



**OWNER'S MANUAL**  
***Model Number***

***700316-4 (Polypropylene brush)***



***BERCO***  
***Rotary Broom***  
for  
***LAWN, YARD, & GARDEN TRACTORS***  
***BELT OR SHAFT DRIVE P.T.O.***

- \* 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. This warranty applies to the products bought and used in North America.

## Warranty Period

(from date of the original retail purchase)

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

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

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

## Items and Conditions NOT Covered:

This warranty does not cover the following:

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

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. Requests for warranty claims must be carried out through the same distribution network used to purchase the product. Don't forget to bring your proof of purchase (sales receipt) to the BERCOMAC dealer.

## Owner's Responsibilities:

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

## General Conditions:

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

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. In no event recovery of any kind be greater than the amount of the purchase price of the product sold.

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. Always handle the winch cable with thick leather gloves.
  12. **Never modify the accessory or any part without the written consent from the manufacturer.**



## SAFETY PRECAUTIONS



### OPERATION:

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

### MAINTENANCE AND STORAGE

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



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

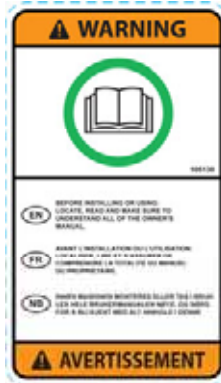


# SAFETY DECALS



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

DECAL #105130



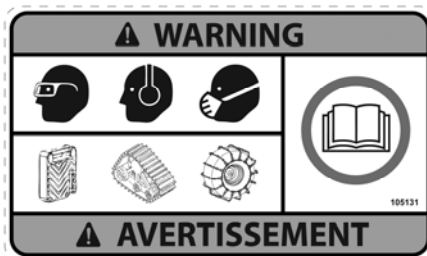
Before installing or using:  
Locate, read and make sure to understand all of the owner's manual.

DECAL #105997



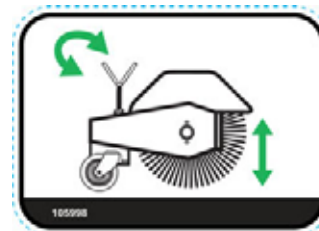
To avoid serious injuries :  
Keep hands, feet & clothing away from the broom when the vehicle is in operation.

DECAL #105131



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

DECAL #105998

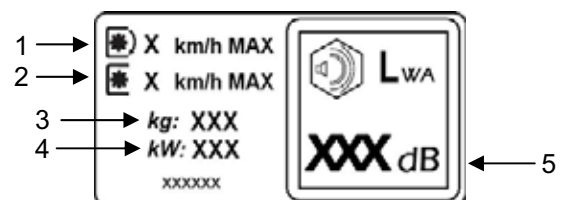


Refer to owner's manual, operation section, for proper brush adjustment. Too much pressure on the brush will considerably reduce it's life span.

DECAL #105996



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



- 1-Maximum speed when the accessory is in operation.
- 2-Maximum speed when the accessory is not in operation.
- 3-The weight of the accessory.
- 4-The engine wattage (if applicable).
- 5-The sound pressure level (measured in dBA) from the driver's position and with the accessory on the ground at full engine speed.

