Original operating manual

ISOBUS software

ZG-TX

This operating manual is valid as of software version NW371-E

SmartLearning

www.amazone.de

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About this operating manual

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CMS-T-00000539-J.1

1.1 Copyright

CMS-T-00012308-A.1

1.2 Meaning of the operating manual

CMS-T-006245-A.1

The operating manual is an important document and it is part of the implement. It is intended for the user and contains safety-related information. Only the procedures specified in the operating manual are safe. Failure to comply with the operating manual can result in severe injury or death.

1. The safety section must be completely read and complied with before using the implement for the first time.

2. In addition, read and observe the relevant sections of the operating manual before starting work.

3. Keep the operating manual in a safe place and available.

4. Hand over the operating manual to the subsequent user.

1.3 Presentations used

CMS-T-005676-G.1

1.3.1 Warnings and signal words

CMS-T-00002415-A.1

Warnings are indicated by a vertical bar with a triangular safety symbol and a signal word. The signal words *"DANGER"*, *"WARNING"* or *"CAUTION"*

describe the severity of the potential danger and have the following meanings:

DANGER

- Indicates imminent danger with high risk of severe physical injury, such as loss of limb or death.

WARNING

- Indicates a possible danger with moderate risk of severe or fatal physical injury.

CAUTION

- Indicates a danger with low risk of minor or moderate physical injury.

1.3.2 Additional instructions

CMS-T-00002416-A.1

IMPORTANT

- Indicates a risk of implement damage.

ENVIRONMENTAL INFORMATION

- Indicates a risk of environmental damage.

NOTE

Indicates application tips and instructions for optimal use.

1.3.3 Instructions

CMS-T-00000473-E.1

1.3.3.1 Numbered instructions

CMS-T-005217-B.1

Actions that must be performed in a specific sequence are presented as numbered instructions. The specified sequence of the actions must be complied with.

Example:

1. Instruction 1
2. Instruction 2

1.3.3.2 Instructions and responses

CMS-T-005678-B.1

Responses to instructions are indicated by an arrow.

Example:

1. Instruction 1

➡ Response to instruction 1

2. Instruction 2

1.3.3.3 Alternative instructions

CMS-T-00000110-B.1

Alternative instructions are introduced with the word *"or"*.

Example:

1. Instruction 1

   or

   Alternative instruction

2. Instruction 2

1.3.3.4 Instructions with only one action

CMS-T-005211-C.1

Instructions with only one action are not numbered, but rather are presented with an arrow.

Example:

▶ Instruction

1.3.3.5 Instructions without a specific sequence

CMS-T-005214-C.1

Instructions that do not require a specific sequence are shown as a list with arrows.

Example:

- ► Instruction
- ► Instruction
- ► Instruction

1.3.3.6 Workshop task

CMS-T-00013932-B.1

WORKSHOP TASK

- ► Indicates maintenance tasks that must be carried out in a specialist workshop that is adequately equipped in terms of agricultural engineering, environmental engineering, and technical safety, by qualified personnel with the appropriate training.

1.3.4 Listings

CMS-T-000024-A.1

Listings without a mandatory sequence are shown as a list with bullet points.

Example:

- Point 1
- Point 2

1.3.5 Item numbers in illustrations

CMS-T-000023-B.1

A framed number in the text, e.g. a **1**, indicates an item number in an adjacent figure.

1.3.6 Direction information

CMS-T-00012309-A.1

Unless otherwise specified, all direction information applies in the direction of travel.

1.4 Other applicable documents

CMS-T-00000616-B.1

A list of other applicable documents is provided in the Appendix.

1.5 Digital operating manual

CMS-T-00002024-B.1

The digital operating manual and e-learning can be downloaded from the Info Portal on the AMAZONE website.

1.6 Your opinion is important

CMS-T-000059-D.1

Dear reader, our operating documents are updated regularly. Your suggestions for improvement help us provide documents that are more user-friendly. Please send us your suggestions by post, fax or email.

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CMS-I-00000638

ISOBUS requirements 2

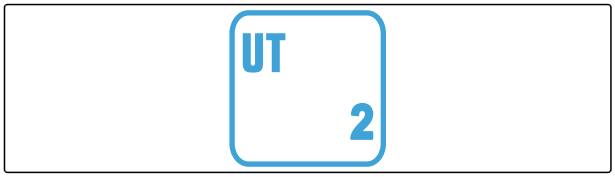
CMS-T-00010917-A.1

2.1 Minimum ISOBUS requirements

CMS-T-00010916-A.1

Universal Terminal:

- Generation 2
- Screen resolution: 240
- Color depth: 8 bit / 256 colors
- Buttons: 8

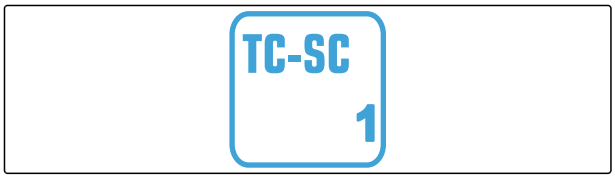


CMS-I-00007472

Other functions are required, depending on the application:

Task Controller Section Control:

- Generation 1
- Booms: 1
- Number of part-width sections: 1



CMS-I-00007474

Task Controller geo-based:

- Generation 1
- Number of control channels: 1

CMS-I-00007475

Task Controller basic:

- Generation 1

CMS-I-00007476

Auxiliary Control new:

- Generation 1

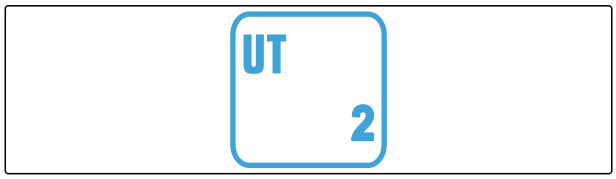
CMS-I-00007473

2.2 Recommended ISOBUS requirements

CMS-T-00010918-A.1

Universal Terminal:

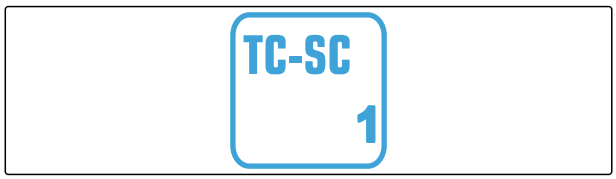
- Generation 2
- Screen resolution: 480
- Color depth: 8 bit / 256 colors
- Buttons: 12



CMS-I-00007472

Task Controller Section Control:

- Generation 1
- Booms: according to the implement equipment
- Number of part-widths sections: according to the implement equipment. 2 part-width sections for one-sided switching. Up to 126 sections with segment distributor head with return flow and single-row control



CMS-I-00007474

Task Controller geo-based:

- Generation 1
- Number of control channels: number of products according to the implement equipment

CMS-I-00007475

Task Controller basic:

- Generation 1

CMS-I-00007476

Auxiliary Control new:

- Generation 1

CMS-I-00007473

Overview of the functions

3

CMS-T-00009980-A.1

The ZG-TX trailed spreader is operated with the ISOBUS software. The ISOBUS software can be displayed and operated with an ISOBUS control terminal.

The ISOBUS software includes the following functions:

- Starting and stopping fertilizer spreading
- Determining the calibration factor for rate-precise fertilizer spreading
- Switching other fertilizer spreading functions
- Filling the spreading material hopper
- Emptying spreading material hopper
- Managing products
- Managing profiles
- Documenting work

User interface at a glance 4

CMS-T-00009907-A.1

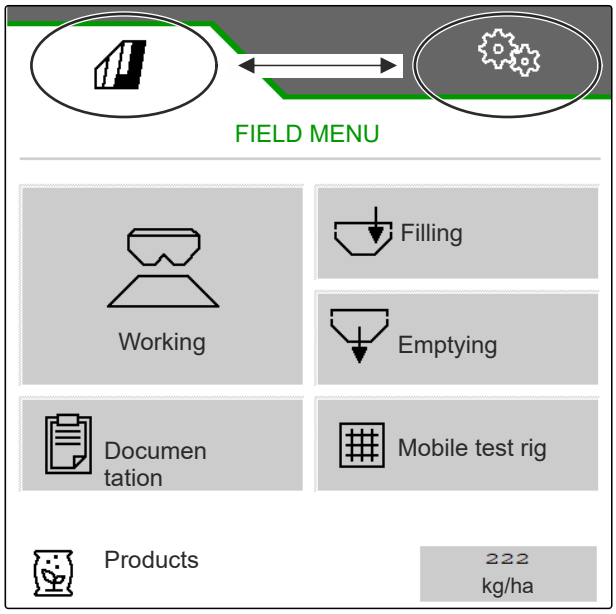
4.1 Field menu

CMS-T-00009908-A.1

The user interface is divided into the *"Field menu"* and the *"Settings"* menu.

The *"Field menu"* consists of the following submenus:

- *"Work"* menu for displaying and operation during field operation
- *"Documentation"* menu for displaying the recorded work data
- *"Filling"* menu for correct fill level information for the spreading material hopper
- *"Emptying"* menu shows the procedure for emptying the spreading material hopper
- *"Mobile test rig"* menu for checking the lateral distribution
- Input field for the target spread rate



CMS-I-00006786

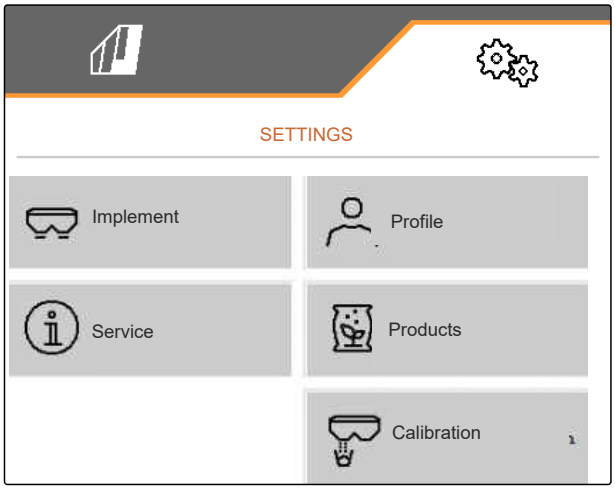
4.2 Settings menu

CMS-T-00009909-A.1

The user interface is divided into the *"Field menu"* and the *"Settings"* menu.

The *"Settings"* menu consists of the following submenus:

- The *"Implement"* menu is used for the implement settings.
- The *"Service"* menu provides information on the software version, counter readings, diagnostics data and calibration of the motors on the spreader.
- The *"Profiles"* menu is used to create individual user profiles.
- The *"Products"* menu is used to enter product-specific data.
- The *"Calibration"* menu is used to determine the calibration factor for a correct spread rate.

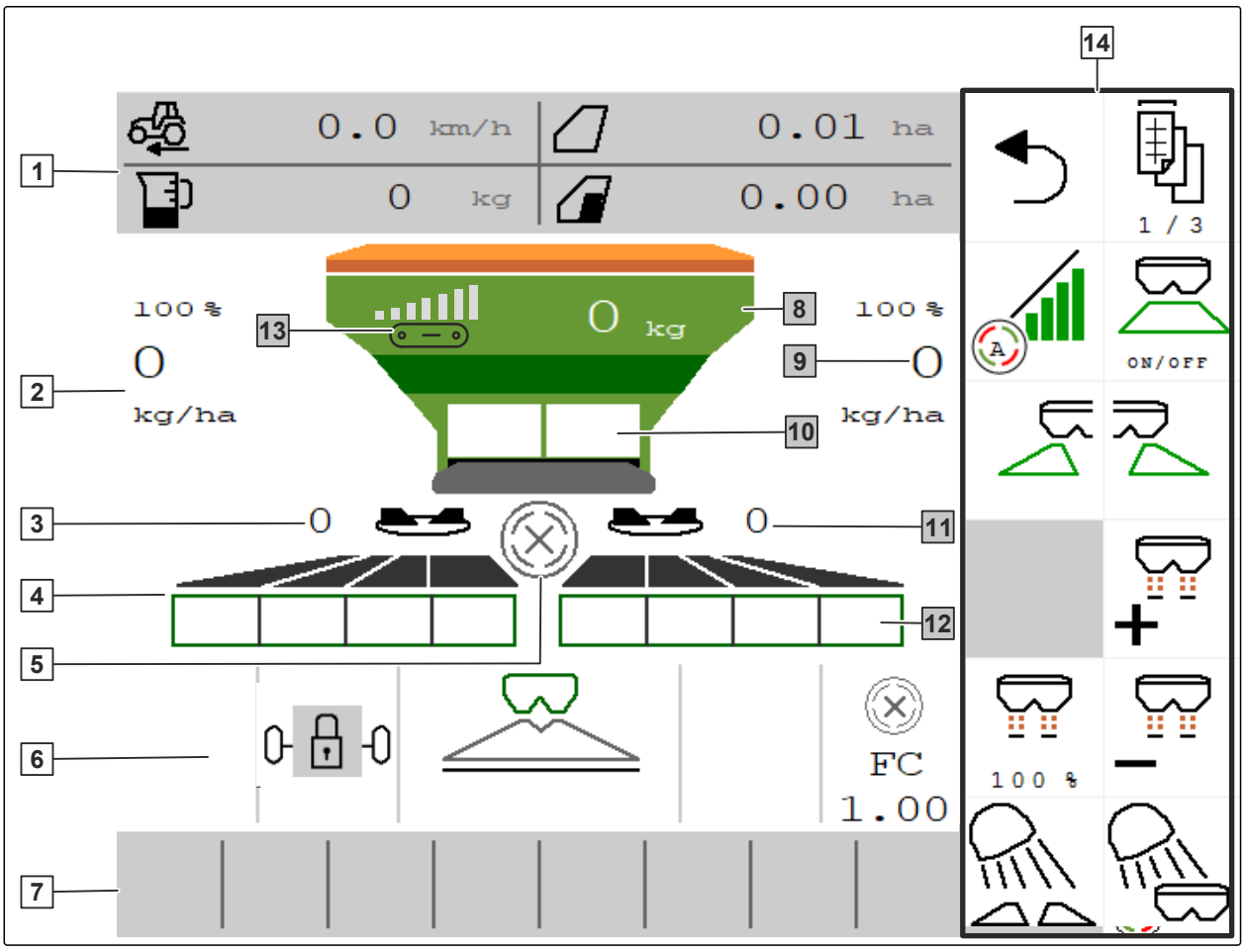


CMS-I-00006788

Overview of the Work menu

5

CMS-T-00009884-B.1



CMS-I-00006795

1	Multi-function display	2	Spread rate, left
3	Spreading disk speed, left	4	Status of the left part-width sections
5	Section Control status	6	Display of additional functions
7	Status bar	8	Hopper content
9	Spread rate, right	10	Double shutter for fertilizer or mono shutter for lime
11	Spreading disk speed, right	12	Status of the right part-width sections
13	Indicator, belt speed	14	Button bar

Basic operation 6

CMS-T-00009894-B.1

6.1 Switching between the Field menu and the Settings

CMS-T-00009895-A.1

► *To switch to the "Field menu":*

select .

or

To switch to the "Settings":

select .

