



2010 The BOSS Way  
Iron Mountain, MI 49801  
United States

# Owner's Manual

## 48in Broom Kit Snowrator MAG

Part No. BRX25175—Serial No. 400000000 and Up





g000502

Figure 2

1. Safety-alert symbol

# Introduction

The broom attachment is used to sweep walkways and driveways of dirt or snow. Read this information carefully to learn how to operate and maintain your product properly and to avoid injury and product damage. You are responsible for operating the product properly and safely.

You may contact Boss directly at [www.BossPlow.com](http://www.BossPlow.com) for product safety and operation training materials, accessory information, help finding a dealer, or to register your product.

Whenever you need service, genuine Boss parts, or additional information, contact an Authorized Service Dealer or Boss Customer Service and have the model and serial numbers of your product ready. Figure 1 identifies the location of the model and serial numbers on the product. Write the numbers in the space provided.

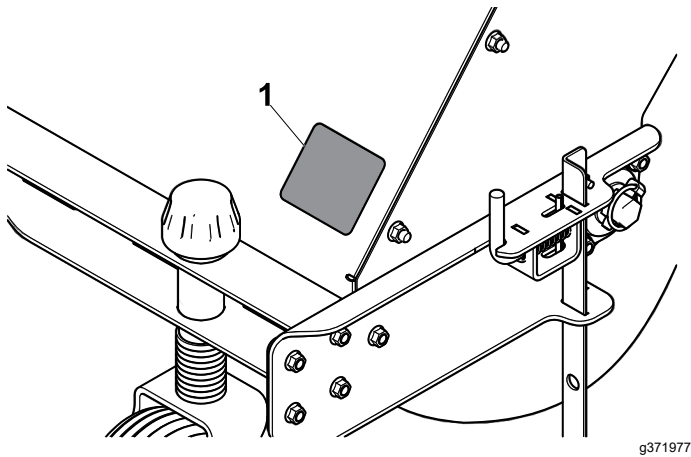


Figure 1

g371977

1. Model and serial number plate

Write the product model and serial numbers in the space below:

<p>Model No. _____</p> <p>Serial No. _____</p>
--

This manual identifies potential hazards and has safety messages identified by the safety-alert symbol (Figure 2), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.

This manual uses 2 words to highlight information. **Important** calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

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# Safety

**Read and understand the contents of this manual before the engine is first started.**

**Improperly using or maintaining this machine could result in injury or death. To reduce this potential, comply with the following safety instructions.**

## General Safety

This product is capable of amputating hands and feet and of throwing objects. Always follow all safety instructions to avoid serious personal injury.

- Read and understand the contents of this *Owner's Manual* before starting the engine.
- Do not put your hands or feet near moving components of the machine.
- Do not operate the machine without all guards and other safety protective devices in place and functioning properly on the machine.
- Keep clear of the discharge opening.
- Keep bystanders and children out of the operating area. Do not allow children to operate the machine. Allow only people who are responsible, trained, familiar with the instructions, and physically capable to operate the machine.
- Stop the machine, shut off the engine, and remove the ignition key before servicing, fueling, or unclogging the machine.

Improperly using or maintaining this machine can result in injury. To reduce the potential for injury, comply with these safety instructions and always pay attention to the safety-alert symbol ▲, which means Caution, Warning, or Danger—personal safety instruction. Failure to comply with these instructions may result in personal injury or death.

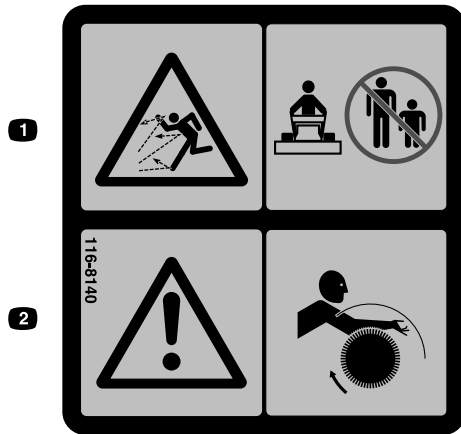
## Operation

- Never allow children or untrained people to operate the machine. Local regulations may restrict the age of the operator. The owner is responsible for training all operators and mechanics.
- The owner/operator can prevent and is responsible for accidents that may cause personal injury or property damage.
- Wear appropriate clothing, including eye protection; long pants; substantial, slip-resistant footwear; and hearing protection; also wear a dust mask in dusty conditions. Tie back long hair and do not wear loose clothing or loose jewelry.
- Become familiar with the safe operation of the equipment, operator controls, and safety signs.
- Shut off the engine, remove the key, and wait for all moving parts to stop before leaving the operator's position. Allow the machine to cool before servicing, adjusting, fueling, cleaning, or storing it.
- Know how to stop the machine and shut off the engine quickly.
- Inspect the area where you will use the machine and remove all objects that the machine could throw.
- Evaluate the terrain to determine the appropriate equipment and any attachments or accessories required to operate the machine properly and safely.

# Safety and Instructional Decals



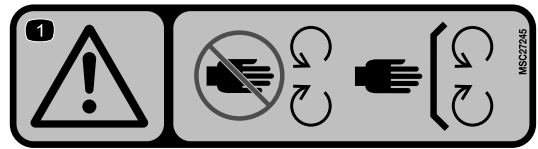
Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or missing.



**116-8140**

decal116-8140

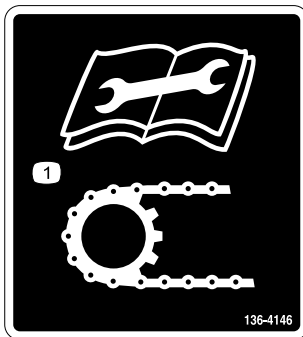
1. Thrown object hazard—Do not operate when people and pets are in the area.
2. Warning—Entanglement hazard—stay clear of the rotating broom.



**MSC27245**

decalmsc27245

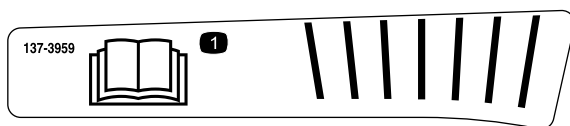
1. Warning—stay away from moving parts; keep all guards and shields in place



**136-4146**

decal136-4146

1. Read the *Operator's Manual* before performing maintenance on the chain.



**137-3959**

decal137-3959

1. Read the *Operator's Manual*.

# Setup

## Positioning the Casters

1. Rotate the caster-cap to remove from the shaft.
2. Remove the caster assembly from the frame.
3. Remove 1 or more spacers.