# ASSEMBLY

## STEP 1 ROTARY BROOM PREPARATION

**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.**

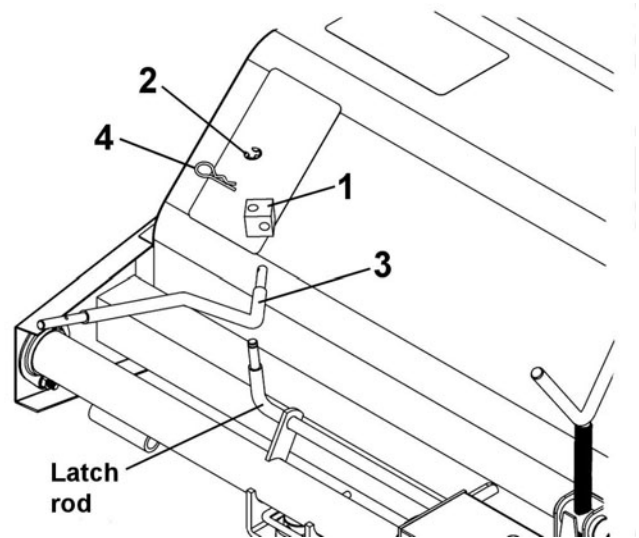
### CONVERSION TABLE

1" (po, in)	25.4 mm
1' (pi, ft)	0.3 m
1 psi (lb/in <sup>2</sup> )	6.89 kPa
1 lb	0.45 kg
1 lbf	4.4 N
1 m/h (mi/h)	1.61 km/h
1 hp (cv)	0.75 kW

### TOOLS REQUIRED:

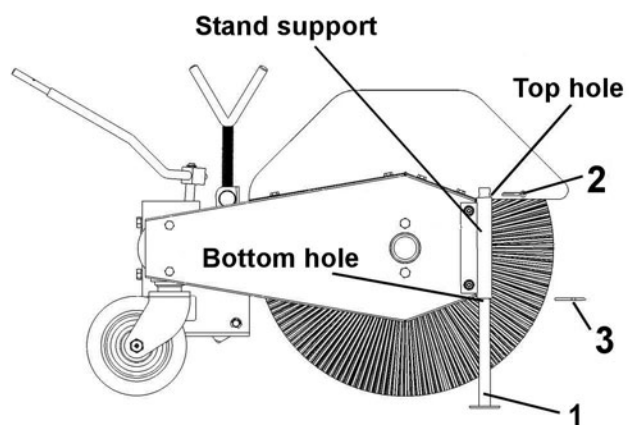
1 pair of long nose pliers

Install the control rod (item 3).		
# Item	Description	Action
1	Joint bloc	Install on the latch rod.
2	Retaining ring	Secure the joint block.
3	Control rod	Insert in the joint block
4	Hair pin 2.5mm	Secure the control rod.



Prepare broom

Install the parking stands (item 1).		
# Item	Description	Action
1	Parking stand	Install in the stand support.
2	Cotter pin 5/32" x 1"	Install in the top hole.
3	Hair pin	Install in the bottom hole.
This will allow the broom to rest on the parking stands.		



Install the parking stands



# ASSEMBLY

## STEP 2 ADAPTOR INSTALLATION

Follow the instructions for the installation of the adaptor in the Broom Adaptor Instruction Booklet.

## STEP 3 ROTARY BROOM INSTALLATION



### 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.

Follow the instructions for the belt and broom installation in the Adaptor Instruction Booklet and the Subframe Owner's Manual.

Attach the rotary broom to the subframe  
Make sure the rotary broom is pushed in until locked into place.

## HANDLE INSTALLATION

Install the 1/2 x 3" handgrip (item 1) on the handle (item 2).  
Insert the handle through the plastic grommet on the handle support (item 3) and on the control rod (item 4).  
Secure with a 2.5 mm hair pin (item 5).

**NOTE:** If the subframe includes a handle extension (item 6), install it between the control rod (item 4) and the handle (item 2).

## VERIFY TIRE PRESSURE:

Check and adjust tractor tire pressure as per reference in vehicle's owner's manual.

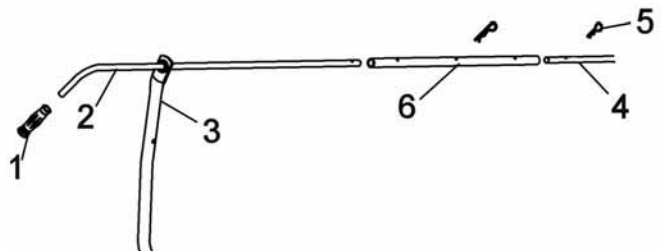


### DANGER



**NEVER OPERATE THE ROTARY BROOM WITHOUT:**

Brush hood  
Belt guard  
Gear box guard  
Extension guard and any other safety protection devices in place.



