



OWNER'S MANUAL
Model Number
700217-1

Berco
Subframe
for
HUSQVARNA, JONSERED, POULAN, RALLYE, WEEDATER & YARD PRO
tractors

* ASSEMBLY
* OPERATION

* REPAIR PARTS
* MAINTENANCE

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

WARRANTY

LIMITED ONE YEAR ON BERCO TRACTOR ATTACHMENTS

For one year from date of purchase, Bercomac Limitée will repair or replace free of charge at Bercomac's option, any parts which are defective as a result of defective materials or faulty workmanship.

COMMERCIAL OR RENTAL USE:

Warranty on Berco attachments used for commercial or rental purposes is limited to 90 days.

This warranty does NOT cover:

- * **Wear items, such as shear pins and belts.**
- * **Repairs due to customer abuse or neglect.**
- * **Pre-delivery set-up.**
- * **In home service.**

Warranty service is available by returning the "Berco" attachment to the authorized dealer.

BERCOMAC Limitée
46 Fortin, St-Méthode de Frontenac, Québec, Canada, G0N 1S0

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See attachment owner's manual for this section. (Snowblower, Blade, Rotary Broom)	

INTRODUCTION

TO THE PURCHASER

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

NOTE: All photographs and illustrations in the manual may not necessarily depict the actual models or equipment, 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 equipment.

7 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 subframe model with 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 parts or attachments. 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.

MODEL NUMBER: _____
SERIAL NUMBER: _____
PURCHASE DATE: _____

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

In this manual, "attachment" means accessories that you install on the tractor, such as, snowblower, rotary broom, blade, subframe, etc.

SAFETY PRECAUTIONS

Careful operation is your best insurance against an accident. Read this section carefully before operating the tractor and attachment. 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

7

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

1. Read this Owner's Manual carefully. Be thoroughly familiar with the controls and proper use of the equipment. Know how to stop the unit and disengage the controls quickly.
2. Never allow children to operate equipment. Never allow adults to operate equipment without proper instructions.
3. No one should operate the unit 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. Disengage all clutches and shift into neutral before starting engine.
2. 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) Replace fuel cap securely and wipe up spilled fuel.
3. Never attempt to make any adjustments while engine is running (except where specifically recommended by manufacturer).
4. 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.

OPERATION

1. Do not run engine indoors except when starting engine and transporting equipment, 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.
3. Take all possible precautions when leaving the machine unattended. Lower the blade, shift into neutral, set the parking brake, stop the engine and remove the key. Wait for all moving parts to stop.
4. You must use manufacturer approved rear counterweights, minimum 100 lbs., for better traction and safety at all times when you have an attachment installed in front.
5. Never operate the equipment without good visibility or light.

SAFETY PRECAUTIONS

MAINTENANCE AND STORAGE

1. Check shear bolts, mounting bolts, etc..., at frequent intervals for proper tightness to be sure equipment is in safe working condition.
2. 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. Maintain or replace safety and instructions labels, as necessary.

WHENEVER YOU SEE THIS SYMBOL

7

IT MEANS:

WARNING!

BECOME ALERT !

YOUR SAFETY IS INVOLVED!

7

WARNING

7

For your security, read the attachment owner's manual for security precautions and rules.

Follow the assembly and operation instructions.

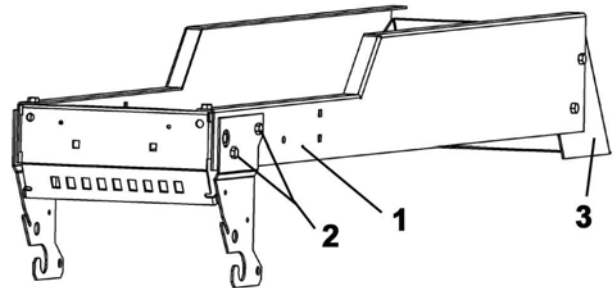
TRACTOR IDENTIFICATION

IDENTIFY YOUR TRACTOR AS PER DESCRIPTIONS BELOW THEN FOLLOW THE ASSEMBLY INSTRUCTIONS IDENTIFIED BY THAT SPECIFIC LETTER ONLY.

A

Channel frame (item 1). (U shaped tractor frame)
Mower attaching supports bolted outside the frame (item 2).
Slanted tow hitch (item 3).

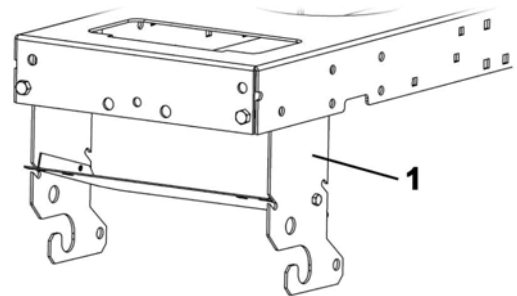
TRACTOR FRAME



f1

B

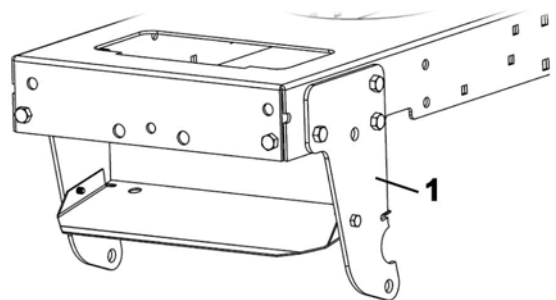
Mower attaching supports are welded inside the tractor frame (item 1).



f2

C

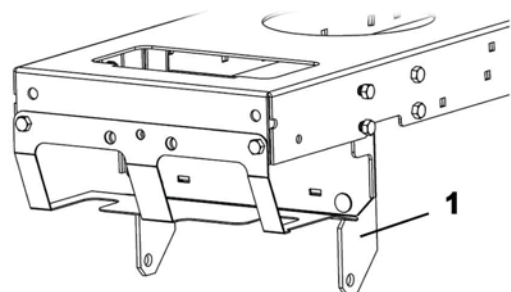
Mower attaching supports are bolted outside the tractor frame (item 1).



f3

D

Mower attaching supports are located under the tractor's axle (item 1).



f4

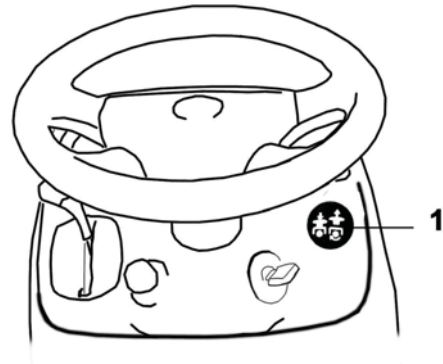
TRACTOR IDENTIFICATION

IDENTIFY YOUR TRACTOR AS PER DESCRIPTIONS BELOW THEN FOLLOW THE ASSEMBLY INSTRUCTIONS IDENTIFIED BY THAT SPECIFIC LETTER ONLY.

E

Electric clutch engaged by a button (item 1) on the dashboard.

CLUTCH MECHANISM

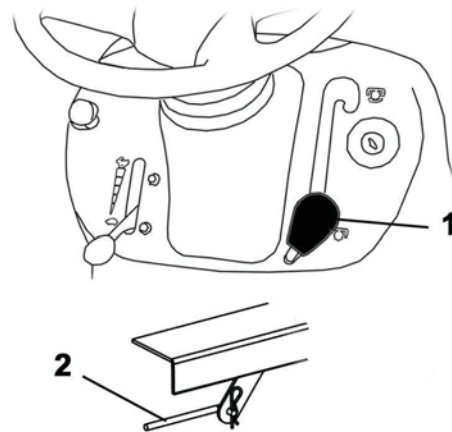


f5

F

Manual clutch engaged by a lever (item 1) located on the dashboard.

Rod (item 2) which relays clutch mechanism to mower deck.

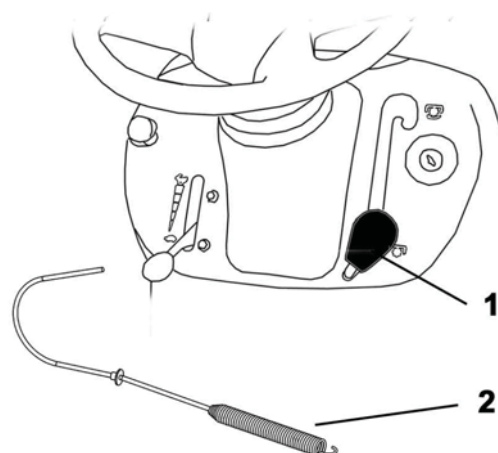


F6

G

Manual clutch engaged by a lever (item 1) located on the dashboard.

Cable with spring attached to the end (item 2) relaying the clutch mechanism to the mower deck.



F7

ASSEMBLY

STEP 1

TRACTOR FRAME MODIFICATIONS:

Note: Follow only the instructions that are identified for your tractor and refer to parts breakdown for parts identification.

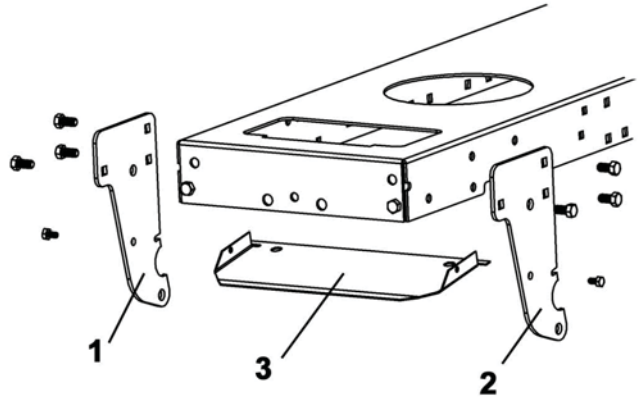
A- B

No modifications are needed.

C

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

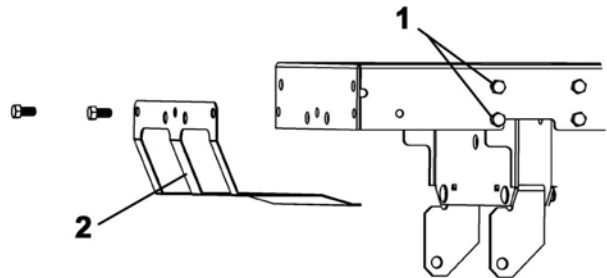
Remove the mower attaching supports (items 1 & 2) and the heat shield (item 3).



