

# S N O W P L O W Power-V and Straight-Blade Snowplow Owner's Manual

This manual covers all truck-mounted snowplows manufactured by BOSS Snowplow. As this manual includes both Power-V and Straight-Blade snowplow information, some of the data contained within may not apply to your snowplow.

Patents Pending.

Form No. MSC09494

Register at bossplow.com. Original Instructions (EN) This product complies with all relevant European directives; for details, please see the separate product specific Declaration of Conformity (DOC) sheet.

WARNING
CALIFORNIA
Proposition 65 Warning
This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects, or reproductive harm.

# Introduction

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 for product and 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.

This manual identifies potential hazards and has safety messages identified by the safety-alert symbol (Figure 1), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.



#### 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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# Contents

Introduction
Safety7
Preparation
Operation
Safety and Instructional Decals
Power-V Product Overview
Power-V Controls
SmartHitch2 Switch
Couplers14
Joystick Controller
SmartTouch2 Controller
Headlight Toggle Switch
Mounting the Power-V Snowplow
Removing the Power-V Snowplow
Straight-Blade Product Overview
Straight-Blade Controls
SmartHitch2 Switch
Couplers
Joystick Controller
SmartTouch2 Controller
Headlight Toggle Switch
Mounting the Straight-Blade Snowplow
Removing the Straight-Blade Snowplow

General Operation	
Before Operation	
Checking the Hydraulic-Fluid Level	
Adding Hydraulic Fluid	
During Operation	
Protecting Your Transmission	
Plowing Parking Lots	
Plowing Driveways	
Operating Tips	
After Operation	
Maintenance	
Recommended Maintenance Schedule(s)	
Hydraulic System Maintenance	
Draining the Hydraulic Fluid	
Adjusting the Hydraulic Lowering Speed	45
Checking the Hydraulic Lines and Hoses	
Miscellaneous Maintenance	
Levelling the Plow Blades (Power-V Snowplows Only)	
Adjusting the Angle of Attack (EXT Straight-Blade Snowplows Only)	49
Adjusting the Aim of the Plow Headlights	51
Storage	53
Storing the Plow	53
Removing the Plow from Storage	53
Troubleshooting	
Optional Equipment and Accessories	

# 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 **A** 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 Operator's Manual before operating or servicing the plow.
- Always follow the vehicle manufacturer's recommendations relating to snowplow installation. For recommended vehicle models, refer to the *BOSS Snowplow Application Chart and Selection Guide*.
- Ensure that only trained personnel install and perform maintenance on the equipment.
- Many trucks are equipped with air bags. **Never** disable, remove, or relocate any sensors or other components related to the operation of the air bags.
- Keep your hands, feet, and clothing away from moving parts and mounting points.
- Ensure the plow is properly attached to the vehicle before moving it.
- To comply with federal regulations and to assure a safe vehicle, do not exceed the front gross-axle-weight rating (FGAWR), rear gross-axle-weight rating (RGAWR), and the gross-vehicle-weight rating (GAWR) at any time.

## Operation

- Vehicles equipped with air bags are designed so that the air bags activate in a frontal collision equivalent to hitting a solid barrier (such as a wall) at approximately 22 km/h (14 mph) or more, or a frontal perpendicular collision with a parked car or truck of similar size at approximately 45 km/h (28 mph) or more. Careless or high-speed driving while plowing snow can deploy the air bag.
- When transporting the vehicle, position the plow so as not to block your vision or the plow headlights.
- **Do not** change the blade position when traveling from site to site.
- **Do not** exceed 64 km/h (40 mph) when transporting the plow.
- **Do not** exceed 22 km/h (14 mph) when plowing.
- Always lower the blade when the vehicle is not in use.
- Never put any part of your body between the plow and the vehicle.
- Do not operate the plow while ill, tired, or under the influence of alcohol or drugs.
- Always wear your seatbelt while operating a motor vehicle.
- Due to the variety of equipment that you can install on the vehicle, do not exceed the front gross-axle-weight rating (FGAWR), rear gross-axle-weight rating (RGAWR), and the gross-vehicle-weight rating (GAWR) at any time. This may require weighing the vehicle and adding ballast as necessary. It may also limit the payload capacity of the vehicle.

## 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.



- Read the Owner's Manual for information on removing the plow.
- 2. Coupler spring pin unlock
- 3. Coupler spring pin unlock
- 4. Read the Owner's Manual for information on attaching the plow.
- 5. Coupler spring pin lock
- Coupler spring pin lock



- Read the Owner's Manual for information on removing the plow.
- 2. Coupler spring pin lock
- 3. Coupler spring pin lock
- 4. Read the *Owner's Manual* for information on attaching the plow.
- 5. Coupler spring pin unlock
- 6. Coupler spring pin unlock



- 1. Warning-read the Owner's Manual.
- 2. Warning—all operators should be trained before operating the machine.
- 3. Warning—coupler spring pins must be locked before plowing.
- 4. Warning—coupler spring pins must be unlocked to remove the plow.
- 5. Warning—do not block the vehicle headlights with the plow.

- 6. Crushing hazard—do not stand between the plow and vehicle during maintenance.
- 7. Warning—do not exceed 64 km/h (40 mph) when transporting the plow.
- 8. Warning—do not exceed 22 km/h (14 mph) when plowing.
- 9. Warning— lower the plow when the vehicle is not in use.



- 1. Important—read the *Owner's Manual*.
- 2. Fill the hydraulic fluid to the bottom of the fill elbow.



- 1. Important—read the Owner's Manual.
- 2. Raise the coupler tower.
- 3. Lower the coupler tower.





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## **Power-V Product Overview**



- 1. Hydraulic reservoir fill elbow
- 2. Coupler-tower cover
- 3. Hydraulic flow-control valve

- Coupler 4.
- 5. SmartHitch2 switch

## **Power-V Controls**

Become familiar with all the controls before you operate the plow.

## SmartHitch2 Switch

The SmartHitch2 switch controls the movement of the coupler tower to facilitate plow attachment and removal. With the controller in the Float mode, press the switch up to raise the tower and down to lower the tower.

## Couplers

The couplers (Figure 3) secure the plow to the vehicle push beam. Turn the levers toward the coupler tower to turn on the spring pins. Turn the levers away from the coupler tower to turn off the spring pins.



1.

2.

## **Joystick Controller**

The joystick controller (Figure 4) operates the movement of the snowplow. You can rotate the Raise/Lower switch for right or left hand operation by pulling up the joystick and rotating it to the desired position.

• On/Off switch—turns the plow controller on and off. A red light illuminates when the controller is on.

**Note:** Turn off the controller when not in use to prevent accidental activation of the plow.

• Raise/Lower switch—raises or lowers the plow blade. Press the switch up to raise the plow. Press the switch down to lower the plow.



- 2. Raise/Lower switch
- Directional joystick—controls the direction that the plow moves
  - To activate the Float feature, pull the joystick back until it clicks into the detent position, allowing the plow blade to follow the contour of the ground. The joystick stays in the Float position until it is centered again.
  - To move the right plow wing out, push the joystick diagonally right and forward.

