



P.O. Box 787
Iron Mountain, MI 49801
United States

Owner's Manual

4' and 5' Straight Blade Plow Kit Snowrator MAG

Part No. SNR24024—Serial No. 40000000 and Up

Part No. SNR24025—Serial No. 40000000 and Up



BOSS Products limited consumer warranty and BOSS Products commercial warranty policies are located at www.bossplow.com.

Patents www.ttcopats.com.

Introduction

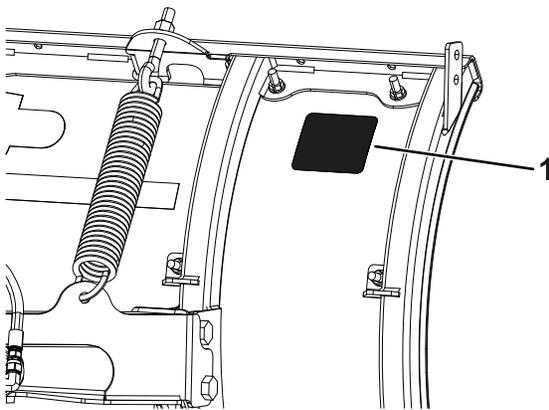
Note: This plow attaches to the Snowrator MAG.

The straight-blade plow is intended to be used on a BOSS stand-on, multi-purpose machine. The blade is designed to hydraulically change its angle as needed for snow removal. 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 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.



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Figure 1

1. Model and serial number location

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

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.



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Figure 2

1. Safety-alert symbol

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

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 plow.
- 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 plow.

Operation

- Use a 500 kg (1/2 ton) minimum lifting device to move heavy plow components.
- Do not exceed 8 km/h (5 mph) while operating.
- Never put any part of your body between the plow 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 plow, ensure that it is properly secured. Instructions are available at www.bossplow.com.
- When transporting the vehicle, position the plow so as not to block your vision or headlights.
- Do not change the blade position when traveling.
- Always lower the blade 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 plow off before filling, servicing, or cleaning it.
- Do not climb into or ride on the plow.
- 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

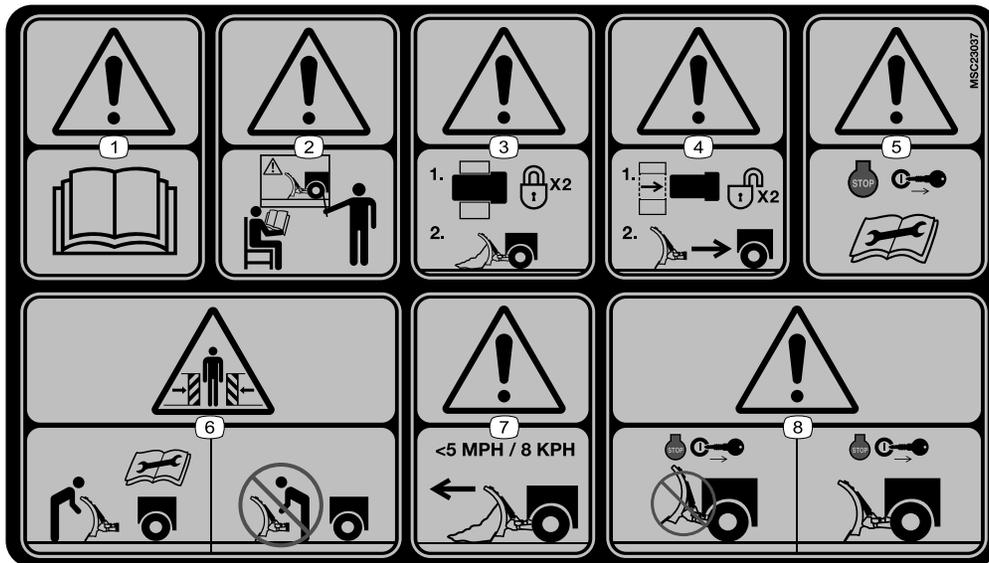
causes distractions; otherwise, injury or property damage may occur.