Removal of tractor parts 18

D

Remove the bolts, two on each side (item 1) and heat shield (item 2).



Removal of tractor parts 19

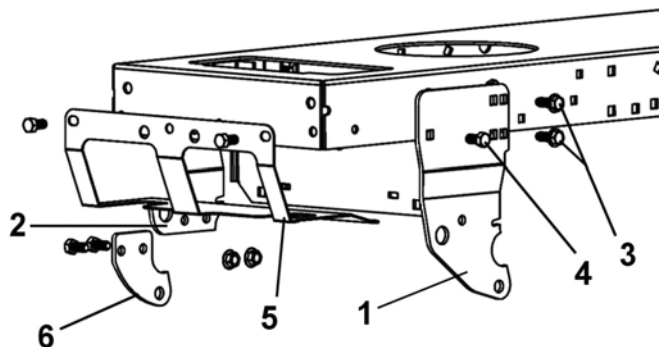
C-D

Install the new attaching supports (items 1 & 2) included with the subframe. Secure on each side with two 3/8 x 1" thread cutting bolts (item 3) and one tractor bolt (item 4).

C

Install the mower bracket (item 6) on the outside of the right hand side attaching support (item 2) with two 3/8 x 3/4" hex bolts and flange nuts. Tighten firmly.

Install the new heat shield (item 5) with the tractor bolts.



Installation of new parts 110

ASSEMBLY

STEP 2

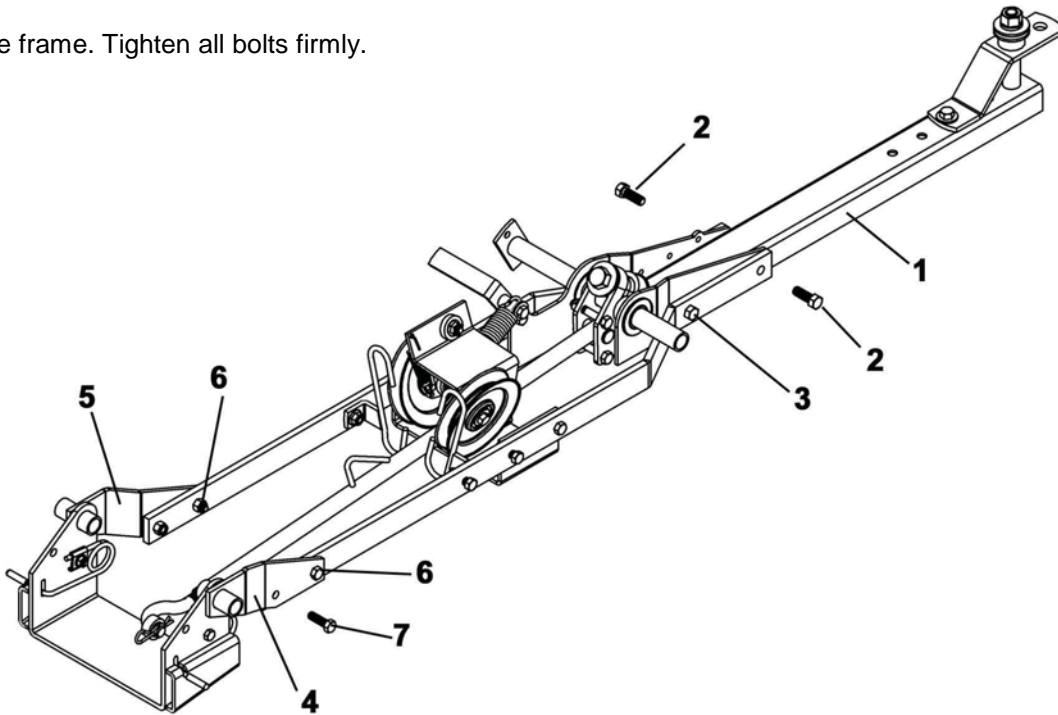
SUBFRAME PREPARATION:

A-B-C-D

Loosen the bolts (item 3) to unfold the subframe. Place the channel (item 1) in its most extended position. Secure with two 7/16 x 1 1/4" bolts (item 2), lockwashers and nuts.

Extend the front portion of the subframe (items 4 & 5) by loosening the bolts (item 6). Secure with two 3/8 x 1" bolts (item 7) and nylon insert locknuts.

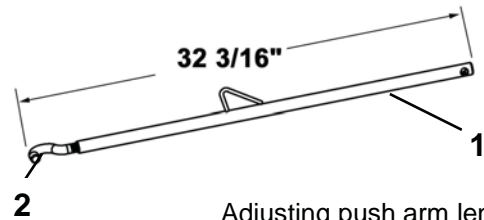
Line up the frame. Tighten all bolts firmly.



Overall view of subframe f11

A

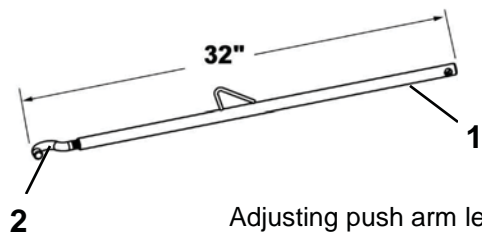
Adjust the overall length of the push arm (item 1) to 32 3/16" by screwing or unscrewing the adjusting rod (item 2) and re-install .



Adjusting push arm length f12

B-C-D

Adjust the overall length of the push arm (item 1) to 32" by screwing or unscrewing the adjusting rod (item 2) and re-install.



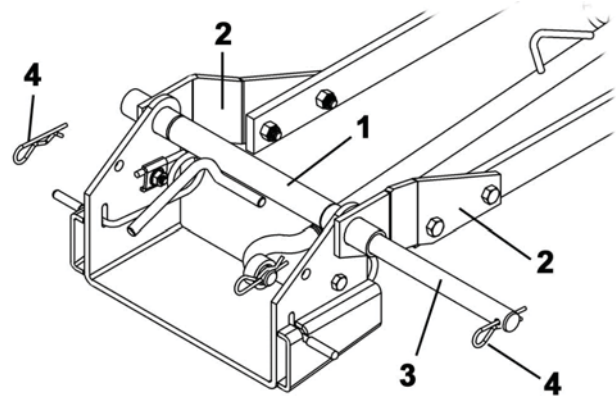
Adjusting push arm length f12

ASSEMBLY

A-B-C-D

Insert the tension arm (item 1) between the two front supports (item 2).

Hold in place with the pin (item 3) and two hair pins (item 4).

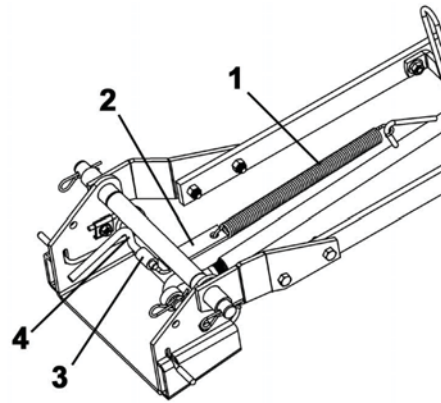


Tension arm installation f14

A-B-C-D

Hook the spring (item 1) to the push tube and to the spring link (item 2) as shown.

Slide the end of spring link (item 3) on the tension arm (item 4).

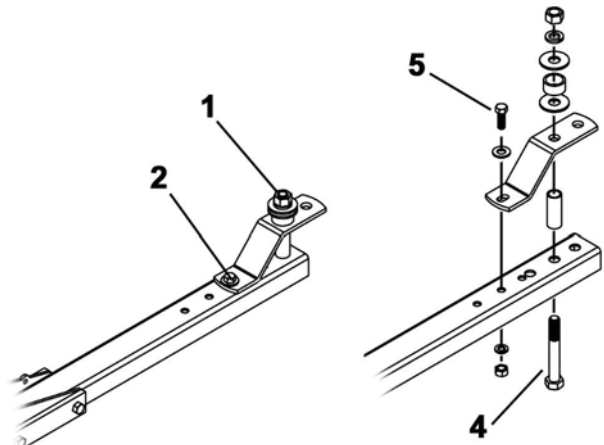


Helper spring mechanism installation f15

B-C-D

Remove the bolts (items 1 & 2).

Move the hitch plate to the second set of holes and re-install the bolts (items 4 & 5) as shown.



Tow hitch modification f16-17

ASSEMBLY

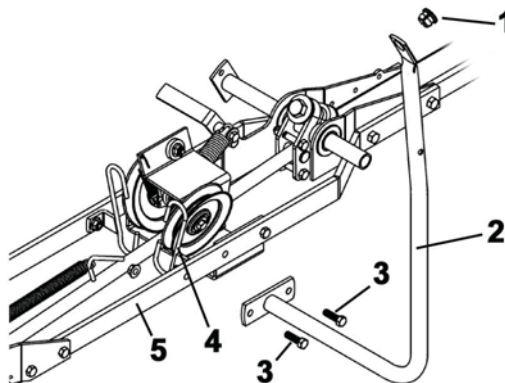
A-B-C-D

Insert the grommet (item 1) in the handle support (item 2)

Install the handle support on the subframe with the subframe bolts (item 3) as shown.

Make sure the belt guide (item 4) is placed 90° with the flat bars (item 5).

Tighten the bolts firmly.

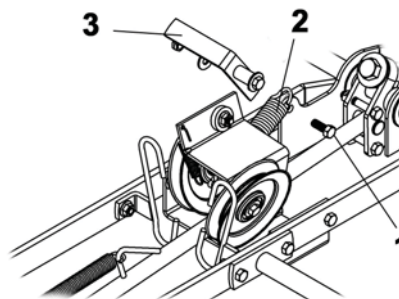


Handle support installation f18

F-G

Remove the bolt (item 1).

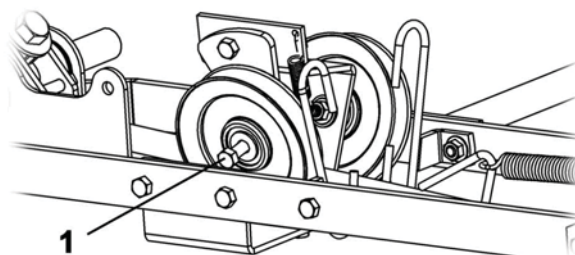
Unhook the spring (item 2) and remove the tension arm (item 3).