- To move the left plow wing out, push the joystick diagonally left and forward.
- To make the scoop shape with the plow, move both wings out and push the joystick forward.
- To move the right plow wing in, pull the joystick diagonally right and backward.
- To move the left plow wing in, pull the joystick diagonally left and backward.
- To angle the entire plow blade right, move the right wing in, the left wing out, and push the joystick right.
- To angle the entire plow blade left, move \_ the right wing out, the left wing in, and push the joystick left.

## SmartTouch2 Controller

The SmartTouch2 controller (Figure 5) operates the movement of the snowplow.

On/Off switch—turns the plow controller ٠ on and off. A green light illuminates when the controller is on.

**Note:** Turn off the controller when not in use to prevent accidental activation of the plow.

Raise button-raises the plow blade. Pressing ۰ the button quickly twice automatically raises the



- Raise button 1.
- 2. Lower/Float button
- 3. Left Wing Out button
- 4. Right Wing Out button 5.
  - Right Wing In button
- Left Wing In button 6.
- Angle left 7.
- 8. Scoop
- 9. Angle right
  - 10. V

blade.

- Lower/Float button—lowers the plow blade and activates the Float feature. Pressing the button quickly twice, or holding the button down for 2 seconds, automatically lowers the blade and activates the Float feature, allowing the plow blade to follow the contour of the ground. A red light illuminates when the Float feature is active.
- Left Wing Out button—moves the left wing out
- Right Wing Out button—moves the right wing out
- Left Wing In button—moves the left wing in
- Right Wing In button—moves the right wing in
- Sleep mode—If you do not use the controller for 20 minutes, it enters sleep mode and the controller lights flash green and red. Turn the controller off and on again to deactivate the sleep mode.

To perform different tasks, you can configure the plow wings as follows:

- To angle the entire plow blade right, press the Right Wing In and Rght Wing Out buttons simultaneously until the blades are fully angled.
- To angle the entire plow blade left, press the Left Wing In and Left Wing Out buttons simultaneously until the blades are fully angled.
- To make the scoop shape with the plow, press the Left Wing Out and Right Wing Out buttons simultaneously until the blades are fully extended.

• To make the "V" shape with the plow, press the Left Wing In and Right Wing In buttons simultaneously until the blades are fully retracted.

#### Headlight Toggle Switch

The headlight toggle-switch controls which set of headlights is being used. Move the switch to the TRUCK position to use the headlights on the vehicle. Move the switch to the PLOW position to use the headlights on the plow.

# Mounting the Power-V Snowplow

**Note:** The vehicle must be running before starting this procedure.

- 1. Activate the Float feature on your plow controller.
- 2. Line up the vehicle with the snowplow and drive forward until the lower pin contacts the pushbeam pin receiver (Figure 6).
- 3. Turn the levers on the couplers to the LOCK position (Figure 7).
- 4. Remove the electrical-plug dust-covers and connect the plow wire harness to the vehicle wire harness (Figure 6).
- 5. Push the SmartHitch2 switch on the side of the coupler tower upward and raise the tower until the coupler spring-pins snap in (Figure 8).



Note: Move the coupler tower until the spring pins engage completely.



7. Switch the headlight toggle-switch to the PLOW position.





- Coupler tower 1.
- Coupler spring pin 3. 4.
- 2. Pin receiver

Coupler lever

- SmartHitch2 switch 1.
- 2. Coupler tower

Coupler spring pin 3.

# **Removing the Power-V Snowplow**

**Note:** The vehicle must be running before starting this procedure.

- 1. Switch the headlight toggle switch to the TRUCK position.
- 2. Move both plow wings in to the V position.
- 3. Activate the Float feature on your plow controller.
- 4. Turn the levers on the couplers to the UNLOCK position (Figure 9).
- 5. Push the SmartHitch2 switch on the side of the coupler tower up to release the pins, then down to lower the tower completely (Figure 10).



6. Disconnect the plow wire harness from the vehicle wire harness and secure the electrical-plug dust-covers (Figure 11).

1.

2

7. Slowly back the vehicle away from the snowplow.



## **Straight-Blade Product Overview**



# **Straight-Blade Controls**

Become familiar with all the controls before you operate the plow.

## SmartHitch2 Switch

The SmartHitch2 switch controls the movement of the coupler tower to facilitate plow attachment and removal. With the controller in the Float mode, press the switch up to raise the tower and down to lower the tower.

## Couplers

The couplers (Figure 13) secure the plow to the vehicle push beam. Turn the levers toward the coupler tower to turn on the spring pins. Turn the levers away from the coupler tower to turn off the spring pins.



1.

2

## **Joystick Controller**

The joystick controller (Figure 14) operates the movement of the snowplow.

• On/Off switch—turns the plow controller on and off. A red light will illuminate when the controller is on.

**Note:** Turn off the controller when not in use to prevent accidental activation of the plow.

- Directional joystick—controls the direction that the plow moves
  - To raise the plow blade, pull the joystick back.
  - To lower the plow blade, push the joystick forward.
  - To angle the plow blade right, push the joystick right.
  - To angle the plow blade left, push the joystick left.
  - To activate the Float feature, push the joystick forward until it clicks into the detent position, allowing the plow blade to follow the contour of the ground. The joystick stays in the Float position until it is centered again.



#### SmartTouch2 Controller

The SmartTouch2 controller (Figure 15) operates the movement of the snowplow.

• On/Off switch—turns the plow controller on and off. A green light illuminates when the controller is on.

**Note:** Turn off the controller when not in use to prevent accidental activation of the plow.

- Raise button—raises the plow blade. Pressing the button quickly twice automatically raises the blade.
- Lower/Float button—lowers the plow blade and activates the Float feature. Pressing the button quickly twice, or holding the button down for 2 seconds, automatically lowers the blade and activates the Float feature, allowing the plow blade to follow the contour of the gree



• Right button—angles the plow blade to the right



the plow blade to follow the contour of the ground. A red light will illuminate when the Float feature is active.

• Sleep mode—If you do not use the controller for 20 minutes, it enters sleep mode and the controller lights flash green and red. Turn the controller off and on again to deactivate the sleep mode.

#### Headlight Toggle Switch

The headlight toggle-switch controls which set of headlights is being used. Move the switch to the TRUCK position to use the headlights on the vehicle. Move the switch to the PLOW position to use the headlights on the plow.

# Mounting the Straight-Blade Snowplow

**Note:** The vehicle must be running before starting this procedure.

- 1. Activate the Float feature on your plow controller.
- 2. Line up the vehicle with the snowplow and drive forward until the lower pin contacts the pushbeam pin receiver (Figure 16).
- 3. Turn the levers on the couplers to the LOCK position (Figure 17).
- 4. Remove the electrical-plug dust covers and connect the plow wire harness to the vehicle wire harness (Figure 16).
- 5. Push the SmartHitch2 switch on the side of the coupler tower upward and raise the tower until the coupler spring-pins snap in (Figure 18).
- 6. Ensure that both coupler spring-pins have fully engaged the coupler (Figure 17).

Note: Move the coupler tower until the spring pins engage completely.



29

- Pull the kickstand spring-pin outward and raise the kickstand, then release the spring pin to secure it (Figure 7. 18).
- 8. Switch the headlight toggle-switch to the PLOW position.



1. Coupler tower Pin receiver

2.

3. Coupler spring pin Coupler lever 4.



- 1. Kickstand
- 2. SmartHitch2 switch
- 3. Coupler tower
- Coupler spring pin 4.

