



2010 The BOSS Way  
Iron Mountain, MI 49801  
United States

# Owner's Manual

## Snow Bucket Kit Snowrator MAG

Part No. SNR25890—Serial No. 400000000 and Up



BOSS Products limited consumer warranty and BOSS Products commercial warranty policies are located at [www.bossplow.com](http://www.bossplow.com).

Patents [www.ttcopats.com](http://www.ttcopats.com).

# Introduction

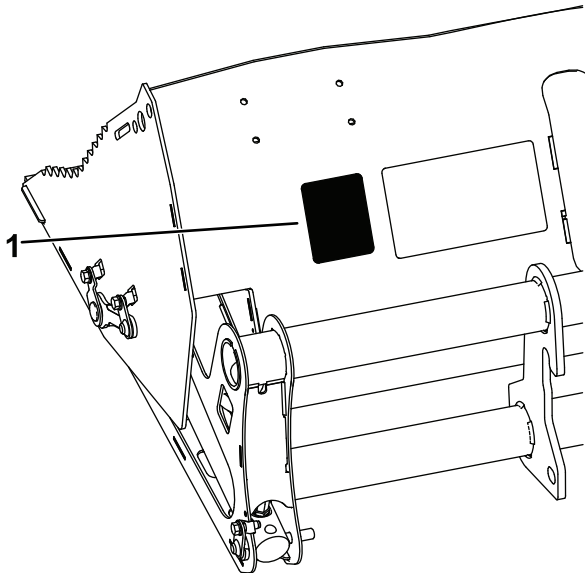
**Note:** This snow bucket attaches to the Snowrator MAG.

The snow bucket is intended to be used on a BOSS stand-on, multi-purpose machine. The bucket is designed to hydraulically change its angle as needed for material removal and transportation. Using this product for purposes other than its intended use could prove dangerous to you and bystanders.

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.

Visit [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 BOSS Dealer or BOSS Technical Service (1-800-286-4155) 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**

g542607

Date Purchased	_____
Model No.	_____
Serial No.	_____
Blade Crate Serial No.	_____

## Safety-Alert Symbol

The safety-alert symbol (**Figure 2**) shown in this manual and on the machine identifies important safety messages that you must follow to prevent accidents.



g000502

**Figure 2**  
Safety-alert symbol

The safety-alert symbol appears above information that alerts you to unsafe actions or situations and is followed by the word **DANGER**, **WARNING**, or **CAUTION**.

**DANGER** indicates an imminently hazardous situation which, if not avoided, **will** result in death or serious injury.

**WARNING** indicates a potentially hazardous situation which, if not avoided, **could** result in death or serious injury.

**CAUTION** indicates a potentially hazardous situation which, if not avoided, **may** result in minor or moderate injury.

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

1. Model and serial number location

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# Safety

Improper use or maintenance by the operator or owner 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 the instruction may result in personal injury or death.

## Preparation

- Read the *Owner's Manual* before operating or servicing the bucket.
- Ensure that only trained personnel installs and performs maintenance on the equipment and hydraulic components.
- Always wear appropriate personal protective equipment when loading, unloading, and servicing the bucket.

## Operation

- Use a 500 kg (1/2 ton) minimum lifting device to move heavy bucket components.
- Do not exceed 3 kp/h (2 mph) while operating.
- Do not exceed 91 kg (200 lb) of weight in the bucket.
- Never put any part of your body between the bucket and the vehicle.
- Wear appropriate clothing, including hearing and eye protection, protective gloves, and substantial, slip-resistant footwear. Tie back long hair, secure loose clothing, and do not wear loose jewelry.
- When transporting the bucket, ensure that it is properly secured. Instructions are available at [www.bosspow.com](http://www.bosspow.com).
- When transporting the vehicle, position the bucket so as not to block your vision or headlights.
- Do not change the bucket position when traveling.
- Always lower the bucket when the vehicle is not in use.
- Do not operate the machine while ill, tired, or under the influence of alcohol or drugs.
- Refer to the *Owner's Manual* for proper parking procedures.
- Turn the vehicle and bucket off before filling, servicing, or cleaning it.
- Do not climb into or ride on the bucket.
- Keep your hands, feet, and clothing away from moving parts and mounting points.
- Use your full attention while operating the machine. Do not engage in any activity that