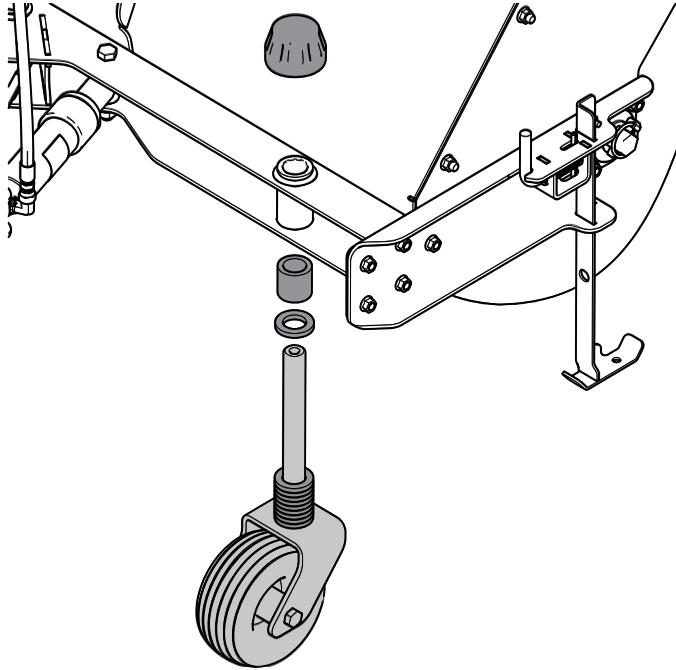


Figure 3

g372000

4. Put the caster assembly in the installed position.
5. Place the removed spacers between the broom frame and the cap.
6. Hold the caster assembly and the tighten cap.

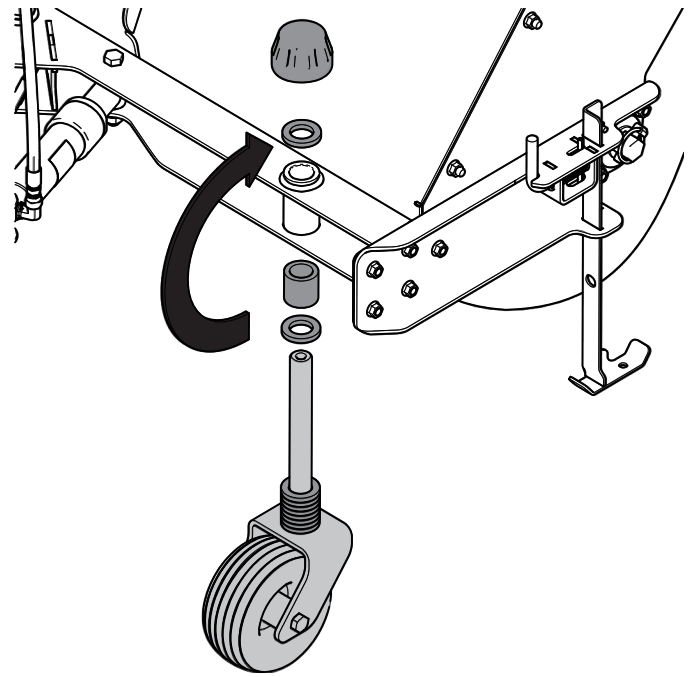


Figure 4

g372001

## Installing the Broom to the Machine

1. Place the broom on a level floor with the kick stands in the down position; refer to [Using the Kickstands \(page 9\)](#).
2. Pull the coupler pins outward and rotate 90° to lock in the disengaged position.

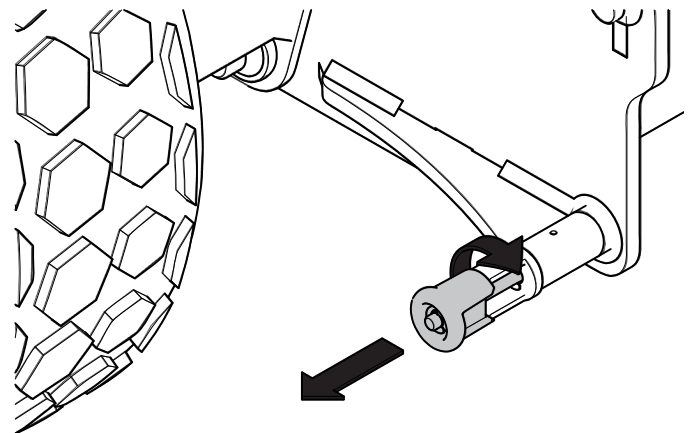


Figure 5

g371989

3. Make sure that the hydraulic hoses do not block the broom attachment point.
4. Start the machine.
5. Lower the coupler with the hydraulic controls.

6. Slowly move the machine towards the broom and raise the coupler upwards until the broom hooks onto the coupler.

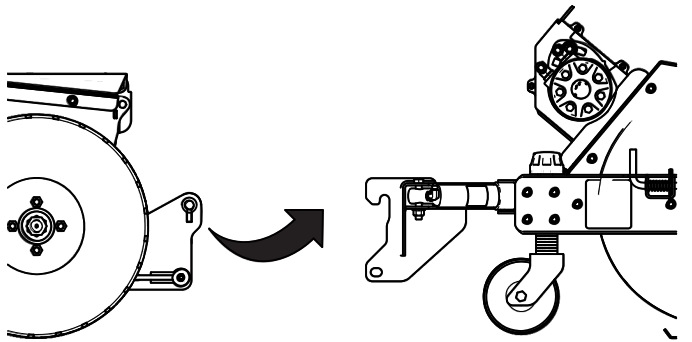


Figure 6

7. Rotate the coupler-pin 90° so that it engages with the broom assembly.

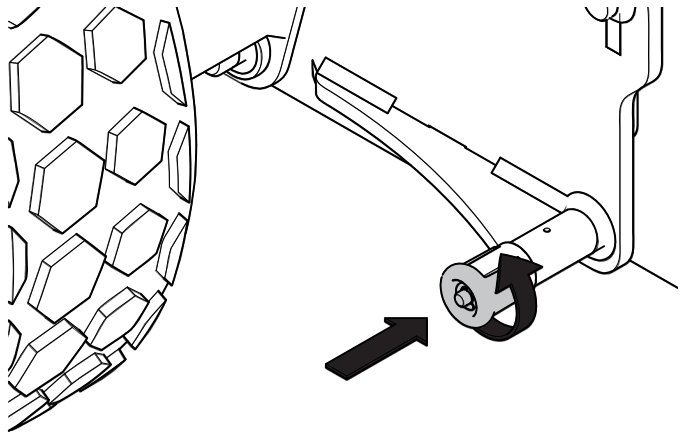


Figure 7

8. Lower the attachment coupler until the broom kickstands rest on the ground.
9. Shut off the machine.
10. Route the hoses from the motor to the high flow connectors on the front of the machine.