## **Removing the Straight-Blade Snowplow**

**Note:** The vehicle must be running before starting this procedure.

- 1. Switch the headlight toggle switch to the TRUCK position.
- 2. Activate the Float feature on your plow controller.
- 3. Pull the kickstand spring pin outward and lower the kickstand, then release the spring pin to secure it (Figure 19).
- 4. Turn the levers on the couplers to the UNLOCK position (Figure 20).
- 5. Push the SmartHitch2 switch on the side of the coupler tower up to release the pins, then down to lower the tower completely (Figure 21).



1.

7. Slowly back the vehicle away from the snowplow.



2. SmartHitch2 switch

31



# **General Operation**

Determine the left and right sides of the machine from the normal operating position.

# **Before Operation**

- Familiarize yourself with the Owner's Manual before operating or servicing your snowplow.
- Familiarize yourself with local snowplowing laws and regulations.
- Carry the following safety equipment and items in case of emergencies:

_	fire extinguisher	_	jumper cables
_	tool kit	_	ice scraper
_	tow strap	_	lock deicer
_	flashlight	_	washer fluid

- flares shovel
- first-aid kit
  bag of salt or sand
- fuses for your vehicle

Note: In case of emergencies, always carry a cell phone or 2-way radio when plowing.

- Wear warm clothes while plowing, including insulated boots, insulated underwear, a warm jacket, hat, gloves, and sunglasses.
- Carry the following snowplow equipment in case of emergencies:
  - hydraulic fluid
    pump solenoid
    trip spring
  - hydraulic hoses
    cutting-edge bolts
- Ensure that your vehicle has been maintained according to the manufacturer's recommendation.
- Consider adding a strobe light or backup lights to your vehicle if they are not already equipped.
- Ensure that your vehicle complies with the federal requirements for front and rear weight distribution. Any ballast should be placed past the back axle toward the tailgate and secured in place.
- Ensure that all snowplow bolts are tight and torqued properly.
- Ensure that the snowplow lights are properly aligned and functioning.
- Ensure that the cutting edge is not over-worn and in need of replacing.
- **Do not** exceed 64 km/h (40 mph) when transporting plow.
- When transporting the plow, keep the plow in the straight or V position to reduce the chance of catching a curb or snowbank.
- Turn off the plow controller when transporting the plow to and from a job site.

- When transporting the plow, do not block the plow headlights or your vision with the raised plow.
- Check the temperature gauge often while transporting the plow or plowing. If the vehicle overheats while transporting the plow, stop and adjust the plow position to allow more airflow to the radiator.
- Before it snows, inspect the location you will be plowing and look for obstacles that will become hidden once it snows. Look for things such as bumper stops, speed bumps, curbs, shrubs, water drains, fire hydrants, fences, and pipes. To prevent damaging the area being plowed, your plow, or your vehicle, mark any obstructions in a way that will be visible after it snows.

# Checking the Hydraulic-Fluid Level

- 1. With the plow mounted to the vehicle, lower the plow to the ground and ensure that it is in the straight position.
- 2. Clean the area around the fill cap (Figure 22).
- 3. Remove the fill cap from the hydraulic reservoir (Figure 22).



- 4. Ensure that the fluid comes up to the bottom of the fill elbow. If it does not, add more hydraulic fluid; refer to Adding Hydraulic Fluid (page 36).
- 5. Install the previously removed fill cap.

## Adding Hydraulic Fluid

1. Ensure that the lift cylinder is completely collapsed.

**Note:** The lights should tilt forward.

**Important:** Do not manually pull the tower down. This can cause an air pocket to form in the hydraulic system and fluid to spill out of the internal filler cap.



- 3. Remove the fill cap from the hydraulic reservoir (Figure 23).
- 4. Slowly fill the reservoir with BOSS high-performance hydraulic fluid to the bottom of the fill elbow (Figure 23).

Note: The reservoir holds approximately 1.9 L (2 US qt) of hydraulic fluid.

5. Install the previously removed fill cap.



- 6. Start the vehicle and operate the plow in its full range of movement.
- 7. Stop the vehicle, check the hydraulic-fluid level, and replenish the fluid if necessary; refer to Checking the Hydraulic Fluid Level (page 35).

# **During Operation**

- **Do not** exceed 22 km/h (14 mph) when plowing.
- Always wear a seatbelt while plowing.
- **Never** plow with your head out the window.
- When moving in reverse, turn and look behind you instead of relying on vehicle mirrors.
- When plowing on dirt or gravel, lower the plow shoes to prevent scraping away the surface.
- When plowing on asphalt or concrete, raise the plow shoes to scrape as close to the surface as possible.
- Start driving forward before lowering the plow for a pass.
- As you come to the end of a pass, lift off the accelerator while starting to use the brake. At the same time, start to raise the blade to help stack the snow and to make it easier on your electrical system.
## **Protecting Your Transmission**

Transmission damage is 1 of the most common problems that occur while plowing. The following steps can help prevent transmission damage:

- Do not plow in overdrive unless your vehicle's Owner's Manual recommends it.
- Plan your plow pattern so that you drive forward as much as possible.
- Come to a complete stop before shifting from forward to reverse.
- Wait until the transmission engages before accelerating.
- Accelerate slowly, allowing the tires to grip the road surface for better traction. Avoid spinning the tires.
- Start driving forward before lowering the plow for a pass.
- Whenever possible, back into a cleared area.
- If you have a manual transmission, avoid riding the clutch while plowing.
- Change the transmission fluid before and during the plowing season. If the fluid has a burnt smell, change the fluid as soon as possible.
- You can install an inline transmission heat gauge to monitor the temperature in your transmission. If it reaches 121°C (250°F), let the vehicle idle until the fluid cools.

# **Plowing Parking Lots**

- Make sure that you know where the customer wants you to pile the snow.
- Use caution when plowing next to curbs.
- If a significant amount of snow is expected, plow during the storm rather than letting snow accumulate.
- Keep water drains and catch basins clear at all times.
- Do not stack snow by the road and block the visibility of vehicles coming or leaving the parking lot.
- Use caution when plowing next to parked cars.
- When plowing snow that is next to a building, push snow away from the building.
- If you are responsible for clearing sidewalks, shovel them first so that you can plow the snow away.
- Plow areas in front of buildings and overhead doors first. With the blade raised and in the straight position, drive up to the building, drop the blade, and pull the snow away from the building. Turn your vehicle around, then back into the cleared area and push the snow to the outer edges of the lot.
- Push the snowbanks back far enough to accommodate future snowfalls.
- After back dragging snow away from building, start plowing the lot. Begin by making a pass down the center of the lot, and then push snow in windrows to the outer edges. If there has been a significant amount of snowfall, push as much bulk off the lot as possible, then go over it again. In large lots, it may be best to break your plowing down into smaller areas.

- Do not pile snow in the middle of the lot. It will be difficult to remove later.
- Do not pile snow near handicapped parking areas.
- Plow in straight lines whenever possible, and push snow to the outer edges of the lot. Keep the wind direction in mind and pile snow downwind to minimize drifting.
- Plow snow during low-traffic hours, and always be cautious of cars and people in the lot.
- Once the majority of snow is removed from the lot, start the cleanup work. Begin by plowing next to curbs. Be sure to square off corners where possible, and do not leave trails of snow behind.

