

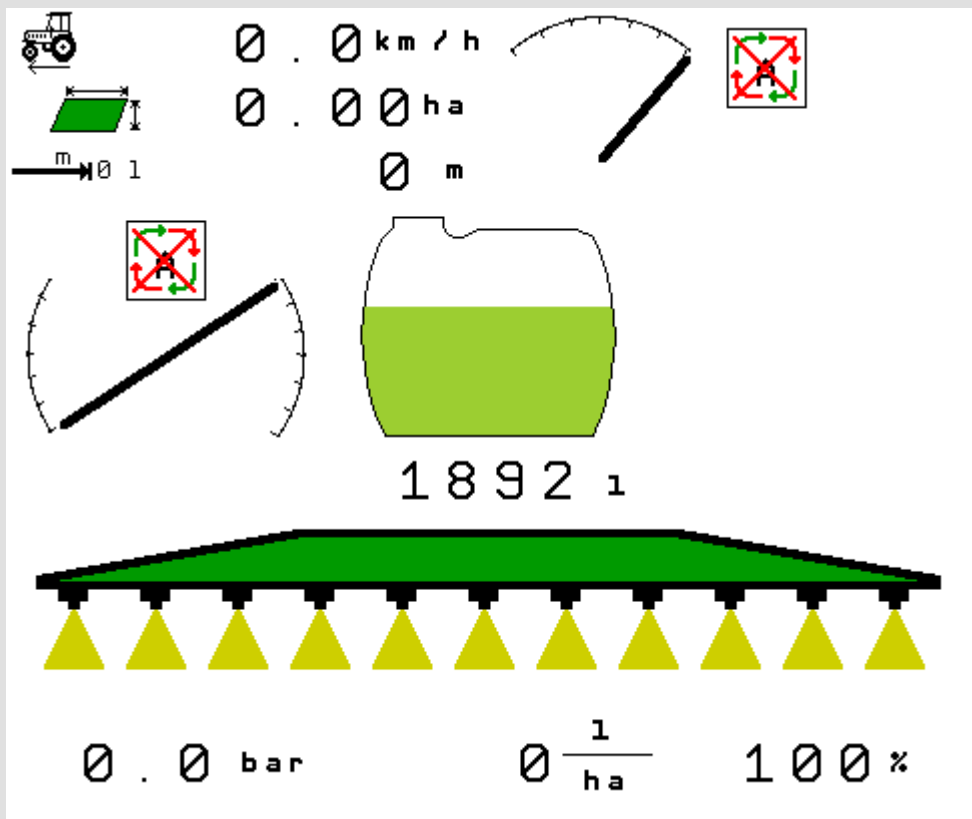
# Operating Manual

## AMAZONE

### Software ISOBUS for field sprayers

#### Multi-function stick **AMAPILOT**

#### Boom part width section control box **AMAClick**



MG4798  
BAG0104.9 06.17  
Printed in Germany

SmartLearning



Read and follow this operating manual before putting the machine into operation. Keep it in a safe place for future use!

en



# *Reading the instruction*

*manual and to adhere to it should not appear to be inconvenient and superfluous as it is not enough to hear from others and to realise that a machine is good, to buy it and to believe that now everything would work by itself. The person concerned would not only harm himself but also make the mistake of blaming the machine for the reason of a possible failure instead of himself. In order to ensure a good success one should go into the mind of a thing or make himself familiar with every part of the machine and to get acquainted with its handling. Only this way, you would be satisfied both with the machine as also with yourself. To achieve this is the purpose of this instruction manual.*

---

*Leipzig-Plagwitz 1872. Rud. Sark.*

**Manufacturer's address**

---

AMAZONEN-WERKE  
H. DREYER SE & Co. KG  
Postfach 51  
D-49202 Hasbergen, Germany  
Tel.: + 49 (0) 5405 50 1-0  
E-mail: amazone@amazone.de

**Spare part orders**

---

Spare parts lists are freely accessible in the spare parts portal at  
[www.amazone.de](http://www.amazone.de).

Please send orders to your AMAZONE dealer.

**Formalities of the operating manual**

---

Document number: MG4798

Compilation date: 06.17

© Copyright AMAZONEN-WERKE H. DREYER SE & Co. KG, 2017

All rights reserved.

Reprinting, even of sections, permitted only with the approval of  
AMAZONEN-WERKE H. DREYER SE & Co. KG.

## Foreword

---

## Foreword

---

Dear Customer,

You have chosen one of the quality products from the wide product range of AMAZONEN-WERKE, H. DREYER SE & Co. KG. We thank you for your confidence in our products.

On receiving the machine, check to see if it was damaged during transport or if parts are missing. Using the delivery note, check that the machine was delivered in full including the ordered special equipment. Damage can only be rectified if problems are signalled immediately!

Before commissioning for the first time, read and understand this operating manual, particularly the safety information. Only after careful reading will you be able to benefit from the full functionality of your newly purchased machine.

Please ensure that all the machine operators have read this operating manual before commissioning the machine.

Should you have any questions or problems, please consult this operating manual or contact your local service partner.

Regular maintenance and timely replacement of worn or damaged parts increases the lifespan of your machine.

## User evaluation

---

Dear Reader,

We update our operating manuals regularly. Your suggestions for improvement help us to create ever more user-friendly manuals.

AMAZONEN-WERKE

H. DREYER SE & Co. KG

Postfach 51










D-49202 Hasbergen, Germany

Tel.: + 49 (0) 5405 50 1-0

E-mail: [amazone@amazone.de](mailto:amazone@amazone.de)

<b>1</b>	<b>User Information .....</b>	<b>8</b>
1.1	Purpose of the document.....	8
1.2	Locations in the operating manual.....	8
1.3	Diagrams used.....	8
<b>2</b>	<b>General Safety Instructions .....</b>	<b>9</b>
2.1	Representation of safety symbols.....	9
<b>3</b>	<b>Product description machine control software.....</b>	<b>10</b>
3.1	Software version .....	10
3.2	Menu navigation layout .....	10
3.3	Hierarchy of the ISOBUS software .....	11
<b>4</b>	<b>Main menu .....</b>	<b>12</b>
4.1	Display of the Main menu .....	12
4.2	Sub-menus of the Main menu.....	12
<b>5</b>	<b>Weather documentation .....</b>	<b>13</b>
<b>6</b>	<b>Manage documentation.....</b>	<b>14</b>
<b>7</b>	<b>User profile.....</b>	<b>15</b>
7.1	Configuring user-specific key assignment .....	17
7.1.1	Example: for freely assignable functions 1 to 30, 32 in the Work menu.....	18
7.2	Configure multi-function display.....	19
7.3	Configure automatic devs. ....	19
7.4	Configure alarm limits .....	20
7.5	Configure the pump drive.....	20
7.6	Configure application rate increase .....	21
7.7	Configure part width section control .....	23
7.8	Configure the boom behaviour.....	25
7.9	Configure ISOBUS.....	26
<b>8</b>	<b>Enter machine data.....</b>	<b>28</b>
8.1	Configure the speed source.....	29
8.2	Calibrate flow meter .....	30
8.2.1	Calibrate flow meter 1 .....	31
8.2.2	Calibrate flow meter 2 (return flow meter) .....	32
8.2.3	Flow meter 3 (High Flow).....	32
8.3	Calibrate AutoTrail .....	33
8.4	Calibrate the booms.....	34
8.4.1	Calibrating the boom locking mechanism .....	34
8.4.2	Calibrate the tilt adjustment .....	34
8.4.3	Calibrate the DistanceControl .....	35
8.5	Menu Setup.....	36
<b>9</b>	<b>Info menu.....</b>	<b>37</b>
<b>10</b>	<b>Use on the field – Work menu.....</b>	<b>38</b>
10.1.1	Switching Section Control .....	40
10.2	Menu navigation.....	41
10.3	Work menu with function fields .....	42
10.4	Calling up the user-specific key assignment.....	43
10.5	Display in the Work menu .....	44
10.6	Deviations from the nominal state.....	45
10.7	Mini-view in SectionControl.....	45

## Table of Contents

10.8	Filling the  function group .....	46
10.8.1	With filling level indicator .....	46
10.8.2	Without filling level indicator .....	47
10.8.3	Comfort Package: automatic filling stop .....	47
10.8.4	Automatic filling stop when filling via the pressure connection .....	48
10.9	Function group boom kinematics  (Profi-folding) .....	49
10.9.1	Adjust the boom height (Profi-folding) .....	49
10.9.2	Swing compensation lock / unlock (Profi-folding) .....	49
10.9.3	Boom folding (Profi-folding) .....	50
10.9.4	Angle in the boom (Profi-folding II only) .....	54
10.9.5	Tilt adjustment .....	55
10.9.6	Nozzle illumination .....	56
10.10	Function group boom kinematics  (pre-select folding) .....	57
10.10.1	Selection function field (pre-select folding) .....	57
10.10.2	One-sided boom folding with pre-select folding .....	57
10.11	Function group Spraying  .....	58
10.11.1	Spray quantity control .....	58
10.11.2	Hydraulic pump drive .....	59
10.11.3	Switching the outer part width sections off .....	60
10.11.4	Switching off any part width section .....	60
10.11.5	Foam marker .....	61
10.11.6	Border nozzle, end nozzle or auxiliary nozzle .....	61
10.12	Function group steering / suspension  .....	62
10.12.1	AutoTrail (steering drawbar / steering axle for precise tracking) .....	62
10.12.2	Hydropneumatic sprung suspension .....	66
10.12.3	UX 11200: Traction assistance of the tractor .....	67
10.13	Function group DistanceControl / Autolift  .....	68
10.13.1	DistanceControl .....	68
10.13.2	Autolift .....	70
10.14	Function group Comfort  UX Super, Pantera .....	71
10.14.1	Dilute the spray liquid with rinsing water .....	72
10.14.2	Cleaning the sprayer with the tank filled (work interruption) .....	73
10.14.3	Cleaning the sprayer with the tank empty .....	74
10.14.4	Clean the suction filter with filled tank .....	75
10.14.5	Circulation cleaning .....	77
10.15	Function group Comfort  UF, UG, UX Special .....	78
10.15.1	Dilute the spray liquid with rinsing water .....	79
10.15.2	Cleaning the sprayer with the tank filled (work interruption) .....	80
10.15.3	Cleaning the sprayer with the tank empty .....	81
10.15.4	Automatic agitator deactivation .....	82
10.15.5	Circulation cleaning .....	83
10.16	Function group Front tank  .....	84
10.16.1	Front tank with Flow Control .....	84
10.17	Procedure for use .....	87
<b>11</b>	<b>Automatic single nozzle control .....</b>	<b>88</b>
11.1.1	Single nozzle control during operation .....	88

11.2	AmaSwitch (optional) .....	90
11.3	AmaSelect (optional).....	90
11.4	Configure nozzle switching .....	93
11.4.1	Configure standard nozzle body .....	95
11.4.2	Configure extra nozzle body .....	95
11.4.3	Configure automatic nozzle selection .....	97
11.5	Cleaning the nozzle body - AmaSelect.....	99
11.6	Nozzle body maintenance AmaSelect .....	99
<b>12</b>	<b>AUX-N multi-function sticks .....</b>	<b>100</b>
<b>13</b>	<b>AmaPilot/AmaPilot+ multi-function stick.....</b>	<b>101</b>
<b>14</b>	<b>Boom part width section control box AMAClick.....</b>	<b>104</b>
14.1	Function .....	104
14.2	Attachment.....	105
<b>15</b>	<b>Fault .....</b>	<b>106</b>
15.1	Display on the control terminal.....	106
15.2	Fault table .....	106
15.3	Failure of functions without alarm message on the terminal .....	112
15.4	Failure of the speed signal from the ISOBUS.....	112
15.5	Hydraulic pump drive malfunctions.....	114

# **1 User Information**

---

The User Information section supplies information on use of the operating manual.

## **1.1 Purpose of the document**

---

This operating manual

- describes the operation and maintenance of the machine.
- provides important information on safe and efficient handling of the machine.
- is a component part of the machine and should always be kept with the machine or the traction vehicle.
- keep it in a safe place for future use.

## **1.2 Locations in the operating manual**

---

All the directions specified in the operating manual are always seen from the direction of travel.

## **1.3 Diagrams used**

---

### **Handling instructions and reactions**

---

Activities to be carried out by the user are given as numbered instructions. Always keep to the order of the handling instructions. The reaction to the handling instructions is given by an arrow.

Example:

1. Handling instruction 1  
→ Reaction of the machine to handling instruction 1
2. Handling instruction 2

### **Lists**

---

Lists without an essential order are shown as a list with bullets.

Example:

- Point 1
- Point 2

### **Number items in diagrams**

---

Numbers in round brackets refer to the item numbers in the diagrams.  
Example:

- (1) Position 1



## 2 General Safety Instructions

Knowledge of the basic safety information and safety regulations is a basic requirement for safe handling and fault-free machine operation.



The operating manual

- must always be kept at the place at which the machine is operated.
- must always be easily accessible for the user and maintenance personnel.

### 2.1 Representation of safety symbols

Safety instructions are indicated by the triangular safety symbol and the highlighted signal word. The signal word (DANGER, WARNING, CAUTION) describes the gravity of the risk and has the following significance:



#### **DANGER**

**Indicates an immediate high risk, which will result in death or serious physical injury (loss of body parts or long-term damage) if not avoided.**

**If the instructions are not followed, then this will result in immediate death or serious physical injury.**



#### **WARNING**

**Indicates a medium risk, which could result in death or (serious) physical injury if not avoided.**

**If the instructions are not followed, then this may result in death or serious physical injury.**



#### **CAUTION**

**Indicates a low risk, which could incur minor or medium-level physical injury or damage to property if not avoided.**



#### **IMPORTANT**

**Indicates an obligation to special behaviour or an activity required for proper machine handling.**

**Non-compliance with these instructions can cause faults on the machine or in the environment.**



#### **NOTE**

**Indicates handling tips and particularly useful information.**

**These instructions will help you to use all the functions of your machine to the optimum.**

### 3 Product description machine control software

The ISOBUS software and an ISOBUS terminal make it easy to control, operate and monitor the AMAZONE machines.

The ISOBUS software works with the following AMAZONE field sprayers:

- **UF, UX, UG, Pantera**

The Main menu is shown after switching on the ISOBUS terminal when the machine computer is connected.

#### Settings

The settings can be adjusted through the sub-menus in the Main menu.

#### Operation

The ISOBUS software controls the application rate according to forward speed.


The Work menu shows all of the work data during operation and, depending on the equipment, the machine can be operated through the Work menu.

#### 3.1 Software version

This operating manual is valid from software version:

MHX version: 01.10.01


#### 3.2 Menu navigation layout



X

**Function fields with white background**


- for executing functions





X


**Function fields with coloured background**

- for menu navigation
- for calling up function groups in the Work menu

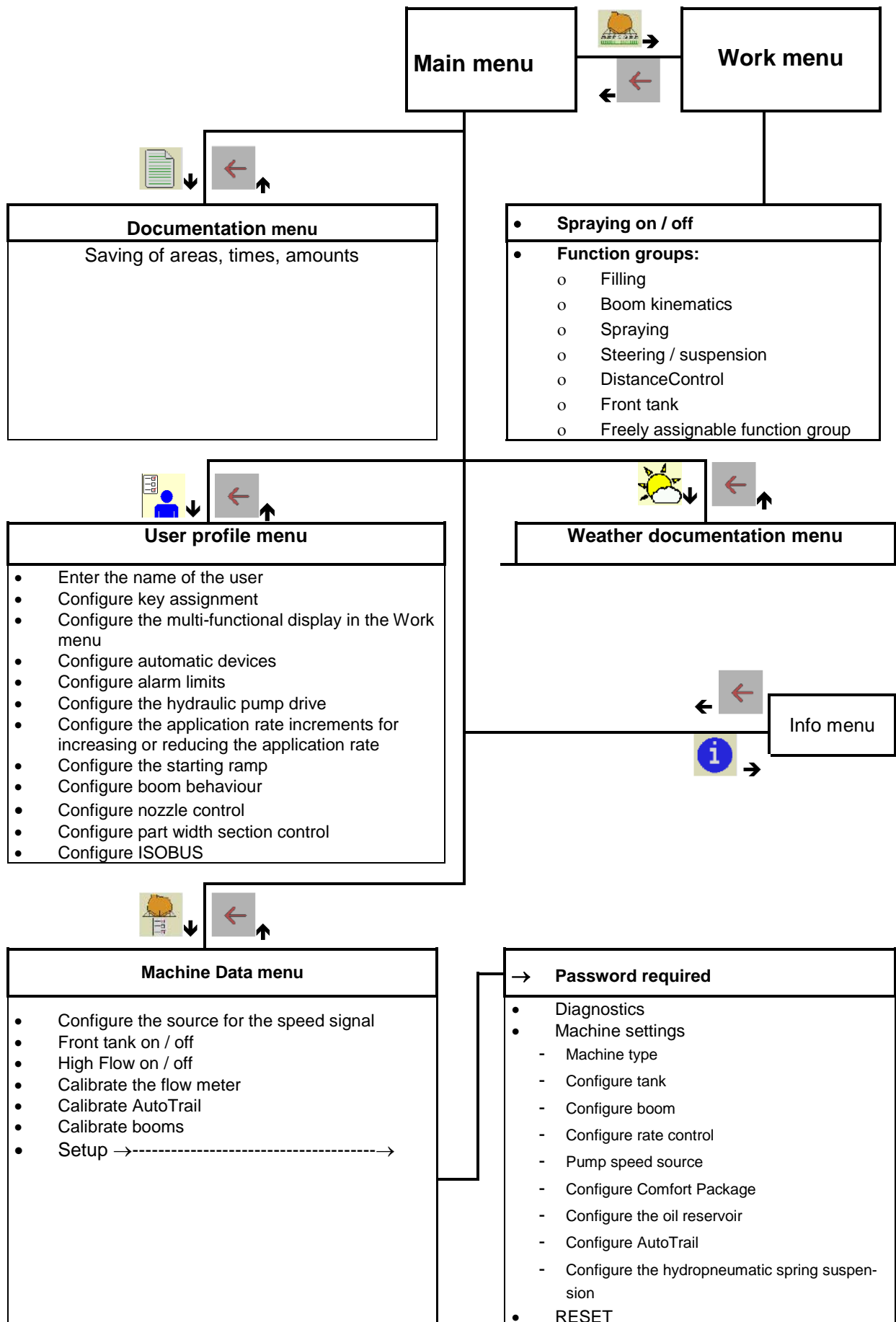


-  Back to previous menu



-  Scrolling in the menu






### 3.3 Hierarchy of the ISOBUS software



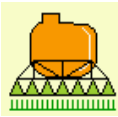





## 4 Main menu

### 4.1 Display of the Main menu

- Adjusted machine
- aktive documentation
- Entered spread rate
- Changes are also possible here.
- Set working width
- Tank size

			
	Activated documentation	2	
	Application rate	<input type="text" value=""/>	kg/ha
	Working width	24.0	m
	Tank size	3200	l

### 4.2 Sub-menus of the Main menu

-  Work menu
  - o Display and operation during work
-  User profile menu
  - o Each user can save a personal profile with settings for the terminal and the field sprayer.
-  Weather documentation
  - o Save weather data
-  Documentation menu
  - o Saving of areas, times, amounts.
  - o The calculated data can be stored for up to 20 documented jobs.
-  Machine Data menu
  - o Entry of machine-specific or individual data
  - o Change the setup of the machine (password required)
-  Info menu
  - o Software version and total ground coverage


## 5 Weather documentation









The Task Controller must be activated.

Every time you save, the entered weather data are saved with the active job in the Task Controller.

- Enter wind strength
- Enter wind direction
- Enter temperature

→  Save weather data.

 Weather data		
Active job		
	Wind speed	<input type="text"/> m/s
	Wind direction	<input type="text"/>
	Temperature	<input type="text"/> °C
 Cancel		 Save

## 6 Manage documentation





Select **Documentation** in the main menu!



The **Documentation** menu is an internal, non-readable job memory.


When the documentation menu is opened, the documentation which has been started is shown.


-  Overall data display
-  Daily data display



To end a documentation process, another must be started.

Up to a maximum 20 documented jobs can be stored.

Before further documented jobs can be created, existing ones must be deleted.






 Documentation

Name  

			
Worked area	0.00	0.00	ha
Required time	0.00	0.00	h
Quantity spread	0.00	0.00	l

-  Create new documentation.

→ Enter the name.

-  Start documentation.
-  Delete day data.
-  Start previously created documentation.
-  Start later created documentation.
-  Delete documentation.



- One documentation is always started.
- Documentation which has already been stored can be selected and restarted.


## 7 User profile




Select **User profile** in the main menu!


- Enter the name of the user
- Configure key assignment (see page 17)
- Configure the multi-functional display in the Work menu (see page 19).
- Configure the automatic devices (see page 19)
- Configure alarm limits (see page 19)
- Configure the hydraulic pump drive (see page 20)
- Configuring the application rate increments for increasing or reducing the application rate (see page 21).
- Configure the start ramp (see page 21)
- Configure the boom behaviour (see page 25)
- Configuring nozzle control (single nozzle control, see page 93)
- Configure part width section control (see page 23)
- Configure ISOBUS (see page 26)

### User profile







Configure key assignment




Configure multi-functional display




Configure automatic devs.




Configure alarm limits




Configure the hydraulic pump drive




Configure application rate increase




Configure boom behaviour



Configure nozzle control



Configure part width section control



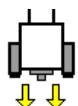
Configure ISOBUS

## User profile

- Switching of the work lights can be controlled manually or by the TECU.
  - ☒ The TECU switches the work lights on as soon as the parking light is switched on in the tractor.
  - ☐ Switch the work lights manually.
- When reverse driving is detected, the implement steering is moved to the centre position.
  - ☐ Reverse driving detection on
  - ☒ Reverse driving detection off



Work lights  
via TECU



Reverse driving detection



User: change, new, delete

### Change user:

1. Mark user.
2. Confirm marking.

### Create new user:



1. Create new user.
2. Mark user.
3. Confirm marking.
4. Enter name.



Profile list

Pit



Tom



- Copy the current user with all their settings.

### Delete user:



Mark  symbol and confirm.




When using an AUX-N multi-function stick, the freely selected key assignment of the multi-function stick are saved with the respective user.


Each user profile needs a key assignment.

Perform the key assignment on the VT1.




## 7.1 Configuring user-specific key assignment








In the work menu, the user-specific key assignment can be called up. The keys can be freely assigned.




Back to the default assignment

Here the function fields of the work menu can be freely assigned.

Perform key assignment:


1. Call up list of the functions.
- Functions which have already been selected are greyed out.
2. Select function.
3.  Select the screen where the function should be saved in the work menu.
4. Press the key / function field in order to place the function to the key / function field.
5. In this manner, all functions can be assigned any way you like.
6.  Save the settings or  
 cancel.





Configure key assignment

Select the desired function from the list and press the desired button.