CMS-I-00006796

6.2 Switch to the previous menu

CMS-T-00000805-C.1

► Select on the button bar.

6.3 Scrolling through the menus and button bar

CMS-T-00000806-C.1

► *To scroll through the Settings menus:*

select .

► *To scroll through the button bar:*

select .

Adjusting the implement 7

CMS-T-00009902-C.1

7.1 Selecting the source for the speed signal

CMS-T-00009903-B.1

7.1.1 Configuring the simulated speed

CMS-T-00000762-F.1

To control the implement, a speed signal is required. If no speed signal is available, the simulated speed can be used.

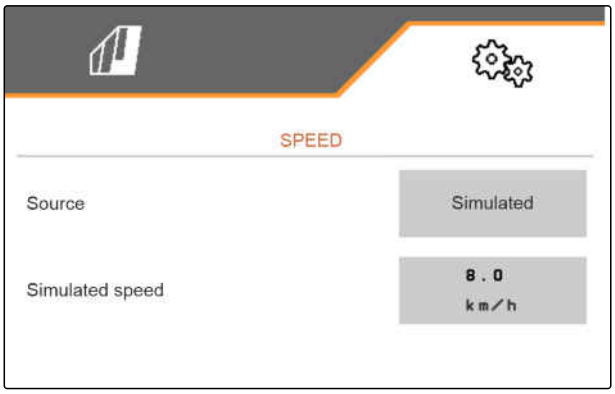
NOTE

The simulated speed must be maintained during operation.

When a speed signal is detected, the simulated speed will be deactivated.

After restarting the implement, the simulated speed is set to 0 mph (0 km/h).

1. In the *"Settings"* menu, select *"Implement"* > *"Speed"*.
2. Under *"Source"*, select *"Simulated"*.
3. Under *"Simulated speed"*, enter the desired speed.



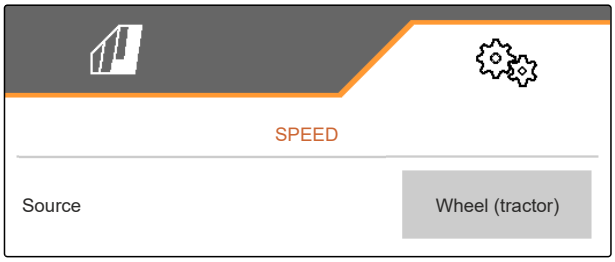
CMS-I-00000623

7.1.2 Configuring the speed signal from the tractor

CMS-T-00009910-A.1

To control electric metering drives, a speed signal is required. The speed sensor on the tractor can be used for this purpose.

1. In the *"Settings"* menu, select *"Implement"* > *"Speed"*.
2. Under *"Source"*, select *"Wheel (tractor)"*.



CMS-I-00007150

7.1.3 Setting up the speed sensor of the implement

CMS-T-00009911-B.1

7.1.3.1 Setting up the speed sensor of the implement

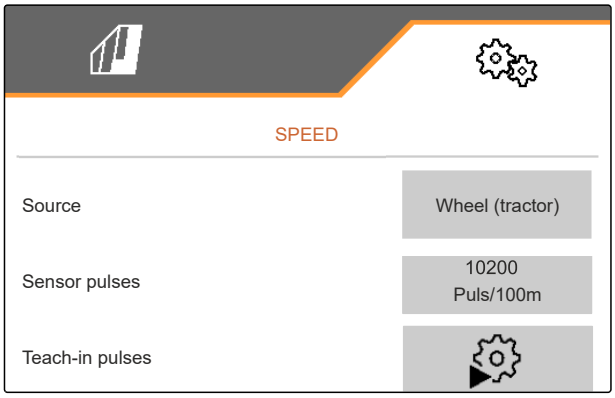
CMS-T-00009904-B.1

To control electric metering drives, a speed signal is required. A speed signal from the tractor or implement can be used to do this.

1. In the *"Settings"* menu, select *"Implement"* > *"Speed"*.
2. Under *"Source"*, select *"Implement"*.
3. Under *"Sensor pulses"*, enter the pulses per 100 metres.

   or

   Select *"Teach-in pulses"*.



CMS-I-00000622

7.1.3.2 Teaching-in pulses per 328 in / 100 m

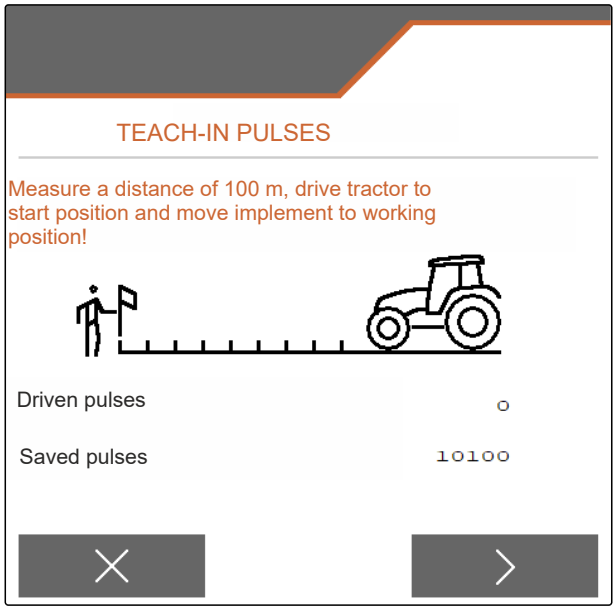
CMS-T-00009912-B.1

NOTE

Determine the *"Pulses per 100 m"* calibration factor under operating conditions.

If 4-wheel drive is being used during operation, the 4-wheel drive must also be switched on when determining the pulses per 100 m.

1. Measure a distance of 100 m.
2. Mark the start point and end point.
3. Drive up to the start point.
4. > Continue.

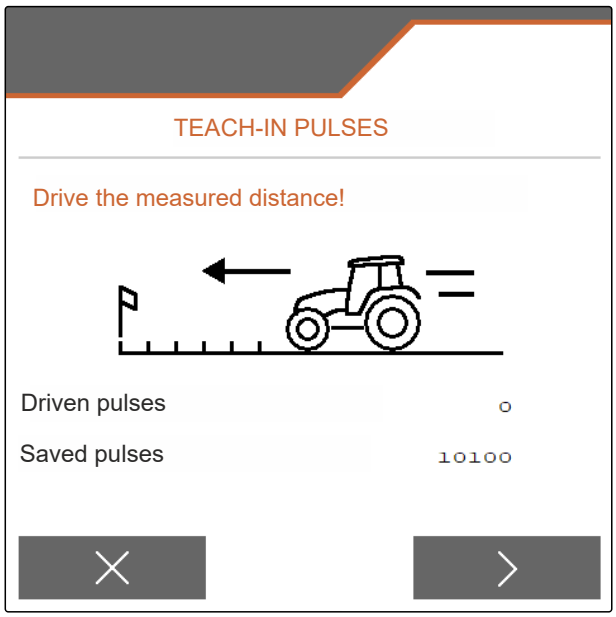


CMS-I-00006797

5. Bring the implement into working position.
6. Drive to the end point.

➡ The *"Pulses driven"* will be counted.

7. > Continue.

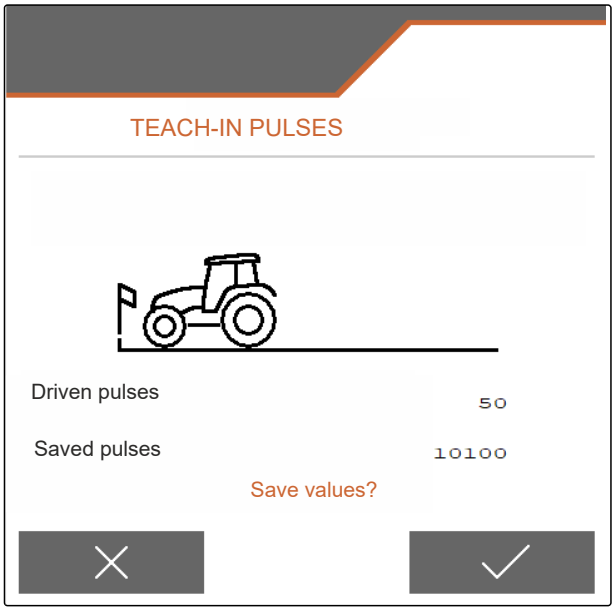


CMS-I-00006799

8. ✓ Save value

   or

   ✕ Discard value.



CMS-I-00006798

7.2 Converting the spreader

CMS-T-00009915-C.1

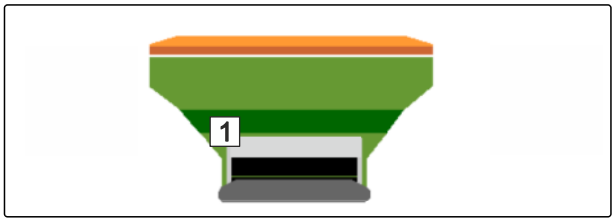
7.2.1 Converting the spreader unit for spreading lime

CMS-T-00009916-C.1

NOTE

Comply with the ZG-TX operating manual.

1 Display of the mono shutter in the Work menu



CMS-I-00007290

1. In the *"Settings"* menu, select *"Implement"* > *"Convert spreader"*.
2. Select *"Conversion to lime"*.
3. Convert sluice position.
4. Move the delivery system into parking position.
5. Move AutoTS into parking position.
6. Remove delivery system.

7. Change spreading disks.

8. Dismount the charging sieves in the hopper.

9. ✓ Confirm full conversion.

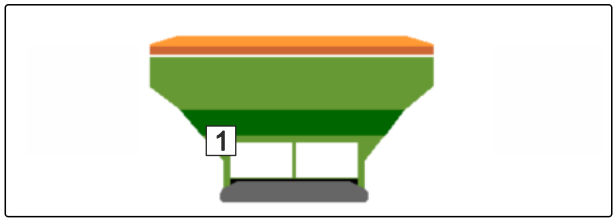
7.2.2 Converting the spreader unit for spreading fertilizer

CMS-T-00009917-C.1

NOTE

Comply with the ZG-TX operating manual.

1 Display of the double shutter in the Work menu



CMS-I-00007289

1. In the *"Settings"* menu, select *"Implement"* > *"Convert spreader"*.

2. Select *"Conversion to fertilizer."*

3. Convert sluice position.

4. Install delivery system.

5. Change spreading disks.

6. Mount charging sieves in the hopper.

7. ✓ Confirm full conversion.

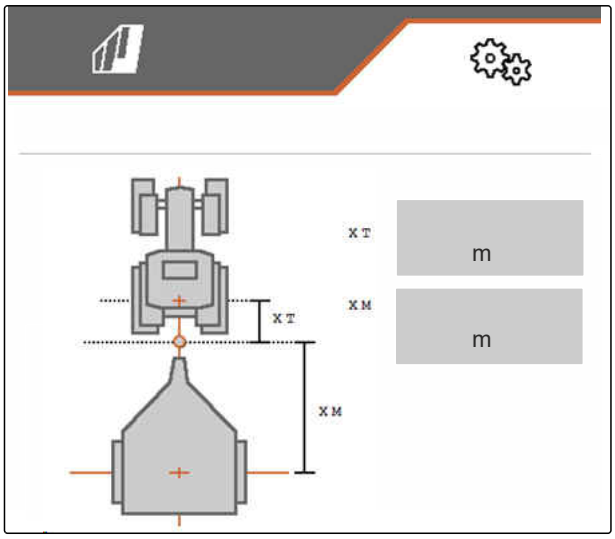
7.3 Entering geometry data

CMS-T-00015174-A.1

1. In the *"Settings"* menu, call up *"Implement"*.
2. Select *"Geometry"*.
3. Specify the dimension *"XT"* from the tractor rear axle to the connecting device in ft (m).
4. Specify the dimension *"XM"* from the connecting device to the implement axle in ft (m).
5. ✓ Save values

   or

   ✕ Discard values.



