

## OWNER'S MANUAL *Model Number*700370-3



## **BERCO Subframe**for JOHN DEERE

SERIES 300, LX, GT, GX and G-100
WITH FOOT LIFT OR MANUAL HAND LIFT

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 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

Commercial 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 (supplied with BERCOMAC equipment): 2 years

Please refer to the engine manufacturer's warranty statement included with the unit. BERCOMAC is not authorized to handle warranty adjustments on engines.

## Items and Conditions NOT Covered:

This warranty does not cover the following:

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

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

## Owner's Responsibilities:

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

## **General Conditions:**

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

<u>In particular, without being limited to, BERCOMAC shall have</u> 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 <a href="https://www.bercomac.com">www.bercomac.com</a>.

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

## **TABLE OF CONTENTS**

INTRODUCTIO	N	2
SAFETY PREC	AUTIONS	3
ASSEMBLY Step 1:	John Deere models: LX 255, 266, 277, 277AWS, 279, 288 and GT 225, 235 245 and G-100 Subframe Preparation	5 6
	John Deere models: LX 172, 173, 176, 178, 188, and GT 242, 262, 275 Subframe Preparation Subframe Installation	7 9
	John Deere models: GT 325, 335, 345, 355 and GX 325, 335, 345, 355 Subframe Preparation Subframe Installation	10 11
	Sabre models: GT1842, 1848, 2048, 2148, 2254, 2354, 2554 (GH or HV) Subframe Preparation Subframe Installation	12 14
Step 2:	Snowblower Installation Rotary Broom Installation Utility Blade Installation	15 18 21
Mainter Belt Adj Subfrar	ustment	23 23 23 23
Push fra		24 26
TORQUE SPEC	CIFICATION TABLE	29
OPTIONS		30
TROUBLESHO See atta	OTING achment owner's manual for this section. (Snowblower, Utility Blade, Rotary Broom)	

## INTRODUCTION

## **TO THE PURCHASER**

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

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

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



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

DANGER: Signals an extreme hazard that will cause serious injury or death if recommended precautions are

not followed.

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

followed.

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

followed.

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

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

This manual should be kept for future reference.

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 :	
PURCHASE DATE :	

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

## **SAFETY PRECAUTIONS**

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

## **TRAINING**



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

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

## **PREPARATION**

- 1. Thoroughly inspect the area where the attachment is to be used and remove door mats, all foreign objects and the like.
- Disengage all clutches and shift into neutral before starting engine
- 3. Do not operate the attachment without wearing adequate 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.
  - 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 refuelling 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 engine is running (except where specifically recommended by manufacturer).
- Always wear safety glasses or eye shields during operation or while performing an adjustment or repairs to protect eyes from foreign objects that may be thrown from the machine.
- 7. Never modify the attachment or any part without the written consent from the manufacturer.

## **OPERATION**

- Do not run engine indoors except when starting engine and transporting attachment, in or out of building. Do not operate or let motor run in a storage area without ventilation because gas contains carbon monoxide which is odourless, colourless and can cause death.
- 2. Do not carry passengers on attachment or tractor.
- Take all possible precautions when leaving the machine unattended. Lower the attachment, shift into neutral, set the parking brake, stop the engine and remove the key. Wait for all moving parts to stop.

## SAFETY PRECAUTIONS

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

## **MAINTENANCE AND STORAGE**

- 1. Check shear bolts, mounting bolts, etc..., at frequent intervals for proper tightness to be sure attachment is in safe working condition.
- Never store the machine with fuel in the tank inside a building where ignition sources are present, such as hot water tanks, space heaters, clothes dryers and the like. Allow engine to cool before storing in any enclosure.
- 3. Always refer to the owner's manual when you store than attachment for an extended period.
- 4. Maintain or replace safety and instructions labels, as necessary.

## WHENEVER YOU SEE THIS SYMBOL



IT MEANS:

**WARNING!** 

**BECOME ALERT!** 

YOUR SAFETY IS INVOLVED!



## **WARNING**



## FOR YOUR SECURITY:

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

Follow the assembly and operation instructions.



## **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 an attachment remove rear counterweights.

## STEP 1

## **SUBFRAME PREPARATION**

MODÈLS: LX 255, 266, 277, 277AWS, 279, 288 &

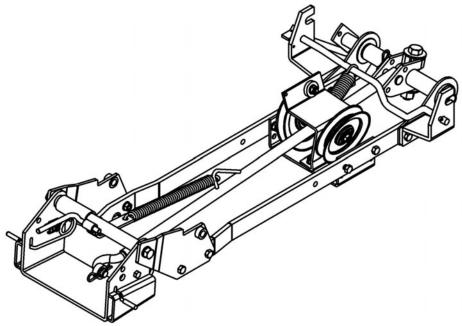
GT 225, 235, 245 & G-100

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.

**NOTE:** The mower deck must be removed to install the subframe.

## INSTALLING THE REFLECTORS

**IMPORTANT:** When operating the tractor with the front mounted attachment, install the two red-colored adhesive reflectors on the rear vertical surface of the tractor's fender.



View once unpacked

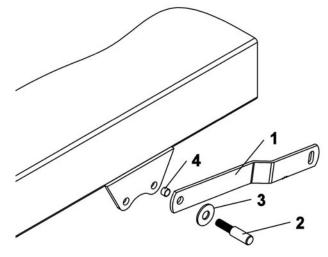
## IF YOUR TRACTOR IS NOT EQUIPPED WITH MOUNTING PINS:

Remove the bolt that holds the left hand side mower lift arm (item 1). Reinstall the lift arm by inserting (as shown) the mounting pin (item 2), original sleeve (item 4) and flat washer (item 3) from the tractor.

Secure with the original nut inside the tractor frame.

Do the same operation on the right side.

Tighten firmly.



Install the mounting pins

Install the handle support (item 1) on the left hand side with a  $3/8 \times 1 \ 1/4$ " hex bolt (item 2) and flange nut already in place, a  $3/8 \times 1$ " hex bolt (item 3) and flange nut.

