

IC45-DYNARATE

USER MANUAL

98-05365-EN

**SPRAYER
JOB COMPUTER**



TeeJet
TECHNOLOGIES

A Subsidiary of  Spraying Systems Co.®

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SPRAYER JOB COMPUTER IC45-DYNARATE®

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THE WORK SCREEN

BEGINNING THE SEASON

USE AND SPRAYING

AFTER SPRAYING

DIAGNOSTICS

SPRAYER JOB COMPUTER IC45-DYNARATE®

THE WORK SCREEN

BEGINNING THE SEASON

USE AND SPRAYING

AFTER SPRAYING

DIAGNOSTICS

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IMPORTANT SAFETY INFORMATION

FOREWORD

This guide is intended for the user of the sprayer for the current operations of treatment of the crops or fertilization of the fields. It is considered that the settings inherent to the tractor, the sprayer, the ISOBUS terminal (TECU), the calibrations and the advanced settings have been carried out beforehand in the workshop.

Instructions for these operations, which are limited to qualified personnel from agricultural machinery manufacturers and dealers, are available from TeeJet technologies.

All safety related and operating instructions should be read before the system is operated. Safe operation of machinery is the operators responsibility. Safety procedures must be posted close to the equipment and clearly visible to and legible by the operator. Safety procedures should meet all company and local regulations, as well as MSDS-requirements. For assistance, please contact a local dealer.

Safety Alert Symbol Definitions:



DANGER! This symbol is reserved for the most extreme situations where serious personal injury or death is imminent.



WARNING! This symbol indicates a hazardous situation that could result in serious personal injury or death.



CAUTION! This symbol indicates a hazardous situation that could result in minor or moderate personal injury.



NOTE: This symbol addresses practices in which the operator should be aware.

GENERAL WARNINGS AND PRECAUTIONS



DANGER!

- Read and follow instructions. If instructions are unclear after reading the manual, please contact a local dealer.
- Keep children away from equipment.
- Do not operate machinery under the influence of alcohol or any illegal substance.
- Some systems include a fan heater. Never cover the heater otherwise there will be a serious danger of fire!



WARNING! ELECTRICAL / SHOCK HAZARDS

- Before working on any particular component, make sure that all power supplies have been switched OFF and cannot be accidentally switched ON.
- Disconnect power leads before using an arc welder on equipment or anything connected to the equipment.
- Systems including frequency drives have a risk of electric shock due to residual voltage. It is not permissible to open the equipment neither to disconnect the system or any quick connection until 5 minutes after the power has been removed.
- Only operate the system from the power source indicated in the manual. If you are not sure of the power source, consult qualified service personnel.
- Do not use a high pressure cleaner to clean electrical components. This could damage electrical components and subject the operator to risk of electrical shock.
- The electrical supply to the equipment must be properly routed and connected to the equipment. All connections must meet the specified requirements.



WARNING! PRESSURISED HYDRAULIC SYSTEMS

- Always wear personal protective equipment (PPE) when performing work on hydraulic systems.
- Adhere to the machine manufacturer's approved maintenance instructions when working on the hydraulic system.
- Always turn equipment OFF when working on the hydraulic system. Take appropriate precautions when opening systems that have been previously pressurised.
- Be aware that hydraulic oil may be extremely hot and under high pressure.



WARNING! CHEMICAL HANDLING

- Always wear PPE when handling any chemical substance.
- Always follow safety labels and instructions provided by the chemical manufacturer or supplier.
- The operator should have full information on the nature and the quantity of the material to be distributed.
- **ADHERE TO FEDERAL, STATE AND LOCAL REGULATIONS REGARDING THE HANDLING, USE OR DISPOSAL OF AGRICULTURAL CHEMICALS.**



WARNING! PRESSURISED SPRAY SYSTEM

- It is important to follow proper safety precautions when using a pressurised spray system. Fluids under pressure can penetrate skin and cause serious personal injury.
- The system pressure should never exceed the lowest rated component. Always know your system and all component capabilities, maximum pressures and flow rates.
- Filters can only be opened when the manual valves in front of and behind the filter are in closed position. If any appliance has to be taken out of the piping, manual valves in front of and behind this appliance have to be in closed position. If they are reinstalled, make sure that this happens correctly, that this apparatus is well aligned, and that all connections are tight.
- The plumbing supply to the equipment should meet all company and local regulations and must be properly routed and connected to the equipment. All connections must meet the specified requirements.
- It is advised to drain and purge the liquid train when the equipment shall not be used for a longer period of time.



WARNING! AUTO STEERING SAFETY

- To prevent serious personal injury or death from being run over by the vehicle or automated motion of the steering system, never leave the vehicles operator seat with the system engaged.
- To prevent serious personal injury or death from being run over by the vehicle or automated motion of the steering system, verify the area around the vehicle is clear of people and obstacles before startup, calibration, tuning or engaging the system.
- Make sure equipment is tightly secured to the proper components.
- Never drive on public roads with system engaged.



CAUTION! EQUIPMENT SAFETY, MAINTENANCE, AND SERVICE

- The equipment should be operated only by properly trained, qualified personnel. They must have proven their skills in the operation of the equipment.
- Before using the equipment, the operator has to check if the equipment is in good condition and can be used safely. If not, the equipment cannot be used.
- All necessary PPE must be readily available to the operator at all times.
- Routinely check the system and components for wear and damage. Replace or repair when necessary.
- Only qualified authorised experts are allowed to repair or maintain the installation. The maintenance and operating instructions shall be rigidly observed and followed.
- A complete manual for the equipment must be available to the operator or maintenance technician at all times.



CAUTION! HARNESS CABLE AND HOSE SAFETY

- Routinely check all harness cables and hoses for damage or wear. Replace or repair when necessary.
- Do not route harness cables and hoses with sharp bends.
- Do not strap harness cables and hoses to lines with high vibration or spikes in pressure.
- Do not strap harness cables and hoses to lines transporting hot fluids.
- Protect harness cables and hoses from sharp objects, equipment debris, and material buildup.
- Allow sufficient length for harness cables and hoses to have free movement on machine parts that move during operation, and be sure that harness cables or hoses do not hang below the equipment.
- Allow sufficient clearance for harness cables and hoses from implement and machine operational zones.
- When cleaning equipment, protect harness cables from high pressure wash.



NOTE: TOUCH SCREEN CARE

- Keep sharp objects away from the touch screen. Touching the screen with a sharp object could result in damage to the display.
- Do not use harsh chemicals to clean the console/display. The correct way to clean a console/display is to use a soft damp cloth or anti-static wipe, similar to cleaning a monitor on a computer.



NOTE: RECOMMENDED REPLACEMENT PARTS

- The system has been designed with components that work together to provide the best system performance. When the system requires replacement parts, only TeeJet recommended components should be used to maintain proper system operation and safety.



END USER LICENSE AGREEMENT

- ALWAYS READ AND FOLLOW THE CHEMICAL LABEL'S DIRECTIONS. Droplet size classification is in accordance with ISO 25358 at the date of publication. Classifications are subject to change. The chemical being sprayed, tank mixes, temperature, humidity, wind speed, vehicle speed, etc. can influence the actual drop size.



1 - WORK SCREEN

CHAPTER 1 – HANDLING THE WORK SCREEN

INTRODUCTION

The start-up of the IC45-DynaRate work screen will depend on the type of installation of your equipment:

- Either the work screen will be started when the tractor/vehicle is powered ON.
- Or the work screen will be started when the Universal Terminal screen is powered ON.

The initialization phase of the IC45 DynaRate work screen may take a few minutes when first started. Load status is shown on the IC45-DynaRate ECU icon.

If after several minutes the IC45 work screen does not appear, please contact the dealer who sold you the equipment.

The Universal Terminal's screen displays the on-board computer interface consisting of function keys, menus, pressable lists, numeric indicators, graphic indicators, icons or dialog boxes. Before using the system, it is recommended that you read this first chapter in its entirety to understand how the screen works.

NOTE: The screen and keys may look different on different types of Universal Terminals.

ORGANIZATION OF SCREEN AREAS

2 INFORMATION AREAS

Customizable to display numerical indicators: dose, flow rate, pressure, applied area etc.

ECU ICON

This icon indicates that the IC45 ECU is connected to the terminal.
NOTE: You may sometimes have multiple ECU's if you have multiple ISOBUS system installed.

GRAPHIC INDICATORS

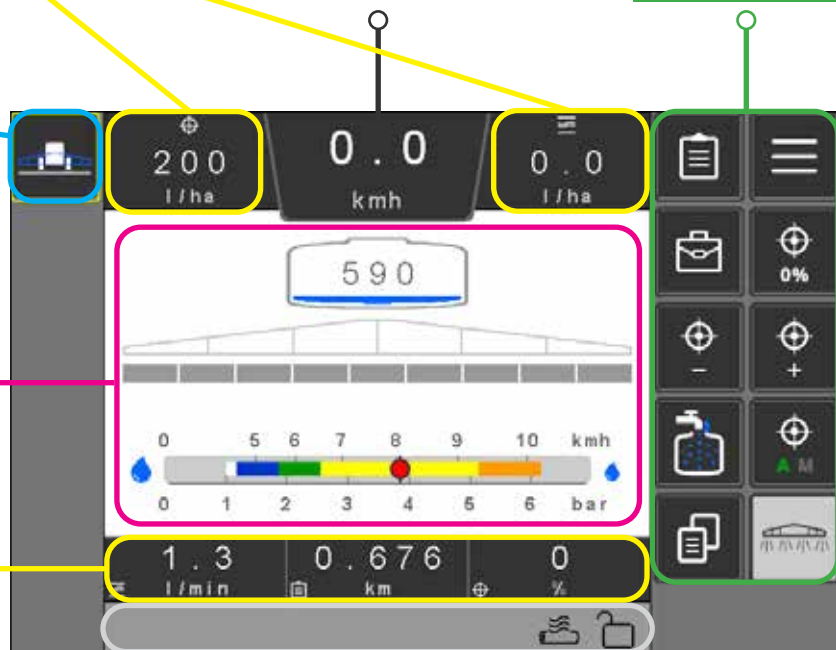
Volume in tank, sections, pressure, droplets.

3 INFORMATION AREAS

Customizable to display numerical indicators: dose, flow rate, pressure, applied area etc.

SPEED INFORMATION

FUNCTION KEYS AND NAVIGATION



STATUS BAR

Contains icons showing the state of currently active functions.

Navigation Keys in the Menu



Opens the settings menu.
Available on the main working screen



Returns to the main working screen.
Available in the menus



Returns to the previous screen



Displays the next page of function keys. Each press of the key moves to the next page of function keys until you return to the first page. Available only in menus that have multiple pages of function keys.

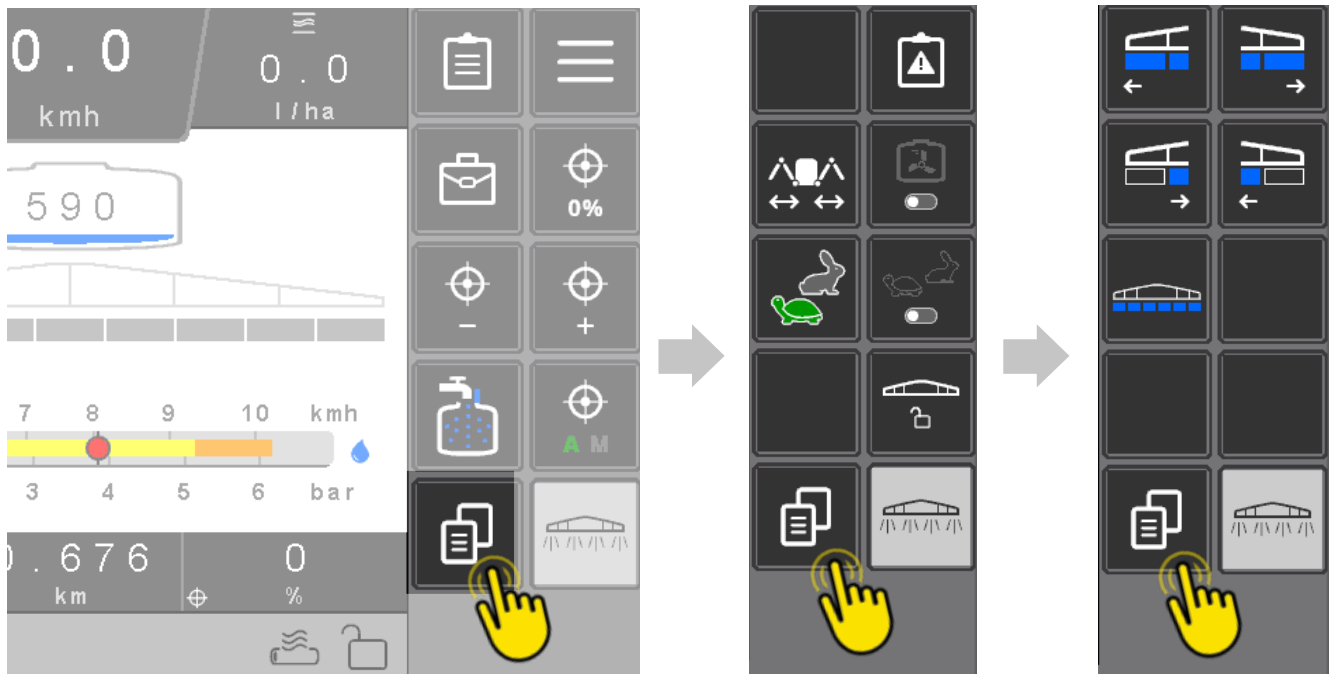
Function Keys

The function keys are displayed on the screen according to the sprayer manufacturer's specifications, the keys placement may be different.

Depending on the configuration, they could also be spread over several pages. You can go to the next page by using the next page key.

Example:

Two separate columns on each side of the screen rather than as shown below.



Next page

Description of Function Keys

Key set may be different depending on your sprayer's features.



Spraying ON/OFF

This key is always available at the bottom right of the screen in work mode. Its color indicates its status :
Green = ON / Grey = OFF



Tank filling menu



JOB WIZARD



Boom pendular suspension
Lock/Unlock



Boom Control Menu



Agitation ON/OFF



Increase dose rate



Decrease dose rate



Reset dose rate adjustment



Automatic/Manual regulation



Toggle button OFF/ON

In multiple menus, there are keys with buttons at the bottom. The key pictograms' colour, as well as the colour of the slide behind the button, is grey when it is turned OFF.

When turned ON, the key pictograms' colour will turn white, and the slide behind the button will turn green.



Simulated speed
ON/OFF



Simulated speed
(Slow/Fast)



Turn OFF section from the left



Turn OFF section from the right



Turn ON section towards the left



Turn ON section towards the right



Turn ON all sections



Job Data



Alarm log

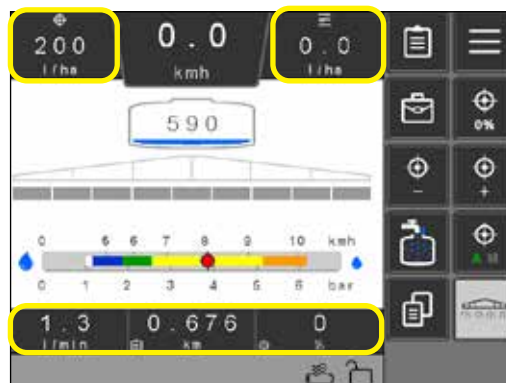
Customization of the Information Displayed on the Screen

The configurable information zones are located in the dark bands on the upper and lower part of the screen.

The central zone of the upper part is not modifiable, it is reserved for the speed and alarm indicator.

All the 5 other information zones are configurable:

- Press on the information area to customize.
- Browse for the desired information on the list (multiple pages), the current selection is highlighted with a checkmark.
- Select the preferred information by pressing on the corresponding line.



Modify this information area

Choose to display this information

Check mark indicates which information is selected

SELECT 1/3		
Tank Volume	l	2135
Working Width	m	27.0
Target application rate	l/ha	105
Actual application rate	l/ha	635
Pct Application Rate	%	5 ✓
Flow	l/min	136

Graphic Indicators

The center of the screen displays information about the status of the sprayer in real time. This allows you to quickly view the sprayer information at once.

Tank level :

The blue colored area represents the amount remaining in the tank, with the volume value here displayed. Press the tank graph for direct access to the tank filling menu.

Boom sections:

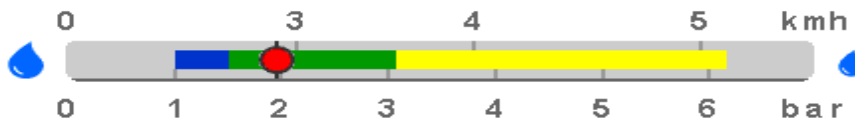
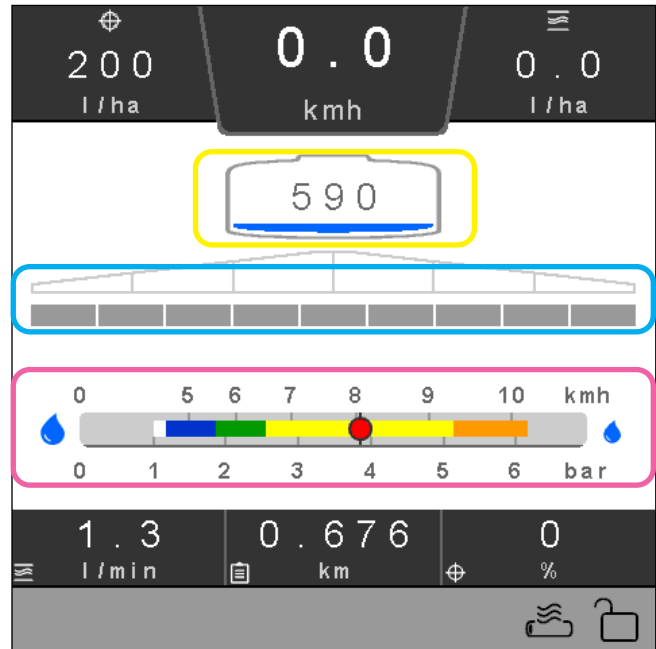
Each section is represented by a rectangle: Colored (solid) rectangles indicate turned ON sections. White indicate turned OFF sections.

NOTE: When connected with more than 43 programmed sections, application status will no longer include spacing between individual sections.

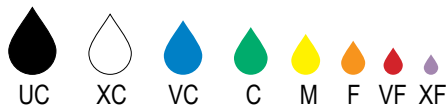
Pressure / Droplet Bargraph:

Press the pressure bar to see the selected nozzle type and its droplet range.