Install the handle

# OPERATION



## WARNING



**BEFORE MAKING ANY ADJUSTMENTS:**  
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.

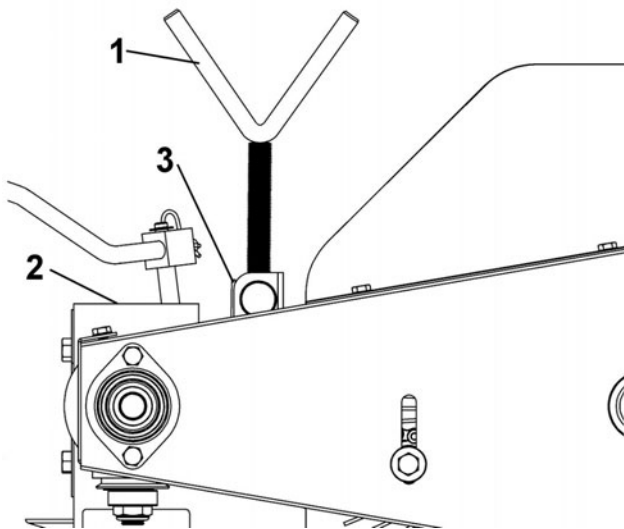
### ROTARY BROOM ANGLE ADJUSTMENT

By turning the handle counter clockwise you unlock the latch and by pulling or pushing, you set the angle 0° to 20° on each side.

### PRESSURE ON THE BRUSH ADJUSTMENT

By turning the adjustment screw (item 1) counter clockwise, the gauge (item 3) moves higher and the pressure of the brush on the ground increases. By turning the adjusting screw clockwise, the gauge moves lower on the gear box frame and the pressure of the brush on the ground decreases.

**IMPORTANT:** Maintain the gauge (item 3) even with the top of the gear box frame (item 2) or lower for general hard surface sweeping. Adjust frequently to compensate for brush wear. Remember to sweep with the tips of the bristles like a broom and not with the sides of the bristles like a mop. Too much pressure can decrease the brush life up to 95%.



Adjust the pressure on the brush



## WARNING



**TO PREVENT INJURIES AND FOR MORE TRACTION WHEN USING AN ACCESSORY:**  
-Rear counterweights of 100 lbs. minimum are required to counter-balance accessory's weight.  
-Tractor manufacturer approved tire chains are required.  
-Do not operate on slopes greater than 10°. When dismantling an accessory remove rear counterweights.  
-Wearing ear muffs, a dust mask and safety glasses are recommended.

### GENERAL SWEEPING

Minimize dust by reducing brush speed and by sweeping after rain or on a day with high moisture.

### SNOW SWEEPING

Adjust the gauge (item 3) to be even with the top of gear box frame (item 2). The broom works well for light snow removal.

Sweep with the wind blowing in the direction of broom discharge.

**WARNING:** Foreign objects in the snow may be thrown faster than the snow itself.

Frequently clean the snow and ice accumulation from the top and bottom of the broom hood.

### LAWN DETHATCHING AND LEAF RAKING:

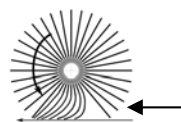
Lower the broom on a hard surface and lift the brush 1" from the ground by turning the adjusting screw clockwise. This adjustment is normally satisfactory but you may raise or lower depending upon grass height.

Low brush speed and ground speed is best for lawn dethatching and leaf raking.

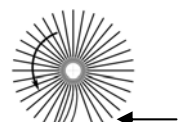
**NOTE:** It is recommended to use the optional side wheel support kit (700451) when used for dethatching uneven ground.

Never sweep with the sides of bristles!

Sweep with the tips!  
Do not mop!



Too much pressure=  
Shortens brush life!