Call up the filling menu



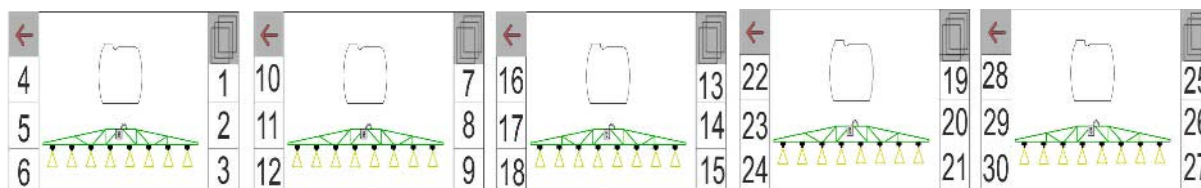

Cancel


Save

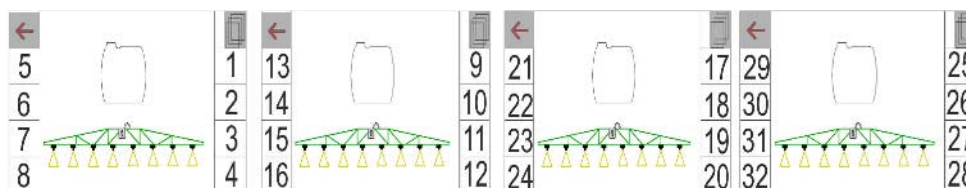
### 7.1.1 Example: for freely assignable functions 1 to 30, 32 in the Work menu

Page 1	Page 2	Page 3	Page 4	Page 5
--------	--------	--------	--------	--------

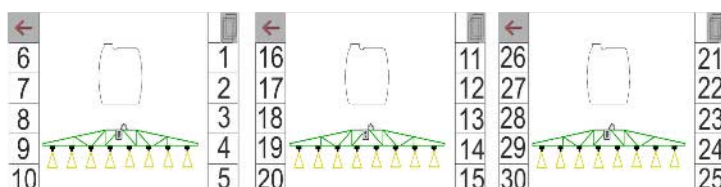
8 key terminal:



10 key terminal:



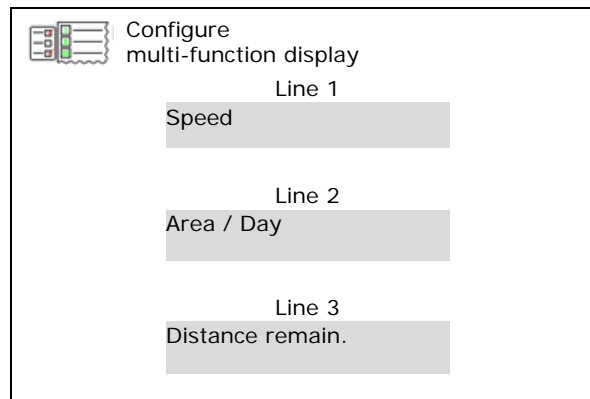
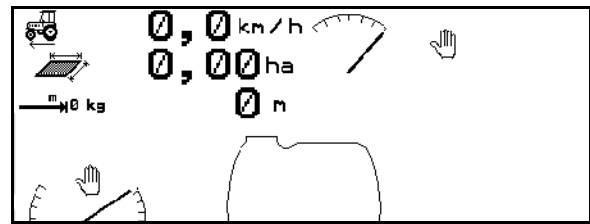
12 key terminal:



## 7.2 Configure multi-function display

Different data sets can be shown in the three data lines in the Work menu.

- (1) Current speed
  - (2) Pump speed
  - (3) Worked area per day
  - (4) Spread quantity per day
  - (5) Remaining distance until hopper is empty
  - (6) Remaining area until hopper is empty
  - (7) Distance counter for the headlands to locate the next tramline.
- When spraying on the headlands, the distance counter is switched off and set to zero and starts with the distance measurement until the sprayer switches on.
- (8) Setpoint
  - (9) Tank fill level



## 7.3 Configure automatic devs.

The common switchable automatic functions can be selected here.













Turn on the automatic devices in the Work menu!

Automatic functions







- ☒ switch together
- ☐ do not switch together

The automatic functions can only be switched off individually.

 O N	Configure automatic devs.	
 0 / 1	Rate control Manual / Automatic	
	Section Control Automatic	
	AutoTrail Manual / Automatic	
	DistanceControl Manual / Automatic	
	Suspension Manual / Automatic	
	Agitator pressure Manual / Automatic	
	Hydraulic pump drive Manual / Automatic	
	Boom automatically unlocked	
	FlowControl Automatic	





## 7.4 Configure alarm limits

- Enter alarm limit for filling level in l.
- A signal sounds when exceeding the alarm limit during spraying.
- Enter minimum spray pressure.
- Enter maximum spray pressure (<15 bar).
- A warning message appears when spraying outside the pressure range entered.
- Enter required pump speed
- Enter upper and lower alarm limit for the pump speed.

 Configure alarm limits	
	Filling level alarm limit <input type="text"/> l
	Minimum press <input type="text"/> bar
	Maximum press <input type="text"/> bar
	Required pump speed <input type="text"/> rpm
	Pump alarm limit <input type="text"/> + <input type="text"/> % - <input type="text"/> %

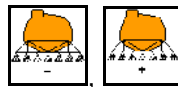
## 7.5 Configure the pump drive


- Spray pump speed
- Suction pump speed
- Agitating/cleaning pump speed

 Configure the pump speed	
	Spray pump speed <input type="text"/> rpm
	Suction pump speed <input type="text"/> rpm
	Agitating/cleaning pump speed <input type="text"/> rpm

## 7.6 Configure application rate increase

- Headland pressure regulation
  - ☒ yes
  - ☐ no
- Enter headland pressure  
(Standard value: 1.0 bar)
- Enter application rate increment (value for percent application rate change while working).




After pressing , the application rate will be reduced or increased by the entered percent value.


By repeatedly pressing, the percent value of the application rate will change accordingly.





Application rate back to 100%.


- Configure the starting ramp


 Configure application rate increase


 Headland pressure regulation


 Headland pressure
  bar


 Quantity increment
  %

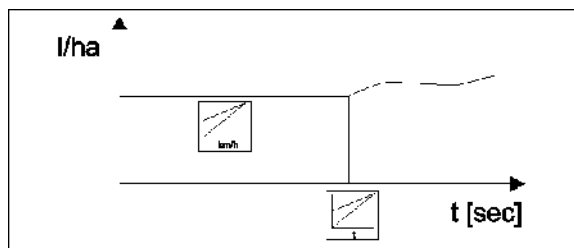

 Configure start-up ramp

## Configuring the starting ramp





The start-up ramp prevents under metering when starting up.

After switching on the spraying, the metering is applied according to the simulated starting up speed until the time specified expires. After that, the speed dependent spraying amount regulation is controlled.


Once the speed entered has been reached or exceeds the simulated speed, the quantity regulation starts.



- Starting ramp on /off
  - o ☒ on
  - o ☐ off
- Simulated start-up speed (km/h)
  - o Default value: 6 km/h
  - o Maximum value 12 km/h
- Time that passes until the simulated speed is actually reached in seconds
  - o Default value: 5 s
  - o Maximum value 10 s

	Configure starting ramp		
	Start ramp	<input checked="" type="checkbox"/>	
	Start-up speed	<input type="text"/>	km/h
	Start time	<input type="text"/>	s

## 7.7 Configure part width section control


- Switch the desired part width sections in the work menu
  - ☒ on
  - ☐ off
-  The number of boom part width sections deactivated is shown.
- Permanently deactivate individual part width sections.
- Configure switch point  
See on page 24
- Optimising switch points  
See on page 24



It is better to set the switch points through the control terminal!

→ Overlap is visible in Section Control!

### Deactivate separate boom part width sections:


- ☒ Active
  - ☐ Deactivated
-  Call up other boom part width sections


Deactivate part width sections is used to permanently switch off part width sections as desired.


The permanently switched off part width sections are marked with a red X in the Work menu.


The part width sections also remain deactivated after the control terminal has been switched off. The deactivated part width sections can be temporarily switched on again in the Work menu. The part width sections can only be permanently activated again here.


The reduced working width is also documented in the Task Controller



Configure part width section control



Selection of individual part width sections


Deactivated boom part width sections


Deactivate separate boom part width sections


Configure switch point

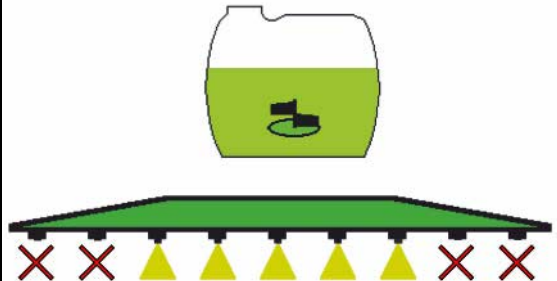

Optimising switch points


Deactivate separate boom part width sections

Boom part 1

Boom part 2

Boom part 3



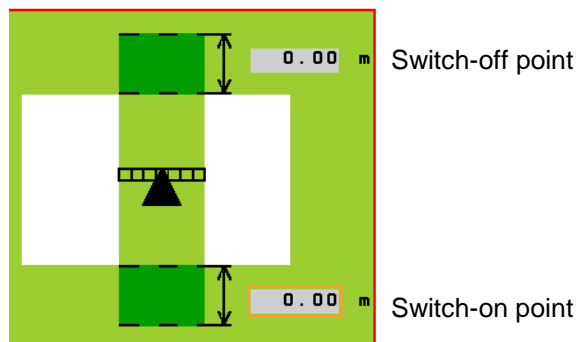
## User profile

### Configure switch point:

Positive value: early switch on, late switch off (overlapping)

Negative value: late switch on, early switch off (no overlapping)

Only when the switching point can be adjusted based on the route (see configuring the ISOBUS)!



### Optimising switch points

Only for time-based adjustment of the switch points (see configuring the ISOBUS)!

- Switch-on delay:

Default value: 400 ms

Positive value / higher value:

→ Switches on earlier (overlapping)

Negative value / smaller value:

→ Switches on later (no overlapping)

- Switch-off delay:

Default value: 200 ms

Positive value / higher value:


→ Switches off later (overlapping).


Negative value / smaller value:

Switches off earlier (no overlapping).


- Set-up assistance

- o Select the set-up assistance for the switching on point or the switching off point.
- o Select too early or too late switching.



Optimising switch points


Switch-on delay


ms



Switch-off delay

ms



Set-up assistance

1. Enter the route which should be switched off too early / too late.
  2. Enter the driving speed (only for time-based adjustment).
- The new switch-on time or switch-off time is calculated.



Optimising the switching on point


Machine is switched on too early, by:


m



Driving speed

km/h


New calculated switch-on time

ms


Cancel


Save



## 7.8 Configure the boom behaviour

- Automatic locking of the swing compensation on and off.
  - ☒ (automatic)
  - ☐ (manual)
- Automatic tilt adjustment when locking. Before locking the vibration compensation, the boom is
  - raised and
  - aligned horizontally.

The tractor/machine/implement must be standing on a level surface.






- Tilt adjustment on the headlands with DistanceControl.
  - ☒ (on)
  - ☐ (off)

The tilt adjustment of the boom can be activated and deactivated on the headlands using this parameter. When the tilt adjustment is deactivated on the headlands, the DistanceControl only controls the tilt adjustment of the boom during the spraying operation

- Super L height adjustment on the headlands without DistanceControl.
  - ☒ (on)
  - ☐ (off)

When switching on the sprayer, the boom is automatically lowered.  
When switching off the sprayer, the boom is automatically lifted.

- Mode (Profi-folding II)
  - Tilt  
DistanceControl works with the tilt adjustment and height adjustment of the boom centre part.
  - Angle-in  
DistanceControl works with the tilt adjustment and boom angle-in. Only the UX with Profi II folding is also driven in this mode with the boom centre part at the saved height.


Configure boom behaviour	
	Automatic lock <input type="checkbox"/>
	Automatic tilt adjustment when locking <input type="checkbox"/>
	Tilt adjustment at headlands <input type="checkbox"/>
	Automatic height adjustment at headlands <input type="checkbox"/>
	Mode <input type="text"/>

## 7.9 Configure ISOBUS

- Select the terminal, see page 27.
- Documentation
  - TaskController, job management active  
→ The implement computer communicates with the Task Controller of the terminal
  - Only machine-internal documentation
- Switching the Section Control to Manual/Automatic
  - In the GPS menu  
Section Control is switched in the GPS menu.
  - In the work menu (recommended setting)  
Section Control is switched in the ISOBUS Work menu.
- Adjusting the switch points
  - Distance-based  
(terminal supports working length)
  - Time-based  
(terminal does **not** support working length)



Section Control  
Manual/Automatic




**ISO** Configure ISOBUS


1

2


Select terminal



Documentation



Section Control  
Switching Manual/Automatic



Setting the  
switch points

## Selecting the terminal

If 2 control terminals are connected to the ISOBUS, one terminal can be selected for displaying.

- Select the terminal for implement operation
  - o 01 Amazone
  - o 02 other terminal
- Select terminal for documentation and Section Control
  - o 01 Amazone
  - o 02 other terminal

1. Select new terminal.



2. Change the terminal for displaying.



Logging onto the VT terminal can take up to 40 seconds.

If the terminal entered is not found after this time, the ISOBUS logs onto another terminal.



Select terminal



Terminal for implement operation



Terminal for documentation and Section Control



Cancel



Change

## 8 Enter machine data



In the main menu, select **Machine data**!

- Configure source for the speed signal (see page 29)
- Front tank on /off
  - o ☒ on
  - o ☐ off
- High Flow on /off
  - o ☒ on
  - o ☐ off
- Calibrate flow meter (see page 30)
- Configure AutoTrail (see page 33)
- Calibrate the booms (see page 34)
- Call up Setup menu (see page 36)
  - o Perform basic settings
  - o Display diagnostics data
  - o Reset machine computer



Configure speed source



Fronttank



High Flow



Calibrate  
flow meter



Configure  
TrailTron



Calibrate booms



Setup

## 8.1 Configure the speed source



The machine computer needs a speed signal for a correct rate control.

There are different sources for the forward speed signal input.





- The speed signal can be provided via the ISOBUS.
- The speed signal can be calculated on the wheel of the machine attached via the pulses per 100 m.
- The speed signal is simulated by entering a speed (e.g., when a speed signal from the tractor fails).

Entering a simulated speed allows you to continue operation even if the speed signal from the tractor fails.

- Select the source of the speed signal.
  - Ground (ISOBUS)
  - Wheel (ISOBUS)
  - Position (ISOBUS)
  - Wheel of the machine attached
  - Simulated
    - Speed entered must be observed later in all cases
    - If another speed source is detected, the simulated speed is deactivated automatically.







### For attached machines:

- Enter wheel pulse per 100 m or,
- determine the wheel pulse per 100 m

	Configure speed source
	Speed source <input type="text"/>
	Wheel imp. <input type="text"/> Pulse / 100 m
	Find impulses

### Determine the speed on the machine via the wheel pulse per 100 m

1. On the field, measure out a calibration distance of exactly 100 m.
  2. Mark the start and end points.
  3.
  4. Move the tractor to the start position.
  5.
  6. Accurately travel along the measurement section from start to finish.
- The pulses are detected continuously and shown on the display.
7. Stop exactly at the end point.
  8.

	Find impulses	1/4
	Measure out the distance exactly	100 m
	Driven impulses	0
		500
	Cancel	
	Continue	

## 8.2 Calibrate flow meter



- The machine computer needs the calibration value "Pulse flow meter" for the flow meter / return flow meter for determining and controlling the spray rate.
- You have to determine the calibration value "Pulse flow meter" via a calibration procedure of the flow meter / return flow meter if the calibration value is not known.
- You can enter the calibration value "Pulse flow meter" for the flow meter / return flow meter manually if you know the exact calibration value.












- Determine the calibration value "Pulse flow meter"
  - annually.
  - after removal of the flow meter.
  - after long periods of operation, because spray residue deposits can form in the flow meter.
  - if differences occur between the required spray rate and the actual spray rate.

Flow meter 1





Flow meter 2 (return flow meter)



Flow meter 3 (High Flow)



- Enter the number of pulses
- Determine the number of pulses by calibration



	Calibrate flow meter	
 	Pulse flow meter 1	
 01	Calibrate flow meter 1	
 	Pulse flow meter 1	
 02	Calibrate flow meter 2	



## 8.2.1 Calibrate flow meter 1

1. Fill the spray liquid tank with clear water (approx. 1000 l).
2.
3. Drive the pump with operating speed.
4.
5.  Switch on the spray and spread at least 500 litres of water.
6.   If necessary, adjust the application rate manually.
- The values of the "Pulses" for the amount of water applied are measured continuously and shown on the display.
7.  Switch of the spraying and interrupt the pump drive.
8. Determine the amount of water applied precisely by refilling the spray liquid tank up until the fill marking marked on both sides of the spray liquid tank
  - o using a measuring vessel,
  - o by weighing or
  - o using a water gauge.
9. Enter the value for the amount of water determined.
10.
- The calibration value determined is displayed.
11.

	Calibrate flow meter 1	1/6
	Fill the following amount of water	1000 l

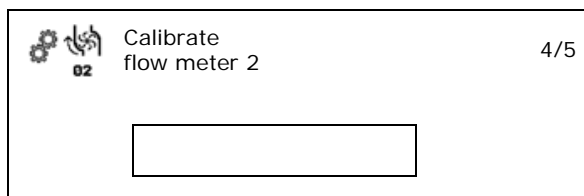
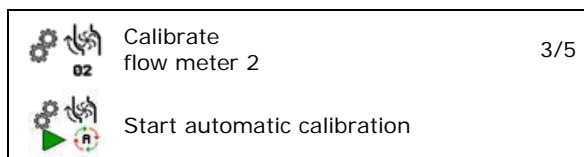
	Calibrate flow meter 1	2/6
	Set nominal pump speed	


	Calibrate flow meter 1	3/6
	Switch sprayer on	

	Calibrate flow meter 1	6/6
	New pulse value	670 1/1

## 8.2.2 Calibrate flow meter 2 (return flow meter)

1. Fill the spray liquid tank with clear water (approx. 1000 l) until the fill marking marked on both sides of the spray liquid tank.
  2.
  3. Drive the pump with operating speed.
  4.
- Start automatic calibration.
- 5.



Calibration can only be carried out when "Spraying"  0 / 1 is switched off.

## 8.2.3 Flow meter 3 (High Flow)



For determining the pulse per litre for flow meter 3, flow meter 3 must be mounted at the position of flow meter 2 in the fluid circuit.

1. Switch off the High Flow (machine data menu).
  2.
  3. Mount DFM 3 at the position of DFM 2.
  4.
  5. Fill the spray liquid tank with clear water (approx. 1000 l) until the fill marking marked on both sides of the spray liquid tank.
  6.
  7. Drive the pump with operating speed.
  8.
- Start automatic calibration.
9.
  10. Flow meter 2 and 3 are mounted back at their correct positions.




### 8.3 Calibrate AutoTrail

1. Move to centre position.

Drive tractor with machine straight ahead




over a short distance and align with , until tractor and machine are on one track.

2.

3. Drive to the right hand stop.

Turn tractor steering wheel as far as possi-




ble to the right and press  to retract AutoTrail cylinder.

4.

5. Drive to the left hand stop.

Turn tractor steering wheel as far as possi-




ble to the left and press  to extend AutoTrail cylinder.


6.

7. The yaw rate sensor is being calibrated.


→ The tractor must not move.

8.


Calibrate AutoTrail
1/6


Take to middle position

Actual rough setting		1000
left side	Stop	right side
256	512	768
Moving		
Yaw rate sensor	Tilt sensor	
32768	512	



Calibrate yaw rate sensor  
Do not move tractor

Actual rough setting		32781
left side	Stop	right side
142	366	642
Moving		
Yaw rate sensor	Tilt sensor	
32775	0	

9. Calibrate the tilt sensor.

→ Move machine to horizontal position first.

10.


Calibrate tilt sensor  
Move sprayer to horizontal position

Actual rough setting		0
left side	Stop	right side
346	397	461
Moving		
Yaw rate sensor	Tilt sensor	
32775	0	

## 8.4 Calibrate the booms






Carry out the boom calibration once a year.

### 8.4.1 Calibrating the boom locking mechanism

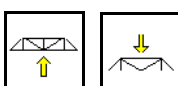
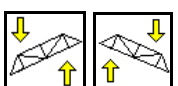


Only with analogue sensor:


Boom is folded out.

1.  Close boom locking mechanism.
2. > continue
3.  Open boom locking mechanism.
4. > continue Continue with tilt adjustment calibration.

	Calibrate the booms	0/0
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <span style="color: red; font-size: 2em;">✗</span> Cancel         </div> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <span style="color: green; font-size: 2em;">➤</span> Continue         </div> </div>		

### 8.4.2 Calibrate the tilt adjustment

1.  Adjust the boom height so that ground contact when adjusting the tilt is avoided (approx. 1.80 m).
  2.  Move to the middle position.
- Align the sprayer boom horizontal to the ground.
3. ➤ continue
  4.  Move to the right hand stop until the right spacer has a slight contact with the ground.
  5. ➤ continue
  6.  Move to the left hand stop until the left spacer has a slight contact with the ground.
  7. → save

	Calibrate booms	0/0
<div style="border: 1px solid black; padding: 10px; text-align: center;"> <span style="color: red; font-size: 2em;">✗</span> Cancel         </div>		

### 8.4.3 Calibrate the DistanceControl




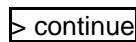




Observe the following before calibrating the DistanceControl:

- The ground must be level, no inclination
- No depressions under the ultrasound sensors
- The surface of the ground must not be smooth (e.g. asphalt, concrete or puddles of water).

The calibration itself takes place in 3 steps.

#### • Horizontal calibration

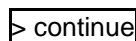
1.    Adjust the boom height so that ground contact when adjusting the tilt is avoided (approx. 1.80 m).
2.  **> continue**
3.   Move to the middle position.

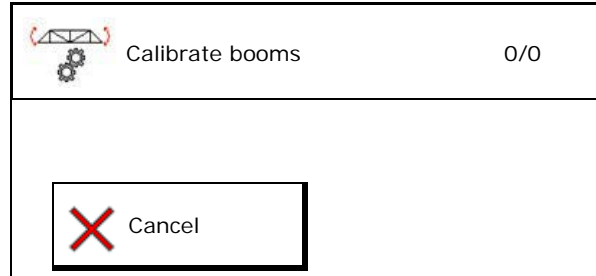
→ Align the sprayer boom horizontal to the ground.

→ The current height of both sensors is displayed constantly.

→ Appears in the display  
**Bar now horizontal**

#### • Carry out manual calibration

4. Press down the left boom folding by hand until the end is located approx. 40 cm above the ground. Keep this position for approx. 5.seconds.
- The signal detection is displayed with: Display green, beep, boom illumination flashes 3 times.
5. Then release the boom and wait until "Boom now horizontal" appears in the display.
6. If the boom does not return to the middle position automatically (this may occur due to friction on the boom chassis) then the booms must be returned to the middle position by hand.
7.  **> continue**



## Enter machine data

---

- **Automatic calibration**



### **DANGER**


**Risk of injury from the boom pivoting automatically!**

During the automatic calibration, no persons must be in the pivoting vicinity of the boom.



8. Start automatic calibration.

→ The boom is lifted automatically, first to the left and then to the right. Then the horizontal position is re-established.

9.  if the automatic calibration has finished.

## 8.5 Menu Setup

---



Only for customer service!

In order to access the Setup menu, you have to enter the password.


In the setup, you can change the implement's basic settings. Incorrect settings can lead to implement failure.

## 9 Info menu




Select **Info** in the main menu!

- Display implement ID No. (MIN)
- Display the softkey number in the menus.
- Display statistics


Info

MIN:: UX 00000000

Display Soft key numbers



Nozzle body switch cycle

Total switch cycles

Switch cycles until next maintenance

Total area 0 ha

Total quantity 0 l


Total time 0 h

Driven distance in:

Transportation position 0 km

Working position 0 km

AEF zertifiziert:




Hydraulic system x.xx.xx

Basis x.xx.xx

- Display the software versions of the base machine computer, hydraulic machine computer and other job computers

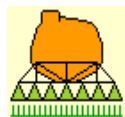


- Display of the last 50 error messages (to do so, display the numbers of the softkeys, see above).


Error memory  
ECU operating hours: 0:00

No.	Error code	Operation. hours
00	F10000	00:00
00	F10000	00:00
00	F10000	00:00

## 10 Use on the field – Work menu



Select **Work menu** in the main menu!



### WARNING

**Risk of accident caused by uncontrolled motions or by the machine turning over!**

- Steering axle / drawbar must be kept in the centre position when transporting.
- Secure the steering drawbar with stop tap.

The following must have been carried out before starting with spraying:

- Enter the machine data.
- Create job and start job.