NOTE: The display of the Pressure / Droplets Bargraph is optional. If the Pressure Bargraph does not show on the screen, (To activate this option, see page 15)



- **The red dot** indicates the current pressure in bar (or PSI for US) - readable on the bottom scale.
- **The background color** of the bar represents the droplet size produced by the selected nozzle at the actual rate. Droplet size standard color scale: Ultra-coarse / Extremely-coarse / Very-coarse / Coarse / Medium / Fine/ Very fine/ Extremely Fine



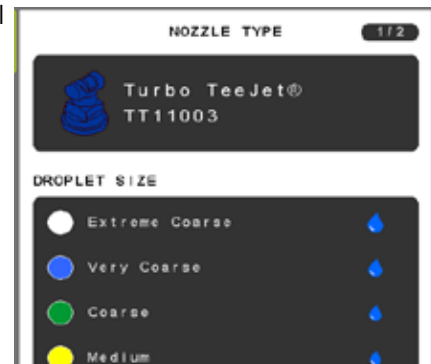
NOTE: Droplet size classification is in accordance with ISO 25358. Classifications are subject to change.

- **The top scale** indicates the working speed. The speed indication will assist you selecting the right droplet size and speed for the rate you need to output.

Example:

- At 2 bar, in the green zone, where the red dot is located, the nozzle produces coarse droplets (between 1.5 and 3 bar).
- If you exceed 3.6 km/h, the red dot will move into the yellow area which indicates that the nozzle will produce medium sized droplets.

View more information of the Nozzle type by pressing the graph bar :



Show/Hide Pressure Bargraph and Tank Volume

The display of the Pressure / Droplets and Tank volume graphics are optional. To activate these options, go to :

Main menu

Machine

Job settings

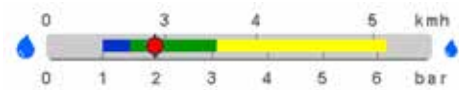
User profile

Show Pressure Bargraph:
Press the line to toggle the button ON or OFF

Show tank volume:
Press the line to toggle the button ON or OFF

Return to Work screen

The display of droplet size as colored areas is only available if a TeeJet nozzle is selected in JOB WIZARD (see page 36). For custom (non-TeeJet) nozzles, the Bargraph will show the current pressure red dot with a black background indicating the pressure range:



Pressure Bargraph display with TeeJet nozzle



Pressure Bargraph display with User nozzle

Alarms

The IC45 has an alarm system (see alarm settings on page 52) to warn the operator if the system cannot reach the predefined parameters or if the system has an issue.

Example:

- Pressure too high, impossible to reach the desired dose, switch OFF the agitation, adapt the speed, flow rate setting, etc.).

The alarms can be displayed with two different presentations:

DEFAULT POP-UP DISPLAY :

By default the alarms are displayed in a pop-up window over the screen.

When there is an alarm and the console is not actively in the Universal Terminal, the user will be automatically taken to the UT to acknowledge the issue.

Alarms only disappear after the user has validated the alarm.

MINIMIZED DISPLAY

This setting allows an alarm to show without hiding the working screen. The alarm is visible in two zones:

- The speed indication zone, which changes from black to red, indicates the action to be taken.
- The status bar at the bottom of the screen gives an explanation of the problem.

The user does not need to intervene on the screen.

Example:

- The 2 arrows displayed in the speed information area indicate the necessary corrective maneuver, meaning slowing down.

You can choose the presentation mode of the alarms in the User profile menu.

> Main menu

> Machine menu

> Job settings

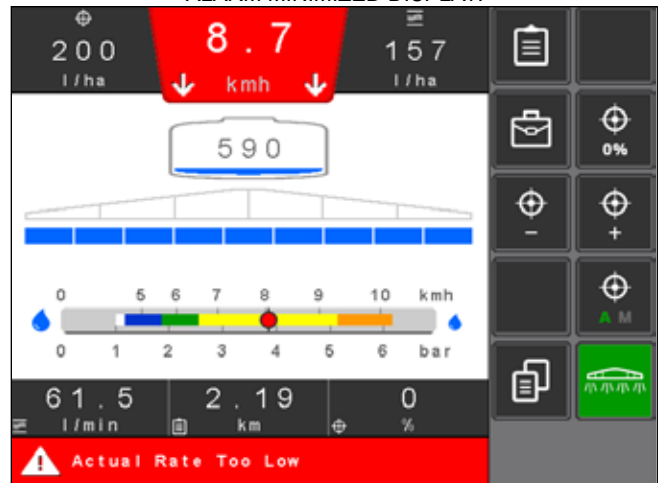
> User profile

Press the "Show minimized Alarm" line to toggle the button ON or OFF

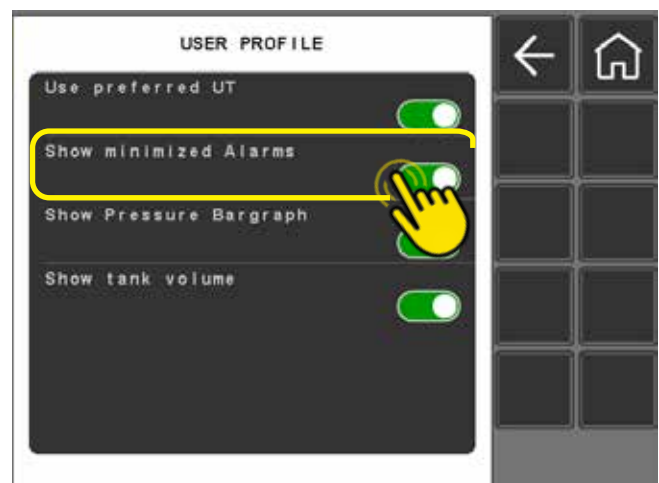
ALARM DEFAULT DISPLAY :



ALARM MINIMIZED DISPLAY:

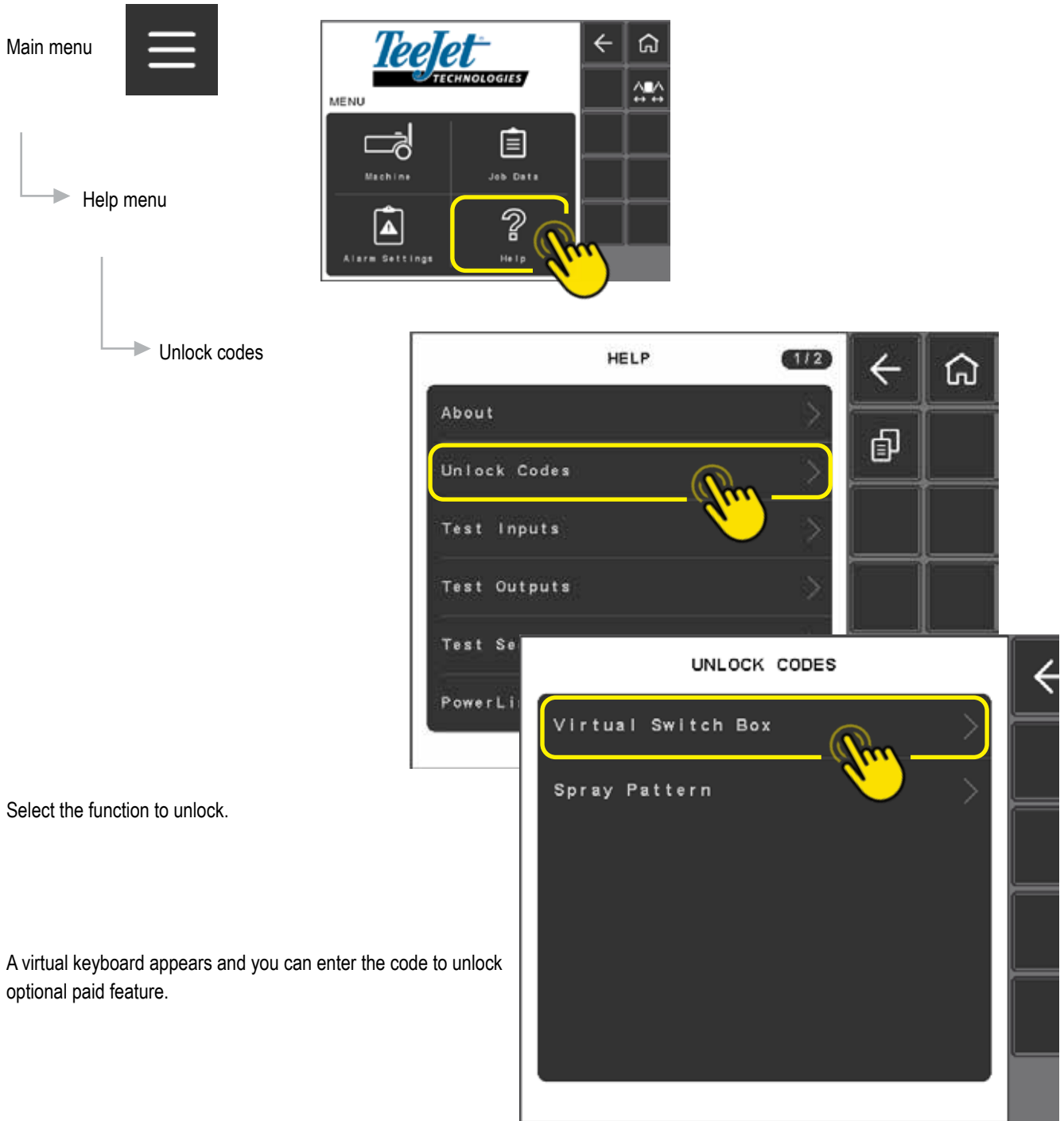


NOTE: Major alarms will still be displayed in a full screen.



Unlocking IC45 Options

To unlock additional functions, you must enter a code purchased through your dealer.
To enter the code, go to:



NOTE: Some unlock options may not be usable, depending on the configuration of the sprayer.



**2 - AT THE BEGINNING
OF THE SEASON**

CHAPTER 2 – AT THE BEGINNING OF THE SEASON

IMPORTANT

At the beginning of the season, we advise you to check that your calibrations are correct. Incorrect calibration can lead to under and/or over dosing in the field, incorrect information on the screen, etc.

If you are starting up your equipment for the first time, please check that these parameters, are already calibrated by your installer / dealer.

For accurate, quality spraying, it is important to ensure that your equipment is properly calibrated and the nozzles are checked for wear and replaced if necessary.

CALIBRATION OF THE SPRAYER

To access the calibration menu from the Work Screen.



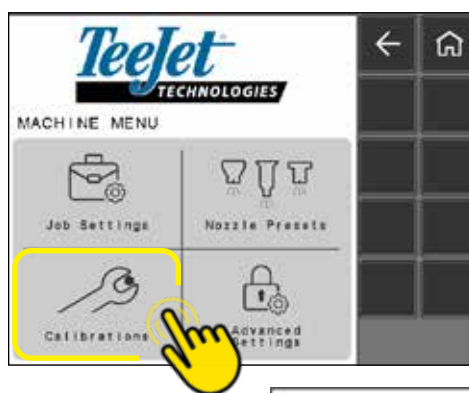
Enter the main menu



Machine



Calibration.



Then please select the sensor to be calibrated:

- Speed sensor
- Flow sensor
- Pressure sensor
- Tank level sensor
- Fill flow sensor

NOTE: For specific calibration options to appear, a specific sensor needs to be installed. Sensor availability is activated on the Sensor Presence screen in the OEM section.



Speed Source and Calibration

THE WORK SCREEN

BEGINNING THE SEASON

USE AND SPRAYING

AFTER SPRAYING

DIAGNOSTICS

Enter the main menu



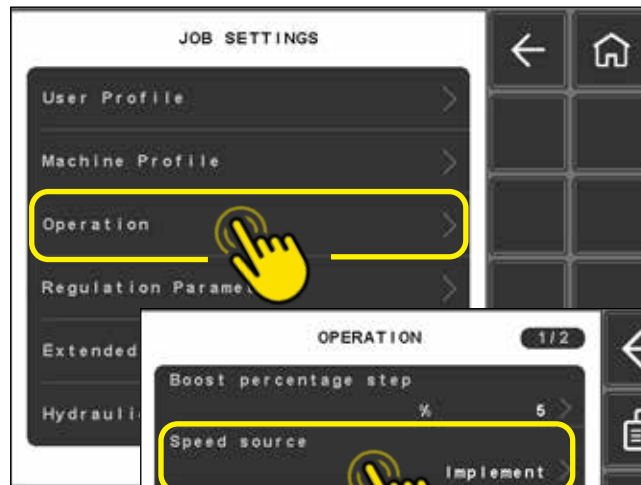
Machine

Job settings



Operation

Speed source

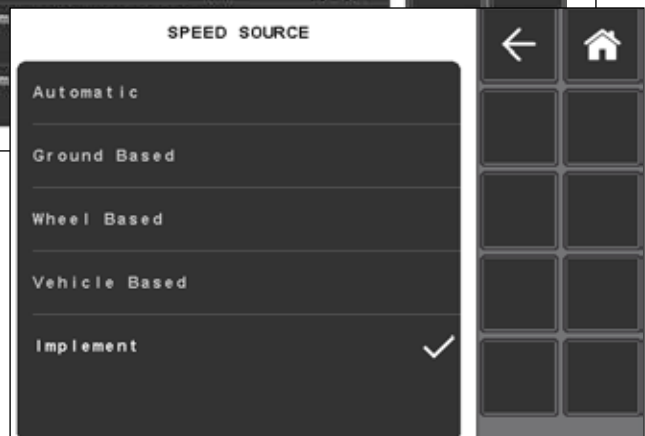
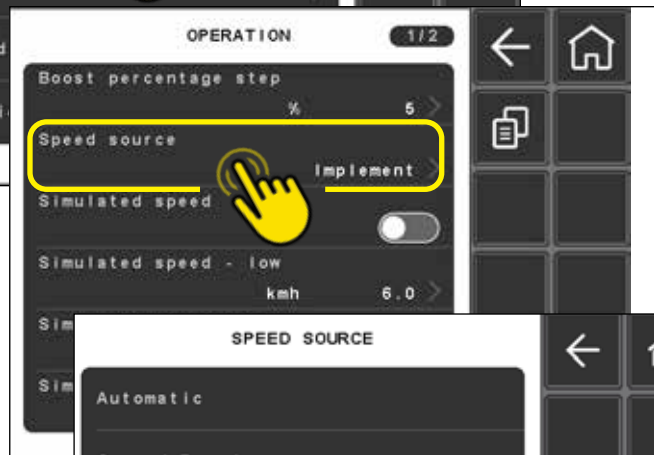


Select the desired Speed Source

- Automatic: selects the best source available (GNSS if available)
- Ground Based: selects the GNSS speed
- Wheel Based: selects the tractor's speed
- Vehicle Based: selects tractor's on-board sensor (radar...)
- Implement: selects the sprayer's wheels sensor

Several sources may provide a speed signal, like GNSS, Speed sensor, vehicle gearbox, etc.).

Ensure that the source used is the preferred one and calibrate it, if the speed is incorrect.





Calibrate Speed Sensor

The calibration of the speed is done by driving a measured distance.

The distance to be covered is 100 meters.

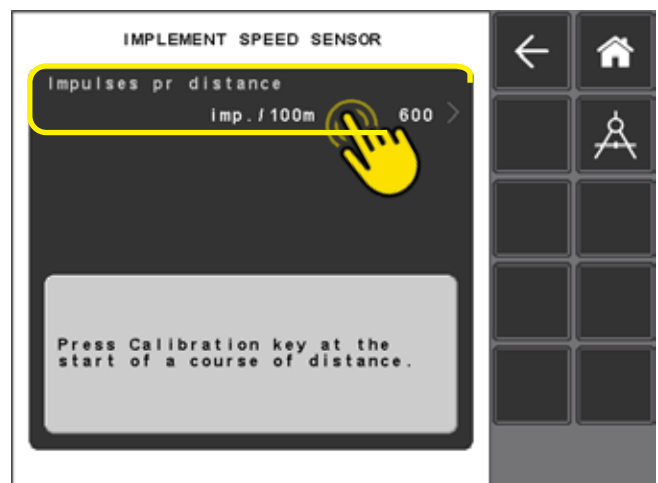
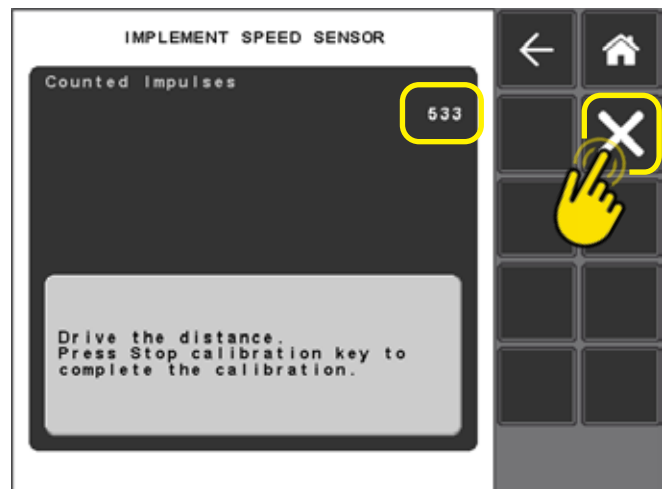
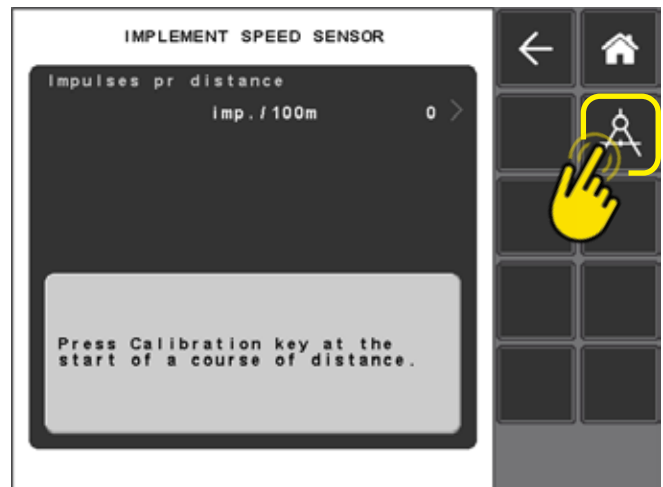
Follow the instructions on the screen:

- Machine stopped: press the Calibration key 
- Then, drive for a distance of 100 meters, during which time the on-board computer records the number of impulses coming from the speed sensor.

- Having driven 100 meters, stop the vehicle and press the Stop Calibration key. 
- The number of impulses is stored.

- Press the Return key. 

If the user already knows the number of impulses sent, by driving 100 meters, press the "Impulses pr distance" line to enter the number.



Calibration of Flow Sensor

Calibration of the flow sensor is done either:

- By entering the values provided by the sensor's manufacturer in the computer (press each of the 3 lines to open the numeric keypad and type in the corresponding value).
- Or, if necessary, by performing the process described below (spray a volume of water to calibrate the flow sensor), in this case:

Start with the sprayer turned OFF.

