



Form No. 3433-272 Rev A

**Count on it.**

**Operator's Manual**

**Spreader Attachment  
Stand-on Aerator**

Model No. 33525—Serial No. 400000000 and Up



## ⚠ 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.

# Introduction

The intended use of this spreader attachment is for dispersing grass seed. This is not to be used for fertilizer or any other chemical applications.

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.Toro.com](http://www.Toro.com) for product safety and operation training materials, accessory information, help finding a dealer, or to register your product.

Whenever you need service, genuine Toro parts, or additional information, contact an Authorized Service Dealer or Toro Customer 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.

**Important:** With your mobile device, you can scan the QR code (if equipped) on the serial number decal to access warranty, parts, and other product information.

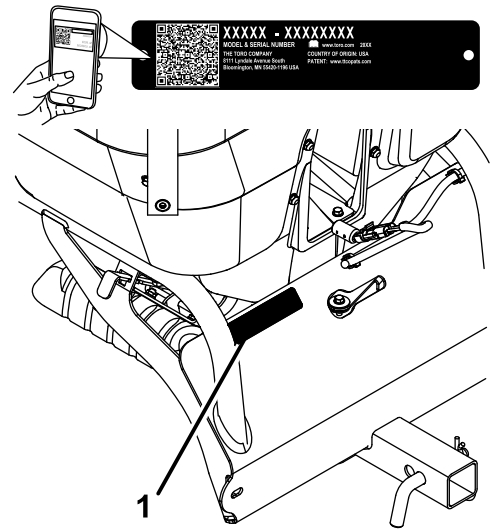


Figure 1

g253435

1. Location of the model and serial numbers

Model No. _____
Serial No. _____

This manual identifies potential hazards and has safety messages identified by the safety-alert symbol ([Figure 2](#)), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.



Figure 2

g000502

1. Safety-alert symbol

This manual uses 2 words to highlight information. **Important** calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

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# Safety

Improper use or maintenance by the operator or owner can result in injury. To reduce the potential for injury, comply with these safety instructions, and pay attention to the safety alert symbol, which means Caution, Warning, or Danger—personal safety instruction. Failure to comply with the instructions may result in personal injury or death.

## Safe Operating Practices

### Training

- Read the *Operator's Manual* for the machine and this accessory and other training material.  
**Note:** If the operator(s) or mechanic(s) cannot read the manual language, it is the owner's responsibility to explain this material to them.
- Become familiar with the safe operation of the equipment, operator controls, and safety signs.
- All operators and mechanics should be trained. The owner is responsible for training the users.
- Never let children or untrained people operate or service the equipment.  
**Note:** Local regulations may restrict the age of the operator.
- The owner/user can prevent and is responsible for accidents or injuries occurring to himself or herself, other people, or damage to property.

### Preparation

- Do not modify the accessory.
- Evaluate the terrain to determine what accessories and attachments are needed to properly and safely perform the job. Use only accessories and attachments approved by the manufacturer.
- Wear appropriate clothing including safety glasses, substantial footwear, and hearing protection. Tie back long hair, secure loose clothing, and do not wear loose jewelry.

## **⚠ CAUTION**

**The machine that the spreader accessory attaches to produces sound levels in excess of 85 dBA at the operator's ear and can cause hearing loss through extended periods of exposure.**

**Wear hearing protection when operating this machine.**

- Inspect the area where you will use the equipment and remove all objects from the area before using the machine.

## **Operation**

### **⚠ WARNING**

**Hands, feet, hair, clothing, or accessories can become entangled in rotating parts. Contact with the rotating parts can cause traumatic amputation or severe lacerations.**

- **Do not operate the machine without guards, shields, and safety devices in place and working properly.**
- **Keep hands, feet, hair, jewelry, or clothing away from rotating parts.**
- Operate the machine only in good visibility and appropriate weather conditions. Do not operate the machine when there is the risk of lightning.
- Operate the machine only in well-lit areas, keeping away from holes and hidden hazards.
- Be aware of weather conditions and check that spreader patterns and volume are suitable.
- Never operate the machine with damaged guards, shields, or covers. Always have safety shields, guards, switches and other devices in place and in proper working condition.
- Stop on level ground, disengage drives, engage the parking brake (if provided), shut off the engine, and remove the key before leaving the operator's position for any reason.
- Stop spreading when making tight turns to minimize uneven distribution pattern and application rate.
- Reduce the weight of the load when operating on hills and rough terrain to avoid tipping or overturning the machine.
- Material loads can shift. This shifting happens most often while turning, going up or down hills, suddenly changing speeds, or while driving over rough surfaces. Shifting loads can cause the machine to tip over.

- When operating with a heavy load, reduce your speed and allow for sufficient stopping distance. Use extra caution on slopes.
- Reduce speed and load when operating on rough terrain, uneven ground, and near curbs, holes, and other sudden changes in terrain. Loads may shift, causing the machine to become unstable.
- Heavy loads affect stability. Reduce the weight of the load and your speed when operating on hills.

## **Maintenance and Storage**

- Close the spreader gate, engage the parking brake, shut off the engine, and remove the key or disconnect spark plug wire. Wait for all movement to stop before adjusting, cleaning or repairing the machine.
- Empty the hopper before tilting the machine for maintenance and before storing.
- Keep your hands and feet away from moving parts. If possible, do not make adjustments with the engine and/or the impeller running.
- Keep all guards, shields, and safety devices in place and in safe working condition.
- Check all bolts frequently to maintain proper tightness.
- Frequently check for worn or deteriorating components that could create a hazard.

# Safety and Instructional Decals



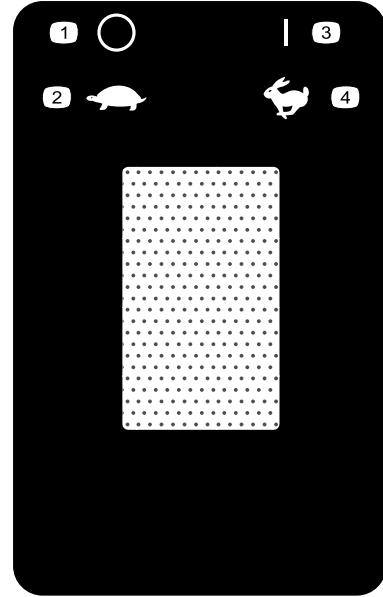
Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or missing.