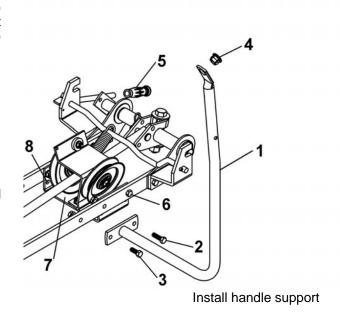
Tighten firmly.

Insert the plastic grommet (item 4) in the handle support.

Install the handgrip (item 5) as shown.

## NOTE: For the G-100 model

Unscrew the bolts (items 2 & 6) from each side and raise the pulley support (item 7). Secure it in the second set of holes (item 8) (1.00" higher) with the same bolts.



## **SUBFRAME 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.

Slide the subframe under the tractor between the front and back wheels on the left side.

Lift the back part of the subframe and hook the supports (item 1) (as shown) on the mounting pins (item 2).

Lift the front part of the subframe between the tractor supports (item 3).

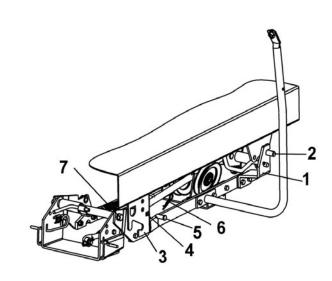
Secure in place in the square holes or round holes (item 4) depending on the model of tractor with two 0.50 x 1.25" pins (item 5) and two 3mm hair pins (item 6).

## **IMPORTANT:**

Make sure the bolt (item 7) is 7 1/2" to 8 1/4" from the ground.

**NOTE:** If the holes are not aligned, loosen the supports, install the pins and retighten the support bolts tightly.

If the tractor supports (item 3) are too narrow, loosen the bolts that hold the heat shield.



Install the subframe

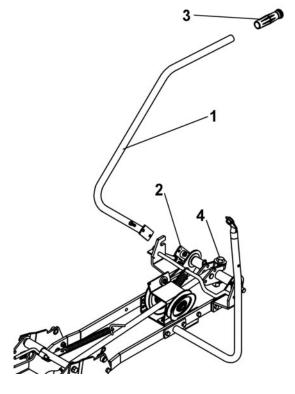
Install the lift arm (item 1) to the lift arm extension (item 2) with two  $5/16 \times 3/4$ " bolts and flange nuts. Tighten firmly.

Install the handgrip (item 3) as shown.

Pull lift arm towards the rear of tractor.

The arm should be 1" outside the mud guard and 2 1/2" above the tire. If not, adjust the arm by unscrewing the bolt (item 4).

**IMPORTANT:** When adjusted properly, tighten bolt (item 4) very firmly with hinge handle or a torque wrench at 85-90 lbs/ft.



Install lift arm

## <u>SUBFRAME PREPARATION FOR THE</u> JOHN DEERE TRACTORS

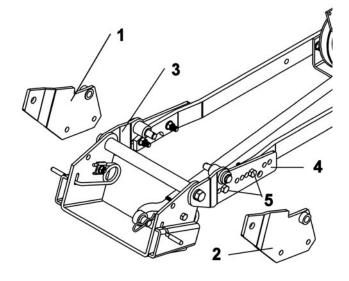
MODÈLS: LX 172, 173, 176, 178, 188, and GT 242, 262, 275

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.

**NOTE:** The mower deck must be removed to install the subframe.

Replace the front supports (items 1 & 2) by the other supports (items 3 & 4) that are included in this kit. Reinstall in the same fashion as the supports you removed, the fold towards the outside.

Insert the bolts (item 5) in the holes as shown. Tighten the bolts firmly.



Replace the front supports

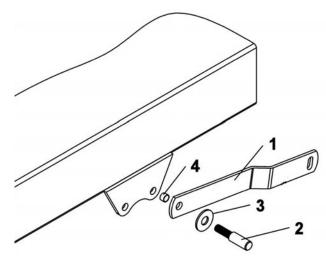
## <u>IF YOUR TRACTOR IS NOT EQUIPPED WITH MOUNTING PINS:</u>

Remove the bolt that holds the left hand side mower lift arm (item 1). Reinstall the lift arm by inserting (as shown) the mounting pin (item 2), original sleeve (item 4) and flat washer (item 3) from the tractor.

Secure with the original nut inside the tractor frame.

Do the same operation on the right side.

Tighten firmly.



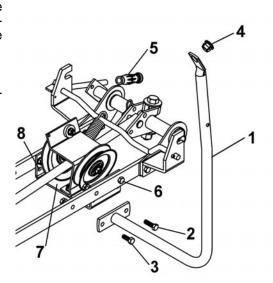
Install mounting pins

Install the handle support (item 1) on the left hand side with a  $3/8 \times 1 \ 1/4$ " hex bolt (item 2) and flange nut already in place, a  $3/8 \times 1$ " hex bolt (item 3) and flange nut.

Tighten firmly.

Insert the plastic grommet (item 4) in the handle support.

Install the handgrip (item 5) as shown.



Install handle support

## **SUBFRAME 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.

Slide the subframe under the tractor between the front and back wheels on the left side.

Lift the back part of the subframe and hook the supports (item 1) (as shown) on the mounting pins (item 2).

Lift the front part of the subframe between the tractor supports (item 3).

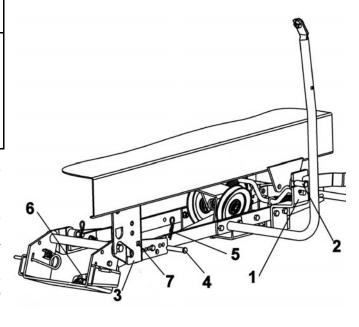
Secure in place in the square holes or round holes (item 4) depending on the model of tractor with two 0.50 x 1.25" pins (item 5) and two 3mm hair pins (item 6).

