



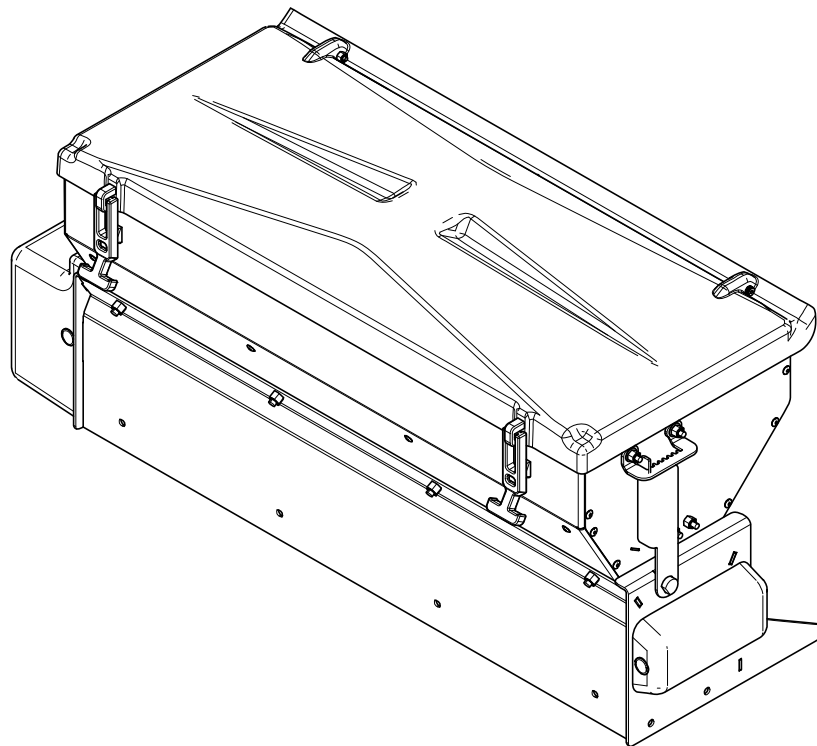
P.O. Box 787
Iron Mountain, MI 49801
United States

Owner's Manual

Exact Path Drop Spreader

Part No. DPS21250—Serial No. 409217000 and Up

Part No. DPS21350—Serial No. 409410000 and Up



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.

Patent www.ttcopats.com.

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 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.

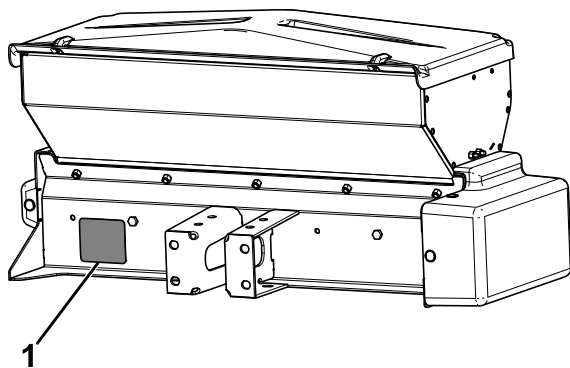


Figure 1

g293845

1. Serial number location

<p>Model No. _____</p> <p>Serial No. _____</p>
--

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

Improperly using and maintaining the equipment 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

- Ensure that only trained personnel install and perform maintenance on the equipment.
- Always wear appropriate personal protective equipment when loading, unloading, and servicing the spreader. Wear substantial, slip-resistant footwear, hand/skin protection, eye protection, and respiratory protection.
- The spreader can hold a maximum weight of 68 kg (150 lb) of material. Do not exceed this weight.

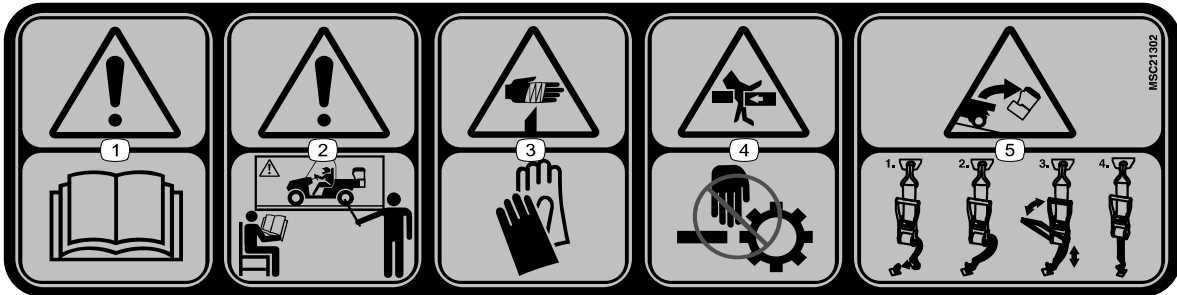
Operation

- Read the *Owner's Manual* before operating or servicing the spreader.
- Do not operate the machine while ill, tired, or under the influence of alcohol or drugs.
- Always follow the vehicle manufacturer's recommendations for proper parking procedures.
- Always wear your seatbelt while operating a motor vehicle.
- Do not exceed 22.5 km/h (14 mph) while spreading.
- This spreader has an operating sound level below 70 dBA.
- Never put any part of your body between the spreader and the vehicle.
- 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 sand, salt, or a sand/salt mix only. Do not run other materials through the spreader.
- Do not attempt to mount or remove the spreader with material in it.
- Turn the spreader off before filling, mounting, removing, servicing, or cleaning it.
- 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 with the UTV bedmount and slide-in mount attachments.
- When transporting the spreader, ensure that it is properly secured. Instructions are available at www.bosspow.com.
- 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.
- Use a 1/2 ton minimum lifting device to move heavy spreader components.
- Do not store material in the hopper.

