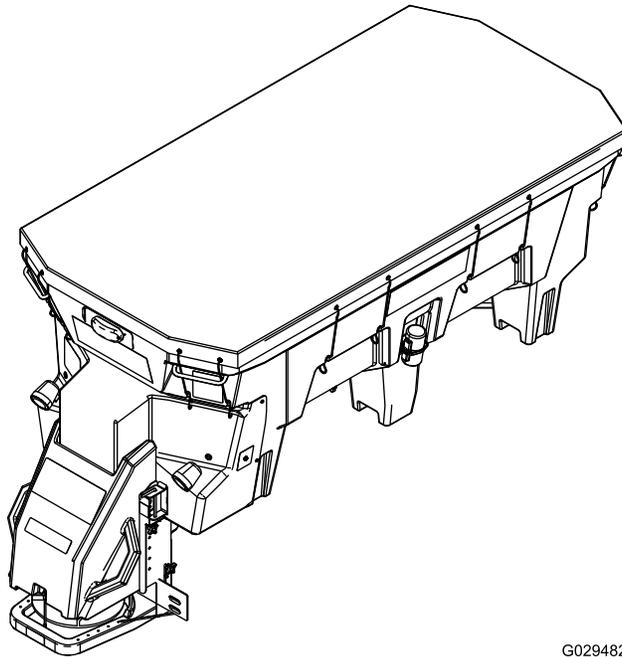




P.O. Box 787  
Iron Mountain, MI 49801  
United States

# Owner's Manual

## VBX 6500/8000/9000 V-Box Spreader



G029482



This product complies with all relevant European directives; for details, please see the separate product specific Declaration of Conformity (DOC) sheet.

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

Patents pending.

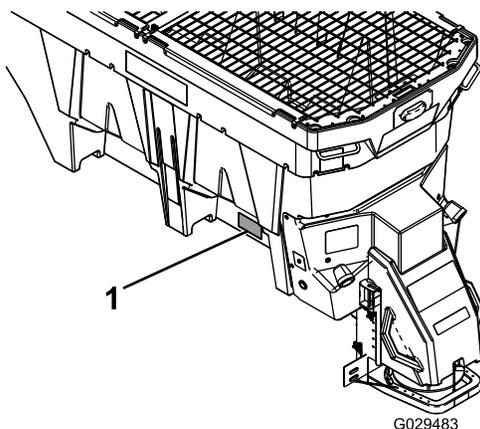
# Introduction

This spreader is designed to dispense ice-control solutions on residential or commercial properties. 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**

1. Serial number location

Model No. _____
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.



**Figure 2**

g000502

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 spreader.
- Ensure that only trained personnel install and perform maintenance on the equipment.
- Use a 500 kg (1/2 ton) minimum lifting device to move heavy spreader components. Never put any part of your body under a suspended load.
- This spreader has an operating sound level below 70 dBA while inside the vehicle. Wear hearing protection while operating the spreader outside of the vehicle.
- Always wear appropriate personal protective equipment when loading, unloading, and servicing the spreader. Wear substantial, slip-resistant footwear, eye protection, and respiratory protection.
- Never disable, remove, or relocate any sensors or other components related to the operation of the air bags in your vehicle.

## Operation

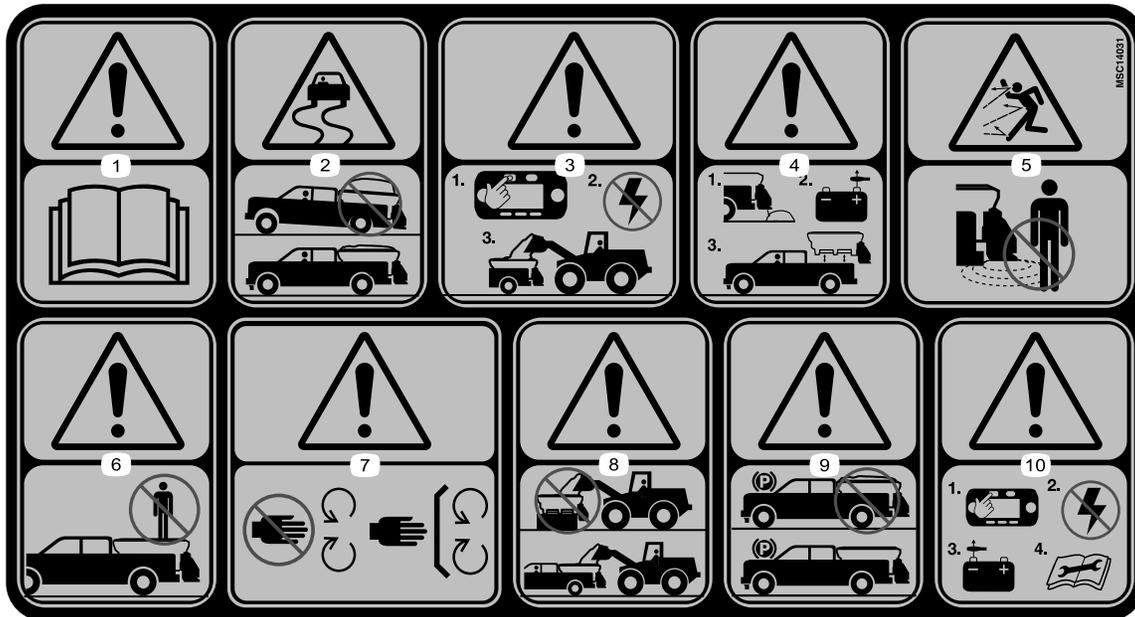
- Never put any part of your body between the spreader and the vehicle.
- When transporting the spreader, ensure that it is properly secured. Instructions are available at [www.bossploow.com](http://www.bossploow.com).
- Do not operate the machine while ill, tired, or under the influence of alcohol or drugs.
- For vehicle mounted spreaders, always follow the manufacturer's recommendations for proper parking procedures.
- Always wear your seatbelt while operating a motor vehicle.
- Do not exceed 22 km/h (14 mph) while spreading.
- Do not exceed 72 km/h (45 mph) while transporting the spreader.
- Overloading the spreader could result in an accident or damage. Never exceed the gross-vehicle-weight rating (GVWR) or the front or rear gross-axle-weight ratings (FGAWR or RGAWR) for the vehicle.

- This spreader is restricted to the use of dry, free-flowing salt, sand, and sand/salt mix. Do not run other materials through the spreader.
- Carefully read and follow the warning labels and safety data sheets (SDSs) for all materials used, and protect yourself according to the manufacturer's recommendations.
- Do not attempt to mount or remove the spreader with material in it.
- Turn the vehicle and spreader off before filling, mounting, removing, servicing, or cleaning it.
- Do not operate the spreader within 7.6 m (25 ft) of bystanders.
- Do not climb into or ride on the spreader.
- Keep your hands, feet, and clothing away from moving parts and mounting points.
- Mount the spreader to a vehicle before loading material.
- Install ratchet straps and keep them properly tightened at all times.
- Do not store material in the hopper.

## 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.



MSC14031

decalsc14031b

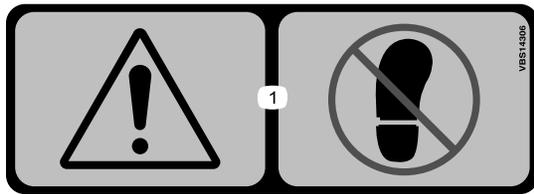
1. Warning—read the *Owner's Manual*.
2. Loss of control hazard—do not overfill the machine.
3. Warning—turn the machine off before filling.
4. Warning—empty the hopper and disconnect the power before installing or removing the machine.
5. Thrown object hazard—keep bystanders away.
6. Warning—do not stand or ride on the machine.
7. Warning—stay away from moving parts; keep all guards and shields in place.
8. Warning—the machine must be installed before filling.
9. Warning—do not store materials in the machine.
10. Warning—turn the machine off and disconnect the power before servicing the machine.



**MSC18131**

decalmsc18131b

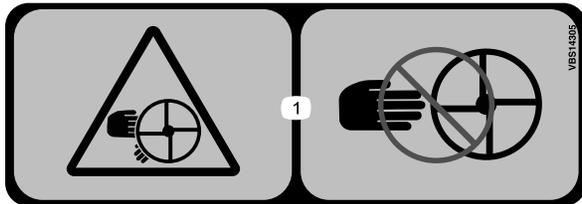
1. Crushing hazard—keep hands clear.



**VBS14306**

decalvbs14306b

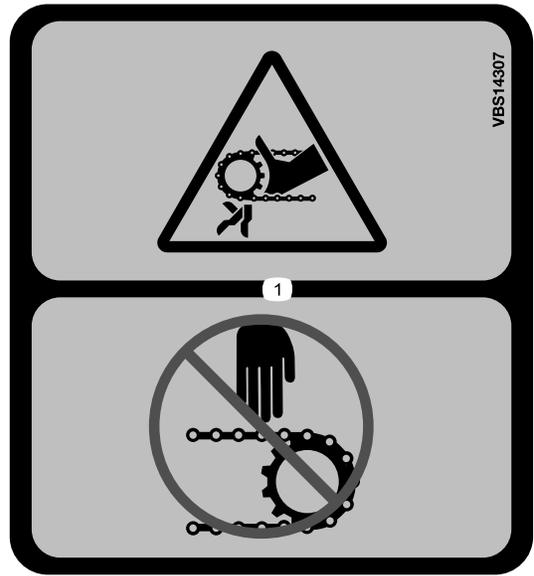
1. Warning—do not step here.



**VBS14305**

decalvbs14305b

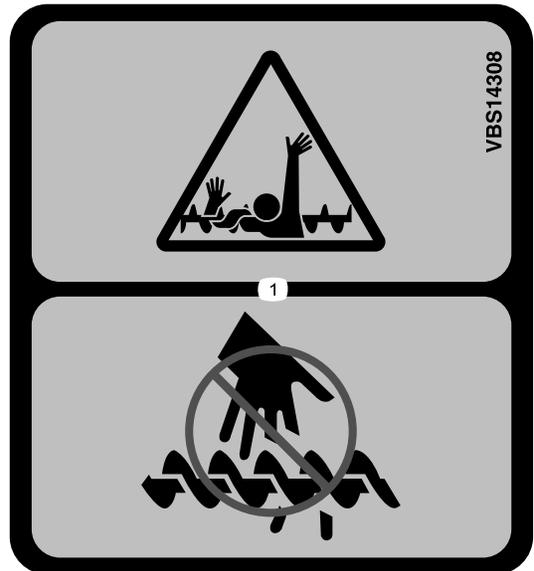
1. Cutting/dismemberment hazard, spinner—keep hands clear.