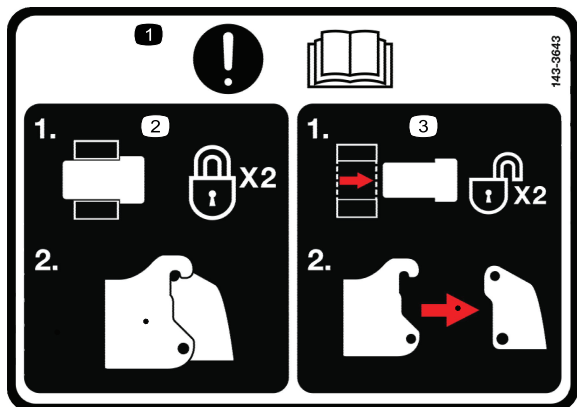
causes distractions; otherwise, injury or property damage may occur.

- Do not operate the bucket within 8 m (25 ft) of bystanders.

## 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.



143-3643

1. Attention—read the *Owner's Manual*.
2. Ensure that the coupler pins are locked in place when using an attachment.
3. Unlock the coupler pins to remove an attachment.



### 143-3752

decal143-3752

1. Warning—read the *Owner's Manual*.
2. Warning—all operators should be trained before operating the machine.
3. Warning—coupler must be locked before using the bucket.
4. Warning—coupler must be unlocked to remove the bucket.
5. Warning—shut off the engine, remove the key, and read the *Owner's Manual* before performing maintenance.
6. Crushing hazard—do not stand between the bucket and vehicle during maintenance.
7. Warning—do not exceed 3 km/h (2 mph) when using the bucket.
8. Warning—do not exceed the bucket capacity of 91 kg (200 lb).
9. Warning—lower the bucket when the machine is not in use.

# Setup

## Mounting the Bucket

1. Park the machine on a level surface.
2. Pull the coupler pins outward and rotate 90° to lock in the disengaged position.

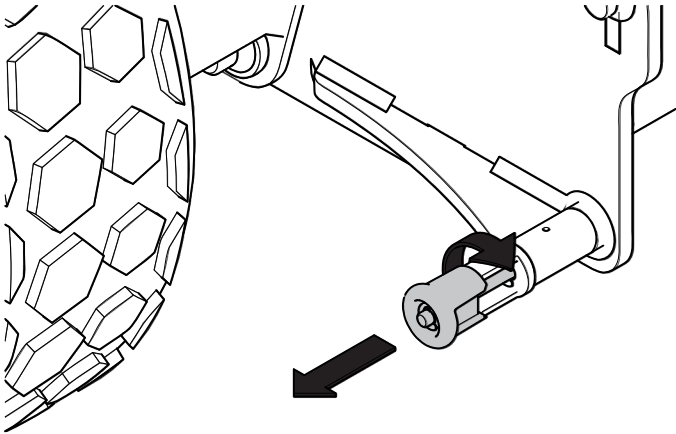


Figure 3

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3. Make sure that the hydraulic hoses do not block the bucket attachment point.
4. Start the machine.
5. Slowly drive forward until the coupler meets the bucket hooks. Raise the coupler to hook it onto the bucket.

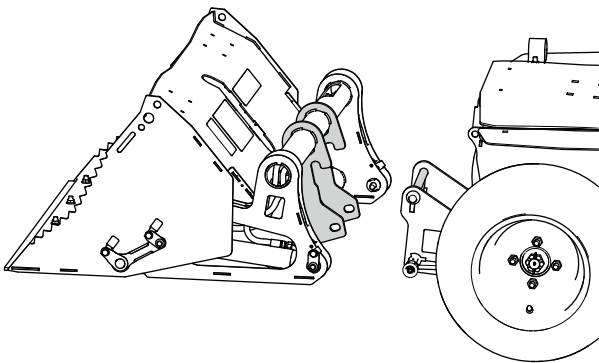


Figure 4

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6. Rotate the coupler pin 90° so that it engages with the bucket assembly.