Follow the instructions on the screen:

- Press the Calibration key



- Provide containers to collect the sprayed water (100 liters minimum)
- Press the key to Open valve and begin collecting water



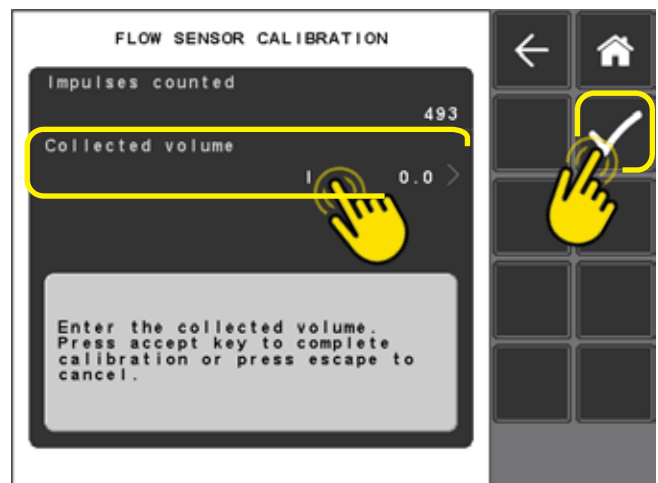
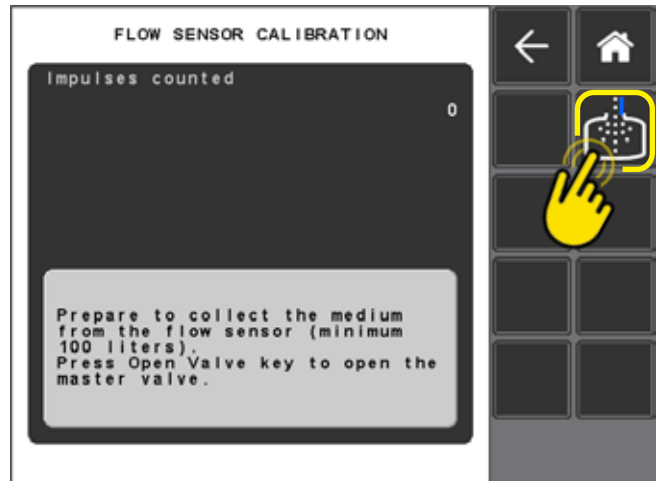
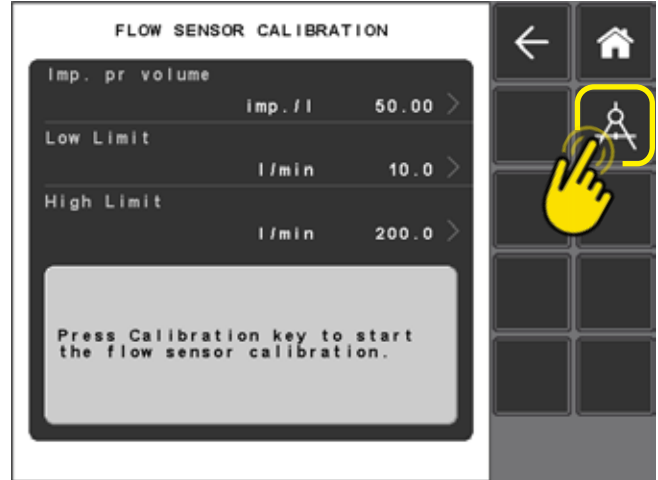
Continue to collect water in the containers while the onboard computer records the flow sensor impulses.

- Press key to close valve



- Measure the volume of water collected in the containers
- Press the "Collected volume" line and enter the value with the numeric keypad

- Press the Accept key to complete the calibration.



Calibration of Pressure Sensor

Calibration of the pressure sensor is done in two steps:

Step 1: CALIBRATE SENSOR AT ZERO PRESSURE:

- Press the “Calibrate ‘No Pressure’ “ line

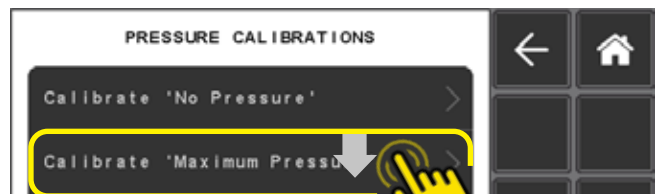
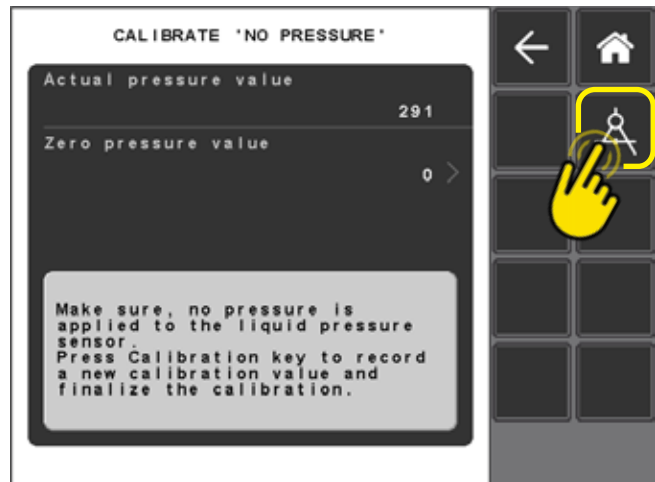
Follow the instructions on the screen:

- Make sure the pressure is at 0,0 bar and press the Calibration Key to record the current value of the sensor.



The measured value appears in the “Zero pressure value” line.

- Return to the previous screen to proceed with the pressure sensor calibration by pressing the back key.



Step 2: CALIBRATE THE MAXIMUM PRESSURE:

- Press the “Calibrate ‘Maximum Pressure’ ” line
- Press the “Maximum pressure” line and use the numeric keypad to enter the value provided by the sensor manufacturer, usually 10 bar.



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Once the two steps described on the previous page are completed, no further pressure calibration is required for the perfect sprayer operation.

Nonetheless, as the IC45 pressure sensor is located on the boom, while the hardware pressure gauge is fitted close to the regulation valve, they should read a slight difference of value at the same time.

If the user wishes the two values to align perfectly, despite the boom sensor providing a more accurate pressure measure close to the nozzles, a fine tuning can be done as follows:

- Press the “Reference pressure” line and use the numeric keypad to enter the pressure you will be using to calibrate (5 bar for instance).

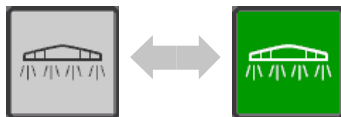
NOTE: The reference pressure must not be changed while calibration is in progress.

Afterwards follow the instructions on the screen:

- Press the Calibration key to start the calibration



- Open the boom sections and start spraying with the Spray key



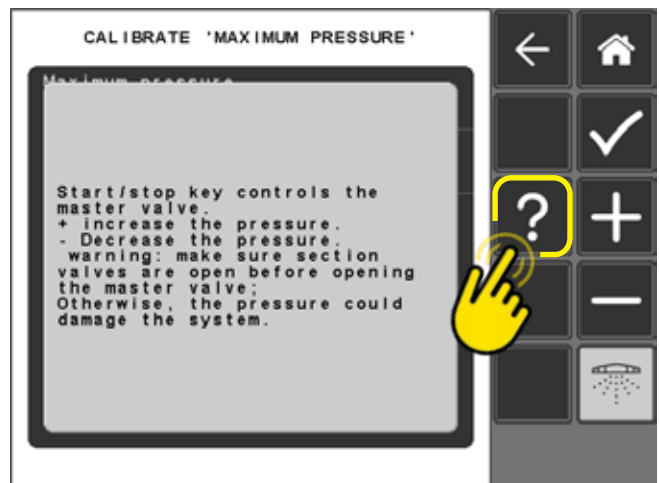
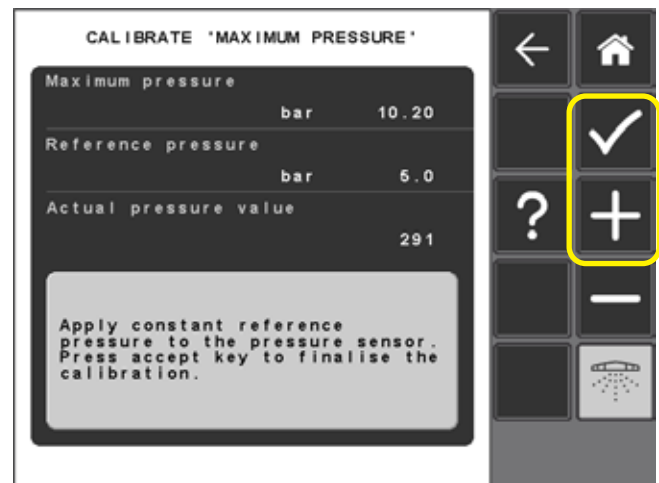
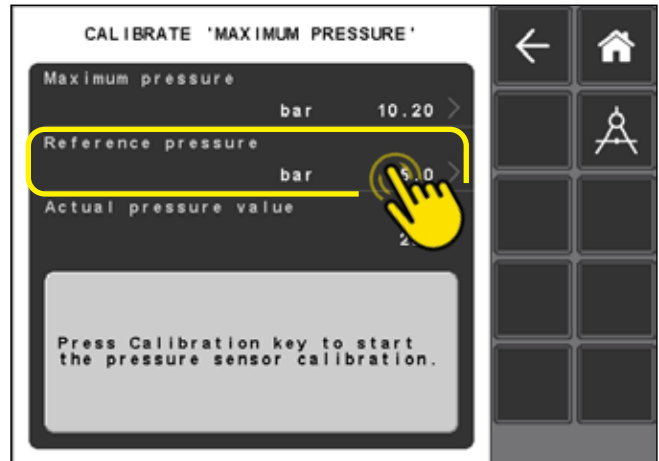
Wait for the pressure to stabilize.

- Adjust the pressure read on the gauge by pressing the Increase [+] or Decrease[-] key till the value equals the reference pressure previously defined.

- Save by pressing the Accept key.



The Help [?] key will display a help screen on how to do this calibration, including making sure to open the boom sections before pressurizing the system to avoid damage to the sprayer.



Calibration of Tank Level Sensor

Calibration of the tank gauge is done in 4 steps with 3 instantaneous measurements and 1 multipoint measurement to calibrate the tank shape. The last measurement is done by emptying the tank.

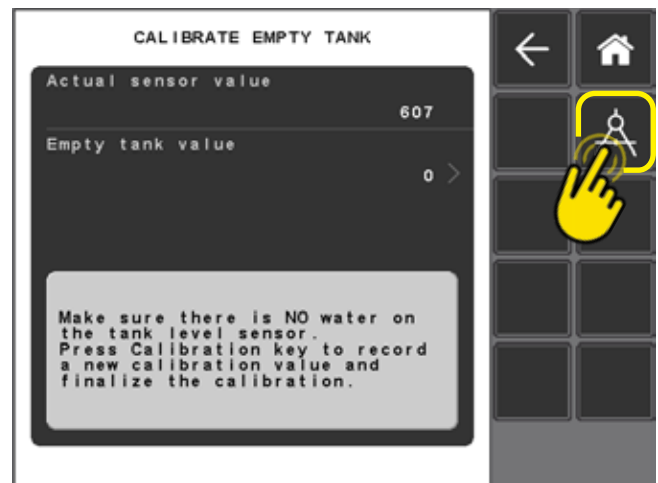
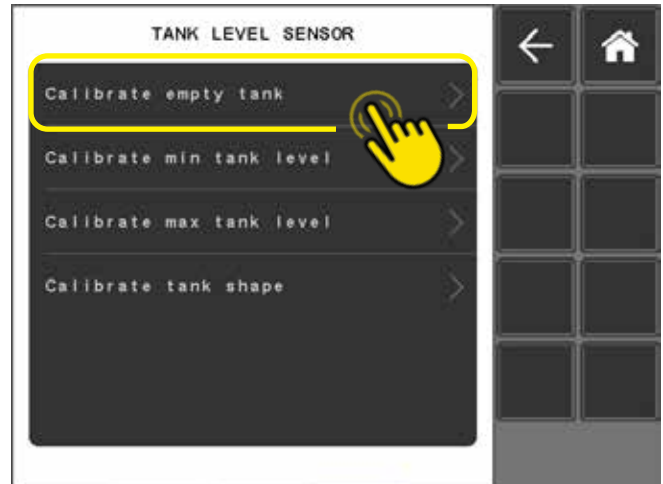
NOTE: Tank Level Calibration is normally done by the machine manufacturer but it may be necessary to calibrate in special circumstances.

Be aware that to complete a full calibration, the tank will need to be fully filled, at least once, during the process.

Step 1: CALIBRATE THE SENSOR WITH EMPTY TANK:

Make sure the tank is absolutely empty before start, and press the Calibrate empty tank line.

- Press the Calibration key to save the sensor value.
- Return to the previous menu with the back key to proceed to the next step.

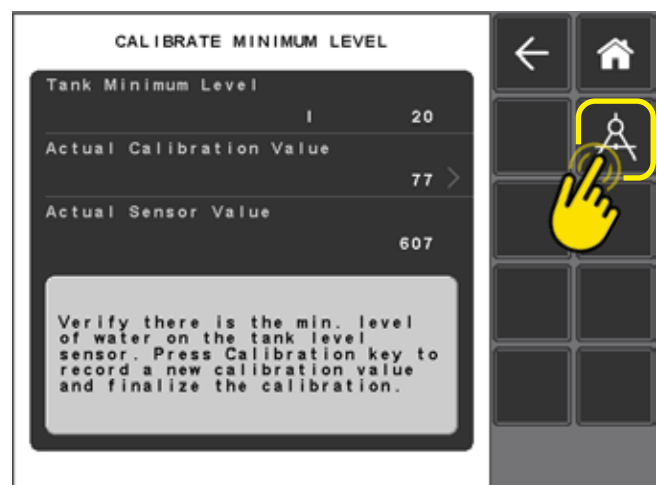


Step 2: CALIBRATE THE MINIMUM LEVEL OF THE TANK:

Press the Calibrate min tank level line.

“Min Tank Level” is a setting that is usually predefined by the manufacturer in the OEM Menu. The entered value is based on the tank itself and it will help you to calibrate the sprayer.

- Fill the tank with water to cover the tank level sensor with the “Tank Minimum Level” value pre-defined on the screen. (In our example, we must fill 20 Liters)
- When you have performed the above operation, press the Calibration key to save.
- Return to the previous menu with the back key.



Step 3: CALIBRATE THE MAXIMUM LEVEL OF TANK:

Press the Calibrate max tank level line.

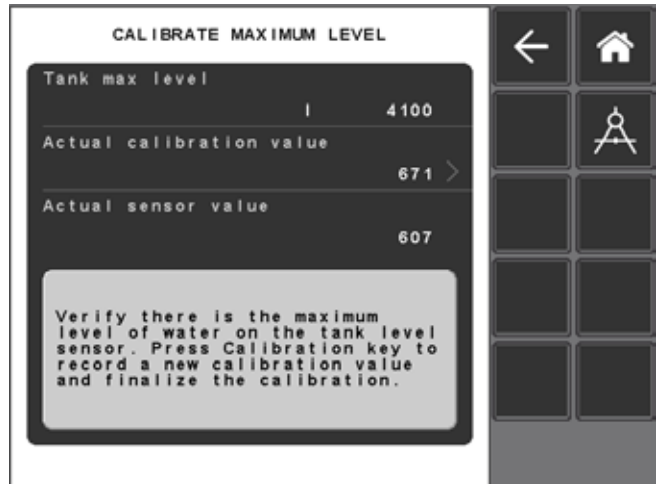
“Max Tank Level” is a setting that is usually predefined by the manufacturer in the OEM Menu. The entered value is based on the tank itself and it will help you to calibrate the sprayer.

- Fill the tank to the “Max Tank Level” value pre-defined on the screen. (In our example, we must fill 4100 Liters)

- Press the Calibration key to save the value.



- Press the Return key to go the previous menu.



- Press the Calibration key

Step 4: CALIBRATE THE TANK SHAPE:

Press the Calibrate tank shape line.

If you have a previously saved tank calibration file, you do not need to go through this full step.

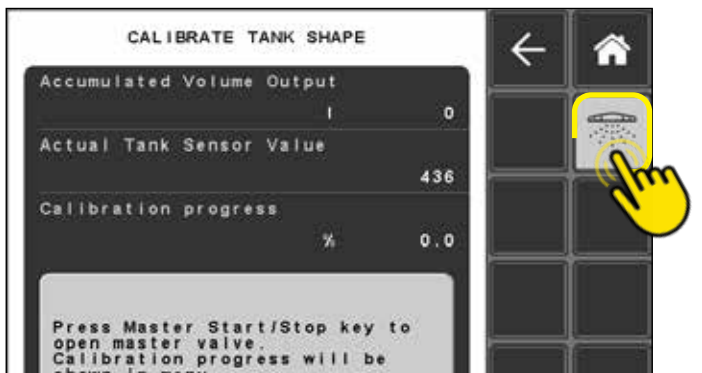
Instead, you can press the Import key and follow the instructions to read the file from a USB drive which has been inserted directly into the IC45. Inserting the USB drive into the UT console may not work.



If you have no saved file, follow the instructions below prior to the calibration:

- Be sure to have completed “Calibrate Empty tank” and “Calibrate min tank level” before you move on to the next step.
- Fill the tank to the top.
- Be sure to have completed “Calibrate max tank level” before you move on to the next step.
- Start spraying with the system in manual regulation.
- Adjust the flow (l/min) to between 200-300 liters per minute to ensure the best possible calibration.
- Stop spraying and leave settings, as is.
- Top up the tank so it is full.

NOTE: The flow must be constant throughout calibration, so opening a valve instead of spraying to empty the tank will not work!



SETTING UP YOUR NOZZLES

Go to the Main Menu



Machine



Nozzle Presets



The Nozzle Presets section contains 5 pages that can store up to 5 nozzles installed on the machine.

NOTE: The preset nozzles will appear in the nozzle list when entering the spray parameters in the JOB WIZARD.