Road surface

# MAINTENANCE

## **BEFORE DOING ANY MAINTENANCE OR DISMOUNTING AN ACCESSORY, REFER TO THE SAFETY PRECAUTIONS.**

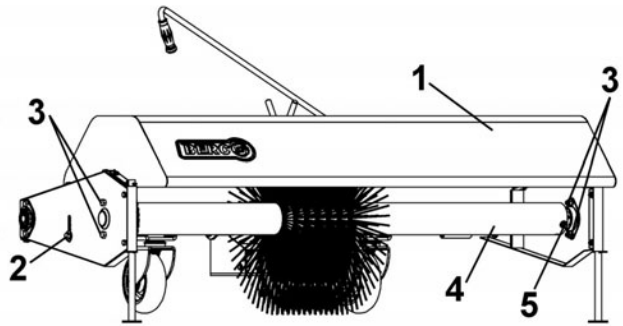
### **MAINTENANCE**

1. Check oil level in gear box every fifty hours and fill to plug level with SAE-90-EP oil when necessary.
2. Grease the wheel axles after every eight hours of use.
3. Roller chain: do not lubricate when used in dusty conditions. After use, wash clean and lubricate.
4. Adjust the roller chain frequently by moving the chain idler sprocket to adjust the tension to 1/2" deflection on the length of the chain..
5. Frequently clean the interior and exterior of hood during operation. Dirt, mud, ice, etc, accumulation adds weight on the brush and could result in premature wear of brush.
6. Check the mounting bolts frequently to prevent costly repairs. Make sure the rotary broom is in good safe working order.
7. Lubricate all moving parts.
6. Remove the bolt (item 5) which retains the brush to the brush hollow shaft.
7. Remove the brush tube from axle.
8. Install the new brush by reversing the procedure.
9. Readjust the tension on the chain by moving the idler sprocket to give a 1/2" deflection on the chain.

### **BRUSH REPLACEMENT:**

See parts breakdown section for parts identification.

1. Remove the hood (item 1).
2. Loosen the chain idler sprocket (item 2).
3. Remove the bolts (item 3) from both flangettes that hold the brush hollow shaft.
4. Remove the brush hollow shaft (item 4) from the broom frame.
5. Loosen the set screw and remove the left bearing when sitting on the vehicle) from the brush hollow shaft



# DISMOUNTING

## DISMOUNTING

1. Select a flat and horizontal surface, set parking brake, stop the engine, and remove the ignition key to prevent accidental starting.
2. Straighten the broom perpendicular with the tractor.
3. Set the parking stands in their most extended position Make sure the brush bristles never touch the ground.
4. Lower the broom to the ground.
5. Remove the hair pin from the handle and remove handle.
6. Loosen and remove the belt from the tractor drive pulley and idlers. Disconnect and remove the driveline if applicable.
7. Detach the broom from the subframe by lifting the spring locks and pulling back the broom one side at a time.
8. Remove the rear counterweights.