Tension arm removal f19

G

Remove the bolt (item 1) and dismount the right hand side V pulley.

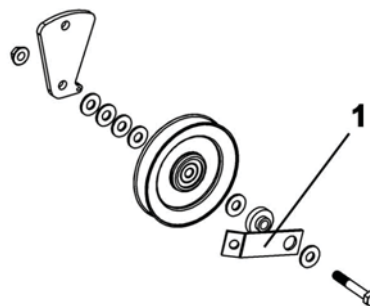


V pulley removal f20

G

Re-install the V pulley as shown. Make sure the spring link (item 1) moves freely.

Tighten the bolt firmly.



V pulley reinstallation f21

ASSEMBLY

STEP 3

SUBFRAME INSTALLATION:

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

A-B-C-D

Place the subframe under the tractor by the left side between the front and rear wheels.

A

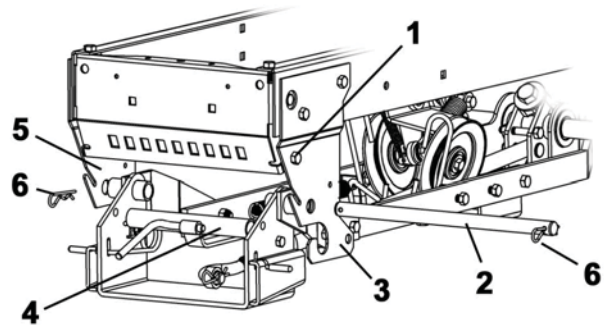
Pull out the pivot pin (item 2).

Lift the front portion of subframe under the front part of tractor between the attaching supports (items 3 & 5).

Note: If the attaching supports are too narrow, loosen the two bottom bolts (item 1).

Place the tension arm (item 4) between the attaching supports and secure in place by inserting the pivot pin (item 2) as shown.

Secure with two 3 mm hair pins (item 6).



Installation of the front part of subframe f22

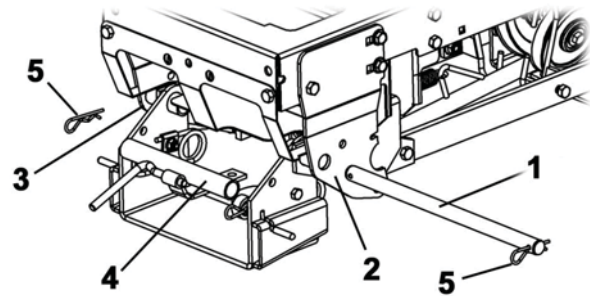
B-C-D

Pull out the pivot pin (item 1).

Lift the front portion of subframe under the front part of tractor between the attaching supports (items 2 & 3).

Place the tension arm (item 4) between the attaching supports and secure in place by inserting the pivot pin (item 1) as shown.

~~Secure with two 3 mm hair pins (item 5) as shown.~~



Installation of the front part of subframe f23

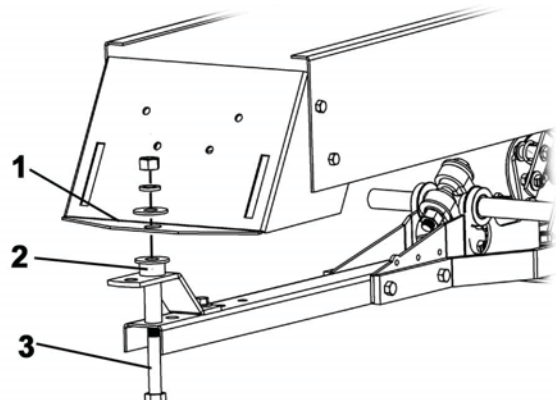
A

Install the rear portion of subframe under the tractor's tow hitch (item 1).

If you need to clear the tractor's transmission, shim with a flange sleeve (item 2) (flange upwards).

Secure with the bolt (item 3), flatwasher, lockwasher and nut on top of the tractor's tow hitch as shown.

Tighten the tractor and subframe bolts firmly.



Installation of the rear part of subframe f24

ASSEMBLY

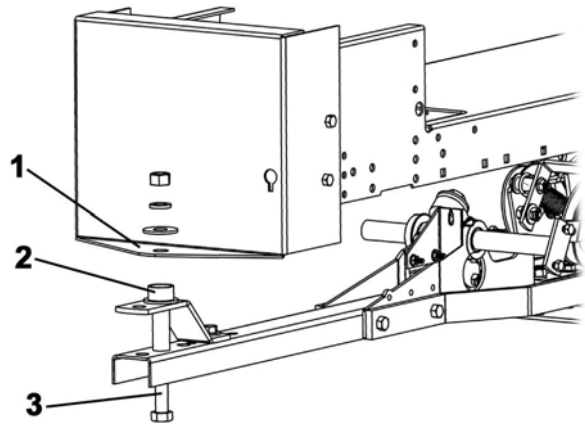
B-C-D

Install the rear portion of subframe under the tractor's tow hitch (item 1).

If you need to clear the tractor's transmission, shim with a flange sleeve (item 2) (flange downward).

Secure with the bolt (item 3), flatwasher, lockwasher and nut on top of the tractor's tow hitch as shown.

Tighten all the tractor and subframe bolts firmly.



Installation of the rear part of subframe r25

B

Subframe must be parallel with the ground once installed. If not, you must order a 2 11/16" sleeve (part #102071) and obtain locally a 5/8 x 6 1/2" bolt to install the subframe.

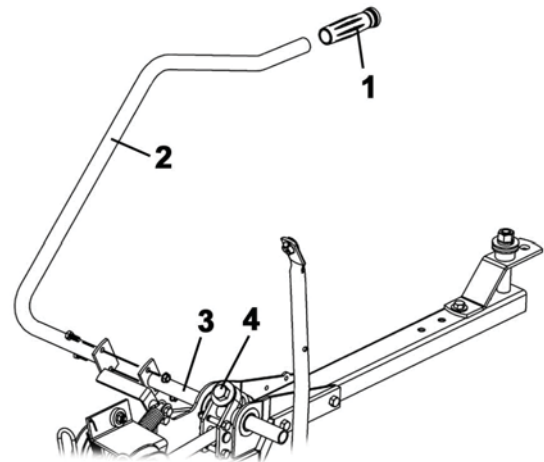
A-B-C-D

Install the lift arm (item 2) to the lift arm extension (item 3) with two 5/16 x 3/4" bolts and flange nuts.

Install the handgrip (item 1) 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). When adjusted properly, tighten bolt firmly with hinge handle or a torque wrench at 85-90 lbs/ft.

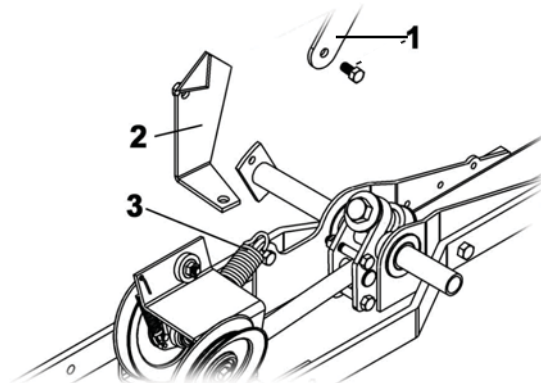


Lift arm installation r26

F

Attach the free end of spring (item 3) to the clutch lever extension (item 2).

Attach the clutch lever extension (item 2) to the tractor's clutch lever (item 1) as shown with a 3/8 x 3/4" bolt and nut.

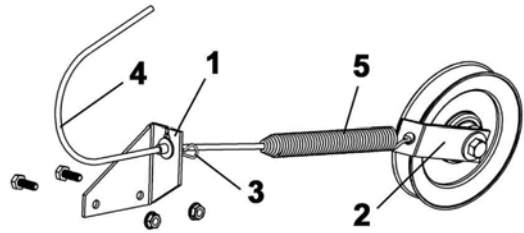


Attach spring to clutch lever extension r31

ASSEMBLY

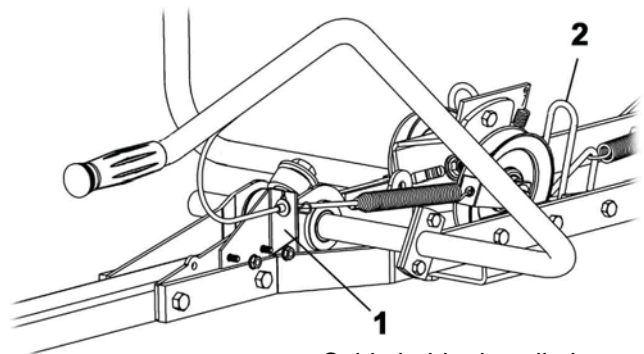
G

Install the cable into the cable holder (item 1). Secure with a 2 mm. hair pin (item 3). Hook the spring into the spring link (item 2).



Cable installation f34

Secure the cable holder (item 1) to the subframe. To identify the correct position, when the clutch is disengaged and the pulley barely touches the belt guide (item 2), slightly pull the cable holder and secure in the matching holes with two 1/4 x 3/4" hex bolts and flange nuts. Tighten firmly.



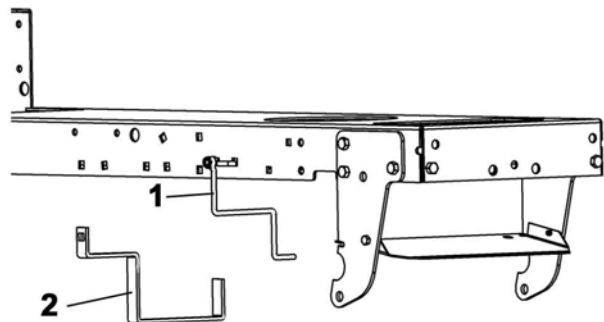
Cable holder installation f35

F-G

Remove the tractor belt guide (item 1).

Install the new belt guide (item 2) supplied with the kit. Use the same bolt.

Tighten the bolt firmly.



Belt guide replacement f33

Note: There **may** be some left over parts which are not necessary. However, these parts will be useful for installation on other tractor models. Keep in safe place for future use.

ASSEMBLY

STEP 4

SNOWBLOWER INSTALLATION:

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

7 WARNING 7

For your security, read the snowblower owner's manual for security precautions and rules. Follow the assembly and operation instructions.

7 WARNING 7

TO AVOID INJURIES:

Stop the motor.

