



*Spray* **STRIKER™**




# OWNER'S MANUAL

SPRAYSTRIKER™ 250 TR & 350 UTV

This manual replaces all editions with an earlier date.

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**CAUTION** - Read this manual before installing or operating the sprayer

**Technical specifications**

Model	250 TR	350 UTV
Liquid tank capacity	250 l	350 l
Width	90 cm	100 cm
Height	120 cm	95 cm
Length	70 cm	85 cm
Empty Weight	120 kg	140 kg
Spray bar width	0,8 m, 1,2 m or 2 m	0,8 m, 1,2 m or 2 m
Spraying width	0,8 - 5 m	0,8 - 5 m
Spray volume	3-18 l/min	3-18 l/min
Power supply	12 V, max 30 Ah	12 V, max 30 Ah

*Construction, design details and specifications are subject to change without notice*

**Sprayer parts**



**WARNING**

Observe these safety precautions before, during and after operating the sprayer. You can prevent injury to persons and damage to the sprayer by following these precautions.



Incorrect installation and operation can lead to serious personal injury and/or damage your equipment and property. Note and ensure that you understand this manual before installing, operating or making adjustments to the sprayer.

**Safety guidelines**

1. Read this manual before operating the sprayer.
2. Before every use, make sure all the equipment is securely mounted into place.
3. Do not exceed your vehicle total weight beyond payload limits.
4. Always empty and clean the sprayer after each use.
5. A sprayer in need of repairs or maintenance should not be operated.
6. Before removing or replacing any electrical components, always disconnect the power.
7. Do not use flammable or petroleum liquids in the liquid system.

**Personal safety**

- Protect your eyes with safety goggles when filling the sprayer and handling de-icing liquids.
- Wear protecting clothes and avoid touching the de-icing liquids. Liquid brine can irritate skin, eyes and breathing organs.

**Noise**

The noise caused by the running sprayer does not exceed 70 dB

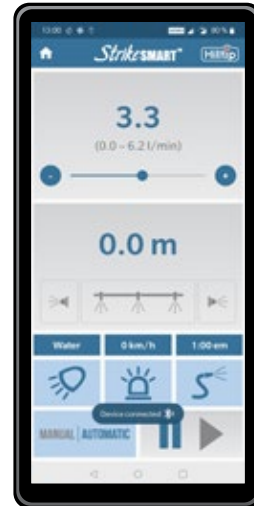
## Start up guide

1. Install the spreader on the vehicle and fill the liquid tank



The recommended mounting height for the sprayer is approximately 50 cm from the ground (spray bar height).

4. Go to spreading mode and start spraying

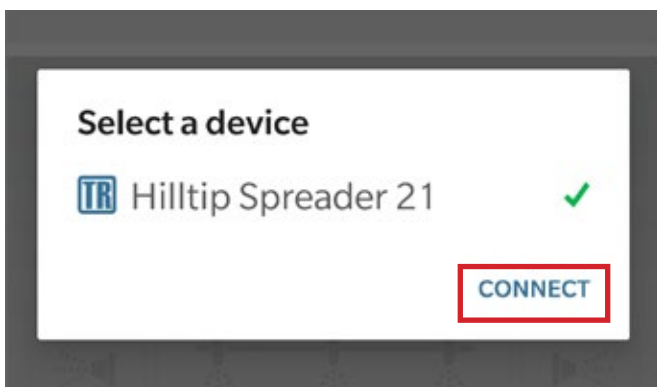


2. Start the Smart phone and StrikeSmart™ app

When the application is opened, it will automatically start scanning for devices.

3. Select device and connect

**Note:** If you are using your controller app for the first time, or connecting it with another sprayer, some extra steps have to be taken. **See page 7 for instructions.**



## StrikeSmart™ app symbols

Activate/inactivate a function by touching the symbol on the screen. A grey symbol means that the function is inactive. An activated function is represented by a coloured blue symbol.