**VBS14307**

decalvbs14307b

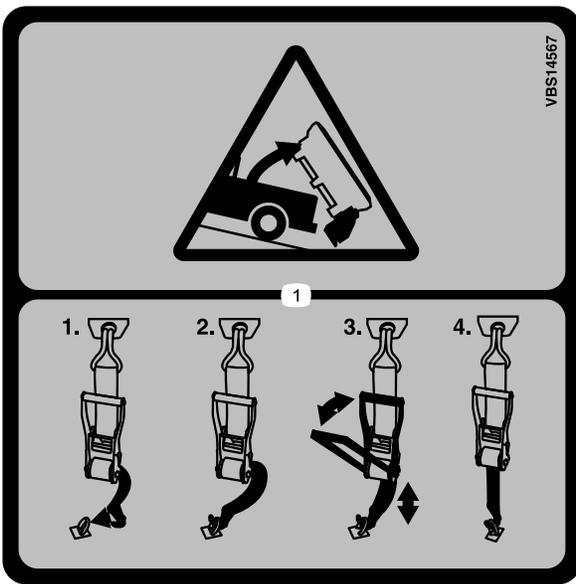
1. Finger/hand entanglement hazard, pintle chain—keep hands clear.



**VBS14308**

decalvbs14308b

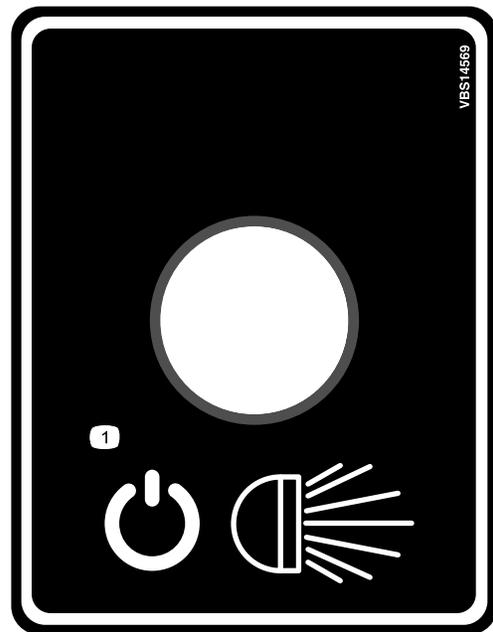
1. Entanglement hazard, auger—keep hands clear.



**VBS14567**

decalvbs14567b

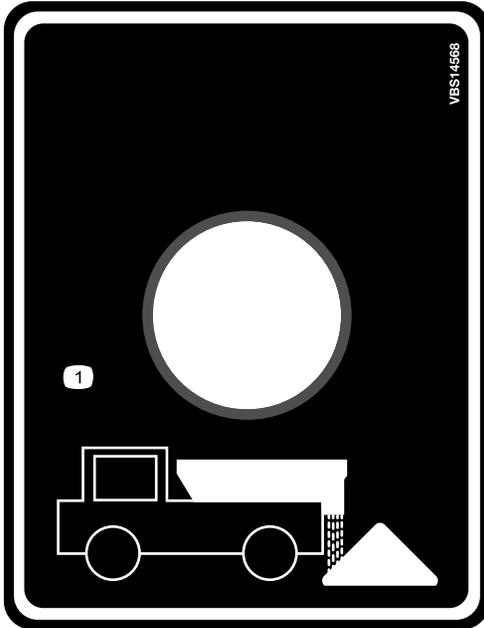
1. Loss of machine hazard—the ratchet straps must be secured at all times.



**VBS14569**

decalvbs14569b

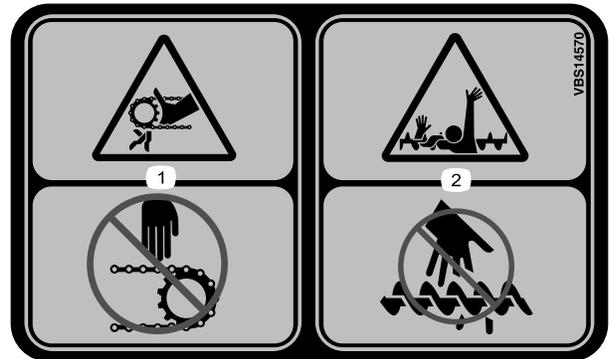
1. Work-light switch



**VBS14568**

decalvbs14568b

1. Dump switch



**VBS14570**

decalvbs14570b

1. Finger/hand entanglement hazard, pintle chain—keep hands clear.
2. Entanglement hazard, auger—keep hands clear.

# Setup

## Installing the Wire Harness

### **⚠ DANGER**

Vehicle engines contain moving parts and can become extremely hot, capable of causing severe burns and serious bodily harm.

Shut off the engine and allow it sufficient time to cool down before installing this kit.

### **⚠ DANGER**

Vehicle batteries can cause dangerous electrical shocks that could lead to severe burns or death.

Disconnect your battery before installing this kit by removing the negative connector followed by the positive connector.

1. Secure the vehicle-side power/ground and main harness connectors near the center of the rear bumper using cable ties (Figure 3).
2. Route the wire harness along the driver-side frame-rail and into the engine compartment, and secure it with cable ties.

**Note:** Keep the wire harness away from any hot or moving parts.

3. Insert the controller connector through the firewall and into the vehicle cab, and secure it with cable ties.

**Note:** Route the connector to the location that you want to install the controller.

4. Install the fuse block within 30 cm (12 inches) of the battery and remove the fuse-block cover.
5. Connect the red power/ground cable to the fuse block (Figure 3).

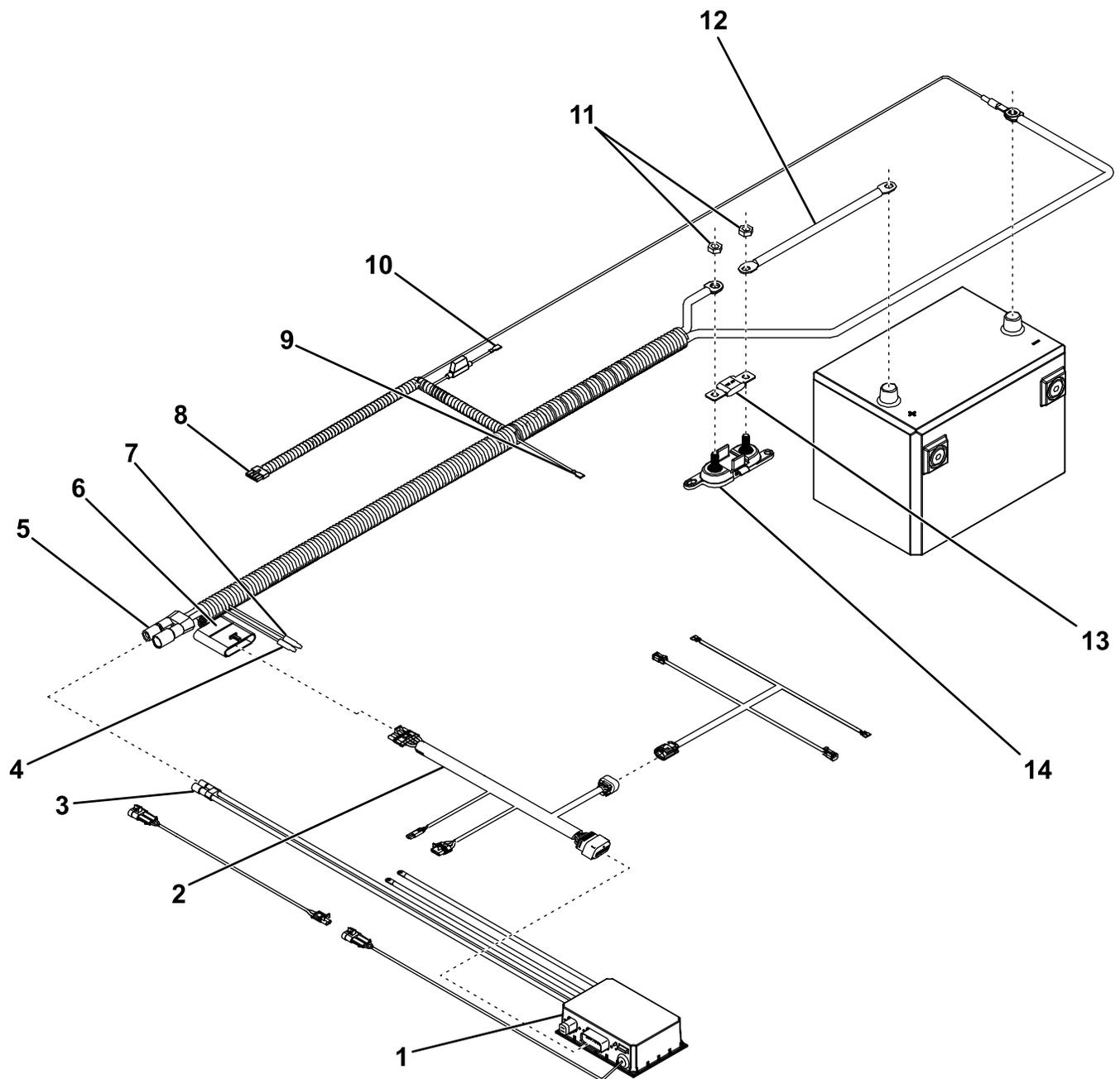
**Note:** Ensure that the 150 A fuse is installed.

6. Connect the power cable to the other end of the fuse block (Figure 3).
7. Install the cover onto the fuse block.
8. Connect the power cable to the positive (+) battery post (Figure 3).

**Important:** Do not connect the ground cable at this time.

9. Connect the red spade connector with the inline fuse to a keyed fuse source on the vehicle (Figure 3).

10. Connect the red spade connector without the inline fuse to the center high-mounted, stoplight fuse if it is available (Figure 3).
11. Connect the white bullet connector to the rear tail-light ground wire using a quick-splice connector (Figure 3).
12. Connect the brown bullet connector to the rear running-lamp wire using a quick-splice connector (Figure 3).
13. Wrap all of the excess wire and secure it in the engine compartment.
14. Connect the black power/ground cable and the controller ground cable to the negative (-) battery post (Figure 3).



**Figure 3**

g266761

- |   |  |  |                  |
|---|--|--|------------------|
| 1. Control module                       | 5. Vehicle-side power/ground connector | 9. Red spade connector                     | 13. Fuse (150 A) |
| 2. Spreader-side main harness           | 6. Vehicle-side main harness connector | 10. Red spade connector (with inline fuse) | 14. Fuse block   |
| 3. Spreader-side power/ground connector | 7. White bullet connector              | 11. Nuts (5/16 inch)                       |                  |
| 4. Brown bullet connector               | 8. Controller connector                | 12. Power cable                            |                  |

# Mounting the Spreader

The minimum truck bed length for the VBX 6500 is 1.68 m (66 inches), for the VBX 8000 is 2.0 m (78 inches), and for the VBX 9000 is 2.3 m (90 inches).