# **Plowing Driveways**

- Make sure that you know where the customer wants you to pile the snow.
- Drive up to the garage, drop the blade, then back up, pulling the snow approximately 2 truck lengths back. Turn the vehicle around and back into the cleaned area. With the blade angled to the center of the driveway, push the snow to the end of the driveway. Finish by pushing the snow into the corners at the end of the driveway. Be careful not to leave snow on the road or sidewalks.

# **Operating Tips**

- **Angle position**—the blade is angled either to the left or right of the vehicle. Use this position for windrowing or for widening the first pass.
- **Straight position**—the blade is positioned directly in front of the vehicle. Use this position when back dragging.
- **Power-V position**—the blades are retracted toward the vehicle. Use this position for first passes, plowing through deep snow, or punching through snowdrifts and hard-packed banks or windrows left by city and country plows.
- **Scoop position**—the blades are extended forward to create an inverted V. Use this position when you must push the snow straight ahead and not to the side, or for cleanup work.
- Windrowing—the blade is angled to the left or right of the vehicle. Use this to clear large areas by making consecutive passes.
- **Back dragging**—with the blade in the straight position, raise the blade and drive toward the building. Lower the blade and back up, pulling the snow away from the building. Back drag only 2 truck lengths, then turn around and push the snow the rest of the way.
- **Deep snow**—when plowing deep snow, raise the plow several inches off the ground and plow off the top layer of snow. Make several passes, plowing only enough snow to prevent overloading your equipment.
- Wet snow—when plowing wet snow, plow until the job is complete. Wet snow left in windrows overnight can freeze and turn into tank traps.

# After Operation

- Lower the blade to the ground and turn off the plow controller when you have finished plowing.
- After plowing, let the vehicle idle for at least 10 minutes to allow the transmission fluid time to cool.

# Maintenance

Determine the left and right sides of the machine from the normal operating position.

## **Recommended Maintenance Schedule(s)**

Maintenance Service Interval	Maintenance Procedure
Before each use or daily	<ul> <li>Check the hydraulic cylinders.</li> <li>Check the hydraulic-fluid level.</li> <li>Check the hydraulic lines and hoses.</li> <li>Check the torque of all fasteners, pins, retainers, nuts, and bolts.</li> <li>Check the cutting edge.</li> <li>Check the plow shoes.</li> <li>Check the wire-harness connector.</li> <li>Grease the coupler spring pins.</li> </ul>
Before storage	<ul> <li>Grease the lift-cylinder rods.</li> <li>Apply dielectric grease to the wire-harness connectors.</li> <li>Grease the coupler spring pins.</li> <li>Grease the vertical hinge bushings (Power-V plows only).</li> </ul>
Monthly	Apply dielectric grease to the wire-harness connectors.
Yearly	Replace the hydraulic fluid.

# Hydraulic System Maintenance

# **Draining the Hydraulic Fluid**

If the oil becomes contaminated, contact your authorized BOSS dealer to have the system flushed.

- 1. Park the vehicle on a level surface, lower the plow, and fully collapse the hydraulic lift-cylinder. Turn off the vehicle and remove the keys.
- 2. Remove the hairpin cotter and clevis pin from the top of the lift cylinder and lean it forward (Figure 24).
- 3. Remove the 2 thumbscrews securing the coupler-tower cover to the coupler tower (Figure 24).
- 4. Remove the coupler-tower cover, pulling it toward the passenger side of the plow.

**Note:** You may need to tug the cover back and forth several times to get it free.



- 1. Hairpin cotter and clevis 3. Coupler-tower cover pin
- 2. Thumbscrew

- 5. Clean the area around the drain plug (Figure 25).
- 6. Place a drain pan under the plug and remove the plug.
- 7. Clean the drain plug.
- Allow the fluid to fully drain, then replace the plug. Torque the plug to 17 to 28 N·m (150 to 250 in-lb).
- 9. Attach the previously removed coupler-tower cover.
- 10. Attach the previously removed lift cylinder.

# Adjusting the Hydraulic Lowering Speed

# **A** WARNING

Adjusting the flow-control valve can cause the plow to drop suddenly, resulting in bodily harm.

45

- Ensure that all observers are standing a safe distance from the plow.
- Ensure that the controller is off before adjusting the plow.
- Keep your body away from the plow blade.



**Note:** There is no flow-control value on the green hydraulic manifolds used for sport-duty snowplows.

- 1. Loosen the jam nut on the back of the hydraulic manifold (Figure 26).
- 2. Adjust the set screw until you find the desired lowering speed.

**Note:** Turning the set screw clockwise decreases the lowering speed; turning the set screw counterclockwise increases the lowering speed.

3. Turn the fitting until it is finger tight, then turn it 2 to 3 more times.



1. Jam nut

# **Checking the Hydraulic Lines and Hoses**

# A WARNING

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

- Ensure that all hydraulic fluid hoses and lines are in good condition and all hydraulic connections and fittings are tight before applying pressure to the hydraulic system.
- 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.
- Get immediate medical help if fluid is injected into skin.

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 the plow.

# **Miscellaneous Maintenance**

## Leveling the Plow Blades (Power-V Snowplows Only)

- 1. Loosen and carefully remove the 4 locknuts and 4 washers from the trip-spring eye bolts (Figure 27).
- 2. Adjust the bumper-stop plate (Figure 28).

**Note:** Slide the plate in to lower the center of the plow; slide the plate out to raise the center of the plow.

3. Secure the plate to the bumper stop and push frame using the previously removed bolt (Figure 28). Torque the bolt to 31 N·m (23 ft-lb).



- 1. Locknut and washer 3. Spring yoke
- 2. Trip spring



## Adjusting the Angle of Attack (EXT Straight-Blade Snowplows Only)

- 1. Park the vehicle on a level surface and lower the plow completely. If the plow is not flush against the ground, adjust the angle of attack.
- 2. Loosen the trip springs.
- 3. On the cams, remove the bolt in the square hole and loosen the bolt in the center (Figure 29).
- 4. Rotate the cam clockwise to angle the bottom of the blade back. Rotate the cam counterclockwise to angle the bottom of the blade forward.

**Note:** Use a 1/2 inch ratchet to help rotate the cams.

- 5. Insert the previously removed bolt, and torque it to 76 N·m (56 ft-lb).
- 6. Tighten the center bolt, and torque it to 76 N·m (56 ft-lb).
- Tighten the trip springs until there is a gap of 0.8 mm (1/32 inch) between the trip spring coils.



- 1. Center bolt (loosen) 3. Cam
- 2. Square bolt (remove)

## Adjusting the Aim of the Plow Headlights

**Important:** Certify that the installation of the snowplow lights conforms to applicable federal motor vehicle safety standards.

1. Park the vehicle on a level surface 7.5 m (25 ft) away from a matte-white screen or garage door.

Note: The screen should be perpendicular to both the ground and the front of the vehicle.

- 2. Ensure that the vehicle is equipped for normal operation with the snowplow attached and in the raised position.
- 3. Perform the following actions to ensure optimal headlight alignment:
  - Remove any ice or mud from under the fenders.
  - Ensure that all tires are fully and evenly inflated.
  - Check vehicle springs for sag or broken leaves.
  - Check the function of any level ride controls.
  - Stabilize the suspension by rocking the vehicle sideways.
  - Ensure that there is no load in the vehicle other than the driver.
  - Clean the headlights and matte white screen.

