

Controller User's Guide

StandOn Spreader Sprayer

Reference Guide

Introduction

This user's guide will explain the Operator interface to allow users to access information.

The controllers monitor the overall electrical system and displays machine hours.

Important: To maximize safety, performance, and proper operation of this machine, it is essential that all operators carefully read and fully understand the contents of this User's Guide along with the Operator's manual provided with the product. Safe operation of Z Turf Equipment is essential. Failure to comply with the operating instructions or receive proper training may result in injury. Go to <https://www.zturfequipment.com> for additional safe operation information, such as safety tips, training materials, and Operator's manuals.

Product Overview

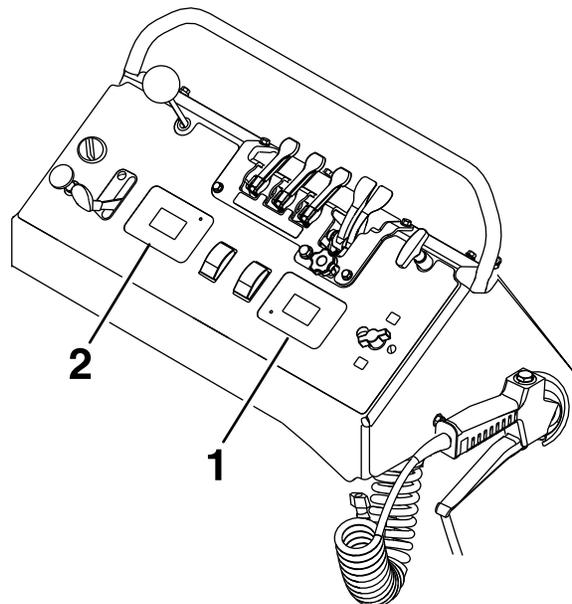


Figure 1
Spreader Sprayer control panel

g305534

1. Spreader display

2. Sprayer display



1. Spreader Screen Icons

The spreader information screen uses the following icons:

 <p>Spreader</p>	<p>0</p> <p>Off</p>
<p>!(02)</p> <p>Motor Overcurrent Error</p>	<p>!(04)</p> <p>Voltage Measurement Error</p>
<p>!(05)</p> <p>Motor Wire Fault</p>	<p>!(06)</p> <p>Motor Open Error</p>
<p>%</p> <p>Percent of Full Speed</p>	

1.2 Spreader Overview

The spreader default screen appears after the initial start-up screens.

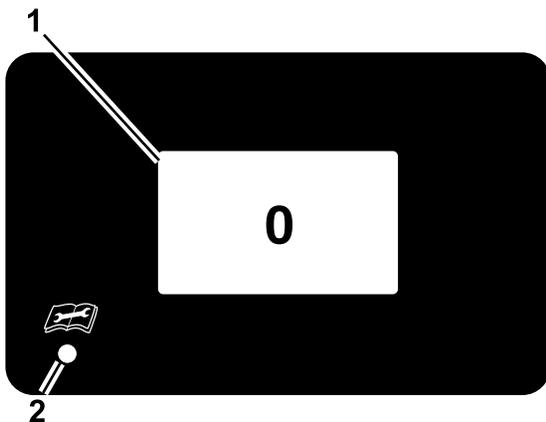


Figure 2

g305329

The spreader motor speed setting screen appears if the multi-function switch is tapped.

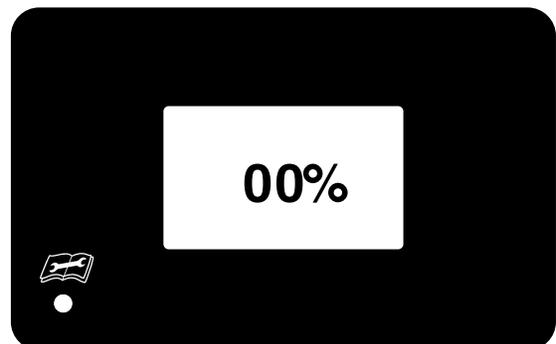


Figure 3

g305328

1. Information screen
2. LED status light (not used on the spreader)

1.3 Spreader Controls

- **Information Screen**

The information screen displays icons and information relative to machine operation.