Select / Preset a TeeJet Nozzle

THE WORK SCREEN

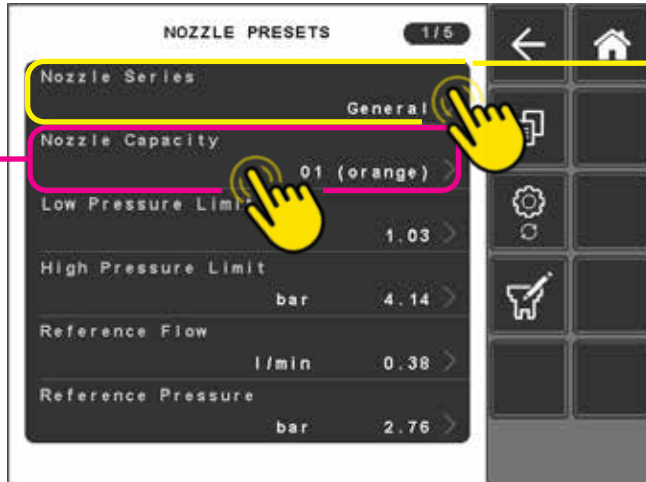
BEGINNING THE SEASON

USE AND SPRAYING

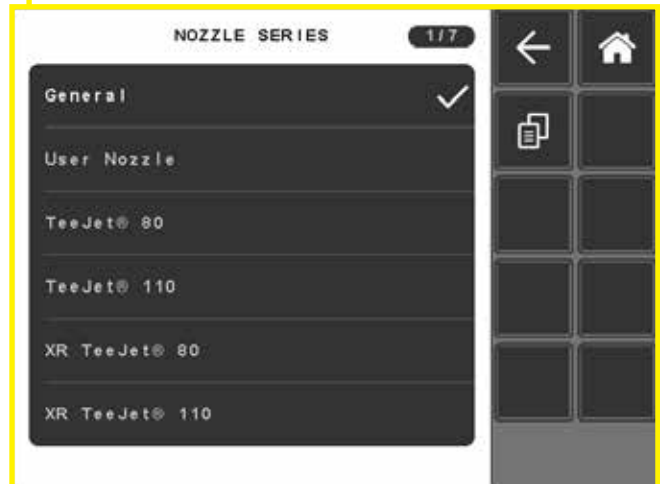
AFTER SPRAYING

DIAGNOSTICS

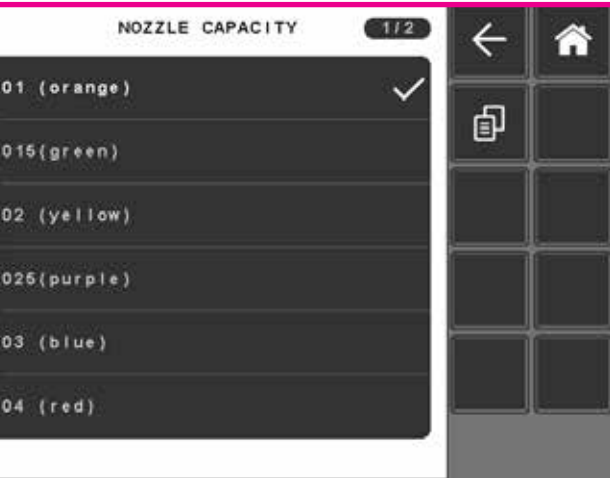
- Use one of the 5 available pages (navigate with the “Next page” key)



- Press the Nozzle Series line to select the nozzle model
 - In these pages, you will find all TeeJet nozzles. Press the line of the nozzle to select it.



- The remaining parameters will automatically be filled in with the technical information of the nozzle and the flow rate provided by TeeJet Technologies. TeeJet nozzle information cannot be changed. General and User Nozzle information should be entered on the appropriate lines.



- Press Nozzle Capacity to select the nozzle capacity
 - In this list, all the nozzle flow rates will be available, either with the capacity number (01, 02, 03,...) or with the capacity color (orange, yellow, blue,...) Press the line of the capacity to select it.

Select / Preset a User Nozzle

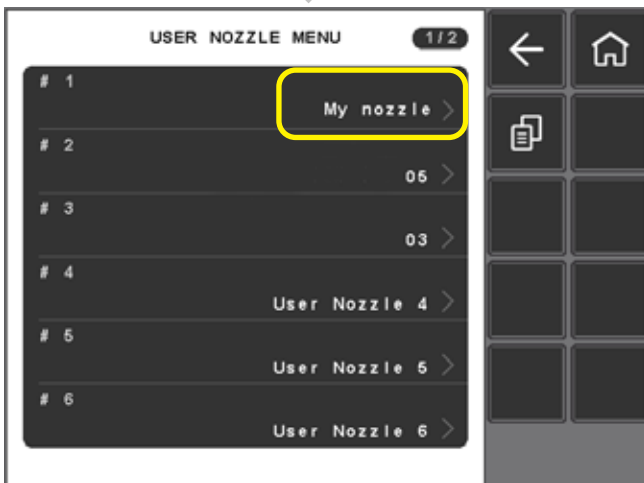
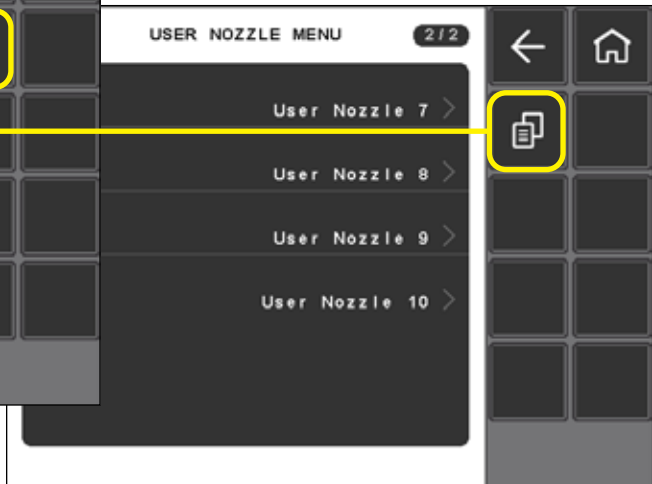
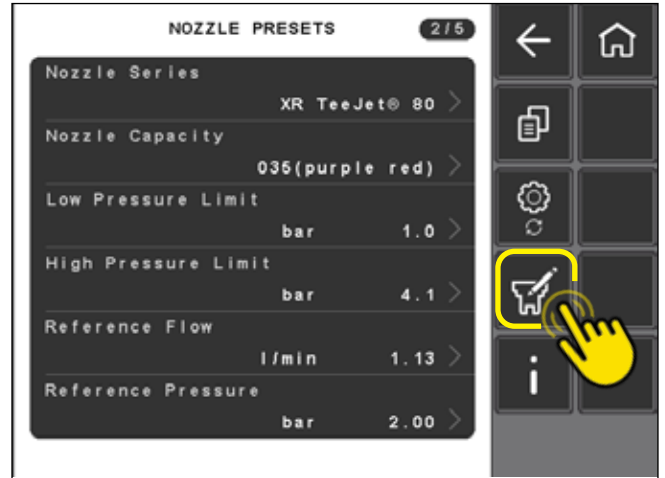
NOTE: TeeJet nozzles are already pre-registered, to preselect them see procedure on previous page.

In the User Nozzle menu, accessed with the User Nozzle key, you can enter up to 10 nozzle names.



To begin, you must name the new nozzle. Choose a nozzle number from 1 to 10. A virtual keyboard will pop up enabling you to rename the nozzle.

(We chose "My nozzle." You can give the commercial name of your nozzle)



Return to the Nozzle Presets screen, by pressing the return key.



- Select one of the five nozzle preset pages by use of the Next Page key.
- Press the Nozzle Series line to open the nozzle list, select "User Nozzle".
- Press "Nozzle Capacity." The list of 10 custom nozzles (seen on the previous page) is displayed.
- Select the new name you have just assigned to a custom nozzle.

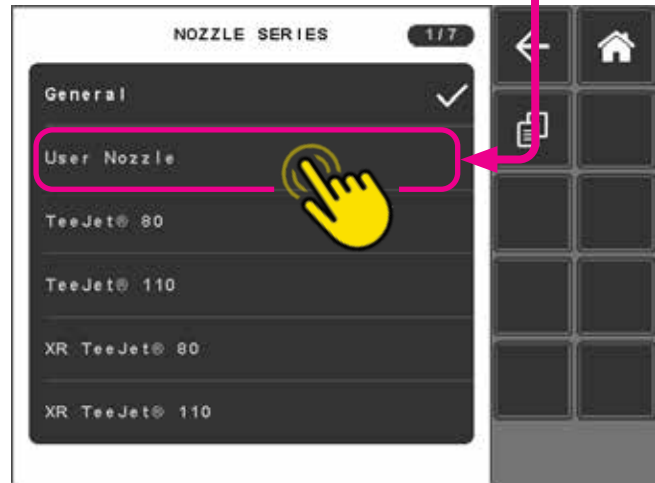
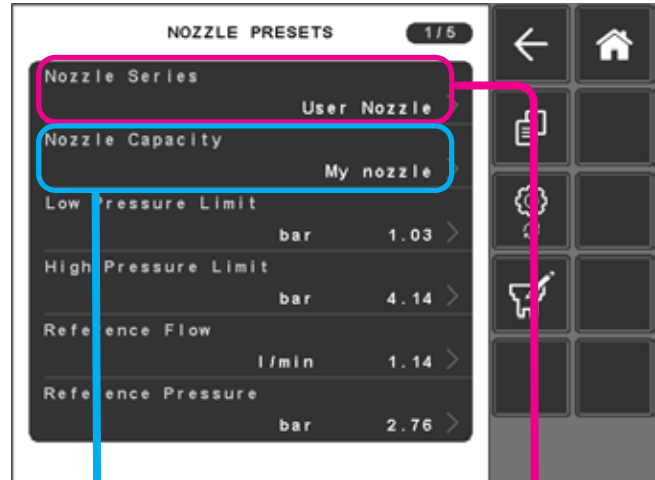
The name of the selected custom nozzle will appear in the "Nozzle Capacity" line.



- Enter the technical information of the nozzle manually in the following 4 fields. This information is provided by the respective nozzle manufacturers.
 - Low pressure limit
 - High pressure limit
 - Reference flow rate
 - Reference pressure

The reference pressure to be used is typically 3 bar, for the reference flow rate, please fill in the flow rate at 3 bar available in the nozzle information sheet. If you have a different reference pressure then change the Reference pressure accordingly.

When all the information is entered, your third party nozzle is set up.



Other Nozzle Functions

Key resets the User Nozzle list to the factory configuration.
(After verification on the next window).



NOTE: The Reset Nozzles key will delete all general and user nozzle presets.



This key, is only displayed when a TeeJet nozzle is selected.

Provides access to detailed information on the droplet sizes available for the selected nozzle (droplet size/pressure ranges).

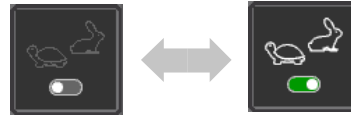


HOW TO USE SIMULATED SPEED

The following keys can be used to simulate a speed to test the sprayer settings before working, while remaining stationary.

This key activates or deactivates the simulation mode. The button is only available when no other speed source is available.

NOTE: Simulated speed will be disabled, if there is another speed source, with a speed higher than 0.0 km/h.



This key toggles between slow and fast simulated speed. The pictograms change color to indicate the selected speed, with green indicating the selected speed.

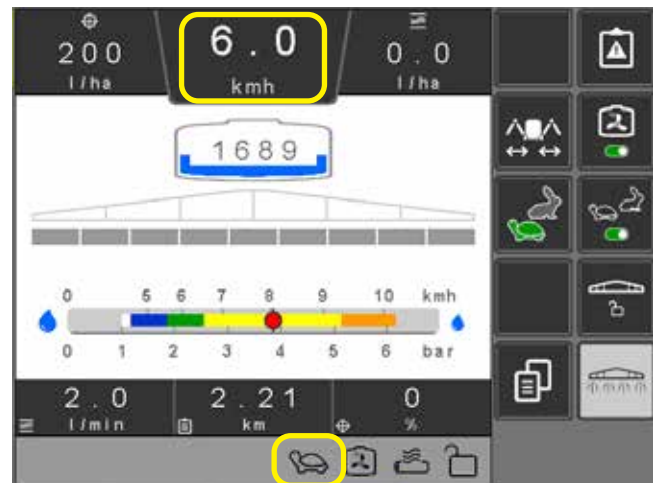


It is also possible to activate/deactivate simulation mode from the switch in the "Simulated speed" line in the JOB WIZARD (see page 36).

To be able to activate simulated speed, there can be no signal sending speed sources currently active. If simulated speed is activated, and the device gets a signal from a speed source, the simulated speed will turn OFF.

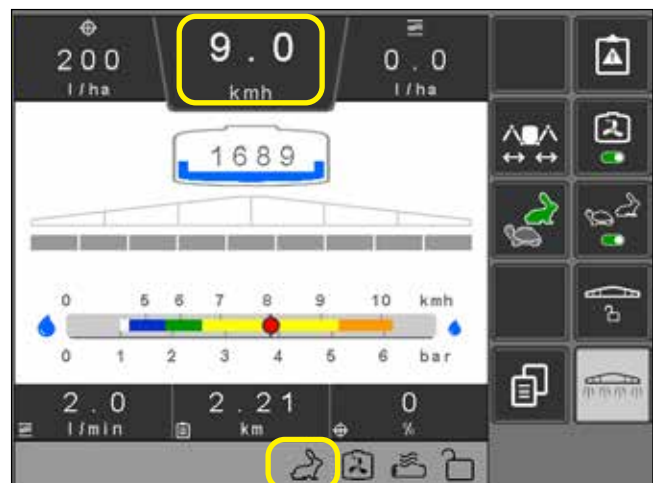
When simulated speed is activated, the speed indicator on the work screen shows the current simulated speed, and the sprayer will spray according to this simulated speed.

NOTE: Using GPS speed may cause slight movements, which will disable the simulated speed.



The status of the simulation mode is displayed in the status bar:

- Simulation active:
The icon (tortoise or hare) corresponding to the selected simulated speed, is visible in the status bar.
- Simulation inactive:
The icon (tortoise or hare), won't be present in the status bar.



SPRAYER JOB COMPUTER IC45-DYNARATE®

The simulated speed values (slow/fast) are set as follows:

Main Menu

Machine

Job Settings

Operation

OPERATION 1/2

Boost percentage step	%	5
Speed source	Implement	
Simulated speed		<input type="checkbox"/>
Simulated speed - low	kmh	6.0
Simulated speed - high	kmh	9.0
Simulated speed - limit	kmh	0.2

Press the lines to change the speed settings of the low (tortoise) or high (hare) speeds.




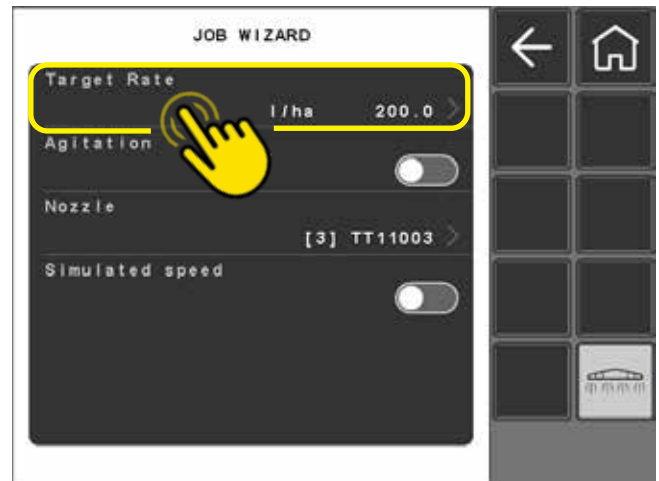
3 - USE AND SPRAYING

CHAPTER 3 - USE AND SPRAYING


ENTERING THE SPRAYING PARAMETERS VIA JOB WIZARD

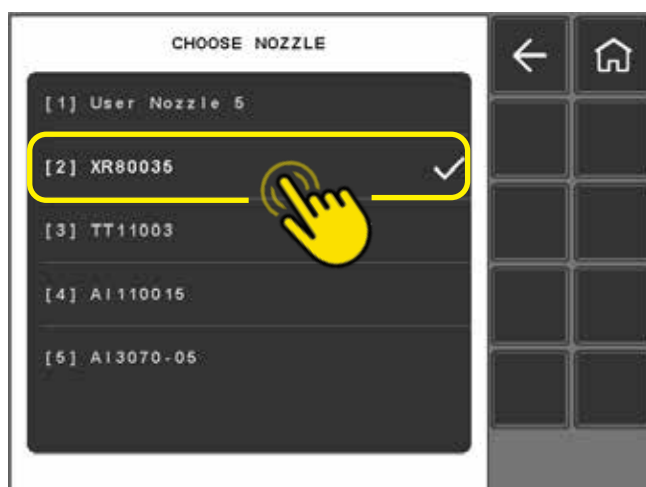
Selecting the Target Rate

- Press the JOB WIZARD key from the Work Screen 
- Pressing the Target Rate line opens the screen for entering the desired target rate.



Selecting a Nozzle

- Press the JOB WIZARD key from the Work Screen 
- Press the Nozzle line to open the nozzle screen. The "Choose Nozzle" screen lists the 1 to 5 preset nozzles. (See how to set up your nozzle list on page 30.)



- Press the line of the desired nozzle to select it. A checkmark highlights the currently selected preset nozzle.

USING TANK AGITATION

Activating Tank Agitation

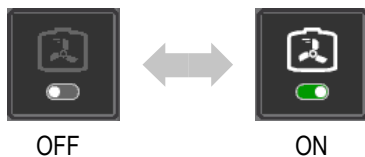
NOTE: Agitation mode may not be available on all sprayers. For more information, contact your manufacturer.

The tank agitation system performed by the spray pump can be activated/deactivated both from the Sprayer Job computer, as well as other physical locations, according to the ongoing task:

- Dedicated key on the work screen
- Joystick, switch box and DynaFill Terminal.

STARTING AGITATION FROM WORK SCREEN:

Pressing the key activates/deactivates the agitation system.



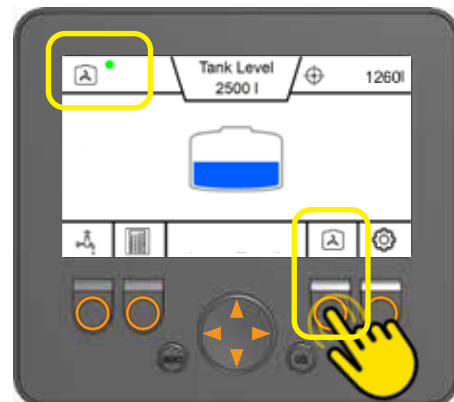
The status of the agitation is also displayed in the status bar. The icon is visible when the agitation is active. It disappears when it is inactive.



STARTING AGITATION FROM REMOTE TERMINAL:

NOTE: The remote terminal is an option.