- Do not operate the plow 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.



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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 plowing.
4. Warning—coupler must be unlocked to remove the plow.
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 plow and vehicle during maintenance.
7. Warning—do not exceed 8 km/h (5 mph) when plowing.
8. Warning—lower the plow when the vehicle is not in use.

Setup

Mounting the Plow

1. Park the machine on a level surface.
2. Ensure that the plow is sitting upright, with the kickstand lowered and locked in place.

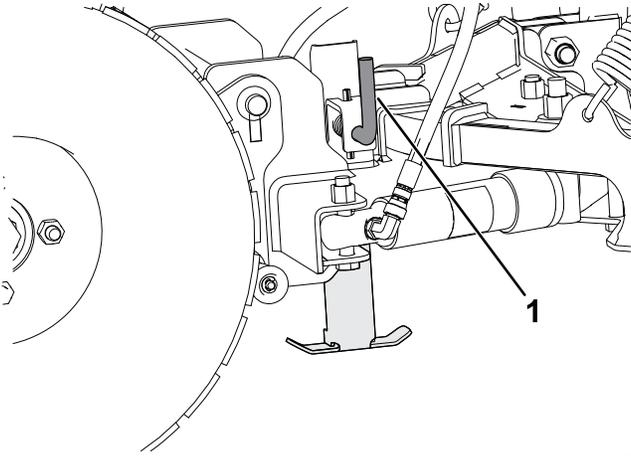


Figure 3

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1. Kickstand spring pin

3. Pull the coupler pins outward and rotate 90° to lock in the disengaged position.

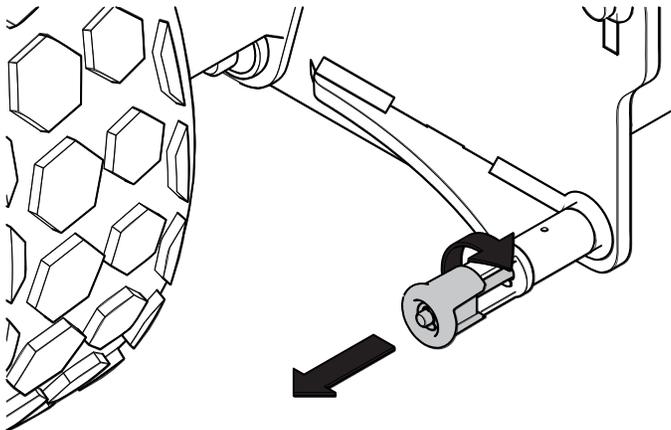


Figure 4