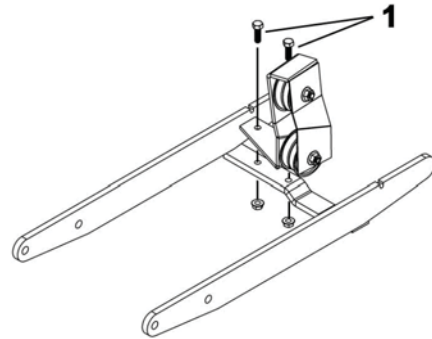
Apply parking brakes.

Remove the ignition key.

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

A-B-C-D

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



Double pulley support installation r27

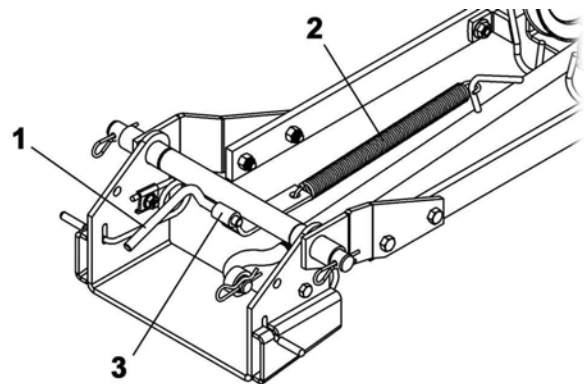
7 CAUTION 7

TO AVOID INJURIES:

Always raise the snowblower 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.

A-B-C-D

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

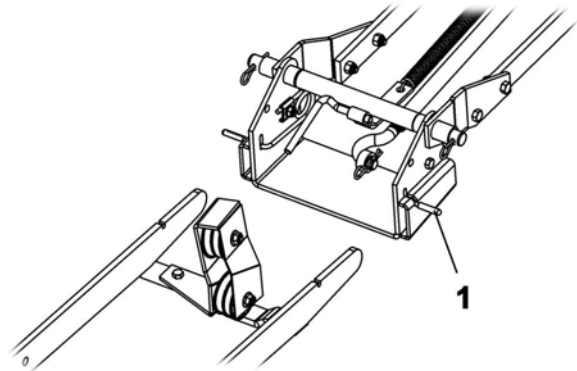


Release tension on spring r28

ASSEMBLY

A-B-C-D

Attach the snowblower to the subframe as shown.
Make sure the snowblower is pushed in until locked into place by the springs (item 1).

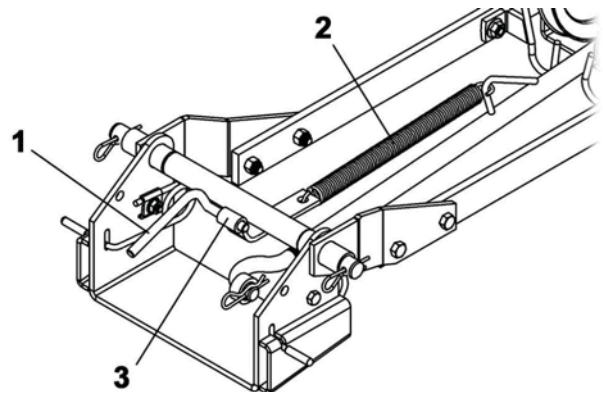


Attach snowblower to subframe f29

A-B-C-D

Before installing the belt, unhook the spring (item 2) by sliding the spring link (item 3) off the tension arm (item 1).

Put the spring on the ground on the left side.

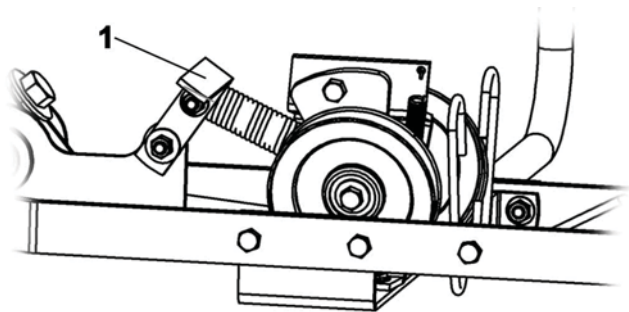


Remove the helper spring f28

E

Before installing the belt, move the tension arm (item 1) forward.

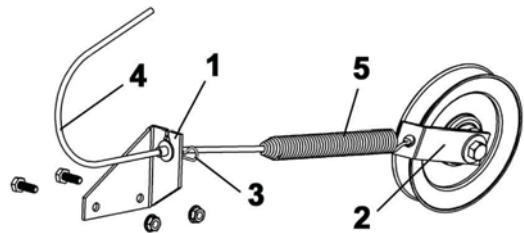
After installing belt, move the tension arm backwards to apply tension on belt.



Move tension arm f30

G

Before installing the belt, remove the cable (item 4) from the holder (item 1) and unhook the spring (item 5) from the spring link (item 2).



Cable and hook removal f34

ASSEMBLY

A-B-C-D

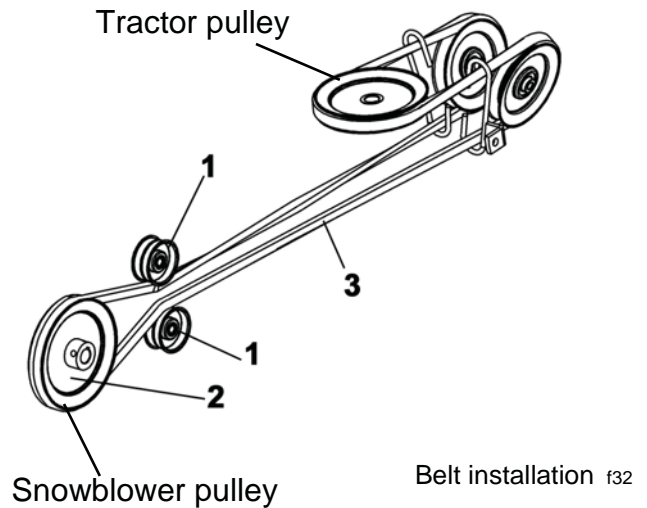
Remove the belt guard from behind the snowblower.

Install the V belt on the snowblower by inserting the belt between the two flat pulleys (item 1) and around the snowblower pulley (item 2).

Install the belt under the tractor as shown and make sure the bottom strand (item 3) between the snowblower pulley and rear left pulley is not twisted.

Re-install the helper spring as previously removed.

Reinstall the belt guard.



7 CAUTION 7

Never use the snowblower without the belt guard.

E

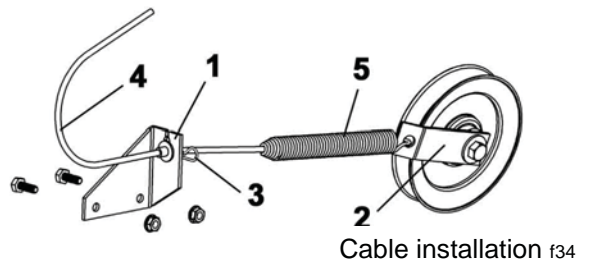
Move the tension arm backwards.

G

Hook the spring into the spring link (item 2).

Reinstall the cable into the cable holder (item 1).

Secure with a 2 mm. hair pin (item 3).



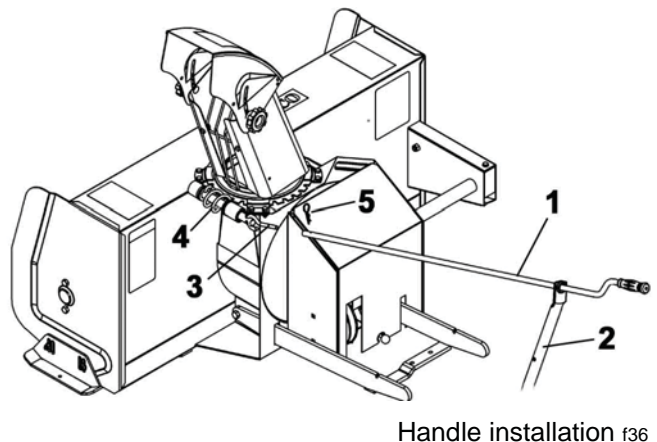
A

Note: On the Husqvarna tractors with a large hood, we suggest installing the optional kit # 700244. This prevents the chute rotation handle from touching the hood avoiding any damage.

A-B-C-D

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).



ASSEMBLY

A-B-C-D

Reconnect the engine's spark plug(s).

Adjust the V-Belt: See V-Belt adjustment instructions.

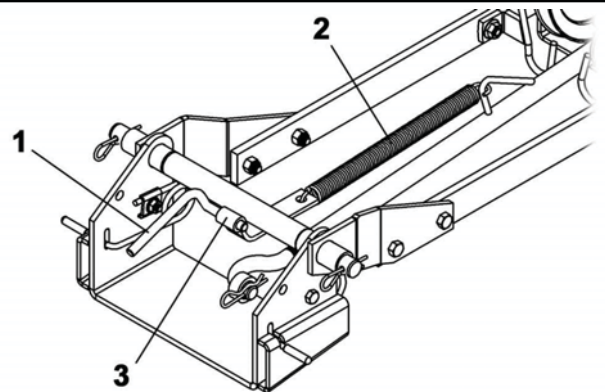
VERIFY BELT ROUTING:

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 has not flipped on its side on the pulleys and that it does not touch the belt guides.

7 CAUTION 7

TO AVOID INJURIES:

Always raise the snowblower 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.



Apply tension to spring f28

A-B-C-D

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

A-B-C-D

VERIFY SKID SHOE ADJUSTMENT:

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

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

A-B-C-D

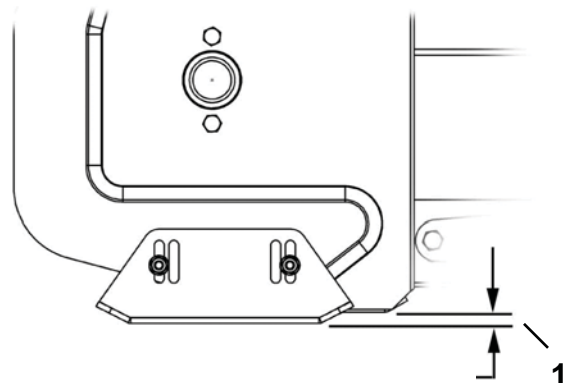
VERIFY TIRE PRESSURE:

Attachments should raise 3" to 4" above ground (no more, no less) if not, check and adjust tractor tire pressure as follows:

Front tires: 14-15 psi

Back tires: 7-8 psi

Tire pressure must be even on both sides of tractor.