This button will activate the left side spray nozzle



This button will activate the right side spray nozzle



This button will activate the middle spray nozzles



This button will activate the hand spray



Push this button to **start** your spray-session



When spraying, push this button to **stop** spraying



This button will activate the optional LED-work light



This button will activate the optional beacon light

## Smartphone placement

The smartphone that is used as a controller for the spreader should be mounted in a place where it can easily be reached and doesn't interfere with the access to vehicle controls or other equipment. Make sure that the smartphone doesn't block the vehicle airbag area. Protect the phone from water, dirt and dust.



### WARNING

Do not operate the StrikeSmart™ app or the smartphone while the vehicle is in motion. Always keep your eyes on the road and the environment while driving and spreading.

## Connecting smart phone to sprayer

When the application is opened, it will automatically start scanning for devices. If not activated, the app will ask for permission to turn on the Bluetooth. Click “Allow” to activate. Found spreaders are listed in a device selection box. To connect, select a spreader in the list and click “Connect”.

**Note:** If you are using your controller app for the first time, or connecting it with another sprayer, some extra steps have to be taken. Before using a sprayer, it has to be paired with the controller app.

### Pairing the sprayer with the controller app

1. Disconnect power to the sprayer
2. Switch the button on the sprayer in configuration mode (image 1)
3. Open the sprayer controller app (StrikeSmart™) and wait for a device selection box
4. Select a device (image 2) and click “Connect” (image 3). A configuration box will appear.
5. Click “Add access” to pair with the device (image 4) and click “Back” (image 5). If “Add access” is not available, your device has already been paired.
6. Click “Exit and reconnect” to start using the sprayer (image 6). (If sprayer is not found after pressing “Exit and reconnect”, power off sprayer for 5 sec (pull out the power plug))



image 1

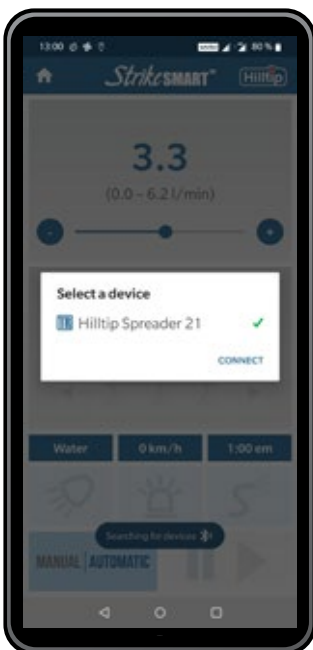


image 2

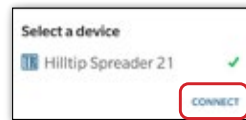


image 3

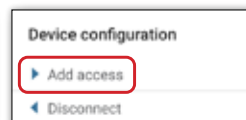


image 4

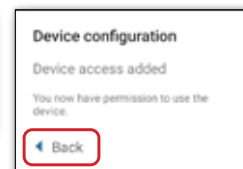


image 5

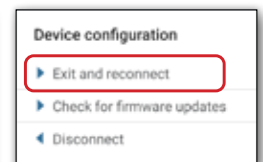


image 6

## Updating sprayer control module firmware

**Make sure you that your phone is connected to the internet.**

1. Disconnect power to the sprayer
2. Press the button on the sprayer in configuration mode (see image 1 on page 7)
3. Open the sprayer controller app (StrikeSmart™) and wait for a device selection box.
4. Select a device (image 1) and click "Connect" (image 2). A configuration box will appear.
5. Click "Check for firmware updates"(image 3) and "Start installing" (image 4) and wait until the update is complete (image 5).
6. Press "Back" when firmware is updated (image 6) then press "Exit and reconnect" (image 7).

