

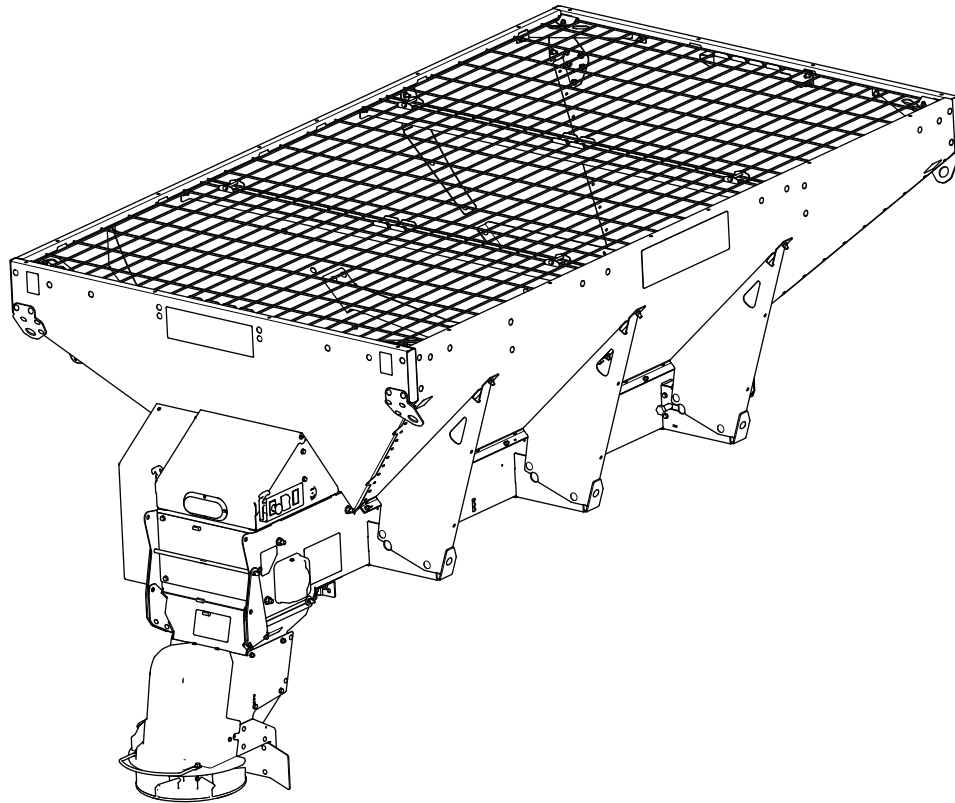


2010 The BOSS Way
Iron Mountain, MI 49801
United States

Owner's Manual

MBX+ V-Box Spreader

Part No. VBS27410—Serial No. 400000000 and Up



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

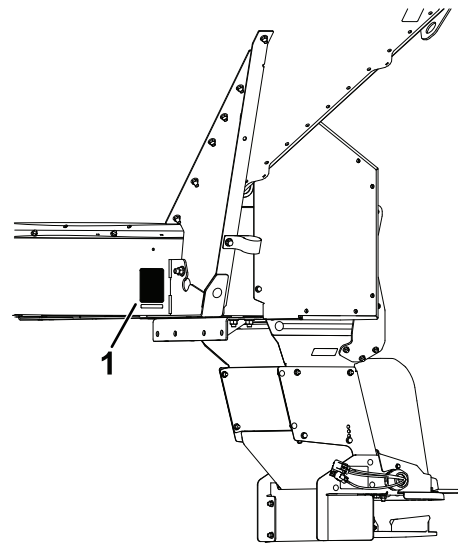
See current patents at <http://www.ttcopats.com/>.

⚠ WARNING

CALIFORNIA

Proposition 65 Warning

Use of this product may cause exposure to chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.



g589299

Figure 1

1. Serial number location

Model No. _____

Serial No. _____

Introduction

This spreader is intended to be used by professional, hired operators. It is designed primarily 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.bossplo.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 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.

Safety-Alert Symbol

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



g000502

Figure 2
Safety-alert symbol

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

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

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

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

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

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Safety

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 1000 kg (1 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.

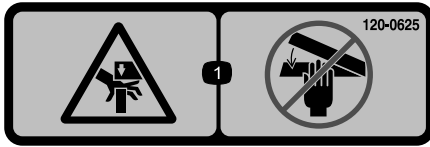
Operation

- 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.bossplov.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 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, pea gravel, 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, chain binders, or approved tie-down devices and keep them properly tightened at all times.
- Do not store material in the hopper.
- Turn the vehicle and spreader off if it will be unattended.

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.



decal120-0625

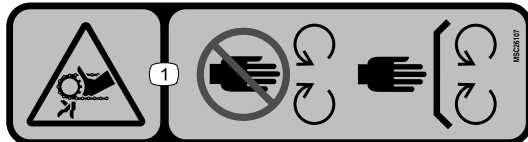
120-0625

1. Pinch point, hand—keep hands away.

**⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.
For more information, please visit www.ttcoCAProp65.com**

decal133-8061

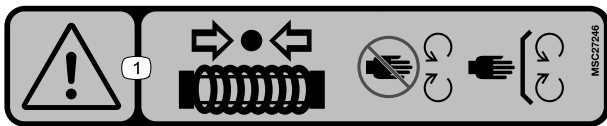
133-8061



decalmsc26107

MSC26107

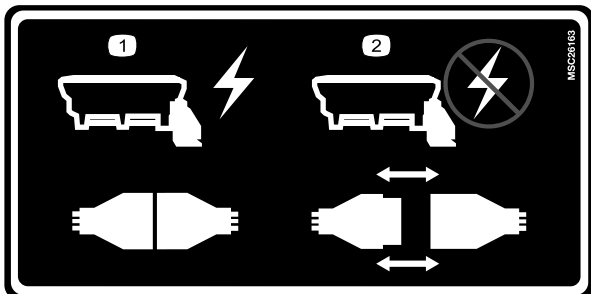
1. Finger/hand entanglement hazard, chain—stay away from moving parts; keep all guards and shields in place.



decalmsc27246

MSC27246

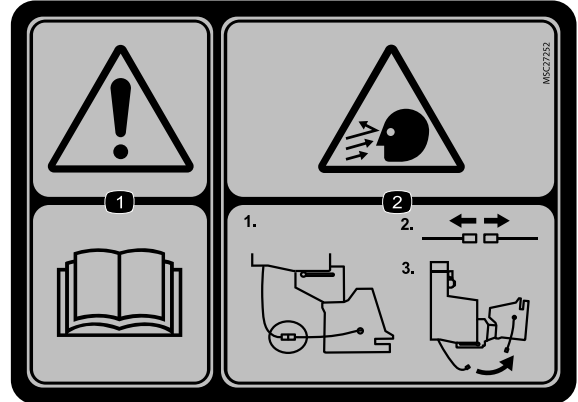
1. Warning—keep clear of the compressed spring; stay away from moving parts; keep all guards and shields in place.



decalmsc26163

MSC26163

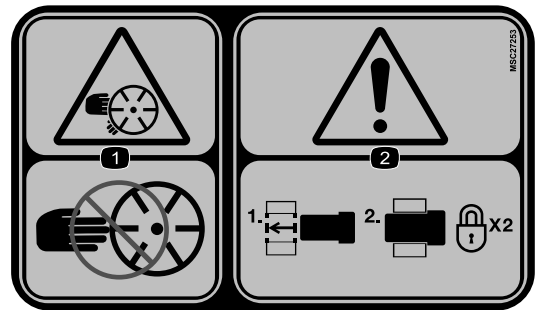
1. Install the plug to power the machine.
2. Remove the plug to disconnect the power from the machine.



decalmsc27252

MSC27252

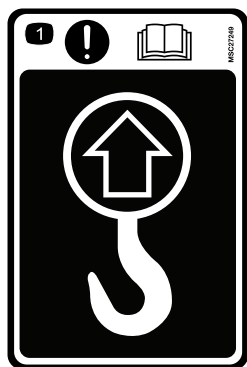
1. Warning—read the *Operator's Manual*.
2. Thrown object hazard—1) Park the machine on level ground; 2) Disconnect the wire harness; 3) raise the spinner.



decalmsc27253

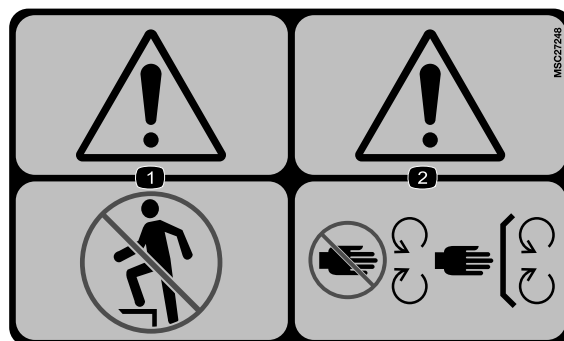
MSC27253

1. Cutting/dismemberment hazard; spinner—keep your fingers and hands clear of the spinner.
2. Warning—1) Insert the pin into the coupler; 2) lock the couplers on both sides.