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

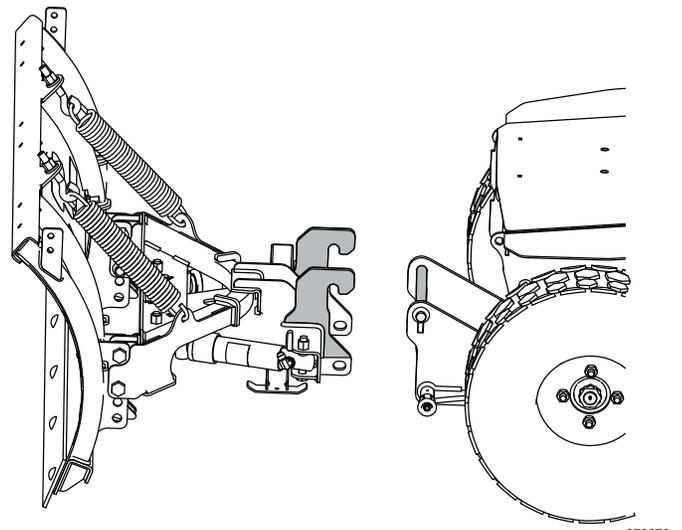


Figure 5

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

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

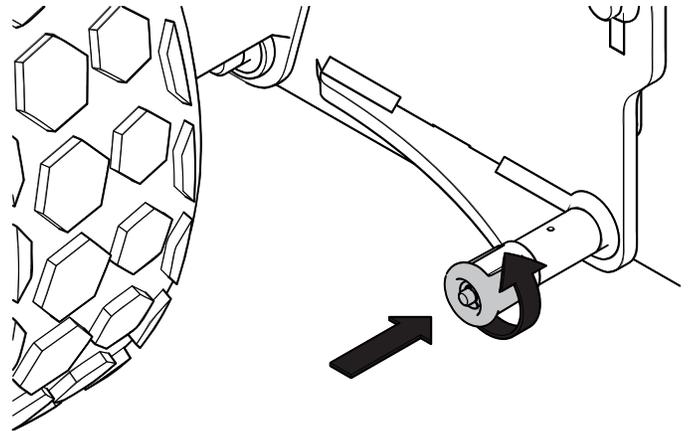
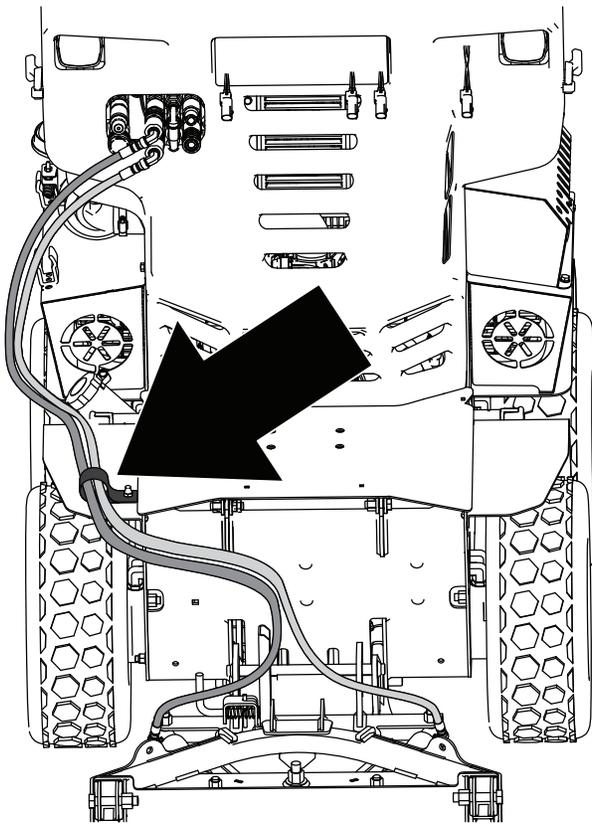


Figure 6

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



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Figure 7

▲ 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.

-
11. Raise and lock the kickstand.
 12. Start the machine.
 13. Use the controls to move the plow in all directions to cycle the hydraulic fluid.
 14. Lower the plow and shut off the machine.
 15. Check and fill the hydraulic fluid; refer to the machine *Owners Manual*.

Product Overview

Controls

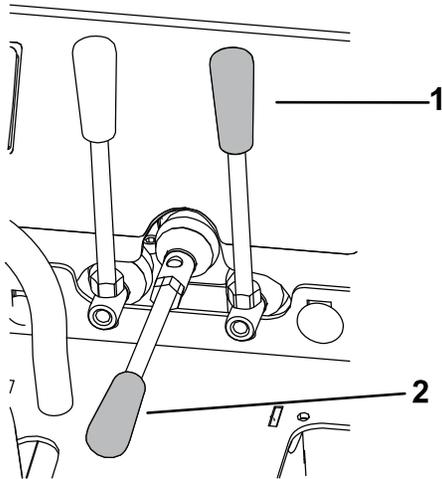


Figure 8

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1. Angle lever 2. Attachment coupler lever