**WARNING:** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).  
For more information, please visit [www.ttcoCAProp65.com](http://www.ttcoCAProp65.com)

133-8061

**133-8061**

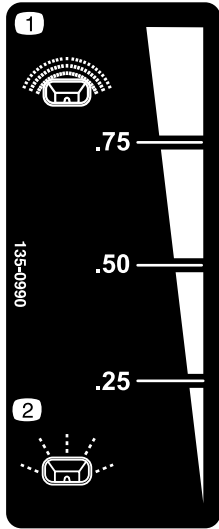
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**135-0739**

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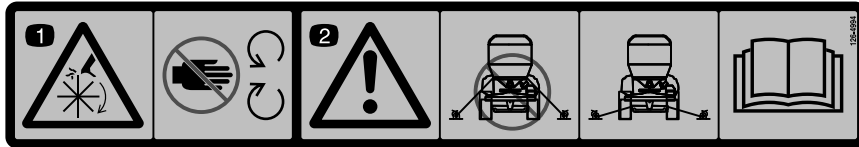
- |                  |                  |
|------------------|------------------|
| 1. Impeller—off  | 3. Impeller—on   |
| 2. Impeller—slow | 4. Impeller—fast |



**135-0990**

decal135-0990

1. Spread pattern-heavy      2. Spread pattern-light



**126-4994**

decal126-4994

- |  |  |
|--|--|
| 1. Cutting/dismemberment hazard—keep away from moving parts. | 2. Warning—do not use the upper front locations as tie down points, only use the specified tie-down points; see the <i>Operator's Manual</i> for location. |
|--|--|

# Setup

## Loose Parts

Use the chart below to verify that all parts have been shipped.

Procedure	Description	Qty.	Use
<b>1</b>	No parts required	–	Prepare the machine.
<b>2</b>	Bolt (3/8 x 1-1/4 inches)—30-inch machines only Locknut (1/4 inch)—30-inch machines only Bolt (1/4 x 5/8 inch)—30-inch machines only Bolt (5/16 x 3/4 inch)—24-inch machines only Locknut (5/16 inch)—24-inch machines only	1 1 1 3 3	Install the flow control panel.
<b>3</b>	Hopper assembly Hairpin cotter Hitch pin	1 1 1	Install the hopper assembly.
<b>4</b>	Cable-mount bracket for 24-inch machines Cable-mount bracket for 30-inch machines Carriage bolt (5/16 x 1 inch)—24-inch machines only Carriage bolt (1/4 x 1 inch)—24-inch machines only Locknut (1/4 inch)—24-inch machines only Locknut (1/4 inch)—30-inch machines only Bolt (1/4 x 5/8 inch)—30-inch machines only	1 1 1 1 1 2 2	Install the cable-mount bracket.
<b>5</b>	Control cable Locknut (1/4 inch) Washer	1 2 2	Install the control cable.
<b>6</b>	Wire harness Cable tie	1 10	Install the harness.
<b>7</b>	Cover Washer Locknut (1/4 inch) Bolt (1/4 x 3/4 inch)	1 4 4 4	Install the cover.

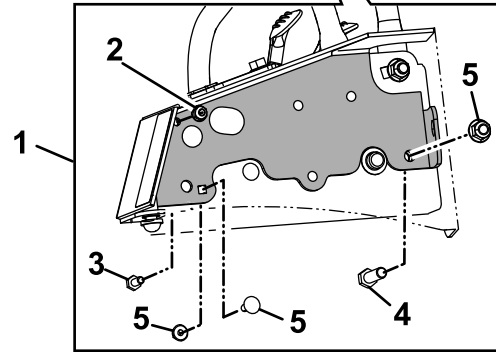
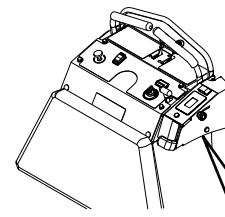
# 1

## Preparing the Machine

No Parts Required

### Procedure

1. Park the machine on a level surface.
2. Engage the parking brake.
3. Shut off the engine and remove the key.
4. Disconnect the negative (black) battery cable from the negative (-) battery terminal.



# 2

## Installing the Flow Control Panel

Parts needed for this procedure:

1	Bolt (3/8 x 1-1/4 inches)—30-inch machines only
1	Locknut (1/4 inch)—30-inch machines only
1	Bolt (1/4 x 5/8 inch)—30-inch machines only
3	Bolt (5/16 x 3/4 inch)—24-inch machines only
3	Locknut (5/16 inch)—24-inch machines only

### Procedure

1. Hold the flow control panel against the right side of the machine to determine the mounting hole configuration. Remove and retain the mounting hardware from where the bracket will be installed on the machine.

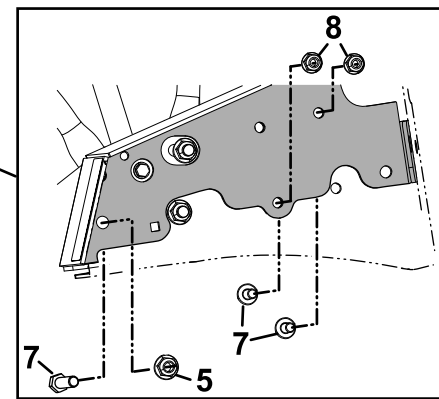


Figure 3

Outer cover hidden for clarity

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| 1. Installation for 30-inch machine | 5. Reuse retained hardware          |
| 2. Locknut (1/4 inch)               | 6. Installation for 24-inch machine |
| 3. Bolt (1/4 x 5/8 inch)            | 7. Hex-head bolt (5/16 x 3/4 inch)  |
| 4. Bolt (3/8 x 1-1/4 inches)        | 8. Locknut (5/16 inch)              |

2. Place the flow control panel onto the machine and secure it using the hardware shown in [Figure 3](#).

**Note:** Additional hardware is shipped with the spreader if the retained hardware is not long enough to mount the control panel.