Refer to the **Spreader Screen Icons** section for descriptions.

- **LED Status Light**

Note: The LED status light is not used on the spreader.



Figure 5

g305693

1.4 Spreader Information Screens

The main information screens are:

- 1.4.1 Spreader Start-up Screens
- 1.4.2 Spreader Default Screen
- 1.4.3 Spreader Motor Screen
- 1.4.4 Spreader Alerts and Error Messages

1.4.1 Spreader Start-Up Screens

When the key is switched from “OFF” to “RUN” position, the following screens will display for two seconds.

The first screen displays the firmware version.

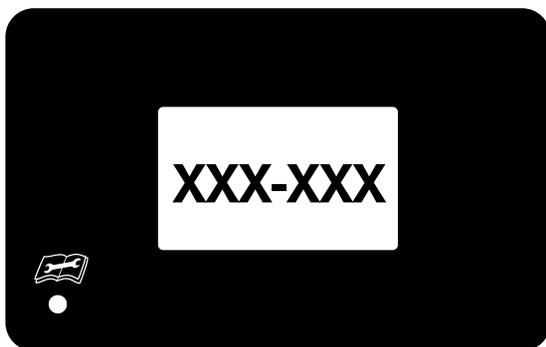


Figure 4

g305692

The second screen displays the spreader hours to the tenth of an hour.

1.4.2 Spreader Default Screen

After the startup screens are complete, the default screen will display.

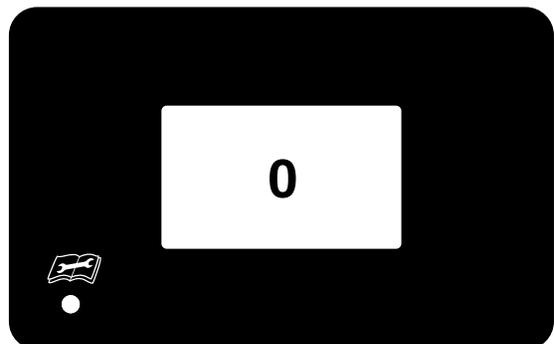


Figure 6

g305459

1.4.3 Spreader Motor Screen

When the multi-function switch is tapped, the spreader motor screen will appear.

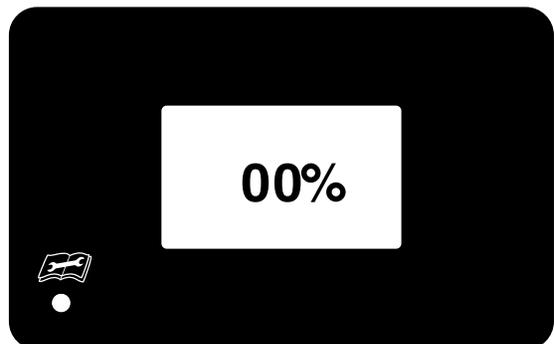


Figure 7

g305328

If the motor is not active for eight seconds, the default screen will display.

1.4.4 Spreader Alerts and Error Messages

The system is capable of displaying the following errors:

- **Motor Overcurrent Error**

If an overcurrent event occurs, “!02” will display in the upper right corner of the screen. Check the motor and inspect for damage and wear.

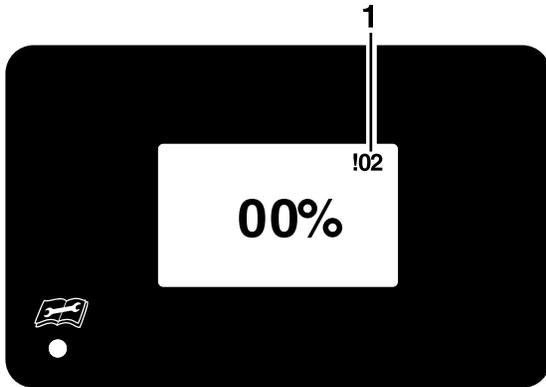


Figure 8

g305344

1. !02- spreader motor overcurrent error

- **Voltage Measurement Error**

If a voltage measurement event occurs, “!04” will display in the upper right corner of the screen. The voltage measurement is disconnected. Check the wires to the motor voltage measurement input.