Safety and Instructional Decals



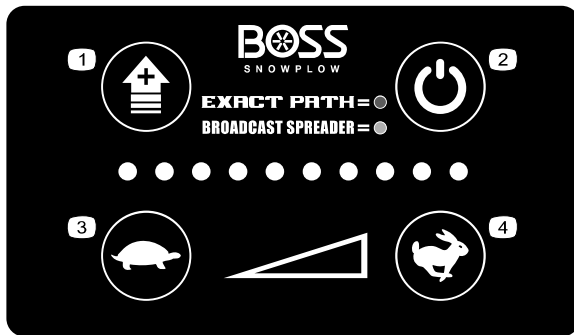
Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or missing.



MSC21302

decalmsc21302

1. Warning—read the *Owner's Manual*.
2. Warning—do not operate this machine unless you are trained.
3. Cutting hazard of the hand—wear hand and skin protection.
4. Crushing hazard of the hand—stay away from moving parts.
5. Falling hazard—the ratchet straps must be secured at all times.



decalmsc22879

MSC22879

1. Blast
2. Power
3. Slow
4. Fast

Setup

Note: Either the slide-in, UTV bedmount, or 3-point attachment is required to install this machine. Contact your Authorized Service Dealer for more information.

Installing the Wire Harness

⚠ DANGER

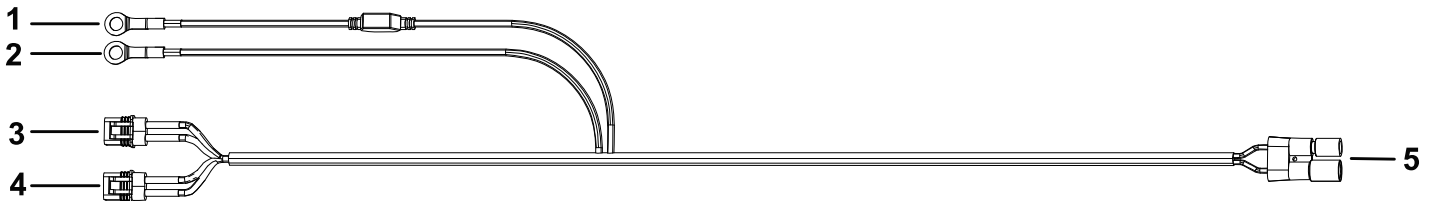
Vehicle engines contain moving parts and can become extremely hot, capable of causing severe burns and serious bodily harm.

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.



g353209

Figure 3

1. Yellow ring connector
2. Black ring connector
3. Yellow/Black controller connector
4. Red/Black controller connector
5. Spreader connector

1. Secure the spreader connector on the vehicle wire harness (Figure 3) to the center of the rear vehicle bumper with a cable tie.
2. Route the wire harness toward the vehicle battery and secure it with cable ties.

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

3. Insert the controller connectors into the vehicle cab, and secure it with cable ties.

Note: Route the controller connectors to the location that you want to install your controller.

Note: The wire colors match the controller input and output.

4. Connect the black ring connector in the engine compartment to the negative (-) battery terminal (Figure 3).
5. Connect the yellow ring connector in the engine compartment to the positive (+) battery terminal (Figure 3).
6. Wrap the excess wire and secure it in the engine compartment with cable ties.