# 3

## Installing the Hopper Assembly

Parts needed for this procedure:

1	Hopper assembly
1	Hairpin cotter
1	Hitch pin

### Procedure

1. Insert the hopper hitch tube into the receiver on the machine.

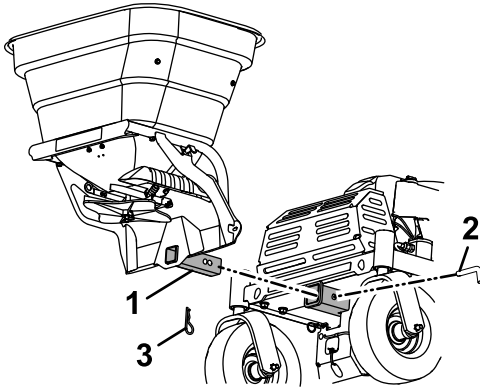


Figure 4

g213510

1. Hopper hitch tube
2. Hitch pin
3. Cotter pin

2. Use the hitch pin and hairpin cotter to secure the hopper assembly to the aerator.

# 4

## Installing the Cable-Mount Bracket

Parts needed for this procedure:

1	Cable-mount bracket for 24-inch machines
1	Cable-mount bracket for 30-inch machines
1	Carriage bolt (5/16 x 1 inch)—24-inch machines only
1	Carriage bolt (1/4 x 1 inch)—24-inch machines only
1	Locknut (1/4 inch)—24-inch machines only
2	Locknut (1/4 inch)—30-inch machines only
2	Bolt (1/4 x 5/8 inch)—30-inch machines only

### Procedure

Choose the appropriate cable-mount bracket by matching the holes to the right side of the machine. Use the hardware shown in Figure 5 to install the bracket.

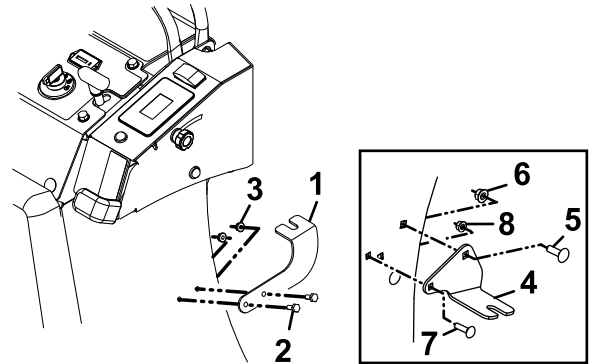


Figure 5

g213563

1. Bracket for 30-inch aerator
2. Bolt (1/4 x 5/8 inch)
3. Locknut (1/4 inch)
4. Bracket for 24-inch aerator
5. Carriage bolt (5/16 x 1 inch)
6. Remove and use this nut to mount the bracket.
7. Carriage bolt (1/4 x 1 inch)
8. Locknut (1/4 inch)



# 5

## Installing the Control Cable

Parts needed for this procedure:

1	Control cable
2	Locknut (1/4 inch)
2	Washer

### Procedure

1. Ensuring that the cable ball joint is securely attached to the cable, connect the ball joint to the control arm and secure it with a washer and locknut (1/4 inch) as shown in [Figure 6](#).

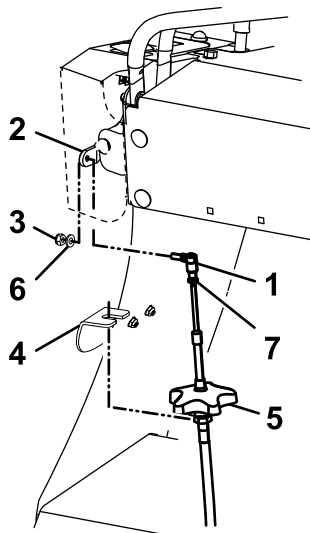


Figure 6

g221603

1. Cable ball joint
2. Control lever
3. Locknut (1/4 inch)
4. Cable-mount bracket
5. Knob
6. Washer
7. Jam nut

2. Loosen the knob and slide the control cable into the notch of the mount bracket and tighten the knob.
3. Route the other end of the control cable to the gate arm.

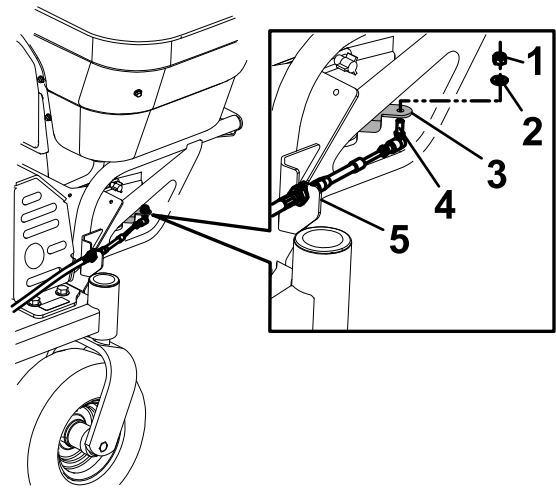


Figure 7

g213569

1. Locknut (1/4 inch)
2. Washer
3. Gate arm
4. Cable end
5. Hopper bracket

4. Insert the cable end into the hole of the gate arm; secure the cable end with a washer and locknut (1/4 inch) as shown in [Figure 7](#).
5. Loosen the nuts on each side of the control cable and slide it into the notch of the hopper bracket. Tighten the nuts on each side of the bracket.
6. Move the flow control lever forward and rearward, making sure that the gate arm fully opens and closes. If it does not close, loosen the knob and/or nuts to adjust the cable until the gate can be fully closed; tighten all components. Make sure that the jam nut has been securely tightened against the cable ball joint after all adjustments have been made ([Figure 6](#)).

# 6

## Installing the Wire Harness

Parts needed for this procedure:

1	Wire harness
10	Cable tie

### Procedure

**Important:** Be sure the machine is not running and the key has been removed from the ignition switch prior to proceeding with the harness installation.

1. Disconnect the battery; refer to your *Operator's Manual*.
2. Plug the hour meter and ON/OFF connectors on the spreader harness into the switches on flow control panel (Figure 8).

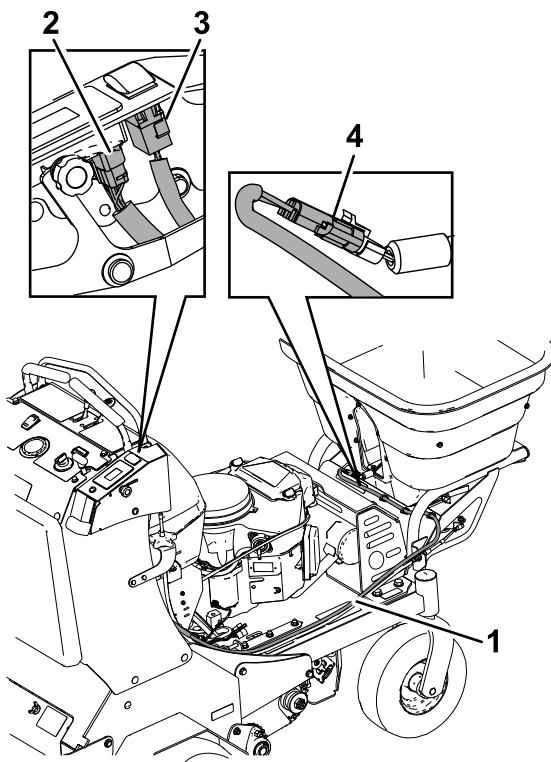


Figure 8

g213636

1. Harness
2. Hour meter connector
3. On/off switch
4. Motor connector

3. Route the harness along the right side of the machine, following the control cable. Place the harness on top of the control cable and slide it into the notch of the hopper bracket. Continue to route the harness between the right hopper

bracket and hopper tube. Connect the spreader harness to the spreader motor as shown in Figure 8. Insert the 3 harness tie clips into the holes of the hopper mainframe to secure the harness.