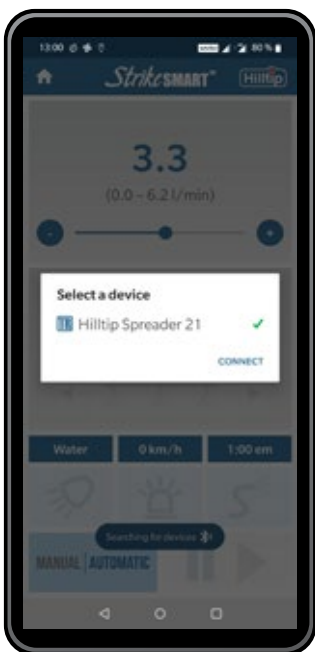


image 1

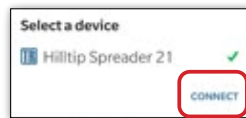


image 2

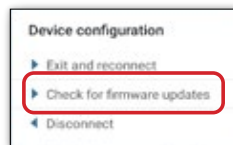


image 3

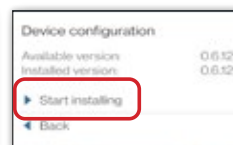


image 4



image 5

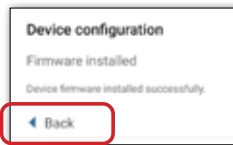


image 6

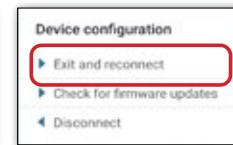


image 7

## Settings menu

### Material

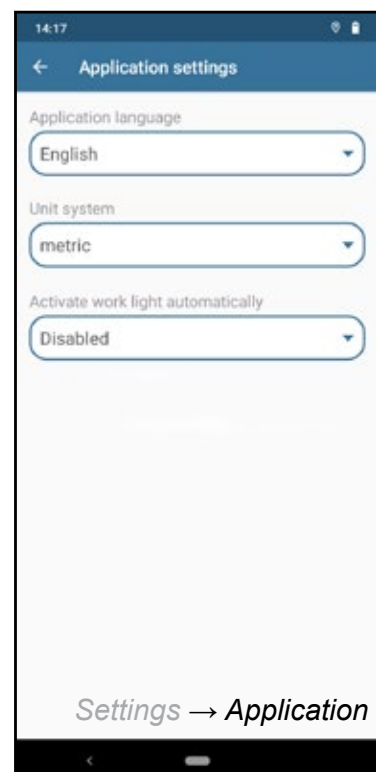
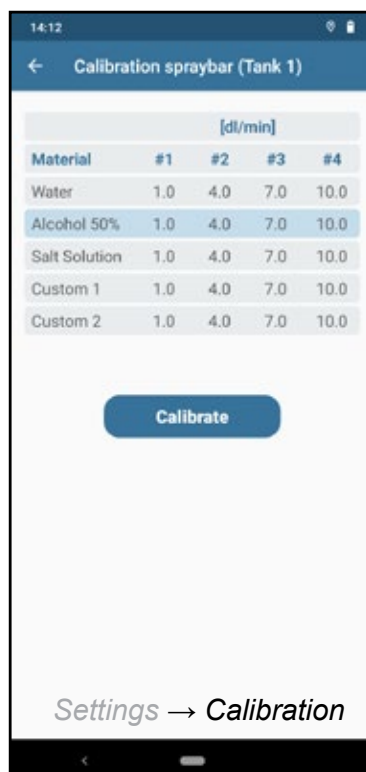
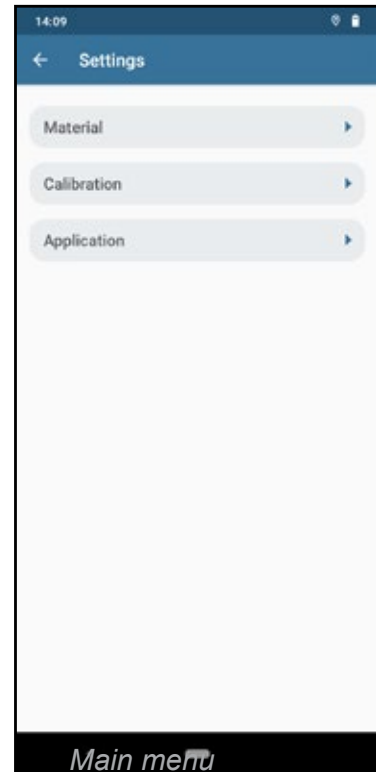
Activate the material selection by clicking the selection box. Click the desired material (Water, Alcohol, Salt solution, Custom1, Custom2) to set the spreading material.

### Calibration

Select the unit you want to calibrate. Choose a material by clicking a row in the calibration table and click “Calibrate”. If the HTrack™ is enabled, depending on your settings, you may have to enter a PIN code before starting the calibration.

### Application

In application settings view, you can choose the application language, enable or disable automatic work light.