Installing the Bed Shield and Stops

1. Remove and retain the motor cover (Figure 4).

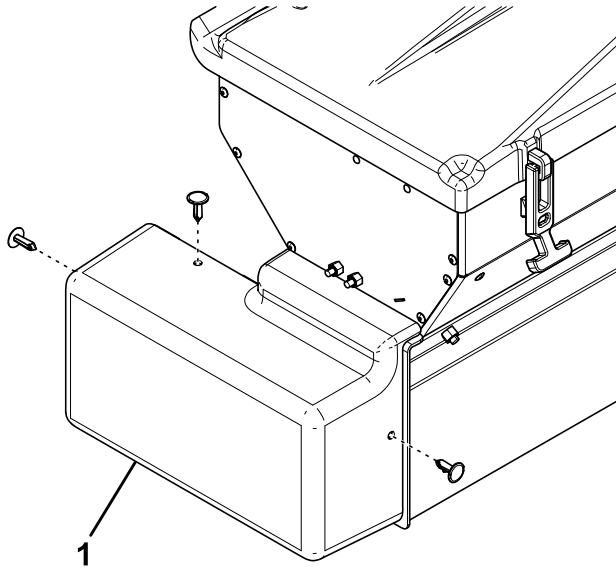


Figure 4

g293830

1. Motor cover

2. Slide the bed shield up under the spreader and lock the tabs into the slots on the spreader frame (Figure 5).

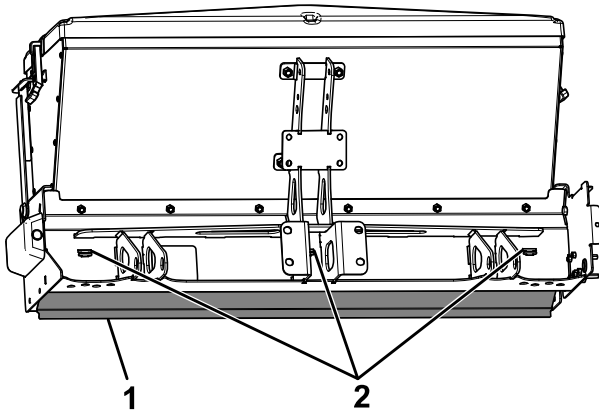


Figure 5

g260116

1. Bed shield
2. Tab slots

3. Secure the bed stops to each side of the spreader frame using 4 bolts (5/16 inch) and locknuts (Figure 6).

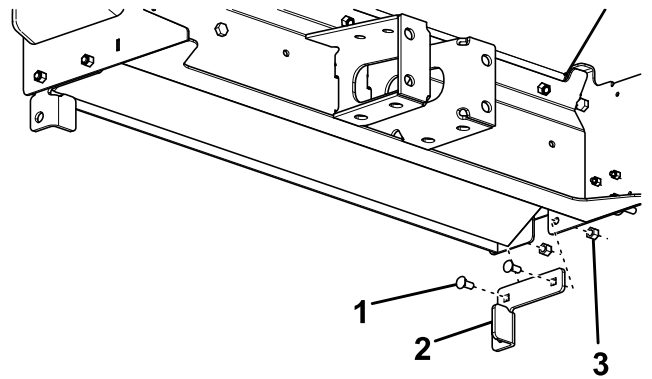


Figure 6

g293831

1. Locknut (5/16 inch)
2. Bed stop
3. Bolt (5/16 inch)

4. Torque the bolts to 15 N·m (11 ft-lb).
5. Install the previously removed motor cover.

Installing the Slide-In Attachment

1. Loosely attach the top of the hitch plate to the spreader using 4 bolts (3/8 inch) and locknuts (Figure 7).

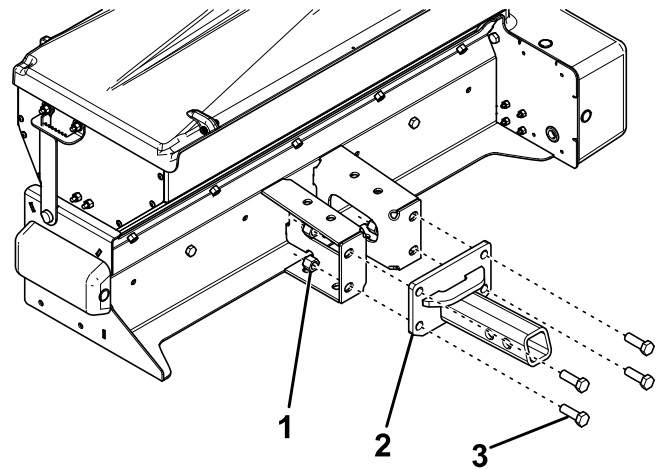


Figure 7

g293827

1. Locknut (3/8 inch)
2. Locknut (1/2 inch)
3. Hitch plate
4. Hitch
5. Bolt (1/2 x 1-1/2 inch)
6. Bolt (3/8 inch)

2. Attach the hitch to the hitch plate and spreader using 4 bolts (1/2 x 1-1/2 inch) and locknuts (Figure 7).
3. Attach the D-ring end of the ratchet straps to the spreader frame using 2 bolts (1/2 x 1-1/2 inch), washers (1/2 inch), and locknuts (1/2 inch) as shown in Figure 8.

Note: You can attach the straps to the center bracket or the lift pin brackets depending on your vehicle. If the straps are mounted to the lift pin brackets, use 2 additional washers.

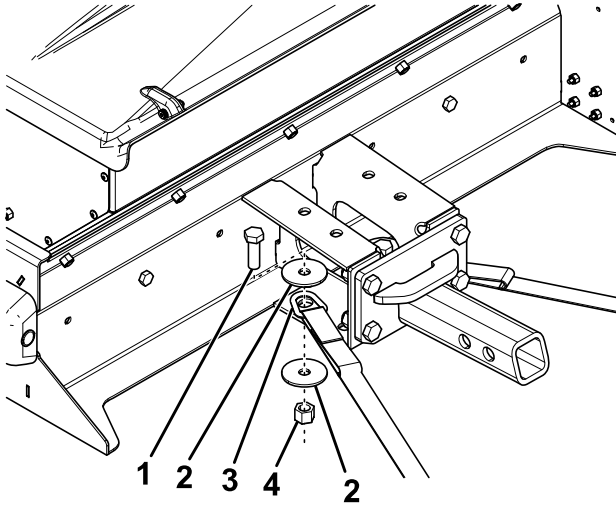


Figure 8

- | | |
|----------------------------|-----------------------|
| 1. Bolt (1/2 x 1-1/2 inch) | 3. Ratchet strap |
| 2. Washer (1/2 inch) | 4. Locknut (1/2 inch) |

4. Torque all of the fasteners to the following specifications:
- 3/8-inch bolts to 27 N·m (20 ft-lb)
 - 1/2-inch bolts to 76 N·m (56 ft-lb)

Mounting the Hitch Receiver

for the Toro Groundsmaster 360/7200/7210

The vehicle must be equipped with the Universal Hitch Kit to perform this installation.

1. Secure the hitch receiver to the rear of the vehicle using 2 bolts (1/2 x 4-1/2 inches) and locknuts (Figure 9).
2. Torque the bolts to 76 N·m (56 ft-lb).