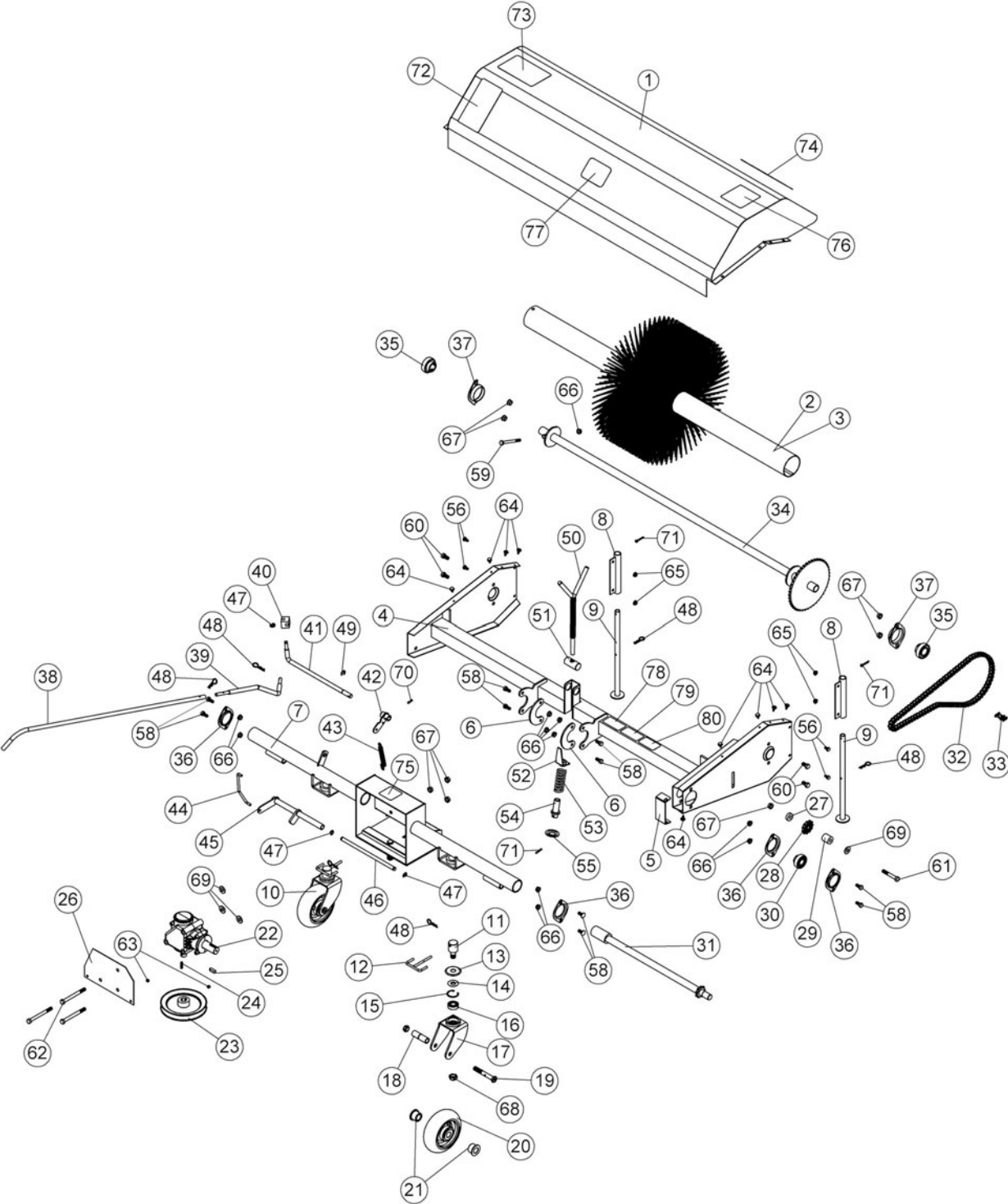
## END OF SEASON STORAGE

1. Clean the broom and inside of the hood and paint all the parts where the paint has worn off.
2. Take note of the replacement parts needed for next season.
3. Lubricate all grease fittings and all moving parts.
4. Store broom on parking stands on a flat and horizontal surface. Make sure the brush bristles never touch the ground.
5. If brush bristles are exposed to direct sunlight, protect the bristles with a tarp.
6. Store the broom in a dry place.

# TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
<p>Brush wears out prematurely or does not wear out evenly.</p> <p>The brush turns jerkily.</p>	<p>The pressure on the brush is not well adjusted.</p> <p>Too much pressure on the brush, it will wear out up to 5 times faster.</p>	<p>Reduce the pressure on the brush when on the ground.</p> <p>Adjust when needed to compensate for the wearing out of the brush.</p> <p>Always sweep with the tips of the bristles like a broom and not with the sides of the bristles like a mop.</p> <p>Maintain the gauge even with the top of the gear box frame or lower when sweeping hard surfaces.</p>
<p>The brush does not sweep well.</p>	<p>Debris accumulation.</p>	<p>Clean the inside and outside of the hood frequently during operation.</p> <p>Dirt, mud, ice, etc.. accumulation adds weight on the brush and could result in premature wear of the brush.</p>
<p>The brush is too aggressive when lawn dethatching or leaf raking.</p> <p>The brush does not turn on the grass.</p>	<p>Too much pressure on the brush.</p>	<p>Lower the broom on a hard surface and lift brush 1" from the ground by turning the adjusting screw clockwise.</p> <p>Adjust from time to time if necessary.</p> <p>May require a side wheel support kit #700451</p>
<p>The chain wears out prematurely.</p>	<p>Inappropriate lubrication.</p>	<p>Do not lubricate the chain during operation. Wait until the job is finished.</p> <p>Wash the rotary broom and lubricate the chain.</p> <p>Let the broom turn a few moments so the oil penetrates in the chain.</p>
<p>The sprocket wears out prematurely.</p>	<p>Chain is not adjusted.</p>	<p>Check the chain adjustment frequently (too tight, too loose).</p>
<p>The brush turns backwards.</p>	<p>The belt is not installed in the right way.</p>	<p>Remove the belt and reinstall as explained in the subframe Owner's Manuel, section broom installation.</p>
<p>Loss of steering.</p>	<p>Too much pressure on the brush.</p>	<p>Reduce pressure on the brush. If problem persists, contact your dealer for more information.</p>
<p>The bristles take a bad form or shape.</p>	<p>The broom was not stored on the parking stands.</p>	<p>Wash the broom with warm water or warm steam. Leave in raised position and let it turn a few turns. The brush should take its original shape.</p>