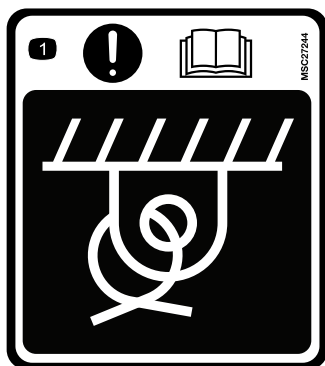
MSC27249

1. Attention—read the *Owner's Manual*; lift point



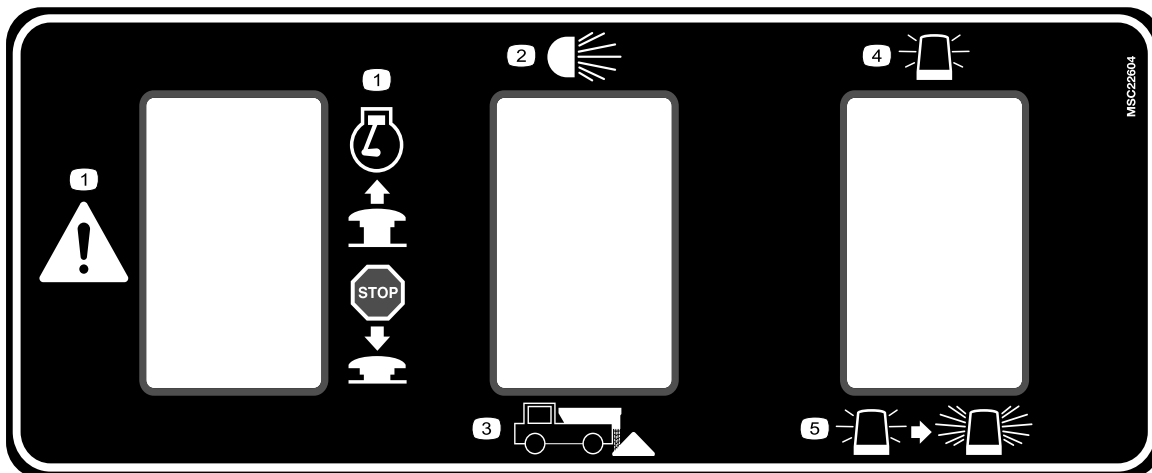
MSC27248

1. Warning—do not step on the machine.
2. Warning—stay away from moving parts; keep all guards and shields in place.



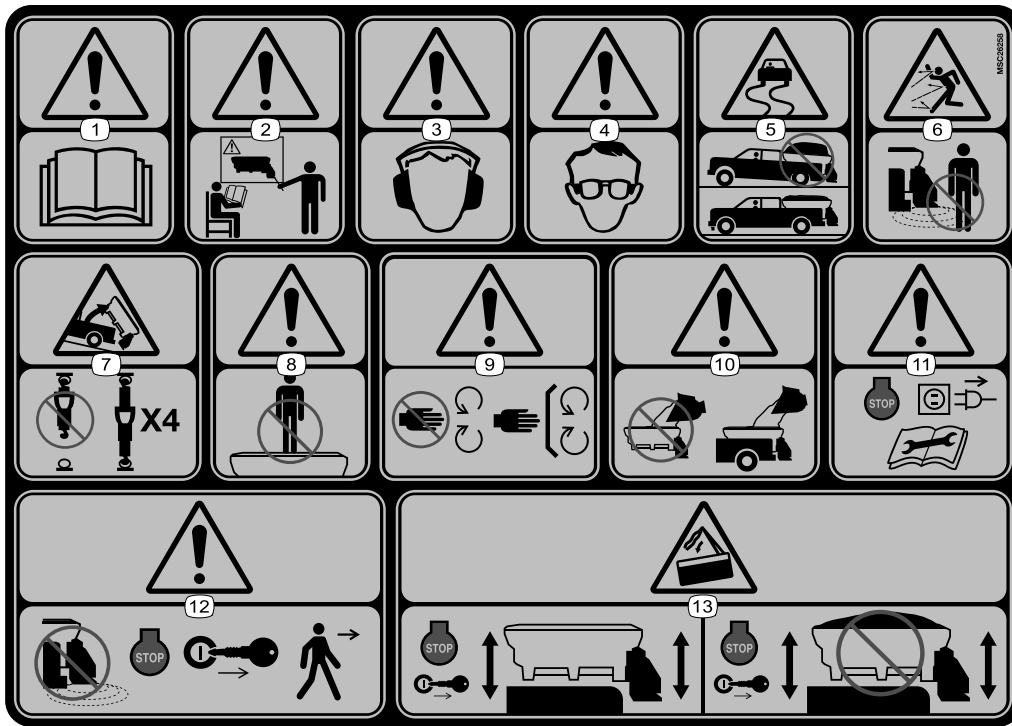
MSC27244

1. Attention—read the *Owner's Manual*; tie down point



MSC22604

1. Emergency shut off—pull up to allow the machine to run; press down to shut off the machine.
2. Work lights—on/off
3. Press and hold to unload material.
4. Strobe lights—on/off
5. Press to change the strobe-light flashing pattern.



decalmsc26258

MSC26258

1. Warning—read the *Owner's Manual*.
2. Warning—all operators should be trained before operating the machine.
3. Warning—wear hearing protection.
4. Warning—wear eye protection.
5. Loss of control hazard—do not overfill the machine.
6. Thrown object hazard—keep bystanders away.
7. Loss of machine hazard—properly tie down the spreader at all 4 points.
8. Warning—do not stand or ride on the machine.
9. Warning—stay away from moving parts; keep all guards and shields in place.
10. Warning—the machine must be installed before filling.
11. Warning—shut off the vehicle and spreader, disconnect the power, and read the *Owner's Manual* before servicing the machine.
12. Warning—shut off the vehicle and spreader and remove the key before leaving the machine.
13. Tipping hazard—shut off the vehicle and spreader, remove the key, and empty the hopper before installing or removing the machine. Do not attempt to move a machine with a full hopper.

Setup

Mounting the Spreader

The MBX+ spreader requires the transport vehicle to have a minimum bed length of 2.7 m (108 inches).

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

Important: Do not suspend the machine from the lift points for extended periods.

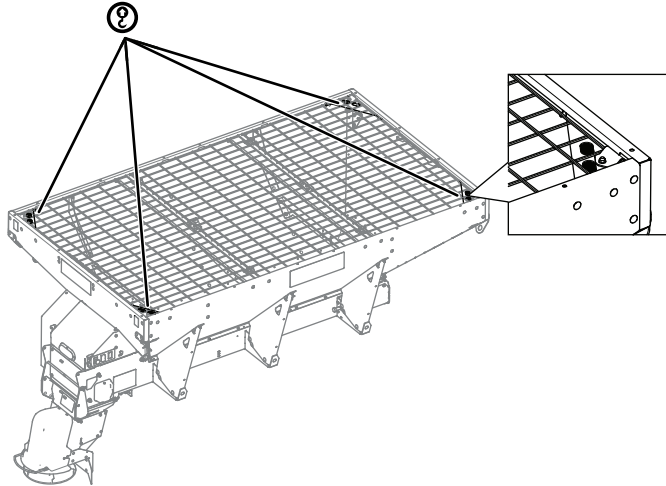
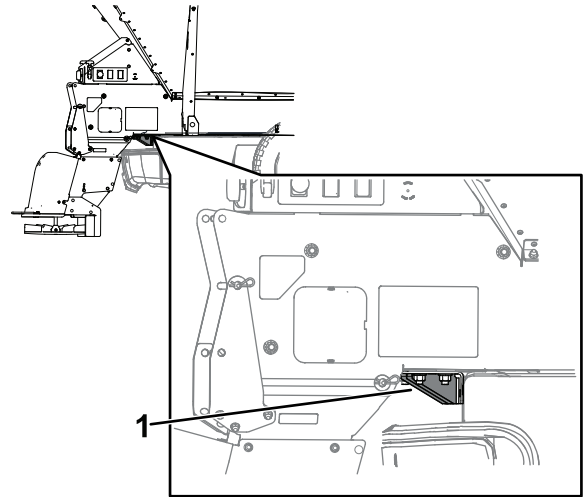


Figure 3

g589298

3. Slide the spreader toward the vehicle cab until the slide stop hits the truck bed.

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



g589358

Figure 4

1. Slide stop
-
4. Complete the steps below if necessary. These steps are optional.

⚠ WARNING

Using a drill without proper eye protection may allow debris to enter the eye, causing injury.

When drilling, always wear eye protection.

- A. Drill 4 holes (7/16 inch) into the truck bed aligned with the slide stop holes.

- B. Secure the slide stop to the vehicle using 4 bolts, 4 locknuts, and 16 flat washers (1/2 inch).

Note: Slide stop fasteners are not included.

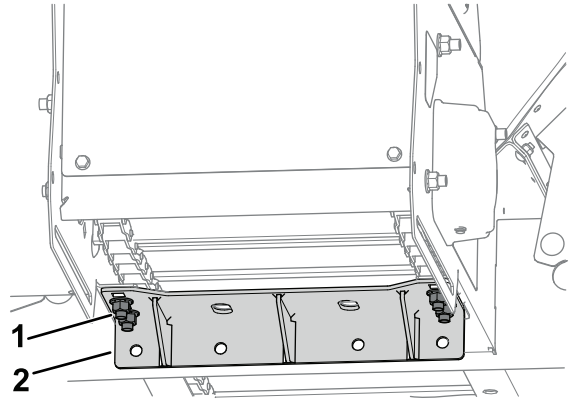
- C. Torque the bolts to 58 N·m (43 ft-lb).

Adjusting the Slide Stop

Optional

You can adjust the slide stop of the spreader 7.6 cm (3 inches) so that the spreader does not extend past the truck box.

1. Remove and retain the 4 carriage bolts and 4 nuts securing the slide stop.



g589360

Figure 5

1. Slide-stop fasteners 2. Slide stop

-
2. Slide the spreader so that it does not extend past the truck box and contacts the vehicle cab.
 3. Move the slide stop to the desired position and secure it with the previously removed fasteners
 4. Torque the bolts to 65 N·m (48 ft-lb).

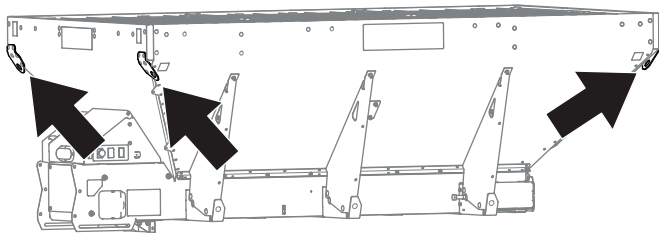
Securing the Spreader

⚠ DANGER

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

Ensure that the tie-down straps are securely attached to the spreader at all times.

1. Connect the tie-down straps to the 4 tie-down plates on the 4 corners of the machine.

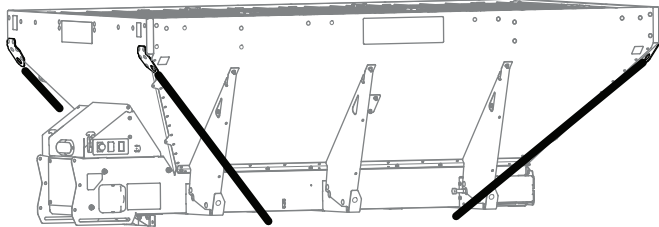


g589361

Figure 6

3 tie-down plates shown

2. Connect the tie-down straps to the vehicle tie-down points as shown in the following figure.



g589362

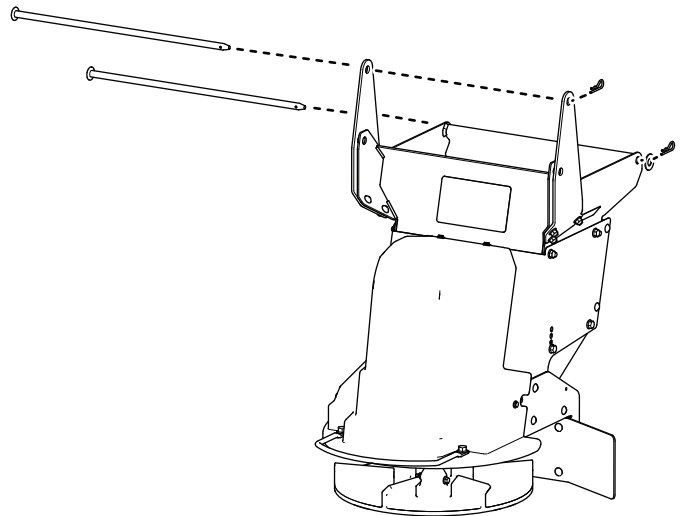
Figure 7

Transport vehicle not shown

3. Tighten the straps evenly to secure the spreader.

Installing the Spinner Assembly

1. Remove and retain the 2 pivot pins, 1 washer, and 2 cotter pins from the spinner assembly as shown in the following figure.