**Note:** Ensure that the coupler pin also inserts through the hole in the pin channel on the bucket coupler.

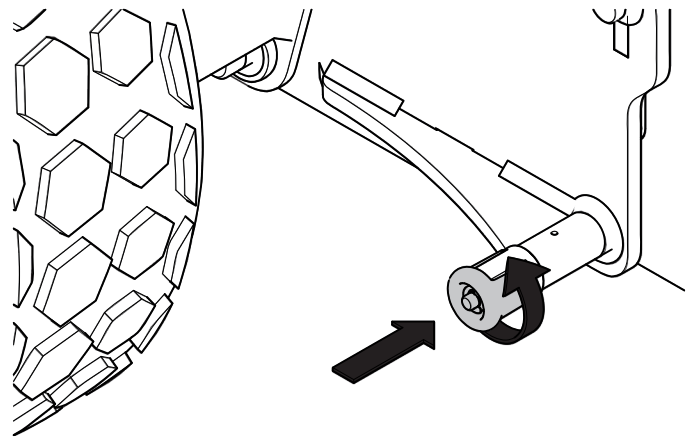


Figure 5

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7. Lower the attachment coupler until the bucket rests on the ground.
8. Shut off the machine engine, wait for all moving parts to stop, ensure that the parking brake is engaged, and remove the key.
9. Route the hydraulic hoses from the bucket, through the hose strap, to the middle connections on the machine.

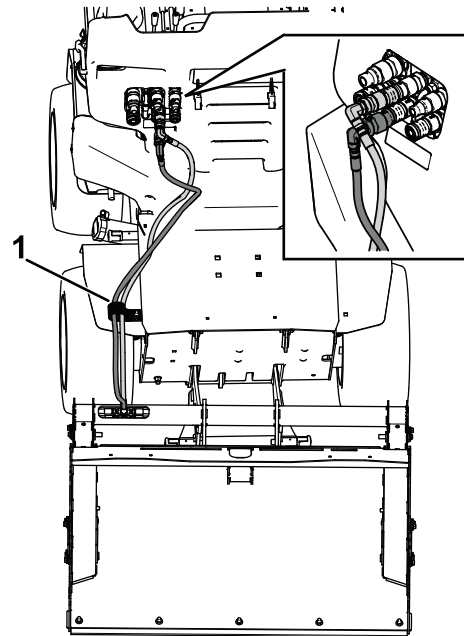


Figure 6

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1. Hose strap

10. Start the machine.
11. Use the controls to move the bucket in all directions to cycle the hydraulic fluid.
12. Lower the bucket and shut off the machine.

## **⚠ WARNING**

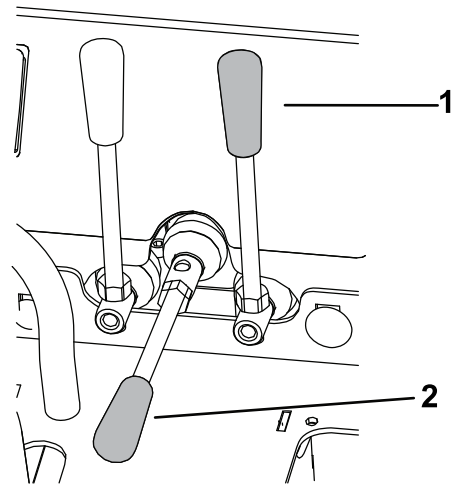
Hydraulic fluid escaping under pressure can penetrate skin and cause injury.

- If hydraulic fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type of injury. Gangrene may result if this is not done.
- Keep your body and hands away from pinhole leaks or nozzles that eject high-pressure hydraulic fluid.
- Use cardboard or paper to find hydraulic leaks.
- Safely relieve all pressure in the hydraulic system before performing any work on the hydraulic system.
- Make sure that all hydraulic-fluid hoses are in good condition, and all that the hydraulic connections and fittings are tight before applying pressure to the hydraulic system.