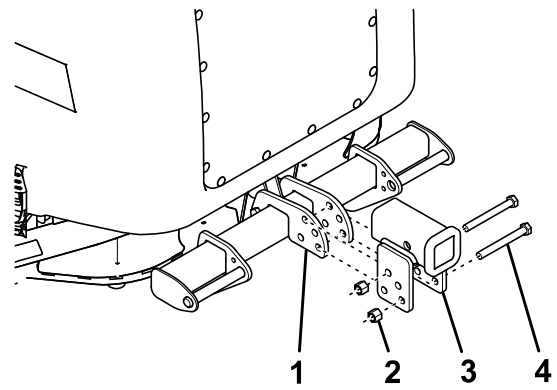


Figure 9

- | | |
|-----------------------|------------------------------|
| 1. Vehicle | 3. Hitch receiver |
| 2. Locknut (1/2 inch) | 4. Bolt (1/2 x 4-1/2 inches) |

Mounting the Spreader with the Slide-In Attachment

Refer to [Mounting the Spreader](#) (page 11).

Installing the UTV Bedmount Attachment

1. Secure the ratchet straps to the spreader using 4 bolts (1/2 x 1-1/2 inch), washers (1/2 inch), and locknuts (1/2 inch) as shown in Figure 10.

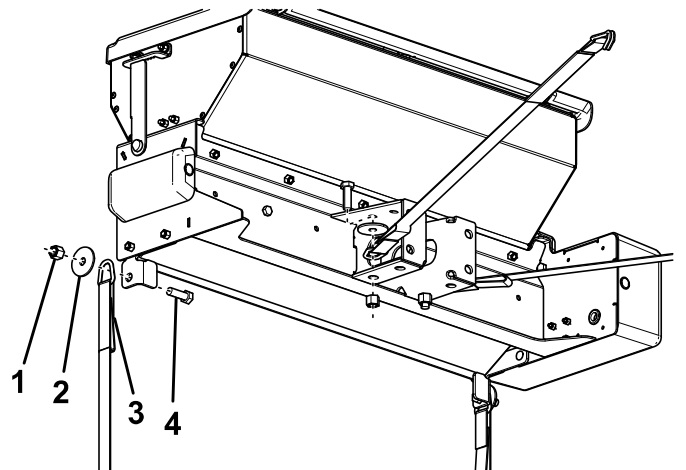


Figure 10

- | | |
|-----------------------|----------------------------|
| 1. Locknut (1/2 inch) | 3. Ratchet strap |
| 2. Washer (1/2 inch) | 4. Bolt (1/2 x 1-1/2 inch) |

2. Torque the bolts to 76 N·m (56 ft-lb).

Mounting the Spreader

with the UTV Bedmount Attachment

Refer to [Mounting the Spreader \(page 12\)](#).

Installing the 3-Point Attachment

1. Determine the height of your tractor mast as shown in [Figure 11](#).

Note: Ensure that you are not measuring the diagonal between centers.

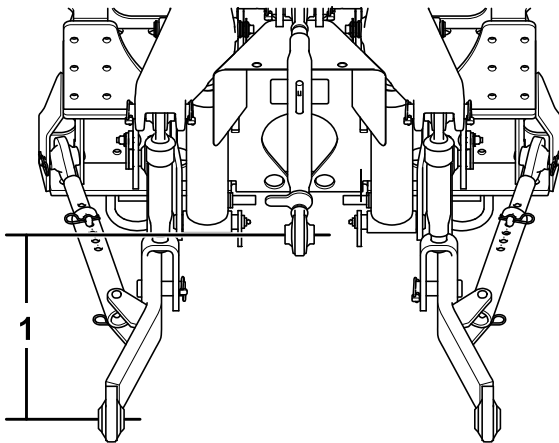


Figure 11

g260403

1. Tractor mast height

2. Position the mast brackets on the spreader so that the distance between the centers of the holes shown in [Figure 12](#) is close to the measurement found in step 1.

Note: Ensure that you are not measuring the diagonal between centers.