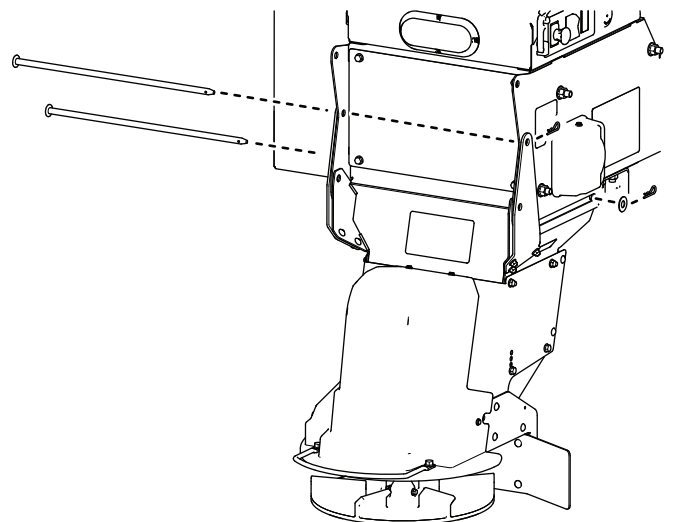


g589363

Figure 8

2. Attach the spinner assembly to the spreader and secure it with the previously removed pivot pins, washer, and cotter pins.

Important: The spinner assembly is heavy; 2 people are required to lift it.



g589366

Figure 9

Connect the wire harness to the spinner assembly.

Checking the Installation

1. Check the pintle chain conveyor tension; refer to [Adjusting the Pintle-Chain Conveyor Tension \(page 27\)](#).
2. 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 Service Dealer about adjusting the control module.

Product Overview

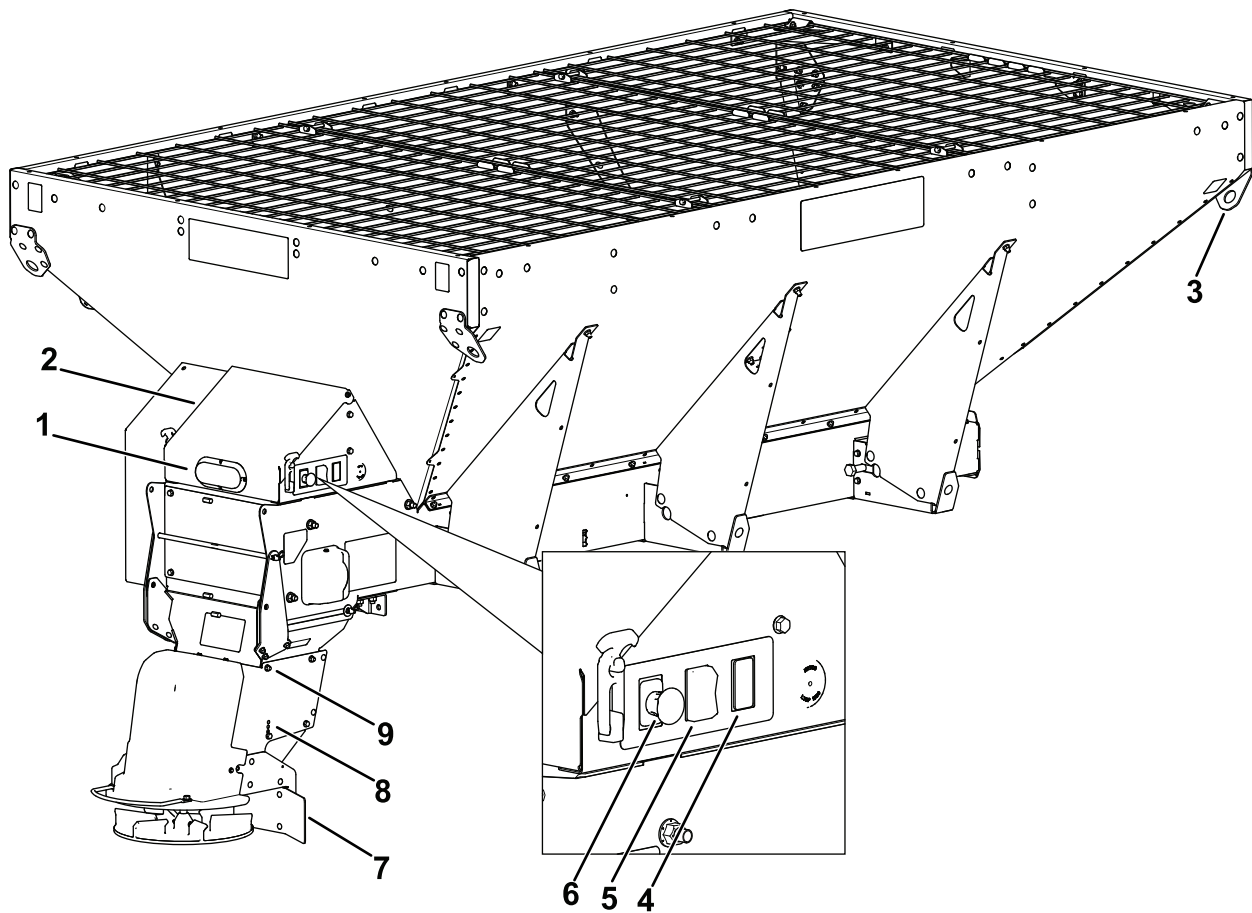


Figure 10

g594570

- | | |
|---|----------------------------|
| 1. Brake light | 6. Emergency stop button |
| 2. Front access cover | 7. Material deflector |
| 3. Tie-down plate | 8. Spinner chute adjuster |
| 4. Strobe light switch (optional) | 9. Spinner height adjuster |
| 5. Dump switch (optional work-light switch) | |

Controls

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

Dump Switch

with Work Light Switch (if equipped)

Note: The work light is an optional feature and is not included as standard equipment on this machine.

⚠ 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.

The dump and work-light (if equipped) functions are controlled by the same rocker switch. The top of the rocker switch controls the rear lights (if equipped) and the bottom of the rocker switch empties the spreading material from the spreader.

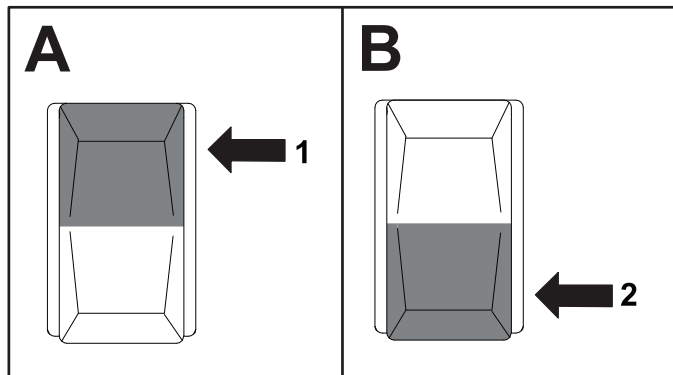


Figure 11

g491902

1. Work-light switch (if equipped)—Press to turn the work-lights ON.
2. Dump switch—Press and hold to empty the contents out of the spreader.

Strobe-Light Switch (Optional)

Note: The strobe light is an optional feature and is not included as standard equipment on this machine.

The strobe-light switch activates the strobe lights.

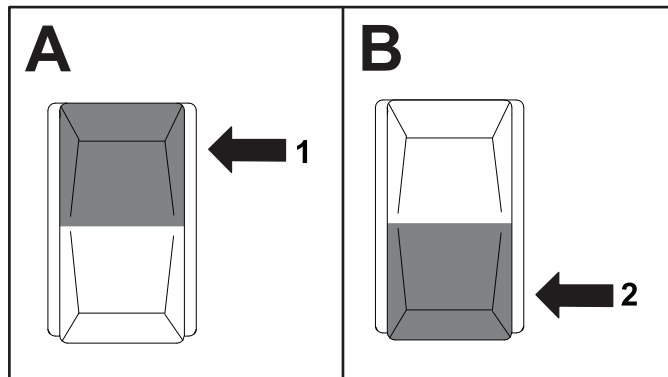


Figure 12

g491902

1. Press to turn the strobe lights ON
2. Press to change the strobe light pattern, or press and hold for 2 to 3 seconds to reset the re-synchronize light pattern

Spreader Controller

The spreader controller shows information about your machine. The following figures illustrate the main screen and settings screen of the controller. You can switch between the main screen and setting screen at any time by pressing the SETTINGS button.

Main Screen

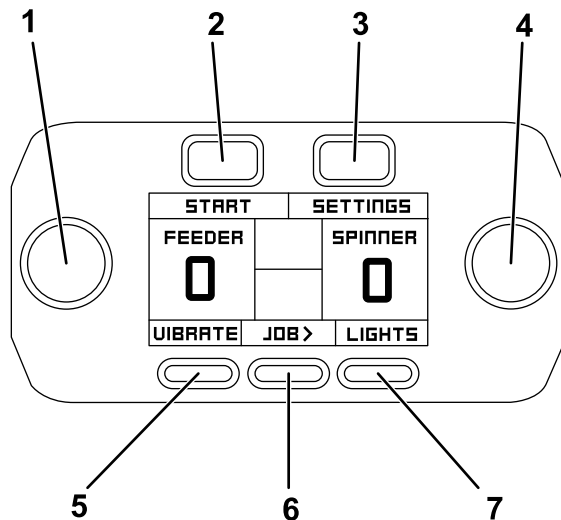


Figure 13

g492248

- | | |
|-----------------------|-------------------|
| 1. Feed speed dial | 5. Vibrate button |
| 2. Start/Stop button | 6. Job button |
| 3. Settings button | 7. Light button |
| 4. Spinner speed dial | |

- 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.
- Material and job display: indicates the active material calibration and job counter (Figure 15).
- Settings button: switches between the main screen and the settings 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 work lights and strobe lights on or off. Pressing the button once will turn on work lights only, pressing a second time will turn

on strobe lights only, pressing a third time will turn on the work lights and strobe lights, and pressing a fourth time will turn lights off.

- Blast button: momentarily sends full power to the feed and spinner motors for the duration of time the button is being held down. When the spreader is not running, this button functions as a JOB > button, which cycles through the active jobs. Once the spreader is running again, the text on the controller screen changes from JOB > to BLAST. The blast button may be used in any spread mode, including Auto Mode, with the vehicle stationary or in motion.
- Vibrate button: switches the vibrator on or off.