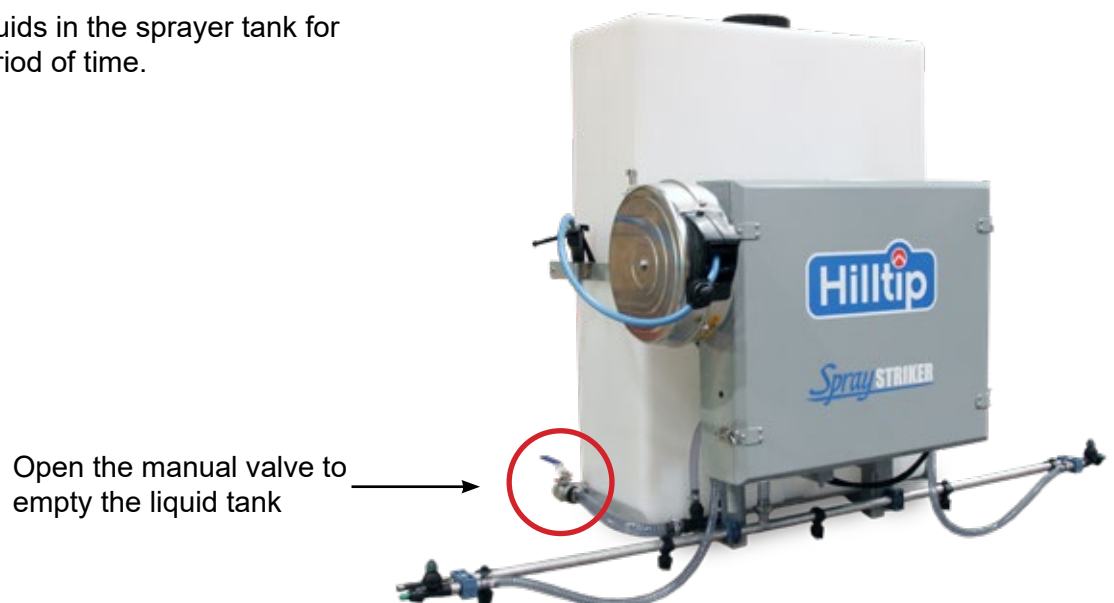
## Filling the sprayer

- ! WARNING**  
Do not use petroleum or flammable liquids for the liquid system.
- ! WARNING**  
Check that there are no persons within the spray area when starting and operating this sprayer.





## Empty the sprayer


- ! CAUTION**  
Do not leave liquids in the sprayer tank for an extended period of time.




## Sprayer maintenance

 **WARNING**  
Power should always be shut off before and during service or maintenance of the sprayer

 **WARNING**  
Always empty the sprayer before removing it from the vehicle

 **NOTE**  
Apply dielectric grease on all electrical connections to prevent corrosion.

 **CAUTION**

- Do not operate a damaged sprayer or a sprayer in need of maintenance
- Sprayer should be rinsed, emptied and cleaned after each use, to prevent material build-up and corrosion. See page 10 for rinsing instructions.

## Brine mixing

### How to determine the concentration of salt in your brine liquid with the Hilltip Refractometer:

Thoroughly mix your salt solution. Place a few drops of the brine liquid with pipette on the prism, and close the daylight plate (see image 3). Make sure the sample is evenly distributed and air bubbles are eliminated on prism. Aim front of the refractometer to the direction of light. Take reading when the boundary line of blue and white cross the graduated scale (see image 2). The scale will provide a direct reading of the concentration.