CMS-I-00009822

7.4 Adjusting the steering

CMS-T-00015171-B.1

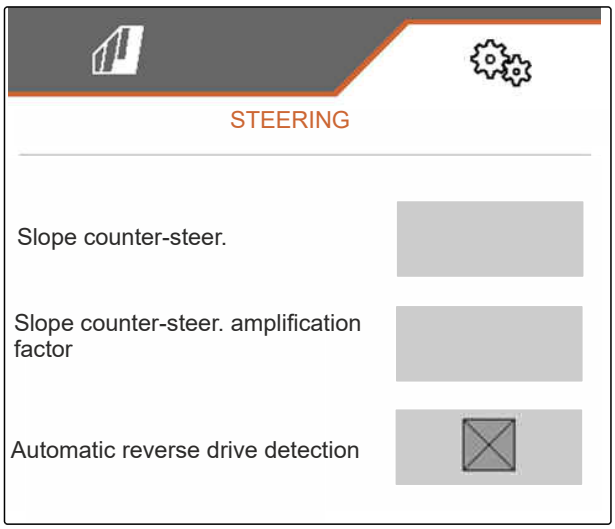
PREREQUISITES

✓ The geometry data is entered.

1. In the *"Settings"* menu, call up *"Implement"* > *"Select steering"*.
2. Select *"Select steering"*.
3. *To adjust the slope counter-steering:*
   Select *"Manual"* for manual steering counter to the slope

   or

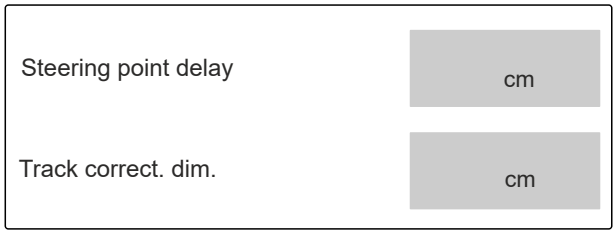
   Select *"Automatic"* for automatic steering counter to the slope.
4. Enter slope inclination boost factor for automatic steering against the slope. Default value: 5
5. Activate or deactivate reverse driving detection.



CMS-I-00009824

The steering point delay indicates the distance, after which the implement starts to steer.

High value	Implement steers later
Low value	Implement steers earlier



CMS-I-00009823

6. Set the steering point delay in in (cm).

The track correction dimension enables lateral correction if the track is not followed correctly.

Positive value	Track further to the outside
Negative value	Track further to the inside

7. Adjust the track correction dimension in in (cm).

7.5 Calibrating AutoTrail steering

CMS-T-00015172-A.1

1. In the *"Settings"* menu, call up *"Implement"* > *"Steering"*.

2. Select *"Calibrate AutoTrail"*.

CMS-I-00009825

3. ←, → Align axle straight and simultaneously drive a short distance straight ahead, until the tractor and the implement are in one track.

4. *To check the center position:*
Prevent the tractor and implement from unintentional rolling.

5. Measure the steering cylinders.

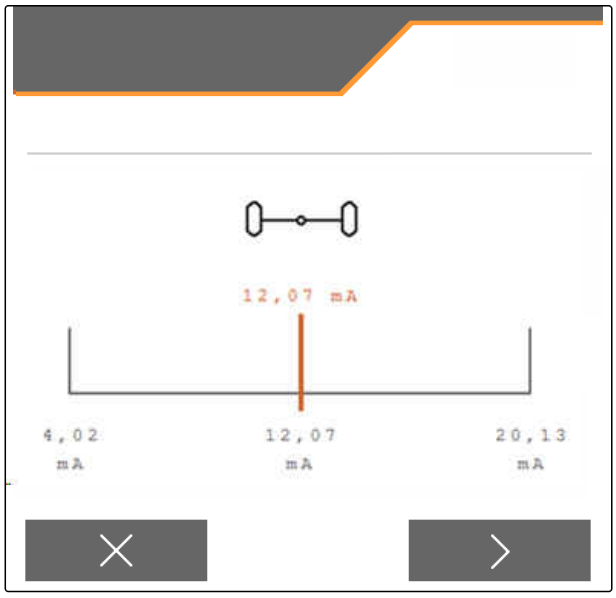
➡ Hydraulic cylinders must have the same length.

6. If necessary, readjust the center position and check again.

7. > Continue.

8. ← Simultaneously steer the implement and tractor all the way to the right.

9. > Continue.



CMS-I-00009820

10. Simultaneously steer the implement and tractor all the way to the left.

11. Continue.

12. Save values

    or

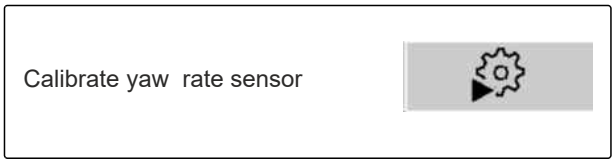
    Discard values.

7.6 Calibrating the yaw rate sensor

CMS-T-00015173-B.1

1. In the *"Settings"* menu, call up *"Implement"* > *"Steering"*.

2. Select*"Calibrating the yaw sensor"*.



CMS-I-00009887

3. Bring the implement into a horizontal position.

4. Continue.

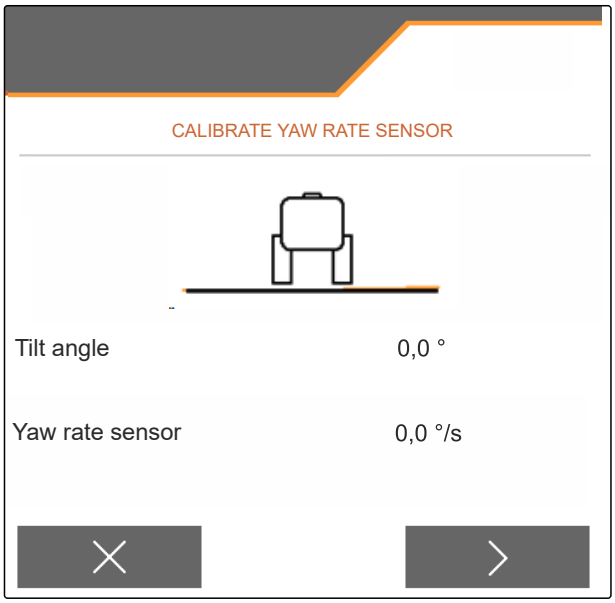
5. Bring the implement to a standstill and wait for calibration to finish.

6. Continue.

7. Save values

    or

    Discard values.



CMS-I-00009821

7.7 Taring the fill level indicator

CMS-T-00015175-B.1

For taring, a weight value for the empty hopper will be saved.

After mounting special equipment, the fill level indicator must be tared.

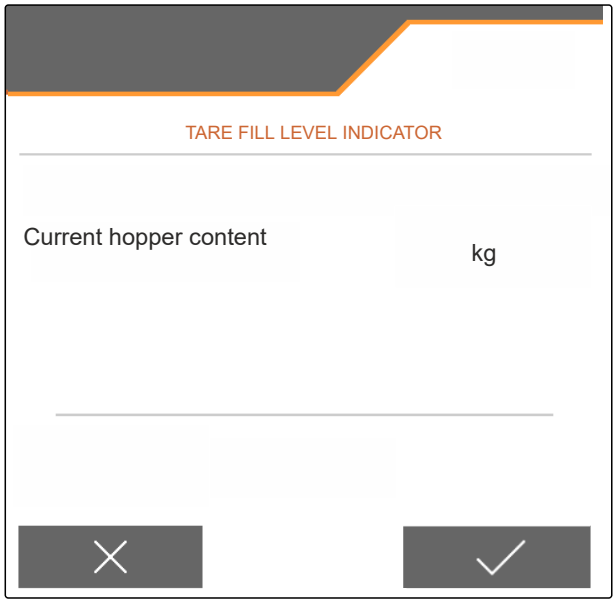
1. Completely empty the hopper.
2. Align the implement horizontally.
3. In the *"Settings"* menu, call up *"Implement"*.
4. Select *"Tare fill level indicator"*.

➡ The theoretical hopper fill level will be displayed.

5. ✓ Save values

   or

   ✕ Discard values.



CMS-I-00009819

7.8 Selecting the calibration method for the spreading material

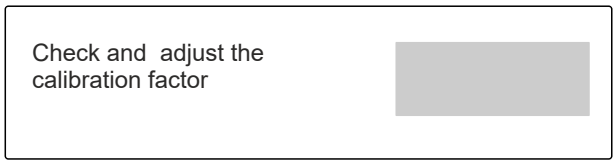
CMS-T-00015176-B.1

Checking and adapting the calibration factor can be done manually or automatically.

▶ For the calibration method for the spreading material, when stationary, chose between *"Manual"* and

   or

   "Automatic FlowControl" when spreading with FlowControl, select Calibrate.



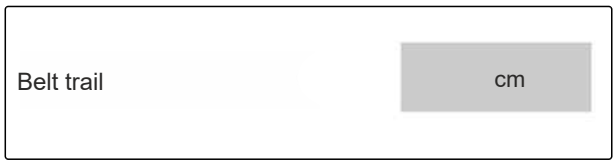
CMS-I-00009818

7.9 Adjusting the belt overrun distance

CMS-T-00013440-B.1

The belt overrun distance specifies the distance that the conveyor belt is driven for pre-metering.

1. In the *"Settings"* menu, call up *"Implement"*.
2. Under *"Belt overrun distance"*, enter the desired distance in in (cm).



CMS-I-00008414

7.10 Switching between day mode and night mode

CMS-T-00008044-A.1

► *To switch the display from day mode to night mode and vice versa,*

select  .

Using profiles 8

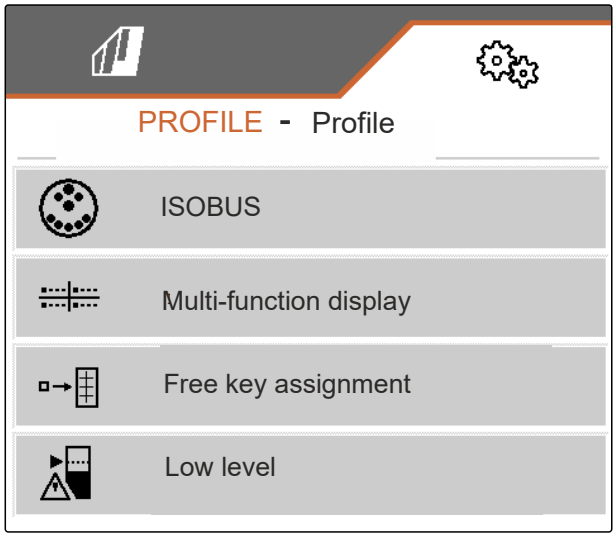
CMS-T-00009913-B.1

8.1 Managing profiles

CMS-T-00009877-A.1

1. In the *"Settings"* menu, select *"Profile"*.

2. Show the list of profiles.

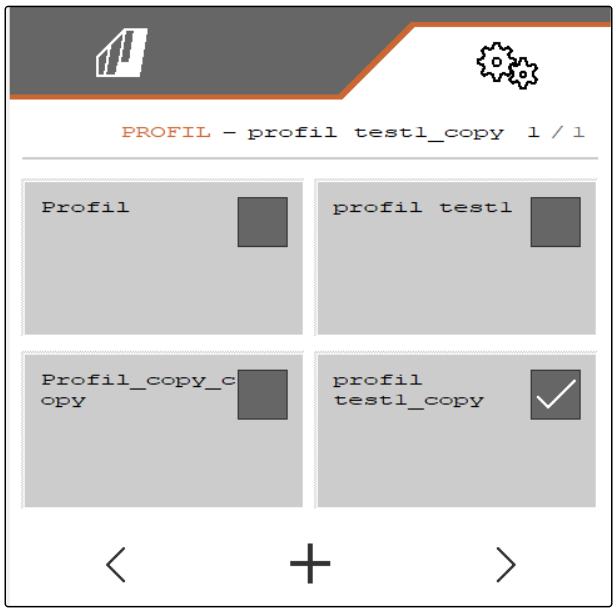


CMS-I-00007151

3. *To activate, rename, reset to default values or delete a profile,*
   select the desired profile from the list.

   or

   New profile is created.



CMS-I-00007369

4. ✓ Activate profile.

   or

   To rename a profile:
   Select *"Profile"*.

   or

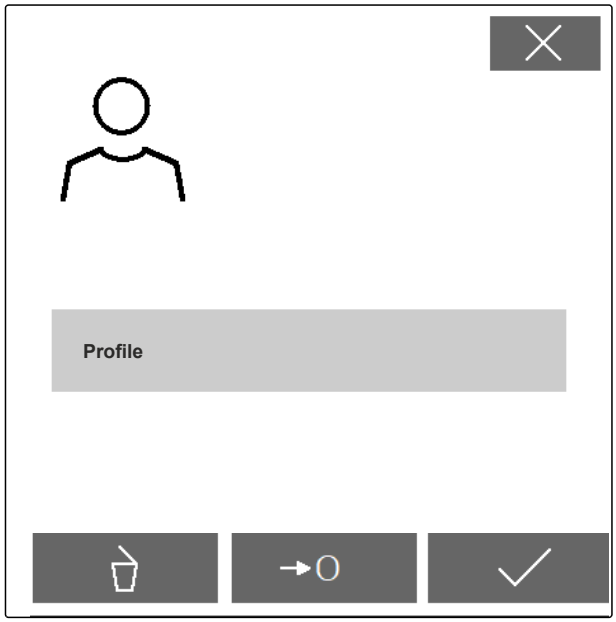
   →O Reset profile to default values.

   or

   ✕ Go back to the list.

   or

   Delete profile. The profile must not be activated.