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

Settings Screen

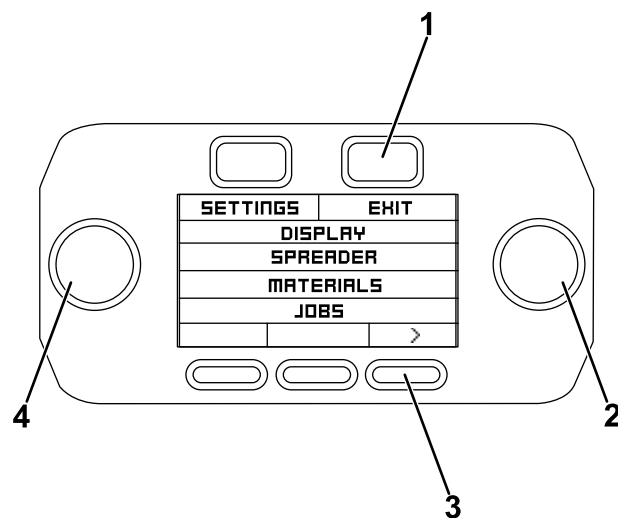


Figure 14

g492164

- | | |
|----------------|----------------------|
| 1. Exit button | 3. Enter/back button |
| 2. Right knob | 4. Left knob |

- Left knob: scrolls the highlighted row up (counterclockwise) and down (clockwise) on the screen.
- Right knob: scrolls through the options of the highlighted row (when shown).
- Enter button (>): enters the sub-menus.
- Back button (<): goes back to the previous page.
- Exit button: returns to the main screen.

Spreader Controller Icon Descriptions

	Stuck button
	Dump mode
	Low battery
	Motor cooling
	Lost communication

Settings Menus

Refer to the following tables for a description of the options available in the settings menu:

Main Settings Menu

Menu Item	Description
DISPLAY	The DISPLAY menu contains a list of settings related to the display.
SPREADER	The SPREADER menu contains a list of options related to the spreader.
MATERIALS	The MATERIALS menu shows the available materials for the spreader, lifetime counter values for the materials, and allows you to select different materials.
JOBS	The JOBS menu shows the available job counters for the spreader, counter values, and allows you to select a job or reset the counters to 0.
CALIBRATE	The CALIBRATE menu shows the available materials for the spreader, the active materials (this can only be activated in the MATERIALS menu), and the calibration adjustment factor for the materials. Refer to Calibrating the Spreader (page 23) .
SPREADER LOG	The SPREADER LOG menu shows the history of the most recent fault and advisory codes with time stamps. For more information, refer to the spreader sub-menu or contact an Authorized Service Dealer.
PLOW	The PLOW menu contains a list of options related to the plow if a Cold Front Technology plow is installed.

Main Settings Menu (cont'd.)

PLOW LOG	The PLOW LOG menu shows the plows history of the most recent fault and advisory codes with a time stamp if a Cold Front Technology plow is installed. For more information, refer to the plow <i>Owner's Manual</i> or contact an Authorized Service Dealer.
ABOUT	The ABOUT menu contains generic information about the spreader such as firmware versions and the run-time counter.

Display Sub-Menu

Menu Item	Description
BRIGHTNESS	Adjusts the brightness of the display.
CONTRAST	Adjusts the contrast of pixels on the display.
INACTIVITY	Adjusts the length of inactive time before the display enters sleep mode. Sleep mode can be forced by pressing and holding the top left button for 3 seconds. Pressing the top left button will wake the display from sleep mode if the key is still on.
BEEPER	Turns on or off the notification beeper.

Spreader Sub-Menu

Menu Item	Description
SPREAD MODE	Changes the control method for the feeder and spinner motors. The different controls are as follows: • STANDARD: controls the feeder and spinner in a generic 0 through 10 speed. If feeder or spinner speed sensors are faulty, this mode can continue to operate without materials and job counters. • RATE: controls the feeder in kg/min (lb/min) and the spinner in meters (feet). • AUTO: controls the feeder in weight per unit area application rates, and the spinner in meters (feet). Auto Spread adjusts the feeder flow rate based on the vehicle speed to achieve the desired application rate and spread width. This setting requires the Cold Front Integration Kit to be installed on the machine.

Spreader Sub-Menu (cont'd.)

UNITS	Changes the units that the feed rate and spread width are displayed in. This will also convert any material or job counters. For SPREAD MODE set to RATE, all metric settings will display feeder settings in kg/min and spinner settings in meters. All US settings will display feeder settings in lb/min and spinner settings in feet. For SPREAD MODE set to AUTO, the options are as follows: • US-1000 FT²: the feeder setting is pounds per 1000 sq/ft and the spinner setting is in feet. • US-ACRE: the feeder setting is pounds per acre and the spinner setting is in feet. • US-MILE: the feeder setting is pounds per single lane mile and the spinner setting is in # of lanes. If this is set to 500 lb per lane mile and 2 lanes, the spreader will be dispensing 1000 lb per two lane mile. • METRIC-M²: the feeder setting is in gram per square meter and spinner setting is in meters. • METRIC-KM: the feeder setting is in kg per lane kilometer and the spinner setting is in # of lanes. If it set to 200 kg per lane km and 2 lanes, the spreader will be dispensing 400 kg per 2 lane km. Pressing the > button on the bottom right, while on this screen, allows you to define the lane width for auto spread mode when the units are set to US-MILE or METRIC-KM. The range is 3 to 5 m (8 to 16 ft).
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Spreader Sub-Menu (cont'd.)

VIB TYPE	Changes the control method of the vibrators. The vibration patterns are as follows: • PULSE: the vibrators turn on and off in equal intervals according to the VIB time. • ALT PULSE: the vibrators turn on and off in alternating equal intervals VIB time (left on, both off, right on, both off, etc.). • STANDARD: the vibrators are always on.
STARTUP	Changes whether the feeder and spinner motors will blast on startup or soft start to their set-point.

Specifications

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

	MBX+ 4yd	MBX+ 5 yd (4yd with 1 yd extension)	MBX+ 6yd (4 yd with 2 yd extension)
Overall length	3.53 m (139 inches)	3.53 m (139 inches)	3.53 m (139 inches)
Hopper height	108.3 cm (42.625 inches)	122.2 cm (48.125 inches)	136.2 cm (53.625 inches)
Hopper width	177.8 cm (70 inches)	177.8 cm (70 inches)	177.8 cm (70 inches)
Weight (empty)	464.93 kg (1,025 lb)	519.36 kg (1,145 lb)	537.51 kg (1,185 lb)
Capacity	3.06 m ³ (4 yd ³)	3.82 m ³ (5 yd ³)	4.59 m ³ (6 yd ³)

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.bossplow.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 inches) increments up to 15.2 cm (6 inches) to account for vehicles with higher beds. The bottom of the spinner assembly should be approximately 46 cm to 61 cm (18 to 24 inches) from the ground.

1. Remove the spinner assembly; refer to [Removing the Spinner Assembly \(page 25\)](#).
2. Hold the upper chute and remove the 4 carriage bolts and 4 nuts securing the lower chute to the upper chute.
3. Slide the spinner assembly down to the desired height.
4. Secure the spinner assembly using 4 carriage bolts and 4 nuts.

Cinders	641 kg/m ³ (1,080 lb/yd ³)
Pea gravel	1,424 to 1,543 kg/m ³ (2,400 to 2,600 lb/yd ³)

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.

Loading the Spreader

Important: Only use dry salt, sand, sand/salt, gravel, 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 the top screen is installed and closed.
2. If equipped, 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 ³ (1,890 to 2,160 lb/yd ³)
Coarse salt	721 to 961 kg/m ³ (1,215 to 1,620 lb/yd ³)
Coarse sand (dry)	1,442 to 1,762 kg/m ³ (2,430 to 2,970 lb/yd ³)
Coarse sand (wet)	1,762 to 2,082 kg/m ³ (2,970 to 3,510 lb/yd ³)

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, 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.

Important: Always check for bystanders before starting the spreader.

1. Start the vehicle.

Note: The controller display lights up when the vehicle starts, but then goes to sleep. Press the upper left button to activate the display.

2. On the controller, verify the correct material and job are selected.
 - Select the materials through the SETTINGS menu.
 - Select the job by cycling through the JOB > button, or through the SETTINGS menu.

3. 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; refer to [Spreader Sub-Menu \(page 16\)](#) and [Rate Control Reference Charts \(page 21\)](#).

4. 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.

5. Press the START button to activate the spreader.

Note: If the machine is operating in the auto spread mode, pressing the START button will activate the spreader but the spreader will only operate while the vehicle is moving.

- While spreading, you can press the BLAST button to momentarily increase the speed of the feed and spinner motors.
- While spreading in auto spread mode, if the settings and vehicle speed require a flowrate that is out of range of the spreader, you will see up or down arrows in the center of the screen. The up arrows indicates you need to increase the vehicle speed or settings because they are too slow. The down arrows indicates you need to decrease the vehicle speed or settings because they are too fast.
- While spreading, the upper right corner displays a live counter for the amount of material dispensed at the active job. If no job is selected, the lifetime counter for the active material is shown on the display.

Note: The full list of materials and job counters can be seen in their respective menus.

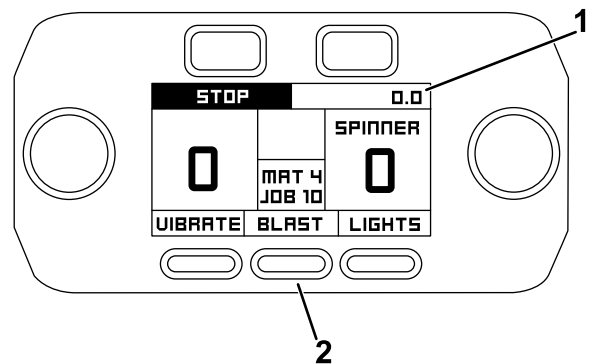


Figure 15

g495325

1. Job counter
2. Blast button

6. Press the STOP button when you are finished spreading to stop the spreader.

Note: If the machine is operating in the auto spread mode, the spreader will stop spreading when the vehicle is not in motion.

7. Empty the leftover materials from the spreader; refer to [Unloading the Spreader \(page 24\)](#).

Rate Control Reference Charts

Pre-Calibrated Material Counter Charts

The spreader has 10 jobs that can be selected and reset through the menu. Each spreader has 4 pre-calibrated materials with counters that cannot be reset; refer to the model-specific tables below.