13. Check and fill the hydraulic fluid; refer to the machine *Owner's Manual*.

# Product Overview

## Controls



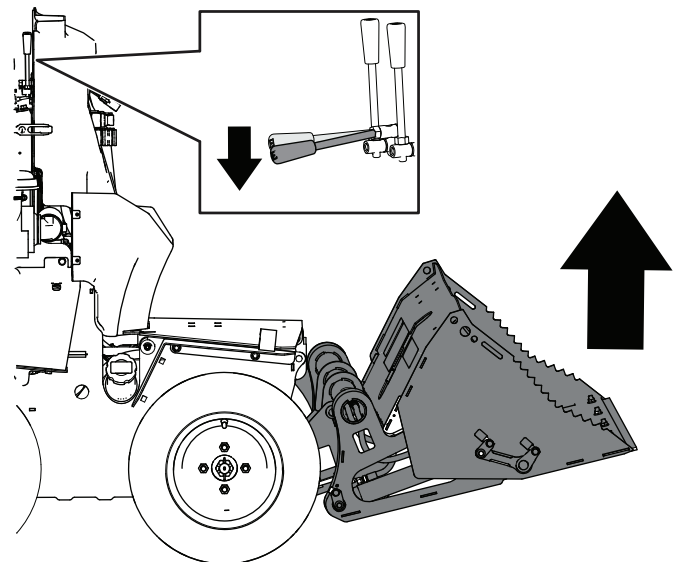
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**Figure 7**

1. Angle lever

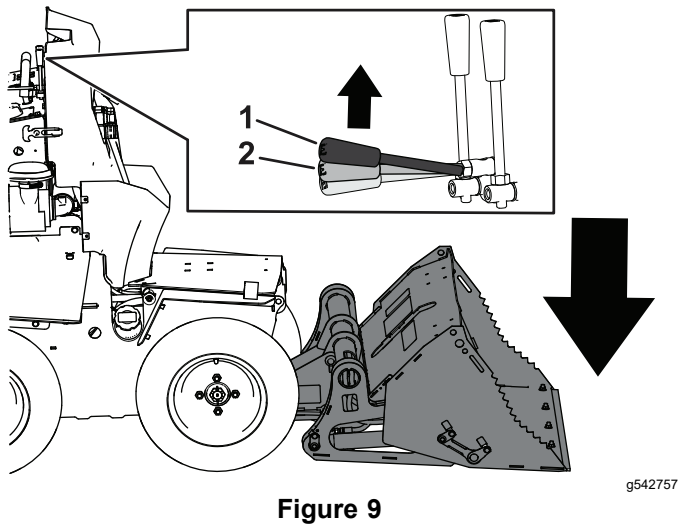
2. Attachment coupler lever

- Use the attachment coupler lever to raise, lower, or float the bucket.