# PARTS BREAKDOWN ROTARY BROOM 700316-4



## PARTS LIST

### ROTARY BROOM 700316-4

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
1	Hood	Capot	1	104316
2	Nylon brush	Brosse en nylon	1	104065
3	Polypropylene brush	Brosse de polypropylène	1	104010
4	Broom frame	Châssis du balai	1	104315
5	Chain guard	Garde chaine	1	106001
6	Collar	Collet	2	102402
7	Gear box frame	Châssis de la boîte d'engrenage	1	104605
8	Stand holder	Support de pied	2	102392
9	Parking stand	Pied de stationnement	2	102394
10	Caster wheel assembly	Roue pivotante assemblée	1	105108
11	Adaptor pin	Goupille adaptateur	1	104678
12	Lock pin	Goupille de barrure	1	104677
13	Cap	Capuchon	1	102586
14	Spacer	Douille d'espacement	1	104679
15	Retaining ring	Bague de retenue	1	102600
16	Bearing	Roulement à billes	1	102599
17	Wheel fork	Fourche de roue	1	104676
18	Wheel bushing	Douille de roue	1	103483
19	Axle and nut	Essieu et écrou	1	102372
20	Wheel 6" included 103482	Roue 6" incluse 103482	1	103484
21	Delrin bushing	Coussinet Delrin	2	103482
22	Gear box	Boîte d'engrenage	1	102205
23	V pulley	Poulie en V	1	102043
24	Key 3/16" x 3/16" x 1.000"	Clé 3/16" x 3/16" x 1.000"	1	102379
25	Key 8 x 7 x 25mm	Clé 8 x 7 x 25mm	1	102030
26	Gear box guard	Garde de la boîte d'engrenage	1	102285

O/L = Obtain Locally

## PARTS LIST

### ROTARY BROOM 700316-4

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
27	Spacer	Espaceur	1	102241
28	Idler sprocket	Pignon tendeur	1	102027
29	Spacer	Douille	1	102286
30	Bearing with set screw	Roulement à billes avec vis à pression	1	102864
31	Drive shaft	Arbre de commande	1	104063
32	Roller chain #40 x 86 links/conn.link	Chaîne # 40 x 86 mailles/maille acc.	1	102375
33	Connecting Link #40	Maille d'accouplement #40	1	102040
34	Brush hollow shaft	Arbre de brosse	1	104064
35	Bearing with set screw	Roulement à billes avec vis à pression	2	102755
36	Flangette	Flangette	4	102212
37	Flangette	Flangette	2	102680
38	Handle	Poignée	1	102292
39	Control rod	Tige de contrôle	1	102291
40	Joint block	Bloc de joint	1	102275
41	Latch rod	Tige de loquet	1	102287
42	Rocker arm	Culbuteur	1	102282
43	Spring 1/2"	Ressort 1/2"	1	102003
44	Rod link	Tige de raccord	1	104072
45	Latch	Loquet	1	102283
46	Latch shaft	Arbre du loquet	1	102198
47	Retaining ring	Bague de retenue	3	102378
48	Hair pin 2.5mm	Goupille à ressort 2.5mm	5	102013
49	Retaining ring	Bague de retenue	1	102377
50	Adjustment screw	Vis d'ajustement	1	102200
51	Special nut	Écrou spécial	1	102288
52	Gauge	Jauge	1	102367