Material Type	Maximum Flow Rate	Maximum Spread Width
SALT	192.78 kg/min (425 lb/min)	12 m (40 ft)
SAND	181.44 kg/min (400 lb/min)	7 m (22 ft)
GRAVEL	181.44 kg/min (400 lb/min)	13 m (44 ft)
MATERIAL 4	192.78 kg/min (425 lb/min)	12 m (40 ft)

Below are descriptions of each material calibration:

- SALT: represents an average bulk salt material with some moisture content.
- SAND: represents an average bulk traction sand material, which has higher flow rates and shorter spread widths compared to salt.
- GRAVEL: represents a pea gravel material, with stones (3/8 inch in size), which has a higher flow rate and farther spread widths compared to salt.
- MATERIAL 4 names are copies of the SALT materials.

Material Coverage Spreading Charts

Use these charts as an approximate guideline only. Other factors, such as weather conditions, spreader operation, and the condition of material affects spreader performance.

See the tables below for the material coverage at various speeds.

Speed: 8 km/h

		Spread Width				
		2 m	5 m	8 m	10 m	12 m
Flow Rate	50 kg/min	187.5 g/m ²	75.0 g/m ²	46.9 g/m ²	37.5 g/m ²	31.3 g/m ²
	100 kg/min	375.0 g/m ²	150.0 g/m ²	93.8 g/m ²	75.0 g/m ²	62.5 g/m ²
	150 kg/min	562.5 g/m ²	225.0 g/m ²	140.6 g/m ²	112.5 g/m ²	93.8 g/m ²
	200 kg/min	750.0 g/m ²	300.0 g/m ²	187.5 g/m ²	150.0 g/m ²	125.0 g/m ²

Speed: 24 km/h

		Spread Width				
		2 m	5 m	8 m	10 m	12 m
Flow Rate	50 kg/min	62.5 g/m ²	25.0 g/m ²	15.6 g/m ²	12.5 g/m ²	10.4 g/m ²
	100 kg/min	125.0 g/m ²	50.0 g/m ²	31.3 g/m ²	25.0 g/m ²	20.8 g/m ²
	150 kg/min	187.5 g/m ²	75.0 g/m ²	46.9 g/m ²	37.5 g/m ²	31.3 g/m ²
	200 kg/min	250.0 g/m ²	100.0 g/m ²	62.5 g/m ²	50.0 g/m ²	41.7 g/m ²

Speed: 40 km/h

		Spread Width				
		2 m	5 m	8 m	10 m	12 m
Flow Rate	50 kg/min	37.5 g/m ²	15.0 g/m ²	9.4 g/m ²	7.5 g/m ²	6.3 g/m ²
	100 kg/min	75.0 g/m ²	30.0 g/m ²	18.8 g/m ²	15.0 g/m ²	12.5 g/m ²
	150 kg/min	112.5 g/m ²	45.0 g/m ²	28.1 g/m ²	22.5 g/m ²	18.8 g/m ²
	200 kg/min	150.0 g/m ²	60.0 g/m ²	37.5 g/m ²	30.0 g/m ²	25.0 g/m ²

Speed: 5 mph

		Spread Width				
		8 ft	16 ft	24 ft	32 ft	40 ft
Flow Rate	100 lb/min	28.4 lb/1,000 ft ²	14.2 lb/1,000 ft ²	9.5 lb/1,000 ft ²	7.1 lb/1,000 ft ²	5.7 lb/1,000 ft ²
	200 lb/min	56.8 lb/1,000 ft ²	28.4 lb/1,000 ft ²	18.9 lb/1,000 ft ²	14.2 lb/1,000 ft ²	11.4 lb/1,000 ft ²
	300 lb/min	85.2 lb/1,000 ft ²	42.6 lb/1,000 ft ²	28.4 lb/1,000 ft ²	21.3 lb/1,000 ft ²	17.0 lb/1,000 ft ²
	400 lb/min	113.6 lb/1,000 ft ²	56.8 lb/1,000 ft ²	37.9 lb/1,000 ft ²	28.4 lb/1,000 ft ²	22.7 lb/1,000 ft ²

Speed: 15 mph

Flow Rate	Spread Width					
	8 ft		16 ft	24 ft	32 ft	40 ft
	100 lb/min	9.5 lb/1,000 ft ²	4.7 lb/1,000 ft ²	3.2 lb/1,000 ft ²	2.4 lb/1,000 ft ²	1.9 lb/1,000 ft ²
	200 lb/min	18.9 lb/1,000 ft ²	9.5 lb/1,000 ft ²	6.3 lb/1,000 ft ²	4.7 lb/1,000 ft ²	3.8 lb/1,000 ft ²
	300 lb/min	28.4 lb/1,000 ft ²	14.2 lb/1,000 ft ²	9.5 lb/1,000 ft ²	7.1 lb/1,000 ft ²	5.7 lb/1,000 ft ²
	400 lb/min	37.9 lb/1,000 ft ²	18.9 lb/1,000 ft ²	12.6 lb/1,000 ft ²	9.5 lb/1,000 ft ²	7.6 lb/1,000 ft ²

Speed: 25 mph

Flow Rate	Spread Width					
	8 ft		16 ft	24 ft	32 ft	40 ft
	100 lb/min	5.7 lb/1,000 ft ²	2.8 lb/1,000 ft ²	1.9 lb/1,000 ft ²	1.4 lb/1,000 ft ²	1.1 lb/1,000 ft ²
	200 lb/min	11.4 lb/1,000 ft ²	5.7 lb/1,000 ft ²	3.8 lb/1,000 ft ²	2.8 lb/1,000 ft ²	2.3 lb/1,000 ft ²
	300 lb/min	17.0 lb/1,000 ft ²	8.5 lb/1,000 ft ²	5.7 lb/1,000 ft ²	4.3 lb/1,000 ft ²	3.4 lb/1,000 ft ²
	400 lb/min	22.7 lb/1,000 ft ²	11.4 lb/1,000 ft ²	7.6 lb/1,000 ft ²	5.7 lb/1,000 ft ²	4.5 lb/1,000 ft ²

Calibrating the Spreader

The spreader and material should be calibrated periodically for better accuracy with RATE CONTROL or AUTO SPREAD. Each material can have a separate calibration factor saved which controls the spreader differently.

1. Remove the spinner assembly; refer to [Removing the Spinner Assembly \(page 25\)](#).

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

2. On the controller, select the material that most closely resembles the material that you will be spreading.
3. On the controller, select a job with 0 kg (0.0 lb) on the job counter, or reset the job counter.
4. Place a receptacle below the discharge area of the spreader.
5. Set the feeder flow rate to a mid-range value (100 kg/min or 200 lb/min) and turn the spreader on for a period of time (at least 30 seconds). The longer the spreader can run, the more accurate the calibration will be.

Important: Ensure bystanders are away from the spreader discharge area.

Note: Do not let spreader run long enough to overfill the receptacle or let the receptacle become too heavy to lift.

6. Weigh the receptacle on a scale.

Note: Be sure to account for the weight of the receptacle while it is empty.

7. Compare the amount of material measured on your scale to the amount on the job counter.

8. On the controller, go to the calibration settings screen and adjust the value as follows:
 - For every 5% that the measured material is less than the job counter, increase the adjustment factor by 1.
 - For every 5% that the measured material is more than the job counter, decrease the adjustment factor by 1.
9. Complete this procedure again if you need to verify the calibration is accurate.

Freeing a 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.**

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

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

Note: The spreader is designed to automatically free clogs.

The spreader display will show a notification when the jam first occurs. After a 5 second time-out or by pressing ACCEPT, the display will return to the main screen and show JAM CLEARING as long as the spreader is attempting to free itself.

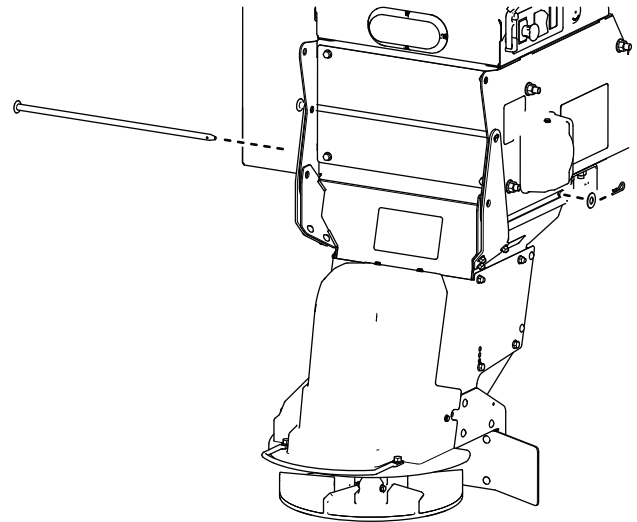
2. If JAM STUCK appears in the feeder or spinner display, push the STOP button.
3. If the clog is not cleared automatically, disconnect the spreader wire harness and manually free the clog.

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 lower pivot pin, washer, and cotter pin from the spreader as shown in the following figure.

Note: Do not move the vehicle when the spinner assembly is in the raised position.



g589506

Figure 16

⚠ 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.

4. Raise the spreader assembly and secure it to the machine with the pivot pin, washer, and cotter pin as shown in the following figure.

Removing the Spinner Assembly

1. Position the spreader over a flat, dry surface.
2. Unplug the spinner harness from the main wire harness.

⚠ 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.

3. Remove the 2 pivot pins, 1 washer, and 2 cotter pins securing the spinner assembly to the hopper and remove the spinner assembly.

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

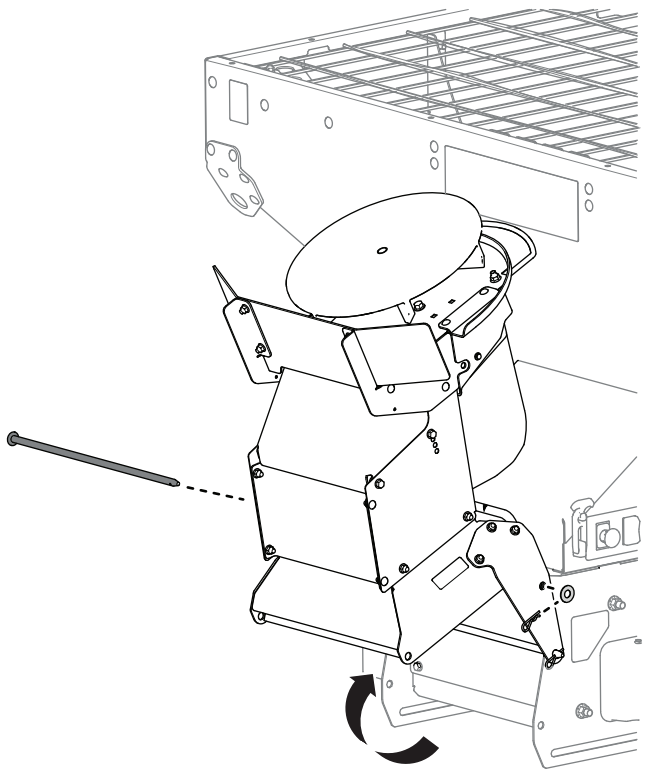


Figure 17

g589507

5. Push and hold the dump switch to unload the hopper material.
6. Position the spinner assembly back into place and secure it with the previously removed attachment pivot pin and cotter pin.
7. Connect the spinner harness to the main wire harness.