CMS-I-00007152

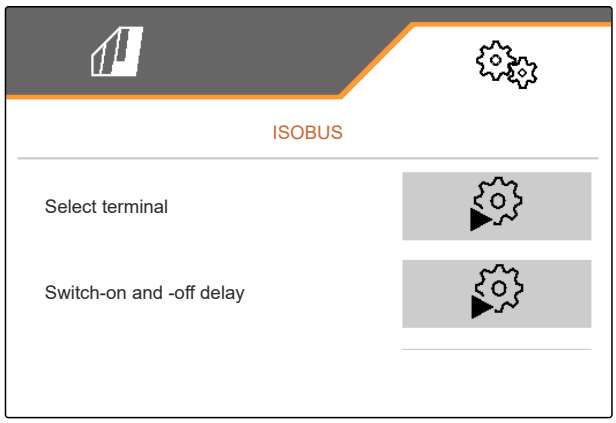
8.2 Setting profiles

CMS-T-00009873-B.1

8.2.1 Configuring ISOBUS

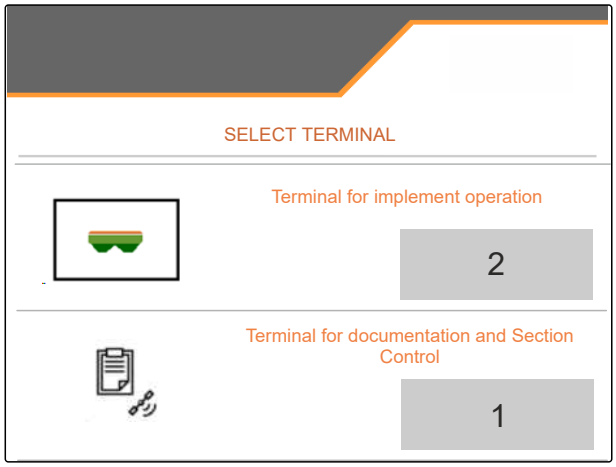
CMS-T-00009875-A.1

1. In the *"Settings"* menu, select *"Profile"* > *"ISOBUS"*.



CMS-I-00007156

2. Select *"Select terminal"*.



CMS-I-00007155

NOTE

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

3. Enter the number of the terminal for displaying the implement operation.

4. Enter the number of the terminal for displaying the documentation and Section Control.

NOTE

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

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

5. Select *"Switch-on and switch-off delay"*.

CMS-I-00007371

6. *If overlaps are produced when moving off a worked area:*
   Increase the *"Switch-on time"*.

   or

   If unworked areas are produced when moving off a worked area:
   Reduce the *"Switch-on time"*.

7. *If overlaps are produced when entering a worked area:*
   Increase the *"Switch-off time"*

   or

   If unworked areas are produced when entering a worked area:
   Reduce the *"Switch-off time"*.

8.2.2 Changing the multi-function display

CMS-T-00009876-A.1

4 different values van be displayed in the Work menu on the multi-function display. The following table contains all of the available values.

Value	Explanation
Speed	Current speed in mph (km/h)
Target spread rate for fertilizer	Target spread rate set for the fertilizer
Area	Worked area in ac (ha)
Remaining distance	Distance in ft (m) that can still be worked with the remaining fertilizer
Hopper fill level	Hopper fill level in lb (kg)
Spreading disk nominal speed	Spreading disk nominal speed entered for the product
FlowControl rate	Daily spread rate, determined by FlowControl

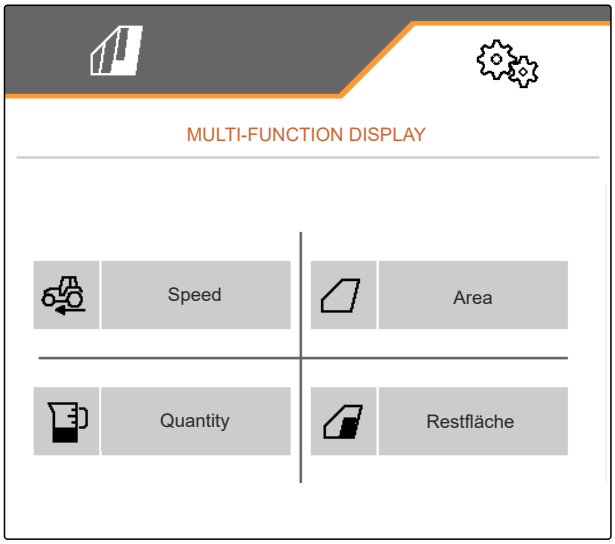
1. In the *"Settings"* menu, select *"Profile"* > *"Multi-function display"*.

2. *To change a display:*
   Select the desired display.

➡ A list with the available values will be shown.

3. Select the desired value from the list.

4. Confirm the selection.



CMS-I-00007236

8.2.3 Changing the free button assignment

CMS-T-00009874-A.1

With the free button assignment, the assignment of the buttons in the Work menu can be changed.

1. In the *"Settings"* menu, select *"Profile"* > *"Free button assignment"*.

2. *If the desired function cannot be found on the first page:*

   Call up the next page with  .

3. Tap the desired function from the list.

➡ The selected function will be framed.

4. Select the desired button in the button bar.

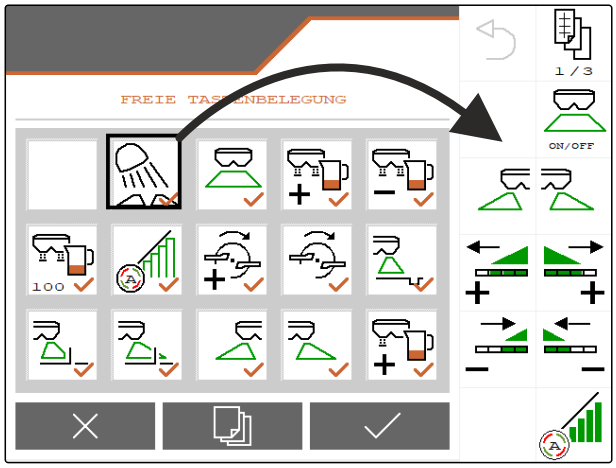
➡ The selected button is assigned to the selected function.

5. Assign other buttons.

6.  Confirm changes

   or

    Discard changes.



CMS-I-00007237

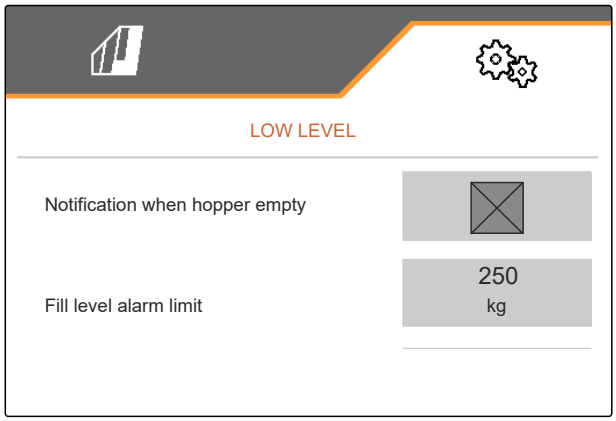
8.2.4 Entering the alarm limit for hopper fill level

CMS-T-00010594-A.1

1. In the *"Settings"* menu, select *"Profile"* > *"Low level"*.

2. *To receive a notification when the hopper is empty:*
   Mark the box for *"Notification at empty"*.

3. Enter the *"Fill level alarm limit"*.



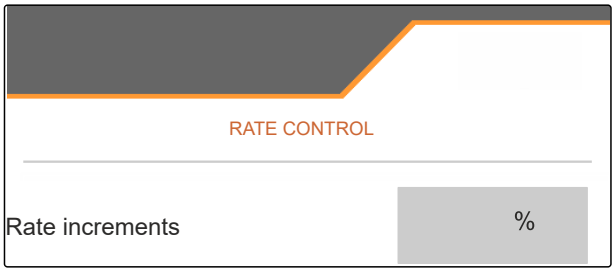
CMS-I-00007238

8.2.5 Entering the increment for changing the target rate

CMS-T-00015205-A.1

1. In the *"Settings"* menu, select *"Profile"* > *"Rate control"*.

2. Enter rate increment in %.



CMS-I-00009839

Using product data 9

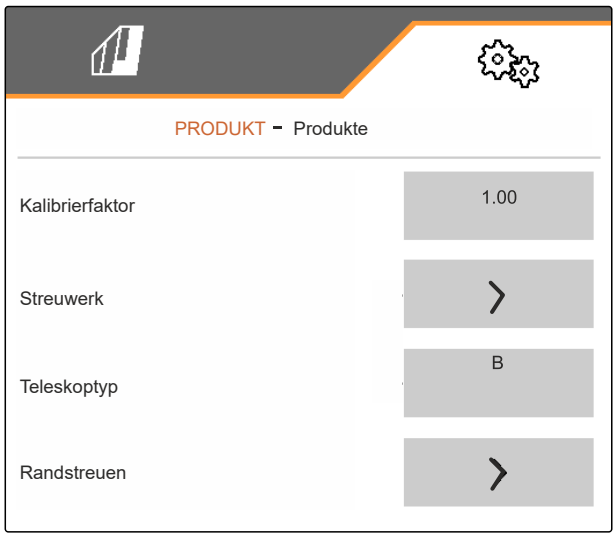
CMS-T-00009914-B.1

9.1 Managing products

CMS-T-00009898-A.1

1. In the *"Settings"* menu, select *"Product"*.

2. Select the product list.

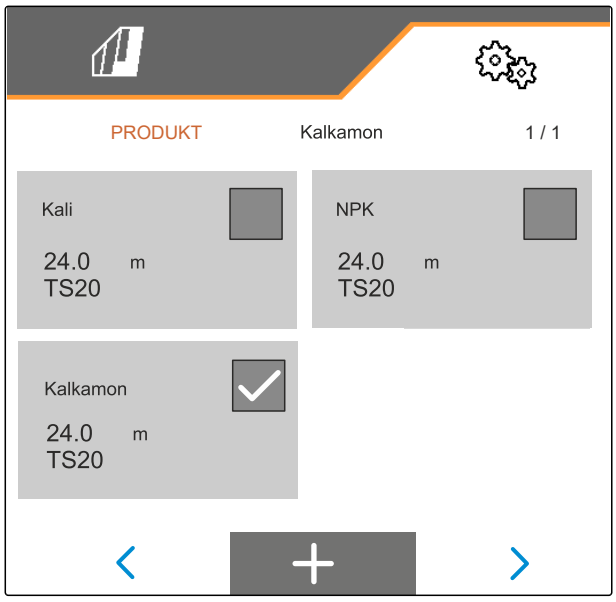


CMS-I-00007240

3. *To select, rename, reset to default values or delete a product:*
   Select the desired product from the list

   or

   Create a new product.



CMS-I-00007239

4. *To manage a product:*
   ✕ Go back to the list

   or

   ✓ Confirm the product.

   or

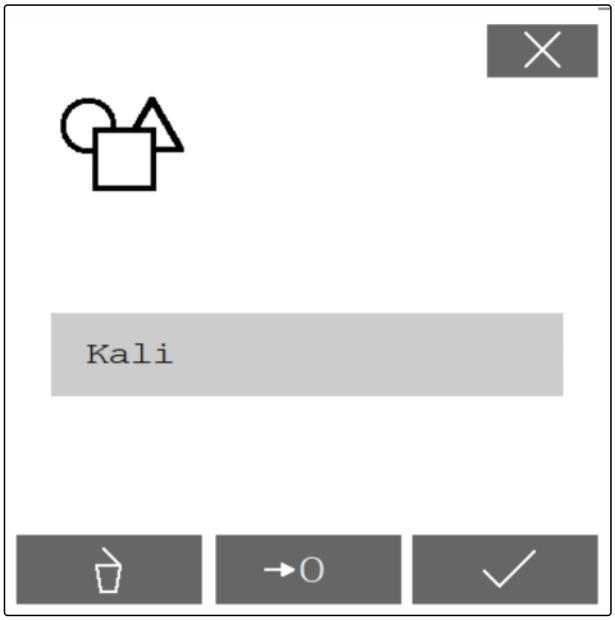
   →0 Reset product to default values.

   or

   Delete the product. The product must not be activated.

   or

   To rename a product:
   Select product.



CMS-I-00007241

9.2 Entering the product data

CMS-T-00009899-B.1

1. In the *"Settings"* menu, select *"Product"*.
2. Under *"Calibration factor"*, enter the calibration factor from the setting chart.
3. Under *"Spreader unit"*, enter the spreading disk speed, the position of the delivery system and the spreading disk.
4. Under *"Telescope"*, select the telescope of the spreading vanes for boundary spreading.
5. Under *"Border spreading"*, enter the telescope setting, the boundary-side target speed and the boundary-side rate reduction.