Skid shoe adjustment fs12

ASSEMBLY

ROTARY BROOM INSTALLATION:

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

A-B-C-D

7 WARNING 7

For your security, read the rotary broom owner's manual for security precautions and rules.

Follow the assembly and operation instructions.

7 CAUTION 7

TO AVOID INJURIES:

Always raise the rotary broom 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.

7 WARNING 7

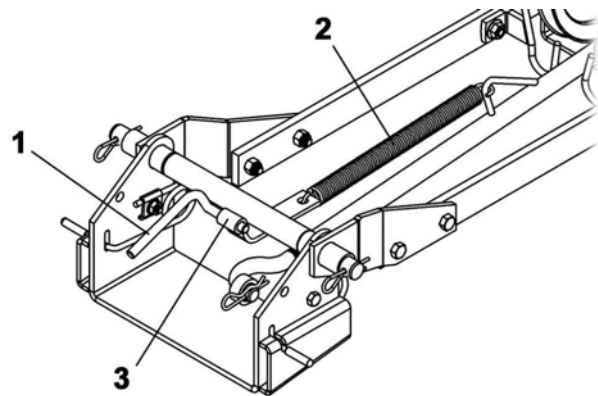
TO AVOID INJURIES:

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.

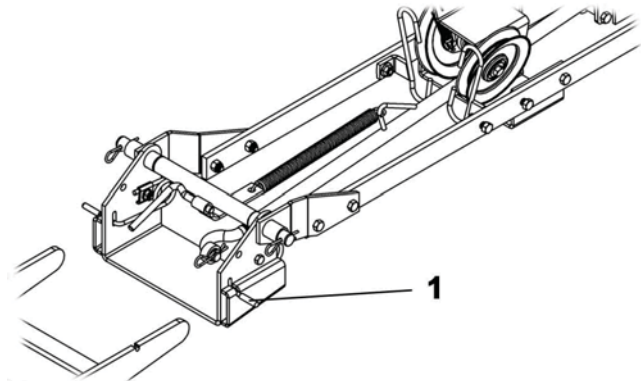


Release tension on the spring f28

A-B-C-D

Attach the rotary broom to the subframe as shown.

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



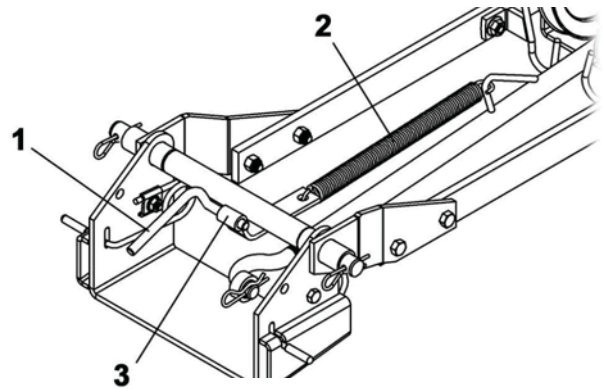
Attach rotary broom to subframe f37

ASSEMBLY

A-B-C-D

Before installing the belt, unhook the spring (item 2) by sliding the spring link (item 3) off the tension arm (item 1).

Put the spring on the ground on the left side.

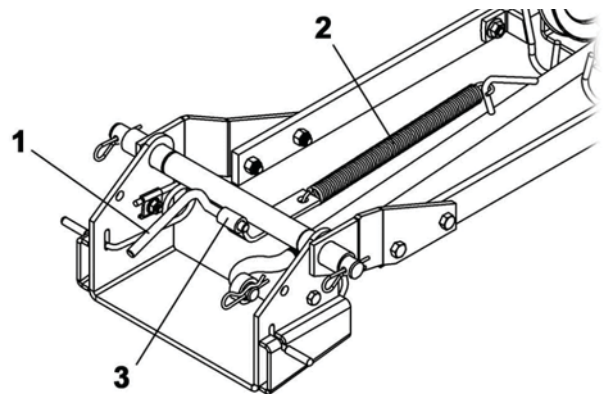


Remove the helper spring f28

E

Before installing the belt, move the tension arm (item 1) forward.

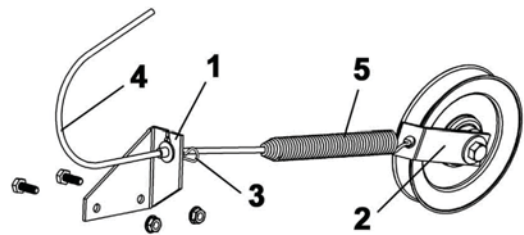
After installing belt, move the arm backwards to apply tension on belt.



Move tension arm f30

G

Before installing the belt, remove the cable (item 4) from the holder (item 1) and unhook the spring (item 5) from the spring link (item 2).



Cable and spring removal f34

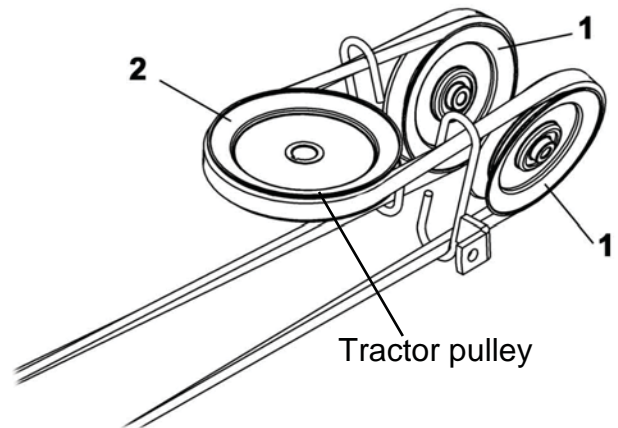
ASSEMBLY

A-B-C-D

Insert the belt under the tractor and place the belt on the subframe pulleys (item 1) and around the tractor's motor pulley (item 2).

Belt should be installed as shown

Re-install the helper spring as previously removed.

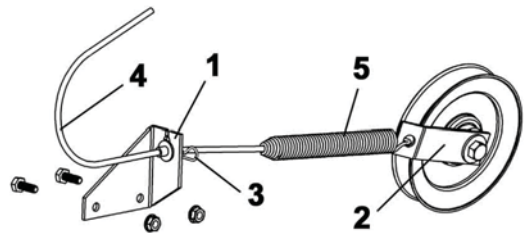


Belt installation f38

G

Hook the spring (item 5) into the spring link (item 2).

Reinstall the cable (item 4) into the cable holder (item 1). Secure with a 2 mm. hair pin (item 3).

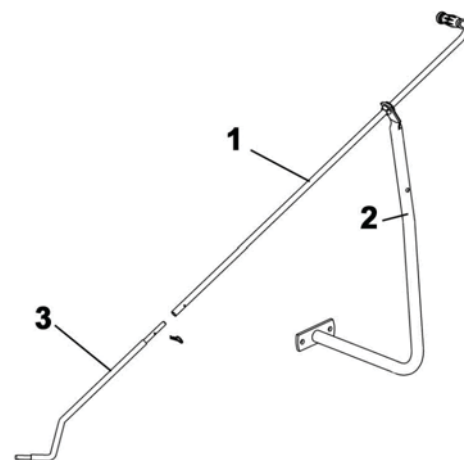


Cable installation f34

A-B-C-D

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.



Handle installation f39

ASSEMBLY

A-B-C-D

Reconnect the engine's spark plug(s).

Adjust the V-Belt. See V-Belt adjustment instructions.

VERIFY BELT ROUTING:

Lower the rotary broom to the ground and let it run for a few seconds under supervision. Disengage the broom and stop the engine. Check the belt to make sure it has not flipped on its side on the pulleys and that it does not touch the belt guides.

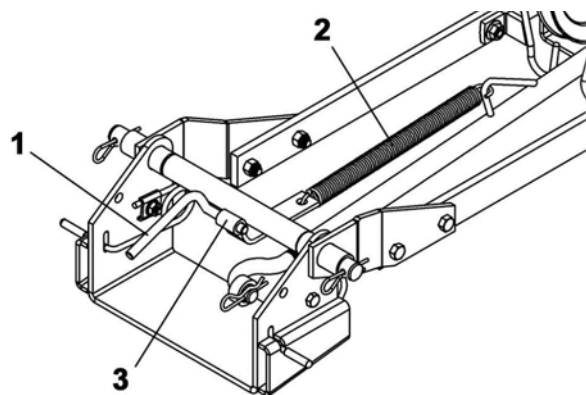
7 CAUTION 7

TO AVOID INJURIES:

Always raise the rotary broom 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.

A-B-C-D

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 to spring #28

VERIFY TIRE PRESSURE:

Attachments should raise 3" to 4" above ground (no more, no less) if not, check and adjust tractor tire pressure as follows:

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

Tire pressure must be even on both sides of tractor.

ASSEMBLY

BLADE INSTALLATION:

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

A-B-C-D

7 WARNING 7

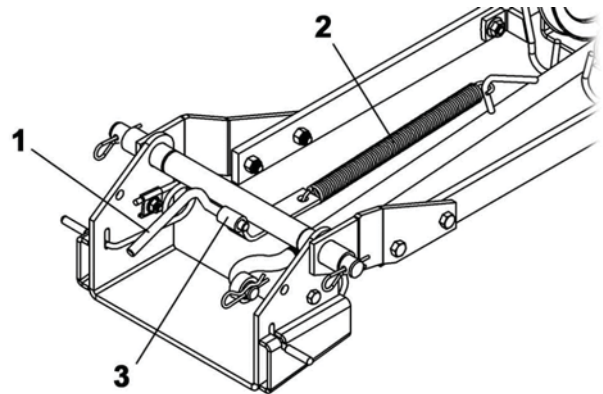
For your security, read the blade owner's manual for security precautions and rules.
Follow the assembly and operation instructions.

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

7 CAUTION 7

To avoid injuries:

Always raise the blade 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.

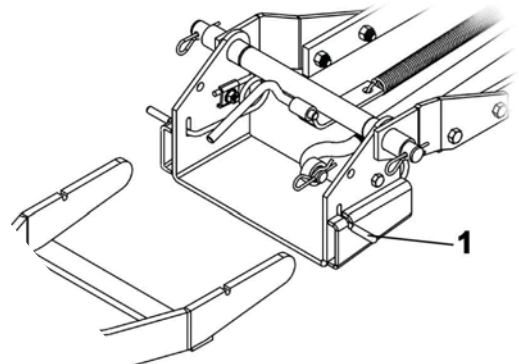


Release tension on spring f28

A-B-C-D

Attach the blade to the subframe as shown.