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**Figure 8**

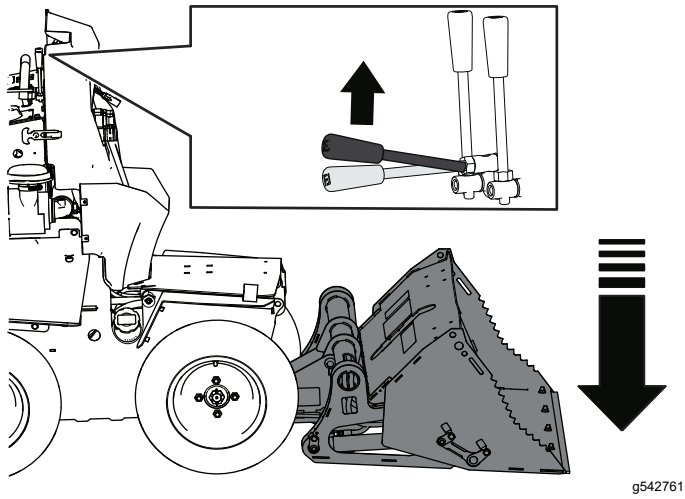


**Figure 9**

1. Float

2. Lower

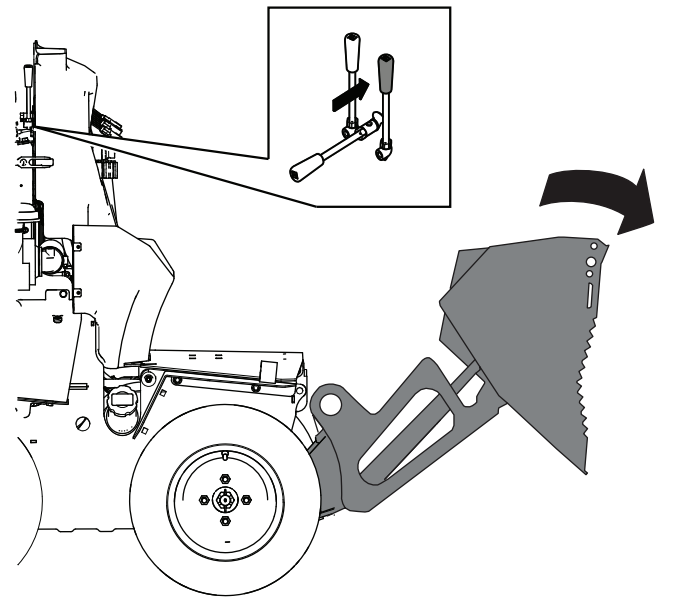
**Note:** Do not shovel forwards in down force.



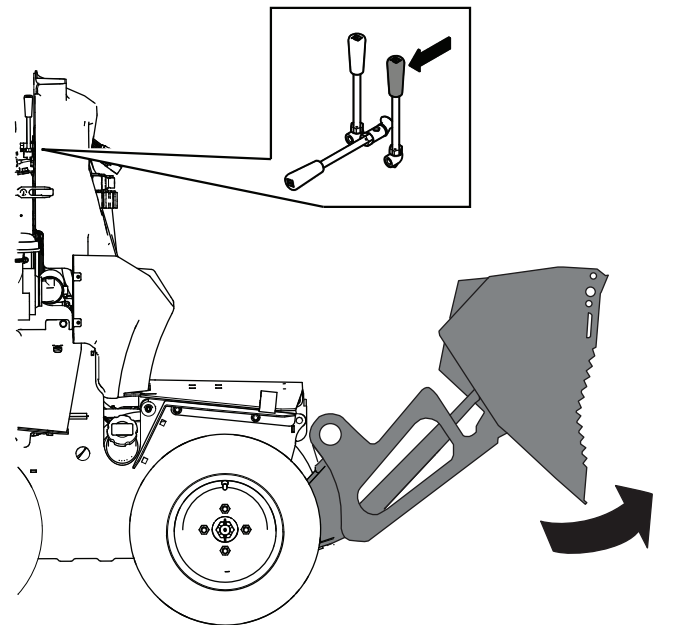
**Figure 10**

Down Force

- Push or pull the angle lever to tilt the bucket.



**Figure 11**



**Figure 12**



# Operation

## Mounting the Bucket

Refer to the [Mounting the Bucket \(page 6\)](#) section above.

## Removing the Bucket

1. Stop machine on a level surface.
2. Lower the bucket until the cutting edge is 2.5 to 5 cm (1 to 2 inches) from the ground.
3. Angle the bucket so the bottom is level with the ground or slightly angled downwards.