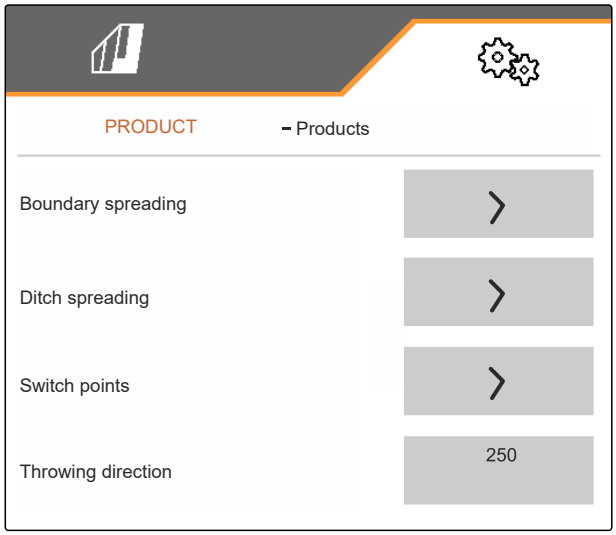
CMS-I-00007240

6. Under *"Boundary spreading"*, enter the telescope setting, the boundary-side target speed and the boundary-side rate reduction.

7. Under *"Ditch spreading"*, enter the telescope setting, the boundary-side target speed and the boundary-side rate reduction.

8. Under *"Switch points"*, enter the switch-on points and switch-off points.

9. Under *"Throwing direction"*, enter the value for the throwing direction from the setting chart.



CMS-I-00007287

10. Under *"Working width"*, enter the desired working width.

11. Under *"Spreading material"*, select Fertilizer or Special spreading material.

CMS-I-00007288

Converting the spreader 10

CMS-T-00009915-C.1

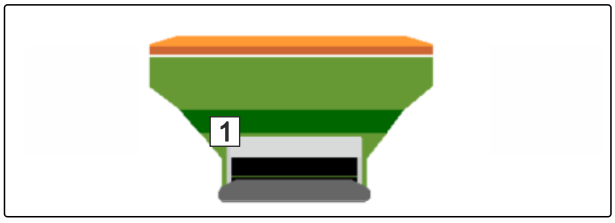
10.1 Converting the spreader unit for spreading lime

CMS-T-00009916-C.1

NOTE

Comply with the ZG-TX operating manual.

1 Display of the mono shutter in the Work menu



CMS-I-00007290

1. In the *"Settings"* menu, select *"Implement"* > *"Convert spreader"*.
2. Select *"Conversion to lime"*.
3. Convert sluice position.
4. Move the delivery system into parking position.
5. Move AutoTS into parking position.
6. Remove delivery system.
7. Change spreading disks.
8. Dismount the charging sieves in the hopper.
9. ✓ Confirm full conversion.

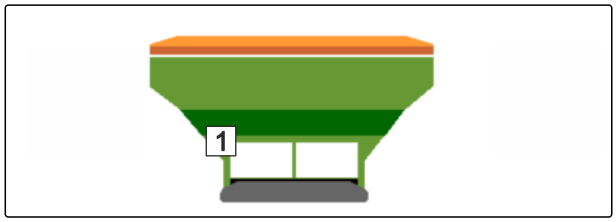
10.2 Converting the spreader unit for spreading fertilizer

CMS-T-00009917-C.1

NOTE

Comply with the ZG-TX operating manual.

1 Display of the double shutter in the Work menu



CMS-I-00007289

1. In the *"Settings"* menu, select *"Implement"* > *"Convert spreader"*.
2. Select *"Conversion to fertilizer."*
3. Convert sluice position.
4. Install delivery system.
5. Change spreading disks.
6. Mount charging sieves in the hopper.
7. ✓ Confirm full conversion.

Filling the spreading material hopper without weighing technology

11

CMS-T-00009918-C.1

1. 

Close double shutter.

2. In the *"Field menu"*, call up *"Filling"*.

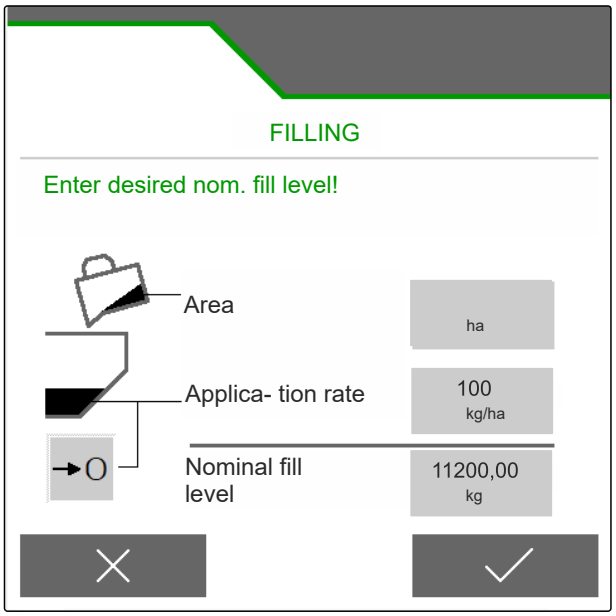
3. 
At empty hopper, set the residual quantity to 0.

4. Fill the spreading material hopper.

5. Enter the refilled quantity.

➡ The new fill level will be shown.

6. ✓ Confirm the new fill level.



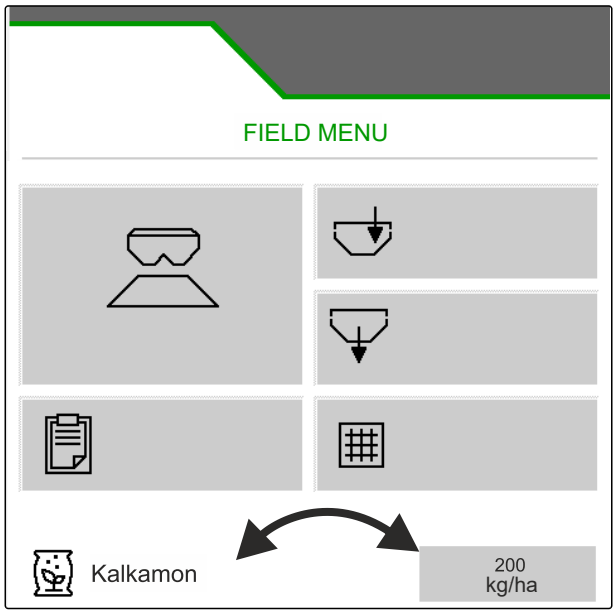
CMS-I-00007293

Entering the spread rate

12

CMS-T-00009919-A.1

- In the *"Field menu"*, enter the spread rate for the selected product.



CMS-I-00007295

Determining the calibration factor for the spreading material 13

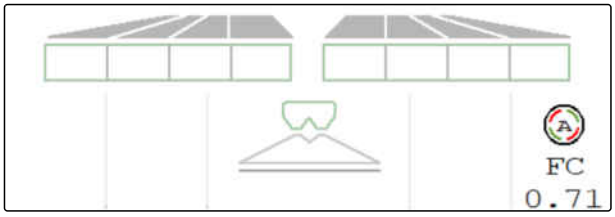
CMS-T-00009921-C.1

13.1 Selecting the calibration method

CMS-T-00009920-B.1

NOTE

The calibration factor, automatically determined with FlowControl is shown in the Work menu for fertilizer and does not require any action from the user.



CMS-I-00007297

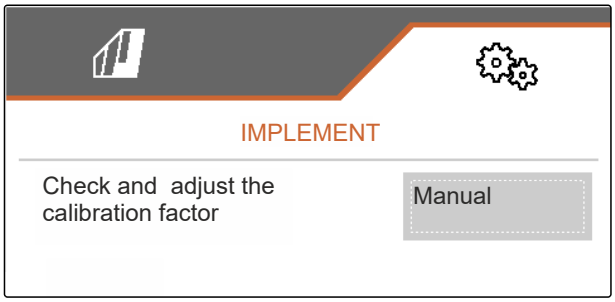
NOTE

Not for spreading lime

1. In the *"Settings"* menu, call up *"Implement"*.
2. Under *"Check and adjust the calibration factor"*, select *"Manual"*.

   or

   Select *"Automatic FlowControl"*.



CMS-I-00007296

13.2 Determining the calibration factor for fertilizer manually

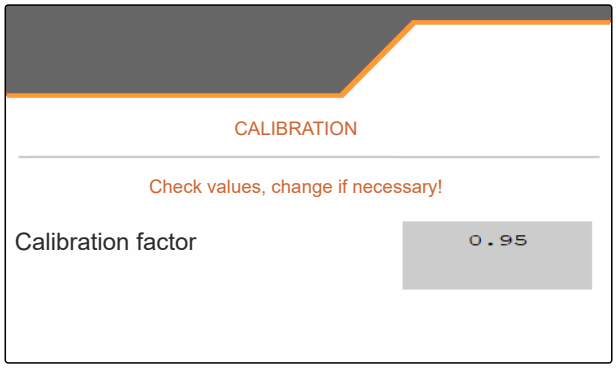
CMS-T-00009922-C.1

PREREQUISITES

- ⊘ PTO shaft switched off
- ⊘ The fertilizer spreader unit is installed and set in ISOBUS

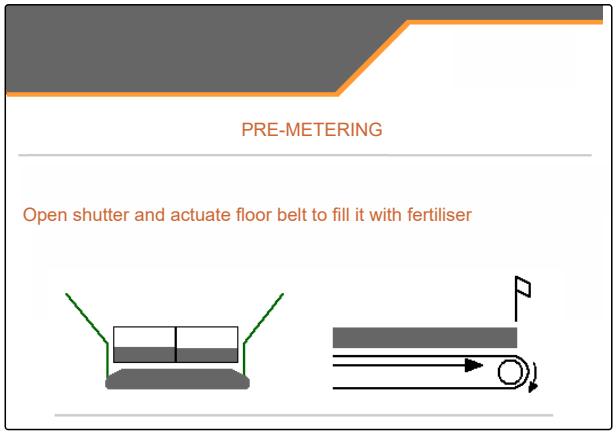
1. Comply with the implement operating manual.
2. In the *"Settings"* menu, select *"Calibration"*.

3. Enter the calibration factor from the setting chart.



CMS-I-00007301

4. > Continue.
5. Check the setting values and change if necessary.
6. > Continue.
7. Check the other points.
8. P Bring the delivery system into parking position and dismount the hopper tips.
9. Install the calibration chute.
10. Place a collection bucket underneath.
11. Open the double shutter.



CMS-I-00007300

12. Start pre-metering for uniform fertilizer flow at calibration.
13. *If fertilizer has been adequately pre-metered:*

STOP

Stop the floor belt.

14. Empty collection bucket and put it back underneath.
15. > Continue.

16. Start the calibration.

➡ The quantity spread and the calibration time will be shown.

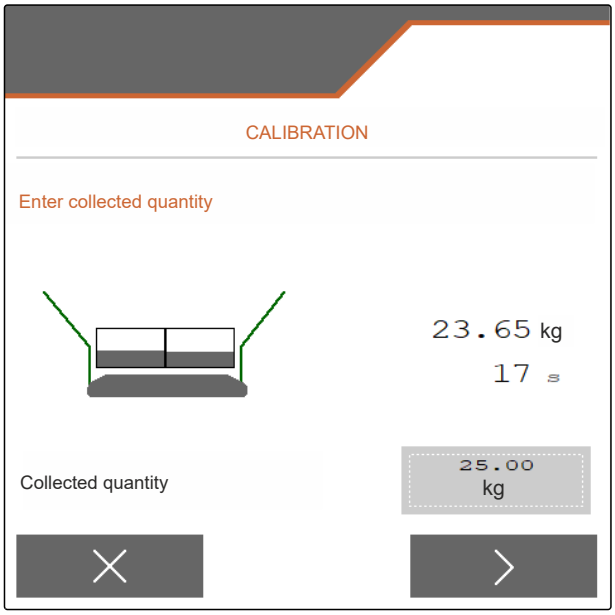
17. *When the collection bucket is full:*

Terminate the calibration.

18. Weigh the collected quantity.

19. Enter the weight of the collected quantity.

20. Continue.



CMS-I-00007299

➡ The new calibration factor will be displayed.

21. Save the calibration factor.

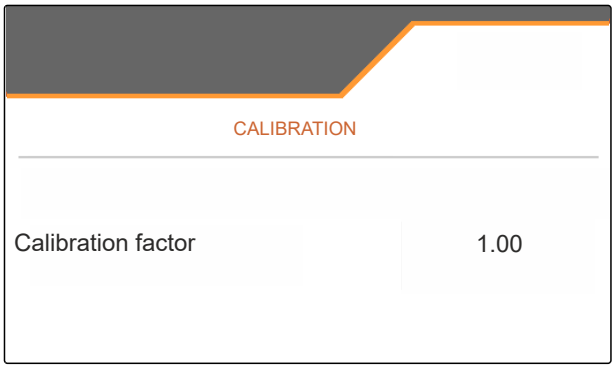
or

To optimise the calibration factor:

Save the calibration factor. Repeat calibration.

or

Discard the calibration.