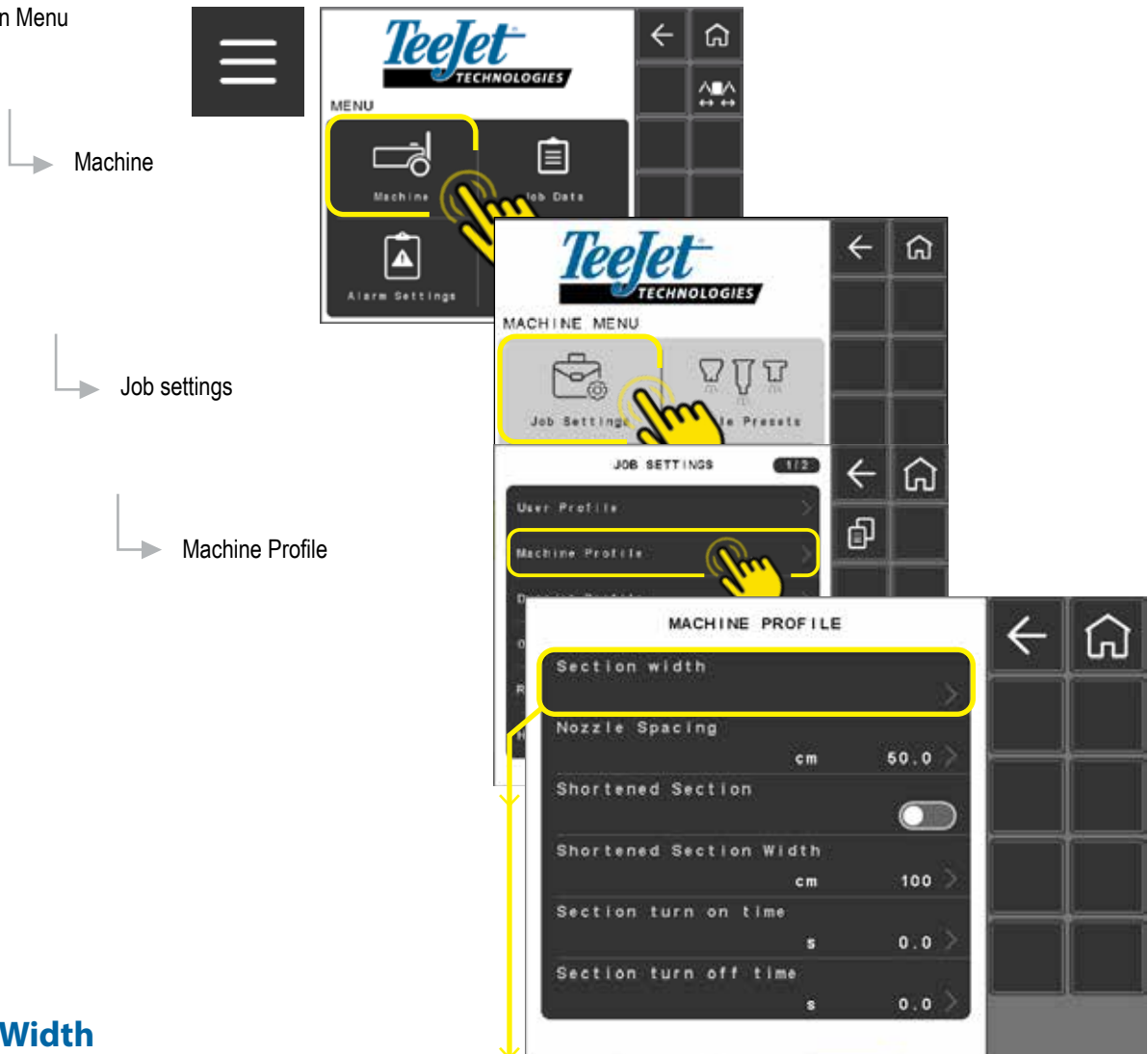
A Start/Stop button is also available on the DynaFill Terminal. This is useful when filling up and mixing the products in the tank from the sprayer command panel. A green dot next to the Agitation icon lights up when agitation is ON.



SPRAYER JOB COMPUTER IC45-DYNARATE®

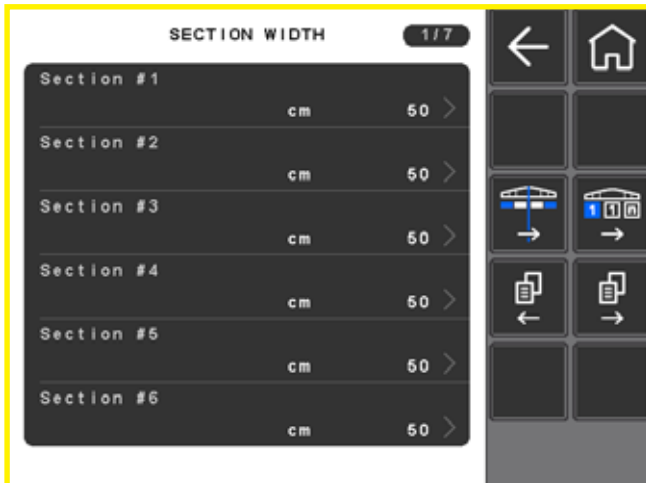
MACHINE PROFILE

Go to the Main Menu



Section Width

Press the Section number you wish to change the numerical value of (cm).



The number of pages in this menu, depends on how many sections you have programmed into the device.



NOTE: In our example, we have chosen 40 sections, so 7 pages are available.



Previous Page

Next Page

To go to another page, use the Previous Page or Next Page Key.

Nozzle Spacing

Enter the value in cm, how far there is between each of your nozzles.

Shortened Section

Pressing this line, will turn the toggle ON, meaning you instantaneously alter your outermost working widths, by the value of the number entered in the line below.

Example:

If you were previously using a 3 meter outermost segment, and you set your Shortened Working Width to 100 cm, you will need to manually shut OFF the nozzles in the remaining 2 meters, as only the first 100 cm (1m) will be digitally counted.



Shortened Section Width

Pressing this line, allows you to enter the value in cm, that you would like your Shortened Section toggle, to instantaneously alter your working width to.



NOTE: If the Shortened Section Width you input, is only meant to turn OFF a number of nozzles, and not an entire section, you will need to manually turn OFF the nozzles, if you want the physical amount of liquid, to match the digitally counted amount.

NOTE: If you enter the value as zero (0), you will turn OFF the entire outermost section in both directions, thereby turning OFF all the nozzles on the sections in question.

Section Turn ON and OFF Time

Section Turn ON Time

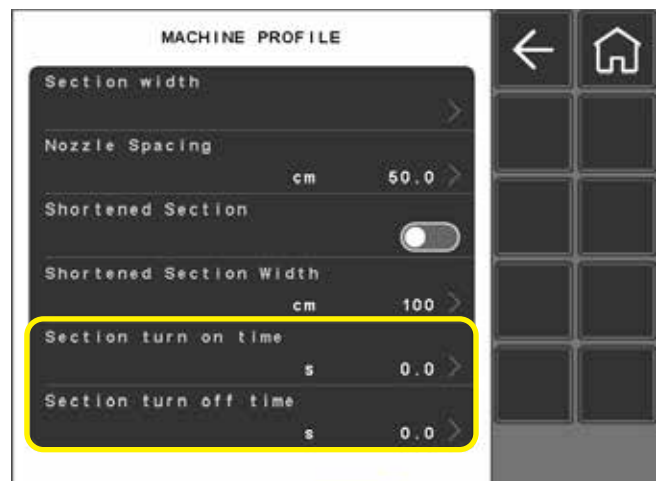
Enter the time it takes between when you enter an area in need of spraying, to the time that liquid, physically comes out of your sprayer.

The device will then turn ON your master switch, said time before, you enter the spraying area, to ensure full spraying coverage.

Section Turn OFF Time

Enter the time it takes between when you exit an area in need of spraying, to the time that liquid physically stops coming out of your sprayer.

The device will then turn OFF your master switch, said time before, you exit the spraying area, to ensure full spraying coverage, without going outside said area.



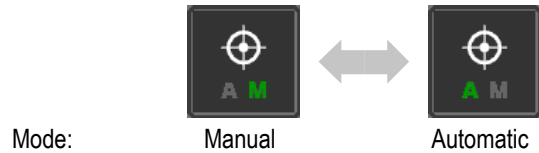
CHOICE OF REGULATION MODE

How to Switch between Manual and Automatic Modes

This key on the Work Screen allows you to select the control mode between manual and automatic regulation.

A green "M" indicates Manual mode.

A green "A" indicates Automatic mode.

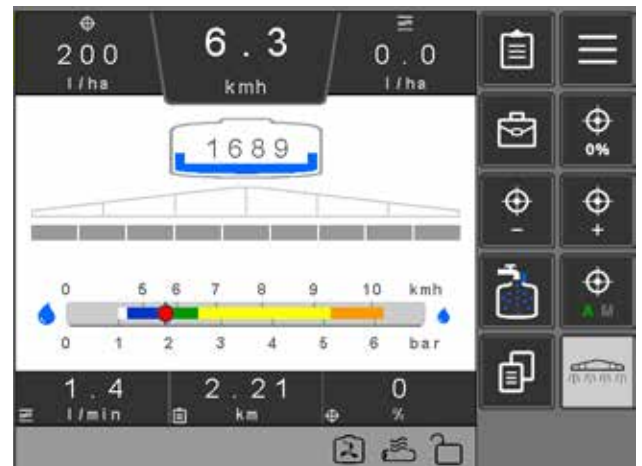


Automatic Mode

In automatic mode, the flow rate is automatically regulated to be proportional to the speed of the sprayer.

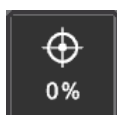
The target rate is set by the user in the JOB WIZARD (see on page 36)

These keys allow you to adjust the current target rate in configurable steps (1%, 5%, 10%, etc.).



Each press of the "+" or "-" key, applies an increase or decrease of the applied target rate by the preset percentage. The target rate adjustment is applied in real time and is displayed on the working screen in the dedicated digital indicator.

The target rate adjustment can be displayed in one of the customizable information areas.

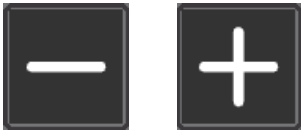


This key cancels the current target rate adjustments and returns to the original target rate.

Manual Mode

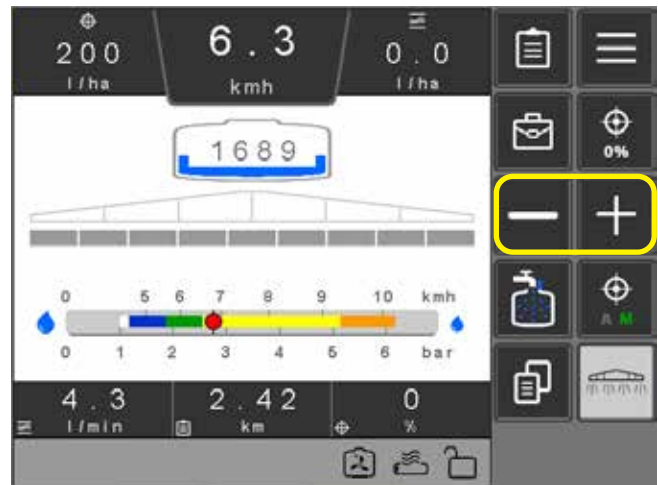
In manual mode, the application rate is not automatically regulated according to the vehicle speed.

The target rate is adjusted manually by pressing the Rate decrease or increase keys.



These keys will open or close the control valve and adjust the target rate as desired.

WARNING : Pressure in boom is not controlled automatically, hence it is possible to set the pressure so high that it may damage the sprayer.



SETUP OF THE DOSE RATE ADJUST STEPS:

You can modify the percentage of the dose rate boost keys.



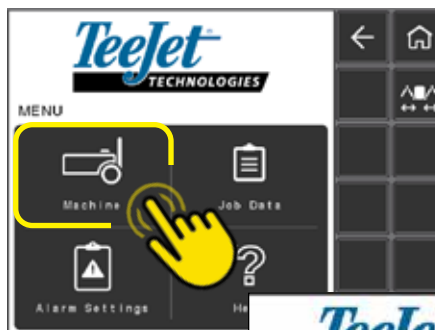
The default step is +/- 5%.

To modify this percentage go to:

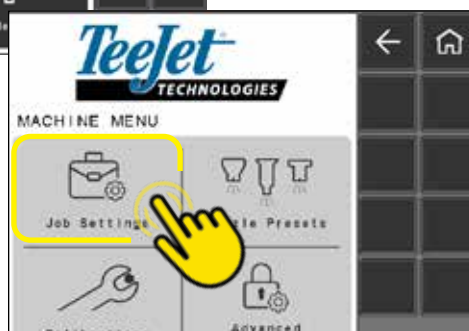
Main menu



Machine



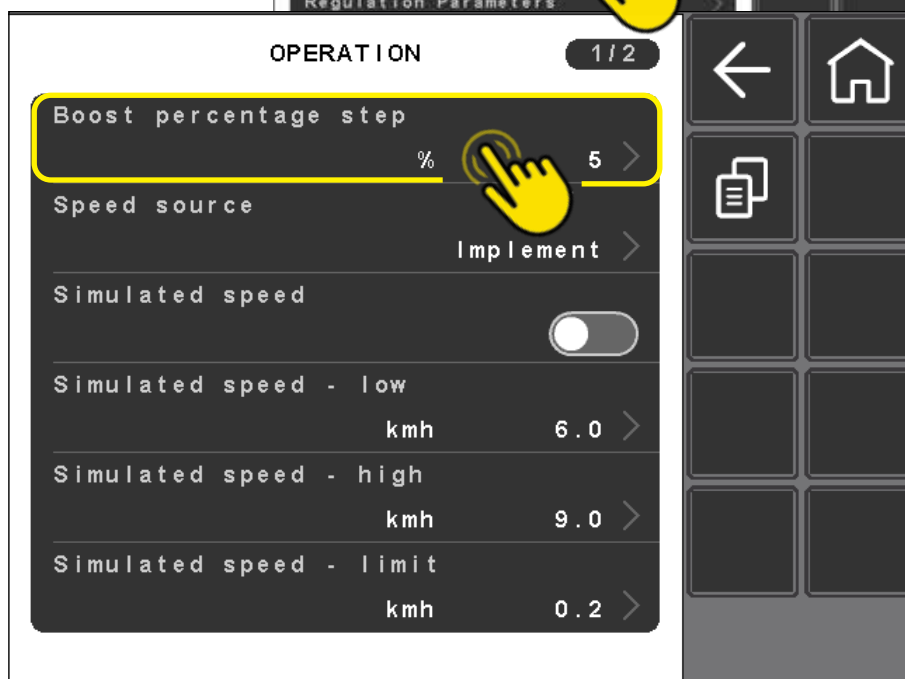
Job Settings



Operation



Press the "Boost percentage step", then enter the desired value.



FILLING THE SPRAYER TANK

Tank filling can be done in different ways, depending on the functions supported by your sprayer:

- The sprayer fill valve (is it manual or electrical - controlled by the Sprayer Job Computer)

Filling with the In-Cab Terminal

Press the Fill key on the Work Screen.



Calculate the required volume in the tank to fulfill the spray job you intend to do. Press the "Desired Content" line and enter the value.

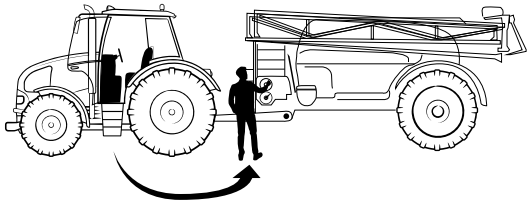
The "Desired content" line will now show the new value you entered, it is now time to start the filling..

There are two ways of doing this, depending on your sprayer's hardware.

Either manually or with the electronic-controlled fill valve.

MANUAL CONTROLS:

If your sprayer does not feature an electrically-controlled fill valve, open the fill valve manually.



When back in the cabin, you can monitor the progress of the filling, by toggling the "Filling Status" line to ON.

The "Filling Progress" line underneath, will then show the filling percentage value, in real-time.

When the value reaches 100%, or the "Actual content" value, equals the "Desired content" value, step back to the sprayer controls and manually turn the fill valve OFF.

- The features of your Sprayer Job Computer (is it fitted with the Tank Fill option or not)

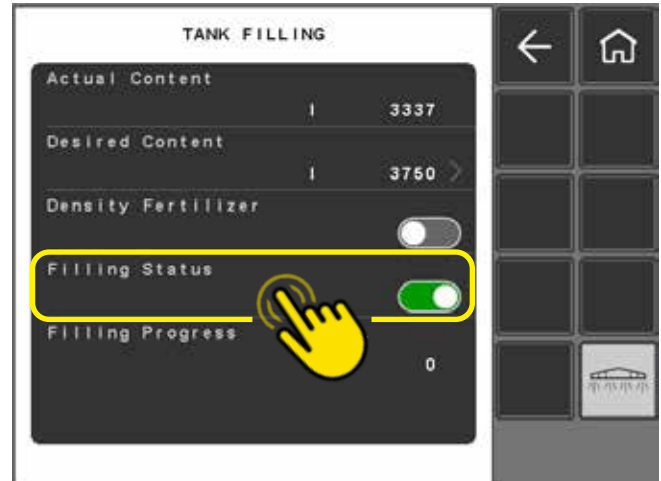


JOB COMPUTER CONTROLS:

If using a sprayer with this feature, the filling is started, simply by pressing the “Filling Status” line to toggle the button ON.

This will display the “Filling Progress” line on the bottom line, showing the percentage of the ongoing filling progress, in real-time.

When the value reaches 100% or the “Actual content” value equals the “Desired content” value, the Sprayer Job Computer turns the sprayer’s fill valve OFF and returns the “Filling status” button on the screen to OFF.



Filling Setup with DynaFill Optional Feature

Some sprayers come with an External Terminal at the filling station.

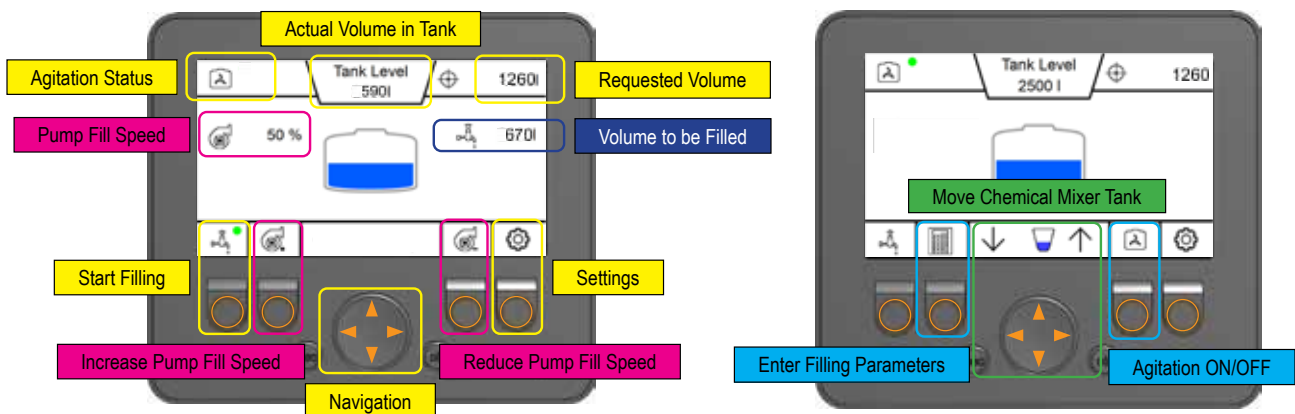
This remote terminal features a screen and a set of function and navigation buttons.

Some replicating commands are also available on the in-cab Terminal while some are only available on the DynaFill Terminal, such as the advanced calculator for required volume in the tank.

It is able to perform volume calculations, value input in the Sprayer Job Computer, as well as filling control and monitoring, all from the same place.

NOTE: There are multiple types of DynaFill Terminals. Some may differentiate from these illustrations.

OVERVIEW OF THE DYNAFILL TERMINAL CONTROLS:



All yellow fields, will always be present, no matter how your system is set up, or what you are doing.

The “Start Filling” button will cause the “Volume to be Filled” field to show up. Shown in dark blue above.