## **IMPORTANT:**

Make sure the bolt (item 7) is 7 1/2" to 8 1/4" from the ground.

**NOTE:** If the holes are not aligned, loosen the supports, install the pins and retighten the support bolts tightly.

If the tractor supports (item 3) are too narrow, loosen the bolts that hold the heat shield.



Install the subframe

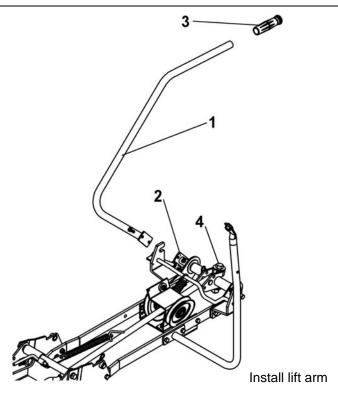
Install the lift arm (item 1) to the lift arm extension (item 2) with two  $5/16 \times 3/4$ " bolts and flange nuts. Tighten firmly.

Install the handgrip (item 3) as shown.

Pull lift arm towards the rear of tractor.

The arm should be 1" outside the mud guard and 2 1/2" above the tire. If not, adjust the arm by unscrewing the bolt (item 4).

**IMPORTANT:** When adjusted properly, tighten bolt (item 4) very firmly with hinge handle or a torque wrench at 85-90 lbs/ft.



<u>SUBFRAME PREPARATION FOR THE JOHN</u> DEERE TRACTORS

MODELS: GT325, 335, 345, 355 GX 325, 335, 345, 355

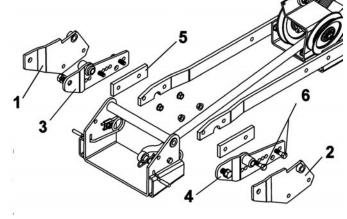
IMPORTANT: TORQUE ALL BOLTS ACCORDING TO TORQUE SPECIFICATION TABLE (SEE TABLE OF CONTENTS) WHEN STATED: TIGHTEN FIRMLY. REFER TO PARTS BREAKDOWN SECTION FOR PARTS IDENTIFICATION.

**NOTE:** The mower deck must be removed to install the subframe.

Replace the front supports (items 1 & 2) by the other supports (items 3 & 4) that are included in this kit. Reinstall in the same fashion as the supports you removed, but the fold towards the inside and insert a shim (item 5) between the supports and the subframe flat bars.

Insert the bolts (item 6) in the holes as shown.

Tighten the bolts firmly.

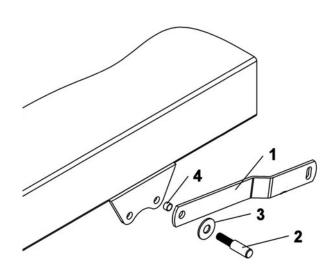


Replace front supports

Remove the bolt that holds the left hand side mower lift arm (item 1). Reinstall the lift arm by inserting as shown the mounting pin (item 2), original sleeve (item 4) and flat washer (item 3) from the tractor.

Secure with the original nut inside the tractor frame.

Do the same operation on the right side. Tighten firmly.



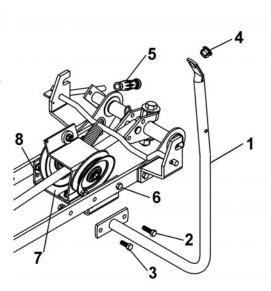
Install handle support

Install the handle support (item 1) on the left hand side with a  $3/8 \times 1 \ 1/4$ " hex bolt (item 2) and flange nut already in place, a  $3/8 \times 1$ " hex bolt (item 3) and flange nut.

Tighten firmly.

Insert the plastic grommet (item 4) in the handle support.

Install the handgrip (item 5) as shown.



Install handle support

## SUBFRAME 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.

Slide the subframe under the tractor between the front and back wheels on the left side.

Lift the back part of the subframe and hook the supports (item 1) (as shown) on the mounting pins (item 2).

Lift the front part of the subframe between the tractor supports (item 3).

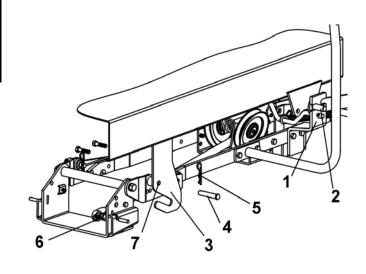
Secure in place in the square holes or round holes (item 4) depending on the model of tractor with two 0.50 x 1.25" pins (item 5) and two 3mm hair pins (item 6).

## **IMPORTANT:**

Make sure the bolt (item 7) is 7 1/2" to 8 1/4" from the ground.

**NOTE:** If the holes are not aligned, loosen the supports, install the pins and retighten the support bolts tightly.

If the tractor supports (item 3) are too narrow, loosen the bolts that hold the heat shield.



Install the subframe

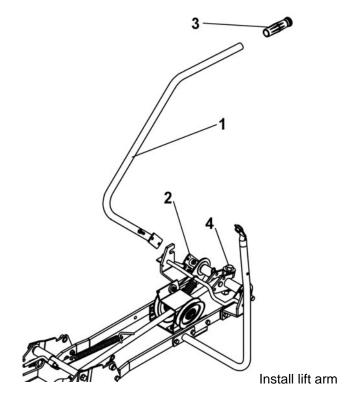
Install the lift arm (item 1) to the lift arm extension (item 2) with two  $5/16 \times 3/4$ " bolts and flange nuts. Tighten firmly.

Install the handgrip (item 3) as shown.

Pull lift arm towards the rear of tractor.

The arm should be 1" outside the mud guard and 2 1/2" above the tire. If not, adjust the arm by unscrewing the bolt (item 4).

**IMPORTANT:** When adjusted properly, tighten bolt (item 4) very firmly with hinge handle or a torque wrench at 85-90 lbs/ft.