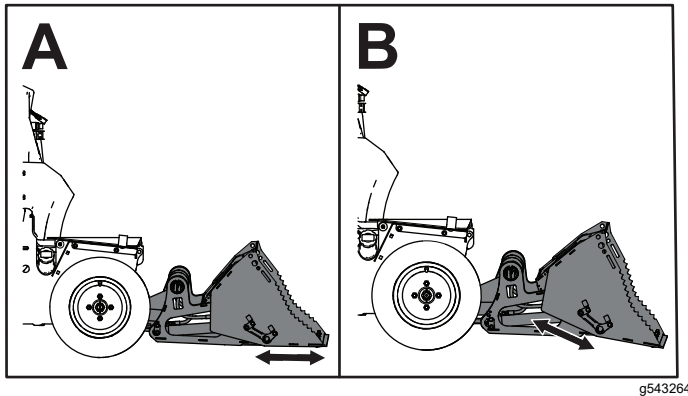


Figure 13

4. Shut off the engine, wait for all moving parts to stop, engage the parking brake, and remove the key.
5. Disconnect the hydraulics.
6. Pull the coupler pins and turn it 90° until the bucket is disconnected from the machine.

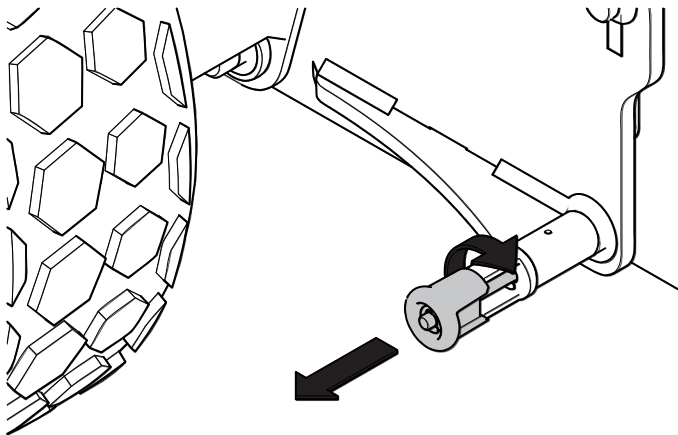


Figure 14

7. Start the machine, lower the attachment coupler, and slowly back away from the bucket.

8. Arrange the hydraulic hoses and disconnects so that they are not resting on the ground.

## Operating Tips

- Become familiar with the area you are removing snow from; hidden obstructions such as curbs and pipes can damage your bucket or machine.
- Lower the bucket when not in use to prevent possible injury.
- Always use the bucket at a safe speed in case you hit hidden obstructions.
- When transporting the machine, do not block your vision with the bucket.
- For more snow removal tips, visit [www.bossplow.com](http://www.bossplow.com).

# Maintenance

## Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 2 hours	<ul style="list-style-type: none"><li>• Tighten all hardware.</li></ul>
Before each use or daily	<ul style="list-style-type: none"><li>• Check the hydraulic cylinders.</li><li>• Check the hydraulic lines and hoses.</li><li>• Check all fasteners, pins, retainers, nuts, and bolts.</li><li>• Check the cutting edge for wear.</li></ul>
Before storage	<ul style="list-style-type: none"><li>• Grease the hydraulic cylinder rods.</li><li>• Grease the cylinder pins.</li><li>• Lightly sand and use touch-up paint on painted areas that are scratched, chipped, or rusted.</li></ul>

## Maintenance Safety

- Check the hydraulic lines and hoses daily for leaks, kinked lines, loose mounting supports, wear, loose fittings, weather deterioration, and chemical deterioration. Make all necessary repairs before operating.
- Check the hydraulic cylinders daily for leaks, rust, or pitting on the rods. Make all necessary repairs before operating.
- Check the cutting edge daily for wear. If the cutting edge is worn down either flip or replace it.
- Check all fasteners, pins, retainers, nuts, and bolts daily to ensure that they are secure. Torque them to the appropriate value if they are loose.

## Replacing the Cutting Edge

**Note:** Replacement hardware is available through an Authorized BOSS Dealer or BOSS Technical Service.

1. Remove the bolts and top locknuts securing the cutting edge to the bottom of the bucket.
2. Flip the cutting edge over.