O/L = Obtain Locally



## PARTS LIST

### ROTARY BROOM 700316-4

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
53	Spring	Ressort	1	102201
54	Spring holder	Support de ressort	1	102197
55	Special washer	Rondelle spéciale	1	102429
56	Hex. bolt 1/4" n.c. x 1/2"	Boulon hex. 1/4" n.c. x 1/2"	4	O/L
58	Hex. bolt 5/16" n.c. x 3/4"	Boulon hex. 5/16" n.c. x 3/4"	8	O/L
58	Carriage bolt 5/16" n.c. x 3/4"	Boulon à carrosserie 5/16" n.c. x 3/4"	2	O/L
59	Hex. bolt 5/16" n.c. x 3 1/2"	Boulon hex. 5/16" n.c. x 3 1/2"	1	O/L
60	Hex. bolt 3/8" n.c. x 3/4"	Boulon hex. 3/8" n.c. x 3/4"	4	O/L
61	Hex. bolt 3/8" n.c. x 2 1/2"	Boulon hex 3/8" n.c. x 2 1/2"	1	O/L
62	Hex. bolt 3/8" n.c. x 4"	Boulon hex. 3/8" n.c. x 4"	3	O/L
63	Hex. socket set screw 5/16" n.c. x 5/16"	Vis à pression hex. 5/16" n.c. x 5/16"	2	O/L
64	Tapping screw 1/4"-14 x 1/2"	Vis taraudeuse 1/4"-14 x 1/2"	9	O/L
65	Flange nut 1/4" n.c.	Écrou à bride 1/4" n.c.	4	O/L
66	Flange nut 5/16" n.c.	Écrou à bride 5/16" n.c.	11	O/L
67	Flange nut 3/8" n.c.	Écrou à bride 3/8" n.c.	8	O/L
68	Nylon insert lock nut 5/8" n.c. (thin)	Écrou à garniture de nylon 5/8" n.c. (mince)	1	O/L
69	Flat washer 7/16" hole	Rondelle plate 7/16" trou	4	O/L
70	Roll pin 3/16" x 3/4"	Goupille roulée 3/16" x 3/4"	1	O/L
71	Cotter pin 5/32" x 1"	Goupille fendue 5/32" x 1"	3	O/L
72	Decal read instructions	Decalque lire instructions	1	105130
73	Decal warning safety	Decalque avertissement sécurité	1	105131
74	Berco decal	Décalque Berco	1	102471
75	Decal miniature danger belts	Decalque miniature danger courroies	1	105996
76	Decal danger broom	Decalque danger balai	1	105997
77	Decal adjustment broom	Decalque ajustement balai	1	105998
78	Serial number	Numéro de série	1	REF
79	Specifications decal	Décalque spécifications	1	REF
80	Made in Canada decal	Décalque Fabriqué au Canada	1	REF

O/L = Obtain Locally

# TORQUE SPECIFICATION TABLE

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

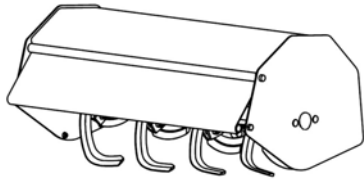
**NOTE:** These values apply to fasteners as received from supplier, dry or when lubricated with normal oil. They do not apply if special graphited or moly disulphide greases or other extreme pressure lubricants are used. This applies to both UNF and UNC threads.