If your machine has the option, and you have chosen to get the function activated, as part of your settings, the three pink fields will also show up. Namely the “Pump Fill Speed”, as well as the “Increase Pump Fill Speed and Reduce Pump Fill Speed.

The pink fields, will only be present, once you have pressed “Start Filling”.

If you don’t have this function, the light blue fields on the other image, will stay on your screen.

The light blue fields, will be present, when the filling option, isn’t activated, or if you don’t have the Pump Filling speed function activated.

Lastly, if your sprayer has this option, and you have chosen to activate the function as part of your settings, the green field, is used to raise and lower the chemical mixer tank, by pressing the arrow keys.

Press the Settings to access the Settings Menu.



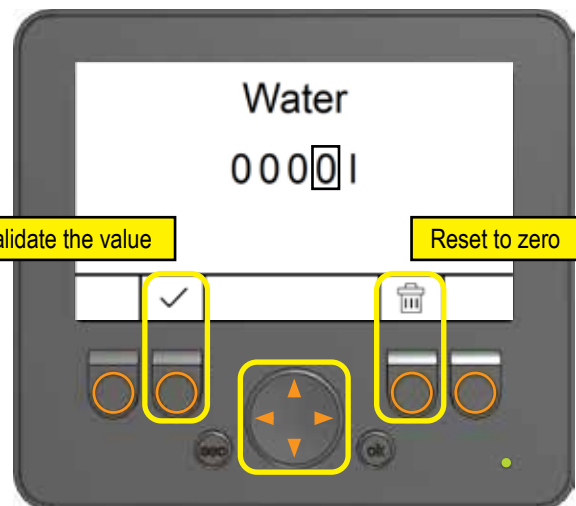
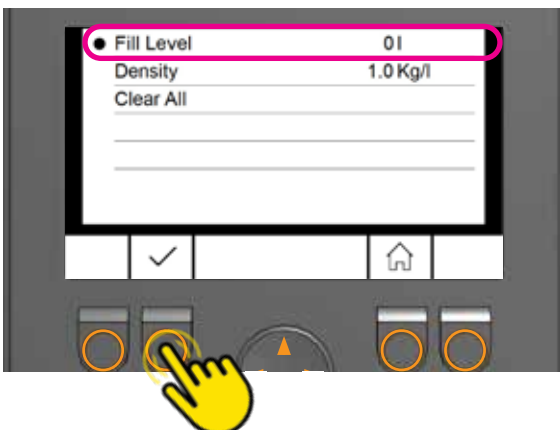
There are two ways of calculating the required volume, Simple and Advanced.

SIMPLE MODE:

To set the calculator to simple mode, use the navigation button arrows (Up/Down) to move the black dot cursor to the "Calculator Type" line. Press the Validate button to toggle between Simple and Advanced mode.



Press the Home button, to go back to the working screen, then press the Calculator button. Use the navigation button to move the black dot cursor to the "Fill level" line and press the "Validate" button to enter the Water menu.



Enter the desired volume to be filled into the tank with the central button:

- The left and right arrows move the rectangle cursor to the left or right.



- The up and down arrows increase or decrease the number in the rectangle cursor unit by unit.

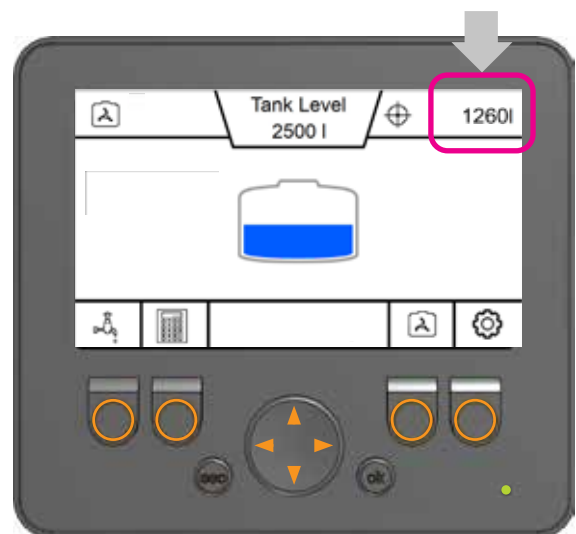
- Repeat the process for all the numbers to be modified. In our example, we have chosen to set the volume to 1260 liters.

- In the event of an error, reset the value to zero with the Delete button and start again.

- When the desired value is display, press the “Validate” button.



The value entered is now displayed in the top-right corner of the DynaFill Terminal, just like on the universal terminal in the cabin.



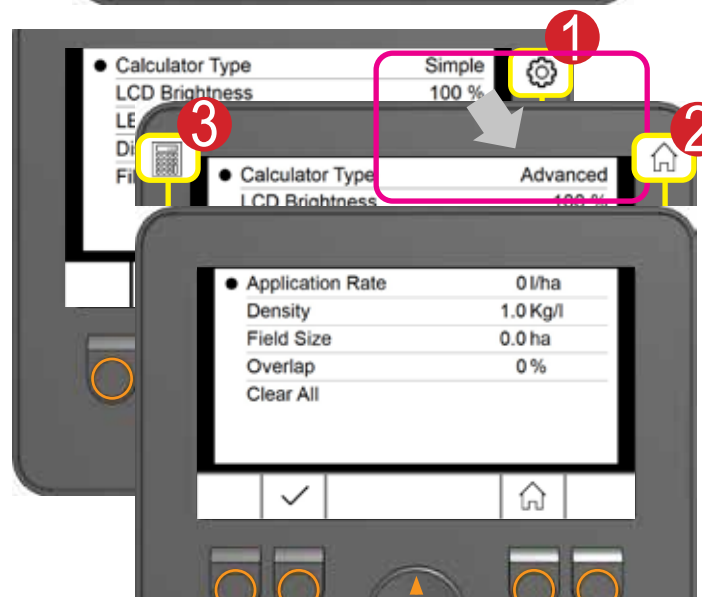
ADVANCED FILLING MODE:

Press the “Settings” button, and use the navigation button arrows (Up/Down) to move the black dot cursor to the “Calculator Type” line. Press the Validate button to toggle between Simple and Advanced mode.

Press the Home button, to go back to the working screen, then press the Calculator button. Use the navigation button to move the black dot cursor.

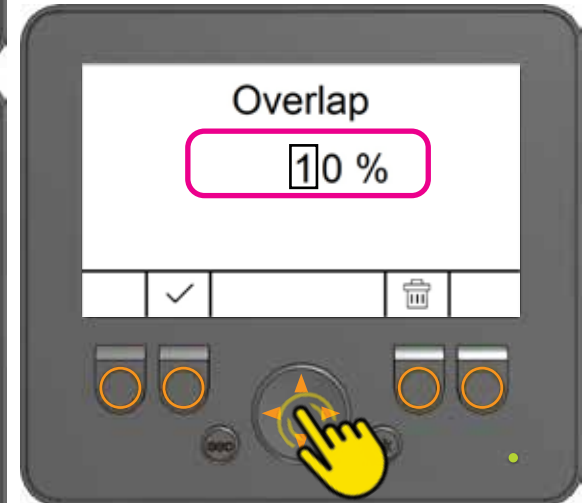
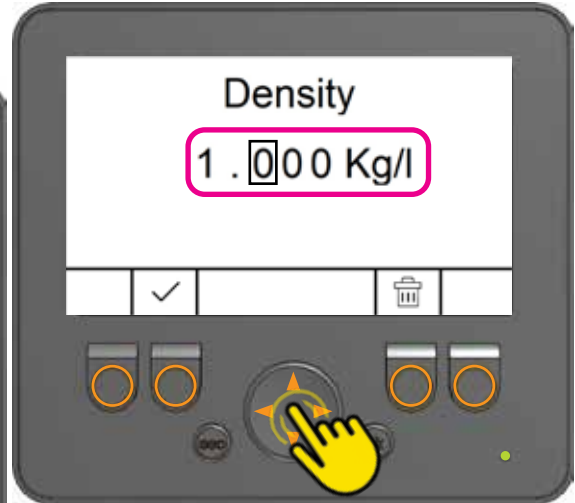
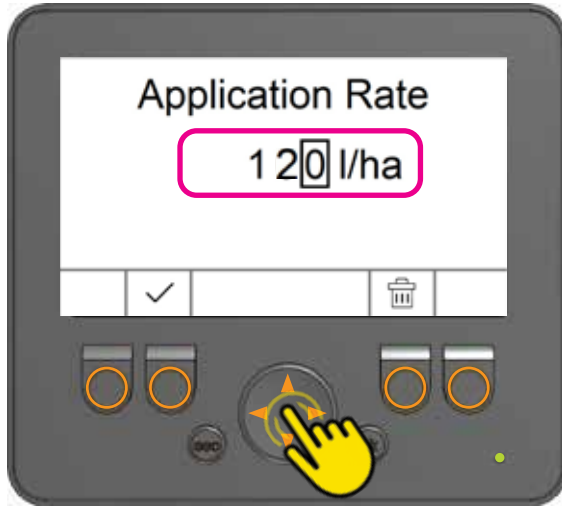
The advanced mode allows you to calculate the volume to be filled, based on below information:

- Application Rate or dose per hectare (Units in l/ha)
- Density of the sprayed product, water solution or liquid fertilizer (Units in kg/l)
- Field size or area to be treated (Units in ha)
- Overlap or passage coverage (Units in %)



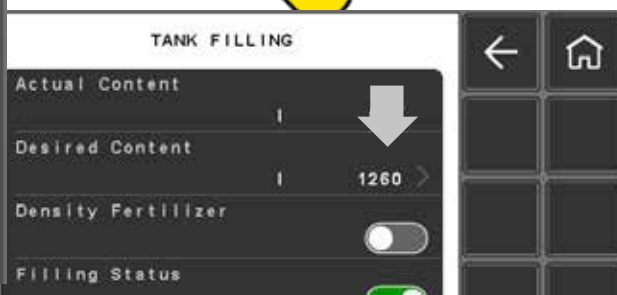
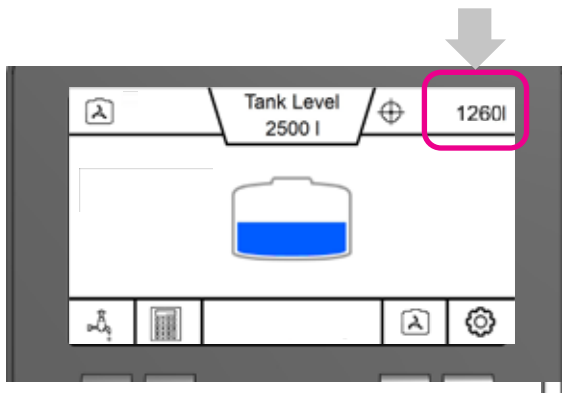
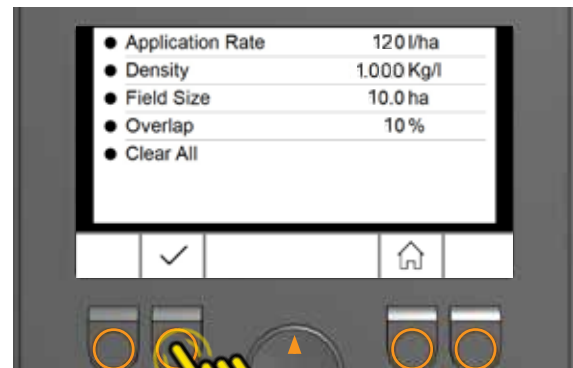
SPRAYER JOB COMPUTER IC45-DYNARATE®

Enter the required values in each of the other lines, using the central button.



When all information lines have been filled in, validate.

The required volume is calculated and the result (in this case 1260 liters) is automatically registered in the system as "Desired content", displayed on the remote display as well as on the universal terminal display in the cabin.



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START FILLING AND FILLING STATUS:

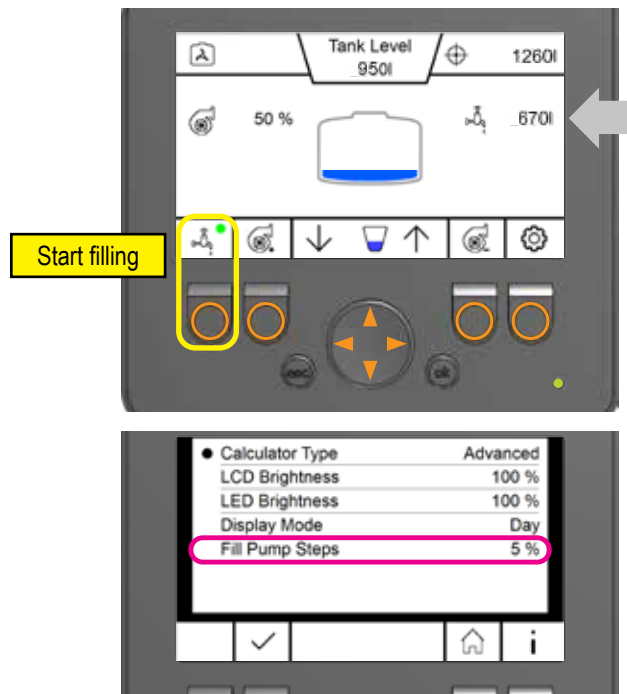
A tap is displayed on the DynaFill Terminal indicating the remaining volume to be filled to reach the required volume.

The fill button activates the filling valve (ON/OFF)

Pressing the Increase Pump Fill Speed or Decrease Pump Fill Speed will change the speed of the filling pump, by the percentage that has been set in the Settings Menu.

NOTE: If this option is available on your machine, and you have activated the function in your settings.

Filling stops automatically when the desired quantity is reached.



Filling the Tank with Liquid Fertilizer

Filling the sprayer with liquid fertilizer requires correcting the setting of the density as it differs from water. It is possible to modify this parameter either on the working screen in the tractor or via the DynaFill Terminal.

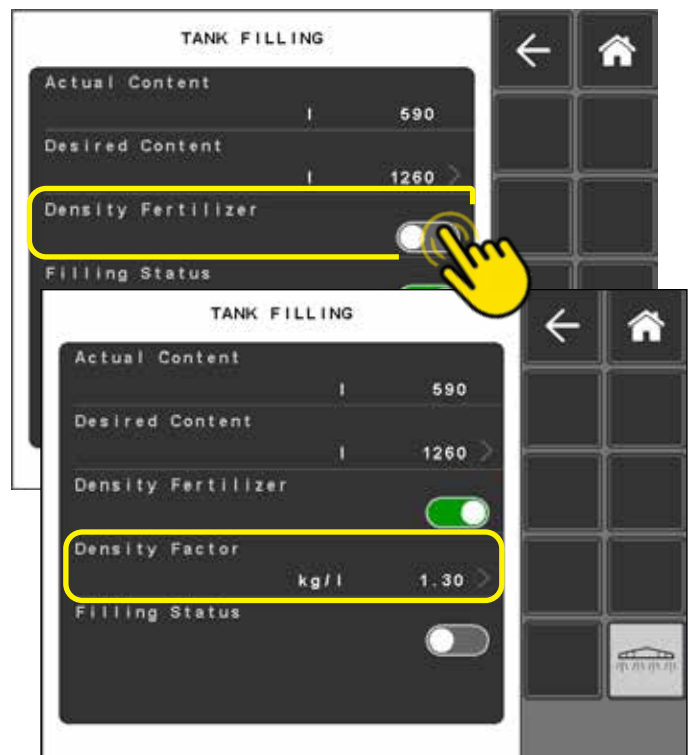


USING THE WORK SCREEN IN THE CABIN:

Press the Fill key on the Work Screen.



Press the Density Fertilizer line to toggle the button to ON.

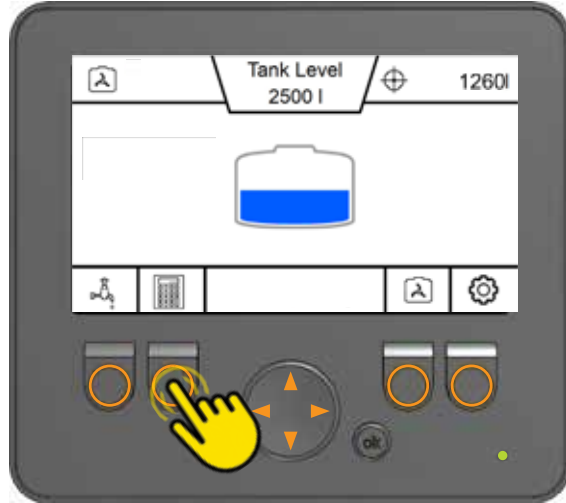


The density factor for fertilizer is set to 1.30 by default. It can be customized to your liking by pressing the Density Factor line to enter the exact value you want.

USING THE DYNAFILL TERMINAL:

Display the calculator by pressing the corresponding button.

Both simple and advanced mode of the calculator, feature the density setup function you will use, to move from water solution to liquid fertilizer spraying and vice-versa.



Use the Up/Down arrows of the navigation button to move the black dot cursor to the Density line as shown below:

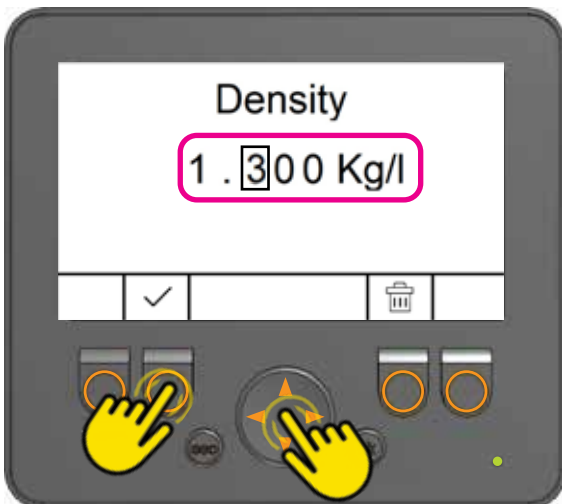
Simple mode:



Advanced mode:



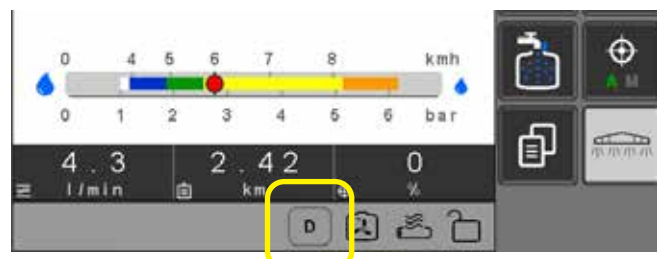
Validate to enter the Density menu and modify the actual value with the Left, Right, Up and Down arrows of the navigation button (as explained on pages 44-45):



Use the Delete button to reset the value to zero if necessary.

Validate the desired value.

When the density is set, a [D] icon is displayed in the status bar of the work screen on the in-cab terminal. This icon disappears when the setting is returned to the default position (Density=1,000) for water-based solution.



Agitation

NOTE: Agitation mode may not be available on all sprayers. For more information, contact your manufacturer.