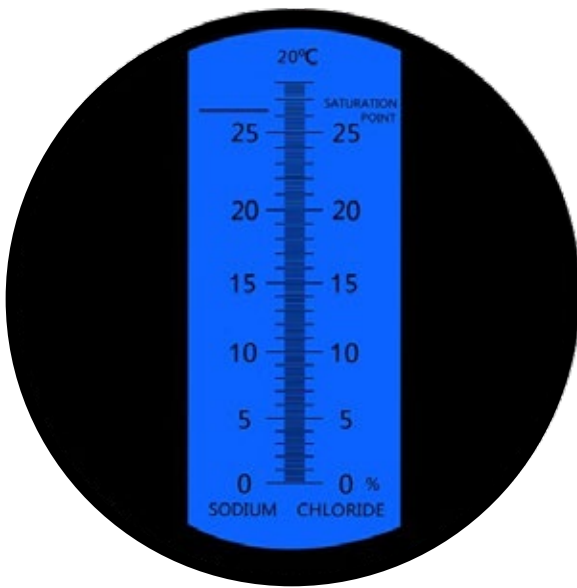


Image 1. As seen when looking in to the instrument. Measure range 0-28%

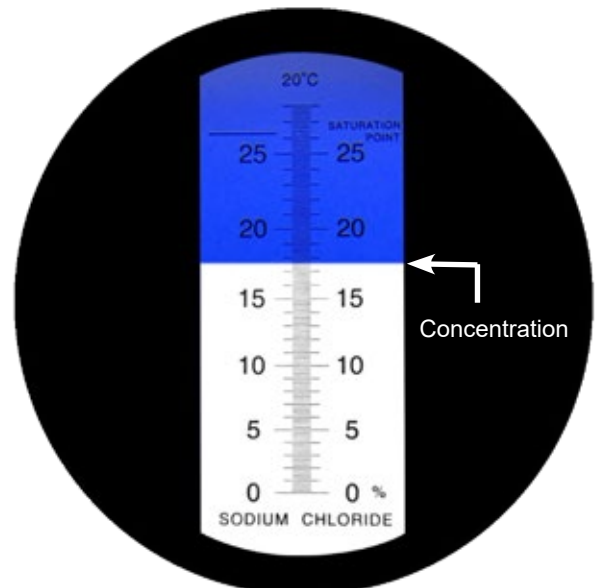


Image 2. Take reading when the boundary line of blue and white cross the graduated scale.