\* Thick nuts must be used with grade 8 bolts

SEE Grade No.		2				5				8 *			
BOLT HEAD IDENTIFICATION MARKS AS PER GRADE NOTE MANUFACTURING MARKS WILL VARY		TORQUE				TORQUE				TORQUE			
BOLT SIZE		FOOT POUNDS		NEWTON-METERS		FOOT POUNDS		NEWTON-METERS		FOOT POUNDS		NEWTON-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

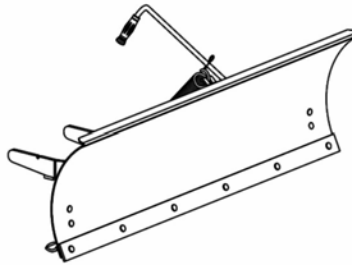
METRIC BOLT TORQUE SPECIFICATIONS								
		COARSE THREAD				FINE THREAD		
Size Screw	Grade No.	Pitch (mm)	Foot Pounds	Newton-Meters	Pitch (mm)	Foot Pounds	Newton-Meters	
M6	4T	1.00	3.6 - 5.8	4.9 - 7.9	-	-	-	
	7T		5.8 - 9.4	7.9 - 12.7		-	-	
	8T		7.2 - 10	9.8 - 13.6		-	-	
M8	4T	1.25	7.2 - 14	9.8 - 19	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	

## ACCESSORIES & OPTIONS



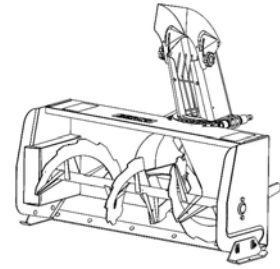
**ROTARY TILLER #700312**

Mounts to the rear of lawn, yard & garden tractors 14 to 25 HP. Comes complete with drive & manual lift mechanisms & mounting hardware.



**UTILITY BLADE #700266**

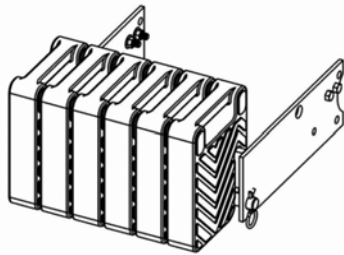
Mounts on the same subframe as the snowblower & rotary broom.



**SNOWBLOWER**

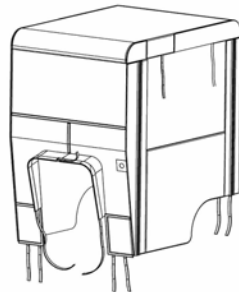
#700255 40"  
#700210-40"  
#700211-44"

Fits on same subframe as rotary broom and utility blade.



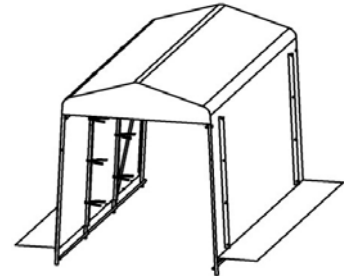
**COUNTERWEIGHT**

Required for safety and traction. Counterbalances weight of attachment.



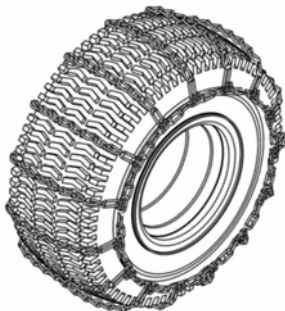
**TRACTOR WINTER CAB #700423**

Universal type fits on a wide variety of lawn and garden tractors.



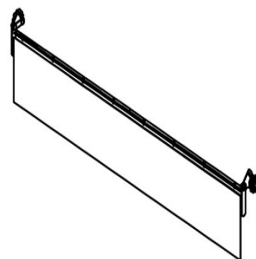
**TRACTOR / A.T.V. SHELTER  
#700438**

Especially designed to put away your tractor or A.T.V with it's accessory.



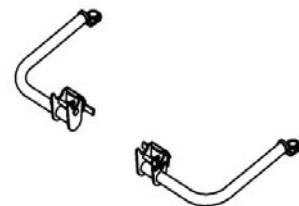
**TIRE CHAINS**

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



**DUST PROTECTOR  
#700452**

Especially designed to reduce flying debris.



**SIDE WHEEL SUPPORT KIT  
#700451**

Especially designed for dethatching and leaf raking on uneven ground



*WHEN PERFORMANCE  
& DEPENDABILITY  
ARE NON NEGOTIABLE !*

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