1. Remove the tailgate from the vehicle.
2. Using the lift points (Figure 4), lift the spreader onto the truck bed and set it on the centerline.

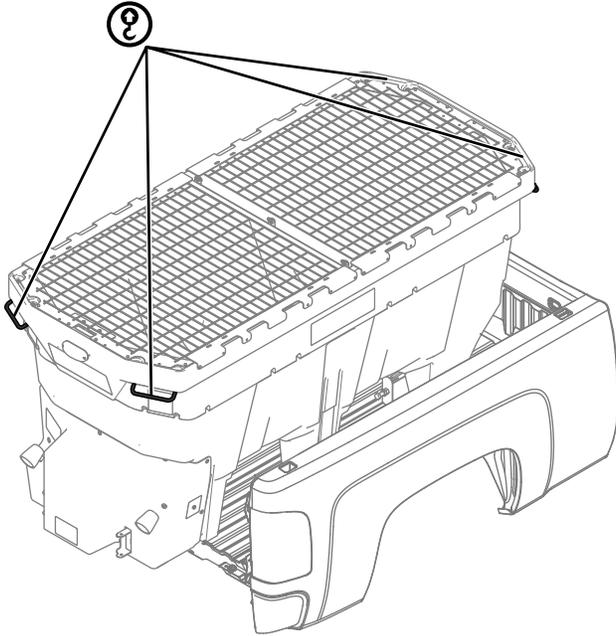


Figure 4

g265126

1. Lift points

3. Slide the spreader toward the vehicle cab until the slide stop hits the truck bed (Figure 5).

**Note:** The truck bed must be at least 1.68 m (66 inches) long for the VBX 6500, at least 2.0 m (78 inches) long for the VBX 8000, and at least 2.3 m (90 inches) long for the VBX 9000.

**Note:** If the spreader is flush with the truck box but the slide stop is not touching the rear bumper, refer to [Adjusting the Slide Stop \(page 9\)](#).

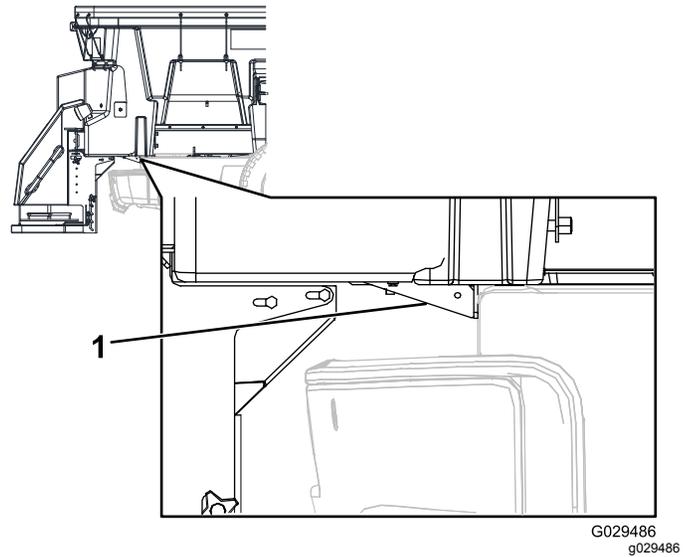


Figure 5

G029486  
g029486

1. Slide stop

4. Drill 4 holes (7/16 inch) into the truck bed aligned with the slide stop holes.
5. Secure the slide stop to the vehicle using 4 bolts, 4 locknuts, and 16 flat washers (3/8 inch).

**Note:** Slide stop fasteners are not included.

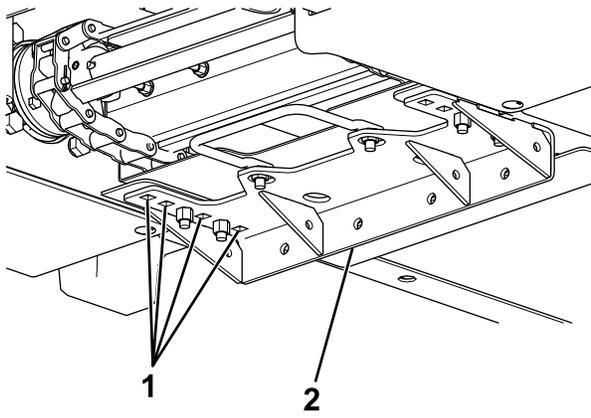
6. Torque the bolts to 28 N·m (19.7 ft-lb).

## Adjusting the Slide Stop

### Optional

You can adjust the slide stop of the spreader 2.5 cm (1 inch) or 5 cm (2 inches) so that the spreader does not extend past the truck box.

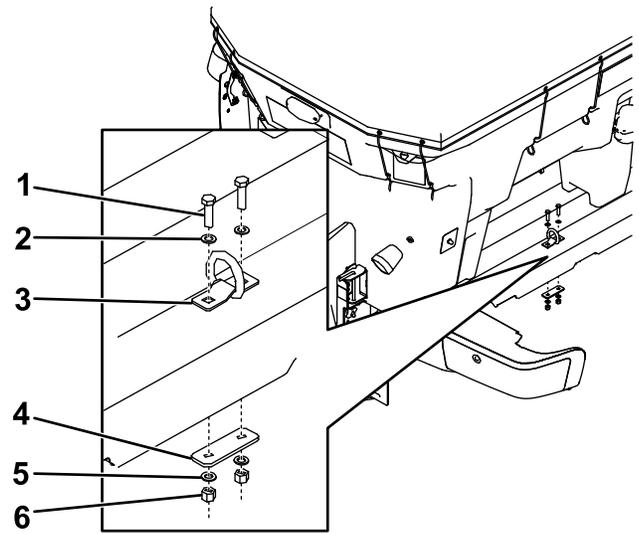
1. Remove and retain the carriage bolts securing the slide stop.
2. Slide the spreader so that it does not extend past the truck box and contact the vehicle cab.
3. Move the slide stop to the desired position and secure it with the previously removed carriage bolts (Figure 6).



**Figure 6**

g265127

1. Slide-stop adjustment
2. Slide stop holes



**Figure 8**

G029489  
g029489

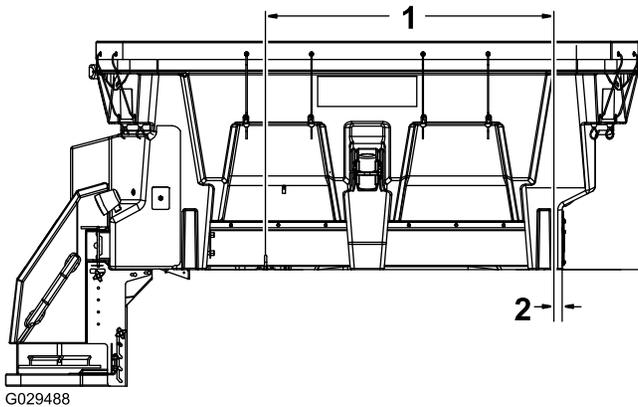
1. Bolt (1-1/2 inch)
2. Flat washer (3/8 inch)
3. D-ring
4. Bedmount plate
5. Flat washer (3/8 inch)
6. Locknut

4. Torque the bolts to 28 N·m (19.7 ft-lb).

## Installing the Tie-Down D-Rings

1. Using a 7/16-inch drill bit, mark and drill the holes for the D-rings as shown in [Figure 7](#).

**Note:** Drill the holes through or near the frame cross-members of the vehicle.



**Figure 7**

g029488

1. Back of the spreader leg to the D-ring center—3.8 cm (1-1/2 inches)
2. D-ring center to the D-ring center—129.5 cm (51 inches)

2. Install the D-rings as shown in [Figure 8](#) and torque the bolts to 28 N·m (19.7 ft-lb).

# Building and Installing the Spacer

1. Measure the distance from the front of the truck box to the spreader legs.
2. Using 3.8 x 18.4 cm (1-1/2 x 7-1/4 inch) lumber, build the spacer as shown in [Figure 9](#).

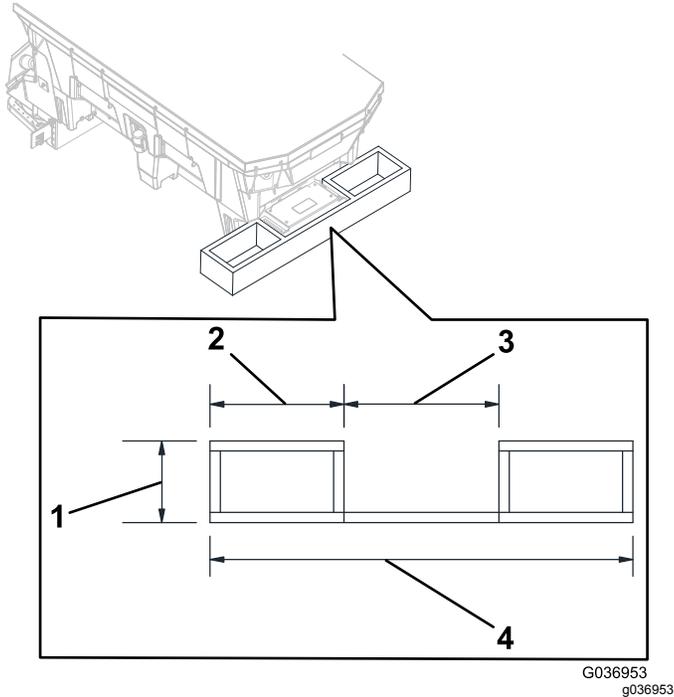


Figure 9

- |   |                            |
|---|----------------------------|
| 1. Distance between the spreader leg and the truck box    | 3. 57.7 cm (22-3/4 inches) |
| 2. Distance between the truck box and the take-up housing | 4. Width of the truck box  |

3. Insert the spacer between the spreader and the front of the truck box.

## Securing the Spreader

### **⚠ DANGER**

The spreader is heavy and could cause serious injury or property damage if it falls off the vehicle.

Ensure that the ratchet straps are securely attached to the spreader at all times.