- 4. Mark the vertical vehicle-centerline on the screen (Figure 30).
- 5. Mark the vertical headlight-centerline on the screen (Figure 30).
- 6. Mark the horizontal headlight-centerline on the screen (Figure 30).

**Note:** The horizontal headlight-centerline should be the distance from the ground to the center of the headlight.

- 7. Loosen the 4 bolts securing each headlight to the headlight brackets.
- 8. Adjust the plow headlights until the brightest part of the plow low-beam lights are aligned as shown in Figure 30.
- Tighten the 4 bolts securing each headlight to the headlight brackets and torque them to 8 N·m (6 ft-lb).



- 6. Distance between headlight centers
- 7. Distance from ground to headlight centers

1.

2

3.

4.

Vehicle centerline

centerline

centerline

Vertical right-headlight

Horizontal headlight-

# Storage

# **Storing the Plow**

- 1. Grease any exposed chrome or nitro bar on the plow-angle lift cylinders.
- 2. Drive the snowplow to your storage location and remove the plow; refer to Removing the Snowplow (page 21-22 or 31-32).
- 3. Power the coupler tower forward until the lift cylinder is completely compressed.
- 4. Apply dielectric grease to all of the wire-harness connectors and install the dust caps.
- 5. Lightly sand and use touch-up paint on painted areas that are scratched, chipped, or rusted.
- 6. Loosen the trip-return springs.
- 7. If you have a Power-V plow, loosen the blade-return springs.
- 8. Grease the coupler spring-pins.
- 9. If you have a Power-V plow, grease the vertical hinge bushings.

# **Removing the Plow from Storage**

- 1. Check the plow for cracked welds.
- 2. Check the torque of all fasteners, pins, retainers, nuts, and bolts; tighten as necessary.

- 3. Check the hydraulic lines and hoses for cracks or leaks.
- 4. Replace the hydraulic fluid; refer to Draining the Hydraulic Fluid (page 44).
- 5. Check the cutting edge for wear.
- 6. Check the plow shoes for wear.
- 7. Tighten the trip-return springs.
- 8. If you have a Power-V plow, tighten the blade-return springs.
- 9. Lightly sand and use touch-up paint on painted areas that are scratched, chipped, or rusted.
- 10. Grease the coupler spring-pins.
- 11. If you have a Power-V plow, grease the vertical hinge bushings.
- 12. Apply dielectric grease to all of the wire harness connectors.
- 13. Attach the plow to the vehicle; refer to Mounting the Snowplow (page 19-20 or 29-30).
- 14. Move the plow through its range of motion to check the hydraulic cylinder rods.
- 15. Align the plow lights; refer to Adjusting the Aim of the Plow Headlights (page 51).

# Troubleshooting

Problem		Diagnostic Check		Result
The pump motor does not run.	1.	Check that the power/ground cables and control cables are connected properly.	1.	Connect the cables if they are not connected.
	2.	Check for voltage at the pump motor while the ignition switch is on and the RAISE button is pressed on the controller.	2.	If voltage is present, the pump motor has failed or the pump has seized. Motor brushes may be replaced, otherwise replace the pump/motor assembly.
	3.	Check for power to the solenoid by testing for voltage between both large terminals and ground.	3.	If voltage is not present between one large terminal and ground, the cable between the battery and the solenoid is disconnected or broken.
	4.	Check for voltage between the other large terminal of the solenoid and ground while jumping power to the small terminal with the white/black wire.	4.	If no voltage is present, the solenoid has failed and must be replaced. If voltage is present, the wire from the small terminal of the solenoid to ground may be disconnected or broken.
	5.	Test the power to the controller by checking the voltage between the black wire and ground at the white, 9-pin connector.	5.	If no voltage is present, power from the relay has become disconnected. If voltage is present, check the wiring and controller switches.

Problem	Diagnostic Check	Result
The pump continues to run while the switch is in neutral.	<ol> <li>Disconnect the controller and turn the ignition on.</li> </ol>	<ol> <li>If the pump continues to run, the solenoid has failed in the closed position. Quickly remove power to the pump by disconnecting the power/ground cables to the plow. Replace the solenoid.</li> </ol>
	2. Disconnect the controller and turn the ignition on.	<ol> <li>If the pump stops running, check the wiring of the controller for a short between the black and white/black wire in the controller, or a failed switch.</li> </ol>
The plow does not lower.	<ol> <li>Check that the power/ground cables and control cables are connected properly.</li> </ol>	<ol> <li>Connect the cables if they are not connected.</li> </ol>
	2. Check the flow-control valve.	2. If the flow-control valve is completely closed, place the controller in neutral, then open the flow-control valve.
	<ol> <li>Check the wiring on the valve block for proper connections.</li> </ol>	<ol> <li>Refer to the wiring diagram included with your Owner's Manual.</li> </ol>
	<ol> <li>Check for voltage between the solenoid valve terminal and ground while the ignition switch is on and the controller is in the Float position.</li> </ol>	<ol> <li>If voltage is present, the solenoid valve or valve coil has failed. Replace the valve or valve coil.</li> </ol>

Problem	Diagnostic Check	Result
	<ol> <li>Test the power to the control box by checking the voltage between the black wire and ground at the white, 9-pin connector.</li> </ol>	<ol> <li>If no voltage is present, power from the relays has become disconnected. If voltage is present, check the wiring and switch off the controller.</li> </ol>
The plow does not raise or raises slowly.	1. Check the hydraulic-fluid level.	1. The hydraulic-fluid level should be within 2 cm (3/4 inch) of the top of the reservoir when lowered and in the V position.
	<ol> <li>Check that the power/ground cables and the control cable are connected properly.</li> </ol>	2. Connect the cables if they are not connected.
	<ol> <li>Check the wiring on the valve block for proper connections.</li> </ol>	3. Refer to the manifold wiring diagram included with your <i>Owner's Manual</i> .
	4. Load a test battery.	4. Replace the battery if it is weak or defective.
	<ol> <li>Check the pressure at the pressure port of the pump.</li> </ol>	5. If the pressure is less than 2,500 psi (at the end of the lift), the motor brushes may be defective, the pump pressure relief valve may be contaminated, damaged, or set to less than 2,500 psi, or the pump may be worn.
	<ol> <li>Check the RAISE control solenoid valve.</li> </ol>	6. If the RAISE solenoid valve is not opening completely, replace it.