The machine is operated in the Work menu using the sub-menus.

The sub-menus are divided into function groups.

Depending on the type and equipment of the machine, functions of the Work menu and sub-menus may not be available.



Functions without a function group:

-  Spraying on/off
-  Automatic functions on
-  Section Control Automatic / manual

## Switch spraying on / off

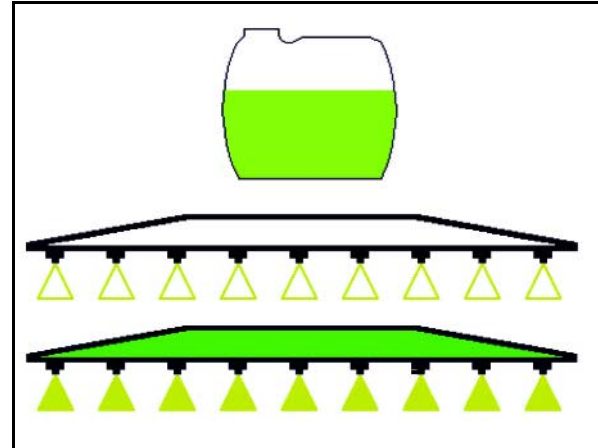
	<b>Switch spraying on / Switch spraying off</b>
---	---

- Switch spraying on: spray fluid is applied via the spraying nozzles.
- Switch spraying off: no spray fluid is applied.

Display in the Work menu:

Spraying switched off










Spraying switched on



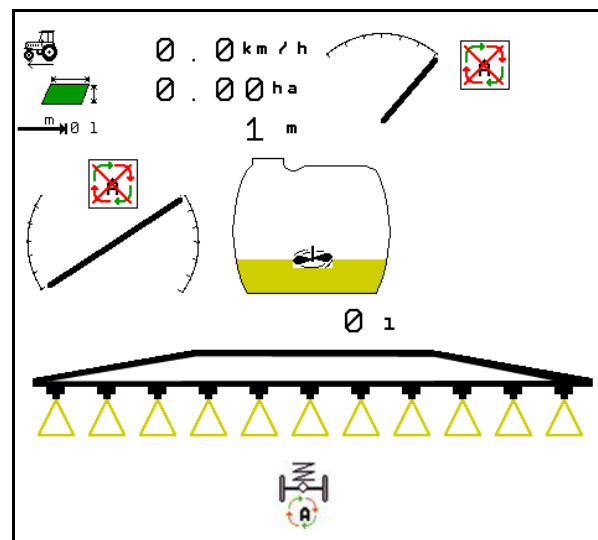
## Switching automatic functions on/off

	<b>Switching automatic functions on together</b>
--	--

Depending on the configuration, the following automatic functions can be switched on together:


-  Spray quantity control
-  SectionControl
-  DistanceControl
-  AutoTrail
-  Hydropneumatic spring suspension
-  Agitator
-  Hydraulic pump drive
-  Unlock the booms
-  FlowControl

It is not possible to switch off the automatic devices off together.




## 10.1.1 Switching Section Control



	Section Control automatic / manual
---	------------------------------------



The terminal must be equipped with Section Control. Section Control must be switched on through the terminal application.

→  Section Control can then be switched using the ISOBUS software.

Start work with Section Control:

1.  Set Section Control to automatic.
2.  Switch the sprayer on one time if it hasn't been switched on previously.

**Display in the work menu (can be set in the Configure ISOBUS menu):**


Sprayers without automatic part width section control

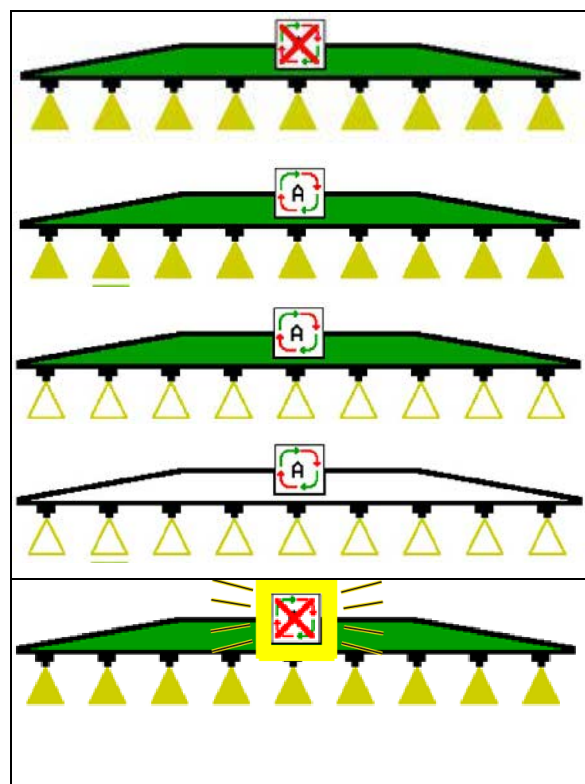
Sprayers with automatic part width section control

Automatic part width section control has switched off all part width sections

Sprayer is switched off, automatic part width section control is switched on.



Section Control switched on through the terminal, however, not activated in the implement software.

→  Switch on Section Control.





If automatic part width section control is not possible, a message appears with the necessary requirements.

-  Requirement not met
-  Requirement met

## Note

Automatic part width section control not possible.  
The following requirements must be met.

- ✗ Section Control of the terminal (Task Controller) activated
- ✓ Implement error free
- ✓ Booms in working position
- ✓ Booms unlocked

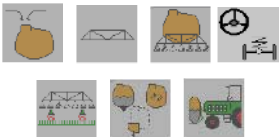

Please acknowledge this message



### Environmental contamination due to undesired application of spray agents.

Use of Section Control is only permitted inside the defined field boundaries.

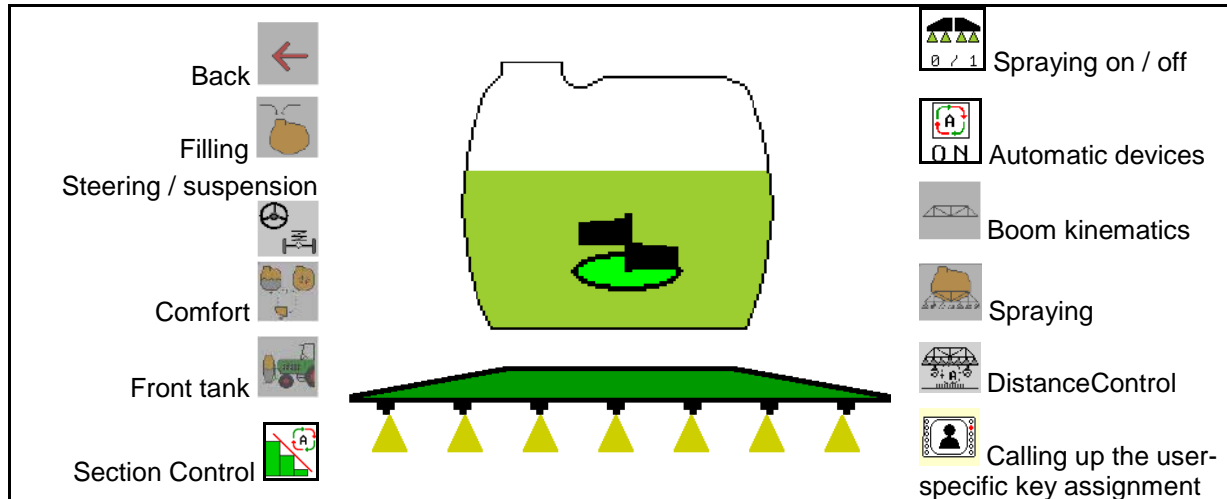
## 10.2 Menu navigation

	<p>In the sub-menu of the different function groups</p>
	<p>Scroll the function fields in the Work menu</p>

## 10.3 Work menu with function fields



The arrangement of the function fields can vary depending on the terminal used.



Function group for filling the spraying agent tank see on page 46



Function group for all movements of the booms see on page 49



Function group for spreading the spraying agent see on page 58



Function group for operating the hydropneumatic spring suspension and the steering axle / steering drawbar see on page 62



Function group for operating the DistanceControl see on page 68





Function group for operating the Comfort functions see on page 71

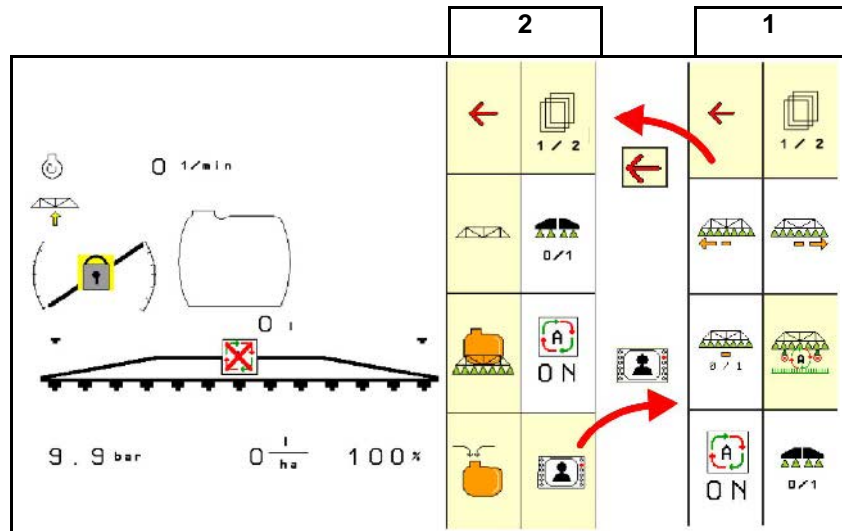


Function group for operating the front tank combined with the field sprayer UF see on page 84

## 10.4 Calling up the user-specific key assignment

- (1)  Call up the user-specific key assignment.
- The assignment of the buttons changes according to the selection in the user profile.

- (2)  Back to the default assignment



## 10.5 Display in the Work menu

Multi-functional display		0,0 km/h 0,00 ha 0 m	AutoTrail:
			Manual / Automatic
Pre-select folding			Position AutoTrail
DistanceControl Manual / Automatic			Manual / Automatic
Tilt adjustment			
Swing compensation locked			
			Agitator
DistanceControl Crop distance		25cm	
Foam marking left		XXX I Tank volume in litres	Foam marking right
Both boom folding in transport position			
Section Control:		Automatic                   Manual	
Spraying:			switched on
			switched off
Part width sections:			switched on
			switched off
Switching off any part width sections			Auxiliary nozzle switched
			Boundary nozzle / end nozzle switched
Spraying		0,0 bar Spray pressure	0 $\frac{1}{ha}$ Spray rate
• Automatic			100% Spray rate %
• Manual		0,0 $\frac{1}{min}$ Spray rate I	

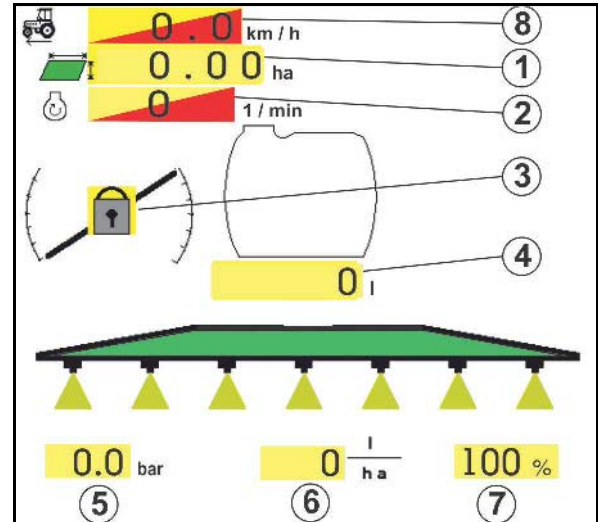
## 10.6 Deviations from the nominal state



Displays marked in yellow are indications for deviating from the nominal state.

Display marked in red indicates a missing information source

- (1) No job started in the Task Controller
- (2) Pump speed deviates from the nominal value/information source not available
- (3) The vibration lock is not in the end position
- (4) Hopper content has reached the indicator limit
- (5) Spray pressure deviates from the nominal value
- (6) Spray rate deviates from the nominal value
- (7) The nominal value has been manually adjusted via the quantity step
- (8) Simulated speed active/information source not available

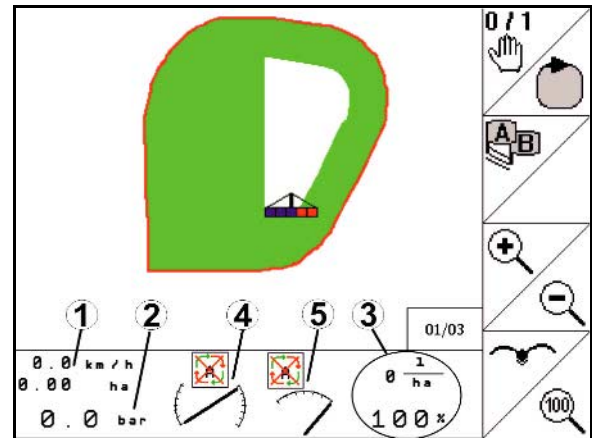


## 10.7 Mini-view in SectionControl

Mini-view is a section from the work menu which is shown in the SectionControl menu.

- (1) The first two rows of the multi-functional display
- (2) Spraying pressure
- (3) Actual value and nominal value adaptation
- (4) Tilt adjustment / DistanceControl
- (5) AutoTrail

Notes are also shown in the miniviews.



Mini-view cannot be displayed on all operating terminals.

## 10.8 Filling the function group



- With the filling level displayed after filling, the machine computer calculates the remaining travelling path / remaining area that can be sprayed with the new tank filling.
- Determine the precise water filling quantity.




### Machine with filling level signal limit:

- When filling, the in-cab terminal has to display the filling menu so that the filling level indicator is active!
- When filling the spray liquid tank again, an alarm signal sounds as soon as the spraying agent filling level reached this signaling limit entered. The monitoring of the refilled spraying agent quantity helps to avoid unnecessary residues if you adapt the indicator limit precisely to the calculated refill quantity.
- During the filling procedure, the amount of water refilled is determined and displayed next to the word "Refilled:".

### Entering the re-fill quantity



- Re-fill quantity entry
- Area is calculated
- or
- Enter the area
- Re-fill quantity is calculated

The application must have been correctly entered for the calculation.


Re-filling the spraying fluid

0

I


0
I


1150

I

Target fill quantity is

7.0

ha

at the current application rate

163

l/ha


### 10.8.1 With filling level indicator



1. Call up the filling menu.
2. Enter the signaling limit for the maximum spraying agent filling level to be refilled.
3. Fill the spraying agent tank.
4. End the filling process at the latest when the alarm signal sounds.
5. Acknowledge message.

### 10.8.2 Without filling level indicator



1. Call up the filling menu.
2. Fill the spraying agent tank.
3. Read off the current filling level from the filling level display.
4. Enter the value for the current filling level.
5.  save

### 10.8.3 Comfort Package: automatic filling stop




#### **DANGER**

The additional injector must not be switched on as the automatic filling stop will otherwise not work.

#### **Filling via the suction coupling:**



1. Call up the filling menu.
2. Enter the signaling limit for the maximum spraying agent filling level to be refilled.
3.  Set the suction via the suction coupling.
  - The tank is filled automatically up the signal limit.
  - After the filling, the intake side is automatically switched over to spraying.
  - Pressing the button again terminates the filling process prematurely.
4. Acknowledge message.



#### **UX with agitation pressure control / Pantera**

The main agitator is automatically closed 100 litres before reaching the indicator limit. Otherwise, the field sprayer cannot be completely filled.



#### **UX Super / Pantera:**

The conversion from spraying / suction can also be carried out via the button on the control terminal.

## 10.8.4 Automatic filling stop when filling via the pressure connection

Filling via the pressure connection:

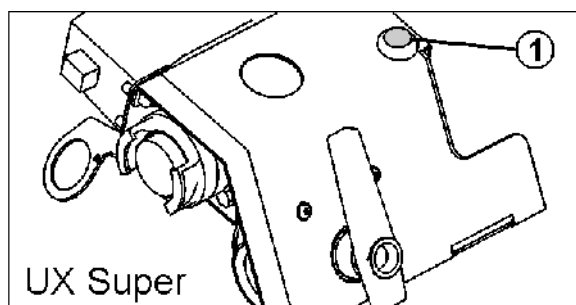
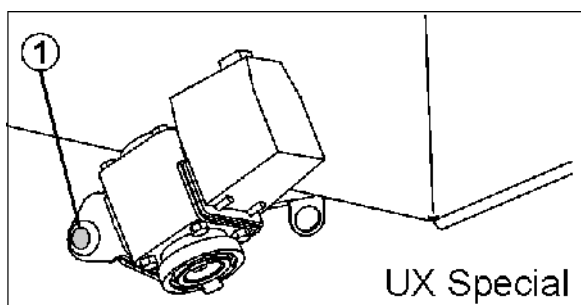


1. Call up the filling menu.
  2. Enter the signaling limit for the maximum spraying agent filling level to be refilled.
  3. Press the button on the control terminal.
- The tank is filled automatically up the signal limit.
4. Close the external stop tap on the filling hose.
  5. For pressure relief in the filling hose: press the button on the control terminal.
- The valve opens temporarily.
6. Acknowledge message.



- For ending the filling procedure in advance.

Press button (1) as an alternative.






## 10.9 Function group boom kinematics (Profi-folding)

### 10.9.1 Adjust the boom height (Profi-folding)

	<b>Lift / lower the boom</b>
---	------------------------------

- To set the distance from the spraying nozzle to the crops.
- For folding the boom.

### 10.9.2 Swing compensation lock / unlock (Profi-folding)

	<b>Swing compensations lock / unlock</b>
---	--

#### Swing compensation unlocked

→ when spraying



Press briefly and wait until the boom is unlocked.

#### Swing compensation locked

- when folding the boom.
- when spraying with the boom folded on one side.

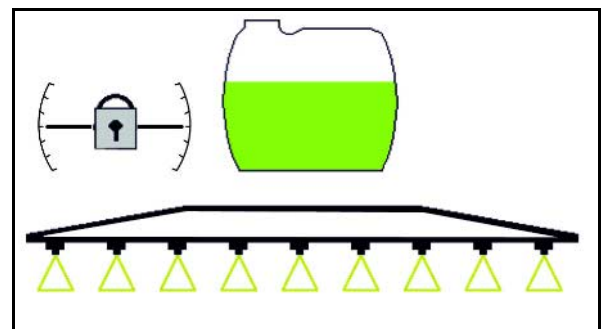
With automatic tilt adjustment, the boom automatically aligns itself horizontally.



Keep pressed until the boom is locked.

Display in the Work menu:

- Swing compensation locked.

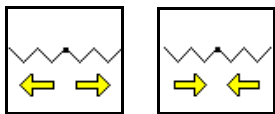


The automatic locking of the swing compensation can be set via the menu Machine data.

Automatic locking switched off (default)

- To avoid damaging the sprayer boom by automatic locking when the machine is standing at an angle.

### 10.9.3 Boom folding (Profi-folding)



**Fold the boom in / out on both sides**



Boom folding is only possible at a forward speed less than 3 km/h.



Field sprayers without Profi-folding:  
see operating manual field sprayer!

- Folding out is always only carried out symmetrically.
- The respective hydraulic cylinder locks the sprayer boom in the operational position.



- Fold the sprayer boom only on a level surface otherwise damage may be caused during the folding procedure!
  - Before folding in, always align the sprayer boom in the horizontal position again (0-Position) otherwise there may be difficulties in locking the sprayer boom in the transport position (catching hooks do not engage the catching sockets).
- With automatic tilt adjustment, the boom automatically aligns itself horizontally

#### Fold out the Super L-boom



1. Lift the boom (at least 30 cm).



The transport lock unlocks automatically.




2. Fold the boom out on both sides.




3. Unlock the swing compensation.
4. Adjust the boom tilt / height or DistanceControl.

## Fold in the Super L-boom

1.  Lift the boom (approx. 2 m), to ensure that the boom folds safely over the mud guard on the spraying tank during the entire folding.





Align the boom horizontally!  
Automatic alignment can be set in the Implement data menu!


2.  Lock the swing compensation.



The automatic locking of the swing compensation when folding in can be set in the menu Machine data.

- Profi II:** 3.  Angle out boom to end position.

4.  Fold the boom in to transport position in both sides.


5.  Keep lowering the boom until the transport lock is displayed on both sides.



Before travelling on public roads, check the correct transport position of the sprayer boom in the in-cab terminal!





## Fold out the Super S-boom


1.  Lift the boom (min. 30 cm).



The transport lock unlocks automatically!


- Profi II:** 2.  Angle in both boom packages in the horizontal position.

3.  Fold the boom out on both sides.

4.  Unlock the swing compensation.

5. Adjust the boom tilt / height or DistanceControl.


## Fold in the Super S-boom

1.  Lift the boom (approx. 1 m).




Align the boom horizontally!

Automatic alignment can be set in the Implement data menu!


2.  Lock the swing compensation.




The automatic locking of the swing compensation when folding in can be set in the menu Machine data.

3.  Fold the boom in to transport position in both sides.

**Profi II:**

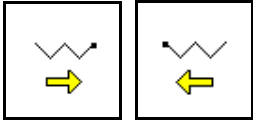
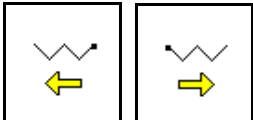
4.  Angle in the boom package in the vertical position.

5.  Keep lowering the boom until the transport lock is displayed on both sides.



Before travelling on public roads, check the correct transport position of the sprayer boom in the in-cab terminal!



	<b>Fold in the boom on one side</b>
	<b>Fold out the boom on one side</b>



Working with the sprayer boom folded out on one side is permitted

- only when the swing compensation is locked.
- only if the other boom is as a package out of the transport position
  - Super S-boom: folded down
  - Super L-boom: is folded to the rear transverse to the direction of travel.
- only for temporarily passing of obstacles (trees, power masts, etc.).



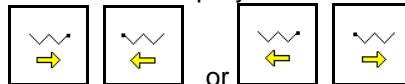
- Lock the swing compensation before you fold the sprayer boom on one side.
- If the swing compensation is not available then the sprayer boom may swing away to one side. If the boom folded out hits the ground this can lead to damage to the sprayer boom.
- During spraying operation, reduce your operational speed considerably to avoid rocking and ground contact of the sprayer boom when the swing compensation is locked. If the sprayer boom guide is unsettled then an equal lateral distribution is no longer ensured.



1. Lock the swing compensation.



2. Lift the sprayer boom into a middle height position.



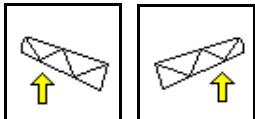
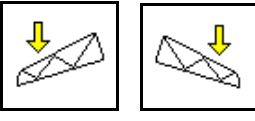
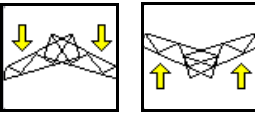
3. The desired boom folds together or apart.

4. Align the sprayer boom parallel to the target surface via the tilt adjustment.



5. Set the spraying height in such a manner that the sprayer boom has a minimum distance of 1 m to the surface of the ground.
6. Switch off the part width sections of the boom folded in.
7. During spraying operation, drive with a considerably reduced speed.

### 10.9.4 Angle in the boom (Profi-folding II only)



	<b>Angle-in the boom on one side, left / right</b>
	<b>Angle-out the boom on one side, left / right</b>
	<b>Angle the boom in and out on both sides</b>

Angling the boom of the sprayer boom in and out is intended for angling the boom in and out during unfavourable terrain conditions where the adjustment possibility of the height and tilt adjustment is no longer sufficient for aligning the sprayer boom with respect to the target surface.

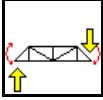
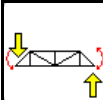


Never angle in the sprayer boom boom folded out by more than 20°!