4. Remove the cap from the accessory wire on the main harness and plug into the spreader accessory harness as shown in Figure 9.

**24 Inch Models Only:** Remove the adaptor plug from the main accessory harness.

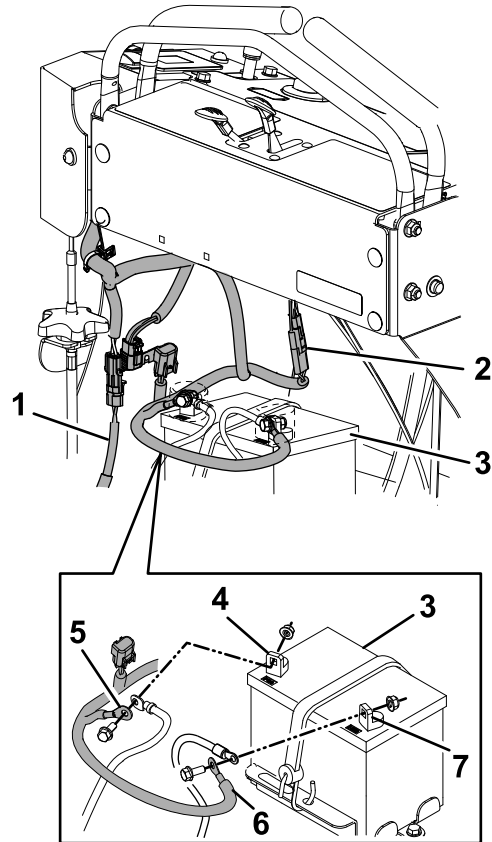


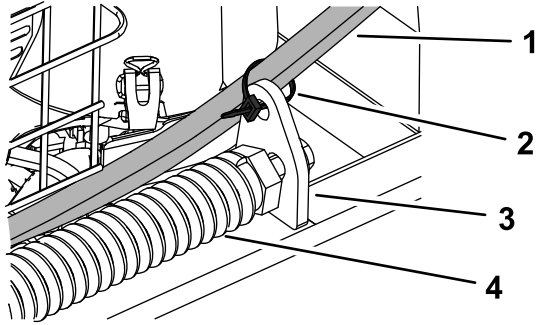
Figure 9

g213682

1. Spreader harness
2. Accessory plug
3. Battery
4. Positive battery terminal
5. Spreader harness positive battery connection
6. Spreader harness negative battery connection
7. Negative battery terminal

5. Remove and retain the nut and screw from the positive terminal on the battery. Install the accessory harness positive cable (second to last terminal ring—Figure 9) and the positive cable of the main harness to the front of the positive battery terminal and secure with the nut and screw. Repeat for negative battery cable.
6. Use the edge clip to secure the harness to the right aerator panel.

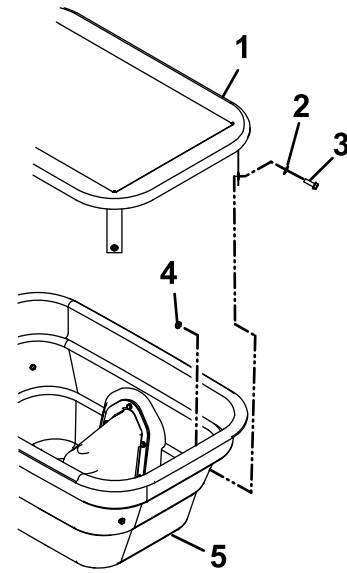
- For 24-inch machines, use 1 cable tie to secure the cable and harness to the spring or spring mount.



**Figure 10**

g253434

- |                      |                 |
|----------------------|-----------------|
| 1. Cable and harness | 3. Spring mount |
| 2. Cable tie         | 4. Spring       |



**Figure 11**

g221638

- Use the remaining cable ties to secure the harness to the frame and/or control cable.

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

- Secure with a locknut (1/4 inch).
- Plug the other 2 holes in the hopper with remaining hardware.

# 7

## Installing the Cover

### Parts needed for this procedure:

1	Cover
4	Washer
4	Locknut (1/4 inch)
4	Bolt (1/4 x 3/4 inch)

### Procedure

- Attach the cover to the hopper in 2 places by inserting a bolt (1/4 x 3/4 inch) and washer through the cover tab grommet and hopper as shown in [Figure 11](#).

# Product Overview

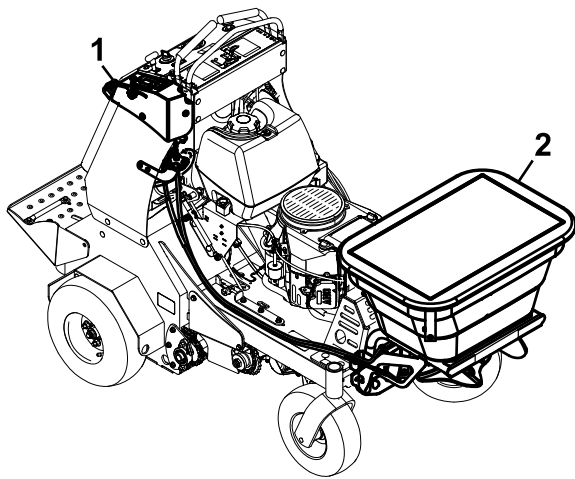


Figure 12

1. Controls

2. Hopper

g228584

## Specifications

Width	69 cm (27 inches)
Length	81 cm (32 inches)
Height	71 cm (28 inches)
Weight	32 kg (70 lb)
Maximum hopper capacity	36 kg (80 lb)
Spreading width	1.2 to 6.7 m (4 to 22 ft)

# Operation

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

**Important:** The intended use of this spreader attachment is for dispersing grass seed. This is not to be used for fertilizer or any other chemical applications.

## Controls

### Impeller Speed Control

The impeller speed control is located at the top of the spreader accessory control panel (Figure 13).

Push down on the right side of the switch 1 time to turn the spreader on; continue to tap the right side to increase the impeller speed.