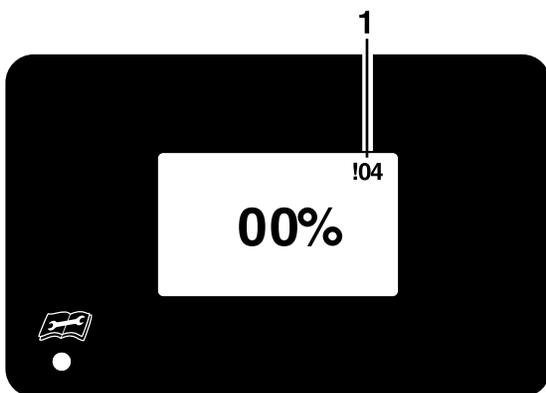


Figure 9

g305345

1. !04-spreader voltage measurement error

- **Motor Wire Fault**

If a motor wire fault event occurs, the number “!05” will display in the upper right corner of the screen. Check either pin 8 or pin 6 on the controller connector and the wires on the motor.

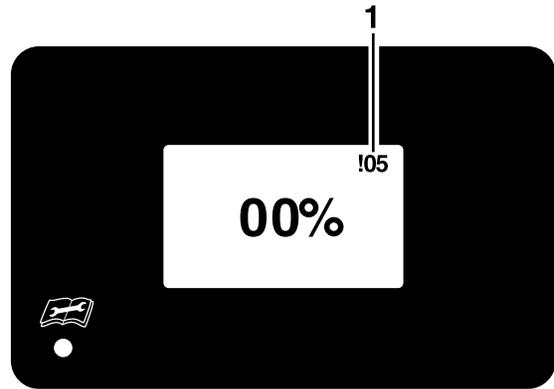


Figure 10

g305419

1. !05-spreader motor wire fault

- **Motor Open Error**

If the motor is disconnected, “!06” will display on the upper right corner of the screen.

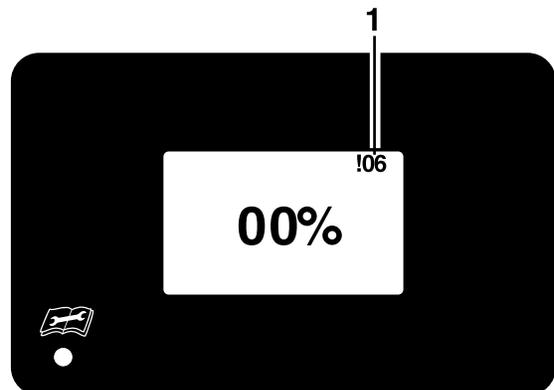


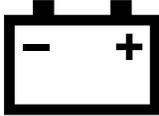
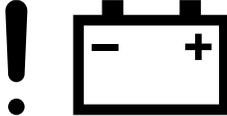
Figure 11

g305333

1. !06-spreader motor open error

2. Sprayer Screen Icons

The sprayer information screen uses the following icons:

 <p>Sprayer</p>	 <p>Hour meter</p>
 <p>Battery Voltage</p>	 <p>Voltage Error</p>
<p>!(02)</p> <p>Motor Overcurrent Error</p>	<p>!(05)</p> <p>Motor Wire Fault</p>
<p>!(06)</p> <p>Motor Open Error</p>	

2.2 Sprayer Overview

The sprayer default screen appears after the initial start-up screens.