1. Connect the ratchet straps to the D-rings around the upper edge of the spreader ([Figure 10](#)).

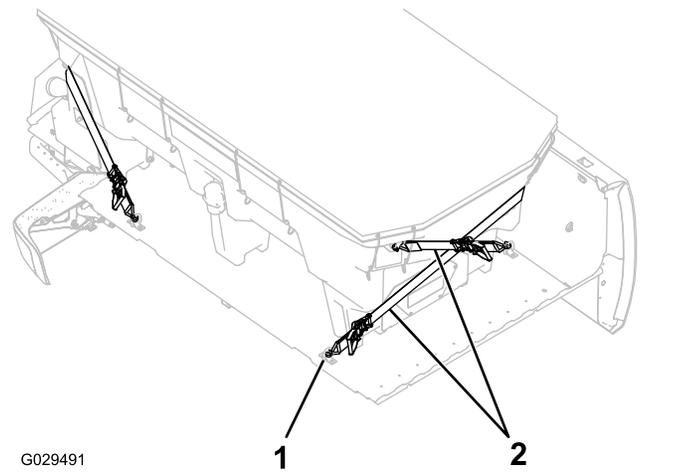


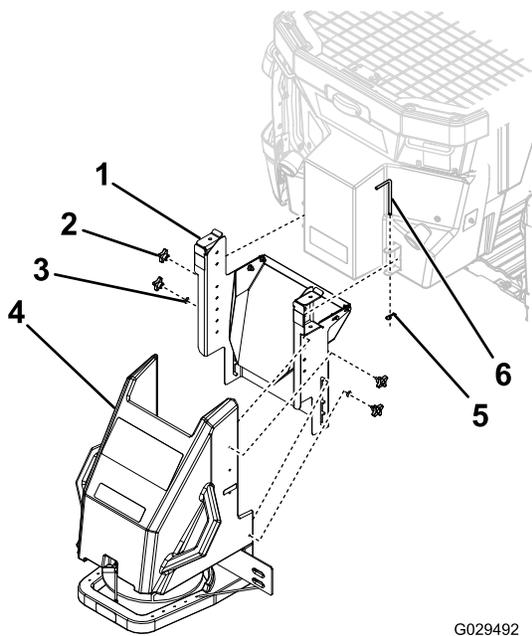
Figure 10

- |           |                   |
|-----------|-------------------|
| 1. D-ring | 2. Ratchet straps |
|-----------|-------------------|

2. Cross the straps near the vehicle cab and attach them to the D-rings opposite to them on the truck bed ([Figure 10](#)).
3. Attach the straps near the rear of the vehicle to the D-rings nearest them on the truck bed ([Figure 10](#)).
4. Tighten the straps evenly to secure the spreader.

## Installing the Spinner Assembly

1. Attach the adjustment assembly to the spinner assembly using 2 flat washers (5/16 inch) and 4 thumb screws as shown in [Figure 11](#). Tighten them 1/4-turn past finger-tight.



**Figure 11**

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- |                            |                     |
|----------------------------|---------------------|
| 1. Adjustment assembly     | 4. Spinner assembly |
| 2. Thumb screw             | 5. Cotter pin       |
| 3. Flat washer (5/16 inch) | 6. Latch pin        |

- Remove and retain the latch and cotter pins from the spinner assembly (Figure 11).
- Attach the spinner assembly to the spreader and secure it with the previously removed latch and cotter pins (Figure 11).

**Important:** The spinner assembly is heavy and requires 2 people to lift.

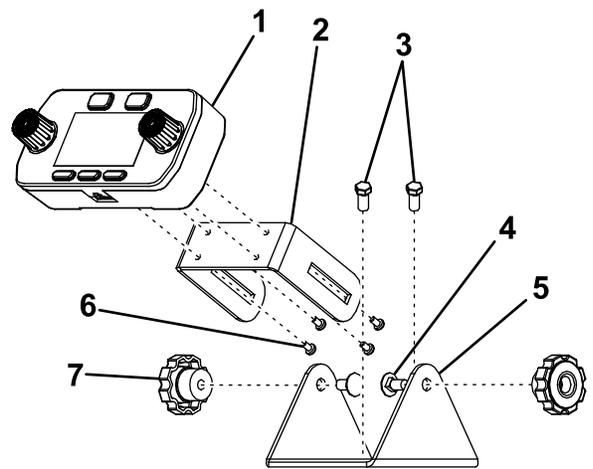
- Connect the wire harness.

## Installing the Spreader Controller

Mount the controller in the cab where it does not interfere with vehicle operation or visibility.

**Important:** Do not mount the controller in a location that vehicle occupants could contact it during a crash.

- Attach the mounting bracket to the vehicle using either 2 hook and loop fasteners or 2 sheet-metal screws (Figure 12).



G029493

g029493

**Figure 12**

- |                       |                     |
|-----------------------|---------------------|
| 1. Controller display | 5. Mounting bracket |
| 2. Sliding bracket    | 6. Pan-head screws  |
| 3. Sheet-metal screws | 7. Thumb nut        |
| 4. Carriage bolt      |                     |

- Connect the controller display to the sliding bracket using 4 pan-head screws (Figure 12).
- Attach the sliding bracket to the mounting bracket using 2 carriage bolts and thumb nuts (Figure 12).

**Note:** Position the controller screen so that it is clearly visible to the driver.

- Connect the wire harness controller connector to the controller display.

## Checking the Installation

- For models pintle chain models, check the pintle chain conveyor tension; refer to [Adjusting the Pintle-Chain Conveyor Tension \(page 20\)](#).
- Check that the unit type listed on the controller display matches your machine type; refer to the [Main Screen \(page 14\)](#) section.

**Note:** If the unit type does not match your machine, contact your Authorized BOSS Dealer about adjusting the control module.

# Product Overview

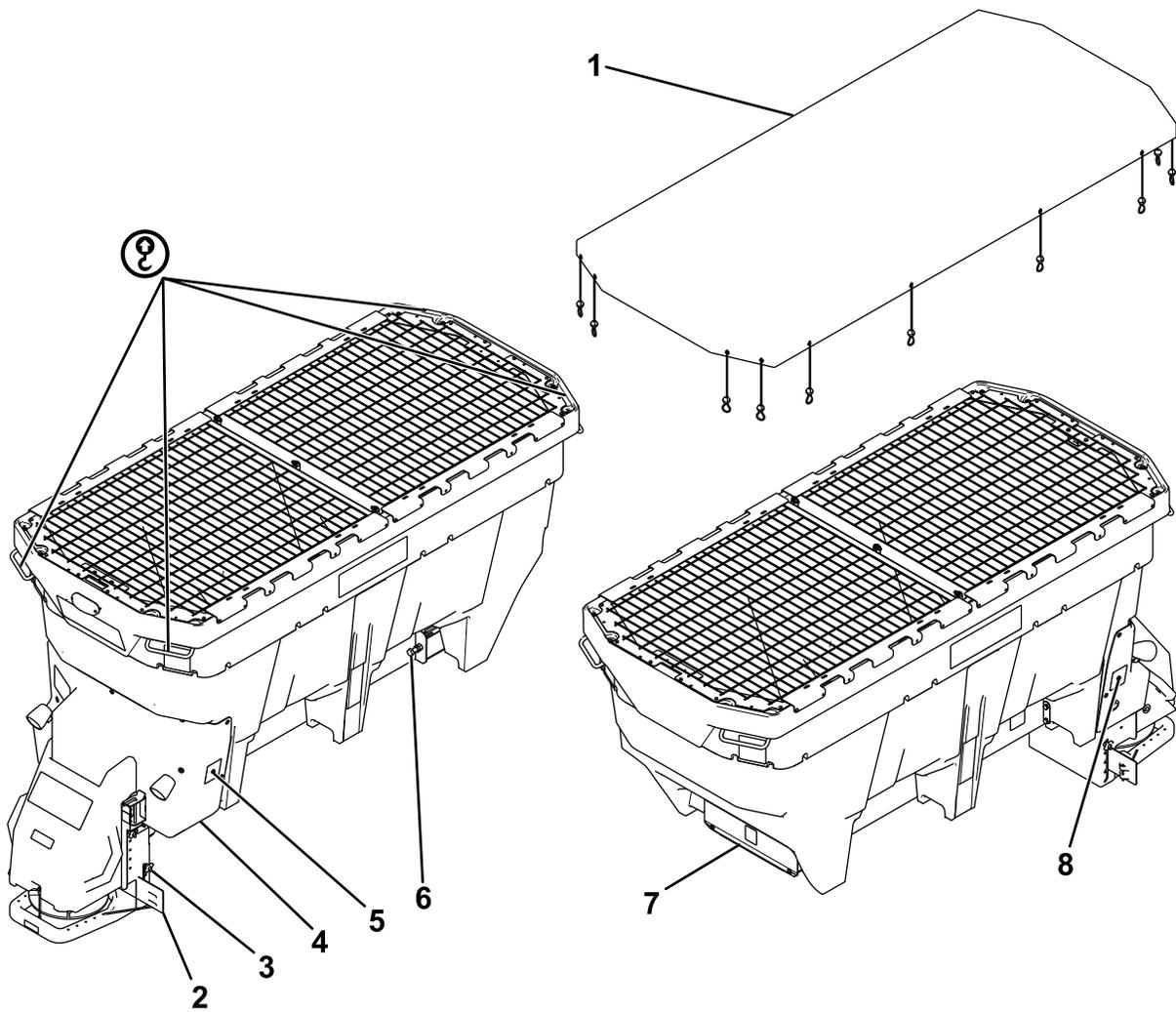


Figure 13

g265128

- 1. Hopper cover
- 2. Material deflector
- 3. Spinner-height adjustment
- 4. Front cover
- 5. Dump switch
- 6. Pintle-chain tension adjustment
- 7. Back cover
- 8. Work-light switch

## Controls

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

### Material Deflector

The material deflector controls the spread of materials; you can adjust the controls to provide different spread patterns; refer to [Adjusting the Material Deflectors \(page 17\)](#).

### Dump Switch

The dump switch activates the spreader and empties out the contents. Press and hold the switch to empty the spreader.

#### **⚠ CAUTION**

**When outside of the vehicle cab, this machine produces sound levels that can cause hearing loss through extended periods of exposure.**

**Wear hearing protection while operating the dump switch.**

## Work-Light Switch

The work-light switch activates the rear lights.

## Control Module

The control module is located under the front cover. The LED on the module can be used to help with [Troubleshooting \(page 25\)](#).

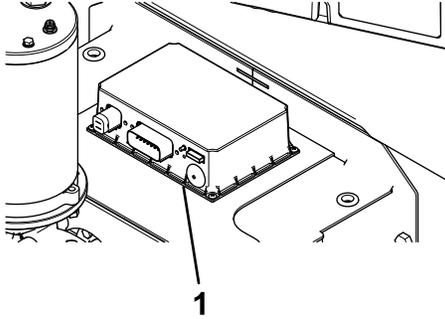


Figure 14

1. Control module

g266146

## Main Screen

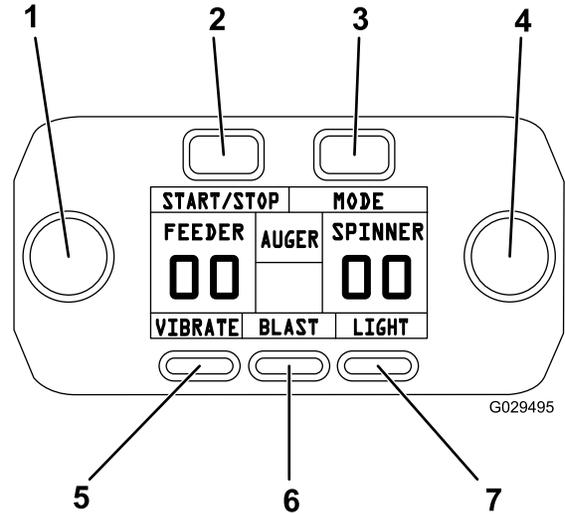


Figure 15

1. Feed speed dial
2. Start/Stop button
3. Mode button
4. Spinner Speed dial
5. Vibrate button
6. Blast button
7. Light button

g029495

## Spreader Controller

The spreader controller shows information about your machine. [Figure 15](#) and [Figure 16](#) illustrate the main screen and adjustment screen of the controller. You can switch between the main screen and adjustment screen at any time by pressing the Mode button.