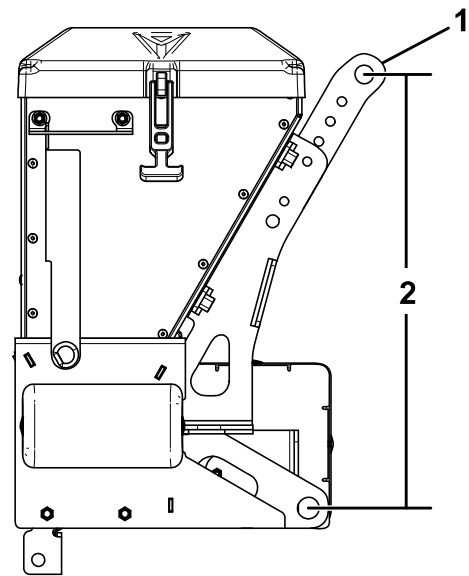


Figure 12

g260121

1. Mast bracket
2. Measurement found in step 1.

3. Secure the mast brackets to the spreader using 4 bolts (3/8 inch) and locknuts ([Figure 13](#)).

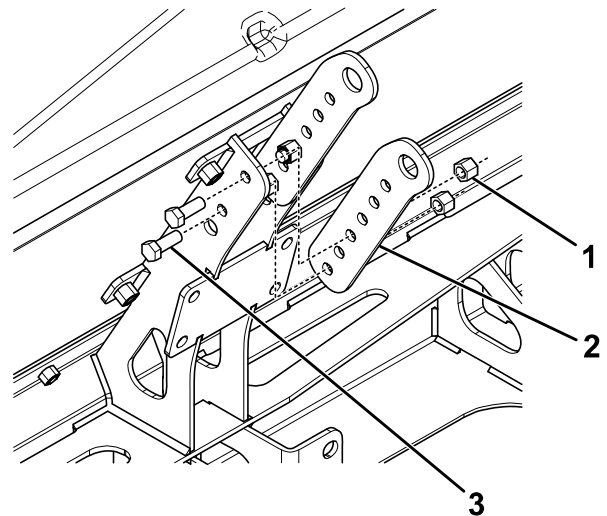


Figure 13

g260122

1. Locknut (3/8 inch)
2. Mast bracket
3. Bolt (3/8 inch)

4. Torque the bolts to 26.7 N·m (19.7 ft-lb).

Mounting the Spreader with the 3-Point Attachment

Refer to [Mounting the Spreader \(page 12\)](#).

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.

1. Attach the mounting bracket to the vehicle using 2 sheet-metal screws.

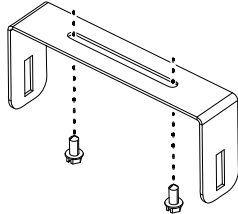


Figure 14

g353205

2. Place the carriage bolts (1/4-20 x 1/2 inch) in the sides of the mounting bracket.

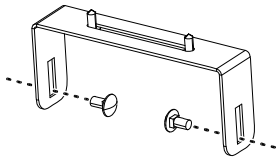


Figure 15

g353206

3. Attach the controller to the mounting bracket with the side brackets using 4 bolts (#10-32 x 3/4 inch) and 4 nuts (#10).

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

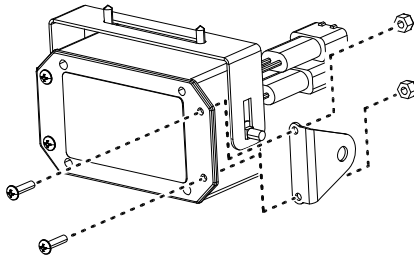


Figure 16

g353207

4. Install the knobs to the carriage bolts.

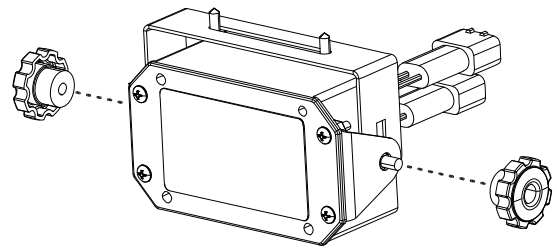


Figure 17

g353208

5. Connect the wire harness controller connector to the controller.

Product Overview

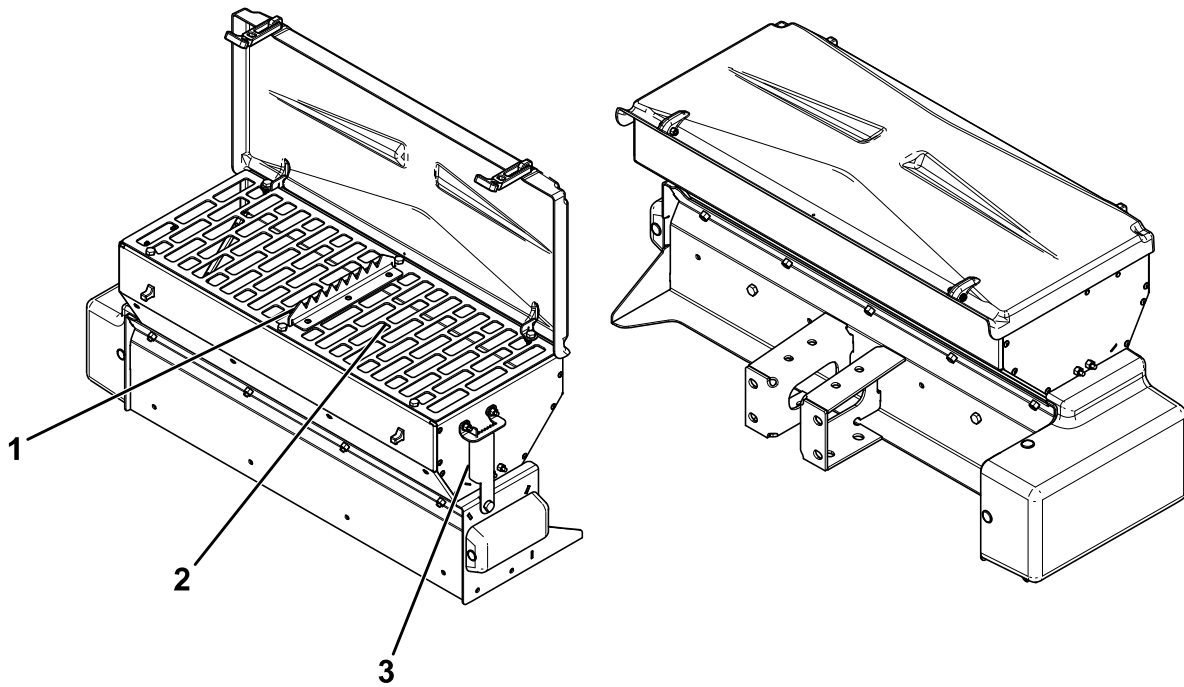


Figure 18

g293834

1. Bag splitter

2. Flow control lever

Controls

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

Flow Control Lever

The flow control lever lets you adjust the flow of material from the hopper. Push it forward to increase the flow. Pull it backward to decrease the flow.