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

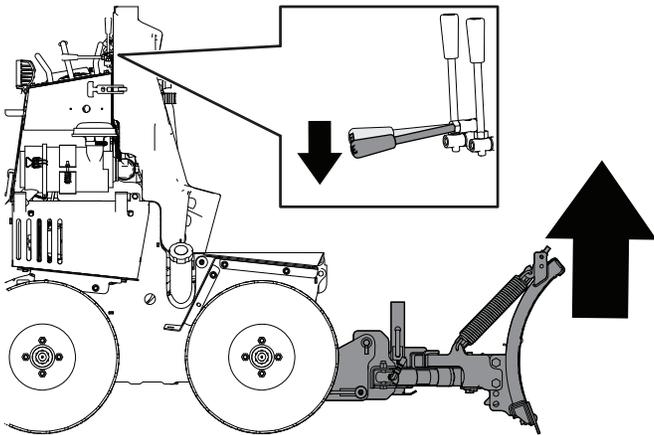


Figure 9

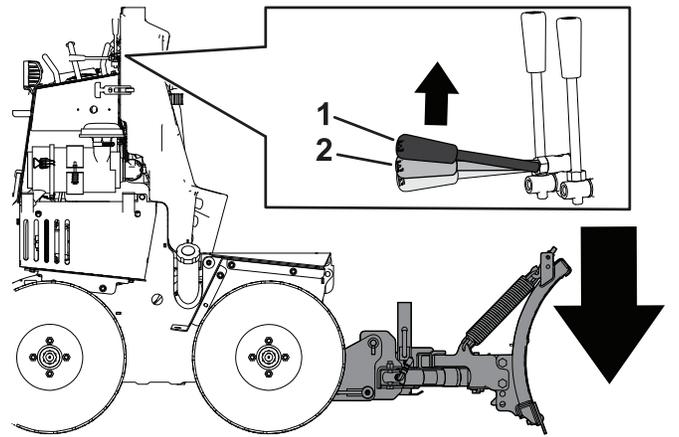


Figure 10

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1. Float 2. Lower

Note: Do not plow forward in down force.

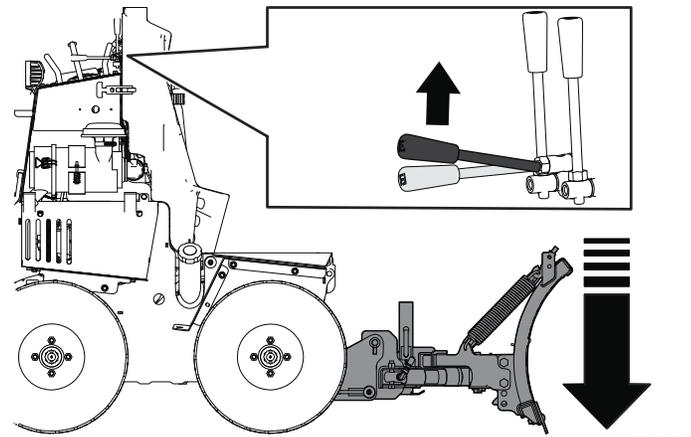


Figure 11
Down Force

- Push or pull the angle lever to angle the plow.