Refer to [Controller Status and Error Indicators \(page 22\)](#) for additional controller icons.

- Feed Speed dial—increases the feed motor speed when turned clockwise, and decreases the feed motor speed when turned counterclockwise. The feed speed determines how quickly material is pulled from the hopper.
- Feeder display—indicates the feed motor speed
- Start/Stop button—turns the feeder, spinner, and vibrator (if active) motors on or off
- Unit type display—indicates if the control module is set for auger or pintle chain mode
- Mode button—switches between the main screen and the adjustment screen
- Spinner display—indicates the spinner motor speed
- Spinner Speed dial—increases the spinner motor speed when turned clockwise, and decreases the spinner motor speed when turned counterclockwise. The spinner speed determines how far the material is thrown.
- Light button—turns the rear lights on or off
- Blast button—momentarily sends full power to the feed and spinner motors in 2 second bursts. Holding the button increases the motors to full speed for 2 seconds and then pauses for 2 seconds then repeats until you release the button. The Blast button only works if the feed and spinner motors are set at less than maximum speed.
- Vibrate button—switches the vibrator on or off

**Note:** The vibrator only runs when the feeder motor is on.

## Adjustment Screen

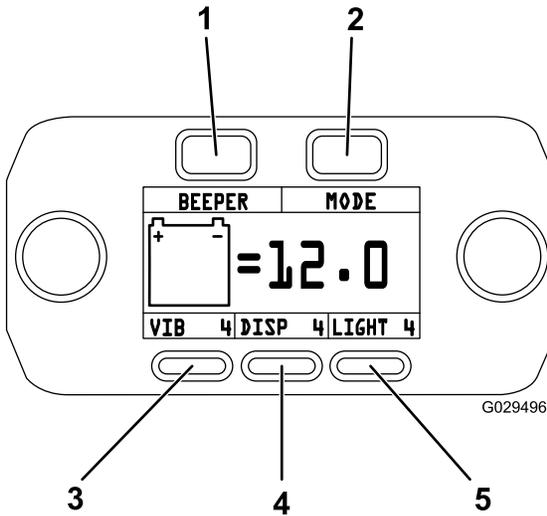


Figure 16

1. Beeper button
2. Mode button
3. Vibrator Adjustment button
4. Display Adjustment button
5. Light Adjustment button

- Beeper button—turns the beeper sound on or off
- Mode button—switches between the main screen and the adjustment screen
- Battery voltage display—indicates the estimated voltage of the vehicle
- Light Adjustment button—adjusts the rear light brightness level from 1 to 4
- Display Adjustment button—adjusts the display screen brightness from 1 to 4
- Vibrator Adjustment button—adjusts the vibration level from 1 to 4

## Specifications

**Note:** Specifications and design are subject to change without notice.

	VBX 6500	VBX 8000	VBX 9000
Length	2.4 m (94 inches)	2.9 m (115 inches)	3.1 m (123 inches)
Hopper height	97 cm (38 inches)	97 cm (38 inches)	124.5 cm (49 inches)
Hopper width	124.5 cm (49 inches)	123 cm (48-1/4 inches)	122 cm (48 inches)
Weight (empty)	250 kg (550 lb) with auger; 272 kg (600 lb) with pintle chain	272 kg (600 lb) with auger; 295 kg (650 lb) with pintle chain	322 kg (710 lb) with auger; 345 kg (760 lb) with pintle chain
Capacity	1.2 m <sup>3</sup> (1.5 yd <sup>3</sup> )	1.5 m <sup>3</sup> (2 yd <sup>3</sup> )	2.3 m <sup>3</sup> (3 yd <sup>3</sup> )

## Attachments/Accessories

A selection of BOSS approved attachments and accessories is available for use with the machine to enhance and expand its capabilities. Contact your Authorized Service Dealer or authorized BOSS distributor or go to [www.bossplov.com](http://www.bossplov.com) for a list of all approved attachments and accessories.

To ensure optimum performance and continued safety certification of the machine, use only genuine BOSS replacement parts and accessories. Replacement parts and accessories made by other manufacturers could be dangerous, and such use could void the product warranty.

# Operation

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

## Adjusting the Height of the Spinner Assembly

You can adjust the spinner assembly height in 5 cm (2 inch) increments up to 20 cm (8 inches) to account for vehicles with higher beds. The bottom of the spinner assembly should be approximately 61 cm (24 inches) from the ground.

1. Remove the 2 upper thumbscrews (Figure 17).

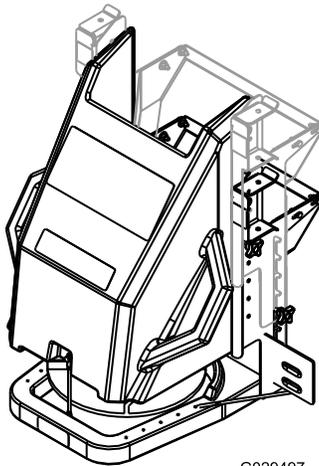


Figure 17

2. Hold the assembly and loosen the 2 lower thumbscrews.
3. Slide the spinner assembly down to the desired height.
4. Insert the 2 upper thumbscrews and tighten them.
5. Tighten the 2 lower thumbscrews.

## Loading the Spreader

**Important:** Only use dry salt, sand, sand/salt, or cinder/salt mixes in the spreader. Other materials could cause damage to the machine.

The density of materials that can be loaded into the spreader varies and therefore so will the amount of a given material that can be carried by the spreader before the maximum load rating is reached.

**Important:** When filling the spreader, do not exceed the gross-vehicle-weight rating (GVWR) or gross-axle-weight rating (GAWR).

1. Ensure that the spreader is securely mounted to the vehicle and that the top screen is installed and closed.
2. Remove the tarp.
3. Determine the amount of material that you can safely transport using the GVWR/GAWR of the vehicle and the following table.

Material Type	Weight Range
Fine salt	1,121 to 1,281 kg/m <sup>3</sup> (1,890 to 2,160 lb/yd <sup>3</sup> )
Coarse salt	721 to 961 kg/m <sup>3</sup> (1,215 to 1,620 lb/yd <sup>3</sup> )
Coarse sand (dry)	1,442 to 1,762 kg/m <sup>3</sup> (2,430 to 2,970 lb/yd <sup>3</sup> )
Coarse sand (wet)	1,762 to 2,082 kg/m <sup>3</sup> (2,970 to 3,510 lb/yd <sup>3</sup> )
Cinders	641 kg/m <sup>3</sup> (1,080 lb/yd <sup>3</sup> )

4. Fill the spreader evenly with the material, making sure not to fill past the top of the hopper.

**Important:** Overfilling the hopper could damage the spreader and the vehicle.

## Operating the Spreader

### ⚠ DANGER

Hands, feet, and clothing can get caught in the moving parts of the spreader and cause serious bodily injury and loss of limbs.

Keep your hands, feet, and clothing away from the moving spinner, auger, chain, and attachment points.

### ⚠ CAUTION

The spreader throws material at a high speed that could cause minor injuries to bystanders.

**Bystanders should stay a minimum of 7.6 m (25 ft) away from operating spreaders.**

1. Start the vehicle.

**Note:** The controller display should light up when you start the vehicle.

- Use the controller to set the desired feed speed and spinner speed.

**Note:** You can adjust the feed and spinner speeds while the spreader is operating.

- If you plan to use the vibrator during spreading, turn it on now.

**Note:** The vibrator does not start until you start the feed motor.

- Press the START/STOP button to activate the spreader.

**Note:** Always check for bystanders before starting the spreader.

- While spreading, you can press the BLAST button to momentarily increase the speed of the feed and spinner motors.
- Press the START/STOP button when you are finished spreading to stop the spreader.
- Empty the leftover materials from the spreader; refer to [Unloading the Spreader \(page 18\)](#).

## Adjusting the Material Deflectors

You can adjust the material deflectors by inserting the deflector pins into the staggered holes around the spinner (Figure 18).

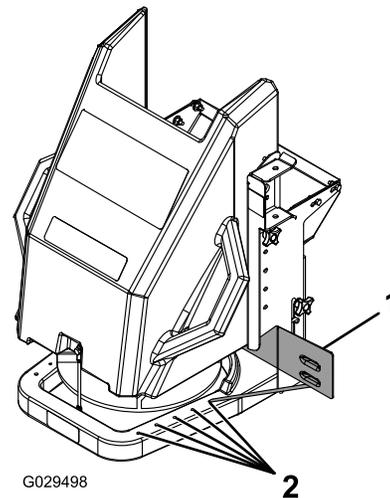


Figure 18

- Material deflector
- Adjustment holes

## Freeing a Clog

The words JAM CLEARING will appear in either the feeder or spinner display when debris gets wedged in the auger or pintle chain, or under the spinner disk.

- Do not turn off the machine when a jam first occurs.

**Note:** The spreader is designed to automatically free clogs.

- If JAM STUCK appears in the feeder or spinner display, push the Start/Stop button.

**Note:** If the machine does not clear the clog after several attempts, the motor goes into a cooldown mode for 3 minutes.

- If the clog is not cleared automatically, disconnect the spreader wire harness and manually free the clog.

### **⚠ WARNING**

**Moving parts on the spreader can entangle hands and cut or dismember fingers.**

- Disconnect the spreader wire harness before attempting to manually free a clog.
- If the top screen is opened, ensure that all bolts are secured after freeing the clog.

You can adjust the spread pattern by positioning the deflectors as shown in Figure 19.