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



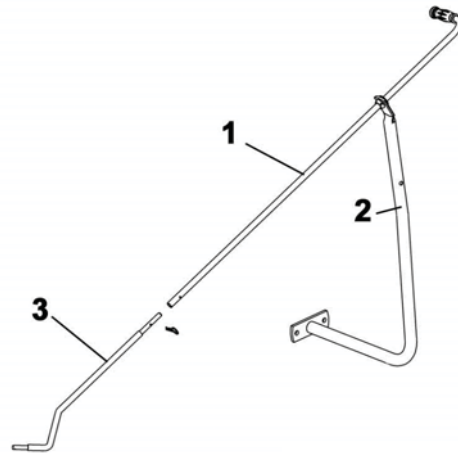
Attach blade to subframe f40

ASSEMBLY

A-B-C-D

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.



Handle installation r39

A-B-C-D

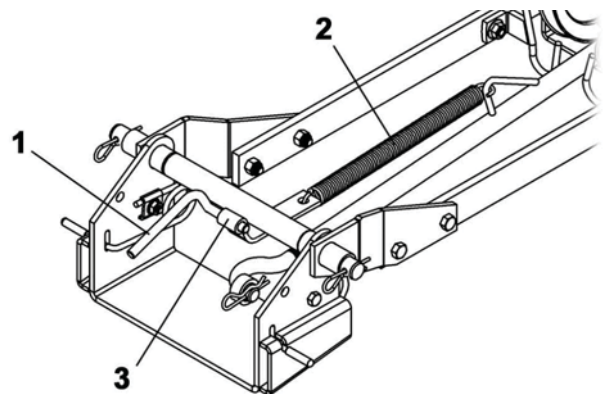
7 CAUTION 7

TO AVOID INJURIES:

Always raise the blade 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.

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 spring r28

VERIFY TIRE PRESSURE:

Attachments should raise 3" to 4" above ground (no more, no less) if not, check and adjust tractor tire pressure as follows:

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

Tire pressure must be even on both sides of tractor.

MAINTENANCE & DISMOUNTING

MAINTENANCE

A-B-C-D

- 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.

V-BELT ADJUSTMENT

E

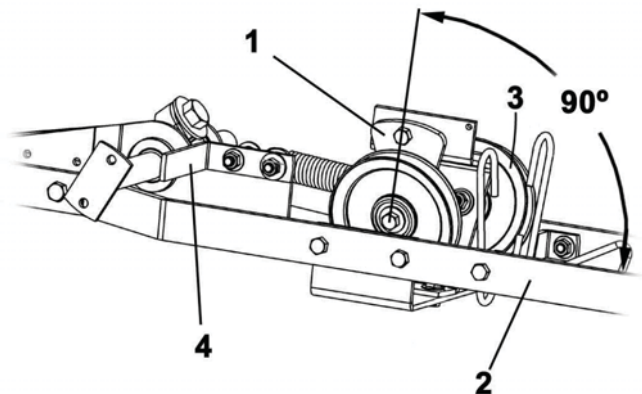
Belt adjustment for a manual P.T.O. clutch, activated by a cable or a rod.

When the clutch mechanism is engaged and the attachment is on the ground, the tension arm (item 1) should be vertical or at approx. 90° with the subframe's flat bars (item 2). If it is not vertical, adjust the tension on the belt by moving the left hand side adjustable pulley (item 3). To adjust, disengage the clutch, then unscrew the bolt in the middle of the pulley. Slide the pulley in the slot and retighten the bolt. Engage the clutch and verify the adjustment. Make sure the tension arm is approx. at 90° with the subframe's flat bars.

F-G

Belt adjustment for electric P.T.O. clutch

When the attachment is on the ground, the tension arm (item 1) should be vertical or at approx. 90° with the subframe's flat bars (item 2). If it is not vertical, release the tension on the belt by moving the tension arm (item 4) towards the front. 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. Slide the pulley in the slot. Tighten the bolt. Apply tension on the belt by moving the tension arm (item 4) towards the rear. Verify the adjustment. Make sure the tension arm is approx. at 90° with the subframe's flat bars.



SUBFRAME DISMOUNTING

A-B-C-D

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

- a) Remove the rear counterweight.
- b) Tractors with a manual clutch, activated by a rod or a cable:

F Models with a rod:

Remove the clutch lever extension and unhook the spring if it is installed.

G Models with a cable:

Remove the cable by removing the hair pin. Pull out the cable and unhook the cable spring.

- c) Dismount the subframe by loosening the 5/8" bolt that attaches the subframe to the tractor's rear tow hitch. Place a piece of wood under the front of the subframe. Release the tension on the helper spring. Remove the hair pins from the 3/4" pivot pin. Remove this pin and carefully lower the front of the subframe. Remove the 5/8" rear bolt and carefully lower the rear of the subframe.
- d) Carefully pull out the subframe by middle of the tractor from the left side between the front and rear wheels.

END OF SEASON STORAGE

A-B-C-D

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

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.

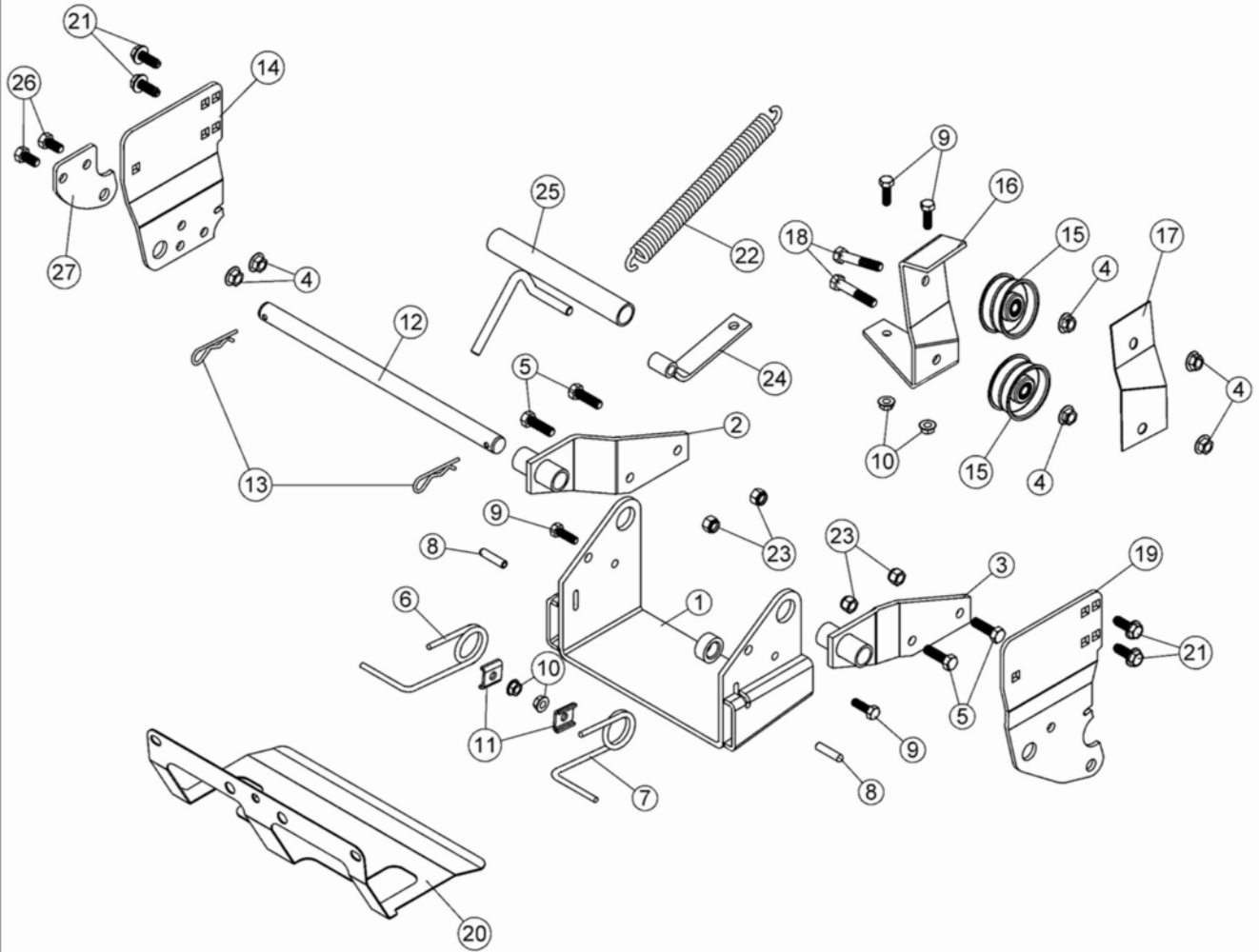
SEE Grade No.		2				5				8 *			
BOLT HEAD IDENTIFICATION MARKS AS PER GRADE- NOTE MANUFACTURING MARKS WILL VARY		TORQUE				TORQUE				TORQUE			
BOLT SIZE		POUNDS FEET		NEWTON-METERS		POUNDS FEET		NEWTON-METERS		POUNDS FEET		NEWTON-METERS	
Inches	Millimetre	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	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
1 1/8"	25.58	-	-	-	-	800	880	1084.8	1193.3	1280	1440	1735.7	1952.6
1 1/4"	31.75	-	-	-	-	1120	1240	1518.7	1681.4	1820	2000	2467.9	2712
1 3/8"	34.93	-	-	-	-	1460	1680	1979.8	2278.1	2380	2720	3227.3	3688.3
1 1/2"	38.1	-	-	-	-	1940	2200	2630.6	2983.2	3160	3560	4285	4827.4

*Thick nuts must be used with grade 8

METRIC BOLT TORQUE SPECIFICATIONS

Size Screw	Grade No.	COARSE THREAD			FINE THREAD		
		Pitch (mm)	Pounds Feet	Newton-Meter	Pitch (mm)	Pounds Feet	Newton-Meters
M 6	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		-	-
M 8	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
M 10	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
M 12	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
M 14	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
M 16	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
M 18	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
M 20	4T	2.50	108-130	146.3-176.2	1.50	132-150	178.9-203.3
	7T		186-205	252-277.8		206-242	279.1-327.9
	8T		213-249	288.6-337.4		246-289	333.3-391.6