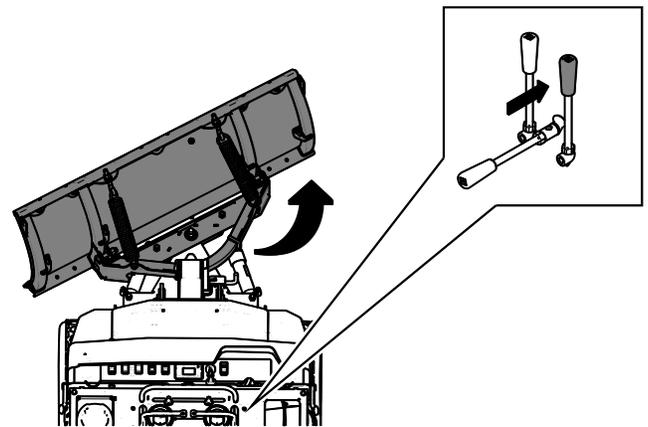


Figure 12

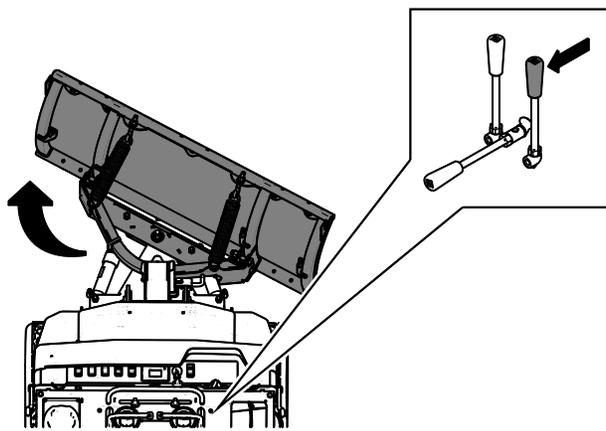


Figure 13

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Operation

Mounting the Plow

Refer to the [Mounting the Plow \(page 5\)](#) section above.

Removing the Plow

1. Stop machine on a level surface.
2. Lower the plow until the cutting edge is 2.5 to 5 cm (1 to 2 inches) from the ground.
3. Shut off the engine, wait for all moving parts to stop, engage the parking brake, and remove the key.
4. Disconnect the hydraulics.
5. Lower and lock the kickstand.
6. Pull the coupler pins and turn it 90° until the plow is disconnected from the machine.

Kickstand

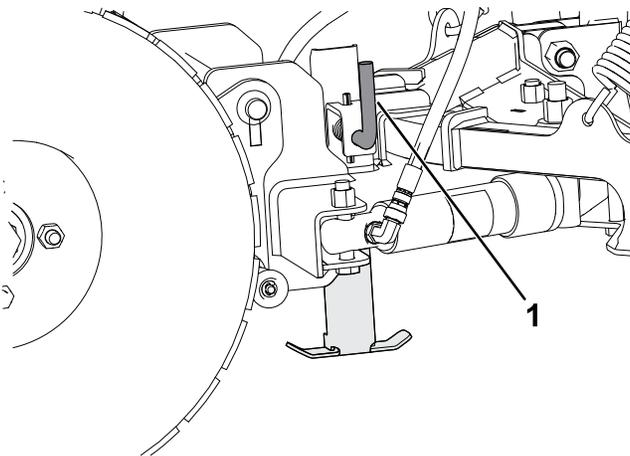


Figure 14

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1. Kickstand spring pin

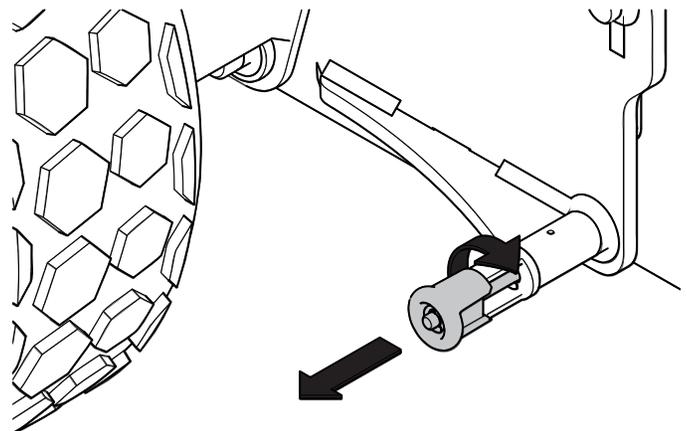


Figure 15

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The kickstand keeps the plow upright for ease of mounting and storage. To raise or lower the kickstand, pull the kickstand spring pin and move the kickstand to the desired position. Release the spring pin to lock the kickstand in place.