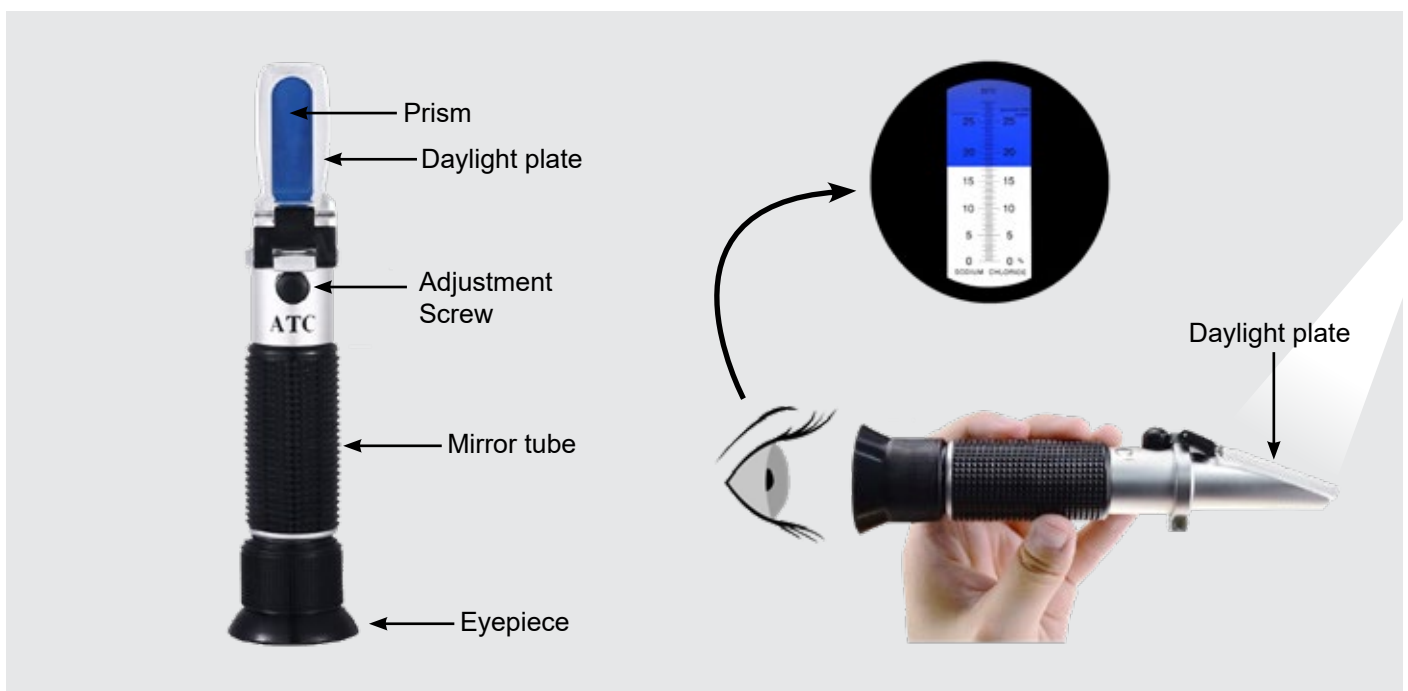


Image 3. Hand held refractometer

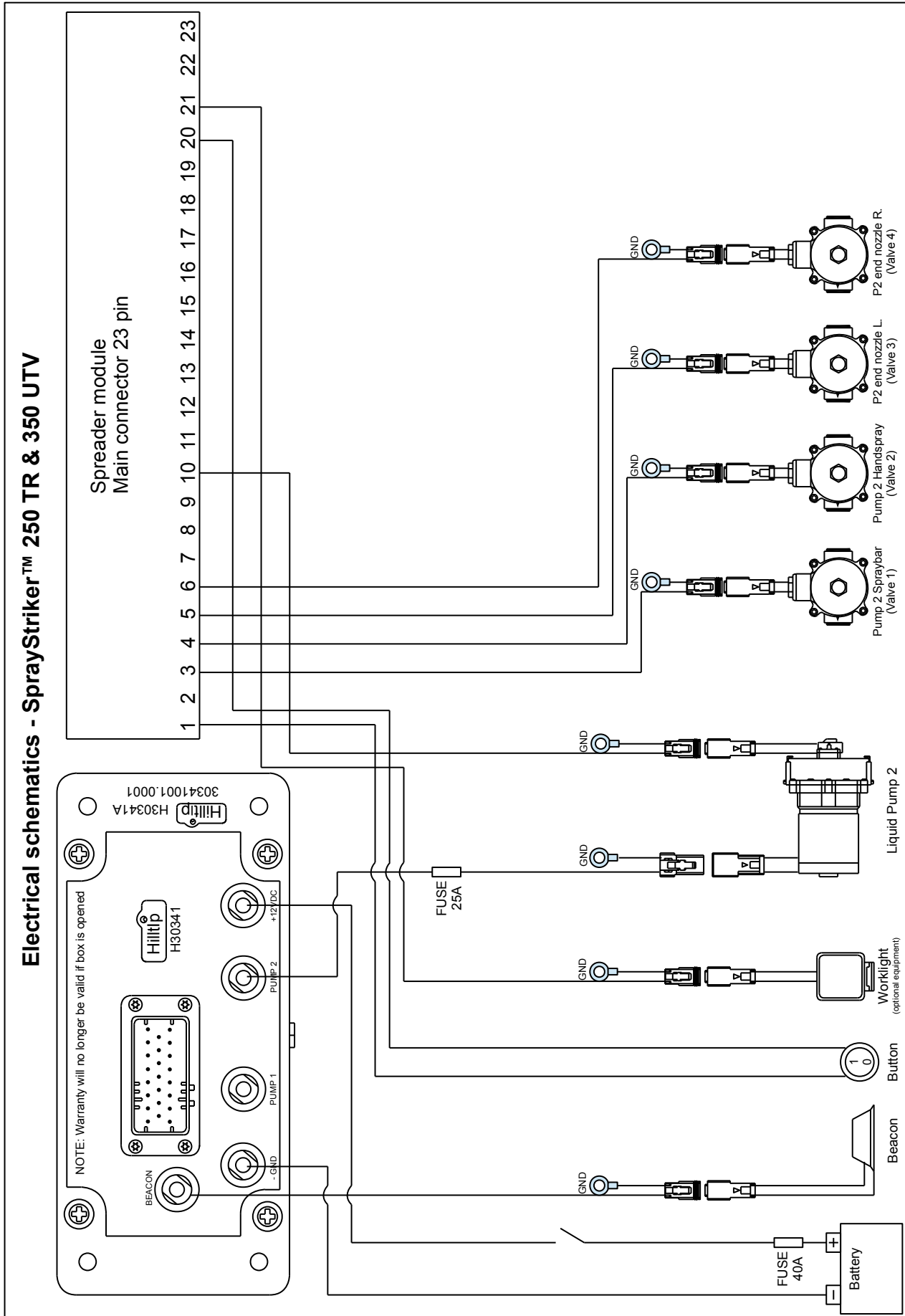
% sodium chloride by weight	Grams salt per L water	Freezing point °C
0	0	0
5,28	54,6	-3,1
10,56	113,5	-7
15,84	176,7	-11,7
18,48	210,0	-14,6
<b>23,31*</b>	<b>274,1</b>	<b>-21</b>
26,13	313,4	-1,2