CMS-I-00007298

22. Prepare the implement for operation.

23. Pour the spread amount back into the hopper.

13.3 Determining the calibration factor for lime manually

CMS-T-00015207-A.1

PREREQUISITES

- PTO shaft switched off
- Lime spreader unit is mounted and set in ISOBUS

1. Comply with the implement operating manual.

2. In the *"Settings"* menu, select *"Calibration"*.

3. Enter bulk density in lb/gal (kg/l) or an empirical value.

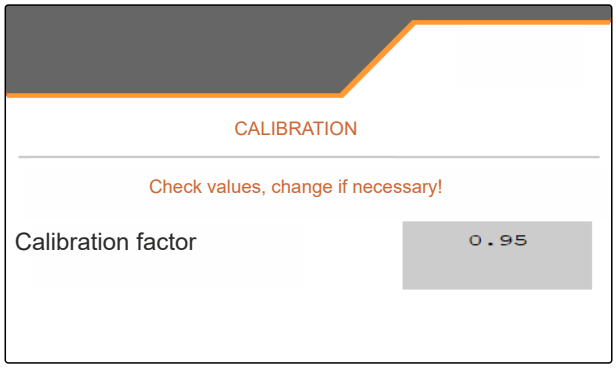
4. > Continue.

5. Check the setting values and change if necessary.

6. > Continue.

7. Check the other points.

8. Dismount lime chute.



CMS-I-00007301

9. Start pre-metering for uniform fertilizer flow at calibration.

10. *If fertilizer has been adequately pre-metered:*
STOP
Stop the floor belt.

11. Clear away the quantity that has flowed out.

12. > Continue.

CMS-I-00009848

13. Start the calibration.

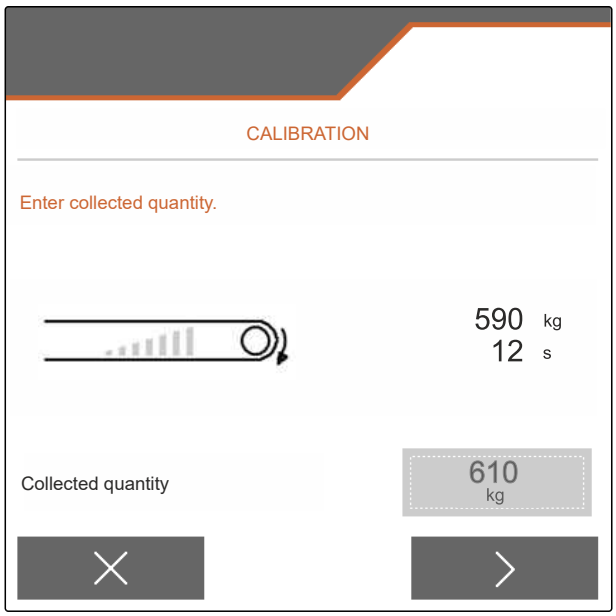
➥ The quantity spread and the calibration time will be shown.

14. *When approximately 500 kg have been spread:*
Terminate the calibration.

15. Weigh the spread quantity.

16. Enter the weight of the spread quantity.

17. > Continue.



CMS-I-00009849

➥ The new calibration factor will be displayed.

18. ✓ Save the calibration factor.

    or

    To optimise the calibration factor:

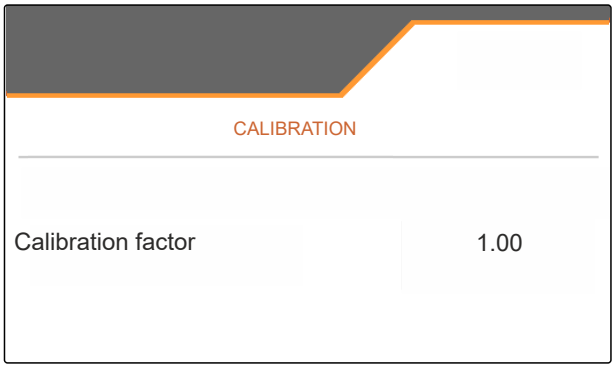
     Save the calibration factor. Repeat calibration.

    or

    ✕ Discard the calibration.

19. Prepare the implement for operation.

20. Pour the spread amount back into the hopper.



CMS-I-00007298

Optimizing the lateral distribution 14

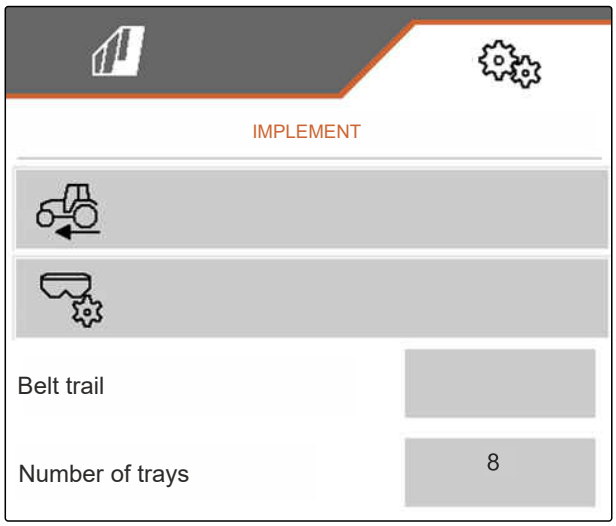
CMS-T-00009923-B.1

14.1 Using the mobile test rig with 8 trays

CMS-T-00009924-B.1

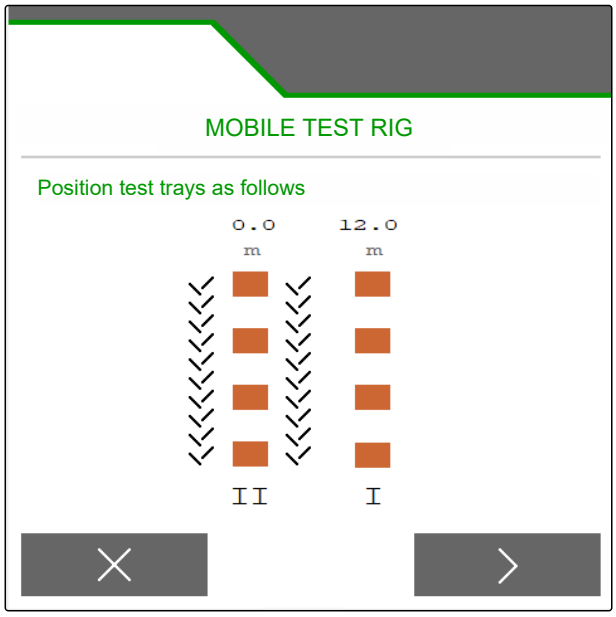
1. In the *"Settings"* menu, call up *"Implement"*.
2. Under *"Number of trays"*, select the number of trays of the mobile test rig.

➡ Use 8 trays for 2 rows.



CMS-I-00007312

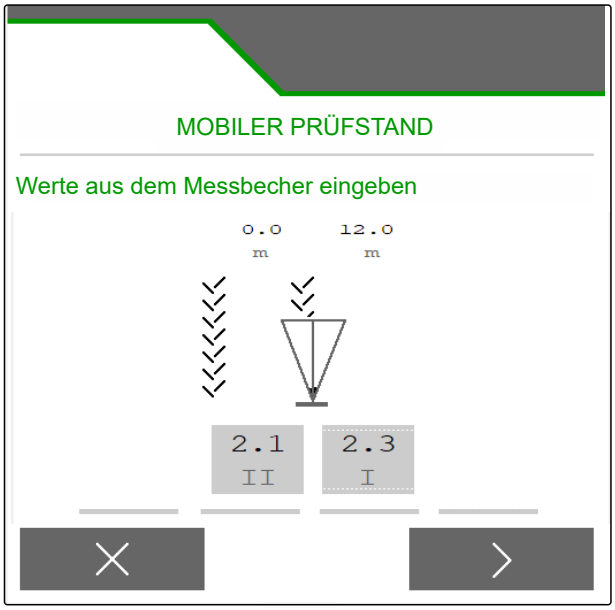
3. In the Field menu, select *"Mobile test rig"*.
4. Collect the fertilizer as described in the *"Mobile test rig"* operating manual and pour it into the measuring cup.
5. > Continue.



CMS-I-00007311

6. Enter measured values I and II.

7. > Continue.

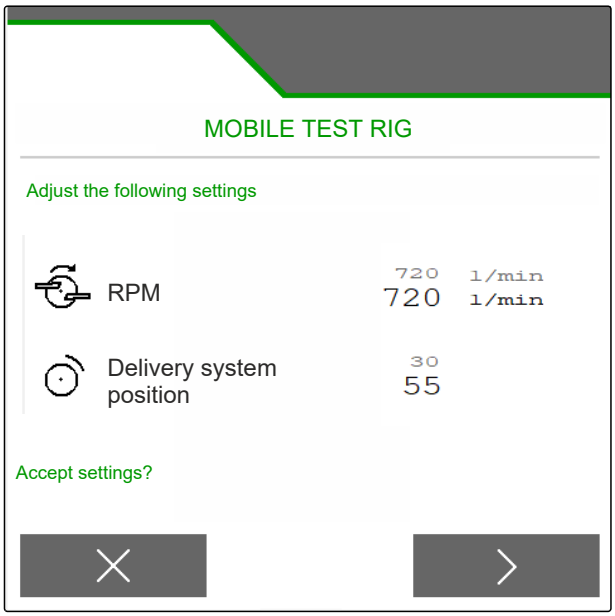


CMS-I-00007314

8. ✓ Accept the adjusted settings

or

✕ Discard them.



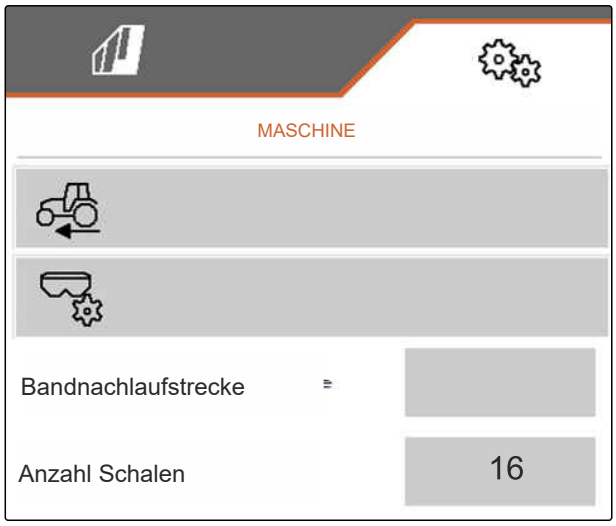
CMS-I-00007313

14.2 Using the mobile test rig with 16 trays

CMS-T-00009925-B.1

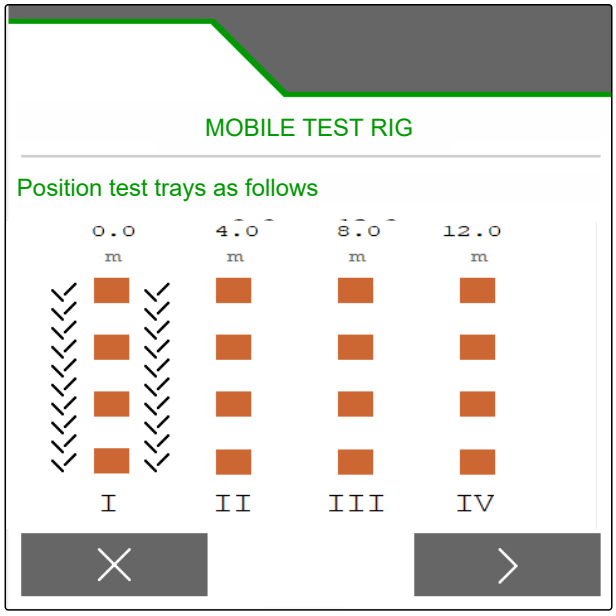
1. In the *"Settings"* menu, call up *"Implement"*.
2. Under *"Number of trays"*, select the number of trays of the mobile test rig.

➡ Use 16 trays for 4 rows.



CMS-I-00007317

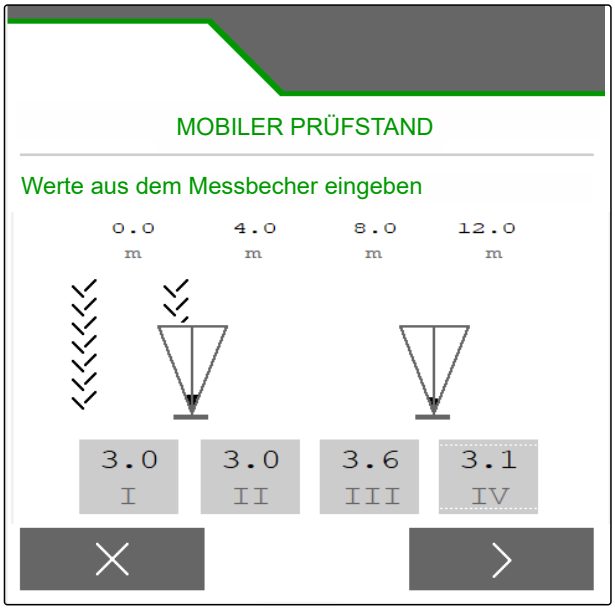
3. In the Field menu, select *"Mobile test rig"*.
4. Collect the fertilizer as described in the *"Mobile test rig"* operating manual and pour it into the measuring cup.
5. > Continue.



CMS-I-00007316

6. Enter measured values I to IV.

7. > Continue.