Problem	Diagnostic Check	Result
	7. Check the LOWER control solenoid valve.	7. The LOWER solenoid valve may be stuck open. Replace it.
The plow angles while plowing.	<ol> <li>Check the ANGLE control solenoid valve.</li> </ol>	<ol> <li>If the ANGLE control solenoid valve is contaminated, clean or replace it.</li> </ol>
	<ol> <li>Check that the pressure relief valve is not contaminated.</li> </ol>	2. If the pressure relief valve is contaminated, clean or replace it.
	<ol> <li>Check that the pressure relief valve is set correctly.</li> </ol>	<ol> <li>If the pressure relief valve is set too low, contact your authorized BOSS dealer.</li> </ol>
The plow does not angle or angles slowly.	1. Check the hydraulic-fluid level.	1. The hydraulic-fluid level should be within 2 cm (3/4 inch) of the top of the reservoir when lowered and in the V position.
	<ol> <li>Check that the power/ground cables and the control cable are connected properly.</li> </ol>	2. Connect the cables if they are not connected.
	<ol> <li>Check the wiring on the valve block for proper connections.</li> </ol>	<ol> <li>Refer to the manifold wiring diagram included with your Owner's Manual.</li> </ol>
	4. Load a test battery.	4. Replace the battery if it is weak or defective.
	<ol> <li>Check the ANGLE control solenoid valve.</li> </ol>	<ol> <li>If the ANGLE solenoid valve is not opening completely, replace it.</li> </ol>

Problem	Diagnostic Check	Result
While trying to raise the plow, the wing(s) extend prior to raising the plow and do(es) not retract.	<ol> <li>Check the pressure and return line routing.</li> </ol>	<ol> <li>The pressure line must be connected from the "P" on the pump to the "P" on the valve manifold. The return line must be connected from the "T" on the pump to the "T" on the valve manifold.</li> </ol>
The wings drift back when extended.	1. Check the wing-return-solenoid valve on the manifold.	<ol> <li>If the solenoid valve is contaminated, clean or replace it.</li> </ol>
	2. Check the pressure.	2. If the pressure-relief valve is contaminated, clean or replace it.
The plow lowers too fast.	1. Check the flow-control valve.	1. Close the flow-control valve to the desired drop speed.
The wing(s) do(es) not extend or extend slowly when the motor runs.	1. Check the hydraulic-fluid level.	<ol> <li>The hydraulic-fluid level should be within 2 cm (3/4 inch) of the top of the reservoir when lowered and in the V position.</li> </ol>
	2. Check that the power/ground cables and control cable are connected properly.	2. Connect the cables if they are not connected.
	<ol> <li>Check the wiring on the valve block for proper connections.</li> </ol>	<ol> <li>Refer to the wiring diagram included with your Owner's Manual.</li> </ol>
	4. Test the vehicle battery.	4. Replace the battery if it is weak or defective.

Problem	Diagnostic Check	Result
	<ol> <li>Check the pressure at the pressure port of the pump.</li> </ol>	5. If the pressure is less than 2,500 psi (at the end of the lift), the motor brushes may be defective, the pump pressure relief valve may be contaminated, damaged, or set to less than 2,500 psi, or the pump may be worn.
	<ol><li>Check the Wing Out control solenoid valve.</li></ol>	6. If the Wing Out solenoid valve is not opening completely, replace it.
	7. Check the wiring and control box.	<ol> <li>Refer to the wiring diagram included with your Owner's Manual.</li> </ol>
The wing(s) extend, but do(es) not retract or retract slowly.	<ol> <li>Check that the power/ground cables and control cable are connected properly.</li> </ol>	<ol> <li>Connect the cables if they are not connected.</li> </ol>
	<ol> <li>Check the wiring on the valve block for proper connections.</li> </ol>	<ol> <li>Refer to the wiring diagram included with your Owner's Manual.</li> </ol>
	3. Check for voltage between the solenoid valve terminal and ground while the ignition switch is on and the controller is in the WING IN position.	<ol> <li>If voltage is present, the solenoid valve or valve coil has failed. Verify the magnetism. If there is none, replace the valve. Check the wiring and controller.</li> </ol>
The wing(s) retract too easily while plowing.	<ol> <li>The pressure-relief valve pressure is set too low.</li> </ol>	<ol> <li>See an authorized BOSS dealer for pressure-relief-valve adjustment.</li> </ol>

Problem	Diagnostic Check	Result
Oil leaks from the lift cylinders.	1. Inspect the fittings and O-rings.	<ol> <li>Tighten loose fittings. See your authorized BOSS dealer for a seal kit.</li> </ol>
	2. Check the rod condition.	2. If the rods are pitted or rough, polish them with a copus cloth or extra fine steel wool.
The vehicle battery dies when the vehicle is turned off.	<ol> <li>Verify that the plow was installed to a keyed fuse source.</li> </ol>	1. Refer to the wiring diagram included with your <i>Owner's Manual</i> .
The vehicle battery dies when all of the switches are in the NEUTRAL position.	<ol> <li>Inspect the controller wiring for a short.</li> </ol>	1. If there is a short, repair or replace the controller.
	<ol> <li>Inspect the wire harness for a short.</li> </ol>	2. If there is a short, repair or replace the wire harness.
	3. Inspect the valve coils for a short.	3. If there is a short, replace the valve coils.
The plow lights are dim, do not come on, or flicker.	1. Check the electrical connections.	1. Clean and repair any corroded or damaged terminals.
	<ol> <li>Check the headlight adapter wires.</li> </ol>	2. Verify that the proper headlight adapters are being used and are correctly installed.
	<ol> <li>Check the relays for corrosion and function.</li> </ol>	3. The relays should click when energized.
The turn signals flash at a rapid rate.	1. Check the headlight adapters.	<ol> <li>Verify that the proper headlight adapters are being used and are correctly installed.</li> </ol>

Problem	Diagnostic Check	Result
There is no high-beam indicator light, or it does not function properly.	1. Check the headlight adapters.	<ol> <li>Verify that the proper headlight adapters are being used and are correctly installed.</li> </ol>
The blade digs into the ground in the	1. Check the bumper-stop position.	1. Adjust the bumper-stop position.
V position.	<ol> <li>The push beam is installed too high.</li> </ol>	2. Lower the push beam.
The blade does not lay flat on the	1. Check the bumper stop position.	1. Adjust the bumper stop position.
ground in the scoop position.	<ol> <li>The push beam is installed too low.</li> </ol>	2. Raise the push beam. If the push beam is at the highest setting, adjust the bumper stop further into the center section.
The blade trips too easily.	1. Check the trip-spring adjustment.	<ol> <li>Tighten the springs and replace them if they are damaged.</li> </ol>
	2. Check the push-beam height.	<ol> <li>Adjust the push beam to the proper height.</li> </ol>
The plow does not clean up snow from low areas.	<ol> <li>The controller is not in the Float position.</li> </ol>	1. Activate the Float feature on the controller.
Fluid is running out of the fill cap of the hydraulic pump.	<ol> <li>Power the light tower down. Do not pull the tower down.</li> </ol>	<ol> <li>Disconnect the plow and adjust the hydraulic-fluid level.</li> </ol>
	2. The terrain is too steep.	2. Avoid steeply sloped areas.
	3. The pump reservoir is overfilled.	3. The hydraulic fluid level should be within 2 cm (3/4 inch) of the top of the reservoir when lowered.