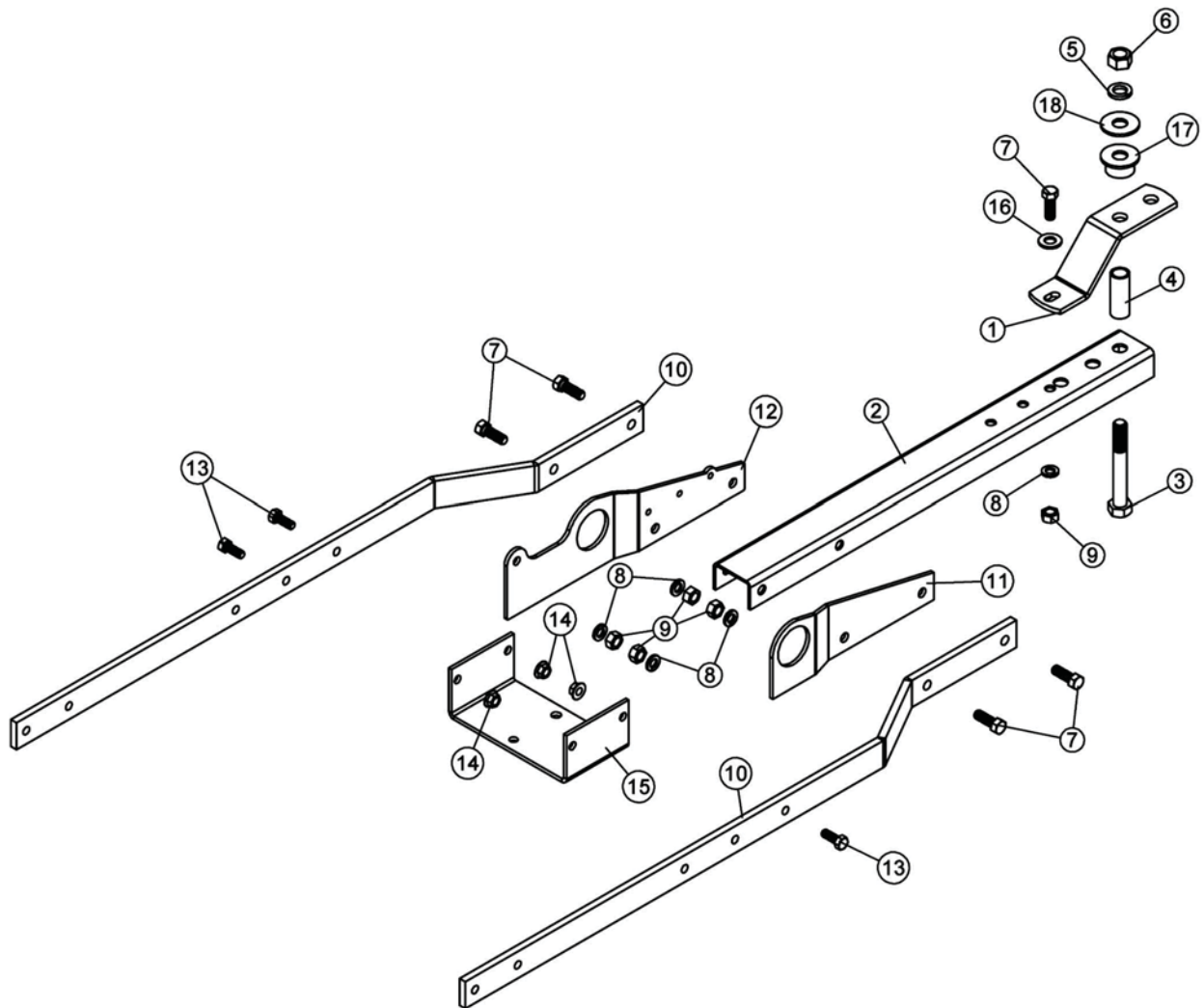
PARTS BREAKDOWN / NOMENCLATURE DES PIÈCES PUSH FRAME / CHÂSSIS DE POUSSÉE



PARTS LIST / LISTE DES PIÈCES

Ref.	Description		Qty.	Part #
1	Pivot support	Support de pivot	1	102655
2	Right front support	Support avant droit	1	102215
3	Left front support	Support avant gauche	1	102220
4	Flange nut 3/8" n.c.	Écrou a bride 3/8" n.c.	6	O/L
5	Hex bolt 3/8" n.c. x 1-1/4"	Boulon hex. 3/8" n.c. x 1 1/4"	4	O/L
6	Spring lock right	Ressort de barrure droit	1	102209
7	Spring lock left	Ressort de barrure gauche	1	102208
8	Handgrip	Poignée	2	102248
9	Hex bolt 5/16" n.c. x 1"	Boulon hex. 5/16" n.c. x 1"	4	O/L
10	Flange nut 5/16" n.c.	Écrou a bride 5/16" n.c.	4	O/L
11	Spring bracket	Fixation du ressort	2	102210
12	Pivot pin	Goupille de pivot	1	102216
13	Hair pin 3mm	Goupille à ressort 3mm	2	102617
14	Right attaching support	Support d'attache droit	1	103358
15	Flat pulley	Poulie plate	2	102057
16	Double pulley support	Support de poulie double	1	103284
17	Idler guard	Garde-poulie	1	103285
18	Hex. bolt 3/8" n.c. x 2"	Boulon hex. 3/8" n.c. x 2"	2	O/L
19	Left attaching support	Support d'attache gauche	1	103167
20	Heat shield	Pare-chaleur	1	103114
21	Thread cutting screws 3/8" n.c. x 1"	Vis a filetage coupante 3/8" n.c. x 1"	4	O/L
22	Spring	Ressort	1	103073
23	Nylon insert lock nut 3/8" n.c.	Ecrou a garniture de nylon 3/8" n.c.	4	O/L
24	Spring link	Lien de ressort	1	103281
25	Tension arm	Bras de tension	1	103286
26	Hex bolt 3/8" n.c. x 3/4"	Boulon hex. 3/8" n.c. x 3/4"	2	O/L
27	Mower bracket	Fixation de tondeuse	1	103113

**PARTS BREAKDOWN / NOMENCLATURE DES PIÈCES
SUBFRAME / SOUS-CHÂSSIS**

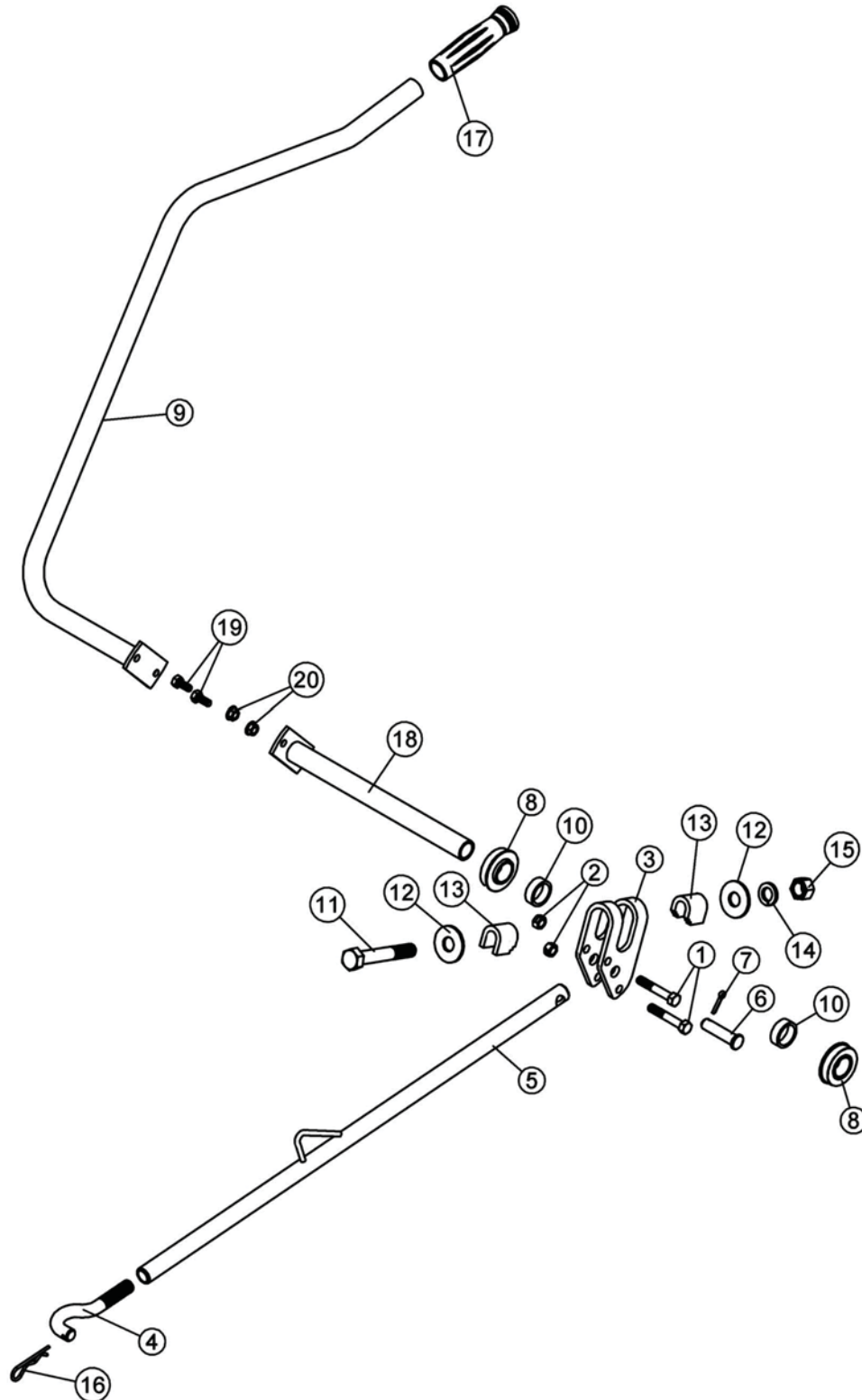


PARTS LIST / LISTE DES PIÈCES

Ref.	Description		Qty.	Part #
1	Hitch plate	Plaque d'attache	1	102064
2	Channel	Profile en u	1	102065
3	Hex bolt 5/8" n.c. x 4 1/2"	Boulon hex. 5/8" n.c. x 4 1/2"	1	O/L
4	Spacer	Douille d'espacement	1	102066
5	Lock washer 5/8"	Rondelle de blocage 5/8"	1	O/L
6	Hex nut 5/8" n.c.	Ecrou hex. 5/8" n.c.	1	O/L
7	Hex bolt 7/16" n.c. x 1 1/4"	Boulon hex. 7/16" n.c. x 1 1/4"	5	O/L
8	Lock washer 7/16"	Rondelle de blocage 7/16"	5	O/L
9	Hex nut 7/16" n.c.	Ecrou hex. 7/16" n.c.	5	O/L
10	Subframe flat bar	Fer plat du sous-chassis	2	102214
11	Left lift support	Support de relevage gauche	1	102068
12	Right lift support	Support de relevage droit	1	102411
13	Hex bolt 3/8" n.c. x 1"	Boulon hex. 3/8" n.c. x 1"	3	O/L
14	Flange nut 3/8" n.c.	Écrou a bride 3/8" n.c.	3	O/L
15	Support plate	Plaque de support	1	102070
16	Flat washer 1/2" hole	Rondelle plate 1/2" trou	1	O/L
17	Flange sleeve	Douille a bride	1	102636
18	Flat washer 11/16" hole	Rondelle plate 11/16" trou	1	O/L