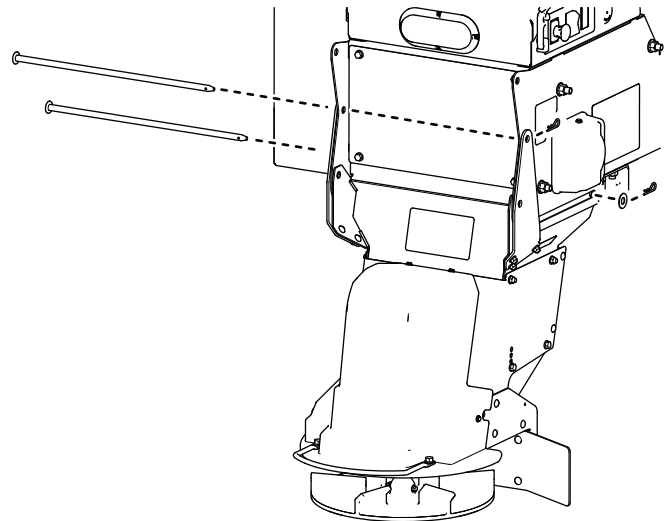


Figure 18

g589366

4. Insert the attachment pins and cotter pins into the spinner assembly for storage.
5. Install weather caps on the spinner harness and spinner motor 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	• Check the ratchet straps and tighten as necessary. • Check the pintle-chain conveyor tension. • Empty the cleanout tray (if equipped).
Every 20 hours	• Tighten the hardware.
Every 50 hours	• Grease the bearings. • Grease the pintle chain.
Before storage	• Unload the spreader. • Clean and grease all of the bearings. • Clean and grease the pintle chain.

Lubrication

Greasing the Machine

Every 50 hours—Grease the bearings.

Every 50 hours—Grease the pintle chain.

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

Miscellaneous Maintenance

Adjusting the Pintle-Chain Conveyor Tension

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 as shown in the following figure.

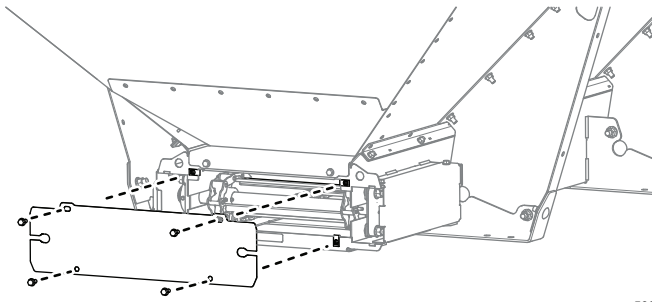


Figure 19

g589508

3. On each side of the machine, remove the side cover by removing the 2 bolts.

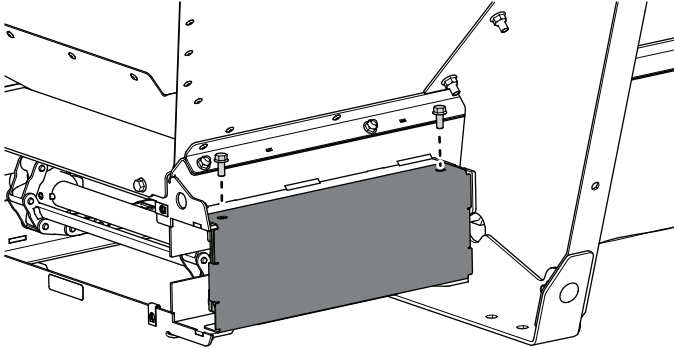


Figure 20

g589510

4. Check the gap between the pintle chain and the drivetrain frame.

Note: The chain should hang 2.5 to 5 cm (1 to 2 inches) above the drivetrain frame.

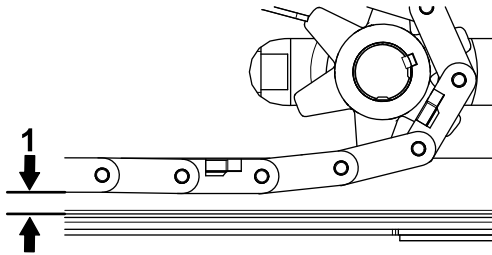


Figure 21

g589521

1. Gap between the pintle chain and the drivetrain frame

5. To adjust the tension, loosen the jam nuts on the sides of the spreader.

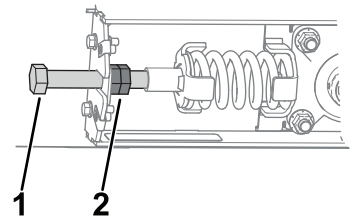


Figure 22

g589526

1. Take-up bolt
2. Jam nut

6. Place a wrench on the jam nut and turn the left take-up bolt clockwise 1 to 3 revolutions.
7. Place a wrench on the jam nut and turn the right take-up bolt clockwise 1 to 3 revolutions.
8. Check the chain tension, and repeat steps 6 and 7 until the desired tension is reached.

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

9. Tighten the jam nuts.
10. Install the 2 side covers and back cover.
11. 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 \(page 32\)](#) 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

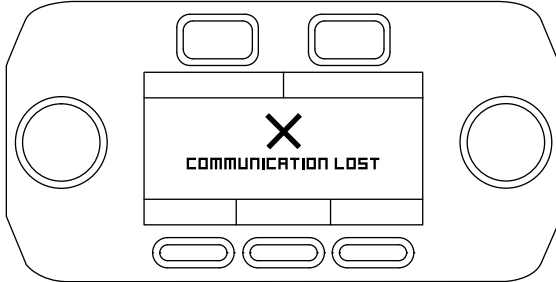


Figure 23

g589945

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

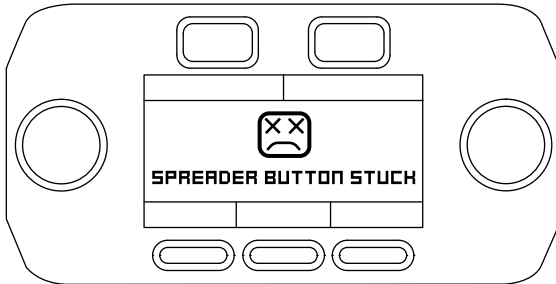


Figure 24

g589946

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

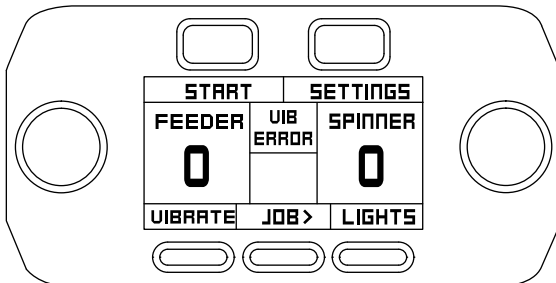


Figure 25

g493238

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

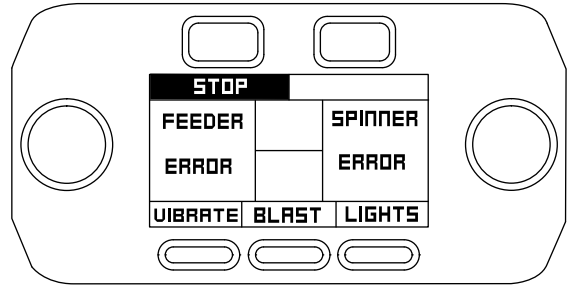


Figure 26

g493234

- 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.

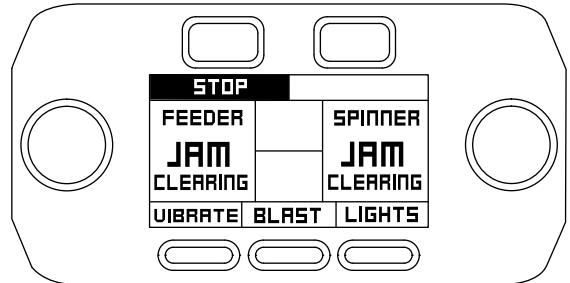


Figure 27

g493235

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

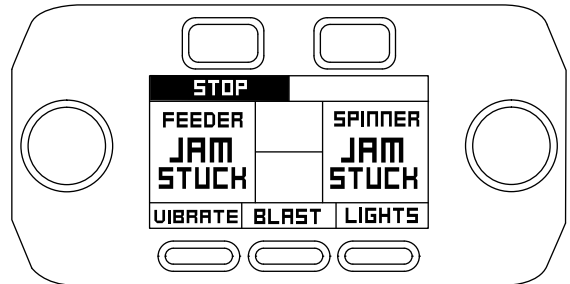


Figure 28

g493236

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

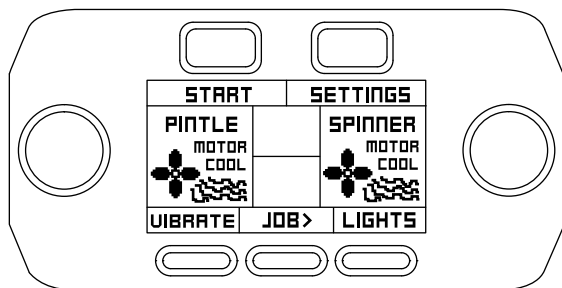


Figure 29

g493237

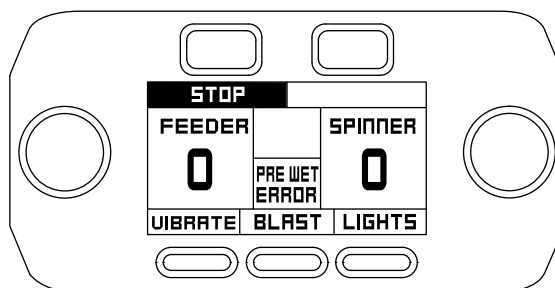


Figure 32

g493232

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

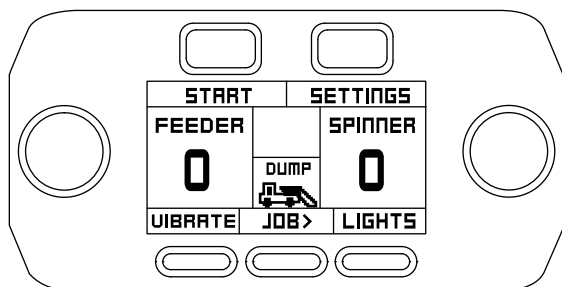


Figure 30

g493239

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

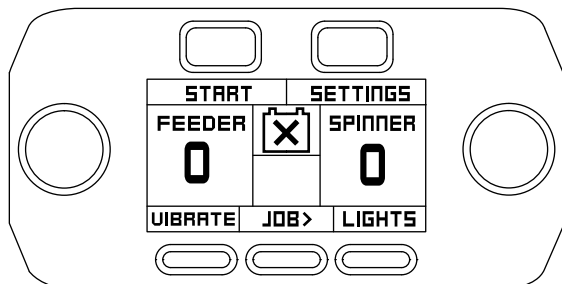


Figure 31

g493231

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

Cleaning

Cleaning the Machine

Service Interval: Before each use or daily

If equipped, 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 \(page 25\)](#).
2. Disconnect the power/control connector from the main wire harness.
3. Lift up on the cleanout tray handle to clear the mount holes and slide the tray out.