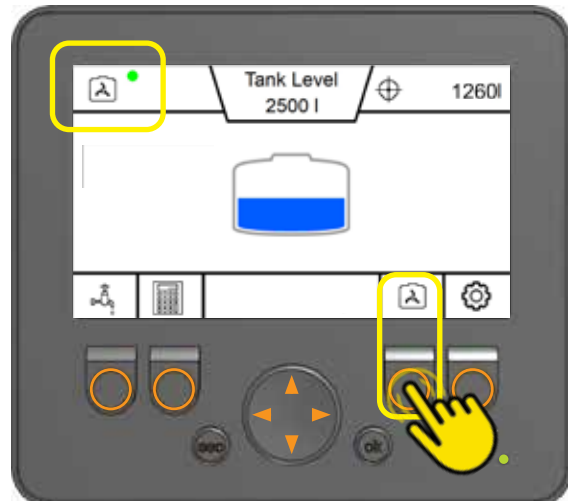
You may want to keep the spray solution properly mixed while you are driving toward the field or during the whole spraying operation.

The agitation system can be activated from the work screen of the in-cab terminal with the dedicated key or from the JOB WIZARD by toggling the Agitation button to ON.



It can also be activated from the DynaFill Terminal by pressing the Agitation button.

A green dot next to the Agitation icon lights up when agitation is ON.



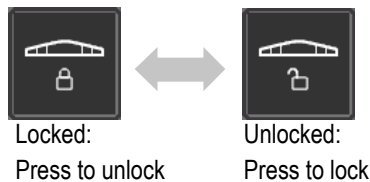
USE OF THE HYDRAULIC FUNCTIONS OF THE BOOM

NOTE: Folding options depend on the sprayer's configuration.

Boom Lock

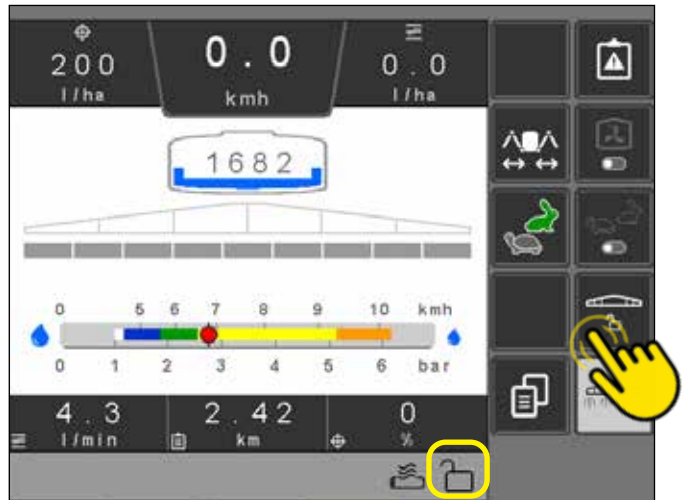
Whether driving on the road, folding or unfolding boom, the boom's pendular suspension must be locked, both for safety and to ensure a proper fixed position.

The pendular suspension is locked/unlocked with the Boom Lock key on the work screen.

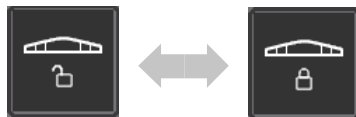


The key's padlock icon changes its appearance to indicate the boom lock status, also permanently displayed in the status bar, with the padlock icon with the open or closed shape.

NOTE: The Boom Lock key may not be displayed on the first page of the work screen, or even on the work screen at all. It may require either browsing pages using the "Next page" key, or going to the Folding Menu by pressing the Main Menu Key (shown below).

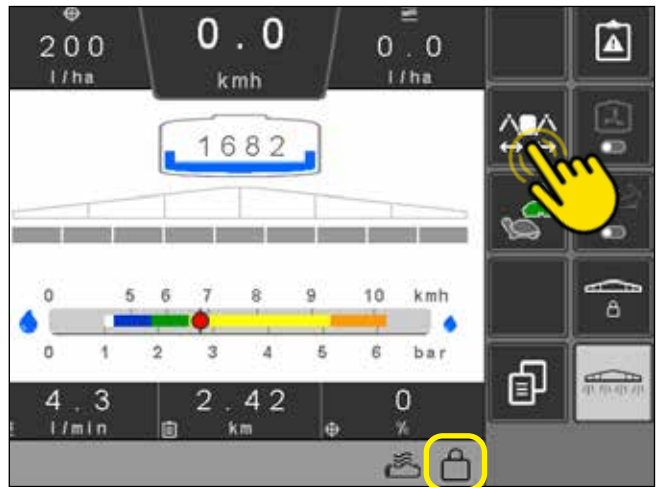


Unfolding



To unfold/fold the booms from the work screen, first lock the pendular suspension and then navigate to the spray booms folding page with Boom Control Key:

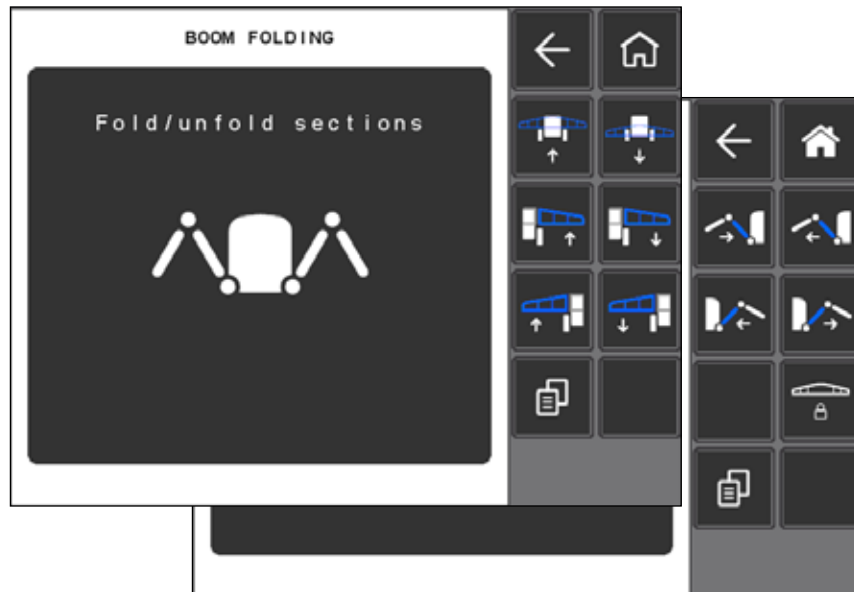
NOTE: The Boom Control Key may not be displayed on the first page of the work screen, or even on the work screen at all. It may require either browsing pages using the "Next page" key, or going to the Folding Menu by pressing the Main Menu key



TIP: The "Boom Control" key is always displayed on the main menu if you have hydraulic functions on your sprayer.

SPRAYER JOB COMPUTER IC45-DYNARATE®

This screen may feature several key pages, depending on the sprayer type and configuration, and will also display the Spray Boom's pendular suspension lock/unlock key.



To unfold, use the following keys :



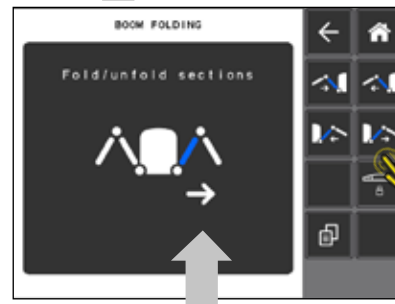
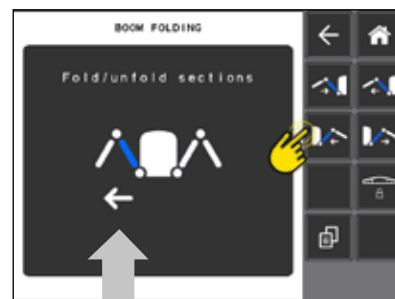
Unfolding the Left-hand spray boom



Unfolding the Right-hand spray boom

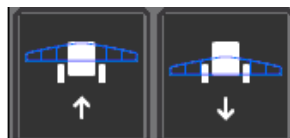
As long as the key is pressed, the hydraulic system performs the desired movement and the terminal screen displays an illustration of the moving part colored in blue and with a direction arrow.

When the key is released, the movement stops immediately and the neutral (full white) pictogram returns to the screen.



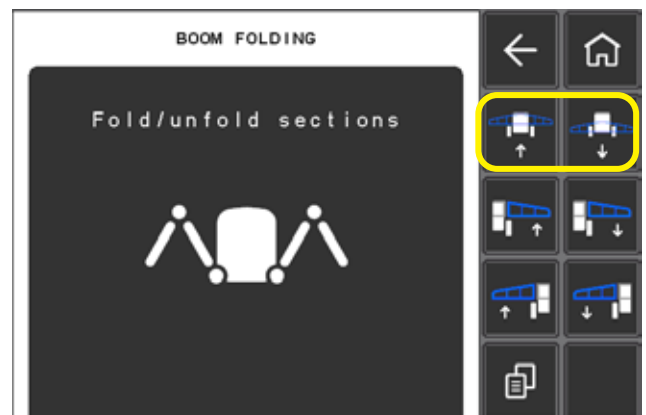
Up / Down

Use Boom Up and Boom Down to regulate the height of your boom:

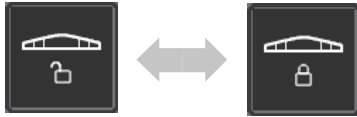


As long as pressure is applied to the key, the hydraulic system performs the desired movement.

When the key is released, the movement stops immediately.



Folding



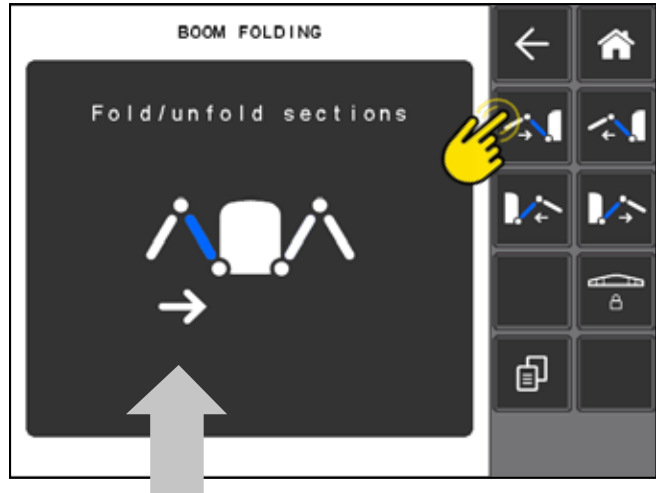
To fold the boom, first lock the boom's pendular suspension, then use the following keys :



Folding the Left-hand spray boom

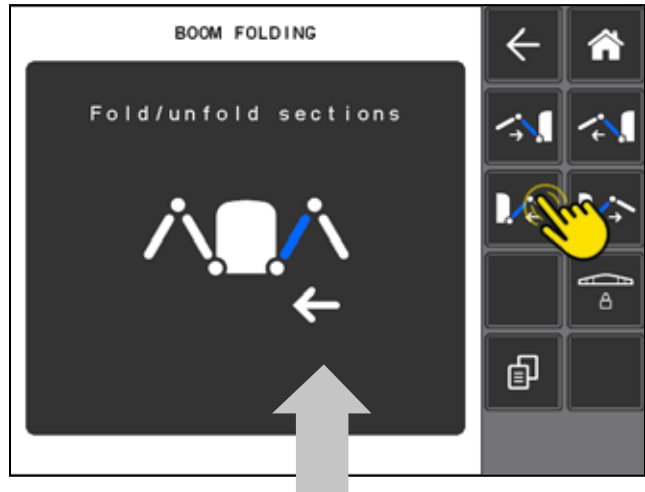


Folding of the Right-hand spray boom



As long as the key is pressed, the hydraulic system performs the desired movement and the terminal screen displays an illustration of the moving part colored in blue and with a direction arrow.

When the key is released, the movement stops immediately and the neutral (full white) pictogram returns to the screen.



ALARM CONFIGURATION

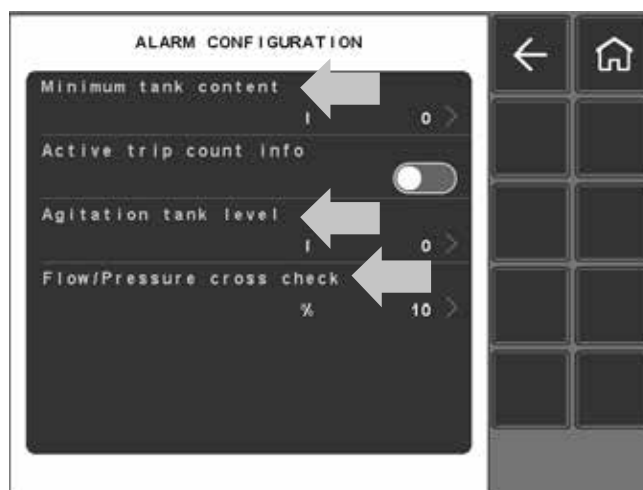
Accessible from the Main menu, the alarm settings page allows you to choose the events that will trigger a visual alarm on the screen during the work.



By touching a line you can access the value entry screen that uses a numeric keypad. If the value is set to zero, the alarm is disabled.

Alarms can be triggered:

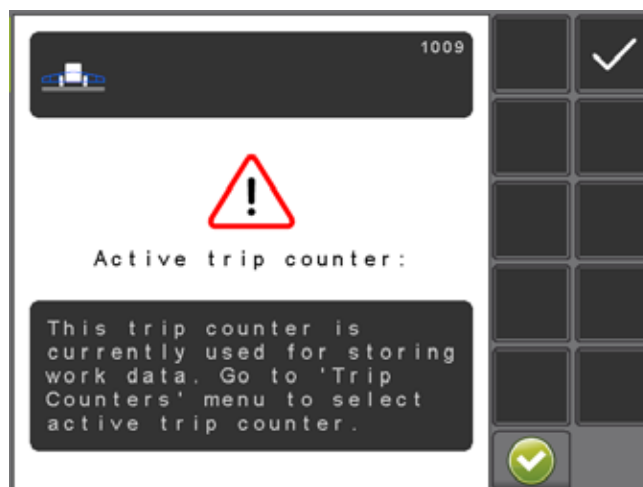
- When volume in the tank falls below a minimum value
= Plan to refill the tank.
- When volume in the tank with, agitation in operation, falls below a minimum value.
= Switch OFF the agitation.
- When the deviation between flow and measured pressure becomes higher than the stated value.
= Recalibrate the sensors or the nozzles must be changed



Alarms will show either with full screen pop-ups like below, or with red background color showing on the working screen (see page 16)

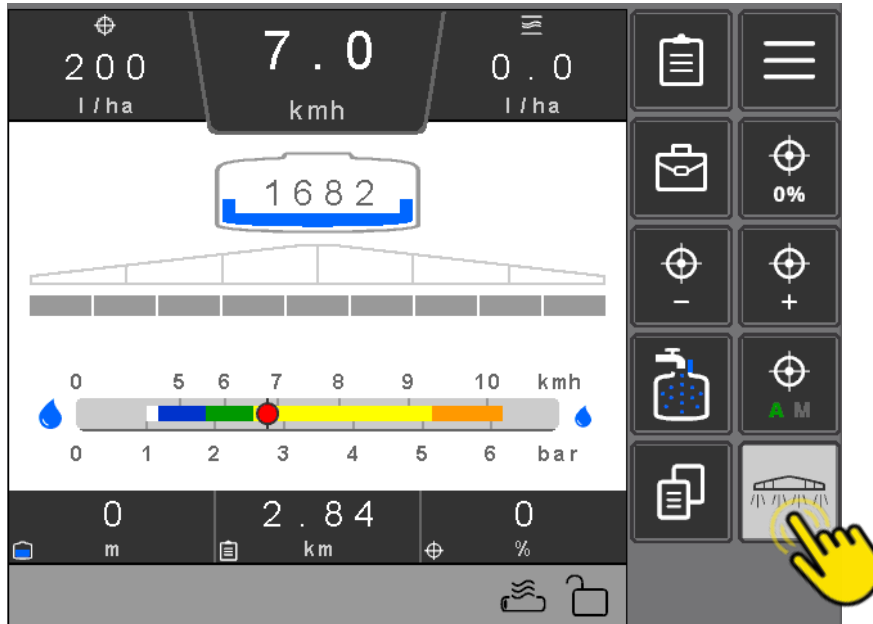


When set to ON, the “Active trip count info” triggers an alarm window each time the unit is started, to remind the user of the active trip counter number (between 1 and 16).

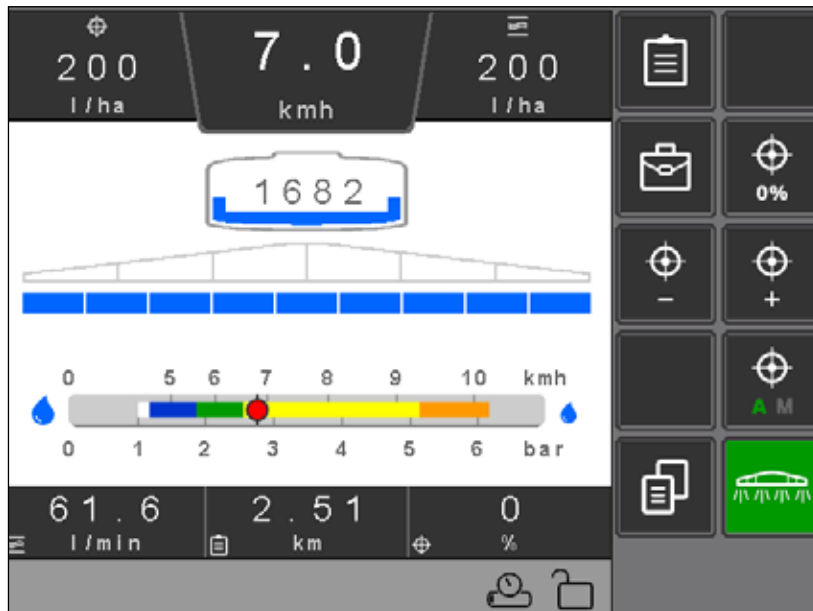


START SPRAYING

When all settings are completed and the sprayer is ready for work, start spraying by pressing the “spray” key.



The working screen displays the information in real time, the automatic regulation sets the required rate.