Tap the left side of the control to decrease the speed; push and hold the left side of the switch to turn it off.

**Note:** The impeller speed control can be turned off at any speed rate. It is not necessary to decrease the speed until it turns off. The last set speed displays when you turn on the control.

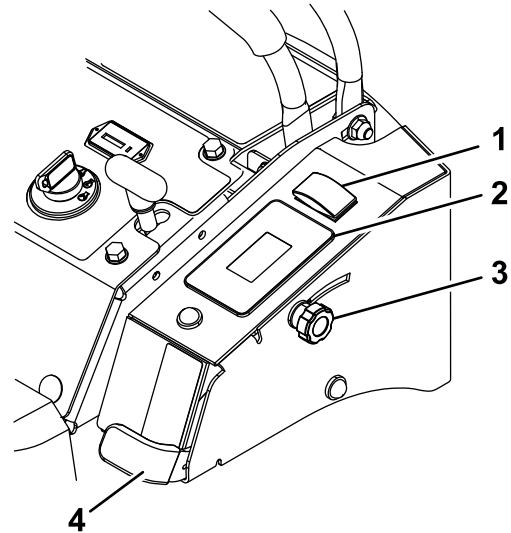


Figure 13

g207672

- 1. Impeller speed control
- 2. Impeller speed display
- 3. Distribution limit lock knob
- 4. Flow control lever

### Impeller Speed Display

Located below the impeller speed control.

This display shows the speed setting number from 1 to 10 (1 is the slowest speed and 10 is the fastest). A circle displays when the control has been turned off.

## Flow Control Lever

Located to the right of the main controls.

Lift the lever upward to start the flow and continue lifting it to increase the distribution rate. Pull the lever downward to decrease or stop the distribution rate.

## Distribution Limit Lock Knob

Located on the right panel of the spreader accessory control panel.

This knob is used to limit the maximum amount of grass seed being dispensed to help maintain consistent distribution.

## Side Deflector Control Lever

Located on the left side of the hopper (Figure 14).

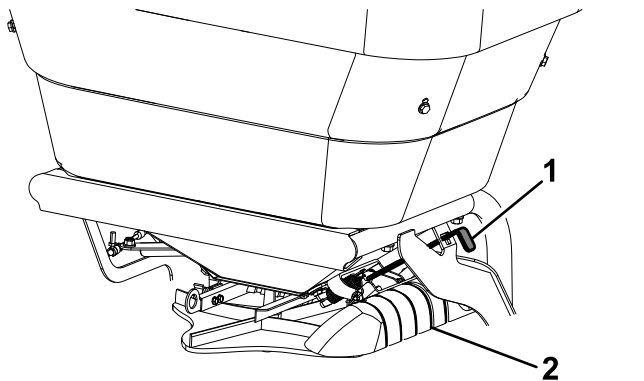


Figure 14

g207876

1. Side deflector control lever
2. Side deflector

Use the side deflector control to temporarily stop or deflect grass seed away from sidewalks, parking lots, patios, or anywhere grass seed is not desired to be discharged from the left side of the spreader.

To temporarily deflect the grass seed, lift the lever up and pull outward until the notch seats into the lower narrow portion of the bracket, which lowers the side deflector (Figure 15).

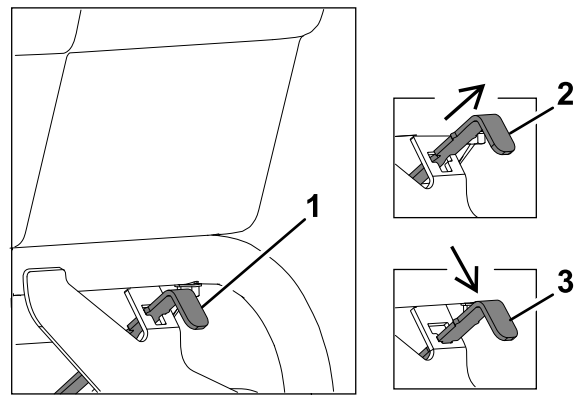


Figure 15  
Lever Positions

g208735

1. Side deflector raises
2. Pull lever outward
3. Push down — side deflector lowers

To raise the deflector, lift the lever into the wide portion of the slot and push the lever inward until it stops.

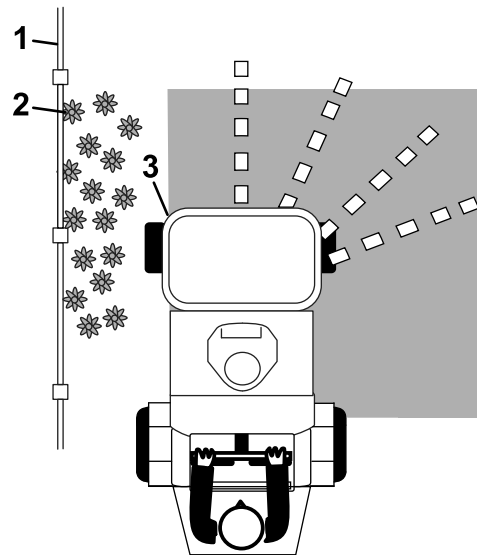


Figure 16

g207826

1. Fence
2. Flowers
3. Side deflector lowered

## Pre-Start

Ensure that you understand the controls, their locations, functions, and safety requirements.

Ensure that the hopper and its components are in good condition, properly attached, and latched.

# Operating Instructions

## ⚠ CAUTION

Machine can spin very rapidly by positioning 1 lever too much ahead of the other. You may lose control of the machine, causing injury to you or bystanders and damage to the machine or property.

- Use caution when making turns.
- Slow the machine down before making sharp turns.

**Note:** The stopping distance may vary depending on the spreader load.

## Operating the Spreader Accessory

causing injury to you or bystanders and damage to the machine or property.

The spreader accessory is designed to disperse grass seed.

## Before Operating the Spreader

Ensure that the spreader has been calibrated for the correct application rate of the grass seed to be spread before starting; refer to [Calculating the Application Rate \(page 14\)](#).

## Filling the Spreader Hopper

**Important:** Verify that the proper application rate has been set prior to filling the hopper.

1. Park the machine on a level surface, move the motion-control lever to the NEUTRAL position, shut off the engine, remove the key, and engage the parking brake.
2. Ensure that the spreader gate is closed.
3. Remove the cover from the hopper, add the grass seed to be spread, and replace the cover.