Problem	Diagnostic Check	Result
	<ol> <li>The plow is hitting snowbanks too hard.</li> </ol>	4. Do not plow recklessly.
The pump chatters when raising the plow, angling the plow, or extending the wing(s).	<ol> <li>Check that the hydraulic fluid level is not low.</li> </ol>	1. The hydraulic fluid level should be within 2 cm (3/4 inch) of the top of the reservoir when lowered.
The SmartHitch2 does not attach to the plow.	<ol> <li>Make sure that the vehicle is on and the controller is in the Float position.</li> </ol>	1. Turn the vehicle on and put the controller in the Float position.
	<ol> <li>Make sure that the controller is staying in the Float position.</li> </ol>	2. If the controller comes out of the Float position when using the SmartHitch2 controller, replace the controller.
	<ol> <li>Check valve block and the SmartHitch2 switch for proper connections.</li> </ol>	3. Refer to the manifold wiring diagram included with your <i>Owner's Manual</i> .
The plow lights and truck lights are on at the same time.	<ol> <li>Check the vehicle harness wiring connected to the truck headlights.</li> </ol>	<ol> <li>Refer to the wiring diagram included with your Owner's Manual and ensure that the vehicle wire harness is not plugged into the vehicle headlight.</li> </ol>
All of the plow and vehicle lights are on at the same time.	1. Check the headlight adapters.	<ol> <li>If the headlight adapters are installed incorrectly, unplug them and connect them as shown in Installing the Wire Harness.</li> </ol>

# **Optional Equipment and Accessories**

The following optional equipment and accessories are available at your local BOSS dealer.

### **Power-V High-Performance Cutting Edges**

The Power-V high-performance cutting edge provides extended wear compared to the traditional cutting edge. There is a built-in snow catcher to eliminate a trail of snow through the middle of the plow. There is also a builtin curb guard to protect your plow from damage.

- 7 ft 6 inches Driver Side—BAL08857
- 7 ft 6 inches Passenger Side—BAR08856
- 8 ft 2 inches Driver Side—BAL08859
- 8 ft 2 inches Driver Side DXT—BAL18150
- 8 ft 2 inches Passenger Side—BAR08858
- 8 ft 2 inches Passenger Side DXT—BAR18145
- 9 ft 2 inches Driver Side—BAL08861
- 9 ft 2 inches Driver Side DXT—BAL18165
- 9 ft 2 inches Passenger Side—BAR08860
- 9 ft 2 inches Passenger Side DXT—BAR18155
- 10 ft Driver Side—BAL08863
- 10 ft Passenger Side—BAR08862



#### **Power-V Curb Guard**

These long-lasting, high-impact curb guards protect the edge of your plow against wear.

- Driver Side—BAL00898
- Passenger Side—BAR00498

## Straight-Blade Curb Guard

These long-lasting, high-impact curb guards protect the edge of your plow against wear. Not available for sportduty straight blades.

- Driver Side—STB03395
- Passenger Side—STB03394
- 10 ft Driver Side—STB04364
- 10 ft Passenger Side—STB04363





#### Urethane Edge

The urethane edge is a reversible plow cutting blade made of plastic.

- 7 ft X 6 inches X 1 inches—STB09231
- 7 ft 6 inches X 6 inches X 1 inches—STB09232
- 7 ft 6 inches X 8 inches X 1-1/2 inches—STB09233
- 8 ft X 8 inches X 1-1/2 inches—STB09234
- 8 ft 6 inches X 8 inches X 1-1/2 inches—STB09235
- 9 ft X 8 inches X 1-1/2 inches—STB09236
- 10 ft X 8 inches X 2 inches—STB09237

## **Plow Shoe**

Add plow shoes to your snowplow to help the blade float over soft surfaces such as gravel, dirt, or grass. Each shoe kit contains only 1 shoe.





#### **Sport-Duty Plow Shoes**

Add plow shoes to your sport-duty snowplow to help the blade float over soft surfaces such as gravel, dirt, or grass. Each shoe kit contains 2 shoes.

• MSC09588



### **Snowplow-Sight System**

The snowplow-sight system allows you to align your plow and truck from inside the cab. Visually line up the wire sight to the target mark on the back of your plow light.



#### **Power-V XT Plow Caster**

The dolly wheel kits use the existing shoe holders on the blade, and are ideal for moving plows around the garage, service bay, or showroom floor. The heavy-duty caster wheels feature steel ball bearings for smooth movement and long-lasting life.

• MSC09216



The dolly wheel kits use the existing shoe holders on the blade, and are ideal for moving plows around the garage, service bay, or showroom floor. The heavyduty caster wheels feature steel ball bearings for smooth movement and longlasting life.





### **DXT Plow Caster**

The dolly wheel kits use the existing shoe holders on the blade, and are ideal for moving plows around the garage, service bay, or showroom floor. The heavy-duty caster wheels feature steel ball bearings for smooth movement and long-lasting life.

• MSC01141



G038537

### **Plow-Blade Wing**

The blade wings increase your blade width by a full 56 cm (22 inches) at a 30° angle. Contact your authorized BOSS dealer for application

details.

- MSC08042B
- MSC08042C
- MSC08063B



### NGE Control System with Pistol Grip Controller

The Next Generation Electrical (NGE) System from BOSS is an optional control system for 2012 and newer plows. This system eliminates the 13-pin electrical connection at the bumper and the in-cab truck-to-plow light switch. The NGE kit can also use the new pistol-grip handheld controller or the existing SmartTouch2 controllers. Contact your authorized BOSS dealer for more details.

- NGE Control Kit w/ Pistol Grip STB/V—MSC17819
- NGE Control Kit w/V SmartTouch 2—MSC17002

### **Pedestal Mount**

Attach your SmartTouch2 controller to the pedestal mount either as a solid floor mount or a removable magnetic mount.





#### **Dash Mount**

Attach your SmartTouch2 controller to the dash or door mount using a duallock hook and loop fastener strip.

• MSC09660



#### **Ballast Retainer**

The ballast retainer secures bags of sand or salt in the bed of your truck, ensuring that they remain in the proper location.



#### SmartLock Angle Cylinder

The cylinders lock and unlock automatically to keep the Power-V plow blade in the straight-position while back dragging. SmartLock cylinders HYD09386 are now available for the 10 ft Power-V Plow.

- HYD07130 (2005 & Older)
- HYD09733 (2006 & Newer)
- HYD09386 (10 ft plows)

### **Rubber Snow Deflector**

The snow deflector keeps snow off the windshield.

- MSC04587 (7 ft to 7 ft 6 inches)
- MSC01565 (7 ft 6 inches to 9 ft)
- MSC17611B (10 ft and EXT)

## **Emergency Parts Kit**

The kit contains a selection of replacement parts, packaged in a soft-sided bag that fits behind or under the seat of your truck.

- MSC16187 for Straight-blade plows
- MSC04298 for Power-V plows

## **Touch-Up Paint**

#### Red:

- MSC04098 12 oz spray
- MSC04358 US qt

#### Black:

- MSC04036 12 oz spray
- MSC04359 US qt

## High-Performance Hydraulic-Fluid

Formulated to maintain its viscosity from normal use to -40°C (-40°F).

- HYD01836 (US gallon)
- HYD01835 (US qt)

## **Joystick Control**

The joystick controller has a lighted On/Off switch that you can adjust for right or left hand use.