- 

 To align the boom in the horizontal position, angle out the sprayer boom as far as it will go (move to the end position).
- Angling out below the horizontal position is not possible.
- Align the sprayer boom horizontally before folding the sprayer boom in to the transport position.

### 10.9.5 Tilt adjustment

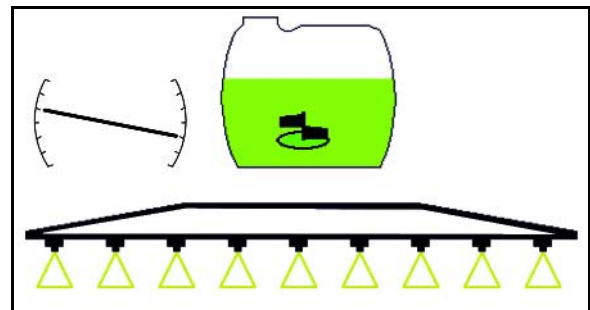
	<b>Tilt adjustment, left side up</b>
	<b>Tilt adjustment, right side up</b>

The sprayer boom can be aligned parallel to the ground or the target area via the tilt adjustment in event of unfavourable terrain conditions, e.g., with tracks that have different depths or driving in a furrow on one side.

#### Align the sprayer boom via the tilt adjustment



 Keep pressed until the sprayer boom is align parallel to the target area.


→ The symbol tilt adjustment shows the sprayer boom tilt selected in the display. Here the left sprayer boom side is raised.

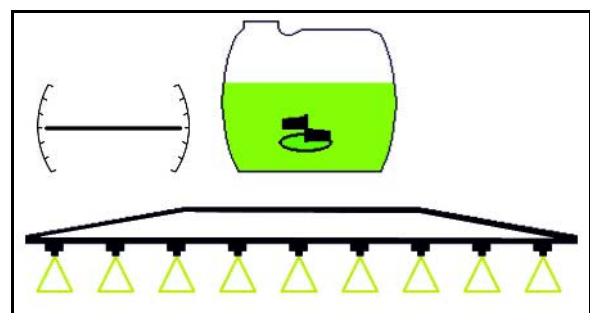


	<b>Mirroring the tilt adjustment (mirroring the slope)</b>
---	--


The selected sprayer boom tilting can simply be mirrored when turning at the headlands, e.g. during spraying operation when operating across slopes.

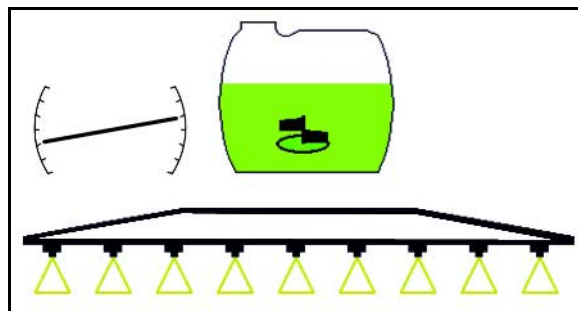
Initial position: the left sprayer boom side is raised.

1.  is actuated once and the hydraulic tilt adjustment aligns the sprayer boom horizontally (0-Position).
- The symbol tilt adjustment shows the horizontal alignment of the sprayer boom in the display.
2. Carry out the turning manoeuvre at the headlands.



## Use on the field – Work menu

3.  is actuated again and the hydraulic boom tilting mirrors the sprayer boom tilting previously used.
- The symbol tilt adjustment shows the mirrored sprayer boom tilt selected in the display.



When mirroring the tilt adjustment, the pre-control of the AutoTrail is cancelled automatically for safety reasons.

## 10.9.6 Nozzle illumination



Nozzle illumination on/off



### WARNING

**Risk of accident by dazzling other road users!**

When travelling on the roads, keep the nozzle illumination switched off.

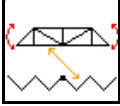


The nozzle illumination is automatically switched on with the tractor lights (only when the tractor has its own TECU).



## 10.10 Function group boom kinematics (pre-select folding)

### 10.10.1 Selection function field (pre-select folding)


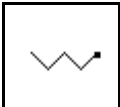
	<p><b>Pre-select</b></p> <ul style="list-style-type: none"> <li>• Tilt adjustment or</li> <li>• Fold boom.</li> </ul>
---	---

The pre-selection is displayed in the Work menu!

The functions are executed using the tractor control unit!

**Folding procedure: see field sprayer operating manual!**

### 10.10.2 One-sided boom folding with pre-select folding

	<p><b>Fold right boom</b></p>
	<p><b>Fold left boom</b></p>

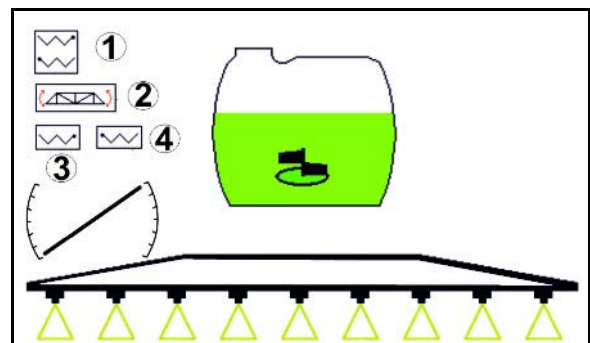
The pre-selection is displayed in the Work menu!

The functions are executed using the tractor control unit!

**Folding procedure: see field sprayer operating manual!**

Display in the Work menu:

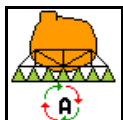
- (1) Pre-selection fold boom.
- (2) Pre-selection tilt adjustment.
- (3) Pre-selection fold left boom.
- (4) Pre-selection fold right boom.



## 10.11 Function group Spraying



### 10.11.1 Spray quantity control



#### Automatic / Manual operation

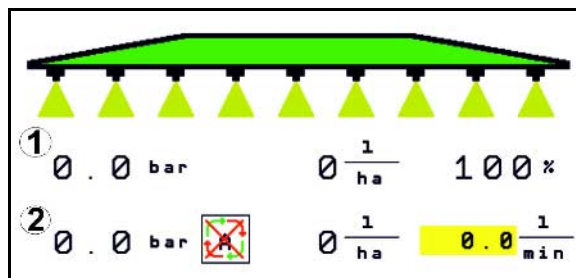
#### (1) Automatic operation

The machine computer takes over the control of the spray rate depending on the current operational speed.


- The spray rate can be changed by the application rate increase using the buttons



- Reset the spray rate back to 100%.



#### (2) Manual operation

- When manual mode is switched on, the  symbol appears on the display as well as the details [l/min].
- The spray pressure that was set when switching over to manual mode will be regulated.

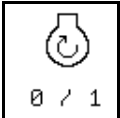



- The application rate can be changed manually by changing the spray pressure in 0.1 bar-increments.



- Use the automatic spray rate control during operation of the sprayer.
  - The target rate in l/ha will be regulated depending on the ground speed.
- Use the spray rate control in manual mode for maintenance and cleaning work.
  - The spray pressure will be regulated (constant pressure control).

### 10.11.2 Hydraulic pump drive

	<b>Hydraulic pump drive on/off</b>
---	------------------------------------

	<p>The speed of the pump is regulated depending on the work situation.</p> <ul style="list-style-type: none"><li>• Booms in working position → Spraying work situation</li><li>• Booms in transport position → Mixing/cleaning work situation</li></ul> <p>Independently of the working position / transport position:</p> <ul style="list-style-type: none"><li>• Filling menu opened → Suction work situation</li><li>• Comfort menu opened → Agitation / cleaning work situation</li></ul>
---	---

### 10.11.3 Switching the outer part width sections off

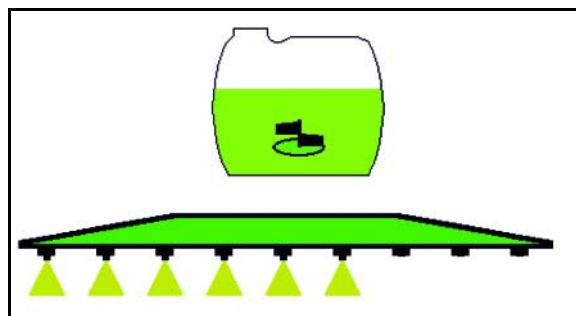
	Switch off the part width sections from the left / from the right.
	Switch the part width sections, to the left / to the right.

Part width sections can be switched off and on

- during spraying,
- when the spraying is switched off.

Switching off the outer part width sections is a particular aid when spraying wedges on the field

Display in the Work menu: part width section from the right switched off.



### 10.11.4 Switching off any part width section

	Switch off any boom part width section permanently
	Select any boom part width section

Switch off individual part width sections for the duration of the task (can be set in the Configure part width sections menu).

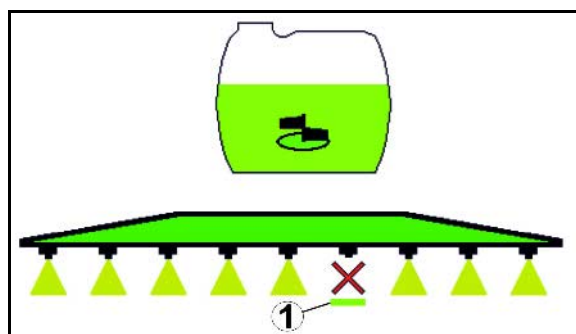
- Any desired part width section switched off.

The boom section identified by the horizontal bar (in this case switched on) can be switched on

and off at random via the key , e.g., for spraying weed windows.


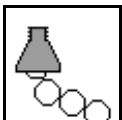
You can switch any desired part width section on or off via the keys when you move the horizontal

bar (1) accordingly via the keys and



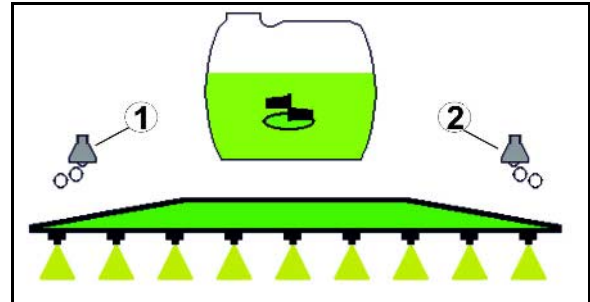
Permanently deactivated part width sections can also be temporarily switched on here.

### 10.11.5 Foam marker



	Switch the foam marker left side on / off
	Switch the foam marker right side on / off

Display in the Work menu:

- (1) Foam marker left side switched on.
- (2) Foam marker right side switched on.

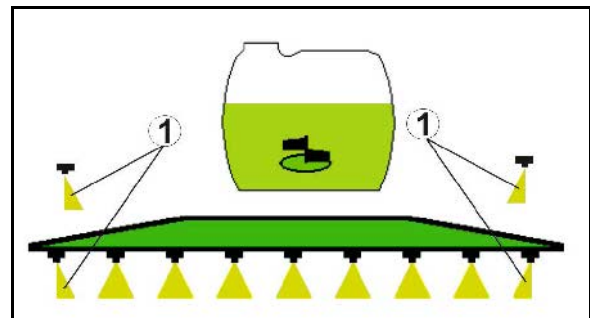


### 10.11.6 Border nozzle, end nozzle or auxiliary nozzle

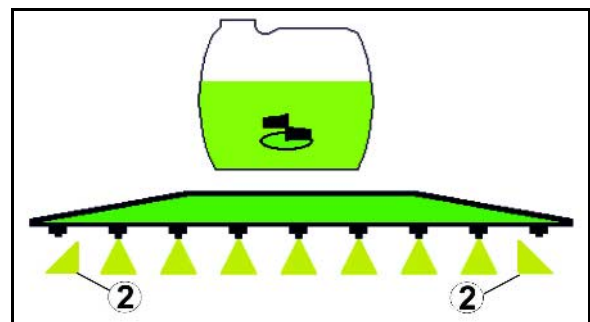
	Switch the right boundary nozzle on / off
	Switch the left boundary nozzle on / off

Display in the Work menu:

- (1) Boundary nozzle switched on.  
End nozzle switched off.



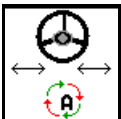
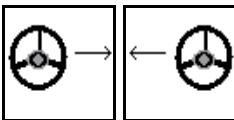
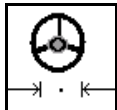
- (2) Auxiliary nozzle switched on.





## 10.12 Function group steering / suspension

### 10.12.1 AutoTrail (steering drawbar / steering axle for precise tracking)

	Automatic / Manual operation
	Steer against the slope
	Take to middle position



#### DANGER

##### Risk of accident caused by turning the machine over!

The following is forbidden in automatic mode:

- Manoeuvring
- Driving on the road



#### DANGER

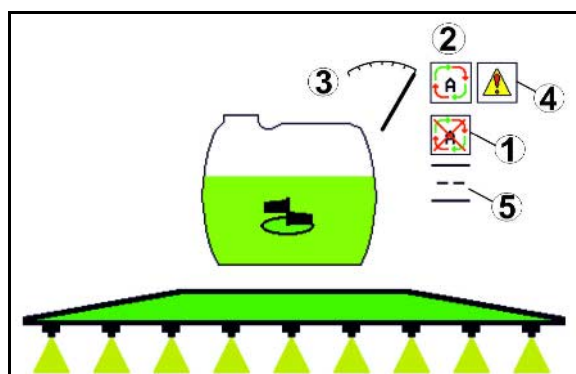
##### Risk of the machine tipping over when the steering drawbar is pushed in; particularly on very uneven or sloping terrain!

With a loaded or partially loaded machine with tracking steering drawbar, there is a risk of tipping over when performing a turning manoeuvre on a headland at high speeds, due to the shifting of the centre of gravity when the steering drawbar is pushed in. The risk of tipping over is especially high travelling downhill on sloping terrain.

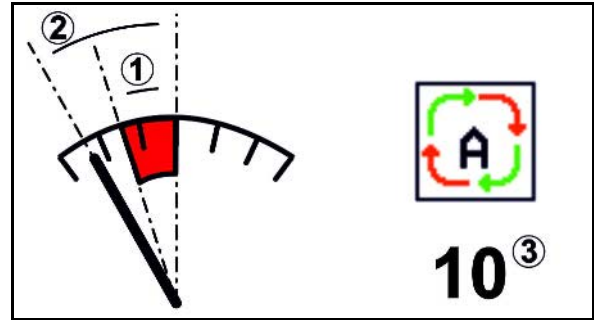
Adapt your driving technique accordingly and reduce speed when performing a turning manoeuvre on a headland, so that you are in complete control of the tractor and machine.

Display in the Work menu:

- (1) AutoTrail in manual mode
- (2) AutoTrail in automatic mode
- (3) Steering angle
- (4) Maximum steering angle of the drawbar is limited – Safety function
- (5) AutoTrail in road operation
- (6) While the centre position is actively being set

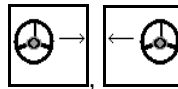


- (1) Moving the middle position when driving on slopes.
- (2) Actual steering of the axle / drawbar
- (3) Correction factor (only with automatic counter-steering on slopes)



### AutoTrail versions

- **AutoTrail with automatic slope steering and tilt measurement using sensors.**
  - o With lateral tilt, the sprayer is counter-steered automatically when travelling up the slope.



- o The intensity of the slope correction can be influenced by adjusting the correction factor.

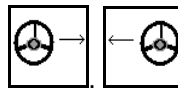
If the key for steering up the slope manually is pressed in automatic mode then the correction is increased. If the key for steering down the slope manually is pressed in automatic mode then the correction factor is reduced.

Default value: 10

Value range from 0 - 20

- Increase the correction factor: the intensity of the automatic counter-steering is increased.
- Reduce the correction factor: the intensity of the automatic counter-steering is reduced.

- **AutoTrail with manual slope counter-steering via key assignment on the control terminal.**



- o For manual steering against the slope.
- o If the following functions are carried out then the manual slope correction is reset.



Move to the middle position,



Slope compensation,



Switch the spraying on / off,




Change to manual mode.






## Mode of the AutoTrail

### Automatic mode:

1.  Put the AutoTrail in automatic mode

With automatic mode switched on, the symbol  appears in the display. The machine computer ensures the precise tracking of the machine.

### Manual operation mode:

1.  Put the AutoTrail in manual operation mode
- When manual mode is switched on, the  symbol appears.
  - Press the  or  key until the tyres of the machine are exactly in the tractor's tracks again.
  -  Middle position is approached as soon as the speed is greater than 0.



The function field for manual steering in automatic mode is only intended for the precise tracking.

Exception:

During reverse driving in automatic mode middle position is approached one time. After manual steering is possible.

For manual steering (e.g., for manoeuvring) the steering must be moved to manual mode.



## Transportation - Street mode



### DANGER

#### Risk of accident caused by turning the machine over!

For road transport, set the steering axle / steering drawbar to transport position!

1. Set the steering drawbar / steering axle to the middle position (steering drawbar / wheels align with machine).

For this:



- 1.1 Put AutoTrail in manual operation.



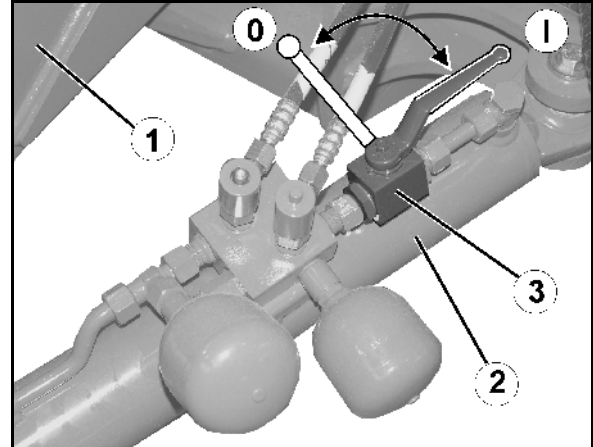
- 1.2 Move to the middle position.

- 1.3 Move the machine until the middle position is reached.

→ AutoTrail stops automatically when it reaches the middle position.

2. Switch off tractor control unit *red*.

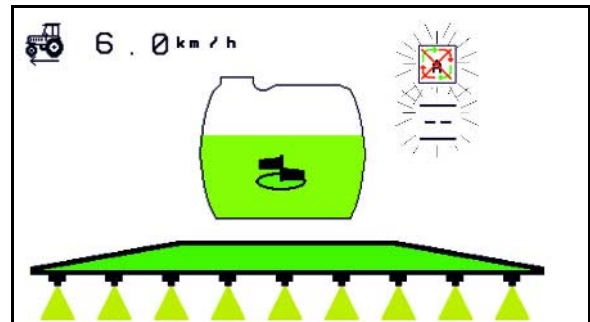
3. Secure the steering drawbar (1) by closing the stop tap (3) in position **0**.



When reaching a forward speed greater than 20 km/h, a warning message is issued and the AutoTrail steering is switched off.

When travelling below a forward speed of 7 km/h in Street mode:

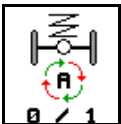
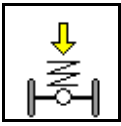
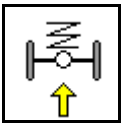
- Manual and Street blink alternately on the display.
- Street mode remains active.
- It is possible to change to manual mode by pressing any button on the AutoTrail.





Calibrate AutoTrail, see page 33.

Configure AutoTrail, see page 19.

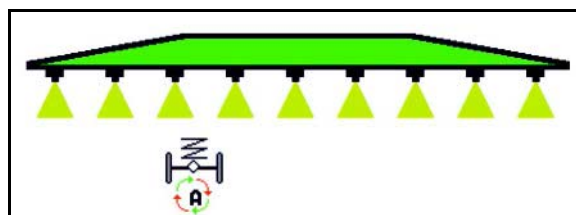
## 10.12.2 Hydropneumatic sprung suspension

	<b>Manual operation, automatic mode</b>
	<b>Lower the machine in manual mode</b>
	<b>Lift the machine in manual mode</b>

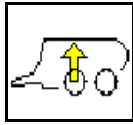
	<p>When automatic mode is switched on, the machine computer controls the riding height of the field sprayer to the value set in the setup independent from the tank volume.</p> <p>In manual mode  the machine can be lowered or raised.</p>
---	---

Display in the Work menu:

Hydropneumatic spring suspension  
in automatic mode (operating state).




### 10.12.3 UX 11200: Traction assistance of the tractor



#### Switching on traction assistance

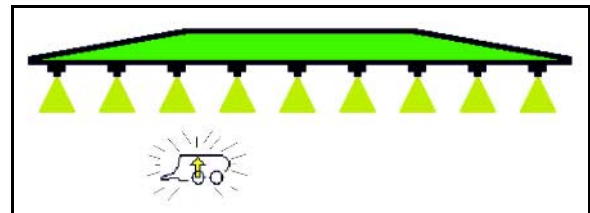
With active traction assistance, the load on the front axle is reduced. This increases the load on the tractor and therefore increases the traction.



- Traction assistance remains active for 60 seconds after it has been switched on.
- It can be repeatedly switched on as often as desired.
- 
 Switching off the traction assistance.
- With a forward speed of 20 km/h, the traction assistance automatically switches off.

Display in the Work menu:

The symbol flashes when the traction assistance is switched on.



#### WARNING

**Risk of accident due to reduced brake performance of the machine/implement when travelling on roads with traction assistance.**

Traction assistance should not be switched on when travelling on roads.


## 10.13 Function group DistanceControl / Autolift





### 10.13.1 DistanceControl



#### Automatic / Manual operation

- With automatic mode switched on, the symbol  appears in the display. The machine computer takes over the distance of the spraying nozzle - Crop.

#### Determine the nominal spraying nozzle – crop distance in advance:

1.   Adjust the nominal distance spraying nozzle in crop as desired.

#### Profi-folding II and DC mode: **Angle-in**



Also use the angle-in function.



2. Confirm settings.

→ Spraying nozzle – crop nominal distance is saved.



3. Determine the boom height for the turning procedure by moving the desired boom height for the turning procedure.

#### Profi-folding II and DC mode: **Angle-in**




Also use the angle-in function.



4. Confirm settings.

→ The boom height for the turning procedure is saved (is moved as soon as the spraying is switched off).

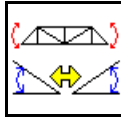
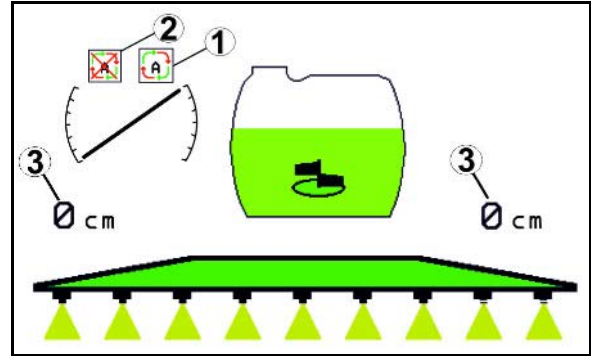
- In manual mode, the symbol  appears. The DistanceControl is switched off. They control the spraying nozzle - crop manually via tilt and height adjustment.



- pressed: the spraying nozzle – crop distance is displayed in the work menu for approx. 20 sec.

Display in the Work menu:

- (1) DistanceControl in automatic mode
- (2) DistanceControl in manual mode
- (3) Distance nozzle – crop



**Align the boom horizontally**

**Before folding in the sprayer boom**



1. Move the DistanceControl to manual mode.



2. Align the sprayer boom horizontally.



#### CAUTION

**Damage to the sprayer boom by horizontal alignment when the machine is standing at an angle.**



Calibrate the DistanceControl, see page 35.







## 10.13.2 Autolift

Only with UX / Pantera without DC.

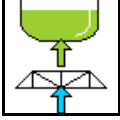







Autolift takes over the lifting of the boom at the headlands and the lowering of the boom after turning.

This is controlled by switching the spraying on and off.