**Note:** Do not overload the hopper; the maximum weight capacity of the hopper is 36 kg (80 lb).

## Calculating the Application Rate

1. Determine the kg (lb) per 93 m<sup>2</sup> (1,000 ft<sup>2</sup>) of product to be applied.
2. Determine the calibration course:

- A. Determine the amount of product to be spread per 93 m<sup>2</sup> (1,000 ft<sup>2</sup>). Use the recommended rate from the [Spreading Chart \(page 15\)](#) or the product manufacturer's label as a guide.
- B. Determine a course length by dividing 93 m<sup>2</sup> (1,000 ft<sup>2</sup>) by the effective spread width.  
For example, if the effective width is 1.8 m (6 ft), then the calibration course length equals 51 m (167 ft).

## Course Length

$$\frac{93 \text{ m}^2(1,000 \text{ ft}^2)}{1.8 \text{ m (6 ft)}} = 51 \text{ m (167 ft)}$$

- C. The calibration course is 1.8 m (6 ft) by 51 m (167 ft).
  - D. Measure and visibly mark the course length. Make sure to allow ample distance before the starting marker to ensure the spreader is at full speed when crossing the first mark of the course.
3. Set the appropriate gate setting (reference the [Spreading Chart \(page 15\)](#) section as a starting point).
  4. Add grass seed to the hopper (for example, 11.3 kg (25 lb) was added).
  5. Drive the spreader over the calibration course while applying the grass seed.
  6. Empty the remaining grass seed of the hopper into a clean bucket.
  7. Weigh the bucket containing the grass seed and record the weight. Pour the contents back into the hopper and then weigh the empty bucket. Subtract these 2 amounts to determine the amount of grass seed remaining in the hopper (for example, 9 kg (20 lb) remains).
  8. Subtract the amount remaining in the hopper (step 7) from the amount originally added (step 4); the result is the amount applied to the course.

## Amount Applied

$$11.3 \text{ kg} - 9 \text{ kg (25 lb} - 20 \text{ lb)} = 5 \text{ lb (2.3 kg)}$$

For this example, 2.3 kg (5 lb) was applied to 93 m<sup>2</sup> (1,000 ft<sup>2</sup>).

9. If necessary, adjust the rate lever to achieve the recommended amount to be applied and repeat the procedure. Once the correct application rate is achieved, repeat this procedure an additional time to verify the results.

# Spreading Chart

The chart below is for reference only.

Grass Seed Application at Maximum Ground Speed (Coverage 93 m <sup>2</sup> or 1,000 ft <sup>2</sup> )			
Type	kg (lb)/93 m <sup>2</sup> (1,000 ft <sup>2</sup> )	Gate Opening	Spread Width
Blue Grass or Red Top	0.9 kg (2 lb)	.25	1.2 m (4 ft)
Park, Merion, Delta, or Kentucky Bluegrass	0.2 kg (0.5 lb)	.25	1.2 m (4 ft)
Hulled Bermuda	0.9 kg (2 lb)	.75	1.8 m (6 ft)
Mixtures Including Coarse Seeds	2.7 kg (6 lb)	.75	1.8 m (6 ft)
Rye Grasses or Tall Fescue	2.7 kg (6 lb)	.75 to maximum open	1.8 m (6 ft)
Dichondra	0.3 kg (0.75 lb)	.25	2.4 m (8 ft)
Pensacola Bahia	2.7 kg (6 lb)	.50	2.1 m (7ft)

## Spreading

### Spreading Tips:

- To ensure uniform application, overlap the grass seed distribution. The highest amount of seed dispenses from the front of the hopper and less from each side. Adjust the distribution pattern to achieve the desired results.
- Watch for changes in the distribution pattern; unequal distribution may lead to striping.