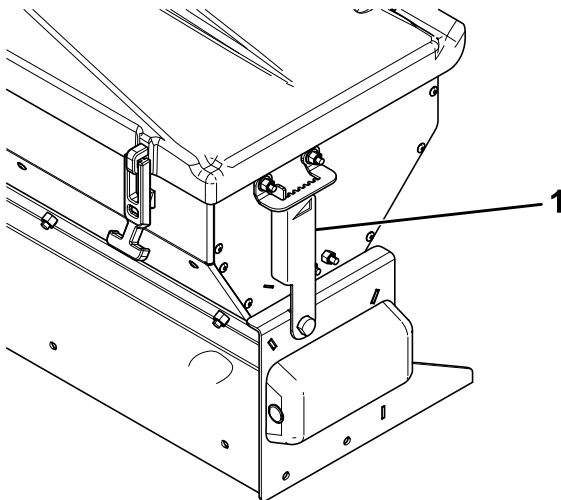


Figure 19

g293835

1. Flow control lever

Spreader Controller

The spreader controller lets you operate the spreader and displays information about the machine.

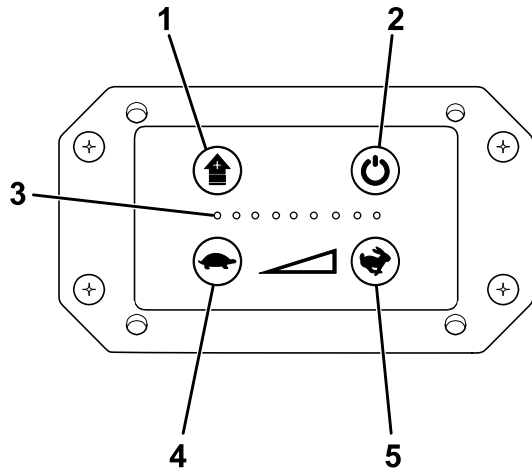


Figure 20

g293836

- 1. Blast button
- 2. Power button
- 3. Speed LEDs
- 4. Slow button
- 5. Fast button

- Power button—turns the spreader controller and feed motor on or off. Press once to turn the controller on. Press again to turn the feed motor on or off. Hold the button to turn the controller off.
- Blast button—momentarily sends full power to the feed motor as long as it is held up
- Speed dial—increases the motor speed when turned clockwise, and decreases the motor speed when turned counterclockwise
- Fast button—increases the feed motor speed
- Slow button—decreases the feed motor speed
- Speed LEDs—indicates the feed motor speed and operating mode. The LEDs will be red in Exact Path mode and green in Broadcast spreader mode.

Specifications

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

	2.5 ft ³ spreader	6 ft ³ spreader
Hopper height	34.9 cm (13.75 inches)	54 cm (21.3 inches)
Hopper width	1 m (39.4 inches)	1 m (39.4 inches)
Hopper depth	30.9 cm (12.2 inches)	40.6 cm (16 inches)
Weight (empty)	63.5 kg (140 lb)	72.5 kg (160 lb)
Capacity	0.07 m ³ (2.5 ft ³)	0.16 m ³ (6 ft ³)

Operation

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

⚠ DANGER

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

- Ensure that your footing is stable, and avoid lifting the spreader on slippery or uneven surfaces.
- Ensure that the ratchet straps are securely attached to the spreader at all times.

Mounting the Spreader with the Slide-In Attachment

1. Slide the spreader hitch into the receiver hitch on the vehicle and line up the second hole on the spreader hitch with the hole in the hitch of your vehicle (Figure 21).

Note: If the spreader contacts the bumper or rear of your vehicle, slide the spreader out and align the first hole of the spreader hitch instead.

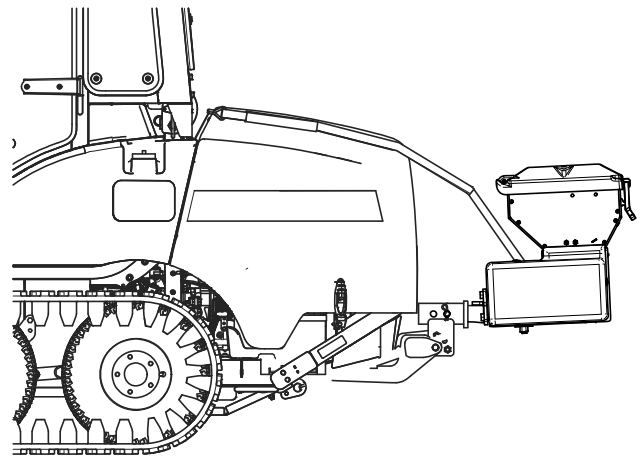


Figure 21

g293837

2. Secure the spreader hitch to the vehicle hitch using the clevis pin and cotter hairpin.
 3. Attach the ends of the ratchet straps to a solid point on the vehicle frame.
- Note:** You may have to drill a hole in the vehicle frame to attach them.
4. Plug the spreader harness into the vehicle wire harness at the bumper.

Removing the Spreader with the Slide-In Attachment

1. Ensure that the spreader controller is off.
2. Unplug the spreader harness from the vehicle wire harness at the bumper.
3. Disconnect the ratchet straps from the vehicle.
4. Remove the clevis pin and cotter hairpin securing the spreader hitch to the vehicle hitch.
5. Slide the spreader out of the receiver hitch of your vehicle.
6. Move the spreader to your storage area.