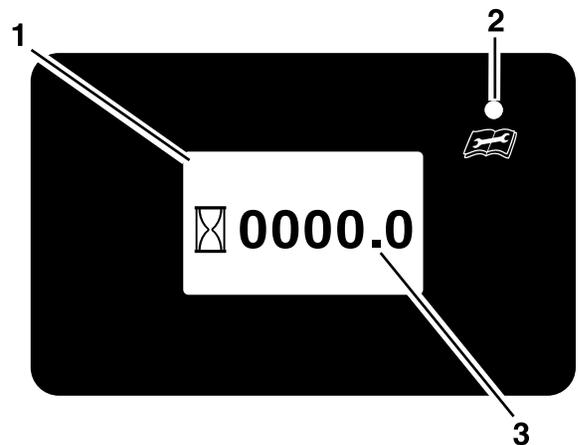


Figure 12

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1. Information screen
2. LED status light
3. Engine hours

The sprayer screen appears if the multi-function switch is tapped.

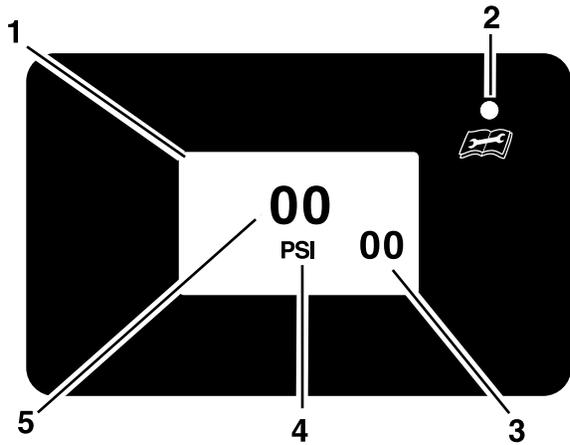


Figure 13

g305357

- | | |
|-----------------------|-------------------------------|
| 1. Information screen | 4. PSI=Pounds per square inch |
| 2. LED status light | 5. Pressure measurement |
| 3. Pressure set point | |

2.3 Sprayer Controls

• Information Screen

The information screen displays icons and information relative to machine operation.

Refer to the **Sprayer Screen Icons** section for descriptions.

• LED Status Light

The LED is multi-colored to indicate the system status and is located on the right side of the panel.

–**Solid Green**— indicates normal operating activity.

–**Solid Red**— indicates a fault is active.

2.4 Sprayer Information Screens

The main information screens are:

- 2.4.1 Sprayer Start-up Screens
- 2.4.2 Sprayer Default Screen
- 2.4.3 Sprayer Motor Screen
- 2.4.4 Sprayer Alerts and Error Messages

2.4.1 Sprayer Start-Up Screens

When the key is switched from “OFF” to “RUN” position, the following screens will display for one second.

The first screen displays the sprayer firmware version.

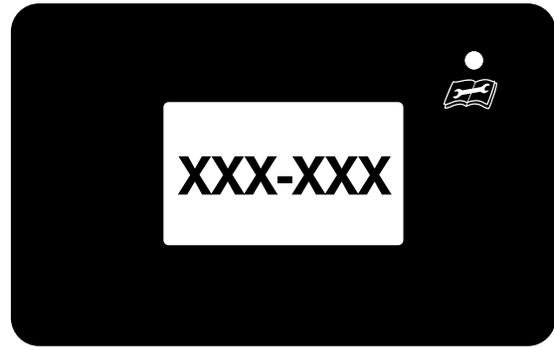


Figure 14

g305694

The second screen displays the sprayer engine hours.

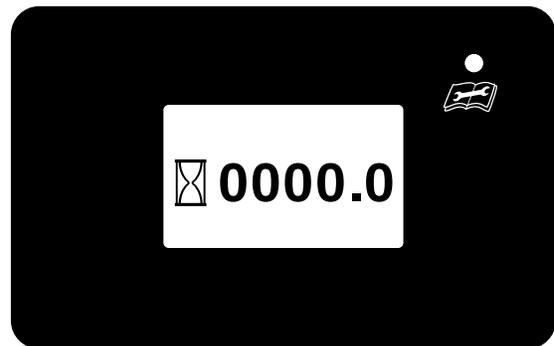


Figure 15

g305783

The third screen displays the sprayer hours to the tenth of an hour.