THE WORK SCREEN

BEGINNING THE SEASON

USE AND SPRAYING

AFTER SPRAYING

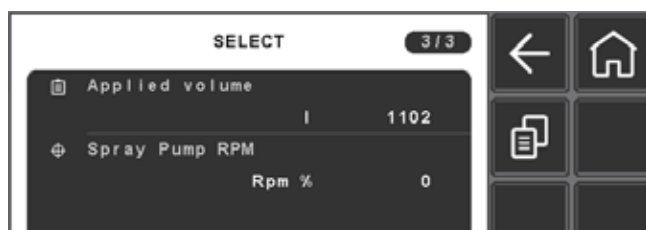
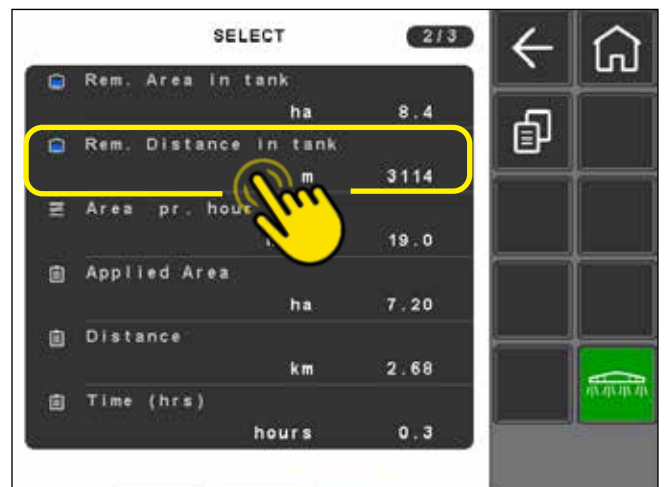
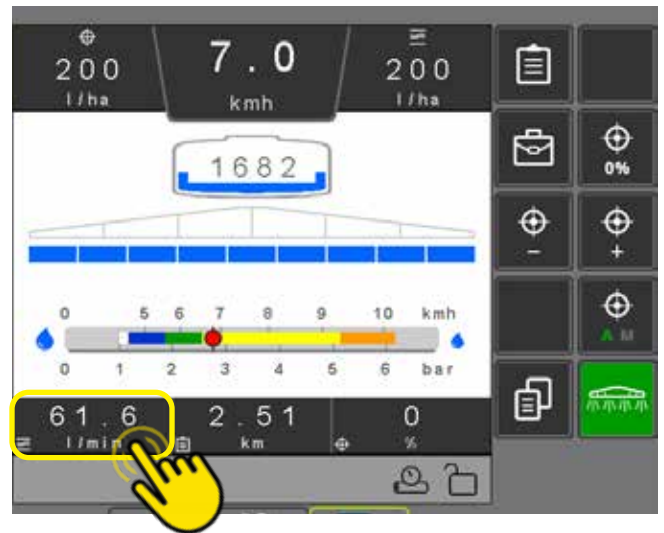
DIAGNOSTICS

USEFUL INFORMATION WHEN SPRAYING

A selection of information is permanently displayed on the screen in the configurable information areas.

To view other available information:

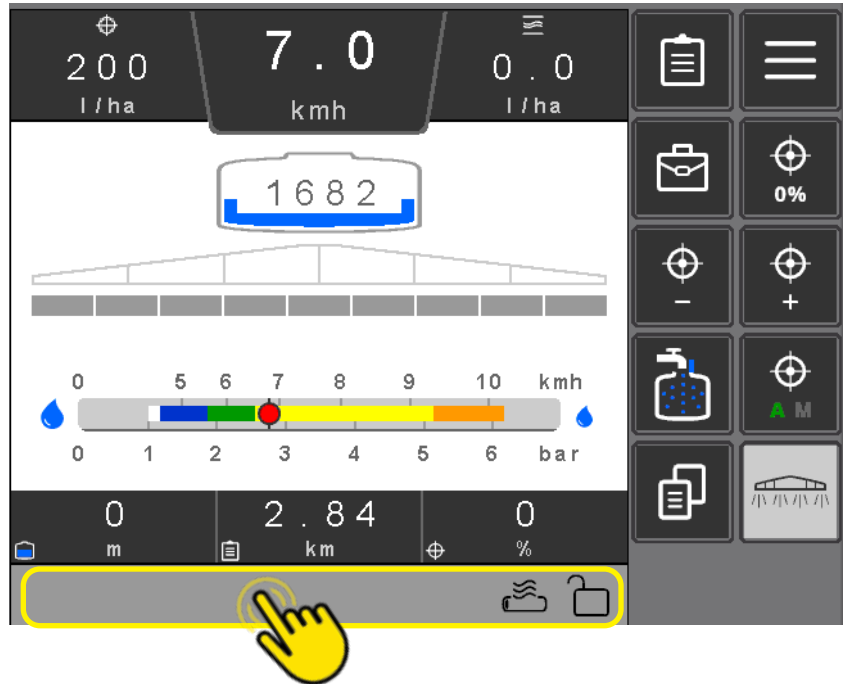
- Press on one of the information areas
- The list of information is displayed (Multiple pages) with actual values in real time.



- Select the one you want to be displayed in the working screen by pressing on it. It will now appear in the selected information area.



STATUS BAR



The grey status bar at the bottom of the screen, displays icons indicating active functions: agitation system status, boom lock status, sensors, etc.

By pressing the status bar, a list of the possible symbols will be accessible, along with the meaning of each symbol (Multiple pages):

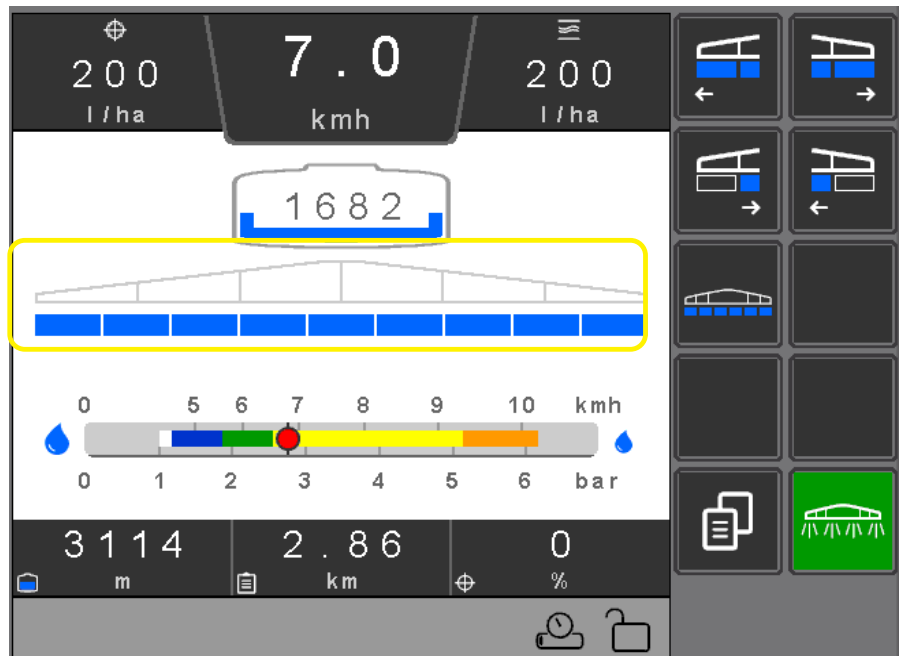


SECTION CONTROL ON THE SCREEN

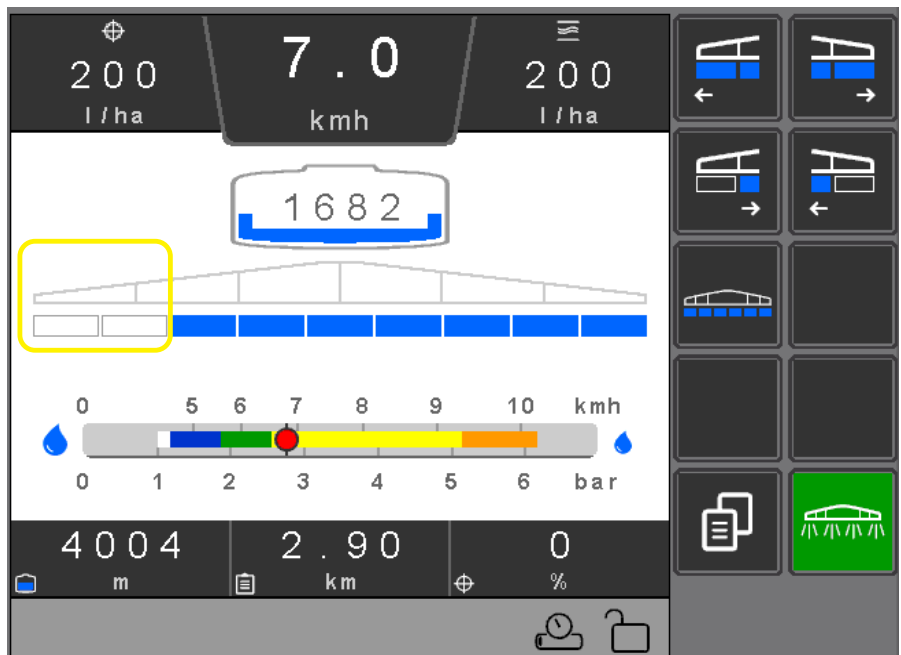
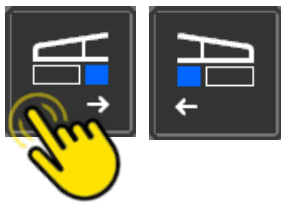
The function key pages on the work screen include commands to turn ON and turn OFF spray boom sections.

The sections are represented by rectangles under the spray boom:

- Sections are **Blue**, when the sections are turned ON and the sections are spraying
- Sections are **Grey**, when the sections are turned ON, but the sections aren't spraying.
- Sections are **White**, when the sections are turned OFF manually.



Turn OFF sections sequentially, with each press, on the left or right side. The closed sections are displayed as white:



Turn ON inactive sections sequentially, with each press, on the left, on the right, or all simultaneously.



4 - AFTER SPRAYING



CHAPTER 4 - AFTER SPRAYING

TASK COUNTER

The Job Data key in the general menu accesses the counters page.



The device has 3 counting levels:

- Mission, with 16 independent task counters which can be reset
- Campaign (partial totalizer counter, with reset)
- Totalizer counter without reset

Press on the line to access the corresponding counters:



Trip Counter

The last counter used will be displayed by default, but still supports the use of 16 individual counters.

To access one of the 16 counters, or start a new job with a blank counter, press the Active Job N° line, and choose one of the 16 counters by entering its number with the numeric keypad or the graphic cursor, then validate.

The Delete keys are used for resetting:

- The Delete key resets the task counter currently displayed on the screen,
- The Delete All key resets all 16 task counters at once.



Campaign Counter (Partial Totalizer)

Accumulates values since last reset of the campaign counter and resets itself to zero with the Delete key.



General Totalizer Counter

Totals all job counters since the device was commissioned and cannot be reset.



ALARM LOG

The logbook key records alarms that occur during work.

It should be able to be found on one of the workscreen pages, if your device has been set up for this.



The alarm log will assist the user or service technician in getting an overview of the most common issues and thereby make it easier to pinpoint the root cause of any problem that may be occurring or have occurred.

Some alarms can be set in the Alarms section of the general menu (see page 16).

The alarms can be based on the flow rate, pressure, ect.

The dashboard shows the following data:

- Flow rate: 200 l/ha
- Speed: 0.0 kmh
- Pressure: 0.0 l/ha
- Speedometer: 590
- Pressure gauge: 0 to 10 bar
- Flow rate: 1.3 l/min
- Distance: 0.676 km
- Percentage: 0%

The alarm log is accessed via the icon in the top right of the dashboard. Below are two screenshots of the alarm log interface:

ALARM LOG 1/6

Actual Rate Too High	10:20 AM	>
	02-17-2023	
Actual Rate Too High	10:26 AM	>
	02-15-2023	
Actual Rate Too High	10:26 AM	>
	02-15-2023	
Actual Rate Too Low	10:25 AM	>
	02-15-2023	
Actual Rate Too Low	10:24 AM	>
	02-15-2023	
Min. Regulation Pressure	10:21 AM	>
	02-15-2023	

ALARM LOG 2/6

Min. Regulation Pressure	04:31 PM	>
	02-14-2023	
Actual Rate Too High	03:16 PM	>
	02-14-2023	
Min. Regulation Pressure	03:15 PM	>
	02-14-2023	
Max. Regulation Pressure	03:15 PM	>
	02-14-2023	
Pressure/Flow Check	03:12 PM	>
	02-14-2023	
Max. Regulation Pressure	03:12 PM	>
	02-14-2023	



5 - DIAGNOSTICS

CHAPTER 5 - DIAGNOSTICS

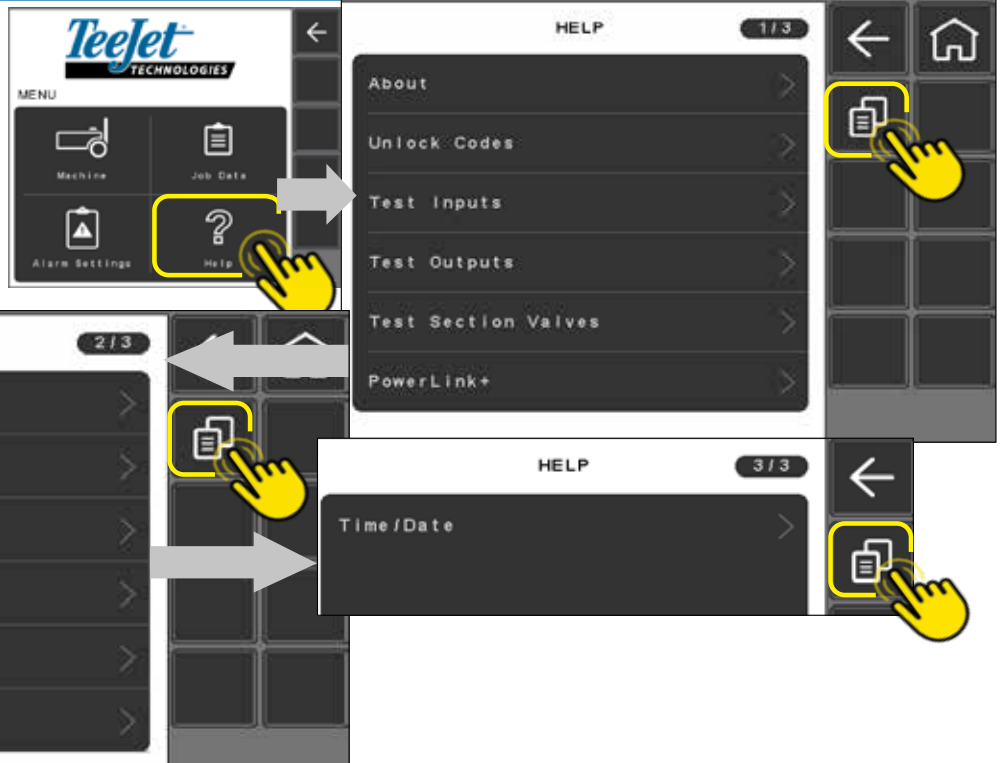
THE WORK SCREEN

To access test and other functions.

Go to Main Menu:



Help



BEGINNING THE SEASON

USE AND SPRAYING

AFTER SPRAYING

DIAGNOSTICS

DIAGNOSTIC OF SENSORS

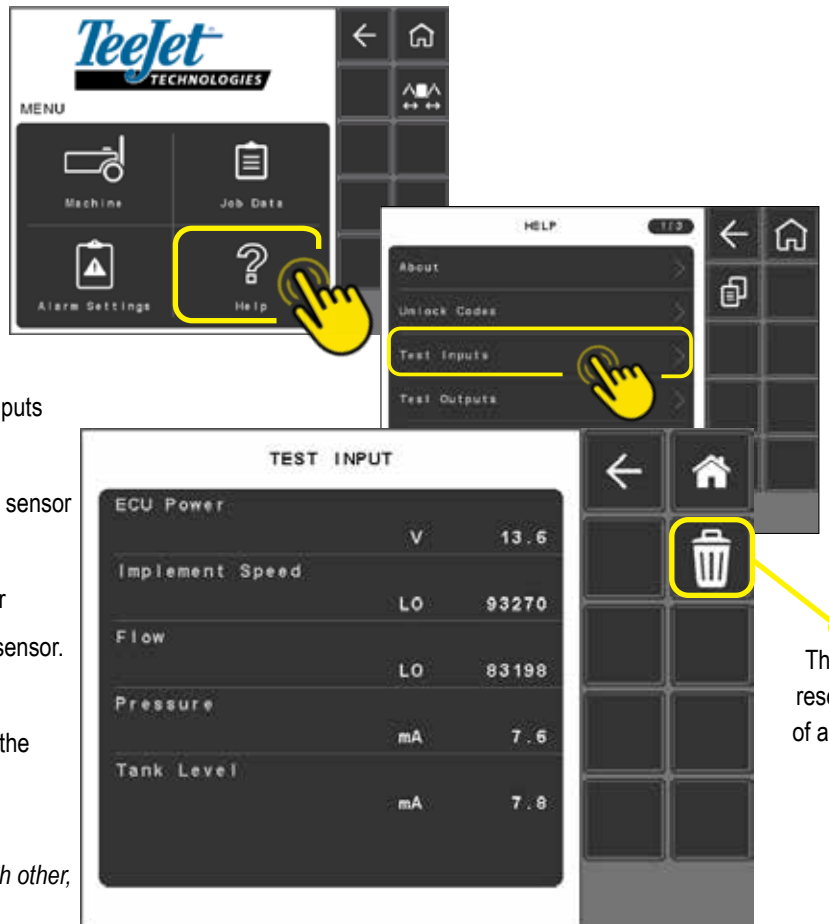
To test the connection and activity of the sprayer sensors:

Go to Main Menu:



Help

Test Inputs



- ECU Power = System supply voltage
- Implement Speed = Number of impulses from speed sensor
- Flow = Number of impulses from flow meter
- Pressure = Current in mA, output by pressure sensor
- Tank Level = Current in mA, output by the tank level sensor.
- Fill Flow = Number of impulses from Fill Flow Meter.

The values indicated are used to check the activity of the sensors.

NOTE: Tank level and Fill Flow are alternatives to each other, so only one sensor will show on screen

TEST INPUT		
ECU Power	V	13.6
Implement Speed	LO	93270
Flow	LO	83198
Pressure	mA	7.6
Tank Level	mA	7.8

The Delete key resets the value of all the counter

DIAGNOSTIC OF ACTUATORS

To test the operation of the valve actuators: master valve, regulation valve, filling valve, section valves:

Go to Main Menu:



Help

Test Outputs



Pressing the ON /OFF buttons activates the corresponding valves via the on-board computer to verify that they are responding correctly to its commands.


OTHER FUNCTIONS IN THE HELP MENU

About	Displays the technical reference information of the IC45 computer and its peripherals, serial numbers, software version, etc.
Unlock Codes	Unlock additional functions.
Test Section Valves	Tests the functionality of each boom section valve.
PowerLink+	Tests the electronic relay modules installed on the sprayer.
Universal Terminal	Displays the technical reference information of the UT such as serial number, software version, etc.
Task Controller	List and enable/disable ISOBUS task controllers.
TECU	Information received from the Tractor ECU.
Reload Factory Settings	Be aware that existing information will be overwritten.
PLP12 Safe State	Displays information about PLP12 electronic relay modules if they have gone into Safe State.
TankMatic	References of the filling controller.
Time / Date	Settings for internal clock and calendar.

IC45-DYNARATE

U S E R M A N U A L



A Subsidiary of  *Spraying Systems Co.*

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