Note: This step will require at least 2 people.

4. Remove any material from the tray.
5. Insert the tray into the spreader.

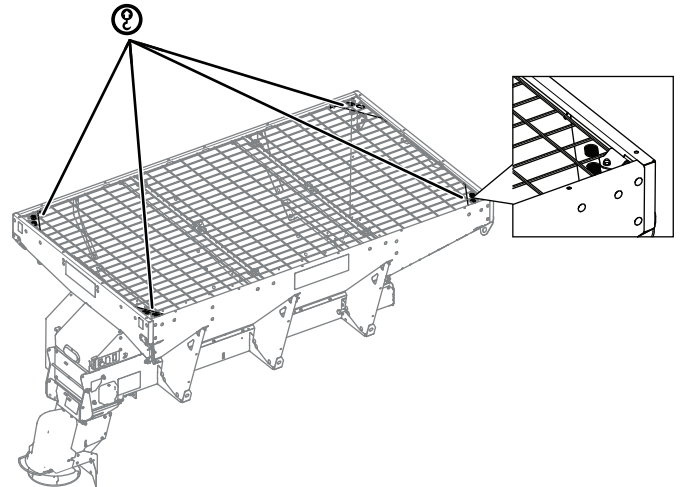
Note: Ensure the handle locks into the mount holes.

6. Connect the power/control connector to the main wire harness.

Storage

1. Unload the spreader; refer to [Unloading the Spreader \(page 24\)](#).
2. Remove the spinner assembly; refer to [Removing the Spinner Assembly \(page 25\)](#).
3. Remove the spreader from the truck using the lift points.

Important: Do not suspend the machine from the lift points for extended periods.



g589298

Figure 33

4. Wash and rinse the entire unit.
5. Clean and grease all of the bearings.
6. Clean and grease the pintle chain.
7. Clean all exposed connectors and apply dielectric grease to them.
8. Remove the controller from the truck and store it in a clean, dry place.
9. Store the machine on a flat surface.

Troubleshooting

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

Possible Cause	Corrective Action
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.

The controller display has no power or is not turning on.

Possible Cause	Corrective Action
1. The controller is in Sleep mode. 2. The vehicle key is in the OFF position. 3. The fuse, battery, ground, or ignition switch connection is loose or corroded. 4. The in-line fuse is not functioning. 5. The controller is not plugged into the vehicle harness. 6. The controller has a internal failure.	1. Press the upper left button on the display to wake it up. 2. Start the vehicle or move the key to the ACCESSORY position. 3. Tighten or clean the connection. 4. Replace the fuse. 5. Plug-in the controller. 6. Replace the controller.

Communication Error (Fault B1F03)



Possible Cause	Corrective Action
1. The power/ground cable is not connected to the battery. 2. The 150 A fuse is not functioning. 3. The power/ground/control cable is not connected to the spreader. 4. The power/ground cable is not connected to the module. 5. The 4-pin controller connector or 35-pin header are not connected to the spreader. 6. The module is not functioning.	1. Connect the power/ground cable to the battery. 2. Replace the fuse. 3. Clean the power/ground/control connector pins at the bumper, check continuity on all of the wires, and connect to the spreader. 4. Connect the power/ground cable to the module. 5. Clean the connectors, check the continuity of the green, yellow, and black/red wires, and connect to the module. 6. Replace the module.

Spreader Button Stuck Error (Fault B1F04)



Possible Cause	Corrective Action
1. The dump/work light switch is stuck or faulty. 2. The strobe-light switch is stuck or faulty.	1. Replace the dump/work light switch. 2. Replace the strobe-light switch.

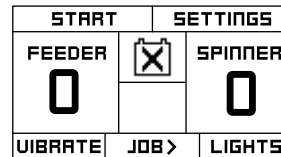
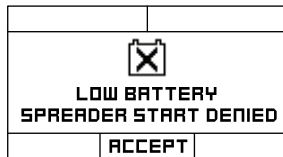
Display Button Stuck Error (Fault B1F05)



Possible Cause	Corrective Action
A button on the in-cab display controller is stuck or faulty.	Replace the controller.

Low Voltage Error (Fault B1F06)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.



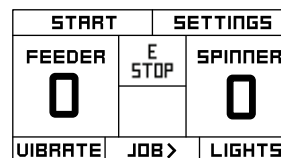
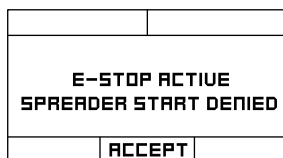
Possible Cause	Corrective Action
1. The battery is low. 2. The alternator is not functioning.	1. Charge the battery. 2. Replace the alternator.

Dump Switch Active (Fault B1F07)

Possible Cause	Corrective Action
1. The dump switch is being pressed. 2. The dump switch is faulty.	1. Stop pressing the dump switch. 2. Remove and install a new dump switch; contact an Authorized Service Dealer.

Emergency Stop Active (Fault B1F08)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.



Possible Cause	Corrective Action
1. The emergency stop switch is being set to the STOP position. 2. The emergency stop switch is disconnected. 3. The emergency stop switch is faulty.	1. Ensure bystanders and obstructions are clear. Set the emergency stop switch to the RUN position. 2. Connect the emergency stop switch. 3. Replace the emergency stop switch.

Feeder Overheat Error (Fault B1F2A)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

FEEDER OVERHEAT WAIT FOR COOLDOWN	
ACCEPT	

START	SETTINGS	
FEEDER		SPINNER
		
VIBRATE	JOB >	LIGHTS

Possible Cause	Corrective Action
1. The circuit board on the module is overheating. 2. The module is faulty.	1. Allow the controller to cool off then try again. 2. Replace the module.

Spinner Overheat Error (Fault B1F3A)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

SPINNER OVERHEAT WAIT FOR COOLDOWN	
ACCEPT	

START	SETTINGS	
FEEDER		SPINNER
		
VIBRATE	JOB >	LIGHTS

Possible Cause	Corrective Action
1. The circuit board on the module is overheating. 2. The module is faulty.	1. Allow the controller to cool off, then try again. 2. Replace the module.

Feeder Control Mode Error (Fault B1F20)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP		
MATERIAL MISSING RATE CONTROL DENIED		
ACCEPT	CANCEL	

STOP		
FEEDER		SPINNER
ERROR		
VIBRATE	BLAST	LIGHTS

Possible Cause	Corrective Action
1. The module is not configured correctly. 2. The module is faulty.	1. Contact an Authorized Service Dealer. 2. Replace the module.

Feeder Low Current Error (Fault B1F21)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
LOW FEEDER CURRENT	
ACCEPT	

STOP		
FEEDER		SPINNER
ERROR		0
VIBRATE	BLAST	LIGHTS

Possible Cause	Corrective Action
1. The feeder motor is not connected to the module. 2. The feeder motor has a failed internal connection. 3. The module is faulty.	1. Connect the feeder motor to the module. 2. Replace the feeder motor. 3. Replace the module.

Feeder High Current Error (Advise B1F22, B1F23, B1F24, and B1F25)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
FEEDER JAM DETECTED ATTEMPTING AUTO-CLEAR	
ACCEPT	

STOP		
FEEDER		SPINNER
JAM CLEARING		0
VIBRATE	BLAST	LIGHTS

Possible Cause	Corrective Action
1. The module detected a high current on the feeder motor. 2. The feeder drive system has excessive drag.	1. The controller is attempting to clear itself. Allow the spreader to keep running to self-clear. 2. Disconnect the spreader and inspect the feeder drive system for interference. Check the gearbox oil level and viscosity. Contact an Authorized Service Dealer for replacement parts.

Feeder Jam Error (Advise B1F26)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
FEEDER JAM DETECTED ATTEMPTING AUTO-CLEAR	
ACCEPT	

STOP		
FEEDER		SPINNER
JAM CLEARING		0
VIBRATE	BLAST	LIGHTS

Possible Cause	Corrective Action
1. The module detected an obstacle that is preventing the feeder motor from turning. 2. The feeder drive system has excessive drag.	1. The controller is attempting to clear itself. Allow the spreader to keep running to self-clear. 2. Disconnect the spreader and inspect the feeder drive system for interference. Check the gearbox oil level and viscosity. Contact an Authorized Service Dealer for replacement parts.

Feeder Jam Stuck Error (Fault B1F27)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
FEEDER JAM DETECTED COULD NOT CLEAR	
ACCEPT	

STOP	
FEEDER	SPINNER
JAM STUCK	0
VIBRATE	BLAST LIGHTS

Possible Cause	Corrective Action
The pintle chain is jammed and cannot clear.	Disconnect the power to the spreader and free the jam manually.

Feeder Lost Sensor Error (Fault B1F28)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
LOST FEEDER SENSOR RATE CONTROL DENIED	
ACCEPT CANCEL	

STOP	
FEEDER	SPINNER
ERROR	0
VIBRATE	BLAST LIGHTS

Possible Cause	Corrective Action
1. The 4-pin feeder motor sensor cable is disconnected. 2. The 4-pin feeder motor sensor cable has a poor connection. 3. The 4-pin feeder motor sensor cable is damaged.	Accepting the fault will change the spread mode to the OPEN control mode. The material and job counters are disabled in OPEN control mode. OPEN control mode is only active until key power cycle or the mode is manually changed. 1. Connect the 4-pin feeder motor sensor cable. 2. Clean the pins of the feeder motor sensor cable and then connect them. 3. Replace the feeder motor sensor cable. Contact an Authorized Service Dealer for replacement parts.

Feeder Under Target Error (Advise B1F29)

STOP	
FEEDER UNDER TARGET	
ACCEPT	

Possible Cause	Corrective Action
The module is not able to provide enough power to achieve the target flow rate.	The spreader will continue to run, but it is not achieving the target flow rate. It is recommended that you turn the feeder setting down. Calibrate the spreader flow rate. Retry the setting. If the advisory persists, contact your Authorized Service Dealer.

Spinner Control Mode Error (Fault B1F30)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
MATERIAL MISSING RATE CONTROL DENIED	
ACCEPT	CANCEL

STOP	
FEEDER	SPINNER
0	ERROR
VIBRATE	BLAST LIGHTS

Possible Cause	Corrective Action
1. The module is not configured correctly. 2. The module is faulty.	1. Contact an Authorized Service Dealer. 2. Replace the module.