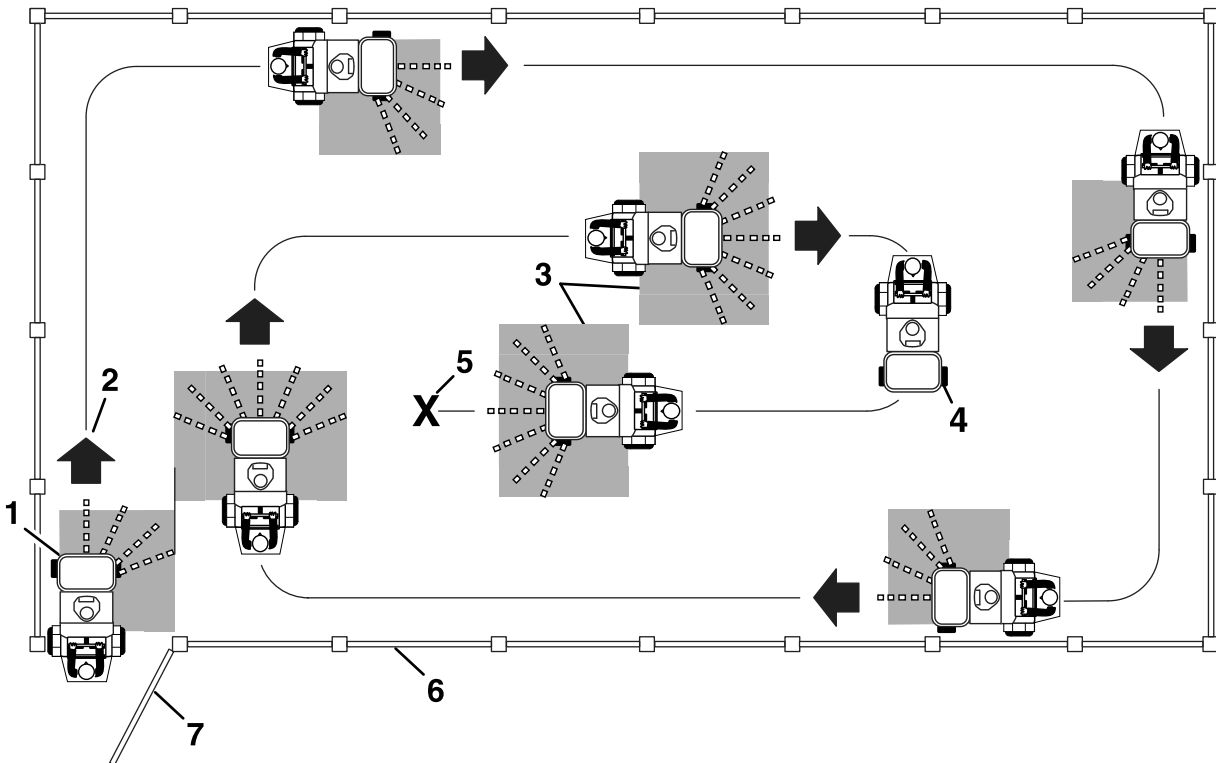


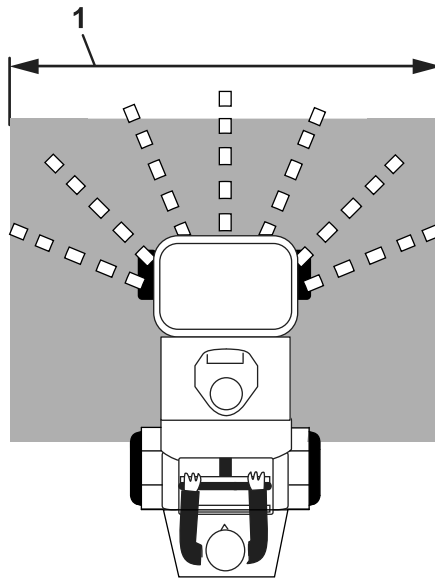
Figure 17

g207791

1. Narrow distribution-side deflector lowered
2. Forward
3. Effective spreading width—variable 1.2 to 6.7 m (4 to 22 ft)
4. Do not spread when turning 180 degrees
5. End of spreading job
6. Property fence
7. Gate

1. Start the engine and place the throttle midway between the SLOW and FAST positions.

2. Turn on the impeller speed control.
3. Set the impeller speed to the appropriate setting.
4. Move the throttle to the FAST position and drive forward.
5. Open the hopper gate and begin spreading.



**Figure 18**

g207728

1. Effective spreading width—variable 1.2 to 6.7 m (4 to 22 ft)

- 
6. Evaluate the spread pattern. If adjustments are needed, refer to [Spreader Pattern Adjustment \(page 17\)](#).
  7. When finished spreading, close the hopper gate.



# Spreader Pattern Adjustment

If the spread pattern is skewed or dispensing too light or too heavy to 1 side (Figure 19), adjust the gate as follows:

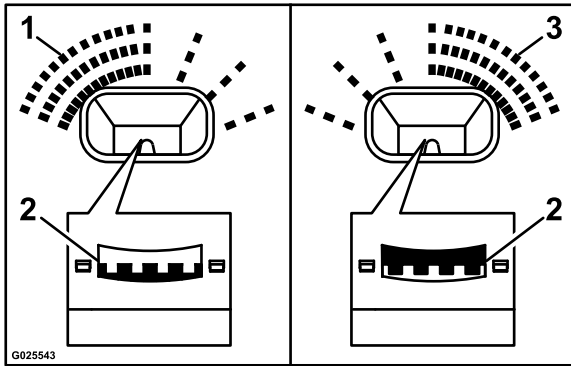


Figure 19

1. Heavy to left side
2. Move ramp pattern to shaded position
3. Heavy to right side

**Note:** Do not adjust the ramps to split product flow. Use only the front or rear ramp positions as shown.

1. Unlock the spreader pattern control knob by turning it counterclockwise 90 degrees.

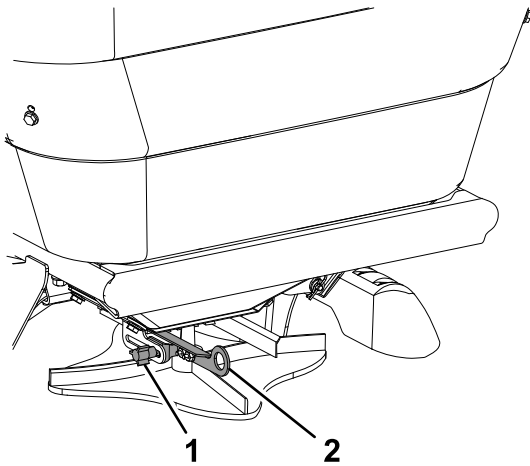


Figure 20

1. Spreader pattern control knob
2. Control handle knob

To adjust when the grass seed pattern is heavy:

- To the left side, slightly pull the control handle rearward.
  - To the right side, slightly push the control handle forward.
2. Lock the spreader pattern control by turning the control knob clockwise 90 degrees.

# Operating Tips

## Overseeding

**Important:** Do not put down more seed than recommended by the seed company. Overseeding can cause the grass to be too thick and become susceptible to fungus.

**Note:** The machine seeds at the same rate going both forward and rearward.

**Note:** If there is excessive thatch, it may be necessary to remove the thatch prior to seeding.

## Removing the Spreader Attachment

1. Shut off the engine, remove the key, wait for all moving parts to stop, and engage the parking brake.
2. Unplug the spreader accessory harness (Figure 9).
3. Disconnect the cable ball joint from the control lever (Figure 6). Loosen the knob on the cable mount bracket.
4. Remove and retain the hitch pin from the receiver (Figure 4)
5. Remove the hopper assembly, control cable, and accessory harness.

**Note:** All other spreader attachment components may stay mounted on the machine. Make sure components are secure and away from moving parts.

# Maintenance

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

## ⚠ WARNING

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, engage parking brake, and pull the wire(s) off the spark plug(s) before you do any maintenance to the machine or attachment. Also push the wire(s) aside so it does not accidentally contact the spark plug(s).

## Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
Before each use or daily	<ul style="list-style-type: none"><li>• Check for loose hardware.</li><li>• Clean the debris buildup from the machine.</li></ul>

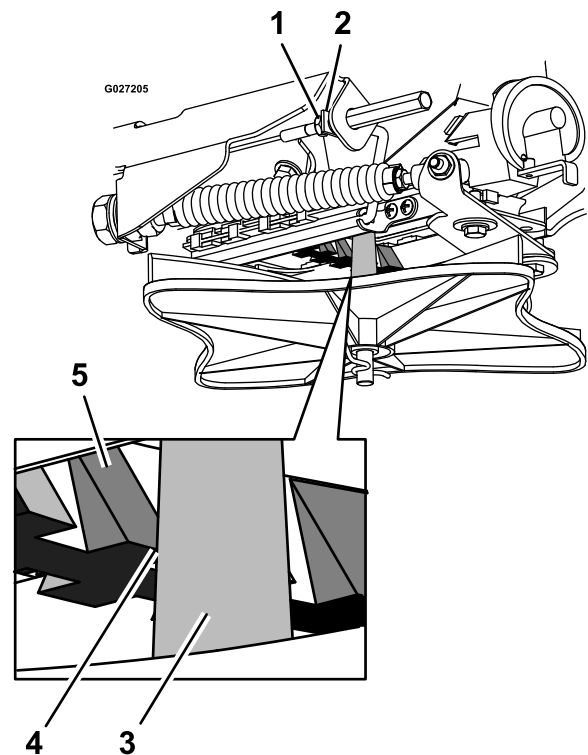
## Checking for Loose Hardware

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

1. Shut off the engine, remove the key, wait for all moving parts to stop, and engage the parking brake.
2. Visually inspect the machine for any loose hardware or any other possible problem. Tighten any loose hardware or correct the problem before operating the machine.