**Note:** If the cutting edge has already been flipped, discard it and use a new edge.

3. Secure the cutting blade to the bucket using the previously removed hardware.

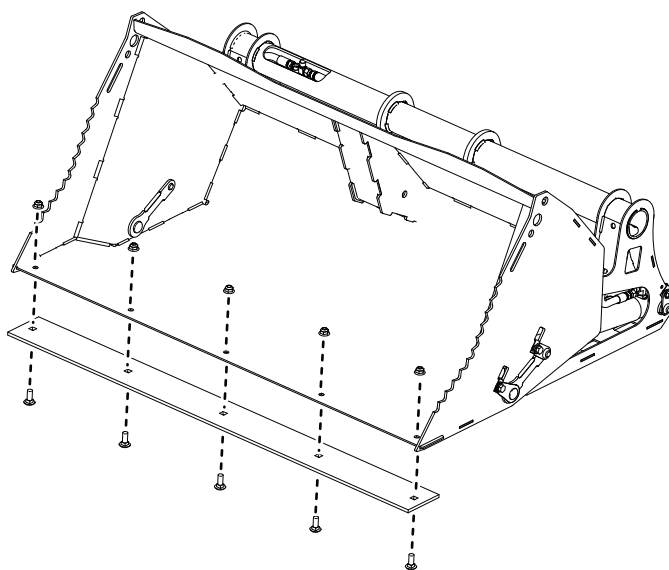


Figure 15

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# Storage

## Storing the Bucket

1. Drive the bucket to your storage location and remove the bucket; refer to your machine *Owner's Manual*.
2. Grease any exposed metal on the hydraulic cylinder rods.
3. Lightly sand and use touch-up paint on painted areas that are scratched, chipped, or rusted.

## Removing the Bucket from Storage

1. Check the torque of all fasteners; tighten as necessary.
2. Check the hydraulic lines and hoses for cracks or leaks.
3. Check the cutting edge for wear.
4. Lightly sand and use touch-up paint on painted areas that are scratched, chipped, or rusted.
5. Attach the bucket to the machine; refer to your machine *Owner's Manual*.
6. Move the bucket through its range of motion to check the hydraulic cylinder rods.

# Troubleshooting

Problem	Possible Cause	Corrective Action
The bucket rotates when loaded.	<ol style="list-style-type: none"> <li>1. A cylinder hose is bad.</li> <li>2. The pressure relief is bad.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the cylinders, hoses, and all fittings for leaks. Tighten loose connections. Replace any damaged components.</li> <li>2. Check the pressure relief valve. If the valve is contaminated, clean or replace it.</li> </ol>
The bucket does not rotate or rotates slowly.	<ol style="list-style-type: none"> <li>1. The hydraulic fluid level is low.</li> <li>2. The incorrect control is being used.</li> <li>3. The pressure relief valve, on the machine, is bad.</li> <li>4. A cylinder or hose is bad.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the hydraulic fluid level; refer to the machine <i>Owner's Manual</i>.</li> <li>2. Ensure that the quick disconnects are connected to the corresponding control lever.</li> <li>3. Check the pressure relief assembly on the machine. If the valve is contaminated, clean or replace it.</li> <li>4. Thoroughly check the cylinders, hoses, and all fittings for leaks. Tighten any loose connections. Replace any damaged components</li> </ol>
Oil leaks from the hydraulic cylinders.	<ol style="list-style-type: none"> <li>1. The hose is bad.</li> <li>2. The cylinder is bad.</li> <li>3. The cylinder rod is pitted.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the hose for leaks. Tighten any loose connections. Replace any damaged components.</li> <li>2. Replace the cylinder.</li> <li>3. Polish the rod with steel wool. Replace the cylinder if the pitting is too bad.</li> </ol>
There is a significant delay between control lever movement and rotation of bucket.	<ol style="list-style-type: none"> <li>1. One cylinder is not pinned to the bucket.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check that the pins pass through both sides of both cylinders to attach them to bucket.</li> </ol>
Downforce is weak or completely lacking, while lift still works.	<ol style="list-style-type: none"> <li>1. Lift cylinder bolt on machine is broken.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the bolts that attach the lift cylinder to the frame of machine (under hood of machine). Replace the bolts if necessary.</li> </ol>