**Note:** Do not engage the high flow pump without the broom hydraulic hoses attached.

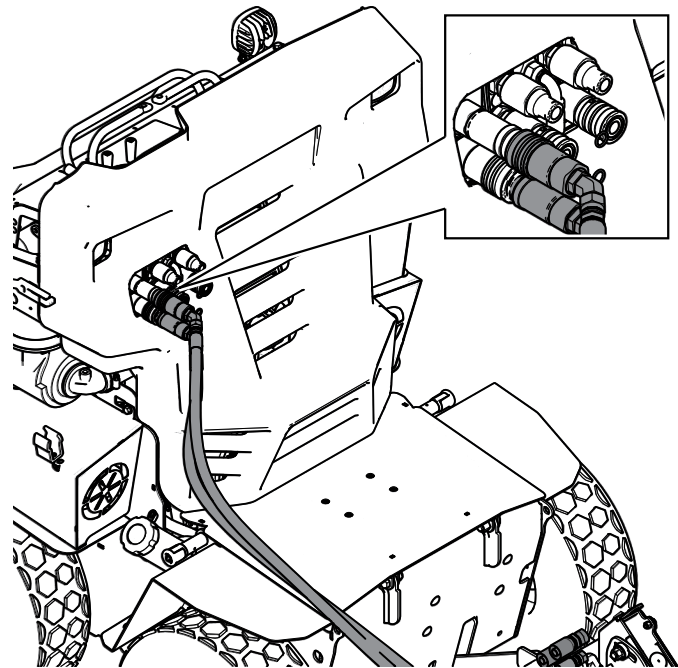


Figure 8

11. Attach the motor hoses to the right side of the machine with the hook-and-loop fastener.
12. Connect the hydraulic cylinder hoses to the low flow connector on the front of the machine.

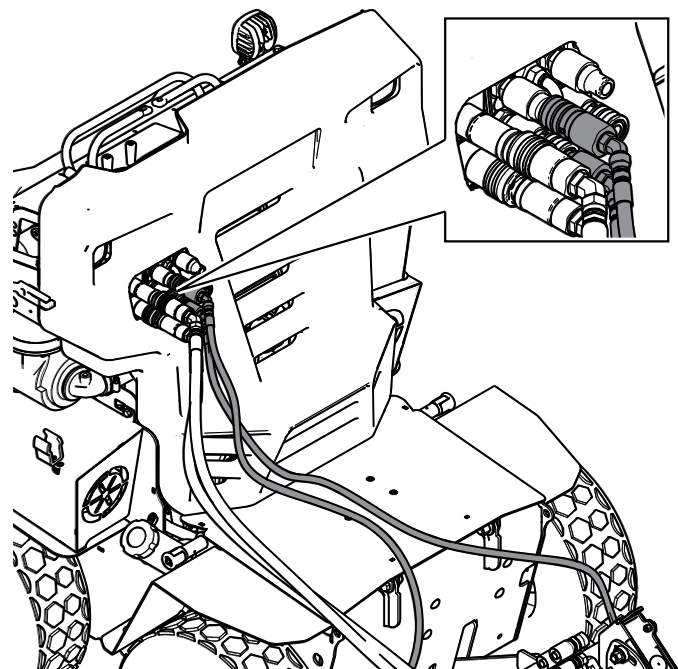
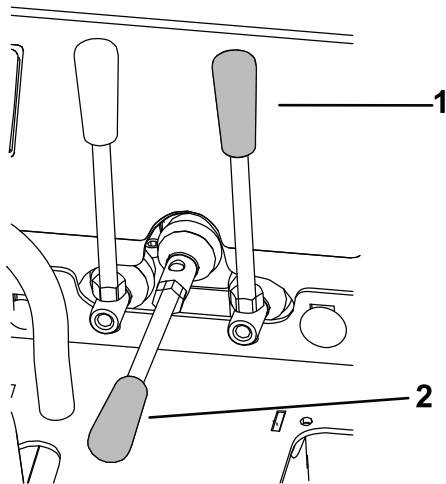