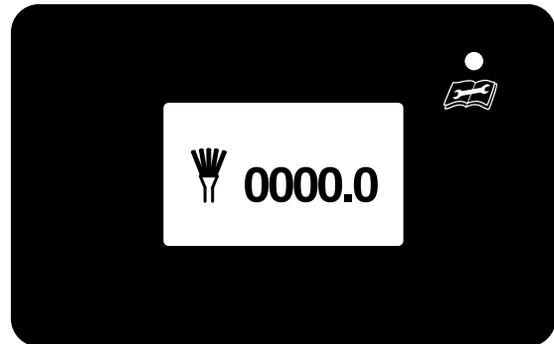


Figure 16

g305695

The fourth screen displays the sprayer battery voltage to the tenth of a volt.

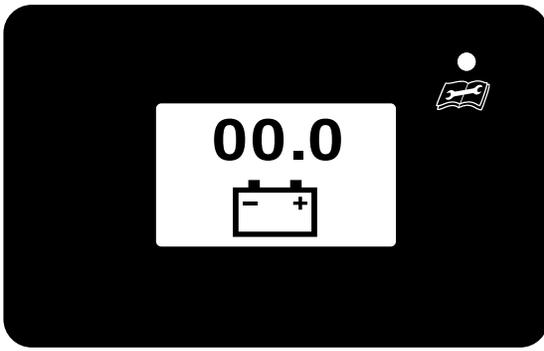


Figure 17

g305696

2.4.4 Sprayer Alerts and Error Messages

The system is capable of displaying the following errors:

- **Voltage Error**

This occurs when the Key-Run voltage is less than 12.5 or greater than 16, a voltage error will flash. The LED will show a red light. The agitation motor will shut off.

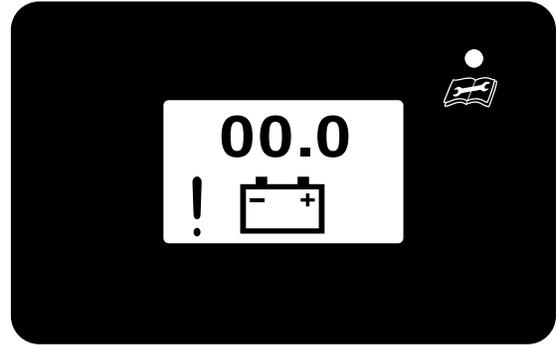


Figure 20

g305697

2.4.2 Sprayer Default Screen

After the startup screens are complete, the default screen will display.

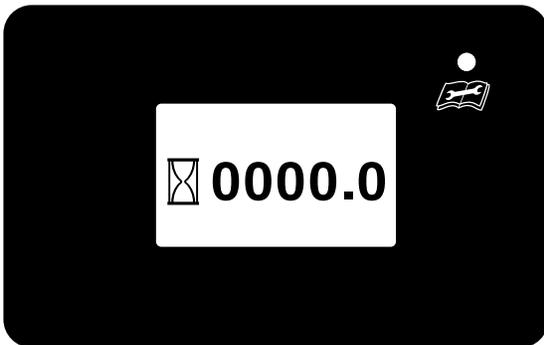


Figure 18

g305783

2.4.3 Sprayer Motor Screen

When the multi-function switch is tapped, the sprayer motor screen will appear.