Mounting the Spreader with the UTV Bedmount Attachment

1. If your UTV has a tailgate, remove it.
2. Slide the spreader onto the UTV bed until the bed stops contact the bed (Figure 22).

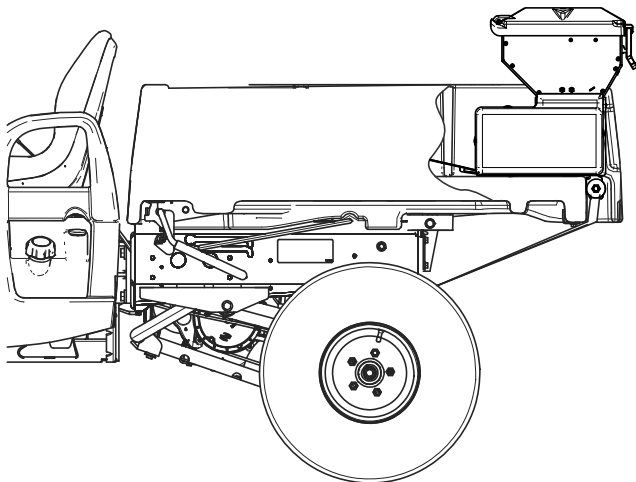


Figure 22

g293838

3. Attach the ends of the upper ratchet straps to a solid point toward the front of the UTV.
4. Slide the ends of the lower ratchet straps under the UTV and attach them to a solid point on the UTV frame rail or hitch.
5. Plug the spreader harness into the UTV wire harness at the bumper.

Removing the Spreader with the UTV Bedmount Attachment

1. Ensure that the spreader controller is off.

2. Unplug the spreader harness from the UTV wire harness at the bumper.
3. Disconnect the ratchet straps from the UTV.
4. Slide the spreader off of the UTV bed.
5. Move the spreader to your storage area.

Mounting the Spreader with the 3-Point Attachment

1. Space your tractor lift arms 70.5 cm (27-3/4 inches) apart.
2. Slowly drive the tractor up to the spreader and lower the lift arms so that they align with the lift pin brackets (Figure 23).

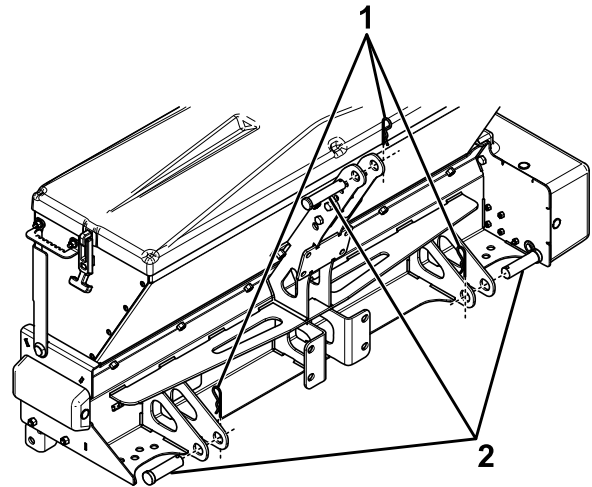


Figure 23

g260127

1. Cotter hairpins

2. Clevis pins

3. Secure the spreader lift pin brackets to the tractor using 2 clevis pins (7/8 inch) and cotter hairpins (Figure 23).
4. Lean the spreader back and attach the mast brackets to the tractor mast using a clevis pin (3/4 inch) and cotter hairpin (Figure 23).
5. Adjust the tractor mast turnbuckle until the spreader is perpendicular to the ground.
6. Plug the spreader harness into the vehicle wire harness.

Removing the Spreader with the 3-Point Attachment

1. Ensure that the spreader controller is off.
2. Lower the lift arms so that the spreader is resting on the ground.
3. Unplug the spreader harness from the vehicle wire harness at the bumper.

4. Remove the clevis pins and cotter hairpins securing the spreader to the tractor mast and lift arms.
5. Slowly drive the tractor away from the spreader.
6. Move the spreader to your storage area.

Loading the Spreader

Important: Use only dry sand, salt, or a sand/salt mixture in the spreader. Other materials could damage the machine.

1. Ensure that the spreader is securely mounted to your vehicle and is not over slippery or uneven terrain.
2. Ensure that the flow control lever is pulled back into the CLOSED position.
3. Remove the hopper cover and ensure that the top screen is installed and closed.
4. Determine the amount of material that you can safely transport in your spreader; refer to [Specifications \(page 11\)](#).
5. Fill the hopper using the following methods:
 - If using bagged materials, place the bag on the top screen bag splitter and work it back and forth to split the bag. Continue to move and shake the bag until it is empty.
Note: Have 2 people lift bags weighing more than 18 kg (40 lb).
Note: Keep your hands and fingers clear of the bag splitter when loading materials.
 - If using dry bulk materials, load the materials into the hopper through the top screen to break up any large, impassable chunks that may clog the spreader.
6. Ensure that the material is evenly distributed inside the hopper and not heaped in the center.
7. Secure the previously removed hopper cover.

Operating the Spreader

1. Move the flow control lever to the desired position; refer to the table below for recommendations based on your material type.
2. Start the vehicle.
3. Flip the Power switch to the ON position to turn on the spreader.
4. Use the speed dial to set your desired motor speed.
5. Drive at a consistent speed as you spread material.
6. While spreading, you can press the Blast button to momentarily increase the speed of the motor.
7. Flip the Power switch to the OFF position when you are finished spreading to shut off the spreader.
8. Pull the flow control lever back into the CLOSED position.