	<b>Adjust the boom height in use and on the headlands</b>
---	---

1.   Adjust the nominal distance spraying nozzle in crop as desired.
2.  Confirm settings.
- Spraying nozzle – crop nominal distance is saved.
3.   Determine the boom height for the turning procedure by moving the desired boom height for the turning procedure.
4.  Confirm settings.
- The boom height for the turning procedure is saved (is moved as soon as the spraying is switched off).

## 10.14 Function group Comfort UX Super, Pantera

	Switch-over spraying / flushing
	Diluting the spraying agent
	Switch the cleaning on / off
	Agitator automatic / manual
	Increase agitator intensity
	Decrease agitator intensity
	Circulation cleaning
	Switch spraying on / off



Filling the spraying agent tank via Comfort Package, see page 47.



Also observe the operating instructions of the machine when carrying out the functions of the Comfort Package.

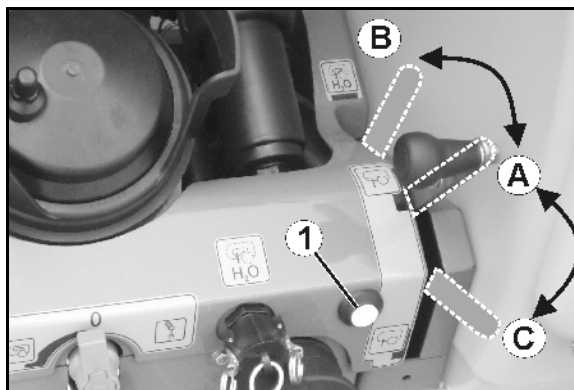
## Use on the field – Work menu

The Comfort Package enables the intake side to be switched via



- the in-cab terminal,
- the key on the control terminal (1).


Adjustable remote control:

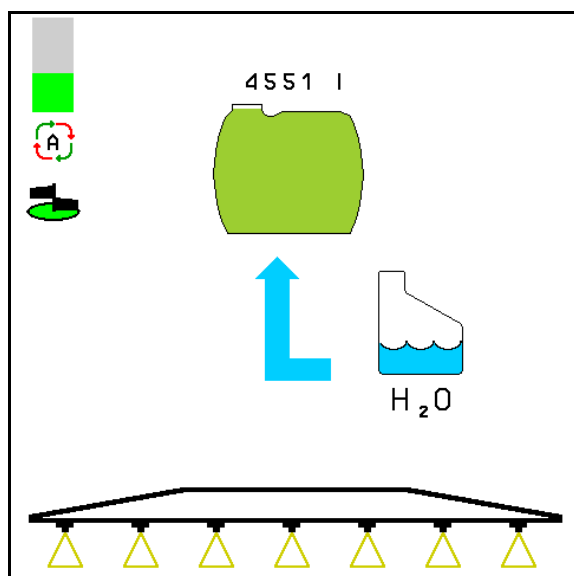
- Spraying (position A)
- Flushing / diluting (position B)
- Filling via the suction coupling (position C, only in Filling menu)



### 10.14.1 Dilute the spray liquid with rinsing water


1.  Start dilution.  
→ The flushing water is fed to the container through the additional agitator.
2. Monitor the container filling level.
3.  End dilution.

 In case of a machine with nozzle control, the spray line is flushed. If you start spraying again, it will take two to five minutes before concentrated spray liquid is applied again.







### 10.14.2 Cleaning the sprayer with the tank filled (work interruption)

1.  Switch suction side to flushing.
- The flushing water is sucked in, agitator is closed.




The conversion from spraying / flushing can also be carried out via the button on the control terminal.

#### Machine without DUS:

2.  Switch on the spraying.
- Spray lines and nozzles are cleaned with flushing water.
3.  Switch off the spraying.






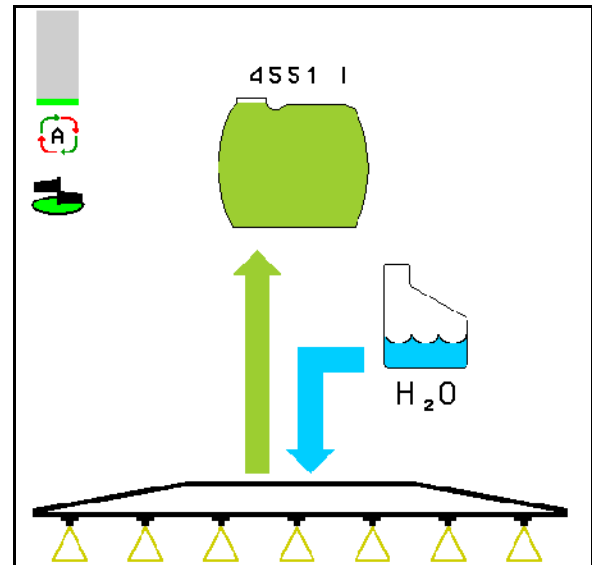
If necessary, also switch the boundary nozzles.

4. Switch off the pump drive.
5.  Switch the suction side back to spraying.

- **Hopper, agitators are not clean!**
- **The spray agent concentration in the tank is unchanged**

#### Machine with DUS:

2. Wait until 2 litres of rinsing water have rinsed through the lines per meter working width..
  3.  Switch on the spraying temporarily for cleaning the nozzles.
  4.  Switch off the spraying.
  5. Switch off the pump drive.
  6.  Switch the suction side back to spraying.
- **Hopper, agitators are not clean!**
  - **The spray liquid concentration in the tank has changed.**



### 10.14.3 Cleaning the sprayer with the tank empty

#### Cleaning:

Condition container filling level < 1 %  
(empty container, if possible).

1. Run the pump with 450 rpm.



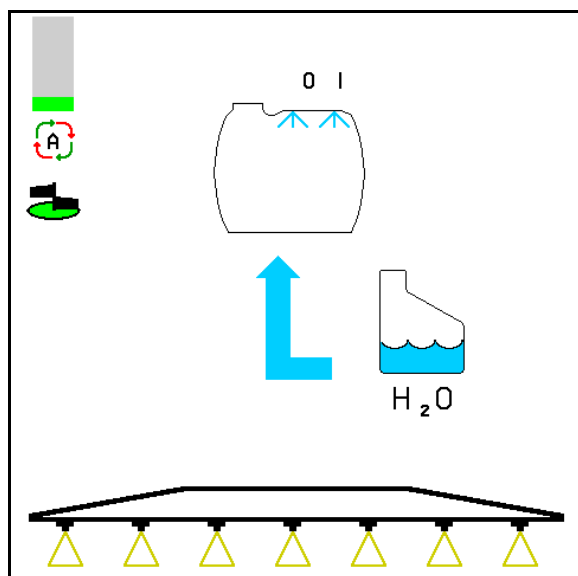
2. Start cleaning.

→ Main and additional agitator are flushed, the inside container cleaning process is switched on.

→ At a container filling level of 4%, the cleaning process is terminated automatically.



On machines with nozzle control, the spray line is also cleaned automatically.



#### Emptying container:



3. Switch on the spraying.

Switch the sprayer on and off at least ten times when travelling.

Spray the spraying empty.



4. Switch off the spraying.



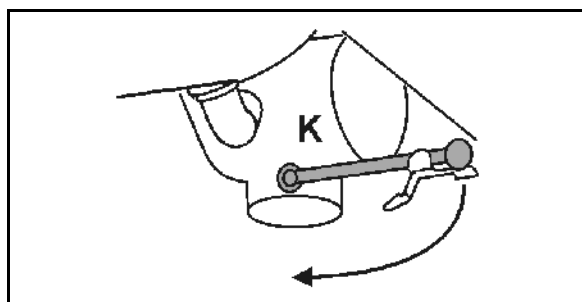
If necessary, also switch the boundary nozzles.

5. Repeat steps 1 to 3 once or twice.

→ Machine is clean!

6. If necessary, drain the remaining residue on the field via the drain tap (K).

7. Clean the suction and pressure filter.








#### Special procedure for critical change of the spraying agent:

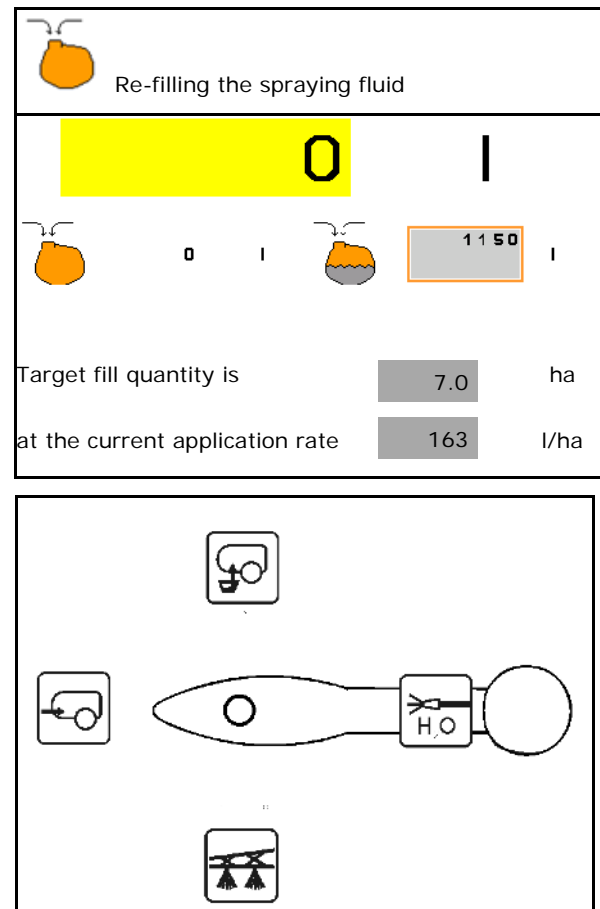
8. Re-fill the flushing water.

9. Repeat steps 1 to 6.

#### 10.14.4 Clean the suction filter with filled tank

The filling menu has to be called up to clean the suction filter while the container is full.

1.  Call up the filling menu.
2. Increase the setpoint rate at least at 200 litres.
- So no spray fluid is applied out of the opened suction filter.
3. Place cap on the suction hose coupling.
4. Switch tap pressure gauge in position .
5.  Switch the intake side to filling via the key on the control terminal.
- Filter cup is emptied by suction.
6. Unscrew the cover of the suction filter.
7. Activate the relief valve on the suction filter.
8. Remove the cover with suction filter and clean using water.
9. Reassemble the suction filter in the reverse sequence.
10. Check the filter cover for leaks.
11.  Switch the intake side to spraying via the key on the control terminal.
12. Switch tap pressure gauge in position .
13. Reduce the setpoint rate again

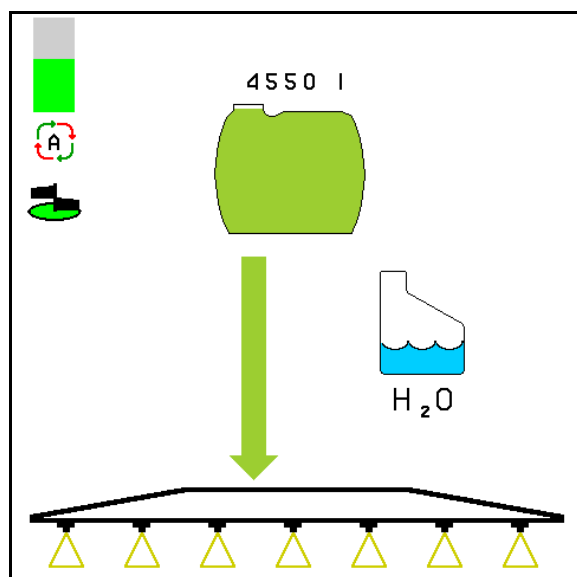


### 10.14.4.1 Automatic agitator control

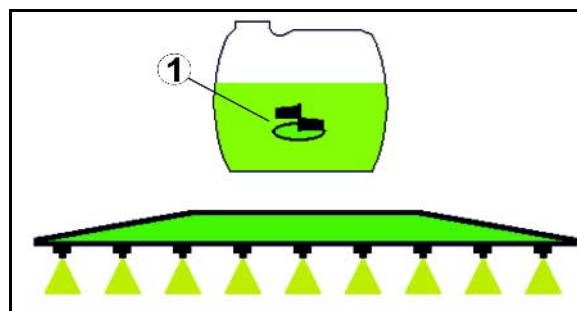


#### Agitator to automatic




- The agitating intensity is controlled filling level dependent.
- The main agitator switches off when the tank volume falls below 5%.
- The agitator switches back on automatically after being filled.

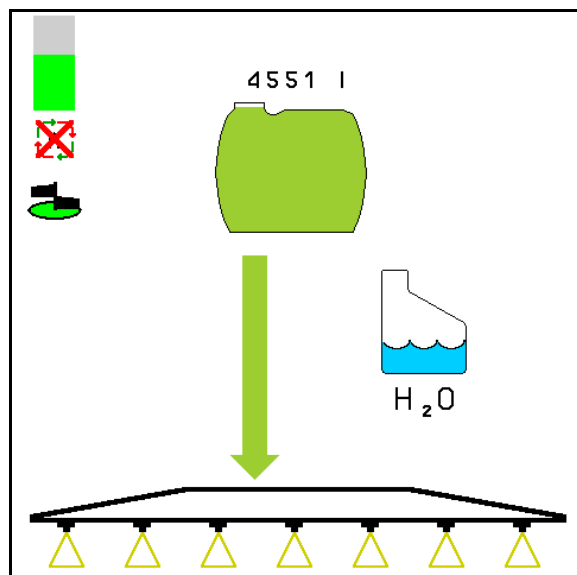


- (1) Automatic agitator control displayed in the Work menu.




#### Agitator to manual

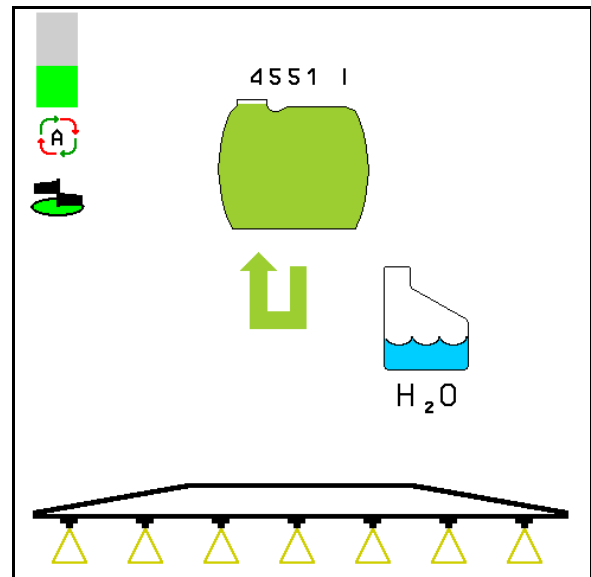
-  Reduce agitator intensity.
-  Increase agitator intensity.
-  Agitator intensity display.
- The agitator remains switched on even if the tank contents fall below 5%.



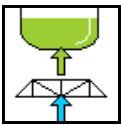



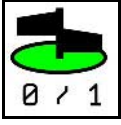

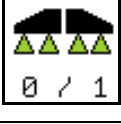

### 10.14.5 Circulation cleaning

During circulation cleaning, the liquid in the spray agent container is permanently pumped through the agitator and the internal cleaning system in a circuit.

- 
 Switching the circulation cleaning on/off.






## 10.15 Function group Comfort UF, UG, UX Special

	Switch-over spraying / flushing
	Diluting the spraying agent
	Switch the cleaning on / off
	Agitator automatic / manual
	Switch the secondary agitator on / off
	Circulation cleaning
	Switch spraying on / off
	Filling the spraying agent tank via Comfort Package, see page 47.

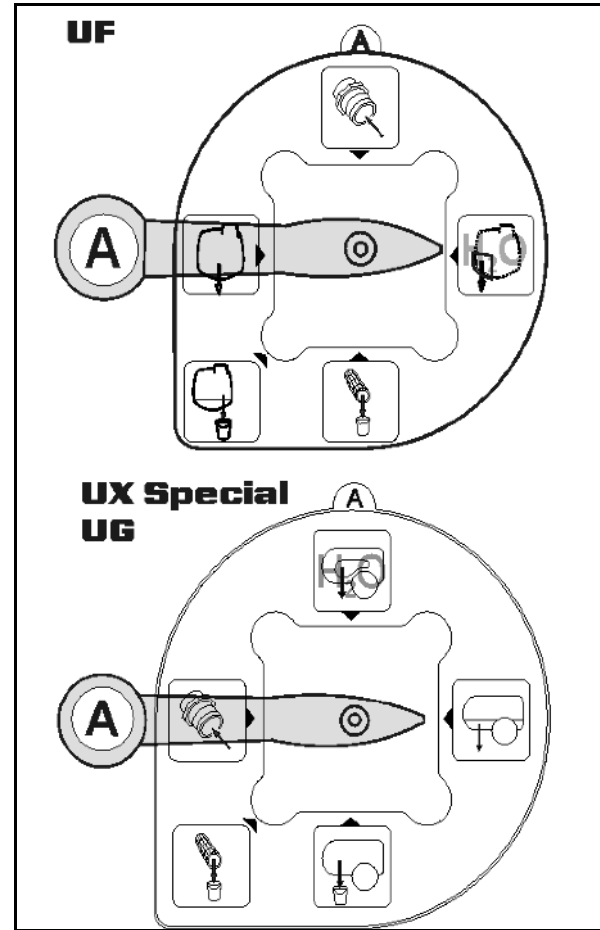
The Comfort Package enables the intake side to be switched via the terminal.

Adjustable remote control:



- Spraying 
- Flushing / diluting 
- Filling via the suction coupling  (Only in the filling menu)



Also observe the operating instructions of the machine when carrying out the functions of the Comfort Package.

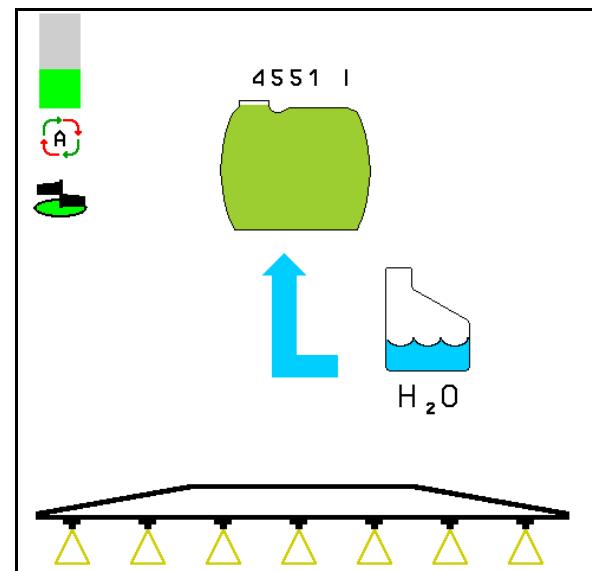


### 10.15.1 Dilute the spray liquid with rinsing water


1.  Start dilution.  
→ The flushing water is fed to the container through the additional agitator.
2. Monitor the container filling level.
3.  End dilution.





In case of a machine with nozzle control, the spray line is flushed. If you start spraying again, it will take two to five minutes before concentrated spray liquid is applied again.





### 10.15.2 Cleaning the sprayer with the tank filled (work interruption)

1.  Switch suction side to flushing.
- The flushing water is sucked in, agitator is closed.

#### Machine without DUS:




2.  Switch on the spraying.
- Spray lines and nozzles are cleaned with flushing water.
3.  Switch off the spraying.

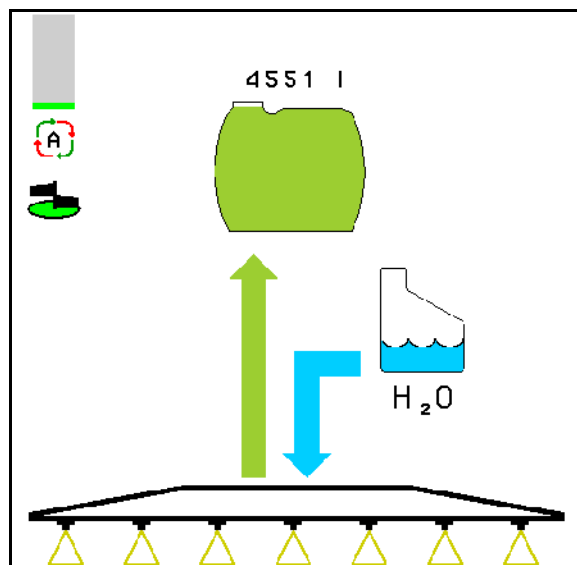
 If necessary, also switch the boundary nozzles.

4. Switch off the pump drive.
5.  Switch the suction side back to spraying.

- **Hopper, agitators are not clean!**
- **The spray agent concentration in the tank is unchanged.**

#### Machine with DUS:

2. Wait until 2 litres of rinsing water have rinsed through the lines per meter working width..
  3.  Switch on the spraying temporarily for cleaning the nozzles.
  4.  Switch off the spraying.
  5. Switch off the pump drive.
  6.  Switch the suction side back to spraying.
- **Hopper, agitators are not clean!**
  - **The spray liquid concentration in the tank has changed.**





### 10.15.3 Cleaning the sprayer with the tank empty

#### Cleaning:

Condition container filling level < 1 % (empty container, if possible).

1. Run the pump with 450 rpm.



2. Start cleaning.

→ Main and additional agitator are flushed, the inside container cleaning process is switched on.

→ At a container filling level of 4%, the cleaning process is terminated automatically.



On machines with nozzle control, the spray line is also cleaned automatically.

#### Emptying container:



3. Switch on the spraying

Switch on and off at least ten times when travelling.

Spray the spraying empty.



4. Switch off the spraying.

If necessary, also switch the boundary nozzles.

5. Repeat steps 1 to 3 once or twice.

→ Machine is clean!



6. If necessary, set the suction side to manually and drain the remaining residue

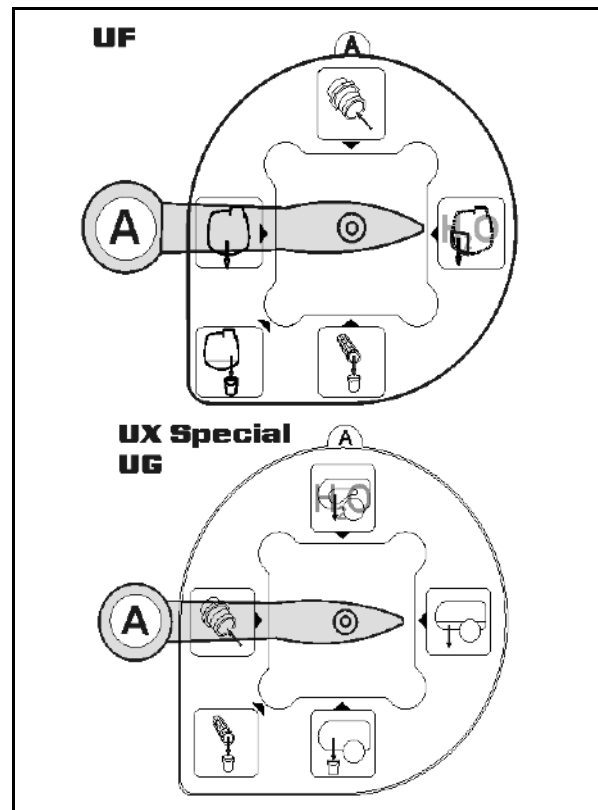
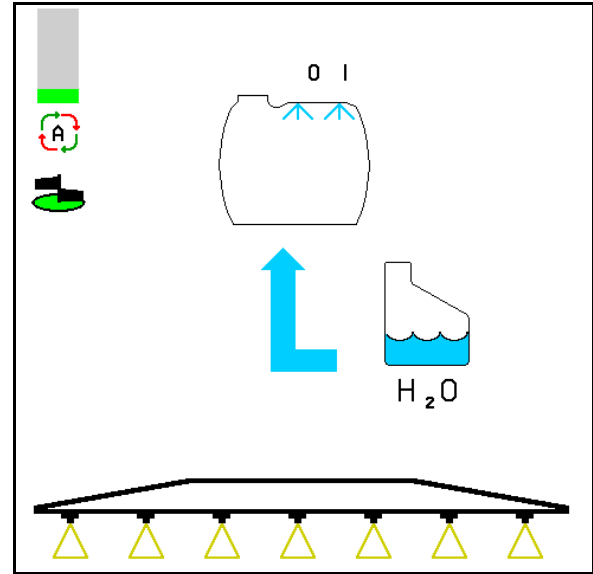
on the field, then reset manually..