Spinner Low Current Error (Fault B1F31)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
LOW SPINNER CURRENT	
ACCEPT	

STOP	
FEEDER	SPINNER
0	ERROR
VIBRATE	BLAST LIGHTS

Possible Cause	Corrective Action
1. The spinner motor is not connected to the module. 2. The spinner motor is not connected to the wire harness. 3. The spinner motor has a failed internal connection. 4. The module is faulty.	1. Connect the spinner motor to the module. 2. Connect the spinner motor wire harness. 3. Replace the spinner motor. 4. Replace the module.

Spinner High Current Error (Advise B1F32, B1F33, B1F34, and B1F35)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
SPINNER JAM DETECTED ATTEMPTING AUTO-CLEAR	
ACCEPT	

STOP	
FEEDER	SPINNER
0	JAM CLEARING
VIBRATE	BLAST LIGHTS

Possible Cause	Corrective Action
1. The module detected a high current on the spinner motor. 2. The spinner disk has excessive drag.	1. The controller is attempting to clear itself. Allow the spreader to keep running to self-clear. 2. Disconnect the spreader and inspect the spinner disk for interference. Contact an Authorized Service Dealer for replacement parts

Spinner Jam Error (Advise B1F36)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
SPINNER JAM DETECTED ATTEMPTING AUTO-CLEAR	
ACCEPT	

STOP		
FEEDER		SPINNER
0		JAM CLEARING
VIBRATE	BLAST	LIGHTS

Possible Cause	Corrective Action
- The module detected a obstacle that is preventing the spinner motor from turning. - The spinner disk has excessive drag.	- The controller is attempting to clear itself. Allow the spreader to keep running to self-clear. - Disconnect the spreader and inspect the spinner disk for interference. Contact an Authorized Service Dealer for replacement parts.

Spinner Jam Stuck Error (Fault B1F37)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
SPINNER JAM DETECTED ATTEMPTING AUTO-CLEAR	
ACCEPT	

STOP		
FEEDER		SPINNER
0		JAM STUCK
VIBRATE	BLAST	LIGHTS

Possible Cause	Corrective Action
The spinner disk is jammed and cannot clear itself.	Disconnect the power to the spreader and free the jam manually.

Spinner Lost Sensor Error (Fault B1F38)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
LOST SPINNER SENSOR RATE CONTROL DENIED	
ACCEPT	CANCEL

STOP		
FEEDER		SPINNER
0		ERROR
VIBRATE	BLAST	LIGHTS

Possible Cause	Corrective Action
- The 4-pin spinner motor sensor cable is disconnected. - The 4-pin spinner motor sensor cable has a poor connection. - The 4-pin spinner motor sensor cable is damaged.	Accepting the fault will change the spread mode to the OPEN control mode. The material and job counters are disabled in OPEN control mode. OPEN control mode is only active until the key power cycle or the spread mode is changed manually. - Connect the 4-pin spinner motor sensor cable. - Clean the pins of the spinner motor sensor cable and then connect them. - Replace the spinner motor sensor cable. Contact an Authorized Service Dealer for replacement parts.

Spinner Under Target Error (Advise B1F39)

STOP	
SPINNER UNDER TARGET	
ACCEPT	

Possible Cause	Corrective Action
The module is not able to provide enough power to achieve the target spread rate.	The spreader will continue to run, but it is not achieving the target spread width. Turn the feeder setting and/or spinner setting down and retry. If the advisory persists, contact your Authorized Service Dealer.

Left Side Vibrator Low Current Error (Advise B1F70)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
LOW VIBE 1 CURRENT VIBRATOR 1 DENIED	
ACCEPT	

STOP		
FEEDER	VIB. ERROR	SPINNER
0		0
VIBRATE	BLAST	LIGHTS

Possible Cause	Corrective Action
1. The circuit between the module and the left side vibrator is open. 2. The vibrator has an internal failure.	1. Check for disconnected wires and connect them. 2. Replace the vibrator.

Left Side Vibrator High Current Error (Advise B1F71 and B1F72)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
HIGH VIBE 1 CURRENT VIBRATOR 1 DENIED	
ACCEPT	

STOP		
FEEDER	VIB. ERROR	SPINNER
0		0
VIBRATE	BLAST	LIGHTS

Possible Cause	Corrective Action
1. The mounting bolts for the left side vibrator are too tight or too loose. 2. There is a short in the wire harness. 3. The vibrator is not functioning.	1. Check the tightness of the vibrator mounting bolts. 2. Replace the vibrator wire harness. 3. Replace the vibrator.

Right Side Vibrator Low Current Error (Advise B1F73)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
LOW VIBE 2 CURRENT VIBRATOR 2 DENIED	
ACCEPT	

STOP		
FEEDER 0	VIB. ERROR	SPINNER 0
VIBRATE	BLAST	LIGHTS

Possible Cause	Corrective Action
1. The circuit between the module and the right side vibrator is open. 2. The vibrator has an internal failure.	1. Check for disconnected wires and connect them. 2. Replace the vibrator.

Right Side Vibrator High Current Error (Advise B1F74 and B1F75)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
HIGH VIBE 2 CURRENT VIBRATOR 2 DENIED	
ACCEPT	

STOP		
FEEDER 0	VIB. ERROR	SPINNER 0
VIBRATE	BLAST	LIGHTS

Possible Cause	Corrective Action
1. The mounting bolts for the right side vibrator are too tight or too loose. 2. There is a short in the wire harness. 3. The vibrator is not functioning.	1. Check the tightness of the vibrator mounting bolts. 2. Replace the vibrator wire harness. 3. Replace the vibrator.

Brine Pump Low Current Error (Advise B1F76)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
LOW WET CURRENT PRE WET DENIED	
ACCEPT	

STOP		
FEEDER 0	PREWET ERROR	SPINNER 0
PRE-WET	BLAST	LIGHTS

Possible Cause	Corrective Action
1. The circuit to the pump is open. 2. The pump has an internal failure.	1. Check for disconnected wires and connect them. 2. Replace the pump.

Brine Pump High Current Error (Advise B1F77 and B1F78)

The first screen below shows the initial error message that can be accepted, or it will time-out after 5 seconds. The second screen shows the error message on the main display screen.

STOP	
HIGH WET CURRENT PRE WET DENIED	
ACCEPT	

STOP		
FEEDER		SPINNER
0	PREWET ERROR	0
PRE-WET	BLAST	LIGHTS

Possible Cause	Corrective Action
1. The maximum current for the pump has been exceeded.	1. Replace the pump.
2. The pump motor wiring has shorted.	2. Check for shorts in the wires and replace the pump if necessary.
3. The pump is not functioning.	3. Replace the pump.

Invalid Speed Error (Fault B1F2B)

Possible Cause	Corrective Action
1. The Cold Front Integration Kit is not connected.	1. Accept the fault. The spread mode will change to the RATE spreader mode.
2. The status LED is off.	2. Verify the device is connected to the in-cab harness for keyed power and connected to the vehicle OBD (on-board diagnostics) port for battery power.
3. The status LED is amber.	3. The device is not programmed. Contact an Authorized Service Dealer.
4. The status LED is solid red.	4. The battery is charge is low. Charge the battery or replace the alternator as required.
5. The status LED is slow-blinking green.	5. There is no communication with the spreader controllers. Verify the spreader display and motor control module are connected and powered. Verify the device connection to the in-cab harness. If the issue persists, contact an Authorized Service Dealer.
6. The status LED is fast-blinking green.	6. There is no communication with the vehicle OBD port. Verify all OBD connections are secure. If the issue persists, contact an Authorized Service Dealer.

Over Speed Error (Fault B1F2C)

Possible Cause	Corrective Action
In Auto Spread Mode, the vehicle speed is too fast for the control to operate.	If speed is outside of the range of the spreader performance, reduce the vehicle speed or adjust the spreader settings. If vehicle speed is exceeding 72.4 kph (45 mph), reduce the speed of the vehicle.

Notes:

California Proposition 65 Warning Information

What is this warning?

You may see a product for sale that has a warning label like the following:



WARNING: Cancer and Reproductive Harm—www.p65Warnings.ca.gov.

What is Prop 65?

Prop 65 applies to any company operating in California, selling products in California, or manufacturing products that may be sold in or brought into California. It mandates that the Governor of California maintain and publish a list of chemicals known to cause cancer, birth defects, and/or other reproductive harm. The list, which is updated annually, includes hundreds of chemicals found in many everyday items. The purpose of Prop 65 is to inform the public about exposure to these chemicals.

Prop 65 does not ban the sale of products containing these chemicals but instead requires warnings on any product, product packaging, or literature with the product. Moreover, a Prop 65 warning does not mean that a product is in violation of any product safety standards or requirements. In fact, the California government has clarified that a Prop 65 warning "is not the same as a regulatory decision that a product is 'safe' or 'unsafe.'" Many of these chemicals have been used in everyday products for years without documented harm. For more information, go to <https://oag.ca.gov/prop65/faqs-view-all>.

A Prop 65 warning means that a company has either (1) evaluated the exposure and has concluded that it exceeds the "no significant risk level"; or (2) has chosen to provide a warning based on its understanding about the presence of a listed chemical without attempting to evaluate the exposure.

Does this law apply everywhere?

Prop 65 warnings are required under California law only. These warnings are seen throughout California in a wide range of settings, including but not limited to restaurants, grocery stores, hotels, schools, and hospitals, and on a wide variety of products. Additionally, some online and mail order retailers provide Prop 65 warnings on their websites or in catalogs.

How do the California warnings compare to federal limits?

Prop 65 standards are often more stringent than federal and international standards. There are various substances that require a Prop 65 warning at levels that are far lower than federal action limits. For example, the Prop 65 standard for warnings for lead is 0.5 µg/day, which is well below the federal and international standards.

Why don't all similar products carry the warning?

- Products sold in California require Prop 65 labelling while similar products sold elsewhere do not.
- A company involved in a Prop 65 lawsuit reaching a settlement may be required to use Prop 65 warnings for its products, but other companies making similar products may have no such requirement.
- The enforcement of Prop 65 is inconsistent.
- Companies may elect not to provide warnings because they conclude that they are not required to do so under Prop 65; a lack of warnings for a product does not mean that the product is free of listed chemicals at similar levels.

Why does BOSS include this warning?

BOSS has chosen to provide consumers with as much information as possible so that they can make informed decisions about the products they buy and use. BOSS provides warnings in certain cases based on its knowledge of the presence of one or more listed chemicals without evaluating the level of exposure, as not all the listed chemicals provide exposure limit requirements. While the exposure from BOSS products may be negligible or well within the "no significant risk" range, out of an abundance of caution, BOSS has elected to provide the Prop 65 warnings. Moreover, if BOSS does not provide these warnings, it could be sued by the State of California or by private parties seeking to enforce Prop 65 and subject to substantial penalties.

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