Figure 9

# Product Overview

## Controls

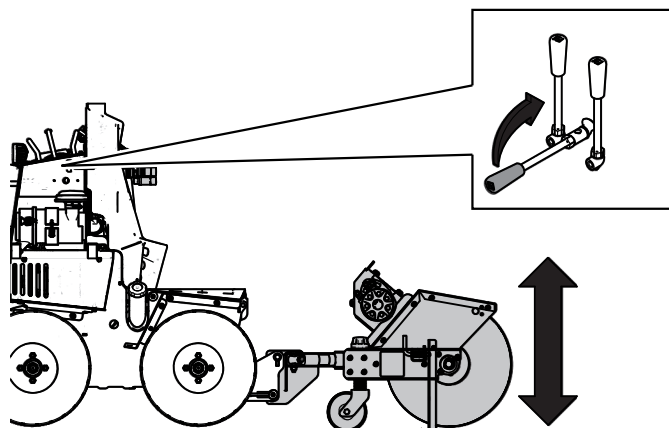


**Figure 10**

g370669

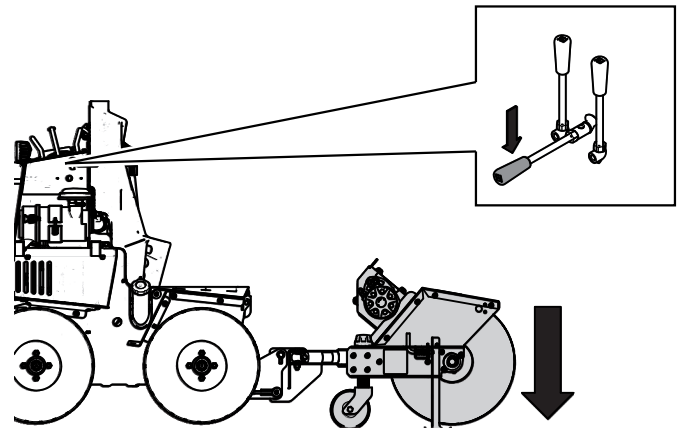
1. Angle lever

2. Attachment coupler lever

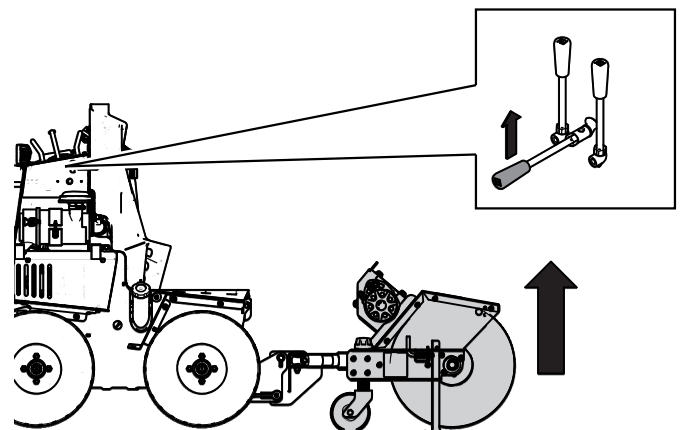


**Figure 11**

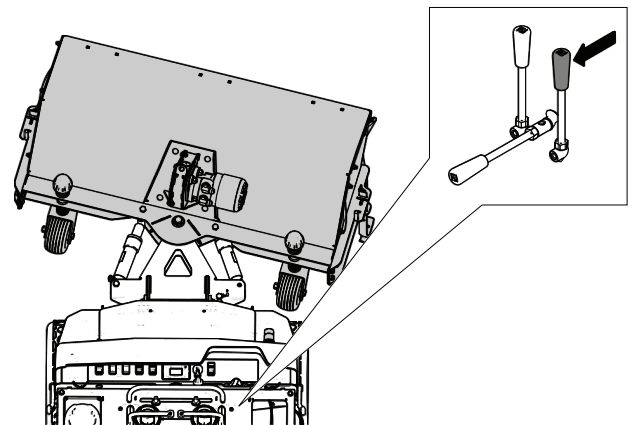
Float



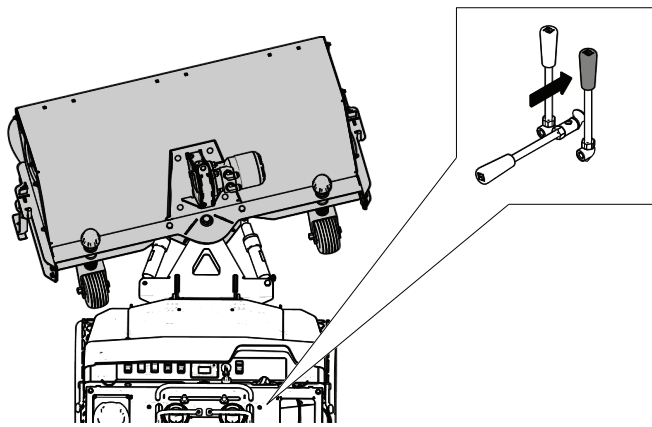
**Figure 12**  
Lower broom



**Figure 13**  
Raise broom

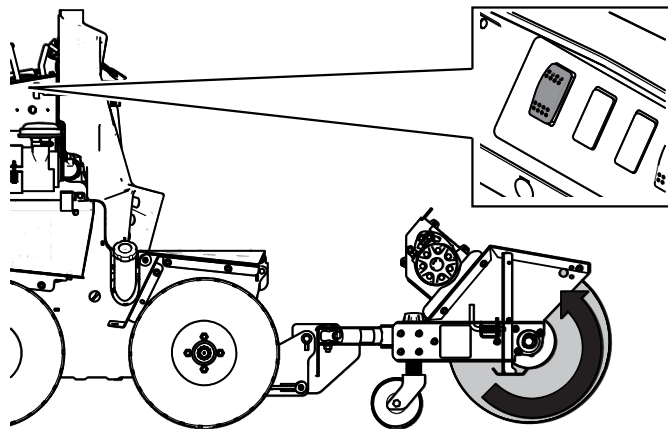


**Figure 14**  
Right angle



**Figure 15**  
Left angle

g372374



**Figure 16**  
Bristle operation

g374194

# Operation

## Operating the Broom

### **⚠ DANGER**

When the machine is in operation, contact with a rotating broom can result in serious personal injury to you or bystanders.

- Before adjusting, cleaning, inspecting, troubleshooting, or repairing the machine, shut off the engine and wait for all moving parts to stop. Remove the key to prevent someone from accidentally starting the engine.
- Stay behind the handles and away from the broom while operating the machine.
- Keep your face, hands, feet, and any other part of your body or clothing away from concealed, moving, or rotating parts.

### **⚠ WARNING**

The rotating broom can throw stones and other foreign objects, causing serious personal injury to you or bystanders.

- Keep the working area clear and free of all objects that the broom could pick up and throw.
- Keep bystanders away.

## Checking the Sweeping Path

**Service Interval:** Before each use or daily

A broom sweeps with the tips of its bristles. When you apply too much downward pressure, the broom no longer uses its tips; the broom is now working with the sides of the bristles. This limits the flicking action of the bristles and sweeping effectiveness, decreasing the service life of the broom.

1. Drive to a flat, dusty or snowy area and stop the machine.
2. Engage the broom, lower it to the ground to sweep away some snow or debris, and then raise it.
3. Disengage the broom and shut off the machine.
4. Wait for all moving parts to stop before leaving the operating position.



5. Make sure that the area swept equals the length of the broom and a maximum width of 51 to 102 mm (2 to 4 inches) as shown in [Figure 17](#).

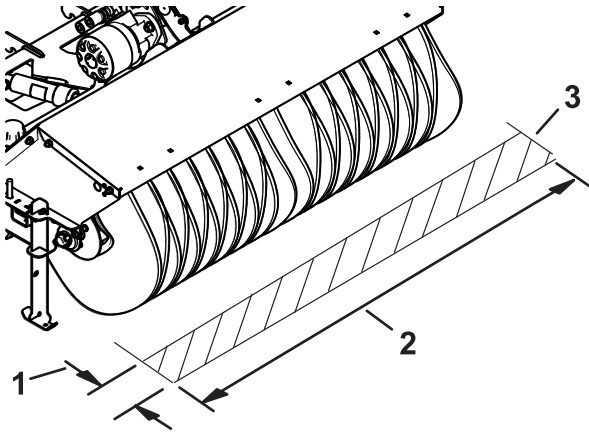


Figure 17

1. 51 to 102 mm (2 to 4 inches) maximum width
2. Length of broom
3. Swept area

6. If the width of the sweep area is incorrect, adjust the casters; Refer to [Positioning the Casters](#) (page 5)

## Using the Kickstands

**Important:** Do not operate the machine with the kickstands down.

1. Park the machine on a level surface, disengage the broom, move the motion-control levers to the NEUTRAL-LOCK position, and engage the parking brake.
2. Shut off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Pull the kickstand handle rearward and lower the kickstand.

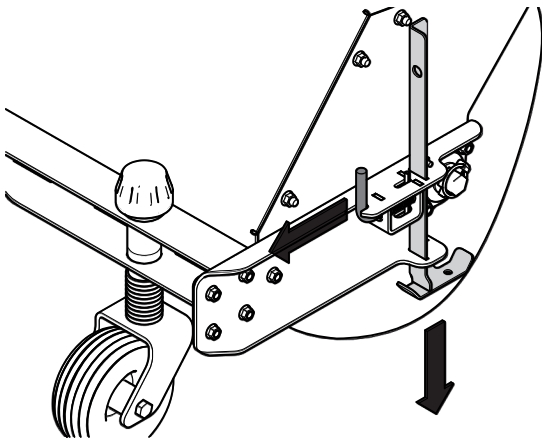


Figure 18

4. Align the kickstand handle with the hole in the kickstand and release the handle.

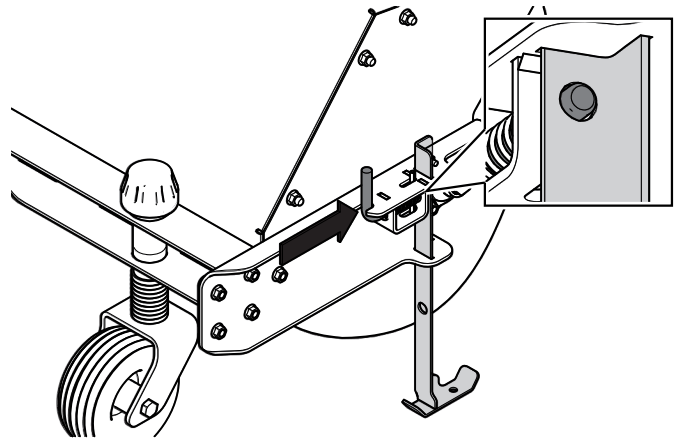


Figure 19

g372005

g375757

## Clearing a Clogged Broom

### ⚠ WARNING

The rotating broom could cause serious injury.

Shut off the machine and allow all rotating parts to stop before cleaning the broom.