7. Start the machine, lower the attachment coupler, and slowly back away from the plow.
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 plowing; hidden obstructions such as curbs and pipes can damage your plow or machine.
- Do not let snow accumulate; always plow with the storm.
- Lower the plow when not in use to prevent possible injury.
- Always plow at a safe speed in case you hit hidden obstructions.
- When transporting the machine, do not block your vision with the plow.

- Do not change the plow position while plowing.
- Ensure that the kickstand is raised before plowing to prevent damage to the plow or machine.
- For more plowing tips, visit www.bossplow.com.

Maintenance

Recommended Maintenance Schedule(s)

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

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.

- Remove the bolts, washers, top locknuts, and metal strap securing the cutting edge to the bottom of the plow.
 - Flip the cutting edge over.
- Note:** If the cutting edge has already been flipped, discard it and use a new edge.
- Secure the metal strap and cutting blade to the plow using the previously removed hardware.

Note: Do not tighten the bolts and locknuts at this time.

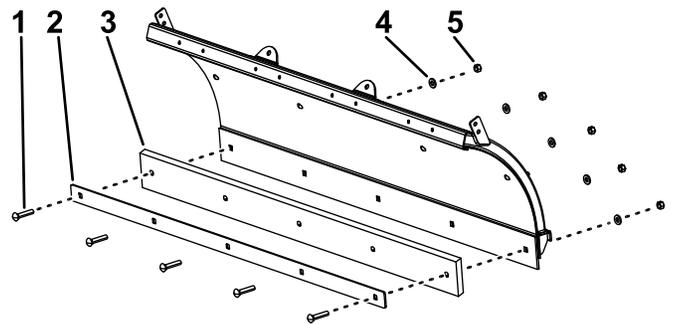


Figure 16

- Carriage bolt (1/2 inch)
- Metal strap
- Blade
- Washer (1/2 inch)
- Top locknut

- Slide the cutting blade so that it is flush with the sides of the plow.

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5. Tighten the bolts until the rubber begins to squish.

Storage

Storing the Plow

1. Drive the plow to your storage location and remove the plow; refer to your machine *Operator'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.
4. Loosen the trip springs.

Removing the Plow 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. Tighten the trip springs.
5. Lightly sand and use touch-up paint on painted areas that are scratched, chipped, or rusted.
6. Attach the plow to the machine; refer to your machine *Operator's Manual*.
7. Move the plow through its range of motion to check the hydraulic cylinder rods.

Troubleshooting

Problem	Possible Cause	Corrective Action
The plow angles while plowing.	<ol style="list-style-type: none"> 1. A cylinder or hose is bad. 2. The pressure relief valve is bad. 	<ol style="list-style-type: none"> 1. Check the cylinders, hoses, and all fittings for leaks. Tighten loose connections. Replace any damaged components. 2. Check the pressure relief valve. If the valve is contaminated, clean or replace it.
The plow does not angle or angles slowly.	<ol style="list-style-type: none"> 1. The hydraulic fluid level is low. 2. The incorrect control is being used. 3. The pressure relieve valve, on the machine, is bad. 4. A cylinder or hose is bad. 	<ol style="list-style-type: none"> 1. Check the hydraulic fluid level; refer to your SnowRator Mag <i>Owner's Manual</i>. 2. Ensure that the quick disconnects are connected to the corresponding control lever. 3. Check the pressure relief assembly on the machine. If the valve is contaminated, clean or replace it. 4. Thoroughly check the cylinders, hoses, and all fittings for leaks. Tighten any loose connections. Replace any damaged components.
Oil leaks from the hydraulic cylinders.	<ol style="list-style-type: none"> 1. The hose is bad. 2. The cylinder is bad. 3. The cylinder rod is pitted. 	<ol style="list-style-type: none"> 1. Check the hose for leaks. Tighten any loose connections. Replace any damaged components. 2. Replace the cylinder. 3. Polish the rod with steel wool. Replace the cylinder if the pitting is too bad.