## Adjusting the Spreader Pattern Control Cable

1. Shut off the engine, remove the key, wait for all moving parts to stop, and engage the parking brake.
2. Close the granular gate.
3. Ensure that the spread pattern control handle is pushed down and locked at the control panel.
4. Loosen the jam nut at the end of the cable.



**Figure 21**

g027205

1. Jam nut
  2. Linkage rod
  3. Impeller shaft
  4. 3.2 mm (1/8 inch) gap between ramp tooth and impeller shaft
  5. Ramp tooth
- 
5. Pull the linkage rod until there is 3.2 mm (1/8 inch) gap between the ramp tooth and the impeller shaft.
  6. Tighten the jam nut.

## **Adjusting the Gate Closure**

1. If the gate arm is not fully closing, adjust the control cable at the knob located on the cable mount bracket or the nuts located on either side of the hopper bracket.
2. Continue to adjust until the gate can be fully closed; tighten all components.

## ***Cleaning***

### **Cleaning Debris from the Machine**

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

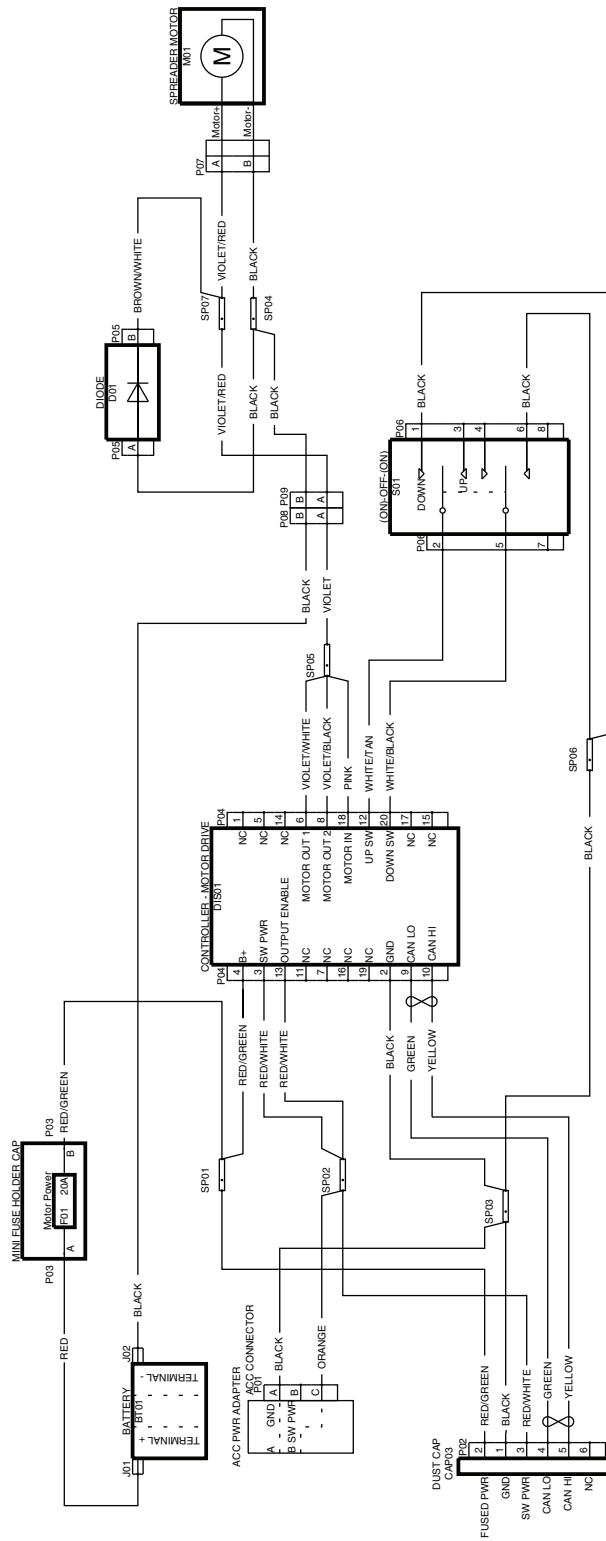
1. Shut off the engine, remove the key, wait for all moving parts to stop, and engage the parking brake.
2. Clean off any debris or buildup on the machine, especially the impeller.

# Troubleshooting

The following table lists some of the common causes of trouble. If a problem continues, contact an Authorized Service Dealer.

Problem	Possible Cause	Corrective Action
Message displays "STALLED (02)"	1. Controller has detected an excessive electrical current to the impeller motor.	1. Check the impeller and hopper for obstructions that may add an excessive load to the impeller motor. Check the electrical connections to the impeller motor to ensure they are not shorted. Press the "ON" switch to retry.
Message displays "WIRE FAULT (04)"	1. The controller is unable to detect motor feedback voltage.	1. Check pins 18 on the controller connector for proper pin seating and locking.
Message displays "WIRE FAULT (05)"	1. One of two outputs are not providing power to the impeller motor.	1. Check pins 6 and 8 on the controller connector for proper pin seating and locking.
Message displays "WIRE FAULT (06)"	1. The controller is unable to detect connection to the impeller motor.	1. Power off the impeller and check the electrical connections to the impeller motor.
The controller does not power on.	1. A fuse is blown. 2. There are improper electrical connections. 3. The controller module is faulty.	1. Replace the blown fuse. 2. Check the electrical connections at the accessory power connector and battery ring terminals and ensure both have power. 3. Replace the controller module.
The controller fails to keep running.	1. Electrical connections are corroded, loose, or faulty.	1. Check the electrical connections for good contact. Clean connector terminals thoroughly with electrical contact cleaner, apply dielectric grease and reconnect.
A switch is unresponsive.	1. The switch connector may be loose. 2. Pins may not be inserted into the correct terminals.	1. Ensure that the switch connector is connected to the rocker switch. 2. Check for incorrect pin positions.

# Schematics



Electrical Schematic (Rev. A)

g212875

**Notes:**

**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](http://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 Toro include this warning?

Toro 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. Toro 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 Toro products may be negligible or well within the “no significant risk” range, out of an abundance of caution, Toro has elected to provide the Prop 65 warnings. Moreover, if Toro 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.