## SUBFRAME PREPARATION FOR THE SABRE TRACTORS

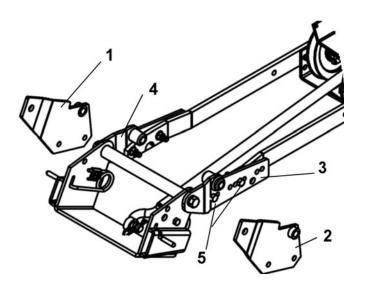
MODELS:GT1842, 1848, 2048, 2148, 2254, 2354, 2554 (GH or HV)

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.

**NOTE:** The mower deck must be removed to install the subframe.

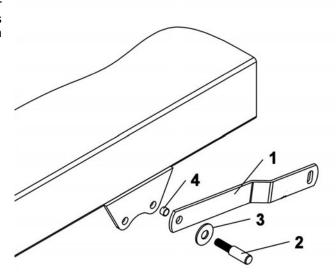
Replace the front supports (items 1 & 2) by the other supports (items 3 & 4) that are included in this kit. Reinstall in the same fashion as the supports you removed, the fold towards the outside.

Insert the bolts (item 5) in the holes as shown. Tighten the bolts firmly.



Replace front supports

Remove the bolt that holds the left hand side mower lift arm (item 1). Reinstall the lift arm by inserting (as shown) the mounting pin (item 2), original sleeve (item 4) and flat washer (item 3) from the tractor. Secure with the original nut inside the tractor frame. Do the same operation on the right side. Tighten firmly.



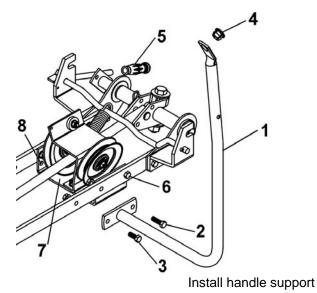
Install mounting pins

Install the handle support (item 1) on the left hand side with a  $3/8 \times 1 \ 1/4$ " hex bolt (item 2) and flange nut already in place, a  $3/8 \times 1$ " hex bolt (item 3) and flange nut.

Tighten firmly.

Insert the plastic grommet (item 4) in the handle support.

Install the handgrip (item 5) as shown.



13

## **SUBFRAME 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.

Slide the subframe under the tractor between the front and back wheels on the left side.

Lift the back part of the subframe and hook the supports (item 1) (as shown) on the mounting pins (item 2).

Lift the front part of the subframe between the tractor supports (item 3).

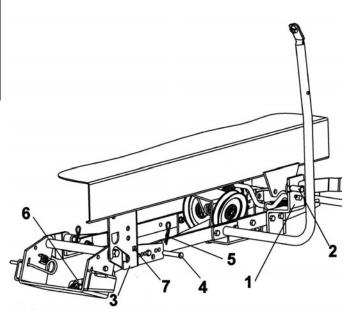
Secure in place in the square holes or round holes (item 4) depending on the model of tractor with two 0.50 x 1.25" pins (item 5) and two 3mm hair pins (item 6).

## **IMPORTANT:**

Make sure the bolt (item 7) is 7 1/2" to 8 1/4" from the ground.

**NOTE:** If the holes are not aligned, loosen the supports, install the pins and retighten the support bolts tightly.

If the tractor supports (item 3) are too narrow, loosen the bolts that hold the heat shield.



Install the subframe

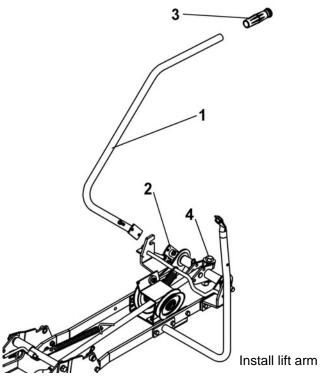
Install the lift arm (item 1) to the lift arm extension (item 2) with two  $5/16 \times 3/4$ " bolts and flange nuts. Tighten firmly.

Install the handgrip (item 3) as shown.

Pull lift arm towards the rear of tractor.

The arm should be 1" outside the mud guard and 2 1/2" above the tire. If not, adjust the arm by unscrewing the bolt (item 4).

**IMPORTANT:** When adjusted properly, tighten bolt (item 4) very firmly with hinge handle or a torque wrench at 85-90 lbs/ft.



## STEP 2 SNOWBLOWER INSTALLATION:

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



## **WARNING**



## FOR YOUR SECURITY:

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

Follow the assembly and operation instructions.

Install the double pulley support (item 1) as shown on the male hitch by using two 5/16 x 1" bolts (item 2) and flange nuts. Tighten the bolts firmly.



## **WARNING**



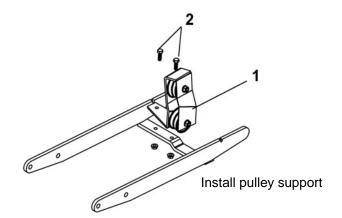
## TO PREVENT INJURIES:

Stop the motor.

Apply parking brakes.

Remove the ignition key.

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





## **CAUTION**



## 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.

Lower the tension arm (item 1) to release the tension on the helper spring (item 2) to facilitate snowblower installation.

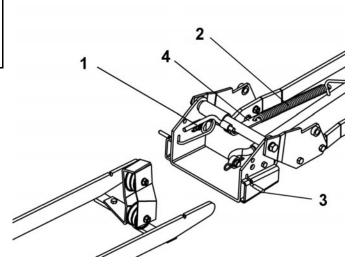
Install the snowblower to the subframe as shown.

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

## NOTE:

Before installing the belt, unhook the spring (item 2) by sliding the spring link (item 4) off the tension arm (item 1).

Put the spring on the ground on the left side.



Install the snowblower



## **CAUTION**



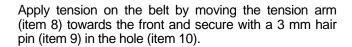
Never use the snowblower without the belt guard.

Remove the belt guard from the back of snowblower.

Move the tension arm (item 8) towards the back to facilitate the belt installation.