- STB03191 for Straight-blade plows
- MSC03809 for Power-V plows
## This manual applies to the following models:

- 7 ft 6 inch Steel XT MSC10176B with MSC08984B and MSC07373, MSC15100, or MSC15101
- 7 ft 6 inch Steel XT MSC10176B with MSC08985B and MSC04728 or MSC04729
- 8 ft 2 inch Steel XT MSC10182B with MSC08984B and MSC07373, MSC15100, or MSC15101
- 8 ft 2 inch Steel XT MSC10182B with MSC08985B and MSC04728 or MSC04729
- 9 ft 2 inch Steel XT MSC10192B with MSC08984B and MSC07373, MSC15100, or MSC15101
- 9 ft 2 inch Steel XT MSC10192B with MSC08985B and MSC04728 or MSC04729
- 7 ft 6 inch Poly XT MSC10276B with MSC08984B and MSC07373, MSC15100, or MSC15101
- 7 ft 6 inch Poly XT MSC10276B with MSC08985B and MSC04728 or MSC04729
- 8 ft 2 inch Poly XT MSC10282B with MSC08984B and MSC07373, MSC15100, or MSC15101
- 8 ft 2 inch Poly XT MSC10282B with MSC08985B and MSC04728, or MSC04729
- 9 ft 2 inch Poly XT MSC10292B with MSC08984B and MSC07373, MSC15100, or MSC15101
- 9 ft 2 inch Poly XT MSC10292B with MSC08985B and MSC04728 or MSC04729
- 10 ft 0 inch Steel DXT MSC17510 with MSC17612B and MSC15100 or MSC15101
- 10 ft 0 inch Steel DXT MSC17510 with MSC17624B and MSC04728 or MSC04729

- 8 ft 2 inch Steel DXT MSC18082 with MSC18212 and MSC07373, MSC15100, or MSC15101
- 8 ft 2 inch Steel DXT MSC18082 with MSC18224 and MSC04728 or MSC04729
- 9 ft 2 inch Steel DXT MSC18092 with MSC18212 and MSC07373, MSC15100, or MSC15101
- 9 ft 2 inch Steel DXT MSC18092 with MSC18224 and MSC04728 or MSC04729
- 8 ft 2 inch Poly DXT MSC18182 with MSC18212 and MSC07373, MSC15100, or MSC15101
- 8 ft 2 inch Poly DXT MSC18182 with MSC18224 and MSC04728 or MSC04729
- 9 ft 2 inch Poly DXT MSC18192 with MSC18212 and MSC07373, MSC15100, or MSC15101
- 9 ft 2 inch Poly DXT MSC18192 with MSC18224 and MSC04728 or MSC04729
- 8 ft 2 Inch Stainless Steel DXT MSC18282 with MSC18212 and MSC07373, MSC15100, or MSC15101
- 8 ft 2 inch Stainless Steel DXT MSC18282 with MSC18224 and MSC04728 or MSC04729
- 9 ft 2 inch Stainless Steel DXT MSC18292 with MSC18212 and MSC07373, MSC15100, or MSC15101
- 9 ft 2 inch Stainless Steel DXT MSC18292 with MSC18224 and MSC04728 or MSC04729
- 7 ft 6 inch HTX V-Blade MSC18800 with MSC18850 and MSC15100 or MSC15101
- 5 ft 6 inch V-Blade MSC13632 with MSC13818 and MSC13625
- 6 ft 6 inch V-Blade MSC12480 with MSC12060 and MSC12075

# Notes:

## Notes:

## **BOSS Products Commercial Warranty**

#### What this warranty covers:

This warranty covers defects in material and workmanship except as set forth below.

#### Who is covered:

The original purchaser from an authorized dealer.

For how long: Complete Product: 2 years from the date of purchase. Labor: 2 years from the date of purchase for complete product. Parts: 1 year from the date of purchase. (no Labor)

### What BOSS Products will do:

BOSS Products will, at its sole option, repair or replace defective parts at no charge.

#### What you must do for warranty service:

To obtain warranty service, purchaser must return the defective product to any authorized BOSS Products dealer (preferably the one from whom the product was purchased) within the warranty period. Purchaser must be able to verify the original purchase date. All transportation costs to and from the dealer will be the responsibility of the purchaser. To locate the authorized BOSS dealer nearest to you, call toll free: (800) 286-4155.

#### What is not covered:

1. Expendable parts such as hoses, plow shoes, cutting edges, pins, nuts, bolts, blade guides, etc.

2. Products repaired or altered by anyone other than an authorized BOSS Products dealer.

3. Products which have been subject to misuse, negligence, accident, improper installation, maintenance, care, or storage.

4. Products mounted on vehicles other than those listed in the BOSS Snowplow Application Chart and Selection Guide.

5. BOSS Products does not assume liability for damage to your motor vehicle resulting from the attachment or use of any BOSS products. Vehicle risk is the sole responsibility of the purchaser.

Limits of BOSS Products Liability are:

BOSS Products' liability is expressly limited to repair or replacement of defective parts. BOSS Products shall not be liable for consequential, incidental, or contingent damages whatsoever, even if damages are caused by the negligence or fault of BOSS Products. The foregoing warranties are exclusive and in lieu of all other express and implied warranties including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

This warranty does not apply if you purchased your product for personal, family, or household use. In this case, refer to the BOSS Products Limited Consumer Warranty.

BOSS Products is a division of The Toro® Company P.O.Box 787 2010 The BOSS Way Iron Mountain, MI 49801

(2016-2017)

## **BOSS Products Consumer Warranty**

#### What this warranty covers:

This warranty covers defects in material and workmanship except as set forth below.

#### Who is covered:

The original retail purchaser of a BOSS product who purchases it for personal, family, or household use.

For how long: Complete Product: 2 years from the date of purchase. Labor: 2 years from the date of purchase for complete product. Parts: 1 year from the date of purchase. (no Labor)

#### What BOSS Products will do:

BOSS Products will, at its sole option, repair or replace defective parts at no charge.

#### What you must do for warranty service:

To obtain warranty service, purchaser must return the defective product to any authorized BOSS Products dealer (preferably the one from whom the product was purchased) within the warranty period. Purchaser must be able to verify the original purchase date. All transportation costs to and from the dealer will be the responsibility of the purchaser. To locate the authorized BOSS dealer nearest to you, call toll free: (800) 286-4155.

#### What is not covered:

1. Expendable parts such as hoses, plow shoes, cutting edges, pins, nuts, bolts, blade guides, etc.

2. Products repaired or altered by anyone other than an authorized BOSS Products dealer.

3. Products which have been subject to misuse, negligence, accident, improper installation, maintenance, care, or storage.

4. Products mounted on vehicles other than those listed in the BOSS Snowplow Application Chart and Selection Guide.

5. BOSS Products does not assume liability for damage to your motor vehicle resulting from the attachment or use of any BOSS products. Vehicle risk is the sole responsibility of the purchaser.

Limits of BOSS Products Liability are:

BOSS Products' liability is expressly limited to repair or replacement of defective parts. BOSS Products shall not be liable for consequential, incidental, or contingent damages whatsoever, even if damages are caused by the negligence or fault of BOSS Products. The foregoing warranties are exclusive and in lieu of all other express and implied warranties including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

#### State laws:

Some states do not allow exclusion of incidental or consequential damages or the limitations on how long an implied warranty lasts, so these limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have the other rights which vary from state to state.

This warranty does not apply if you purchased your product for personal, family, or household use. In this case, refer to the BOSS Products Limited Consumer Warranty.

BOSS Products is a division of The Toro® Company P.O.Box 787 2010 The BOSS Way Iron Mountain, MI 49801

(2016-2017)