1. Stay in the operating position and release the left traction-drive lever.
2. While engaging the broom, raise the broom above the ground.

If you cannot unclog the broom by lifting it into the air, clear the broom as follows:

1. Park the machine on a level surface, disengage the broom, move the motion-control levers to the NEUTRAL-LOCK position, and engage the parking brake.
2. Shut off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. While wearing thickly-padded gloves, use caution to manually clear foreign objects out of the broom.

### ⚠ CAUTION

Sharp objects can become entangled in the bristles and can cause personal injury.

Wear gloves and use caution when cleaning foreign objects out of the broom; never use your bare hands.

g372004

## Removing the Broom

1. Park the machine on a level surface, disengage the broom, move the motion-control levers to the NEUTRAL-LOCK position, and engage the parking brake.
2. Shut off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Lower the kickstands on the broom; refer to [Using the Kickstands \(page 9\)](#).
4. Disconnect the hoses from the low-flow assembly and connect the hoses together.
5. Disconnect the hoses from the high-flow assembly and connect the hoses together.
6. Move the broom hoses away from the machine.
7. Disengage each coupler-pin on the machine.

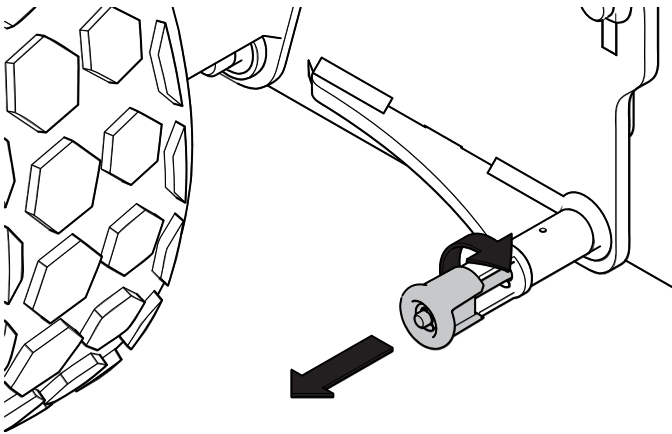


Figure 20

g372126

## Operating Tips

- Become familiar with the area being swept. Hidden obstructions such as curbs and pipes can damage the broom and/or machine.
- Do not let snow accumulate; always sweep with the storm.
- Always sweep at a safe speed. Sweeping at excessive speeds can cause debris to pile up in front of the broom, causing it to bulldoze instead of sweep. This can damage the broom.
- Do not change broom position while sweeping.
- Make sure the kickstands are raised before sweeping.
- More pressure does not give a better sweep. It will wear out the broom faster.
- A level broom lasts longer.
- For more sweeping tips, visit [www.BossPlow.com](http://www.BossPlow.com).

8. Lower the coupler and move the machine rearward from the broom.

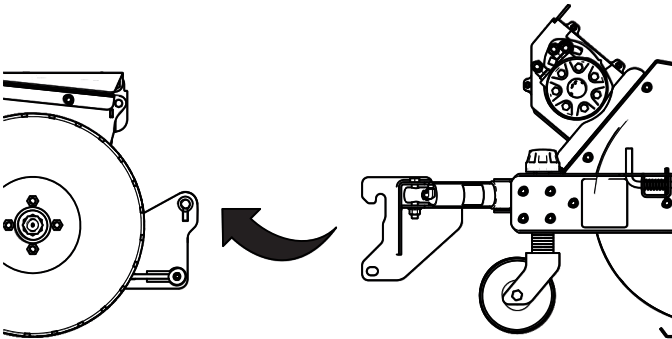


Figure 21

g372127

9. Arrange the hydraulic hoses on the broom and off the ground.

# Maintenance

## Recommended Maintenance Schedule(s)

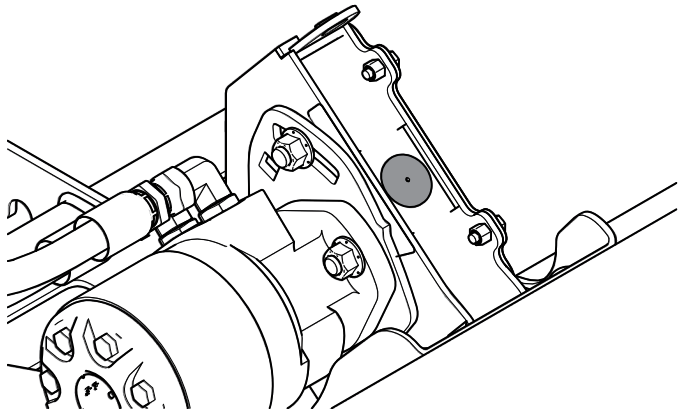
Maintenance Service Interval	Maintenance Procedure
Before each use or daily	<ul style="list-style-type: none"><li>• Check the sweeping path.</li><li>• Oil the chain.</li><li>• Check the hydraulic fluid.</li></ul>
Every 25 hours	<ul style="list-style-type: none"><li>• Grease the caster wheels.</li></ul>
Every 40 hours	<ul style="list-style-type: none"><li>• Check the chain tension.</li></ul>
Before storage	<ul style="list-style-type: none"><li>• Oil the chain.</li><li>• Clean the machine.</li></ul>

## Oiling the Chain

**Service Interval:** Before each use or daily  
Before storage

Use Boss Snowrator Hydraulic Fluid or SAE 20 oil.

1. Raise the broom all the way up using the hydraulic controls.
2. Lower the kickstands; refer to [Using the Kickstands \(page 9\)](#).
3. Remove the rubber plug on the chain housing and insert it into the housing with the cup side up.



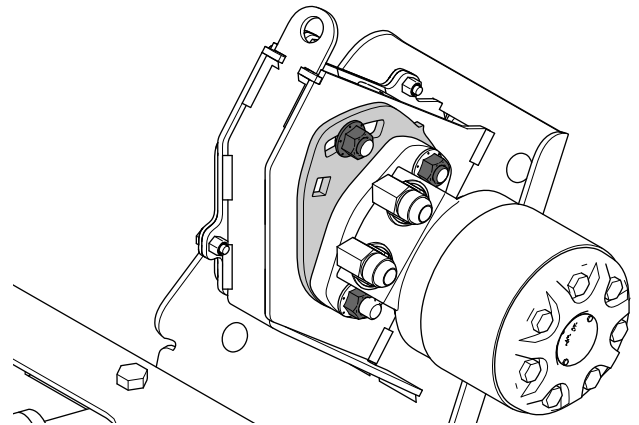
**Figure 22**

4. Fill the rubber plug with oil.
5. Start the machine and run it at low idle.
6. Operate the broom at low idle until the plug is out of oil.
7. Remove the plug and install it with the flat face up to prevent it from filling with debris during operation.

## Tensioning the Chain

**Service Interval:** Every 40 hours

1. Raise the broom all the way up using the hydraulic controls.
2. Lower the kickstands; refer to [Using the Kickstands \(page 9\)](#).
3. Loosen, but do not remove, the 3 mounting bolts on the broom motor until the motor can pivot on the lower bolt.