→ The suction side switch tap must engage!


7. Clean the suction and pressure filter.

#### Special procedure for critical change of the spraying agent:

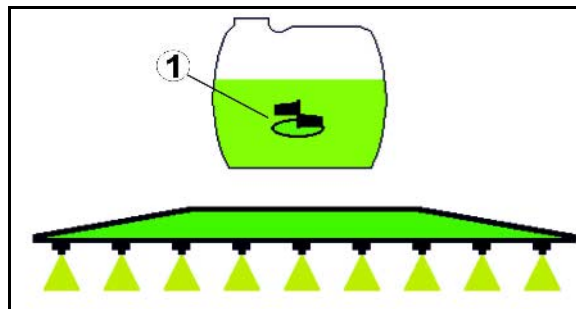
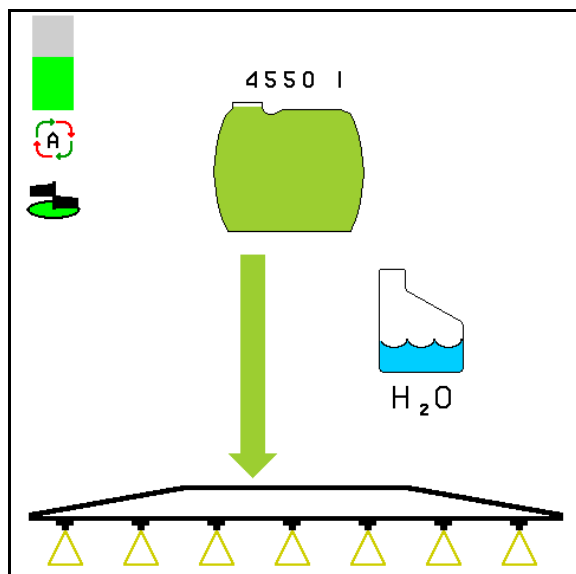
8. Re-fill the flushing water.
9. Repeat steps 1 to 6.





### 10.15.4 Automatic agitator deactivation


-  Agitator switched to automatic deactivation.
  - The agitator switches off when the tank volume falls below 5%.
  - The agitator switches back on automatically after being filled.

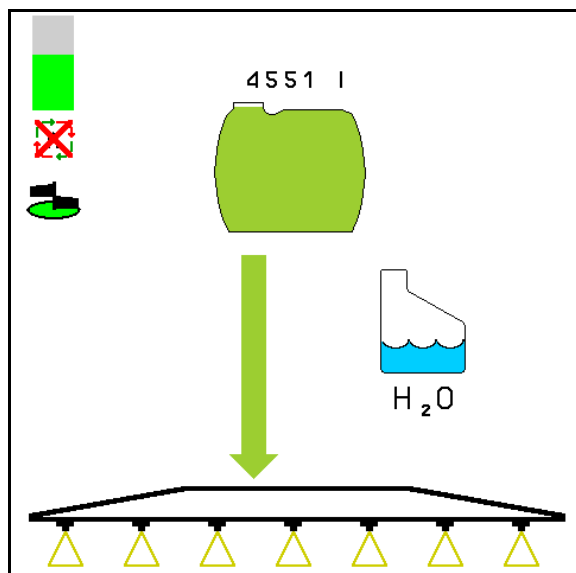
(1) Automatic agitator deactivation display in the Work menu.



-  Agitator deactivation off.
  - The agitator remains switched on even if the tank contents fall below 5%.


→  Display green - agitator on  
 Display grey - agitator off

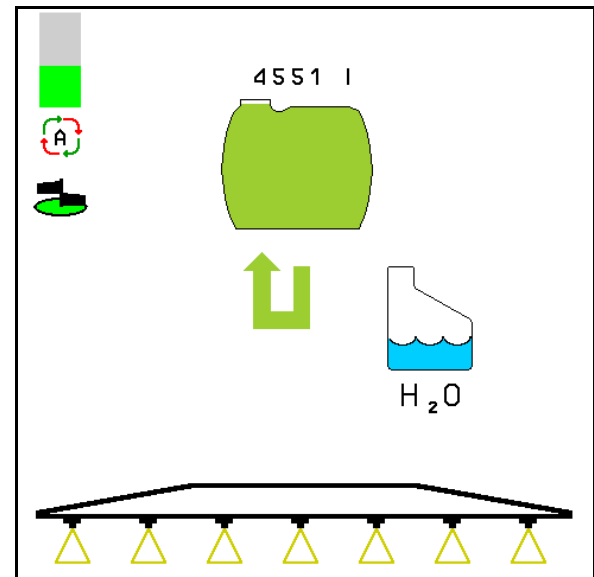
-  Switch the agitator on / off.



### 10.15.5 Circulation cleaning

During circulation cleaning, the liquid in the spray agent container is permanently pumped through the agitator and the internal cleaning system in a circuit.

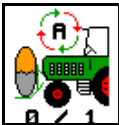
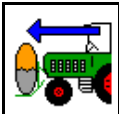
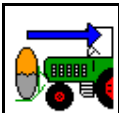
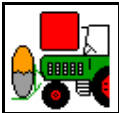
- 
 Switching the circulation cleaning on/off.



## 10.16 Function group Front tank

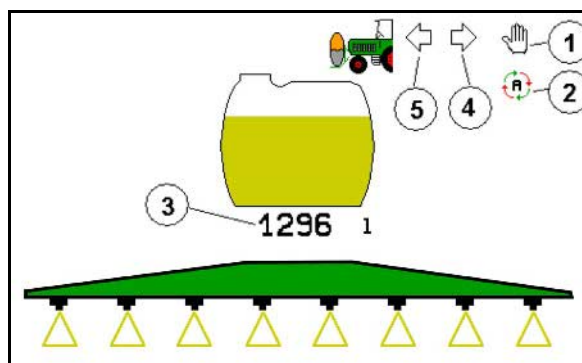


### 10.16.1 Front tank with Flow Control

	Modus Automatic / Manual
	Switch the pump to the front on / off
	Switch the pump to the rear on / off
	Switch off the pump

Display in the Work menu:

- (1) Manual mode switched on.
- (2) Automatic mode switched off.
- (3) Total filling level (UF+FT)
- (4) Pumps switched on from FT to UF.
- (5) Pumps switched on from UF to FT.



#### Automatic mode:

During use / transport of the field sprayer / front tank combination, operate in **Automatic** mode.

Function of the **Automatic** mode:

- Permanent circulation of the spraying agent with agitator effect in the front tank.
- Control of the filling level of both tanks in spraying operation.

#### Manual mode:

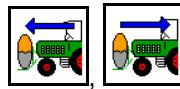
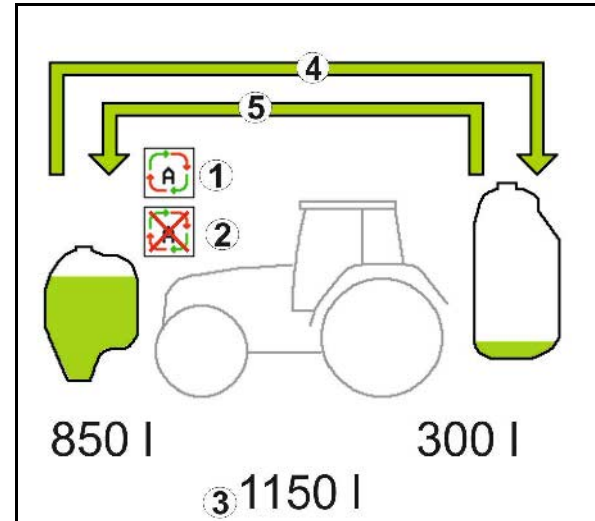
- In Manual mode, the distribution of the spraying agent is controlled by the operator on both tanks.

The following functions are used for this:

- o Pumping to the front.
- o Pumping to the rear.

Display in menu function group front tank:

- (1) **Automatic** mode switched on.
- (2) Manual mode switched on.
- (3) Total filling level (UF+FT)
- (4) Pumps switched on from FT to UF.
- (5) Pumps switched on from UF to FT.



Pumping to the front and pumping to the rear can be switched at the same time.



For using the field sprayer without front tank, switch off the front tank in the machine data menu.

## Filling



The front tank is filled via the field sprayer UF.



The filling menu is called up for this purpose.



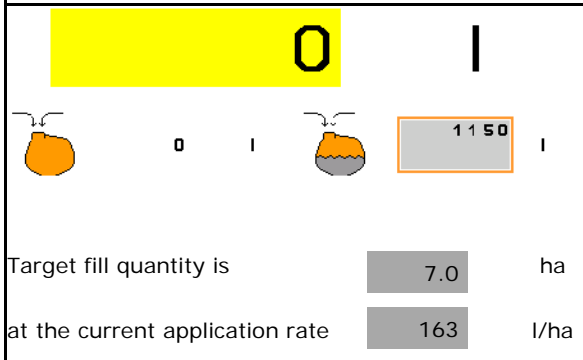
Before filling the front tank and field sprayer together, adapt the indicator limit for the filling level.



In order to avoid an overfilling of the front tank, the respective valve closes when reaching the nominal volume.



Re-filling the spraying fluid



## Internal cleaning

The front tank is equipped with an internal cleaning that is operated parallel to the field sprayer.

→ See the operating manual UF.

During / after internal cleaning:



- **Pumping to the rear** must be switched on until the front tank is empty.
- Is carried out automatically on machines with Comfort Package!
- After internal cleaning: perform residual drainage.

## Failure of the filling level sensor

In event of filling level sensor failure

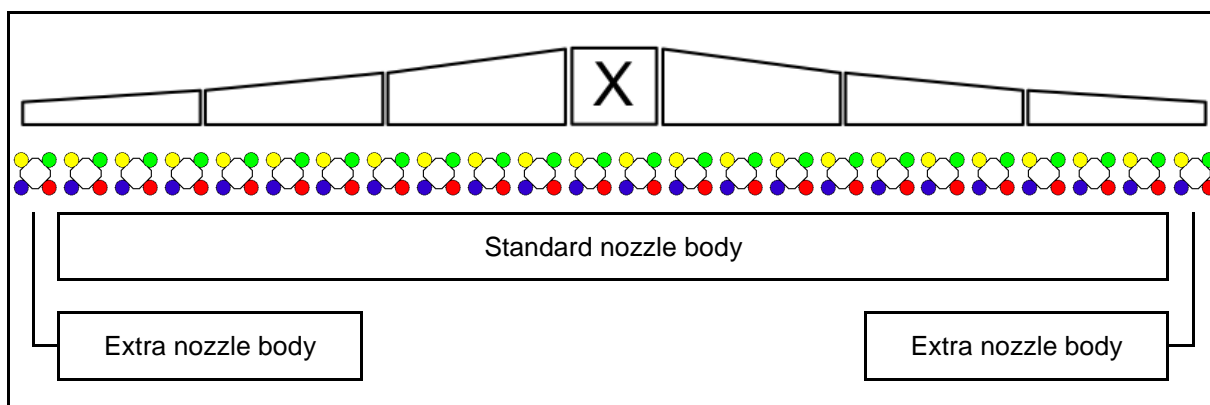
- an alarm signal appears,
- switches from **Automatic** mode to **Manual** mode,
- closes both valves of the Flow Control.

## 10.17 Procedure for use

---

1. Select the Work menu on the in-cab terminal.
2. Profi-folding: supply the hydraulic block with oil via the tractor control unit *red*.
3. Fold out the sprayer boom.
4. Adjust the boom height and align the booms.
5. For UX / UG with steering axle / drawbar: AutoTrail to automatic mode.
6. DistanceControl (option) to automatic mode.
7. Switch on the sprayer, run with the tractor and spray the area.
8. Switch off the spraying.
9. Fold in the sprayer boom.
10. Move the steering axle / drawbar to the middle position and secure in place.
11. For Profi-folding: interrupt oil supply.

## 11 Automatic single nozzle control



Before starting-up the AmaSelect

- Menu Setup: select the type of nozzle
- make the entries in the user profile.

### 11.1.1 Single nozzle control during operation



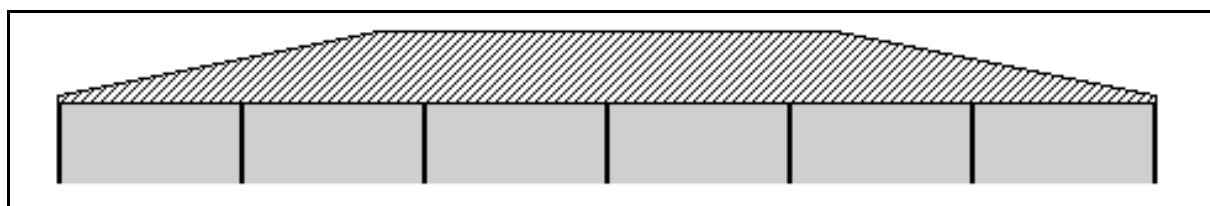
Work menu



Select **Work** menu in the main menu!

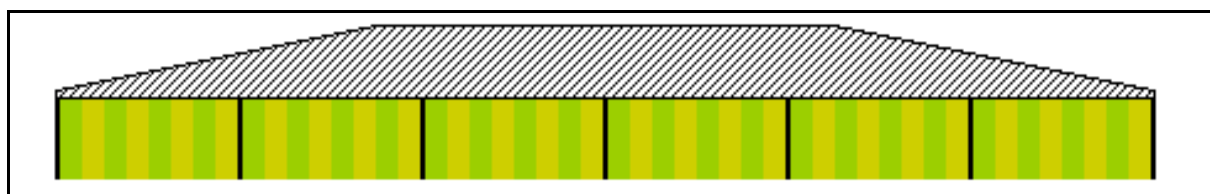
**Spraying switched off**

with display of the part width sections for manual nozzle selection

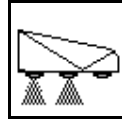
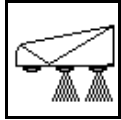


**Spraying switched on**

with display of all active nozzles



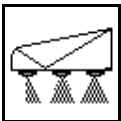
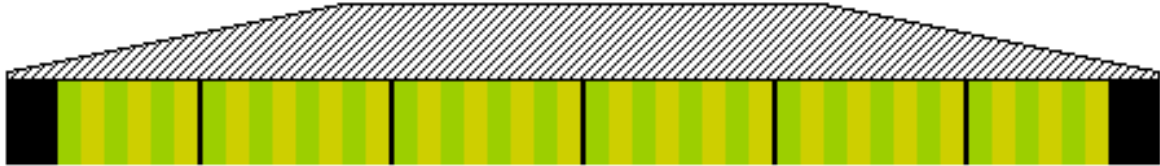




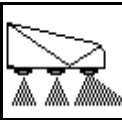
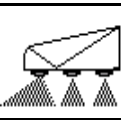
### Switch the left-hand/right-hand end nozzles

The left-hand/right-hand end nozzles can be switched separately

**End nozzles switched on:**



### Switch the left-hand/right-hand boundary nozzles



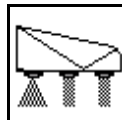
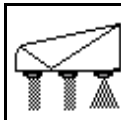
### Switch the left-hand/right-hand extra nozzles

The extra nozzles and boundary nozzles on the left-hand and right-hand sides can be switched separately.

**End nozzle, extra nozzle switched on:**

End noz

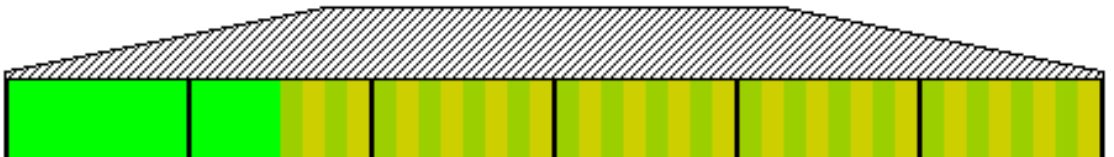
Extra nozzle



### Switch the left-hand/right-hand drift reduction

The drift reduction can be switched separately on the left and on the right or together.

**Drift reduction spraying switched on:**



## 11.2 AmaSwitch (optional)

Each nozzle can be switched on and off separately via Section Control.

## 11.3 AmaSelect (optional)

The sprayer boom is fitted with 4-way nozzle bodies. Each of them is operated by an electric motor.

This means that nozzles can be switched on or off as desired (depending on the Section Control).

Through the 4-way nozzle bodies, multiple nozzles can be simultaneously active in a nozzle body.

Alternatively, the nozzles can be manually selected.

For boundary treatment, an extra nozzle body can be separately configured.

LED single nozzle illumination integrated into the nozzle body.

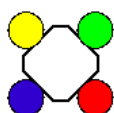
Nozzle distance of 25 cm possible (optional)

### Manual nozzle selection:

The operating terminal can be used to select the nozzle or the nozzle combination.

### Automatic nozzle selection:

The nozzle or nozzle combination is automatically selected during spraying in accordance with the entered boundary conditions.



Symbol for nozzle housings - AmaSelect.

The arrow shows the direction of travel.

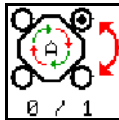
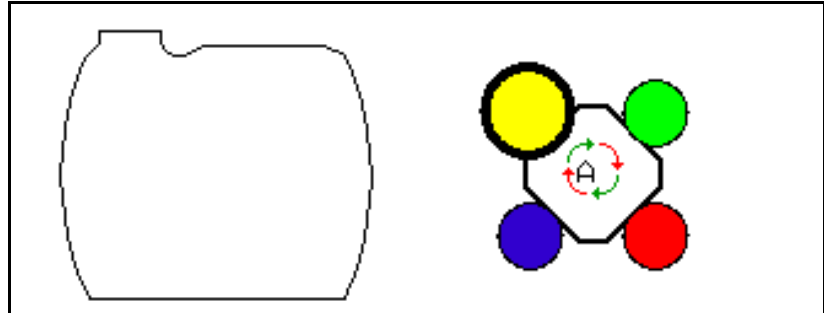
→ This is important for the assembly of the nozzles in the nozzle bodies!

## Nozzle body display in the work menu

### Nozzle body


with display of

- the colour marking of the nozzles
- the active nozzle/combination of nozzles is shown in detail
- the automatic nozzle switching



### Automatic or manual nozzle selection

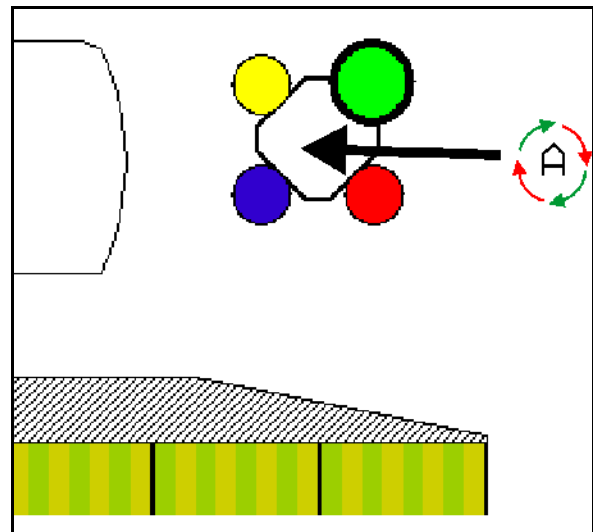
#### Automatic nozzle selection

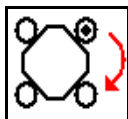
When switching on the automatic nozzle selection, the  symbol appears in the Work menu.

When the spray pressure is exceeded or not reached, the automatic nozzle selection switches to another nozzle or nozzle selection that is preferred for the current spray pressure.

#### Manual nozzle selection

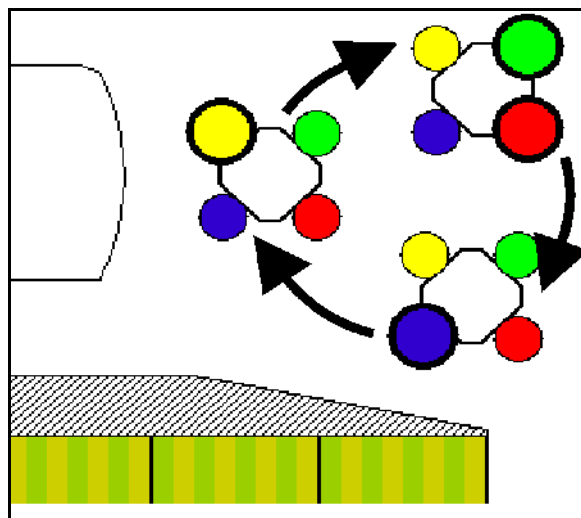
With manual nozzle selection, the nozzle selection can be changed by pressing the buttons.



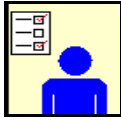


## Manually select nozzles

The nozzle selection changes each time the button is pressed.



## 11.4 Configure nozzle switching













Select User profile in the main menu!

→ Configure nozzle switching menu

To configure the nozzle switching, the following entries must be made.

- Configure part width section control  
See on page 24
- Configure part width section control
- Enter the reduced working width from outside for switching the end nozzle (only AmaSwitch).
- Enter the type of boundary nozzles (only AmaSwitch).
  - none
  - Extra nozzle
  - Boundary nozzle
- Configure standard nozzle body (only AmaSelect)
- Configure extra nozzle body (only AmaSelect)
- Configure manual nozzle selection (only AmaSelect)
- Configure automatic nozzle selection (only AmaSelect)
- Configure boundary treatment


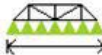

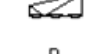


	Configure nozzle switching
	Configure switch point
	Configure part width section control
	End nozzle <input type="text"/> m
	Boundary nozzles <input type="text"/>
	Configure standard nozzle body
	Configure extra nozzle body
	Configure manual nozzle selection
	Configure automatic nozzle selection
	Configure boundary treatment

## Automatic single nozzle control

### Configure part width section control

- Enter the working width
- Enter the number of part width sections for automatic switching
- The number of part width sections may be limited by the TaskController.
- The smallest possible part width section is 0.50 m.
- The size of the automatic part width section is shown.
- Enter the number of part width sections for manual switching.
- Configure the width of the automatic part width sections, see below.  
A width is presented for each part width section, this can be changed.
- Automatic nozzle cleaning (when cleaning the nozzles with rinse water, the entire AmaSelect nozzle body is cleaned).
  - o ☒ Active
  - o ☐ Deactivated

For more, see standard nozzle body, page 23.

	Configure part width section control	
	Working width	<input type="text"/>
	PWS amount with automatic PWS switching	<input type="text"/>
	PWS number for manual PWS switching	<input type="text"/>
	Configure the width of the automatic part width sections, see below.	
	Automatic nozzle cleaning	<input type="checkbox"/>

Check or enter the width for each part width section starting from the left.



Other part width sections.

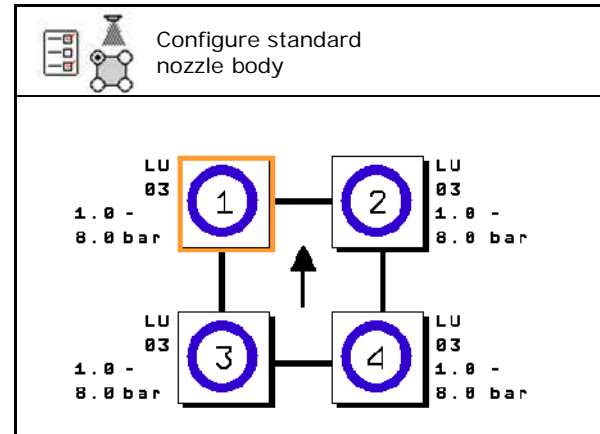
Configure width of the manual part width sections		
Part width section	Width automatic PWS	Corresponding manual PWS
1	0.5 m	1
2	0.5 m	2
3	0.5 m	3
4	0.5 m	4
5	0.5 m	5
6	0.5 m	6
7	0.5 m	7
8	0.5 m	8
9	0.5 m	9
10	0.5 m	10
11	0.5 m	11
12	0.5 m	12
13	0.5 m	13

### 11.4.1 Configure standard nozzle body

Each nozzle is shown with the parameters that have been entered.