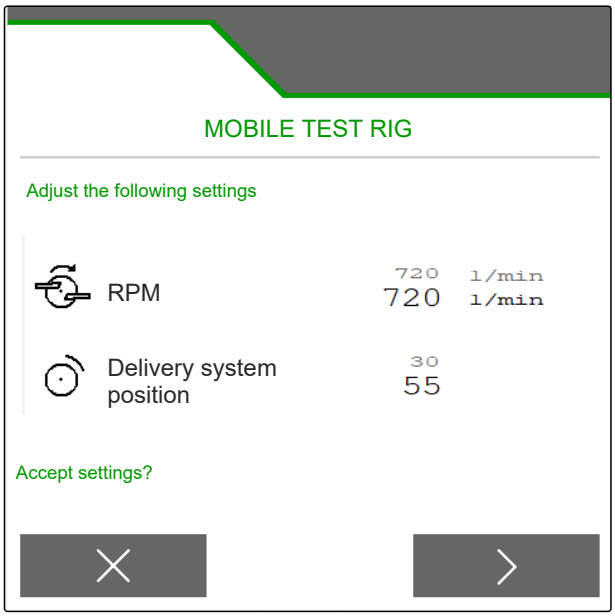


CMS-I-00007315

8. ✓ Accept the adjusted settings

or

✕ Discard them.



CMS-I-00007313

Working 15

CMS-T-00009889-C.1

15.1 Starting work

CMS-T-00009926-A.1

PREREQUISITES

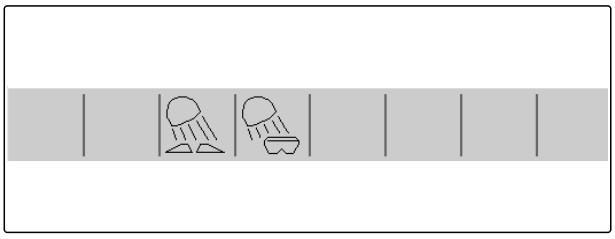
- ⊘ Implement is configured
- ⊘ Product data is entered
- ⊘ Product is selected
- ⊘ Calibration factor is determined
- ⊘ Implement must be in working position

► In the *"Field menu"*, select *"Work"*.

15.2 Using the work lights

CMS-T-00009890-A.1

1. Switch the spread fan illumination on with  .



CMS-I-00007377

NOTE

If the spreading disk drive is interrupted, the spread fan illumination is automatically switched off.

2. Switch the hopper interior lighting on and off with  .

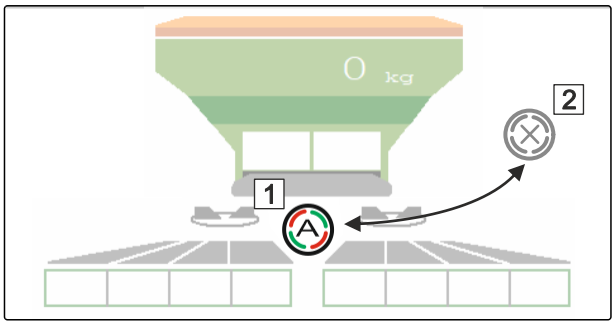
➥ The symbol in the status bar is turned off when the lighting is switched off.

15.3 Using Section Control

CMS-T-00009891-A.1

1 Working with Section Control

2 Working without Section Control



CMS-I-00007322

1. *To use Section Control:*
   Activate Section Control on the control terminal.

2. Switch on Section Control with  .

15.4 Starting spreading

CMS-T-00009927-A.1

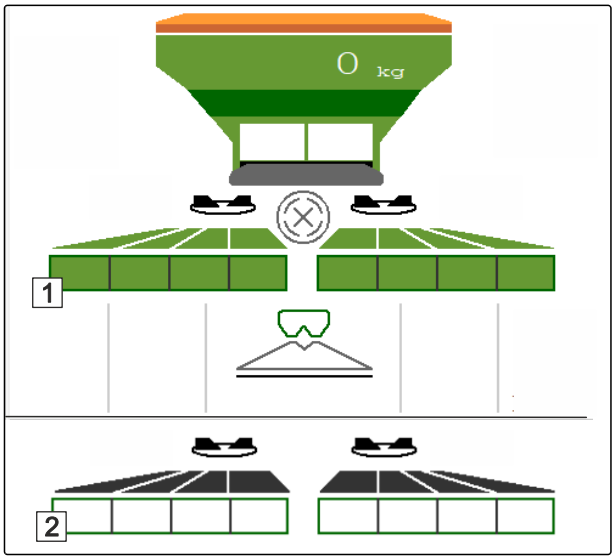
1. Drive onto the field.

2. Run the spreading disks at the nominal speed.

3.  *When the switch-on point according to the setting chart has been reached:*
   1 Start spreading.

4.  *When the switch-off point according to the setting chart has been reached:*
   2 Stop spreading.

5. *When work is finished:*
   Stop the spreading disk drive.



CMS-I-00007336

15.5 Spreading on one side

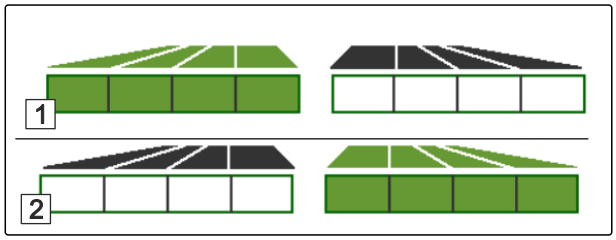
CMS-T-00009928-A.1

NOTE

Not for spreading lime

1 Left shutter is open

2 Right shutter is open



CMS-I-00007335

▶ Open or close the left shutter.

▶ Open or close the right shutter.

15.6 Adjusting the spread rate

CMS-T-00009929-B.1

The setpoint for the spread rate can be increased or reduced before or during operation.

The spread rate is changed by the rate increment each time the button is pressed.

Adjust the spread rate on both sides:

CMS-I-00007332

▶ Increase the spread rate by the rate increment.

▶ Increase the spread rate by the rate increment.

▶ 100 % Reset the spread rate back to 100%.

Adjust the spread rate on one side:

NOTE

Not for spreading lime

CMS-I-00007328

▶ Increase the spread rate on the left by the rate increment.

- ▶  Reduce the spread rate on the left by the rate increment.

- ▶  Increase the spread rate on the right by the rate increment.

- ▶  Reduce the spread rate on the right by the rate increment.

15.7 Switching the part-width sections

CMS-T-00009930-A.1

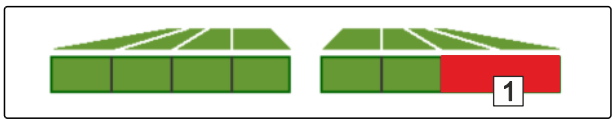
NOTE

Not for spreading lime

The working width is divided into 8 part-width sections.

The part-width sections can be switched off beginning from the outside.

Switched-off part-width sections are shown in red 1.



CMS-I-00007339

Part-width sections can be pre-selected before operation or switched during operation.

- ▶  Switch on switched off part-width section from the left.

- ▶  Switch off part-width section from the left.

- ▶  Switch on switched off part-width section from the right.

- ▶  Switch off part-width section from the right.

15.8 Performing boundary spreading

CMS-T-00009931-A.1

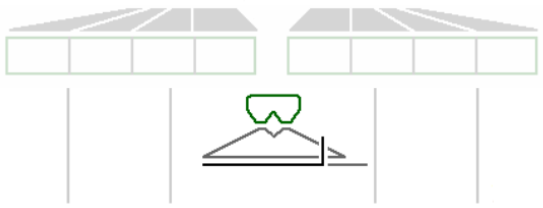
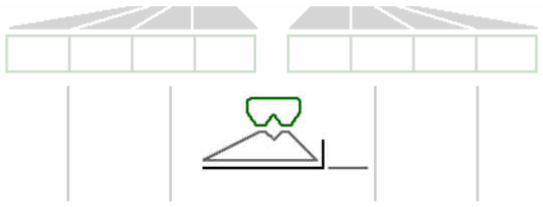
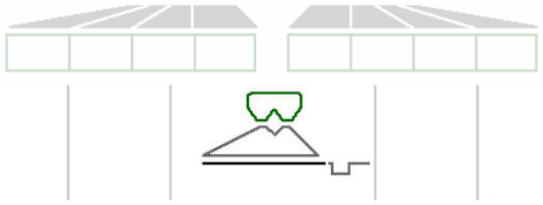
NOTE

Not for spreading lime

The boundary spreading method can be pre-selected before beginning operation or can be switched on and off during operation.

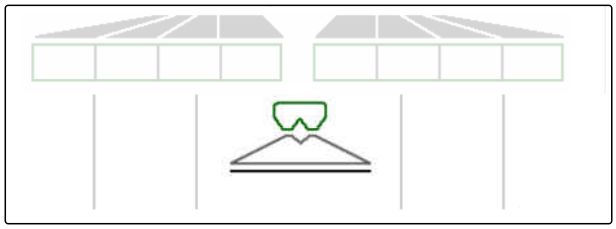
1. Select the boundary spreading method.

➡ The LED on the button is lit.

	Border spreading	
	Boundary spreading	
	Ditch spreading	

2. Carry out the boundary spreading method.

3. Deselect the boundary spreading method and go back to normal spreading.



CMS-I-00007345

15.9 Using the steering axle

CMS-T-00015155-B.1

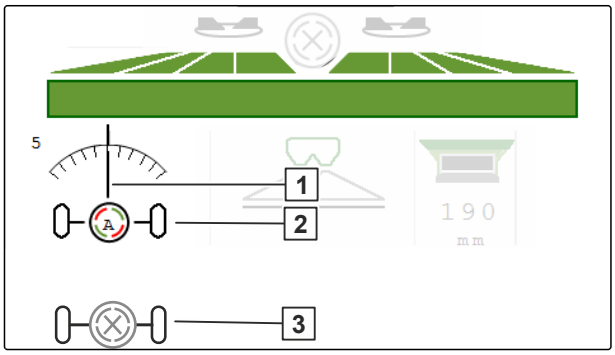
15.9.1 Using the automatic trailing function

CMS-T-00015156-B.1

1 Steering angle indicator

2 Automatic trailing function

3 no trailing function



CMS-I-00009853

PREREQUISITES

- Spreading disk drive switched on

1. Switch on the automatic trailing function.

2. Switch off the automatic trailing function.

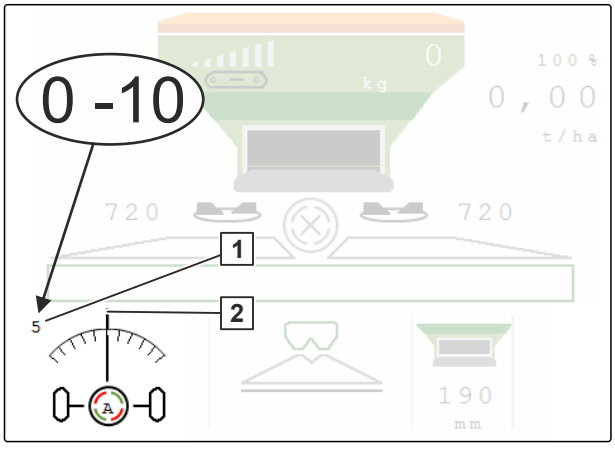
15.9.2 Using automatic slope counter-steering

CMS-T-00015157-B.1

The implement automatically steers counter to the slope.

Slope counter-steering can be influenced by the boost factor 1 2.

- Value 5 = Default value
- Value greater than 5 = Stronger slope counter-steering
- Value less that 5 = Weaker slope counter steering



CMS-I-00009852

PREREQUISITES

- Automatic slope counter-steering activated in the menu *"Implement"* > *"Steering"*

1. Switch on the automatic trailing function.

2. Set stronger slope counter-steering.

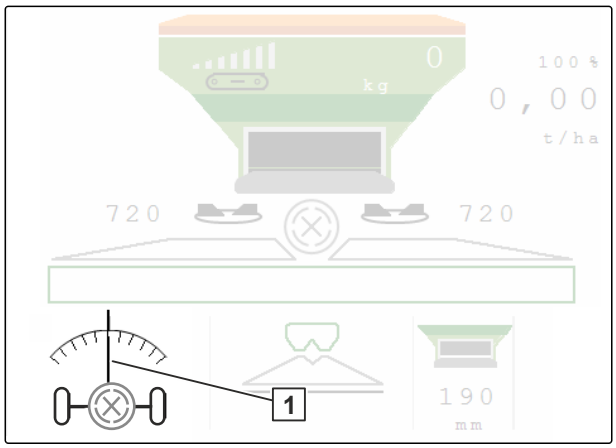
3. Set weaker slope counter-steering.

4. Set slope counter steering to the default position.

15.9.3 Using manual slope counter-steering

The machine steers counter to the slope manually controlled.

CMS-T-00015158-A.1



CMS-I-00009851

PREREQUISITES

- Activate manual slope counter-steering in the menu *"Implement" > "Steering"*

1. Steer to the right counter to the slope.

2. Steer to the left counter to the slope.

3. Lift out on headlands or on a level surface.

15.9.4 Lock the self-steering axle for road travel

CMS-T-00015159-A.1

1. Switch off the spreading disk drive.

2. Lock steering.

➡ Axle aligns itself while driving straight-ahead. Steering is locked.