**NOTE**

The liquid brine will have the best melting capacity at 23,3% solution.

\* Lowest freezing point at this concentration

### Electrical schematics - SprayStriker™ 250 TR & 350 UTV



## Warranty information

*This warranty replaces all previous warranties*

### Warranty

This Limited Warranty applies to the SprayStriker™ sprayer, its spare parts and additional equipment (from now on referred to as the "product"), purchased from Hilltip or an authorized dealer.

### What does this limited warranty cover?

This Limited Warranty covers any defects in material or workmanship under normal use during the Warranty Period.

During the Warranty Period, Hilltip, or an authorized dealer will repair or replace, at no charge, products or parts of a product that proves defective because of improper material or workmanship, under normal use and maintenance.

### How long does the coverage last?

The Warranty Period for the product purchased from Hilltip, or an authorized dealer is two (2) years from the date of purchase. The warranty period for a replacement part is one (1) year from the date of replacement or repair.

### How to obtain warranty on your product?

Make sure your dealer has registered your product. In order to obtain service under this warranty the product must be registered with the end user's contact details (name, address, e-mail address and phone number).

### What does this limited warranty not cover?

- Improperly installed parts.
- Damage caused by usage that is not in accordance with product instructions.
- Modification of the product, and/or the vehicle, is entirely at the purchaser's risk.
- This warranty does not include compensation for the drive to the service spot.
- Any damage in transit will be the responsibility of the carrier or at the risk of the purchaser.
- Hilltip will not provide replacement equipment or cover rental costs while your equipment is out of service.

This Limited Warranty does not cover any problem that is caused by:

- Misuse, neglect, accident, improper installation, maintenance or storage, or repair or alternation by anyone except Hilltip or an authorized dealer.

### What do you have to do?

To obtain warranty service, you must first contact us or your authorized dealer. The purchaser must notify Hilltip or an authorized dealer within ten (10) days after any defect in the product becomes known during the warranty period.

### What will we do to correct problems?

Hilltip, or an authorized dealer will repair or replace the part at no charge using either new or refurbished replacement parts.



## DECLARATION OF CONFORMITY

Manufacturer's & Assambler's Name: **Oy Hilltip Ab**

Manufacturer's & Assambler's Address: **Pukkisaarentie 6, FIN-68600 Pietarsaari, Finland**

Equipment Description: Hilltip de-icing sprayer

Equipment Model Designation: Hilltip SprayStriker 250 TR, 350 UTV

Equipment applications: Tractor, Loader, UTV and Pickup Tailgate

The equipments specified above are manufactured, where applicable, in conformity with provisions of the normative document according to the following directives and standards, in addition to relevant Road Traffic Regulations in European countries:

- 2006/42/EC

- EN 15597-1

I, the undersigned, hereby declare that the equipments specified above, that have been assambled by Oy Hilltip Ab, conforms to the above directives and standards

Pietarsaari April 18, 2022

Signature:

Printed Name: Tom Mäenpää

Title: CEO

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Installer's Name:

Installer's Address:

Type:

Serial number:

Year of installation:

I, the undersigned, hereby declare that the equipment installation to the vehicle specified above conforms to the directive 2006/42/EC and relevant Road Traffic Regulations.

DATE:

Signature:

Printed:

Title:





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