Install the belt on the snowblower by inserting it between the two flat pulleys (items 1 & 2) and around the snowblower pulley (item 4). Route the drive belt around the V pulleys (items 5 & 6) and around the tractor drive pulley (item 7).

Make sure the belt is not twisted between the pulleys (items 4 & 5).

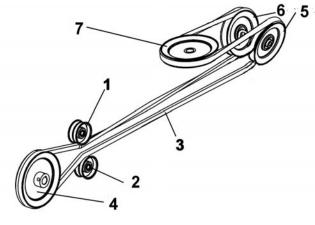


Check the tension on the belt and adjust if necessary.

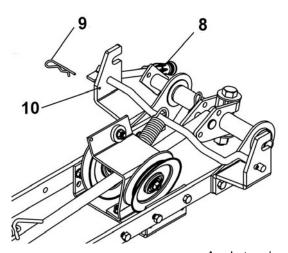
See maintenance section for belt adjustment instructions.

## **VERIFY BELT ROUTING**

- -Lower the snowblower to the ground and let it run for a few seconds under supervision.
- -Disengage the snowblower and stop the engine.
- -Check the belt to make sure it is well inserted in the pulleys and that it has not flipped on its side in the pulleys.
- -Reinstall the belt guard.



Install belt



Apply tension on belt



## **WARNING**



## TO PREVENT INJURIES:

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

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



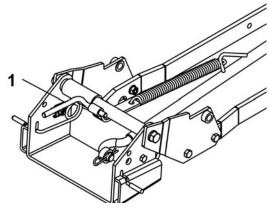
## **CAUTION**



## **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.

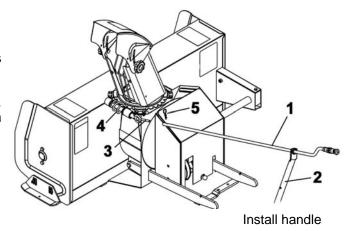
Reinstall the helper spring as originally installed. Raise the snowblower and pull up the tension arm (item 1). This spring helps to lift the snowblower with little effort.



Apply tension to spring

Insert the handle (item 1) into the support (item 2) as shown.

Install the hook (item 3) on the rotation worm (item 4). Insert the hook in the handle (item 1) and secure with a 2.5 mm hair pin (item 5).



## **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.

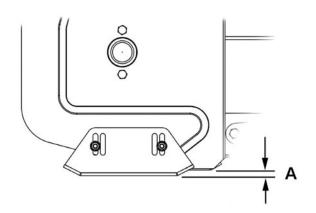
<u>UNEVEN OR GRAVEL SURFACE:</u> Adjust skid shoes to allow 1/2 to 5/8" clearance (A) between cutting edge and surface.

## **VERIFY TIRE PRESSURE:**

Check and adjust tractor tire pressure as follows:

Front tires: 20-25 psi Back tires: 8-10 psi

Tire pressure must be even on both sides of the tractor.



Adjust skid shoes

## **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.



## **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.

Lower the arm (item 1) to release the tension on the helper spring (item 2) to facilitate rotary broom installation.



## **WARNING**



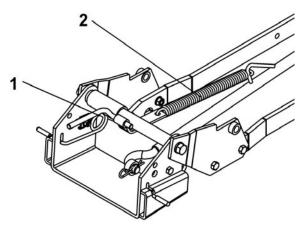
## **TO PREVENT INJURIES:**

Stop the motor.

Apply parking brakes.

Remove the ignition key.

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



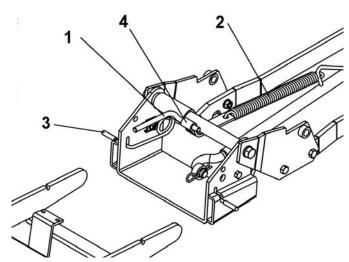
Release tension on the helper spring

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 3).

Before installing the belt, unhook the spring (item 2) by sliding the spring link (item 4) off the tension arm (item 1).

Put the spring on the ground on the left side.



Attach broom to subframe / Remove the helper spring

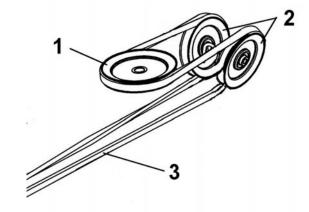
Install the belt as shown.

Apply tension on the belt by moving the tension arm (item 8) towards the front.

And secure with a 3mm hair pin (item 9) in the hole (item 7).

Check the tension on the belt and adjust if necessary.

See maintenance section for belt adjustment instructions.



## Install belt

## **VERIFY BELT ROUTING:**

- -Remove belt guard.
- -Lower the rotary broom to the ground and let it run for a few seconds under supervision.
- -Disengage the rotary broom and stop the engine.
- -Check the belt to make sure it is well inserted in the pulleys and that it has not flipped on its side on the pulleys.
- -Reinstall the belt guard.



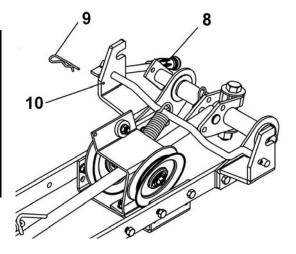
## **WARNING**



## TO PREVENT INJURIES:

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

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



Apply tension on belt



## **CAUTION**

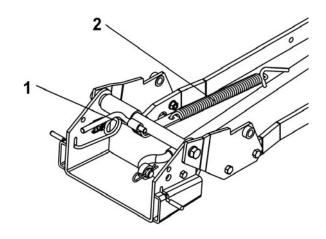


## **TO PREVENT INJURIES:**

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.

Reinstall the helper spring as originally installed.

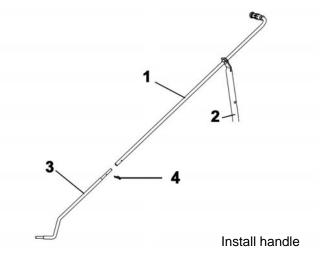
Raise the rotary broom and pull up the tension arm (item 1). This spring helps to lift the rotary broom with little effort.