Note: The motor speed determines how quickly the material is spread.

		Flow Control Lever Position									
		1	2	3	4	5	6	7	8		
Material	Bag salt										Fine/Dry material
	Bulk salt										
	Salt/Sand mix					Vibrator recommended					
	Sand						Vibrator recommended				
	Empty/Unclog										Course/Wet material
		Low flow rate								High flow rate	

Freeing a Clog

The red LED on the spreader controller illuminates when debris gets wedged in the spreader and the controller is overloaded. If the clog is not cleared automatically, disconnect the spreader wire harness and manually free the clog.

Unloading the Spreader

1. Position the spreader in the area where you want to deposit the material.
2. Push the flow control lever forward until it is fully open.
3. Turn on the spreader controller and run the spreader until the hopper is empty.

Troubleshooting

Problem	Possible Cause	Corrective Action
The controller has no power.	<ol style="list-style-type: none"> 1. The battery or ground connections are corroded. 2. The vehicle side circuit fuse, 30 A in-line fuse, or 5 A in-line fuse in the controller side harness is bad. 3. The controller is not plugged into the wire harness. 	<ol style="list-style-type: none"> 1. Clean the ignition switch, battery, and ground connections. 2. Replace the fuses. 3. Plug in the controller.
The spreader motor does not work.	<ol style="list-style-type: none"> 1. The spreader and vehicle wire harnesses are not connected. 2. The controller is not plugged into the wire harness. 3. The feed motor is not connected to the spreader side harness. 	<ol style="list-style-type: none"> 1. Connect the wire harnesses. 2. Plug in the controller. 3. Connect the wire harnesses.
The spreader motor works but the drum does not turn.	<ol style="list-style-type: none"> 1. The connection between the drum and the motor shaft is bad. 2. The connection between the motor shaft and the motor hub is bad. 	<ol style="list-style-type: none"> 1. Contact your Authorized Service Dealer. 2. Contact your Authorized Service Dealer.
The drop pattern is uneven causing the spreader to empty unevenly.	<ol style="list-style-type: none"> 1. The gate baffle is worn. 2. The gate bushings are worn. 3. The flow control handle bolt is loose. 4. Material is built up on the bed shield. 5. Material is heaped in the spreader unevenly. 	<ol style="list-style-type: none"> 1. Replace the urethane gate baffle. 2. Replace the gate bushings. 3. Tighten the bolt. 4. Clean the bed shield. 5. Evenly distribute the material inside the spreader hopper.
Material leaks out of the spreader even when the flow control lever is in the Closed position.	<ol style="list-style-type: none"> 1. The gate baffle is worn. 2. The gate bushings are worn. 3. The flow control handle bolt is loose. 4. The gate baffle is misaligned. 	<ol style="list-style-type: none"> 1. Replace the urethane gate baffle. 2. Replace the gate bushings. 3. Tighten the bolt. 4. Adjust the gate baffle so that it touches the drum when closed.
Material is spreading slowly, intermittently, or not at all.	<ol style="list-style-type: none"> 1. There are rocks or debris clogging the drum. 2. The material being spread is damp or powdery. 	<ol style="list-style-type: none"> 1. Open the gate baffle temporarily to allow them to pass. 2. Open the flow control lever 1 step at a time until the material flows correctly.
Material is spreading too fast.	<ol style="list-style-type: none"> 1. The flow control lever is open too much. 2. The gate baffle is worn. 	<ol style="list-style-type: none"> 1. Move the flow control lever to the appropriate setting. 2. Replace the urethane gate baffle.
Material is spreading too fast.	<ol style="list-style-type: none"> 1. The flow control lever is open too much. 2. The gate baffle is worn. 	<ol style="list-style-type: none"> 1. Move the flow control lever to the appropriate setting. 2. Replace the urethane gate baffle.
1 LED is flashing on the Snowrator® controller.	<ol style="list-style-type: none"> 1. The material in the hopper is too coarse. 	<ol style="list-style-type: none"> 1. Open the feed gate wider.
2 LED's are flashing on the Snowrator controller.	<ol style="list-style-type: none"> 1. Material is stuck in the gate. 	<ol style="list-style-type: none"> 1. Open the feed gate all the way.
3 LED's are flashing on the Snowrator controller.	<ol style="list-style-type: none"> 1. There is a short in the wiring. 2. The spreader is jammed. 	<ol style="list-style-type: none"> 1. Repair or replace the wire. 2. Free the clog.
4 LED's are flashing on the Snowrator controller.	<ol style="list-style-type: none"> 1. A connector is loose. 2. There is a short in the wiring. 	<ol style="list-style-type: none"> 1. Ensure all of the connectors are fully connected. 2. Repair or replace the wire.

Problem	Possible Cause	Corrective Action
5 LED's are flashing on the Snowrator controller.	1. The supply voltage is less than 10 V.	1. Slow down the spreader, increase the vehicle rpm, or replace the battery.
6 LED's are flashing on the Snowrator controller.	1. The supply voltage is greater than 15 V.	1. Repair the vehicle charging system.
7 LED's are flashing on the Snowrator controller.	1. The controller temperature is greater than 60° C (140° F).	1. Turn off the spreader and let it cool for 10 minutes.