**Figure 23**

4. Rotate the cam adjuster counterclockwise with a 1/2 inch torque wrench until it is torqued to 54 N·m (40 ft-lbs).

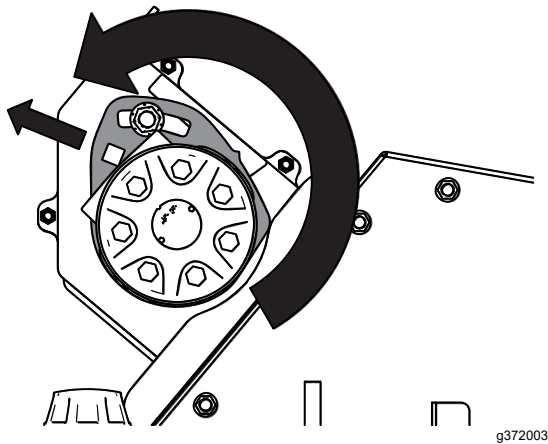


Figure 24

5. Torque the 3 mounting bolts to 102 N·m (75 ft·lb).

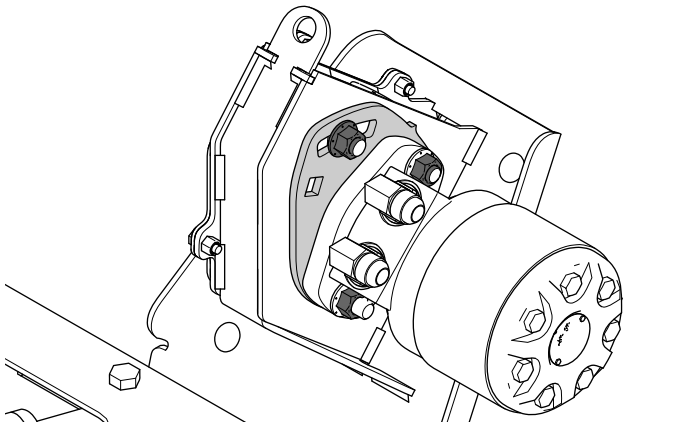


Figure 25

## Greasing the Caster Wheels

**Service Interval:** Every 25 hours

1. Raise the broom all the way up using the hydraulic controls.
2. Lower the kickstands; refer to [Using the Kickstands \(page 9\)](#).
3. Grease each caster.
4. Clean casters of any excess grease.

## Replacing the Bristles

Replace the bristles when they are worn to a 33 cm (13 inch) diameter from the original 51 cm (20 inch) diameter.

**Note:** Replace all bristles at the same time; otherwise, a mix of old and new bristles will reduce performance.

**Note:** One side shown; other side similar.

1. Park the machine on a level surface, disengage the broom, move the motion-control levers outward to the NEUTRAL-LOCK position, and , engage the parking brake.
2. Shut off the engine and remove the key.
3. Lower the kickstands; refer to [Using the Kickstands \(page 9\)](#).
4. Remove the lynch pin.