Apply tension on the helper spring

Insert the handle (item 1) into the support (item 2) as shown.

Install the handle (item 1) on the control rod (item 3) as shown and secure with a 2.5 mm hair pin (item 4).



## **VERIFY TIRE PRESSURE:**

Check and adjust tractor tire pressure as follows:

Front tires: 20-25 psi Back tires: 8-10 psi

Tire pressure must be even on both sides of the tractor.

## **UTILITY BLADE INSTALLATION:**

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



## **WARNING**



## FOR YOUR SECURITY:

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

Follow the assembly and operation instructions.



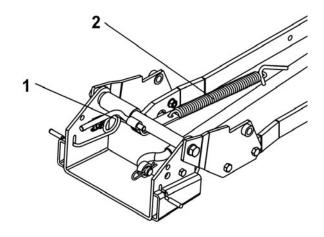
## **CAUTION**



## 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.

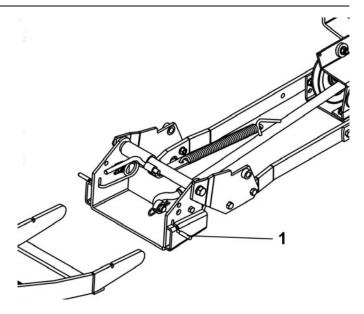
Lower the arm (item 1) to release the tension on the helper spring (item 2) to facilitate blade installation.



Release tension on spring

Attach the blade to the subframe as shown.

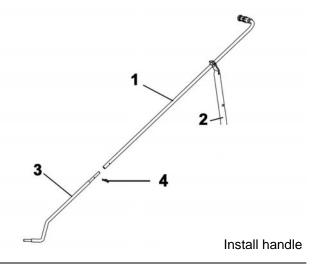
Make sure the blade is pushed in until locked into place by the springs (item 1).



Install utility blade

Insert the handle (item 1) into the support (item 2) as shown.

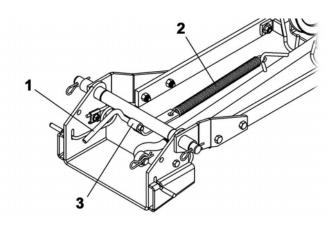
Install the handle (item 1) on the control rod (item 3) as shown and secure with a 2.5 mm hair pin (item 4).



Reinstall the helper spring as originally installed.

Raise the blade. Pull up the tension arm (item 1). This spring helps to lift the blade with little effort.

**Note:** If the blade does not scrape enough, remove the helper spring.



Apply tension on helper spring

## **VERIFY TIRE PRESSURE:**

Check and adjust tractor tire pressure as follows:

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

Tire pressure must be even on both sides of the tractor.

## **MAINTENANCE & DISMOUNTING**



## **WARNING**



## TO PREVENT INJURIES:

Stop the motor.

Apply parking brakes.

Remove the ignition key.

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

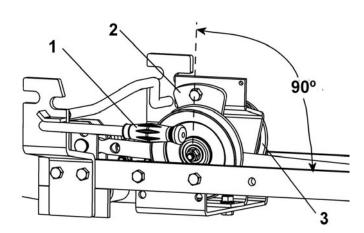
## **MAINTENANCE**

- 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.

## **BELT ADJUSTMENT**

When the attachment is on the ground, the tension arm should be vertical or at approximately 90° with the subframe's flat bars.

If it is not vertical, release the tension on the belt by moving the arm (item 1) towards the back. Adjust the tension on the belt by moving the left hand side adjustable pulley (item 3). To adjust, loosen the bolt located in the middle of the pulley and slide the pulley in the slot. Tighten the bolt. Apply tension on the belt by moving the tension arm towards the front. Verify the adjustment. Make sure the tension arm (item 2) is approximately at 90° with the subframe's flat bars and blocked in the hole with a 3 mm hair pin.



## SUBFRAME DISMOUNTING

See Attachment Owner's manual (Snowblower, Rotary Broom, Utility Blade) for attachment dismounting instructions.

- a) Remove the rear counterweight.
- Release tension on the belt by moving the tension arm towards the back.



## **CAUTION**



## TO PREVENT INJURIES:

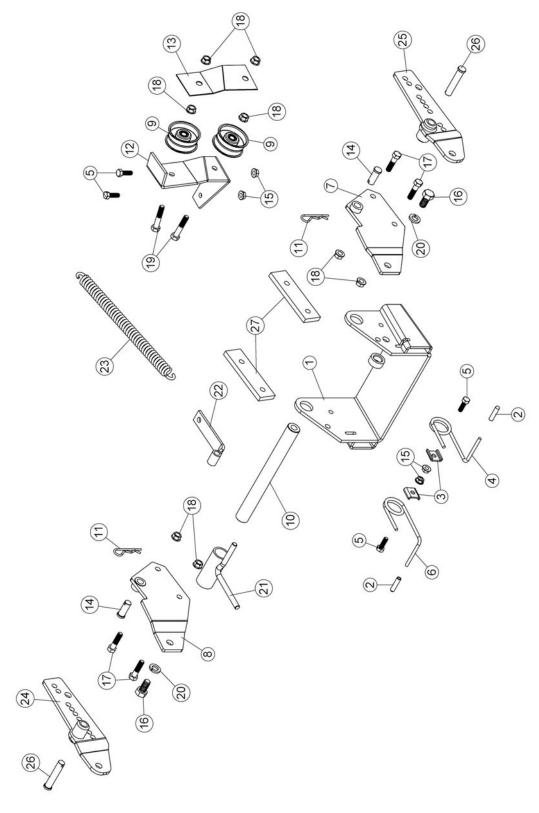
Always raise the attachment to reduce the tension on the spring before applying or releasing tension on the helper spring. Firmly hold the handle when you release the tension because the arm will kick back due to the tension on the spring.