O/L=Obtain locally / Obtenir localement

**PARTS BREAKDOWN / NOMENCLATURE DES PIÈCES
LIFT MECHANISM ASSEMBLY /
LEVIER DE RELEVAGE ASSEMBLÉ**

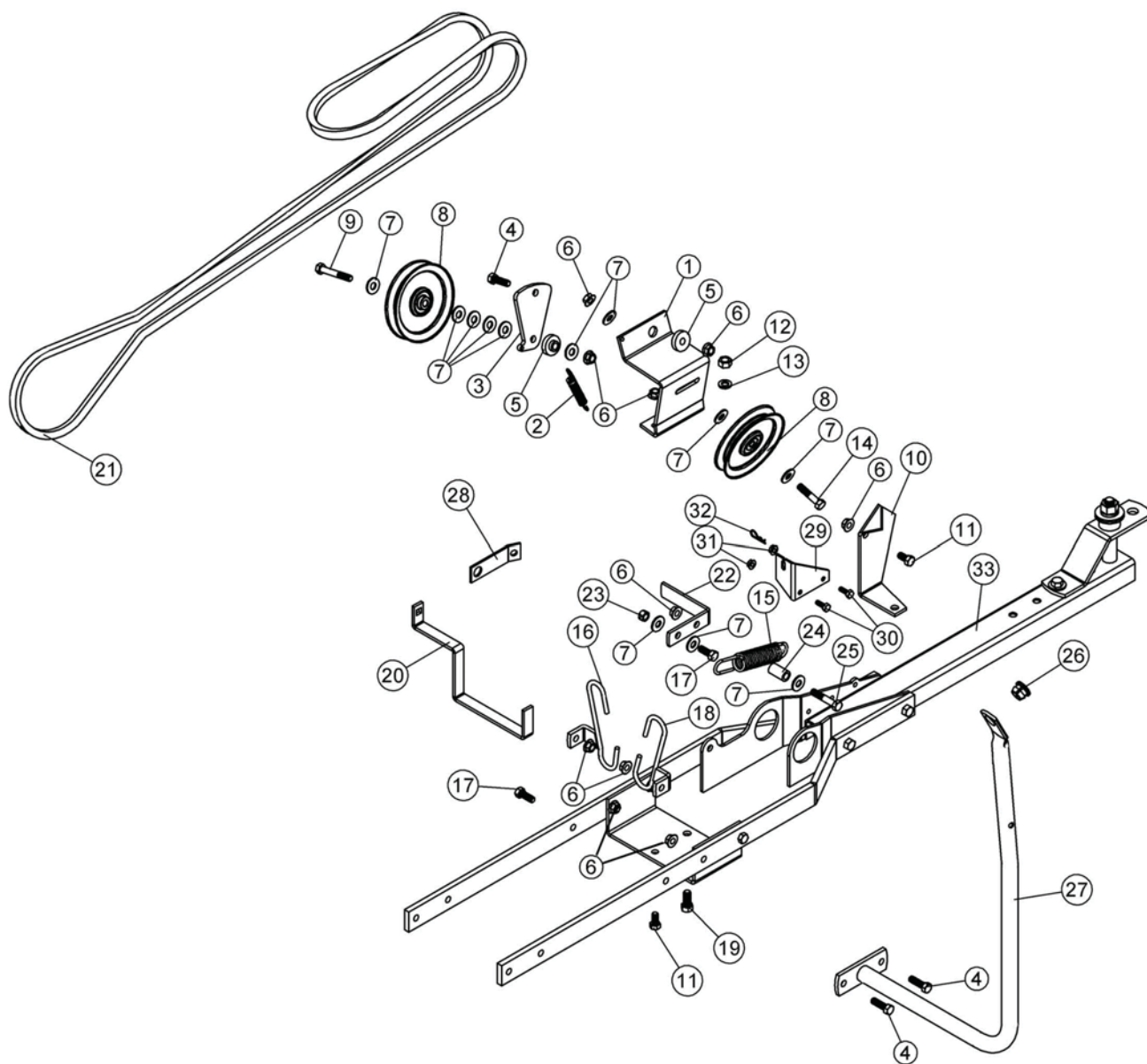


PARTS LIST / LISTE DES PIÈCES

Ref.	Description		Qty.	Part #
1	Hex bolt 3/8" n.c. x 2 1/4"	Boulon hex. 3/8" n.c. x 2 1/4"	2	O/L
2	Stover lock nut 3/8" n.c.	Ecrou de blocage 3/8" n.c.	2	O/L
3	Lift lever	Levier de relevage	1	103287
4	Adjusting rod	Tige d'ajustement	1	102653
5	Push tube	Tube de poussée	1	103279
6	Pin 0.53" x 2.13"	Goupille 0.53" x 2.13"	1	102079
7	Cotter pin 5/32" x 1"	Goupille fendue 5/32" x 1"	1	O/L
8	Freeway bearing 1"	Roulement utilitaire 1"	2	102075
9	Lift arm	Bras de relevage	1	102656
10	Spacer	Douille d'espacement	2	102077
11	Hex bolt 5/8" n.c. x 4"	Boulon hex. 5/8" n.c. x 4"	1	O/L
12	Flat washer 11/16" hole	Rondelle plate 11/16" trou	2	O/L
13	Lever lock	Barrure de levier	2	102078
14	Lock washer 5/8"	Rondelle de blocage 5/8"	1	O/L
15	Hex nut 5/8" n.c.	Ecrou hex. 5/8" n.c.	1	O/L
16	Hair pin 3mm	Goupille à ressort 3mm	1	102617
17	Handgrip	Poignée de plastique	1	102025
18	Lift arm extention	Extention de bras de relevage	1	102406
19	Hex bolt 5/16" n.c. x 3/4"	Boulon hex. 5/16" n.c. x 3/4"	2	O/L
20	Flange nut 5/16" n.c.	Écrou a bride 5/16" n.c.	2	O/L

O/L=Obtain locally / Obtenir localement

**PARTS BREAKDOWN / NOMENCLATURE DES PIÈCES
DRIVE MECHANISM / MÉCANISME D'ENTRÂINEMENT**



PARTS LIST / LISTE DES PIÈCES

Ref.	Description		Qty.	Part #
1	Pulley support	Support de poulie	1	102082
2	Spring 1/2	Ressort 1/2	1	102003
3	Idler arm	Bras de poulie	1	102089
4	Hex bolt 3/8" n.c. x 1-1/4"	Boulon hex. 3/8" n.c. x 1 1/4"	3	O/L
5	Flange washer	Rondelle à bride	2	102081
6	Flange nut 3/8" n.c.	Écrou a bride 3/8" n.c.	9	O/L
7	Flat washer 7/16" hole	Rondelle plate 7/16" trou	12	O/L
8	"V" Pulley	Poulie en "V"	2	102086
9	Hex bolt 3/8" n.c. x 2 1/2"	Boulon hex 3/8" n.c. x 2 1/2"	1	O/L
10	Clutch lever	Levier d'embrayage	1	102085
11	Hex bolt 3/8" n.c. x 3/4"	Boulon hex. 3/8" n.c. x 3/4"	2	O/L
12	Hex nut 7/16" n.c.	Ecrou hex. 7/16" n.c.	1	O/L
13	Lock washer 7/16"	Rondelle de blocage 7/16"	1	O/L
14	Hex bolt 3/8" n.c. x 1-3/4"	Boulon hex. 3/8" n.c. x 1 3/4"	1	O/L
15	Spring 1 1/8	Ressort 1 1/8	1	102004
16	Belt guide	Guide-courroie	1	102240
17	Hex bolt 3/8" n.c. x 1"	Boulon hex. 3/8" n.c. x 1"	2	O/L
18	Belt guide	Guide-courroie	1	102083
19	Hex bolt 7/16" n.c. x 1"	Boulon hex. 7/16" n.c. x 1"	1	O/L
20	Belt guide	Guide-courroie	1	103297
21	V-Belt , B-120	Courroie en V , B-120	1	102048
22	Tension arm	Bras de tension	1	102412
23	Stover lock nut 3/8" n.c.	Ecrou de blocage 3/8" n.c.	1	O/L
24	Sleeve	Douille	1	102418

O/L=Obtain locally / Obtenir localement

PARTS LIST / LISTE DES PIÈCES

Ref.	Description		Qty.	Part #
25	Hex. bolt 3/8" n.c. x 2"	Boulon hex. 3/8" n.c. x 2"	1	O/L
26	Plastic grommet	Oeillet de plastique	1	102063
27	Handle support	Support de manivelle	1	102243
28	Spring link	Lien de ressort	1	103066
29	Cable holder	Fixation de cable	1	103065
30	Hex bolt 1/4" n.c. x 3/4"	Boulon hex. 1/4" n.c. x 3/4"	2	O/L
31	Flange nut 1/4" n.c.	Ecrou a bride 1/4" n.c.	2	O/L
32	Hair pin 2mm	Goupille a ressort 2mm	1	102430
33	Subframe	Sous-chassis	1	Ref

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