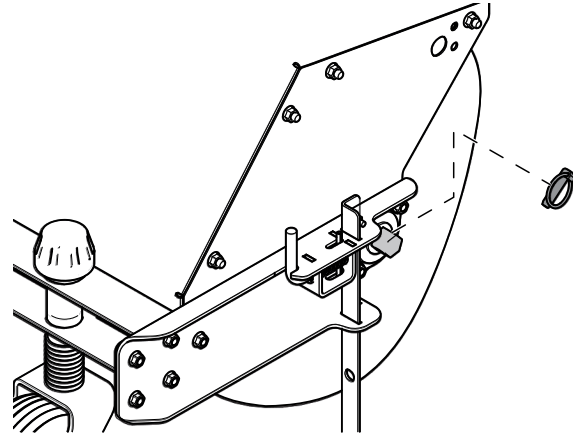


Figure 26

5. Remove the 5 carriage bolts (3/8 x 1 inch) and 5 nuts (3/8 inch) from the side bracket.

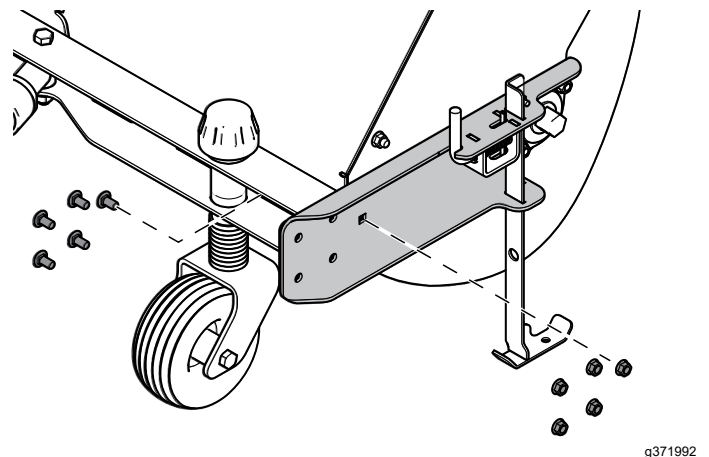


Figure 27

6. Remove the 2 carriage bolts (3/8 x 1 inch), 2 nuts (3/8 inch), and side bracket from the broom assembly.

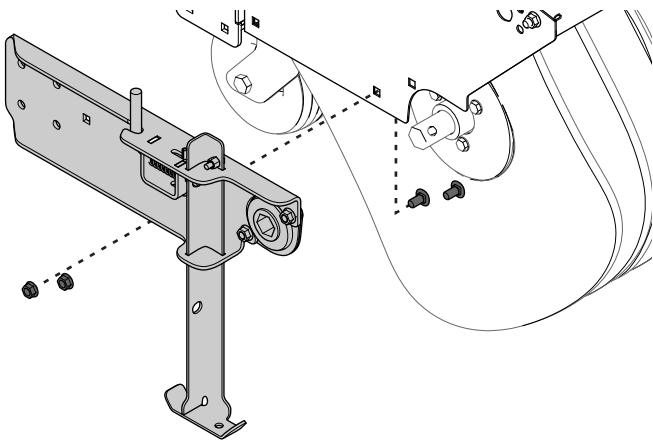


Figure 28

g371993

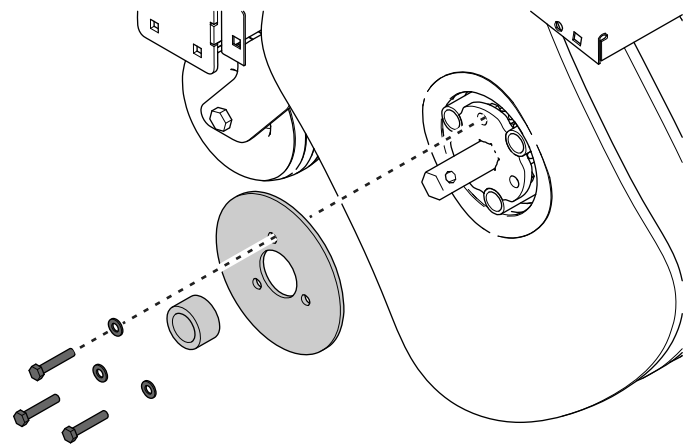


Figure 31

g371995

7. Remove the 4 carriage bolts (3/8 x 3/4 inch), 4 nuts (3/8 inch), and side plate from broom assembly.

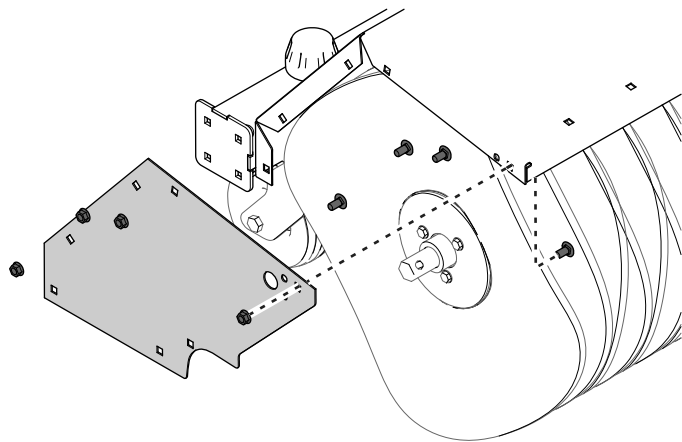


Figure 29

g371994

10. Remove the bristles from the carrier.
11. Put new bristles on the carrier with the 2 pins straddling a rod of the carrier.

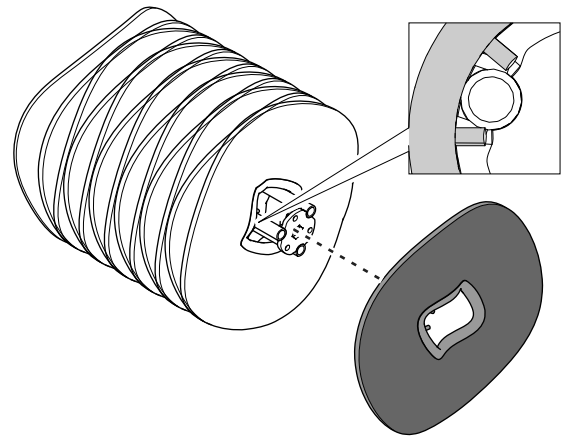


Figure 32

g371997

8. Remove bristle carrier from broom assembly.

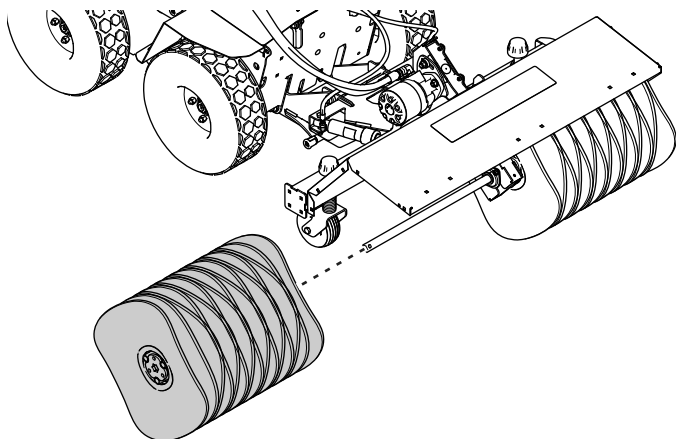


Figure 30

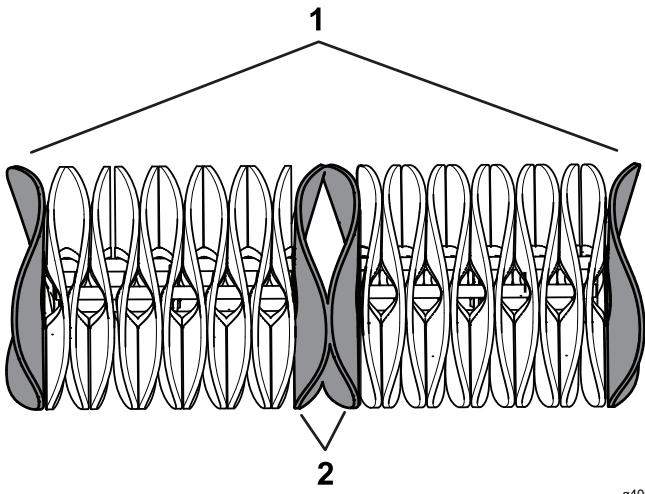
g371996

12. Alternate the orientation of the bristles as shown.

**Note:** If the orientation of the bristles is not alternated, it may be difficult to install the retaining plate.

The inner and outer brush-assembly bristles are flatter than the bristles on the other brushes.

9. Remove the 3 bolts (5/16 x 1-3/4 inches), 3 washers (5/16 inch), bushing, and retaining plate from the bristle carrier.

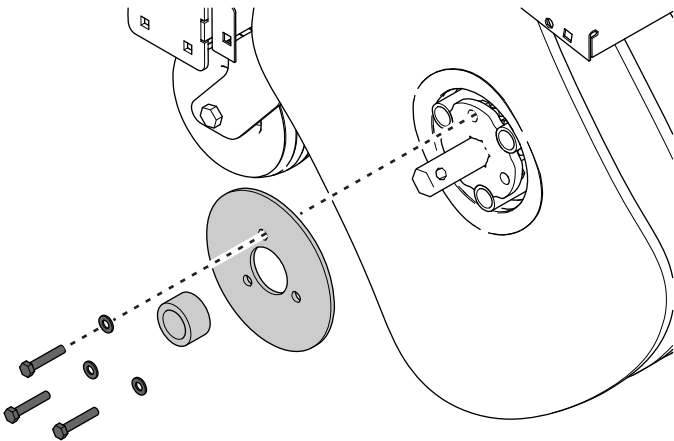


**Figure 33**

g400546

1. Outer rings
2. Inner rings

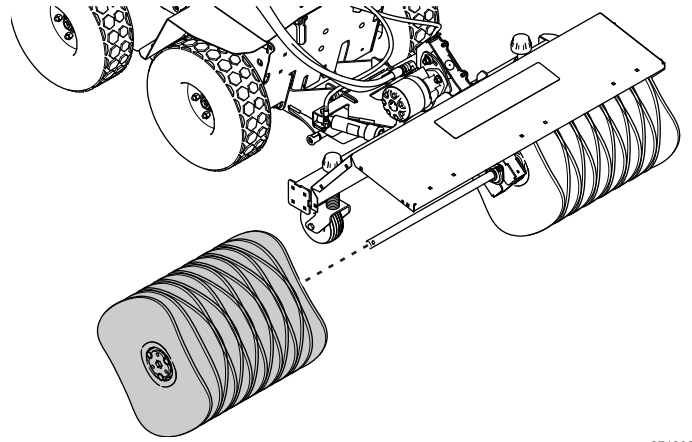
13. Install the 3 bolts (5/16 x 1-3/4 inches), 3 washers (5/16 inch), bushing, and retaining plate to the bristle carrier. Torque the 3 bolts to 23 N·m (17 ft-lbs).