- c) Unhook the spring
- Remove the two pins that hold the back of the subframe.
- e) Remove the two pins that hold the front of the subframe.
- f) Unhook and lower carefully the subframe.
- g) Carefully pull out the subframe by middle of the tractor from the left side between the front and rear wheels.

## **END OF SEASON STORAGE**

- 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.

## PARTS BREAKDOWN PUSH FRAME 700370-3

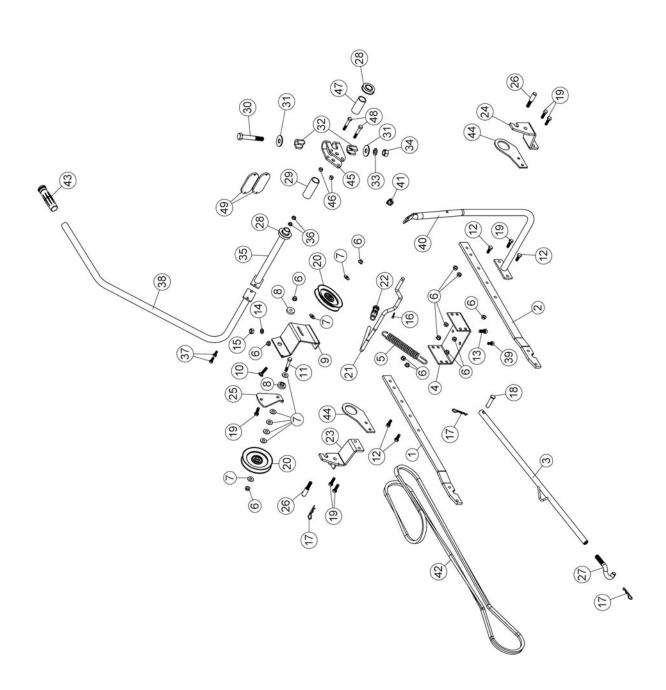


## PARTS LIST PUSH FRAME 700370-3

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
1	Pivot support	Support de pivot	1	102655
2	Handgrip	Poignée	2	102248
3	Spring bracket	Fixation du ressort	2	102210
4	Left spring lock	Ressort de barrure gauche	1	102208
5	Hex. bolt 5/16" n.c. x 1"	Boulon hex. 5/16" n.c. x 1"	4	O/L
6	Right spring lock	Ressort de barrure droit	1	102209
7	Left front support	Support avant gauche	1	103078
8	Right front support	Support avant droit	1	103079
9	Flat pulley	Poulie plate	2	102057
10	Pin	Goupille	1	102258
11	Hair pin 3mm	Goupille à ressort 3mm	2	102617
12	Double pulley support	Support de poulie double	1	103284
13	Idler guard	Garde-poulie	1	103285
14	Pin	Goupille	2	103070
15	Flange nut 5/16" n.c.	Écrou à bride 5/16" n.c.	4	O/L
16	Hex. bolt 1/2" n.c. x 1"	Boulon hex. 1/2" n.c. x 1"	2	O/L
17	Hex. bolt 3/8" n.c. x 1 1/2"	Boulon hex. 3/8" n.c. x 1 1/2"	4	O/L
18	Flange nut 3/8" n.c.	Écrou à bride 3/8" n.c.	8	O/L
19	Hex. bolt 3/8" n.c. x 2"	Boulon hex. 3/8" n.c. x 2"	2	O/L
20	Lock washer 1/2"	Rondelle de blocage 1/2"	2	O/L
21	Tension arm	Bras de tension	1	103920
22	Spring link	Lien de ressort	1	103281
23	Spring	Ressort	1	103073
24	Right front support	Support avant droit	1	103526
25	Left front support	Support avant gauche	1	103525
26	Pin	Goupille	2	102189
27	Shim	Cale	2	102573

O/L = Obtain locally

## PARTS BREAKDOWN SUBFRAME 700370-3



## PARTS LIST SUBFRAME 700370-3

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
1	Right subframe flat bar	Fer plat droit du sous-châssis	1	102263
2	Left subframe flat bar	Fer plat gauche du sous-châssis	1	102262
3	Push tube	Tube de poussée	1	103922
4	Support plate	Plaque de support	1	103646
5	Spring 1 1/8"	Ressort 1 1/8"	1	102004
6	Flange nut 3/8" n.c.	Écrou à bride 3/8" n.c.	13	O/L
7	Flat washer 7/16" hole	Rondelle plate 7/16" trou	8	O/L
8	Flange washer	Rondelle à bride	2	102081
9	Pulley support	Support de poulie	1	102082
10	Carriage bolt 3/8" n.c. x 1-1/2"	Boulon à carrosserie 3/8" n.c. x 1 1/2"	1	O/L
11	Hex. bolt 3/8" n.c. x 2 1/2"	Boulon hex 3/8" n.c. x 2 1/2"	1	O/L
12	Hex. bolt 3/8" n.c. x 1"	Boulon hex. 3/8" n.c. x 1"	4	O/L
13	Hex. bolt 7/16" n.c. x 1"	Boulon hex. 7/16" n.c. x 1"	1	O/L
14	Lock washer 7/16"	Rondelle de blocage 7/16"	1	O/L
15	Hex. nut 7/16" n.c.	Écrou hex. 7/16" n.c.	1	O/L
16	Cotter pin 5/32" x 1"	Goupille fendue 5/32" x 1"	1	O/L
17	Hair pin 3mm	Goupille à ressort 3mm	3	102617
18	Pin	Goupille	1	102079
19	Hex. bolt 3/8" n.c. x 1 1/4"	Boulon hex. 3/8" n.c. x 1 1/4"	6	O/L
20	"V" Pulley	Poulie en "V"	2	102086
21	Idler arm	Bras de tension	1	103074
22	Handgrip	Poignée	1	102062
23	Right rear support	Support arrière droit	1	103925
24	Left rear support	Support arrière gauche	1	103926
25	Idler arm	Bras de poulie	1	102089