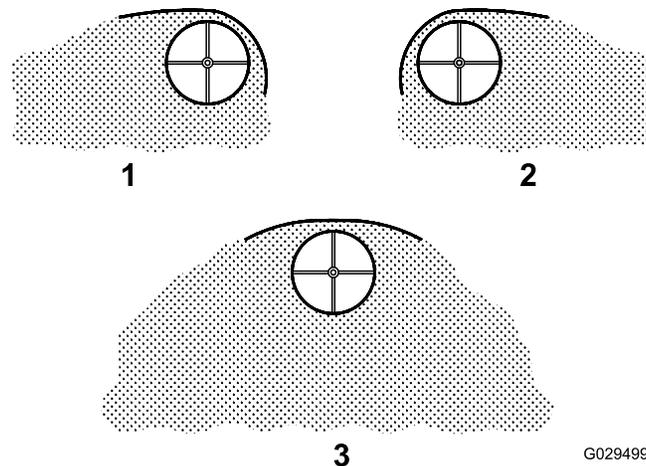


Figure 19  
Deflection Settings

- Driver side open
- Passenger side open
- Both sides open

# Unloading the Spreader

**Important:** Do not leave material in the hopper as it could damage the machine.

1. Position the spreader in the area where you want to deposit the material.
2. Unplug the spinner harness from the main wire harness.
3. Remove the left latch and cotter pin from the spinner assembly (Figure 20).

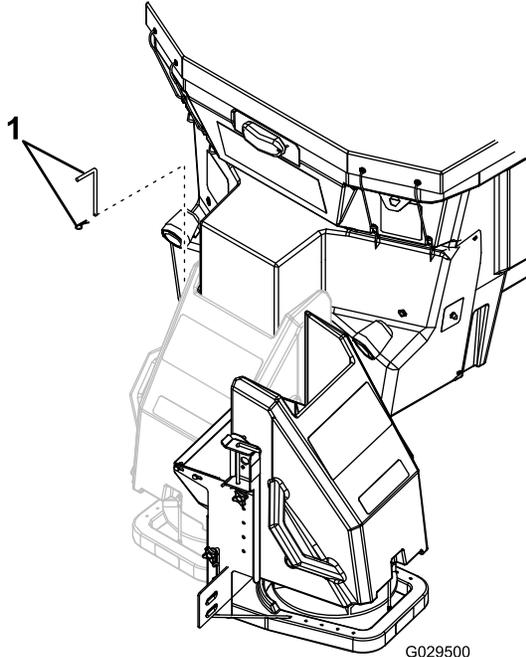


Figure 20

1. Latch and cotter pin

4. Swing the spinner assembly free from the hopper opening (Figure 20).

**Note:** Do not move the vehicle when the spinner assembly is swung out.

5. Push and hold the dump switch to unload the hopper material.

## ⚠ CAUTION

The spreader throws material at a high speed that could cause minor injuries.

Stand to the side of the spreader when activating the dump switch.

6. Swing the spinner assembly back into place and secure it with the previously removed attachment pin and cotter pin.
7. Connect the spinner harness to the main wire harness.

# Removing the Spinner Assembly

1. Position the spreader over a flat, dry surface.
2. Unplug the spinner harness from the main wire harness.
3. Remove the 2 latch and cotter pins securing the spinner assembly to the hopper (Figure 21).

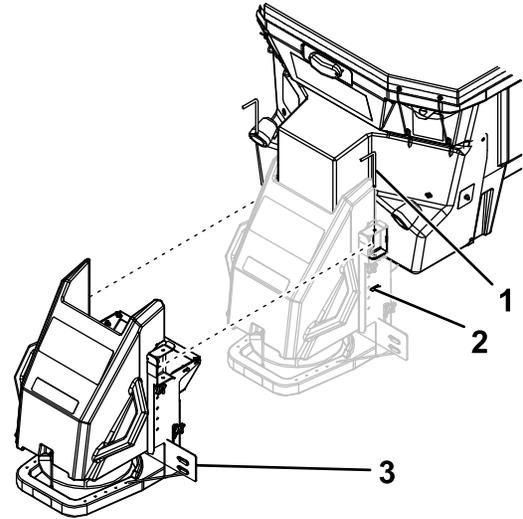


Figure 21

1. Latch pin
2. Cotter pin
3. Spinner assembly

4. Remove the spinner assembly.

## ⚠ DANGER

The spinner assembly is heavy and could cause serious injury if dropped.

Ensure that your footing is stable, and avoid removing the spinner assembly near slippery or uneven surfaces.

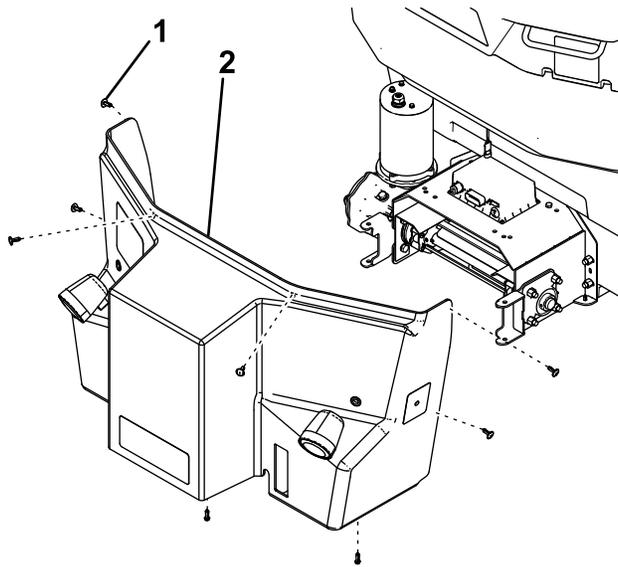
5. Insert the attachment pins and cotter pins into the spinner assembly for storage.

# Installing the Pintle-Chain Restrictor Plate (Optional)

## Pintle-Chain Models Only

If the spreader flow is too fast, install the restrictor plate. If the spreader flow is too slow, remove the restrictor plate.

1. Unplug the power/ground cable and the main harness from the wire harness.
2. Remove the spinner assembly; refer to [Removing the Spinner Assembly \(page 18\)](#).
3. Remove the fasteners securing the front cover to the hopper ([Figure 22](#)).

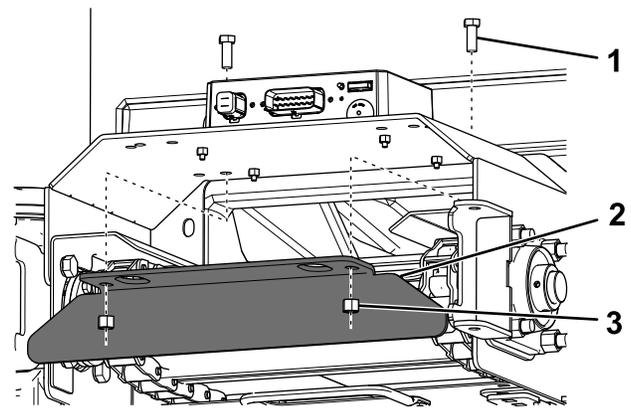


**Figure 22**

g297512

1. Fastener
2. Front cover

4. Carefully pull the cover away and unplug the cover harness from the main wire harness.
5. Set the cover aside.
6. Insert the restrictor plate and secure it with 2 bolts and locknuts ([Figure 23](#)).



**Figure 23**

g297513

1. Bolt
2. Restrictor plate
3. Locknut

7. Position the front cover in place and connect the cover harness to the main wire harness.
8. Secure the front cover to the hopper using the previously removed fasteners.
9. Connect the power/ground cable and main harness to the wire harness.

## Operating Tips

- Know the area in which you are working; hidden obstructions such as curbs, sidewalks, and pipes can damage the spreader or vehicle.
- Do not let the ice build up; always start as soon as possible.
- Always wear your seatbelt when spreading.
- Always remember to spread at a safe speed.
- Never ride on or put body parts into the spreader while servicing or operating it.

# Maintenance

## ⚠ WARNING

Failure to properly maintain the machine could result in premature failure of machine systems causing possible harm to you or bystanders.

Keep the machine well maintained and in good working order as indicated in these instructions.

## ⚠ CAUTION

If you leave the key in the switch, someone could accidentally start the engine and seriously injure you or other bystanders.

Remove the key from the switch before you perform any maintenance.

**Note:** 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 style="list-style-type: none"><li>• Check the ratchet straps and tighten as necessary.</li><li>• Check the pintle-chain conveyor tension.</li><li>• Empty the cleanout tray.</li></ul>
Every 20 hours	<ul style="list-style-type: none"><li>• Grease the bearings.</li><li>• Grease the pintle chain (Pintle chain models only).</li><li>• Tighten the hardware.</li></ul>
Before storage	<ul style="list-style-type: none"><li>• Unload the spreader.</li><li>• Clean and grease all of the bearings.</li><li>• Clean and grease the pintle-chain (Pintle chain models only).</li></ul>

## Lubrication

### Greasing the Machine

Every 20 hours—Grease the bearings.

Every 20 hours—Grease the pintle chain (Pintle chain models only).

Grease all of the bearings, and the pintle chain for pintle chain models, with a general-purpose, lithium-based grease.

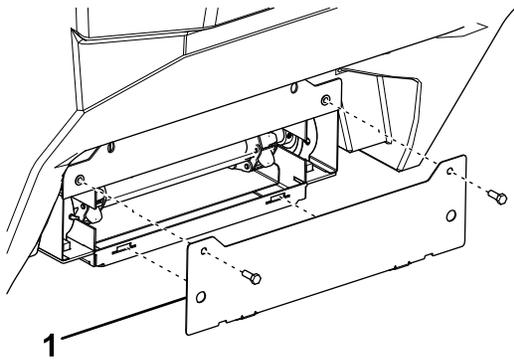
## Miscellaneous Maintenance

### Adjusting the Pintle-Chain Conveyor Tension

#### Pintle-Chain Models Only

**Service Interval:** Before each use or daily—Check the pintle-chain conveyor tension.

1. Disconnect the power/ground cable and main harness from the wire harness.
2. Remove the back cover shown in [Figure 24](#).