The arrow shows the direction of travel.

1. Mark the nozzle.
2. Confirm the entry.

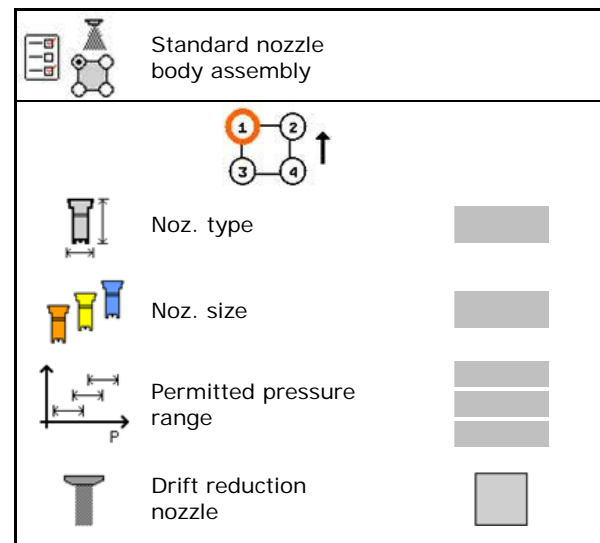


3. Make the entries for the nozzle.

- Nozzle type
- Nozzle size (with colour identification)
- Permitted pressure range
- Drift reduction nozzle
  - o ☒ (yes)
  - o ☐ (no)

→  Next nozzle

→  Previous nozzle

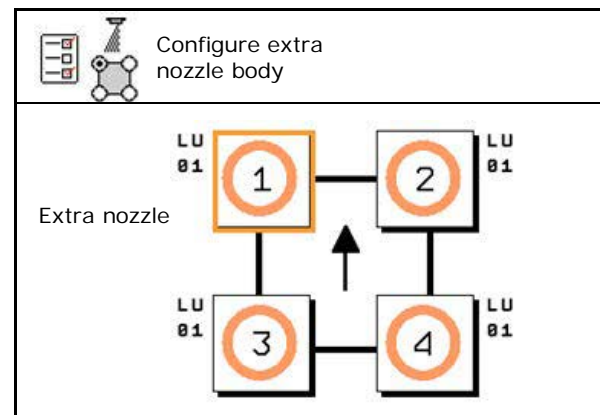


### 11.4.2 Configure extra nozzle body

The extra nozzle body is displayed with the parameters that have been entered.

The arrow shows the direction of travel.

1. Mark the nozzle.
2. Confirm the entry.



## Automatic single nozzle control

3. Make the entries for the nozzle.

- Nozzle type
- Nozzle size
- Boundary nozzle
  - o none
  - o Extra nozzle
  - o Boundary nozzle

→ Next nozzle

→ Previous nozzle

Extra nozzle body assembly

Noz. type

Noz. size

Boundary nozzles

## Configure manual nozzle selection

Select the required nozzle or combination of nozzles:

1. Mark nozzle or the combination of nozzles

A maximum of 7 nozzles and combinations of nozzles can be selected.

2. Select nozzle/combination of nozzles.

- o ☒ Selected
- o ☐ Not selected

Configure manual nozzle selection

Please select which nozzles are required during work.



If nozzles 2 and 3 are selected, it is not possible to switch between 2 and 3 without briefly opening further nozzles.



When using the expansion for 25 cm nozzle distance:

- Configure manual nozzle selection.



- Select nozzle 1 and 2.



### 11.4.3 Configure automatic nozzle selection

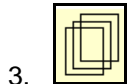
Nozzles or combinations of nozzles to be switched between automatically:

1. Mark nozzle or the combination of nozzles.


A maximum of 2 nozzles and one combination of nozzles can be selected.

2. Select nozzle/combination of nozzles.

- ☒ Selected
- ☐ Not selected

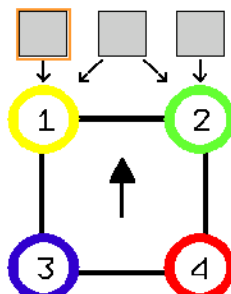


- 3.



#### Configure automatic nozzle selection

Please select between which nozzles should be automatically changed during work.





According to the switching pattern of the nozzle bodies, the following series can be selected.


1. Small nozzle on 1
2. Large nozzle on 2
3. Small and large nozzle

4. Enter the minimum and maximum spraying pressure to switch to another nozzle / combination of nozzles.

- 4.1 Mark the pressure and nozzle.

- 4.2 Confirm marking.

- 4.3 Enter the minimum and maximum spraying pressures.



#### Switch point input

Nozzle selection	Nozzle size	P min [bar]	P max [bar]
1	015		
2	025		
1+2	04		

#### Application example for creating a nozzle selection (working with application cards)

- Forward speed: 10 km/h
- Nozzle ID for pressure between 2 – 8 bar

When selecting the nozzles, observe that the application rates of the individual nozzles overlap sufficiently so that all quantities can be spread correctly.

	Nozzle 1	Nozzle 2	Nozzle 1+2
Nozzle:	ID015	ID025	ID015+ ID025 = 0.4
Pressure range:	2.2 – 7.0 bar	2.0 – 6.9 bar	2.1 – 7.1 bar
for application rates:	60 – 108 l/ha	96 – 180 l/ha	156 – 288 l/ha
Pressures and application rates from the spray table			

60 l/ha	100 l/ha	200 l/ha	300 l/ha
Nozzle 1	Nozzle 2	Nozzle 1+2	

## Automatic single nozzle control

- Enter data determined.
- --- No entry necessary.

Switch point input			
Nozzle selection	Nozzle size	P min [bar]	P max [bar]
1	015	---	7.0
2	025	2.5	6.0
1+2	04	2.4	---

## Spray table for selecting the nozzles and pressure ranges


H <sub>2</sub> O									
6	6,5	7	7,5	8	8,5	9	10	11	12
km/h									
80	74	69	64	60	56	53			
100	92	86	80	75	70	66	60	55	51
120	111	103	96	90	84	78	72	66	60
140	129	120	112	105	98	91	84	77	70
160	148	137	128	120	112	104	96	88	80
180	166	154	144	135	126	117	108	100	91
200	185	171	160	150	140	130	120	110	100
220	203	189	176	165	154	143	132	121	110
240	222	206	192	180	168	156	144	132	120
260	240	223	208	195	182	169	156	143	130
280	259	240	224	210	196	182	168	154	140
300	277	257	240	225	210	195	180	165	150
320	295	274	256	240	224	208	192	175	158
340	314	291	272	255	238	221	204	186	168
360	332	309	288	270	252	233	216	197	178
380	351	326	304	285	266	246	228	208	188
400	369	343	320	300	280	260	240	220	200
420	388	360	336	315	294	273	252	231	210
440	406	377	352	330	308	286	264	242	220
460	425	394	368	345	322	299	276	253	230
480	443	411	384	360	336	312	288	264	240
500	462	429	400	375	353	333	300	273	250

## Configure boundary treatment





- Enter the reduced working width from outside for switching the end nozzle.
  - Enter the width from the outside for switching drift reduction spraying.
- One nozzle of the standard nozzle body must be marked as being drift reducing.

Configure boundary treatment	
End nozzle	
Drift reduction of the spraying	

## 11.5 Cleaning the nozzle body - AmaSelect



After each use, when cleaning the spraying nozzles:

1.  Set manual nozzle selection.
2.  Flush each nozzle for at least 5 seconds.
3.  Flush the boundary nozzles on each side for at least 5 seconds.
4.  Flush the extra nozzles for at least 5 seconds.

## 11.6 Nozzle body maintenance AmaSelect

Maintenance of the nozzle bodies is required to ensure that the system remains leak-free over a long period of time.

### Note

F1280

Nozzle bodies must be maintained. Please contact your dealer.

Please acknowledge  
this message

## 12 AUX-N multi-function sticks

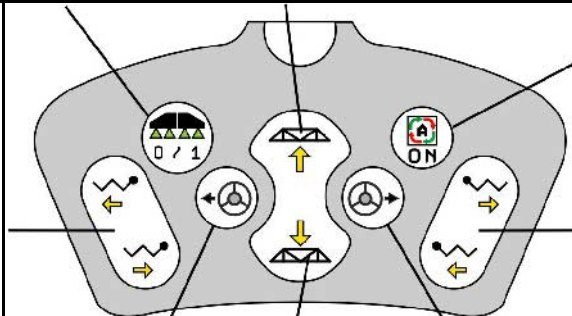


### AUX-N - Auxiliary Control

The implement computer supports the AUX-N standard. Therefore, the functions of the implement can be assigned to an AUX-N-compliant multi-function stick.

The AmaPilot+ and Fendt multi-function sticks are pre-assigned as a standard.

### Assignment of the Fendt multi-function stick

Switch spraying on/off		Raise the boom		
Boom left Unfold  Fold in				Switch automatic devices
				Boom right Unfold
				Fold in
Steer to the left		Lower the boom		Steer to the right

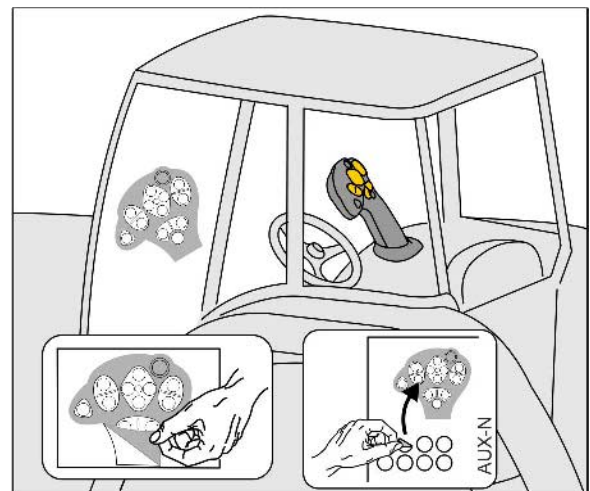
## 13 AmaPilot/AmaPilot+ multi-function stick

All of the implement functions can be performed using the AmaPilot and AmaPilot+.

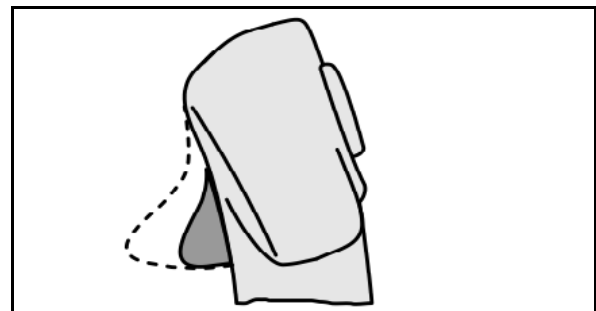
- AmaPilot with fixed key assignment
- AmaPilot+ is an AUX-N control element with freely assignable key assignment (keys pre-assigned like for the AmaPilot)

36 functions can be selected by pressing with your thumb. Two additional levels can also be switched on.

A sticker with the default assignment can be stuck in the cab. For a freely assigned key assignment, a new sticker can be applied over the default assignment.



- Standard level
- Level 2 - holding the trigger on the rear side

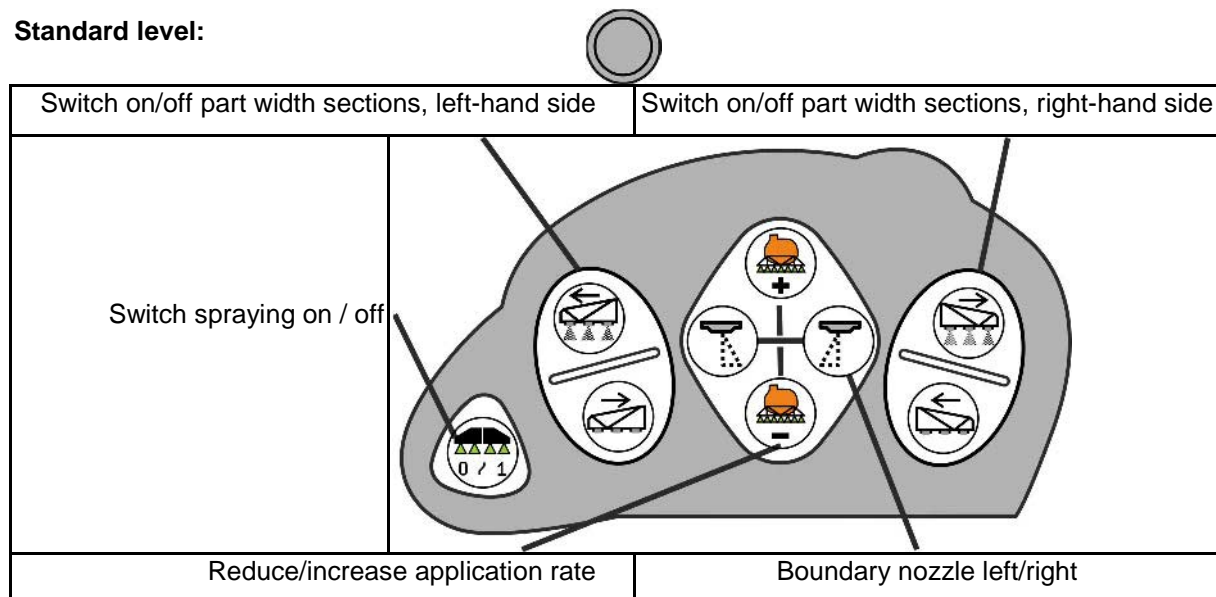


- Level 3 - after switching the illuminated button

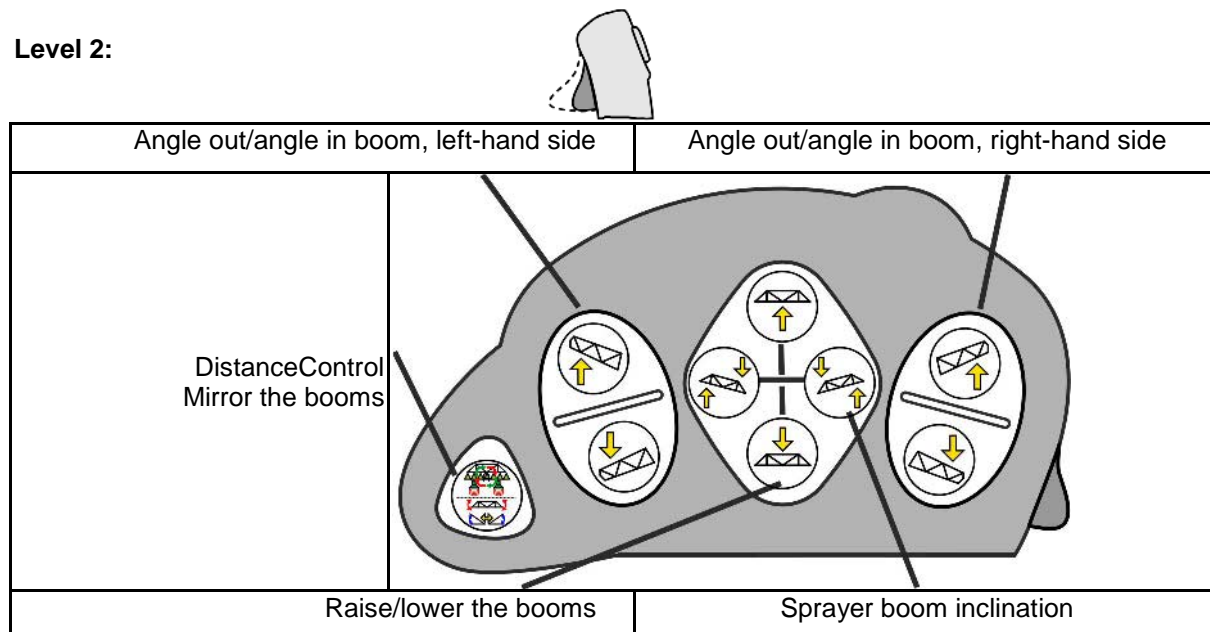


## AmaPilot assignment

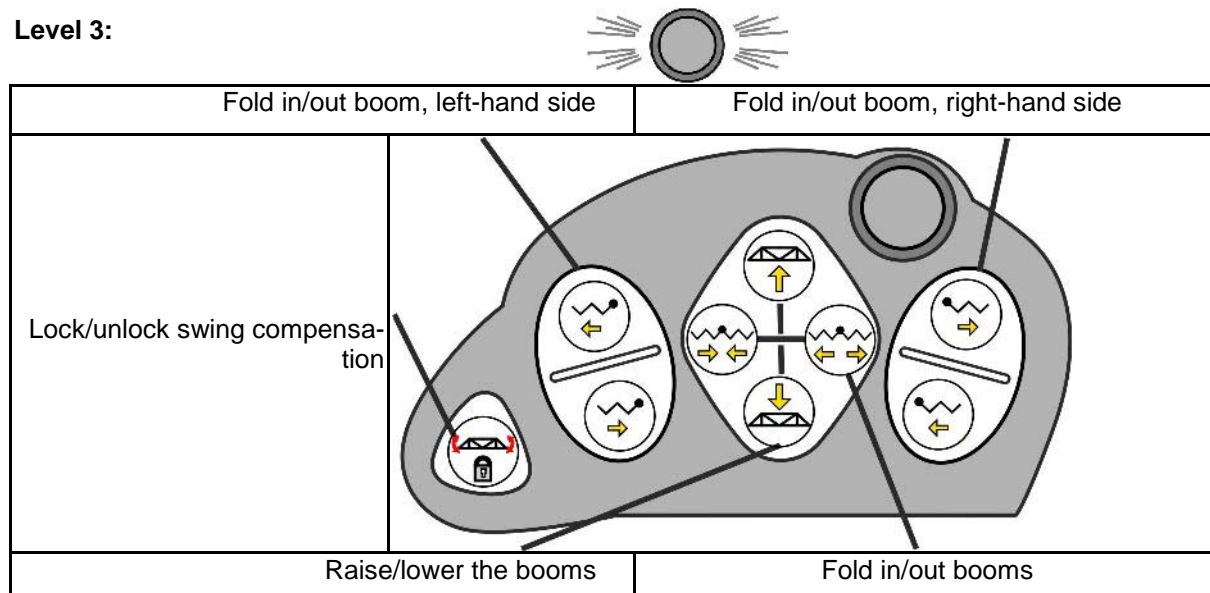
### Standard level:



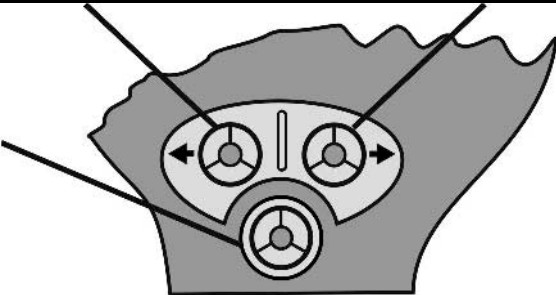
### Level 2:



### Level 3:



**Functions on all levels:**

Pantera: Steer the rear wheel steering to the left UX: Steer axle / draw bar to the left	Pantera: Steer rear wheel steering to the right UX: Steer axle / draw bar to the right
Pantera: Switch between 2 <-> 4 wheel steering UX: AutoTrail toggle automat- ic/manual	



## 14 Boom part width section control box AMAClick

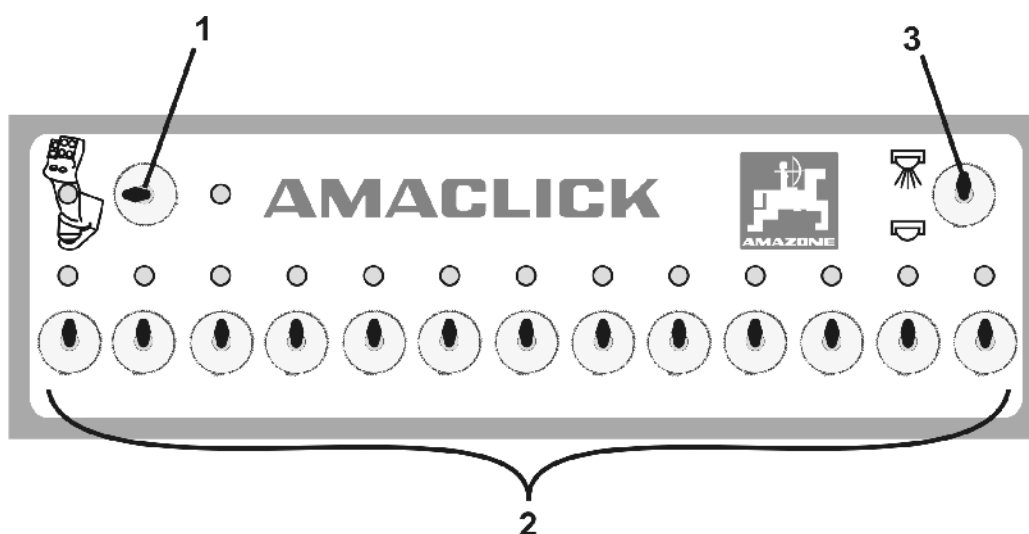
### 14.1 Function

The **AMAClick** control box is used in combination with the

- in-cab terminal,
  - in-cab terminal and multi-function stick
- for operating the AMAZONE – field sprayers.

With the **AMAClick**<sup>+</sup>

- every part width section can be switched on or off as required.
- can switch the application of spraying agent on and off.



(1) On / Off switch

- o Switch position :

**AMAClick** not active. Operation of the part width sections via the in-cab terminal / multi function stick.

- o Switch position "**AMAClick**":

Spraying on / off and part width sections are

**switched using AMAClick**

(Operation with the in-cab terminal / multi-function stick is no longer possible).

The lamp above the boom part width sections indicates that the part width sections are switched on.

(2) Part width section control

A part width section control is available for each part width sections.

If several controls are available as part width section, the control on the right is not assigned (e.g., field sprayer with 11 part width sections, **AMAClick** 13 controls → 2 controls far to the right are not assigned).

(3) Switch spraying on  / off .

Spraying agent is spread via all part width sections switched on, no spraying agent is spread.



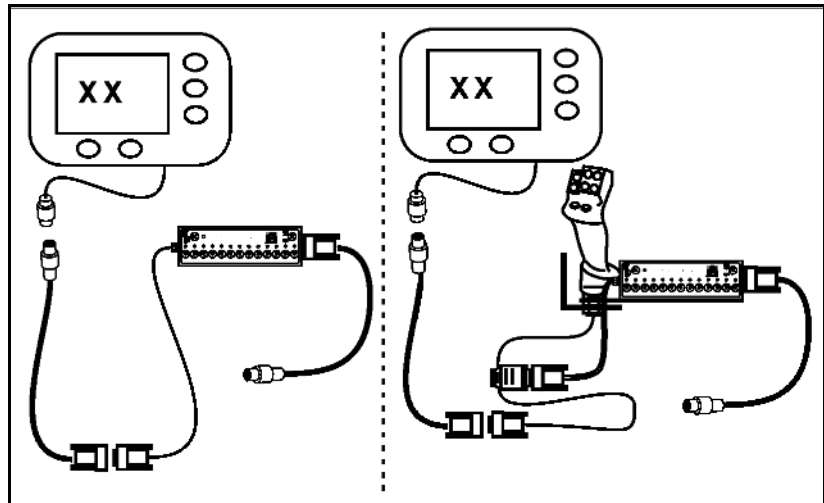


To indicate the part width section controls not assigned, you can remove the plastic caps.