O/L = Obtain locally

## PARTS LIST SUBFRAME 700370-3

Ref. Réf.	English description	Description française	Qty. Qté.	Part # Pièce #
26	Mounting pin	Goupille de montage	2	102257
27	Adjusting rod	Tige d'ajustement	1	102653
28	Freeway bearing	Roulement utilitaire	2	102075
29	Right spacer	Douille d'espacement droite	1	104071
30	Hex. bolt 5/8" n.c. x 4"	Boulon hex. 5/8" n.c. x 4"	1	O/L
31	Flat washer 11/16" hole	Rondelle plate 11/16" trou	2	O/L
32	Lever lock	Barrure de levier	2	102078
33	Lock washer 5/8"	Rondelle de blocage 5/8"	1	O/L
34	Hex. nut 5/8" n.c.	Écrou hex. 5/8" n.c.	1	O/L
35	Lift arm extension	Extension de bras de relevage	1	102406
36	Flange nut 5/16" n.c.	Écrou à bride 5/16" n.c.	2	O/L
37	Hex. bolt 5/16" n.c. x 3/4"	Boulon hex. 5/16" n.c. x 3/4"	2	O/L
38	Lift arm	Bras de relevage	1	103923
39	Hex. bolt 3/8" n.c. x 3/4"	Boulon hex. 3/8" n.c. x 3/4"	1	O/L
40	Handle support	Support de manivelle	1	102243
41	Plastic grommet	Oeillet de plastique	1	102063
42	V-Belt , B-120	Courroie en V , B-120	1	102048
43	Handgrip	Poignée de plastique	1	102025
44	Lift support	Support de relevage	2	103924
45	Lift lever	Levier de relevage	1	103287
46	Stover lock nut 3/8" n.c.	Écrou de blocage 3/8" n.c.	2	O/L
47	Left spacer	Douille d'espacement gauche	1	104068
48	Hex. bolt 3/8" n.c. x 2 1/4"	Boulon hex. 3/8" n.c. x 2 1/4"	2	O/L
49	Reflector (Pack of 2)	Réflecteur (Ensemble de 2)	1	106108

O/L = Obtain locally

## **TORQUE SPECIFICATION TABLE**

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

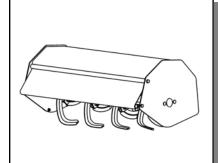
NOTE: These values apply to fasteners as received from supplier, dry or when lubricated with normal oil. They do not apply if special graphited or moly disulphide greases or other extreme pressure lubricants are used. This applies to both UNF and UNC threads.

SEE Grade	nde No. 2		5			8 *							
	TION PER GRADE UFACTURING	R GRADE ACTURING			E TORQUE				TORQUE				
BOL	T SIZE	POUND	S FEET	NEWTON-	METERS	POUND	S FEET	NEWTON-	METERS	POUND	S FEET	NEWTON-I	METERS
Inches	Millimetre	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	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

<sup>\*</sup>Thick nuts must be used with grade 8 bolts

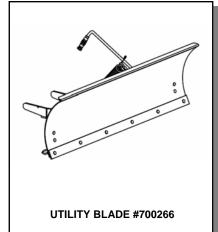
METRIC BOLT TORQUE SPECIFICATIONS								
			COARSE THRE	EAD	FINE THREAD			
Size Screw	Grade No.	Pitch (mm)	Pounds Feet	Newton-Meters	Pitch (mm)	Pounds Feet	Newton-Meters	
М6	4T	1.00	3.6 - 5.8	4.9 - 7.9	-	-	-	
	7T		5.8 - 9.4	7.9 - 12.7		-	-	
	8T		7.2 - 10	9.8 - 13.6		-	-	
M8	4T	1.25	7.2 - 14	9.8 - 19	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	1	116 - 130	157.2 - 176.2		120 - 138	162.6 - 187	
	8T	1	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	

## **ATTACHMENTS**

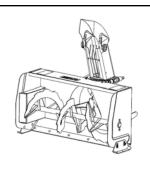


**ROTARY TILLER #700312** 

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



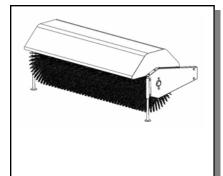
Mounts on the same subframe as the snowblower & rotary broom.



## **SNOWBLOWER**

#700210 40" #700211 44"

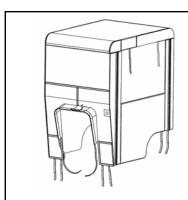
Fits on same subframe as rotary broom and utility blade.



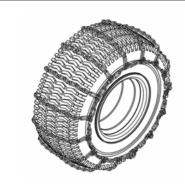
## **ROTARY BROOM**

/#700316-1 with polypropylene brush.

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



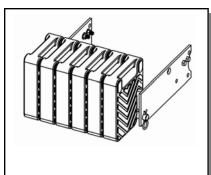
TRACTOR WINTER CAB
#700271 34"
#700423 40"
Universal type fits on a wide variety
of lawn and garden tractors.



## **TIRE CHAINS**

Two link spacing. Required for traction and safety.

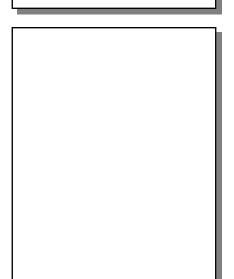
Pkg. of 2

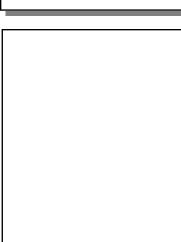


## COUNTERWEIGHT

Required for safety and traction.

Counterbalances weight of attachment.





## **NOTES**


# **NOTES**

# **NOTES**



# WHEN PERFORMANCE & DEPENDABILITY ARE NON NEGOTIABLE!

Bercomac Limitée 92, Fortin North, Adstock, Quebec, Canada, GON 1SO

WWW.BERCOMAC.COM

PRINTED IN CANADA

(ORIGINAL NOTICE)