**Figure 34**

g371995

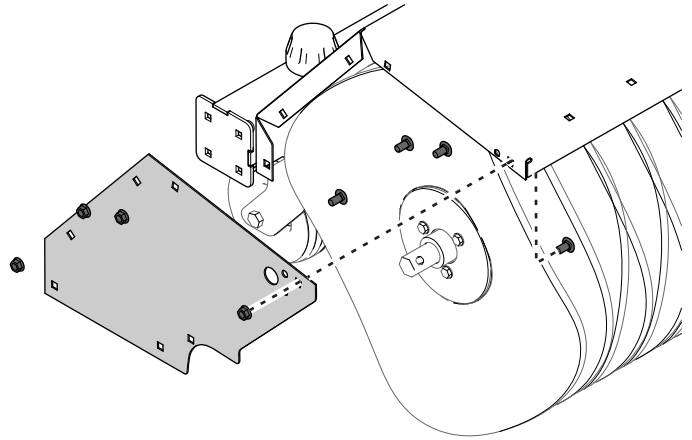
14. Slide the carrier and new bristles on the broom assembly.



**Figure 35**

g371996

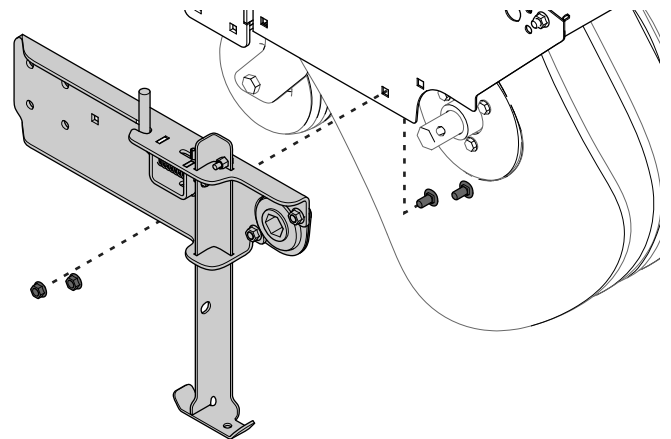
15. Install the 4 carriage bolts (3/8 x 3/4 inch), 4 nuts (3/8 inch), and side plate to broom assembly. Torque the 4 nuts to 41 N·m (30 ft-lbs).



**Figure 36**

g371994

16. Install the 2 carriage bolts (3/8 x 1 inch), 2 nuts (3/8 inch), and side bracket to the broom assembly. Do not torque the nuts at this time.



**Figure 37**

g371993

17. Install the 5 carriage bolts (3/8 x 1 inch) and 5 nuts (3/8 inch) to the side bracket. Torque the 5 nuts from this step and 2 nuts from the previous step to 41 N·m (30 ft-lbs).

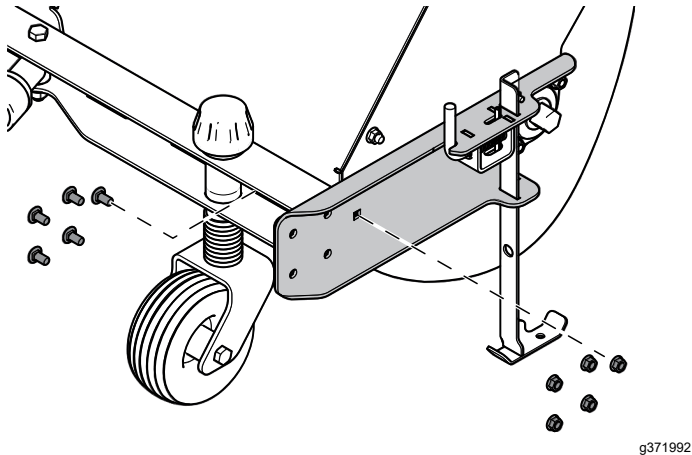


Figure 38

18. Install the lynch pin to the bristle carrier shaft.

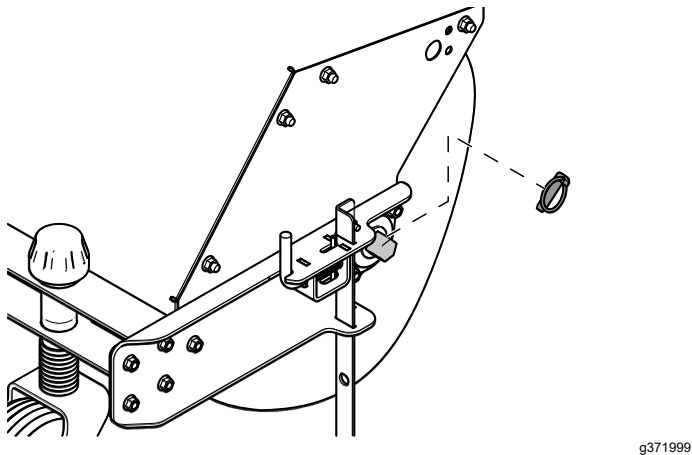


Figure 39

## Storage

1. Park the machine on a level surface, engage the parking brake, and move the motion-control levers outward to the NEUTRAL-LOCK position.
2. Shut off the engine and remove the key.
3. Lower the kickstands so that the bristles are not touching the ground; refer to [Using the Kickstands \(page 9\)](#).  
**Note:** The bristles will become deformed and the broom will be out of alignment if the bristles are touching the ground for an extended period of time.
4. Disconnect the hoses from the low-flow assembly and connect the hoses together.
5. Disconnect the hoses from the high-flow assembly and connect the hoses together.
6. Cover the couplers of the high-flow and low-flow assemblies using caps or a bag.
7. Oil the chain; refer to [Oiling the Chain \(page 11\)](#).
8. Thoroughly clean the broom and ensure that it is free of all caustic chemicals and/or residue.
9. Check and tighten all bolts, nuts, and screws. Repair or replace any part that is damaged or defective.
10. Paint all scratched or bare metal surfaces. Paint is available from your Authorized Service Dealer.
11. Store the broom in a clean, dry garage or storage area. Cover it to protect it and keep it clean.

## Checking the Hydraulic Fluid Level

**Service Interval:** Before each use or daily

Refer to the *Operator's Manual*.



# Troubleshooting

<b>Problem</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
The broom does not clean the surface.	<ol style="list-style-type: none"><li>1. The broom height is incorrect.</li><li>2. The tire pressure in the drive tires is not correct.</li><li>3. You are cleaning too much debris at one time.</li></ol>	<ol style="list-style-type: none"><li>1. Adjust the broom height.</li><li>2. Adjust the tire pressure in the drive tires.</li><li>3. Slow down and clear smaller areas of debris.</li></ol>
The broom does not rotate.	<ol style="list-style-type: none"><li>1. The broom is clogged.</li><li>2. The broom drive lever is not engaged.</li><li>3. The drive chain is loose.</li></ol>	<ol style="list-style-type: none"><li>1. Unclog the broom.</li><li>2. Engage the broom drive lever.</li><li>3. Adjust the motor chain tension.</li></ol>
The broom wears out prematurely.	<ol style="list-style-type: none"><li>1. You are using the incorrect broom height.</li></ol>	<ol style="list-style-type: none"><li>1. Adjust the broom height.</li></ol>