Figure 19

g305794

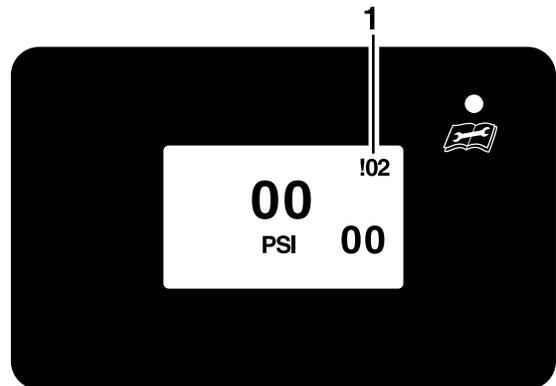


Figure 21

g305384

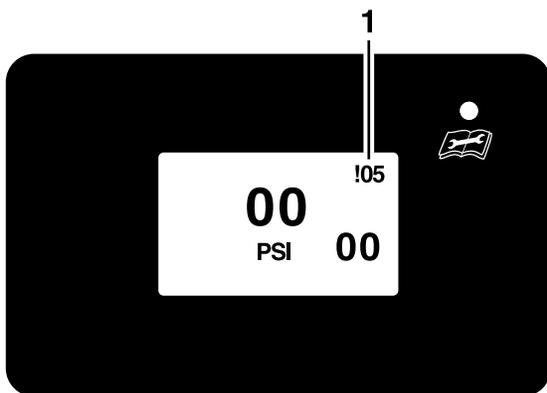
- **Motor Overcurrent Error**

If an overcurrent event occurs, "!02" will display in the upper right corner of the screen. Check the motor and inspect for damage and wear. The LED will show a red light.

1. !02-sprayer motor overcurrent error

- **Motor Wire Fault**

If a motor wire fault event occurs, the number “!05” will display in the upper right corner of the screen. Check either pin 8 or pin 6 on the controller connector and the wires on the motor.



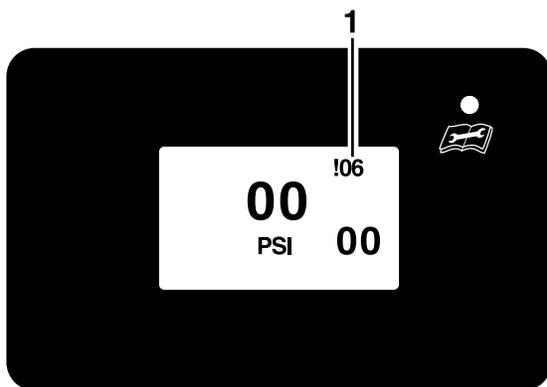
g305430

Figure 22
Sprayer motor wire fault

1. !05-sprayer motor wire fault

- **Motor Open Error**

If the motor is disconnected, the number “!06” will display on the upper right corner of the screen.



g305383

Figure 23

1. !06-sprayer motor open error

Troubleshooting

Problem	Possible Cause	Recommended Corrective Action
Sprayer/Spreader: Message displays “!02”	Controller has detected an excessive electrical current to the spray/impeller motor.	Check sprayer/impeller and hopper for obstructions that may add an excessive load to the sprayer/impeller motor. Check the electrical connections to the sprayer/impeller motor to ensure they are not shorted. Press the “ON” switch to retry.
Spreader: Message displays “!04”	Controller unable to detect motor feedback voltage.	Check pins 18 on the controller connector for proper pin seating and locking.
Sprayer/Spreader: Message displays “!05”	One of two outputs are not providing power to sprayer/impeller motor.	Check pins 6 and 8 on the controller connector for proper pin seating and locking.
Sprayer/Spreader: Message displays “!06”	Controller is unable to detect connection to the sprayer/impeller motor.	Power off the sprayer/impeller and check electrical connections to the sprayer/impeller motor.
Sprayer/Spreader: Controller will not power on.	Fuse is blown.	Replace blown fuse.
	Improper electrical connections.	Check electrical connections at the accessory power connector and battery ring terminals and ensure both have power.
	Faulty controller module.	Replace controller module.
Sprayer/Spreader: Controller fails to keep running.	Electrical connections are corroded, loose, or faulty.	Check the electrical connections for good contact. Clean connector terminals thoroughly with electrical contact cleaner, apply dielectric grease and reconnect.
Sprayer/Spreader: Switch is unresponsive.	Switch connector may be loose.	Ensure switch connector is connected to the rocker switch.
	Pins may not be inserted into the correct terminals.	Check for incorrect pin positions.
Sprayer: Low battery voltage icon displays a quarter of the time.	The engine is off while the spreader is on.	Turn on the engine until the battery charges.
	The engine RPM is low.	Increase engine RPM.
Sprayer: Agitation pump turns off.	The engine is off while the spreader is on.	Turn on the engine until the battery charges.
	The engine RPM is low.	Increase engine RPM.