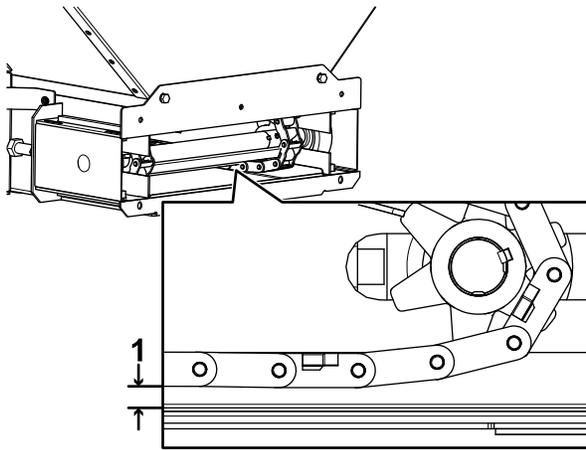
**Figure 24**

g297516

1. Back cover

3. Check the gap between the pintle chain and the cleanout tray ([Figure 25](#)).

**Note:** The chain should hang 2.5 to 5 cm (1 to 2 inches) above the cleanout tray.

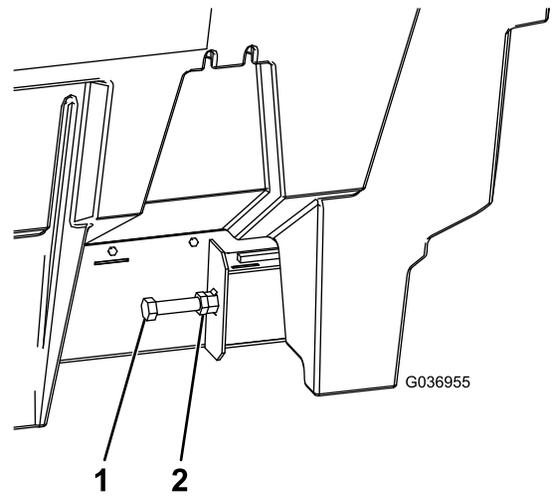


**Figure 25**

g215001

1. Gap between the pintle chain and the cleanout tray

4. To adjust the tension, loosen the jam nuts on the sides of the spreader ([Figure 26](#)).



**Figure 26**

G036955

g036955

1. Take-up bolt
2. Jam nut

5. Turn the left take-up bolt clockwise 1 to 3 revolutions.
6. Turn the right take-up bolt clockwise 1 to 3 revolutions.
7. Check the chain tension, and repeat steps 5 and 6 until the desired tension is reached.

**Note:** Do not overtighten the pintle chain as it could lead to premature wear and spreader failure.

8. Tighten the jam nuts.
9. Connect the power/ground cable and main harness to the wire harness.

# Controller Status and Error Indicators

The following icons and messages indicate that an error has occurred with your machine. Refer to [Troubleshooting \(page 25\)](#) for possible solutions.

Feeder and spinner errors only appear in 1 location or the other, not both.

- X icon—indicates that the controller has no communication with the control module

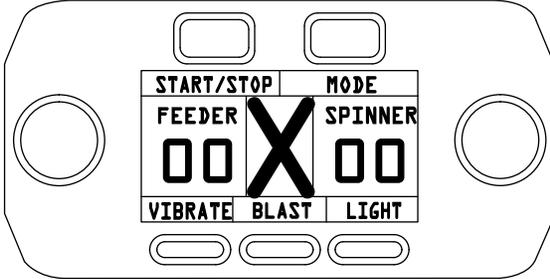


Figure 27

G029507 g029507

- Button Stuck icon—indicates that a button is pressed or stuck down when the controller is powered up

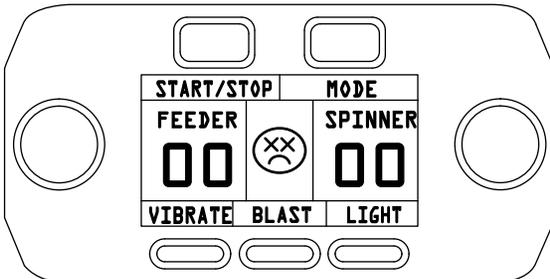


Figure 28

G029508 g029508

- Vib Error icon—indicates that the vibrator is disconnected or not running properly

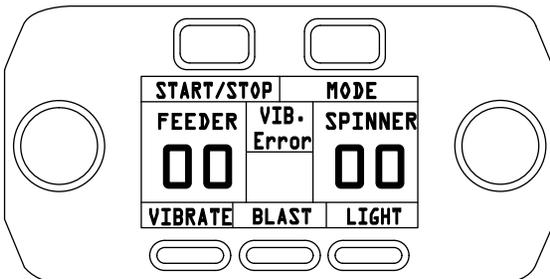


Figure 29

G029509 g029509

- Feeder Error or Spinner Error icon—indicates that the feeder or spinner motor is disconnected or that there is a circuit issue

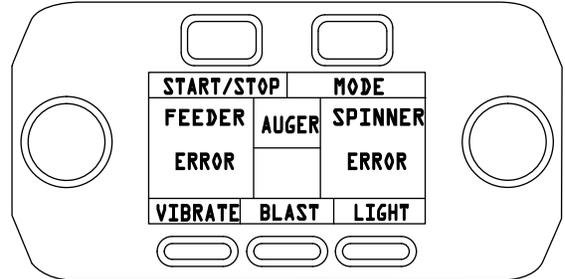


Figure 30

G029510 g029510

- Feeder Jam Clearing or Spinner Jam Clearing icon—indicates that the feeder or spinner has encountered an obstacle and is trying to free itself

**Note:** Do not shut down the system at this time.

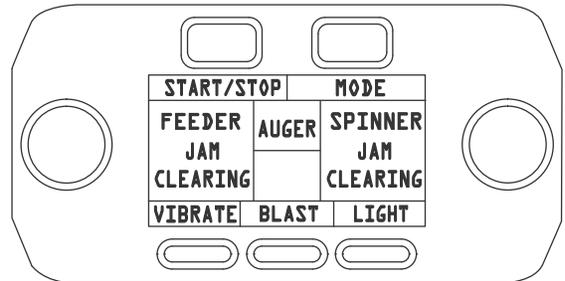


Figure 31

g029514

- Feeder Jam Stuck or Spinner Jam Stuck icon—indicates that the feeder or spinner could not free the jam

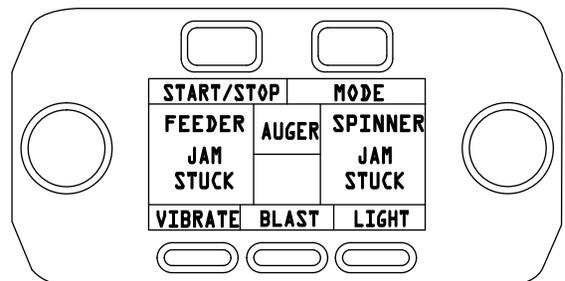
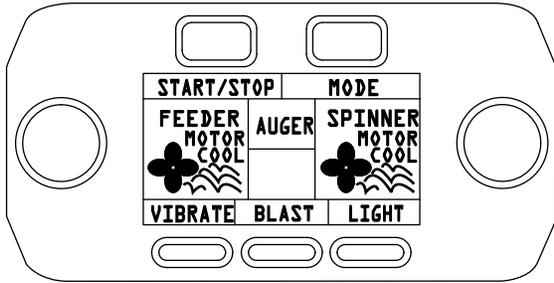


Figure 32

G029512 g029512

- Feeder Motor Cool or Spinner Motor Cool fan icon—indicates that the motor has shut down and is cooling for 3 minutes

**Note:** Turning the machine off and on again does not reset the timer.

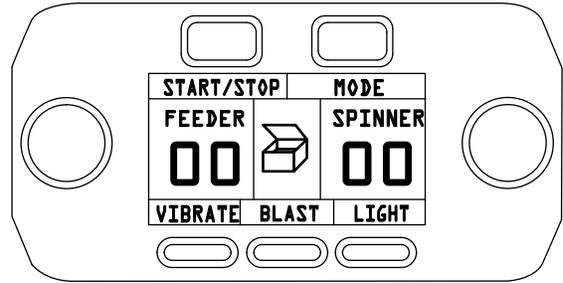


G029513 g029513

Figure 33

- Open Box icon—indicates that the top screen is open. The spreader does not run until the screen is closed.

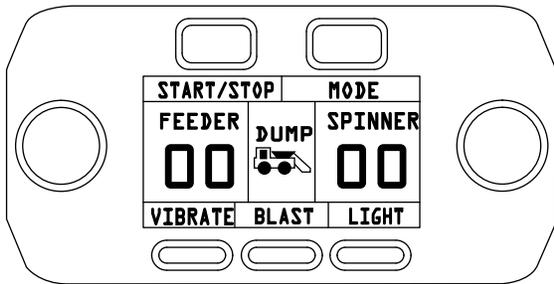
**Note:** You must press the Start/Stop button again to start the machine.



G029516 g029516

Figure 36

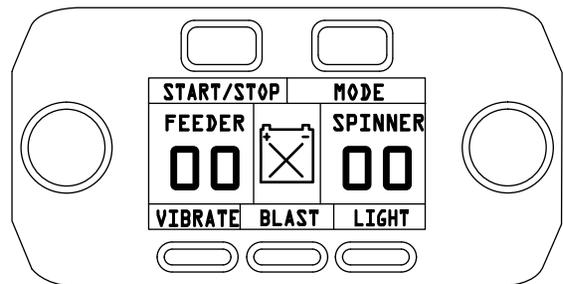
- Dump icon—indicates that the dump switch has been activated



G029514 g029514

Figure 34

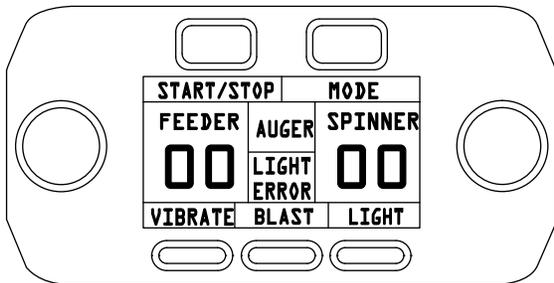
- Low Voltage icon—indicates that the vehicle is not supplying enough voltage to run the spreader continuously



G029517 g029517

Figure 37

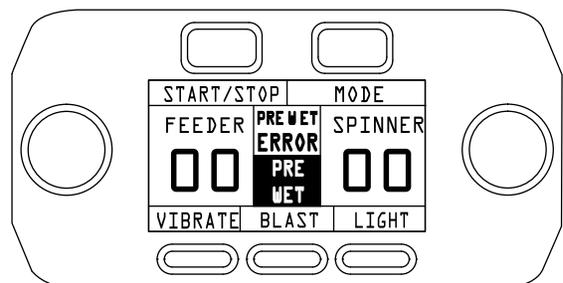
- Light Error—indicates that a rear light is burnt out or disconnected



g266813

Figure 35

- Pre-Wet Error—indicates that the pre-wet system is not functioning



g266868

Figure 38

# Cleaning

## Cleaning the Machine

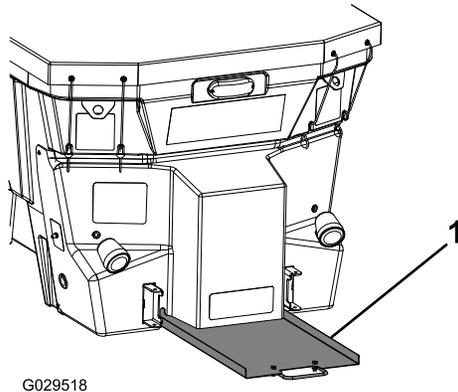
**Service Interval:** Before each use or daily

Empty the cleanout tray after every use.