## 14.2 Attachment

Screw the AMAClick via the hole cut-out of the console on the multi-function stick or mount alternatively in the tractor cab so that it can be accessed conveniently.

### Attaching to the third-party terminal



## 15 Fault

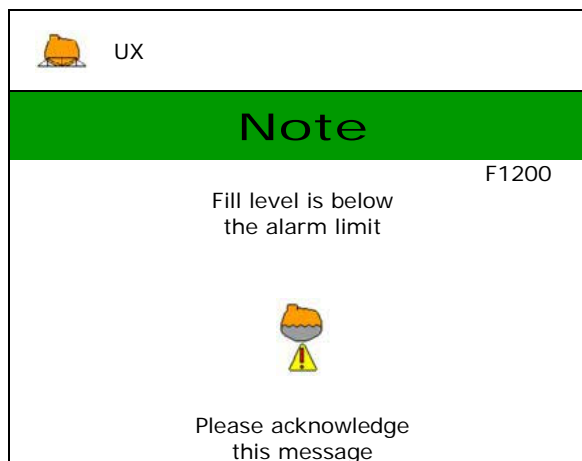
### 15.1 Display on the control terminal

A message appears as:

- Note
- Warning
- Alarm

The following are displayed:

- The number of the fault
- A text message
- If applicable, the symbol of the respective menu



### 15.2 Fault table

Number	Type	Cause	Remedial action
---	---	Only ISOBUS terminals are supported with at least 256 colours and at least 6 buttons.	( Start the AMATRON 3 in ISOBUS mode, use another terminal
F15002	Note	Min. 1 PWS is opened and set fill level alarm limit > 0 and current hopper content < set fill level alarm limit /// from software version 1.06.xx: as soon as the fill level alarm limit is exceeded, the message appears once and the fill level is highlighted yellow	<ul style="list-style-type: none"> <li>• If you do not want to receive this notification message, the fill level alarm limit can be set to 0 litre.</li> </ul>
F15003	Note	Information appears when the speed "simulated speed" has been selected as the source and a speed > 1km/h has been detected at another source	
F15004	Alarm	The voltage of the drawbar poti is greater than 4.653 V or smaller than 0.347 V	<ul style="list-style-type: none"> <li>• Check the connecting cable and potentiometer at the drawbar.</li> </ul>
F15005	Alarm	Value of the axle / drawbar potentiometer < 0.5 V or > 4.5 V	<ul style="list-style-type: none"> <li>• Check the angle detection at the axle or drawbar</li> <li>• Check the connecting cable.</li> </ul>
F15006	Note	Min. 1 PWS open and set pump speed does not deviate by more than the set limits (%min / %max)	<ul style="list-style-type: none"> <li>• Adjust pump speed or limit value.</li> <li>• If this error message is not desired, set the limit value to 0 rpm.</li> </ul>

F15007	Alarm	The voltage of the oil pressure sensor is greater than 4.5 V or smaller than 0.5 V	<ul style="list-style-type: none"> <li>• Check the pressure sensor and connecting cable of the hydro accumulator.</li> </ul>
F15008	Alarm	Front or rear tank fill level indicator failure (The automatic mode of the fill level control between the front and rear tank is quit)	<ul style="list-style-type: none"> <li>• Adapt the fill level ratio between the front and rear tank</li> <li>• Check the filling level sensors and fill level curves.</li> </ul>
F15009	Warning	Connection to the hydraulic job computer has been interrupted for at least 10 seconds	<ul style="list-style-type: none"> <li>• Check the connection of the hydraulic computer and the computer itself</li> <li>• Is the software version of the computer displayed in the setup?</li> <li>• Is the computer visible in the download manager after connecting?</li> <li>• Check the software version of the hydraulic computer for compatibility with the basic computer</li> <li>• Check the voltage supply (connection of the basic equipment, etc.).</li> </ul>
F15010	Warning	Agitator pressure sensor signal < 0.5 V or > 4.5 V	<ul style="list-style-type: none"> <li>• Check the sensor and connection cable</li> </ul>
F15011	Warning	The comfort computer has not sent a status message for at least 14 seconds	<ul style="list-style-type: none"> <li>• Check the connection of the comfort computer and the computer itself</li> <li>• Is the computer visible in the download manager after connecting?</li> <li>• Check if the software version of the comfort computer is compatible with the basic and hydraulic computer.</li> <li>• Check the voltage supply (connection of the basic equipment, etc.).</li> </ul>
F15012	Warning	Voltage value of the potentiometer on the suction tap < 0.5 V or > 4.5 V	<ul style="list-style-type: none"> <li>• Check the sensor and connection cable</li> </ul>
F15013	Warning	Missing change of the voltage value for the pressure sensor when controlling the setting motor at the same time	<ul style="list-style-type: none"> <li>• Check the connecting line and valve agitating pressure</li> <li>• Check the spray agent circulation</li> </ul>
F15014	Warning	Missing change of the voltage value for the suction tap potentiometer when controlling the setting motor at the same time	<ul style="list-style-type: none"> <li>• Check the connecting cable and suction tap adjustment motor</li> <li>• Check the suction tap mechanism</li> </ul>
F15015	Warning	Suspension computer sends the signal of the sensor for detecting the left spring position (rear) < 0.5 V or > 4.5 V	<ul style="list-style-type: none"> <li>• Check the height detection on the axle and connecting cable</li> </ul>
F15016	Warning	Suspension computer sends the signal of the sensor for detecting the right spring position (rear) < 0.5 V or > 4.5 V	<ul style="list-style-type: none"> <li>• Check the height detection on the axle and connecting cable</li> </ul>
F15017	Warning	The suspension computer reports that the height of the left and right axis have different heights.	<ul style="list-style-type: none"> <li>• Check the oil supply</li> <li>• Check if the software version of the Hydac suspension computer is compatible with the basic and hydraulic computer.</li> <li>• Use the diagnosis menu to check if the connections of the potentiometer for the height adjustment or when connecting left and right hydraulic valves have been swapped.</li> </ul>

## Fault

F15018	Warning	The suspension computer has not sent a status message for at least 10 seconds	<ul style="list-style-type: none"> <li>• Check the connection of the suspension computer and the computer itself</li> <li>• Is the software version of the computer displayed in the setup?</li> <li>• Check if the software version of the Hydac suspension computer is compatible with the basic and hydraulic computer.</li> <li>• Check the voltage supply (connection of the basic equipment, etc.).</li> </ul>
F15019	Warning	Voltage value of the pressure sensor for pressure / rate control outside the range of 0.5 V...4.5 V	<ul style="list-style-type: none"> <li>• Check the pressure sensor and connecting cable.</li> </ul>
F15020	Warning	Although at least one part width section valve is open and a pressure of >1 bar is applied, the flow meter does not send a signal	<ul style="list-style-type: none"> <li>• Check the flow meter and connecting cable</li> </ul>
F15021	Warning	Although the bypass valve is open and a pressure of >1 bar is applied, the flow meter does not send a signal	<ul style="list-style-type: none"> <li>• Check the flow meter and connecting cable</li> </ul>
F15022	Warning	Although at least one part width section valve is open, HighFlow is activated and a pressure of >1 bar is applied, the flow meter does not send a signal	<ul style="list-style-type: none"> <li>• Check the flow meter and connecting cable</li> </ul>
F15023	Warning	Transport position sensor left or right is activated and potentiometer of the steering has not detected the middle position yet, or the steering wheel has left the middle position.	<ul style="list-style-type: none"> <li>• Move the steering wheel into the middle position</li> <li>• Check the transport position sensors and connection cable</li> </ul>
F15024	Warning	The voltage of the filling level sensor is greater than 4.5 V or smaller than 0.5 V	<ul style="list-style-type: none"> <li>• Check the potentiometer and connecting cable of the filling level sensor.</li> </ul>
F15025	Warning	Front tank computer reports that the filling level sensor has failed (voltage value at the potentiometer outside the range of 0.5 V ... 4.5 V).	<ul style="list-style-type: none"> <li>• Check the potentiometer and connecting cable of the filling level sensor in the front tank.</li> </ul>
F15027	Warning	Distance Control: the voltage of the tilt sensor is greater than 4.5 V or smaller than 0.5 V	<ul style="list-style-type: none"> <li>• Check the implement and boom settings in setup,</li> <li>• Check the tilt sensor and connecting cable</li> </ul>
F15029	Warning	The front tank computer has not sent a status message for at least 14 seconds	<ul style="list-style-type: none"> <li>• Check the connection of the front computer and the computer itself</li> <li>• Is the software version of the computer displayed in the setup?</li> <li>• Is the computer visible in the download manager after connecting?</li> <li>• Check if the software version of the front tank computer is compatible with the basic and hydraulic computer.</li> <li>• Check the voltage supply (connection of the basic equipment, etc.).</li> </ul>

F15031		Despite controlling the tilt (by the operator, or automatically by the job computer), no change in the tilt sensor signal is determined.	<ul style="list-style-type: none"> <li>• Check the oil supply</li> <li>• Check the tilt adjustment and angle detection.</li> </ul>
F15032	Note	Softkey "delete" has been pressed in the job menu	
F15033	Warning	Distance Control: the voltage of the tilt sensor is greater than 4.5 V or smaller than 0.5 V since approx. 4 seconds	<ul style="list-style-type: none"> <li>• Check the implement and boom settings in setup</li> <li>• Check the tilt sensor and connecting cable</li> </ul>
F15034	Warning	Distance Control: the voltage of the potentiometer "Spring assembly for implement" is greater than 4.5 V or smaller than 0.5 V	<ul style="list-style-type: none"> <li>• Check the implement and boom settings in setup</li> <li>• Check the potentiometer and connecting cable</li> </ul>
F15035	Note	Appears if the value calibrated is missing (e.g., position of the suction tap in the incorrect sequence, ultrasound sensors below 50% successful measurements or another DC sensor is faulty)	<ul style="list-style-type: none"> <li>• Carry out calibration again</li> <li>• Check the implement settings in the setup</li> <li>• Check the software versions for compatibility with the basic computer</li> <li>• Check the position detection of the suction tap</li> <li>• Check the correct position of the suction tap before saving</li> <li>• The ground must not reflect with Distance Control</li> </ul>
F15036	Warning	The tilt adjustment in the implement menu is not calibrated.	<ul style="list-style-type: none"> <li>• Calibrate tilt adjustment</li> </ul>
F15037	Note	Message appears when accessing the diagnosis menu	□
F15038	Warning	The voltage of the potentiometer "Boom tilt" is greater than 4.5 V or smaller than 0.5 V	<ul style="list-style-type: none"> <li>• Check the correct implement and boom settings in setup</li> <li>• Check the potentiometer and connecting cable</li> </ul>
F15039	Warning	Left DC sensor does not send a signal	<ul style="list-style-type: none"> <li>• Check the left ultrasound sensor, extension cable and the connecting cable (including amplification electronics) and, if necessary, replace /// From DC sensors NH141, only NL653, NL654, NL655 or NL656 or higher are permitted to be used, ISOBUS SW 1.06.xx or higher</li> </ul>
F15040	Note	Source for the forward speed does not send a signal	<ul style="list-style-type: none"> <li>• Select another speed source in the machine implements menu</li> <li>• Check the settings of the TECU</li> </ul>
F15041	Alarm	ISOBUS stop button ISB is pressed (with AMATRON 3 = On / Off switch)	Release ISB
F15042	Alarm	ISOBUS stop button ISB is no longer pressed (with AMATRON 3 = On / Off switch)	
F15043	Note	No signal for the PTO shaft speed at the ISOBUS	<ul style="list-style-type: none"> <li>• PTO shaft speed must be sent by TECU</li> <li>• As an alternative, select another source for the pump speed in the implement setting menu</li> </ul>

## Fault

F15044	Warning	Right Distance Control sensor does not send a signal	<ul style="list-style-type: none"> <li>Check the right ultrasound sensor, extension cable and the connecting cable (including amplification electronics) and, if necessary, replace /// From DC sensors NH141, only NL653, NL654, NL655 or NL656 or higher are permitted to be used, ISOBUS SW 1.06.xx or higher</li> </ul>
F15045	Warning	The voltage of the height potentiometer is greater than 4.5 V or smaller than 0.5 V	<ul style="list-style-type: none"> <li>Check the height potentiometer and connecting cable</li> </ul>
F15046	Warning	After the 3rd attempt to load the oil memory (one attempt = loading time + pause of 20 seconds), the setpoint of the oil memory could not be achieved	<ul style="list-style-type: none"> <li>Check the oil supply and the signal of the hydro accumulator pressure sensor</li> </ul>
F15047	Note	Appears when the job computer recognises that the values taught are not plausible (e.g., value 5 is smaller than value 4, although value 6, 7, 8 are larger again and value 1, 2, 3 are smaller) after the teaching process (rear tank and / or front tank).	<ul style="list-style-type: none"> <li>Check the measuring points of the fill level curve for plausibility</li> </ul>
F15050	Warning	Steering tilt sensor failure < 0.5 V or > 4.5 V	<ul style="list-style-type: none"> <li>Check settings in the setup menu</li> <li>Check the connecting cable and tilt sensor</li> </ul>
F15051	Note	Comfort package: internal cleaning should be started and the quantity of agent in the tank is greater than 1% of the nominal tank volume	<ul style="list-style-type: none"> <li>Spray the tank empty</li> <li>Check the fill level detection and fill level curve</li> </ul>
F15052	Note	Despite controlling the spring suspension (by the operator, or automatically by the job computer), no change in the spring suspension sensor signal is determined.	<ul style="list-style-type: none"> <li>Check the spring suspension oil supply</li> <li>Check the spring suspension sensor position</li> <li>Check the spring suspension calibration</li> <li>Check the software versions for compatibility with the spring suspension and basic computer</li> </ul>
F15053	Note	The one-off calibration of the fill level sensor has not been carried out	<ul style="list-style-type: none"> <li>Calibrate spring suspension</li> </ul>
F15054	Note	At least one part width section is opened and rate regulation to automatic and current application rate deviates min. 11% from the set nominal amount by 15 seconds	<ul style="list-style-type: none"> <li>Check nozzle selection</li> <li>Check the agent circuit for leaks / blockages</li> <li>Check the flow meter</li> <li>Check the agitator settings</li> </ul>
F15055	Note	At least on part width section is opened and the current pressure is smaller than the set min. pressure	<ul style="list-style-type: none"> <li>Increase the pressure in the spray agent circuit or adjust the min. pressure limit</li> </ul>
F15056	Note	Current pressure is greater than the set max. pressure since min. 10 seconds and the set pressure is not = 0	<ul style="list-style-type: none"> <li>Decrease the pressure in the spray agent circuit or adjust the max. pressure limit.</li> </ul>
F15057	Note	The one-off calibration of the fill level sensor has not been carried out	<ul style="list-style-type: none"> <li>Calibrate the filling level sensor or enter the offset value for the filling level curve</li> </ul>
F15058	Note	Without comfort package: the alarm message appears 50 litres before reaching the set fill level. With comfort package: the alarm message appears 10 litres before reaching the set fill level. Exception, UX with agitator pressure control: the message appears here 20 litres before.	

F15059	Note	Fill level in the rear tank <150 litres, front tank in manual mode "Circulation"	
F15060	Note	The fill level in the front tank is greater than the nominal volume of the front tank + 70 litres (currently 1,070 litres)	<ul style="list-style-type: none"> <li>• Switch on the pump and pump the agent manually to the rear</li> </ul>
F15061	Note	The one-off calibration of the fill level sensor has not been carried out	<ul style="list-style-type: none"> <li>• Calibrate the filling level sensor or enter the offset value for the filling level curve</li> </ul>
F15062	Note	The boom tilt or Distance Control should be calibrated but the job computer of the implement has detected that the booms are in transport position.	<ul style="list-style-type: none"> <li>• Fold out booms</li> <li>• Check the sensors for the transport position and connection cable</li> </ul>
F15063	Note	The boom tilt or Distance Control should be calibrated but the job computer of the implement has detected that the booms are locked.	<ul style="list-style-type: none"> <li>• Unlock the booms</li> <li>• Check the sensor on the boom lock and connection cable</li> </ul>
F15064	Note	Voltage value of the boom tilt potentiometer must be within 2.0 V...3.0 V	<ul style="list-style-type: none"> <li>• Carry out calibration again</li> <li>• Make sure that the implement is positioned horizontally</li> <li>• Check the tilt sensor and connecting cable</li> </ul>
F15065	Warning	In order to be able to operate the folding function, the speed must not be faster than 3 km/h	<ul style="list-style-type: none"> <li>• Reduce the speed</li> <li>• Check the signal of the source selected for the speed</li> </ul>
F15066	Alarm	The basis computer of the sprayer does not receive any messages from the yaw rate sensor	<ul style="list-style-type: none"> <li>• Check settings in the setup menu</li> <li>• Check the connection cable and yaw rate sensor</li> </ul>
F15067	Alarm	Voltage value of the pressure sensor is outside the range of 0.5...4.5 V	<ul style="list-style-type: none"> <li>• Check the sensor and connection cable</li> <li>• Check the implement settings in the setup (sensor only UX11200)</li> </ul>
F15068	Warning	Suspension computer sends the signal of the sensor for detecting the front left spring position is outside the range of < 0.5 V or > 4.5 V	<ul style="list-style-type: none"> <li>• Check the height detection on the axle and connecting cable</li> <li>• Check the implement settings (sensor only with UX11200)</li> </ul>
F15069	Warning	Suspension computer sends the signal of the sensor for detecting the right spring position < 0.5 V or > 4.5 V	<ul style="list-style-type: none"> <li>• Check the height detection on the axle and connecting cable</li> <li>• Check the implement settings (sensor only with UX11200)</li> </ul>
F15070	Warning	UX11200: manual mode of the suspension active	<ul style="list-style-type: none"> <li>• Move the suspension to automatic mode</li> <li>• Check implement setting</li> </ul>
F15071	Warning	UX11200: suspension computer attempts to correct the suspension position and there is no oil pressure available	<ul style="list-style-type: none"> <li>• Switch on the oil circulation</li> <li>• Check the oil supply</li> <li>• Check the oil pressure sensor</li> </ul>
F15073	Warning	The one-off calibration of the steering has not been carried out yet	<ul style="list-style-type: none"> <li>• Calibrate the steering</li> </ul>
F15074	Warning	For calibrating the steering, the steering must be in field mode	<ul style="list-style-type: none"> <li>• Move the implement to field mode</li> <li>• Check the signal of the source selected for the speed</li> <li>• Check the sensor and connection cable of the transport position sensor</li> </ul>
F15075	Note	The Task Controller has switched off the Section Control	<ul style="list-style-type: none"> <li>• Check the Task Controller</li> </ul>
F15077	Warning	The nozzle body sends an error message or it does not reach its setpoint	<ul style="list-style-type: none"> <li>• Check the connection cable and nozzle body</li> </ul>
F15078	Warning	The message appears when the basic computer of the implement does not receive any messages from the central	<ul style="list-style-type: none"> <li>• Check the connecting cable for the central unit</li> <li>• Check the compatibility of the software</li> </ul>

## Fault

		unit	versions
			<ul style="list-style-type: none"> <li>• Check the implement settings</li> </ul>
F15079	Warning	The message appears when the basic computer of the implement does not receive any messages from the respective control unit	<ul style="list-style-type: none"> <li>• Check the connecting cable for the central unit and to the control unit</li> <li>• Check the compatibility of the software versions</li> <li>• Check the power supply</li> <li>• Check the nozzle body on the control unit</li> </ul>
F15080	Note	The message appears when the switching point does not correspond with the pressure range of the nozzles set	<ul style="list-style-type: none"> <li>• Check the configuration of the automatic nozzle switching</li> </ul>
F15081	Warning	This message appears if the function fold in booms has been called up without the boom being locked.	<ul style="list-style-type: none"> <li>• Lock booms</li> <li>• Check the connection cable and sensor on the boom lock</li> </ul>
F15082	Note	This message appears when the AmaSelect nozzle body has carried out more than 250,000 switching cycles since the last maintenance	<ul style="list-style-type: none"> <li>• Maintain the nozzle body</li> </ul>
F15083	Note	The cleaning slides do not reach the end position within 60 seconds.	<ul style="list-style-type: none"> <li>• Check the connection cable</li> <li>• Check the running path of the cleaning slide</li> </ul>
F15084	Note	The cleaning slides do not reach the end position within 60 seconds.	<ul style="list-style-type: none"> <li>• Check the connection cable,</li> <li>• Check the running path of the cleaning slide</li> </ul>
F15085		Transport position sensors of the boom are actuated	<ul style="list-style-type: none"> <li>• Prepare the booms for the BoomWash</li> <li>• Check the sensors for the transport position and connection cable</li> </ul>
F15086	Note		
F15087	Note	AmaSelect: the message appears when the machine has not opened all nozzle positions during cleaning	<ul style="list-style-type: none"> <li>• Carry out the cleaning again</li> </ul>
F15088	Note	AmaSelect: the message appears when the part width section distribution is not compatible with the number of nozzle bodies and the working width	
F15089	Note	The cleaning slides do not reach the end position within 60 seconds	<ul style="list-style-type: none"> <li>• Check the connection cable</li> <li>• Check the running path of the cleaning slide</li> </ul>
F15091	Warning	Voltage value of the height potentiometer on boom lifting gear (L booms) below 4.0 V	<ul style="list-style-type: none"> <li>• Raise the boom</li> <li>• Check the potentiometer and connecting cable</li> </ul>
F15168	Note	Drawbar steering: the steering angle is limited when the booms are in the transport position	<ul style="list-style-type: none"> <li>• Check the sensors and connection cable</li> </ul>

## 15.3 Failure of functions without alarm message on the terminal

If function failures occur that are not displayed on the control terminal, check the fuse of the load current supply on the tractor.

## 15.4 Failure of the speed signal from the ISOBUS





A simulated speed can be entered in the Machine Data menu as a source for the speed signal.

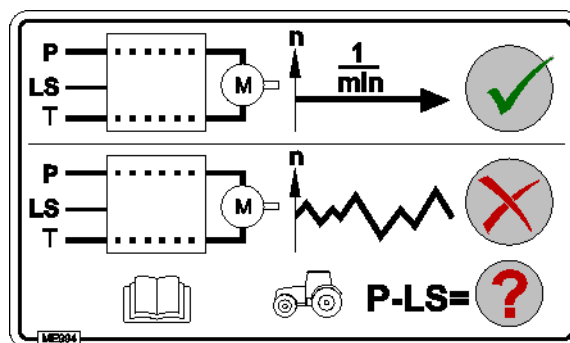
This allows the use of the machine without a speed signal.

For this:

1. Enter simulated speed.
2. Maintain the simulated speed as you continue operation.

	Configure speed source
	Speed source <span style="background-color: #cccccc; display: inline-block; width: 50px; height: 15px; vertical-align: middle;"></span>

## 15.5 Hydraulic pump drive malfunctions



Fault	Cause	Remedy
When actuating a hydraulic function on the sprayer or the tractor, the pump speed rises significantly for a short period of time	The hydraulic oil of the tractor is too cold.	After a few minutes of operation, the oil has warmed up and the speed remains constant.
	The hydraulic filter to the pump drive is clogged.	Replace the hydraulic filter
	The pressure loss between the tractor's hydraulic pump and the pump drive is too large	The standby pressure of the tractor's hydraulic system must be increased. If you cannot adjust this on your tractor, please contact the dealer for your tractor.
When the engine speed of the tractor is increased, the pump drive speed increases over the required speed.	At lower engine speeds, the hydraulic system of the tractor supplies too little oil.	Keep the engine speed raised.





# **AMAZONEN-WERKE**

## **H. DREYER SE & Co. KG**

Postfach 51  
D-49202 Hasbergen-Gaste  
Germany

Tel.: + 49 (0) 5405 501-0  
e-mail: [amazone@amazone.de](mailto:amazone@amazone.de)  
<http://www.amazone.de>

---