**Important:** Leaving any material in the spreader could damage the machine.

1. Remove the spinner assembly; refer to [Removing the Spinner Assembly \(page 18\)](#).
2. Disconnect the power/ground cable and main harness from the wire harness.
3. Lift up on the cleanout tray handle to clear the mount holes and slide the tray out ([Figure 39](#)).

**Note:** This step will require at least 2 people.



**Figure 39**

1. Cleanout tray

- 
4. Remove any material from the tray.
  5. Insert the tray into the spreader.
  6. Connect the power/ground cable and main harness to the wire harness.

# Storage

1. Unload the spreader; refer to [Unloading the Spreader \(page 18\)](#).
2. Remove the spreader from the truck using the lift bars ([Product Overview \(page 13\)](#)).
3. Wash and rinse the entire unit.
4. Clean and grease all of the bearings.
5. Clean and grease the pintle-chain for pintle chain models.
6. Clean all exposed connectors and apply dielectric grease to them.
7. Remove the controller from the truck and store it in a clean, dry place.

# Troubleshooting

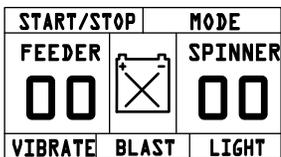
## The controller has no power.

The controller display is not on.

Module Status	Possible Cause	Corrective Action
1-6. The LED is off or flashing green.	<ol style="list-style-type: none"> <li>1. The controller is in Sleep mode.</li> <li>2. The vehicle key is in the Off position.</li> <li>3. The fuse connection is loose or corroded.</li> <li>4. The battery connection is loose or corroded.</li> <li>5. The 2 A inline fuse is not functioning.</li> <li>6. The controller is not plugged into the vehicle harness.</li> </ol>	<ol style="list-style-type: none"> <li>1. Press any button to wake up the controller.</li> <li>2. Start the vehicle or move the key to the Accessory position.</li> <li>3. Tighten or clean the connection.</li> <li>4. Tighten or clean the connection.</li> <li>5. Replace the fuse.</li> <li>6. Plug in the controller.</li> </ol>

## Low Voltage Error (11)

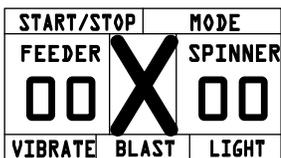
There is a battery with an X in the center of the controller screen.



Module Status	Possible Cause	Corrective Action
1-2. The LED is solid red.	<ol style="list-style-type: none"> <li>1. The battery is low.</li> <li>2. The alternator is not functioning.</li> </ol>	<ol style="list-style-type: none"> <li>1. Charge the battery.</li> <li>2. Replace the alternator.</li> </ol>

## Communication Error (21)

There is a large X in the center of the controller screen.



Module Status	Possible Cause	Corrective Action
1-5. The LED is off.	<ol style="list-style-type: none"> <li>1. The power/ground cable is not connected to the battery.</li> <li>2. The 150 A fuse is not functioning.</li> <li>3. The power/ground cable is not connected to the spreader.</li> <li>4. The power/ground cable is not connected to the module.</li> <li>5. The module is not functioning.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect the power/ground cable to the battery.</li> <li>2. Replace the fuse.</li> <li>3. Connect the power/ground cable to the spreader.</li> <li>4. Connect the power/ground cable to the module.</li> <li>5. Replace the module.</li> </ol>

6-7. The LED is flashing green.	6. The 5-pin spreader harness is disconnected or has a faulty connection.  7. The 4-pin controller connector has a faulty connection.	6. Clean the 5-pin connector at the bumper. Check the continuity on the blue and green wires.  7. Clean the 4-pin connector at the controller. Check the continuity on the blue and green wires.
8. The LED is slowly flashing red.	8. The button on the module is stuck.	8. Free the button or replace the module.

## Button Stuck Error (31, 32)

There is a dead-face icon in the center of the controller screen.

START/STOP		MODE	
FEEDER		SPINNER	
00		00	
VIBRATE	BLAST	LIGHT	

Module Status	Possible Cause	Corrective Action
1. The LED is solid green.	1. The button on the controller is stuck.	1. Replace the controller.
2-3. The LED is quickly flashing red.	2. The dump switch is stuck. 3. The work-light switch is stuck.	2. Replace the dump switch. 3. Replace the work-light switch.

## Top Screen Error (33)

There is an open box icon in the center of the controller screen.

START/STOP		MODE	
FEEDER		SPINNER	
00		00	
VIBRATE	BLAST	LIGHT	

Module Status	Possible Cause	Corrective Action
1-2. The LED is solid green.	1. The top screen is open. 2. The top screen switch is not functioning.	1. Close the top screen. 2. Replace the top screen switch or latch.

## Worklight Error (53)

The center of the controller screen says Light Error.

START/STOP		MODE	
FEEDER	AUGER	SPINNER	
00	LIGHT ERROR	00	
VIBRATE	BLAST	LIGHT	

Module Status	Possible Cause	Corrective Action
1. The LED is solid green.	1. There is a short in the work light wires or the work light assembly.	1. Replace the wires or work light assembly.

## Pre-Wet Error (61, 62)

The center of the controller screen says Pre-Wet Error.

START/STOP		MODE	
FEEDER	PRE WET ERROR	SPINNER	
□□	PRE WET	□□	
VIBRATE	BLAST	LIGHT	

Module Status	Possible Cause	Corrective Action
1-3. The LED is solid green.	<ol style="list-style-type: none"> <li>1. The circuit to the pump is open.</li> <li>2. The maximum current has been exceeded.</li> <li>3. The pump motor wiring has shorted.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check for disconnected pump wires and connect them.</li> <li>2. Replace the pump.</li> <li>3. Check for shorts in the pump wires. Replace the pump if necessary.</li> </ol>

## Vibrator Error (81, 82, 83)

The center of the controller screen says Vib. Error.

START/STOP		MODE	
FEEDER	VIB. ERROR	SPINNER	
□□		□□	
VIBRATE	BLAST	LIGHT	

Module Status	Possible Cause	Corrective Action
1-3. The LED is solid green.	<ol style="list-style-type: none"> <li>1. The circuit between the module and the vibrator is open.</li> <li>2. There is a short in the wires to the vibrator.</li> <li>3. The vibrator is not functioning.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check for disconnected wires and connect them.</li> <li>2. Replace the vibrator wire harness.</li> <li>3. Replace the vibrator.</li> </ol>

## Feeder Error (41, 42)

The left side of the controller screen says Feeder Error.

START/STOP		MODE	
FEEDER	AUGER	SPINNER	
ERROR		□□	
VIBRATE	BLAST	LIGHT	

Module Status	Possible Cause	Corrective Action
1-2. The LED is solid green.	<ol style="list-style-type: none"> <li>1. The feeder motor is not connected to the module.</li> <li>2. There is a short in the feeder motor or feeder motor wires.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect the feeder motor to the module.</li> <li>2. Replace the feeder motor.</li> </ol>

## Feeder Jam Clearing (43, 44, 45)

The left side of the controller screen says Feeder Jam Clearing.

START/STOP		MODE	
FEEDER	AUGER	SPINNER	
JAM CLEARING		□ □	
VIBRATE	BLAST	LIGHT	

Module Status	Possible Cause	Corrective Action
1. The LED is solid green.	1. The auger or pintle chain is jammed.	1. Allow the spreader to clear the jam. Auger spreaders will pulse forward 3 times, then cycle between forward and reverse 4 times. Pintle spreaders will pulse forward 7 times.

## Feeder Jam Stuck (46)

The left side of the controller screen says Feeder Jam Stuck.

START/STOP		MODE	
FEEDER	AUGER	SPINNER	
JAM STUCK		□ □	
VIBRATE	BLAST	LIGHT	

Module Status	Possible Cause	Corrective Action
1. The LED is solid green.	1. The auger or pintle chain is jammed and cannot clear itself.	1. Turn the controller off and on again. If this error occurs a second time, disconnect the power to the spreader and free the jam manually.

## Feeder Motor Cool (47)

The left side of the controller screen says Feeder Motor Cool and there is a fan icon.

START/STOP		MODE	
FEEDER	AUGER	SPINNER	
MOTOR COOL 		□ □	
VIBRATE	BLAST	LIGHT	

Module Status	Possible Cause	Corrective Action
1. The LED is solid green.	1. The feeder circuit has reached Feeder Jam Stuck 7 times without freeing itself.	1. Let the spreader feed motor cool for 3 minutes, then turn the controller off and on again, or disconnect the power to the spreader and free the jam manually.

## The feeder motor is running but the auger or pintle chain is not moving.

There is no error icon for this item.

Module Status	Possible Cause	Corrective Action
1-2. The LED is solid green.	1. The drive system is not connected to the gearbox. 2. The key has fallen out of the coupling.	1. Replace the coupling and/or the gearbox. 2. Replace the coupling and key.

## Spinner Error (71, 72)

The right side of the controller screen says Spinner Error.

START/STOP		MODE
FEEDER	AUGER	SPINNER
□ □		ERROR
VIBRATE	BLAST	LIGHT

Module Status	Possible Cause	Corrective Action
1-2. The LED is solid green.	<ol style="list-style-type: none"> <li>The spinner motor is not connected to the module.</li> <li>There is a short in the spinner motor or spinner motor wires.</li> </ol>	<ol style="list-style-type: none"> <li>Connect the spinner motor to the module.</li> <li>Replace the spinner motor.</li> </ol>

## Spinner Jam Clearing (73, 74, 75)

The right side of the controller screen says Spinner Jam Clearing.

START/STOP		MODE
FEEDER	AUGER	SPINNER
□ □		JAM CLEARING
VIBRATE	BLAST	LIGHT

Module Status	Possible Cause	Corrective Action
1. The LED is solid green.	1. The spinner is jammed.	1. Allow the spinner to clear the jam. The spinner will pulse forward 5 times.

## Spinner Jam Stuck (76)

The right side of the controller screen says Spinner Jam Stuck.

START/STOP		MODE
FEEDER	AUGER	SPINNER
□ □		JAM STUCK
VIBRATE	BLAST	LIGHT

Module Status	Possible Cause	Corrective Action
1. The LED is solid green.	1. The spinner is jammed and cannot clear itself.	1. Turn the controller off and on again. If this error occurs a second time, disconnect the power to the spreader and free the jam manually.

# Spinner Motor Cool (77)

The right side of the controller screen says Spinner Motor Cool and there is a fan icon.

START/STOP		MODE	
FEEDER	AUGER	SPINNER MOTOR COOL	
VIBRATE	BLAST	LIGHT	

Module Status	Possible Cause	Corrective Action
1. The LED is solid green.	1. The spinner circuit has reached Spinner Jam Stuck 7 times without freeing itself.	1. Let the spreader spinner motor cool for 3 minutes, then turn the controller off and on again or disconnect the power to the spreader and free the jam manually.

**Notes:**

**BOSS**  
S N O W P L O W