Emptying the spreading material hopper 16

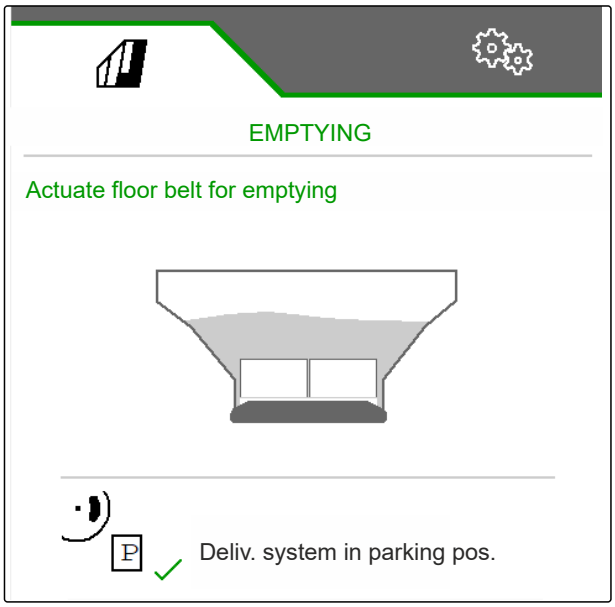
CMS-T-00009893-B.1

1. In the Field menu, select *"Emptying"*.
2.  Move the delivery system into parking position.
3.  Open the double shutter.
4.  Start the floor belt.
5.  Confirm.

➡ The implement will be emptied.

6. *When the spreading material hopper is empty:*

Stop the floor belt.



CMS-I-00007353

Documenting work 17

CMS-T-00009878-A.1

17.1 Calling up the documentation

CMS-T-00009879-A.1

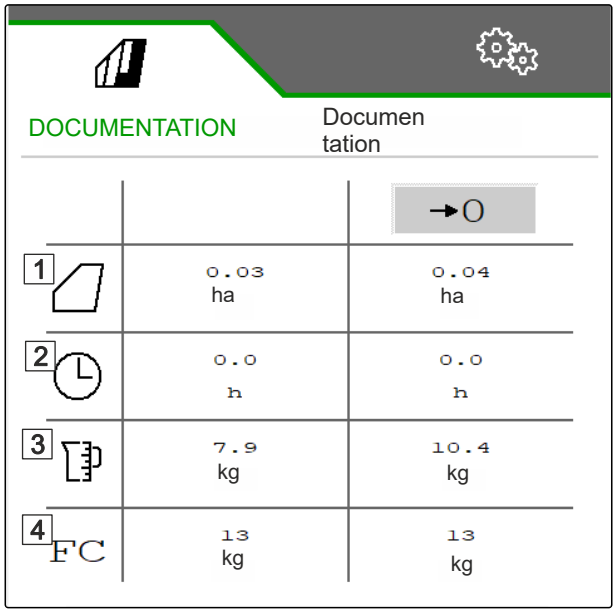
The following work data will be documented and can be displayed:

1 Worked area

2 Working time

3 Spread quantity

4 FC Spread quantity determined via FlowControl



CMS-I-00007357

▶ In the *"Field menu"*, select *"Documentation"*.

➥ A table with the values for the activated documentation is shown in the menu. The left column shows the total values, and the right column shows the daily values.

▶ →0 Delete daily data.

17.2 Managing the documentation

CMS-T-00009932-A.1

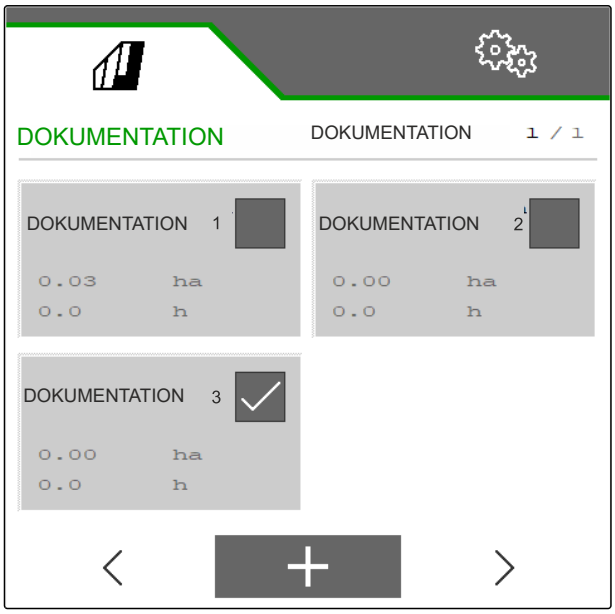
1. In the *"Field menu"*, select *"Documentation"*.

2. Show the documentation list.

3. *To activate, rename or delete a documentation:*
   Select the desired documentation from the list

   or

   Create a new + documentation.



CMS-I-00007359

4. *To rename a documentation:*
   Activate *"Documentation"*.

   or

   Cancel and go back to the documentation list.

   or

   Confirm the documentation.

   or

   Delete documentation. The documentation must not be activated.

CMS-I-00007360

Rectifying faults

18

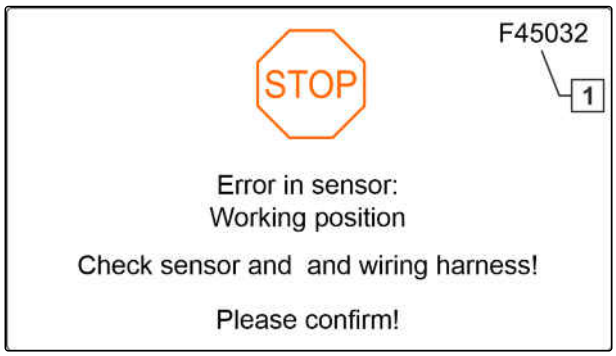
CMS-T-00013445-C.1

18.1 Handling error messages

CMS-T-00007372-D.1

After a notification ⓘ or a warning ⓘ, the work results of the implement can deviate from expectations. A notification is signalled with a slow beeping acoustic warning signal. A warning is signalled with a rapid beeping acoustic warning signal.

After an alarm STOP, there is a risk of implement damage. An alarm is signalled with a continuous acoustic warning signal.



CMS-I-00005170

1. *If an error message appears on the display,*
   stop working immediately.

2. *To find the proposed solutions for the error code* **1**,
   see *"Troubleshooting"*.

18.2 Troubleshooting

CMS-T-00009933-B.1

Error code	Error	Cause	Solution
F35001	Automatic part-width section control cannot be activated	Automatic part-width section control can only be activated when the spreading disks are switched on. The current value for the spreading disk speed is < 100 rpm.	► Switch on the spreading disk drive. ► Check the spreading disk drive. ► Eliminate any damage or interruptions on the cable connection to the speed sensor. ► Replace the speed sensor if defective.
F35102	Fill level alarm limit undercut	The weighed fill quantity is less than the configured alarm limit	► Refill fertilizer.
F35006	Shutters open	The implement is spreading	► Close the shutters.
F35007	Spreading disk speed cannot be maintained	The spreading disk speed deviates from the configured nominal speed by at least 10%	► Adjust the nominal speed.
F35009/ F36803	Left hopper empty	Left fill level sensor is not actuated	► Refill fertilizer. ► Eliminate the fertilizer bridge in the hopper using the appropriate tools. ► Eliminate any damage or interruptions on the cable. ► Replace the fill level sensor if defective.
F35013	Caution: rotating spreading disks	Exit the Work menu while the spreading disks are still switched on.	► Switch off spreading disks.
F35026	Automatic part-width section control not possible	Switching on Section Control not possible	► Switch on the spreading disks. ► Switch on Section Control.
F35035	Setpoint cannot be maintained	The desired spread rate cannot be spread with the working width and speed	► Reduce speed.
F35040	The selected speed source is not available	The speed signal selected from the *"Source"* menu is not available	► In the *"Settings"* *"Source"* menu, select an available signal or the *"Simulated speed"*.

Error code	Error	Cause	Solution
F35041	Switch off functions that cannot be controlled with ISOBUS separately	The ISOBUS shortcut button of the terminal, e.g. on/off button on the control terminal, is pressed	► Release the shortcut button.
F35046	Simulated speed deactivated	A speed signal > 0 km/h is displayed while a simulated speed is set	► Select the correct source for the speed signal in the *"Settings" "Configure speed source"* menu.
F35051	Left limiter sensor has failed	The signal from the path measurement system of the linear drive for the left limiter is less than 0.5 V	► Eliminate damage or interruptions on the cable to the linear drive.
F35052	Right limiter sensor has failed	The signal from the path measurement system of the linear drive for the right limiter is less than 0.5 V	► Eliminate damage or interruptions on the cable to the linear drive.
F35053	Left limiter is not responding	Although the linear drive on the left limiter is switched on, the voltage value of the path measurement system in this drive is not changing	► Remove blockage in the limiter.
F35054	Right limiter is not responding	Although the linear drive on the right limiter is switched on, the voltage value of the path measurement system in this drive is not changing	► Remove blockage in the limiter.
F35057	Left delivery system adjustment is not responding	Although the linear drive on the left delivery system is switched on, the voltage value of the path measurement system in this drive is not changing	► Eliminate the blockage in the delivery system adjustment.
F35058	Right delivery system adjustment is not responding	Although the linear drive on the right delivery system is switched on, the voltage value of the path measurement system in this drive is not changing	► Eliminate the blockage in the delivery system adjustment.

Error code	Error	Cause	Solution
F35064	Section Control deactivated	The Section Control State changes from 1 to 0. Automatic part-width section control deactivated from the spreader or terminal	► Switch on the spreading disks. ► Switch off boundary spreading or ditch spreading. ► Do not operate the spreader manually when in automatic mode. ► Eliminate other faults, e.g. *"Shutter failed"*. ► Exit the *"Settings"* *"Calibration"* or *"Field"* menu.
F35074	Tilt sensor has failed	A signal from the tilt sensor is less than 2 mA or more than 22 mA	► Eliminate damage or interruptions on the cable to the tilt sensor (BEL035).
		The tilt is precisely 0° for longer than 30 seconds	► Eliminate damage or interruptions on the cable to the weighing computer (AEL030).
		The tilt is not being transmitted by the weighing computer.	► Eliminate damage or interruptions on the cable to the weighing computer (AEL030).
F35077	Left weigh cell has failed	The signal for the rear left weigh cell is less than 4 mA	► Eliminate damage or interruptions on the cable to the weigh cell. ► Replace the weigh cell if defective.
F35078	Right weigh cell has failed	The signal for the rear right weigh cell is less than 4 mA	► Eliminate damage or interruptions on the cable to the weigh cell. ► Replace the weigh cell if defective.
F35080	Switch off spreading disks for road transport	The speed is greater than 25 km/h and the spreading disks are rotating at more than 100 rpm	► Switch off spreading disks.
F35091	Yaw rate sensor and tilt sensor have failed	The rotational speed sensor required for automatic steering has failed	► Eliminate damage or interruption on the cable to the rotational speed sensor.
F35093	Axle center position not reached	Axle center position not reached	► Check activation of the stop valves and proportional valves.

Error code	Error	Cause	Solution
F35099	Implausible steering movement detected, automatic steering functions deactivated	The position of the axle has changed without activation	► Check the running gear and wheel angle sensor.
F35102	FlowControl: Left torque sensor failed	No messages received from the left torque sensor for more than 5 seconds	► Eliminate damage or interruption on the cable to the torque sensor.
F35103	FlowControl: Right torque sensor has failed	No messages received from the right torque sensor for more than 5 seconds	► Eliminate damage or interruption on the cable to the torque sensor.
F35107	Steered axle does not respond; automatic steering functions deactivated	Position of the steered axle does not change, in spite of activation	► Check activation of the stop valves and proportional valves.
F35138	Left spread rate insufficient	FlowControl has a calibration factor on the left that is significantly lower than the calibration factor on the right	► Check fertilizer settings such as spreading disk, telescope type, and position.
F35139	Right spread rate is insufficient	FlowControl has a calibration factor on the right that is significantly lower than the calibration factor on the right	► Check fertilizer settings such as spreading disk, telescope type, and position.
F35241	Left delivery system motor: position failed (MEL021)	The signal from the path measurement system of linear drive MEL021 for the left delivery system is less than 2 mA or more than 22 mA	► Eliminate damage or interruptions on the cable to the linear drive. ► Replace the linear drive (EA355) if defective.
F35242	Delivery system motor: position failed (MEL022)	The signal from the path measurement system of linear drive MEL021 for the right delivery system is less than 2 mA or more than 22 mA	► Eliminate damage or interruptions on the cable to the linear drive. ► Replace the linear drive (EA355) if defective.
F35243	Implausible calibration factor	The calibration factor entered is outside of the plausible range from 0.4 to 1.45.	► Check data.

Error code	Error	Cause	Solution
F35247	Left shutter not responding	The measured value of the sensor on the left shutter is not changing. The setting motor of the shutter is switched on.	► *To eliminate the blockage:* Open the shutter via the *"Emptying"* menu. ► Eliminate any damage or interruptions on the cable connection to the setting motor. ► Hook the shutter back into the setting motor after the calibration. ► Replace the setting motor (EA461) if defective.
F35249	Right shutter not responding	The measured value of the sensor on the right shutter is not changing. The setting motor of the shutter is switched on.	► *To eliminate the blockage:* Open the shutter via the *"Emptying"* menu. ► Eliminate any damage or interruptions on the cable connection to the setting motor. ► Hook the shutter back into the setting motor after the calibration. ► Replace the setting motor (EA461) if defective.
F35250	Delivery system motor: power consumption on the left is too high (MEL021)	The power consumption of the setting motor on the right delivery system is above 7.5 A	► Eliminate blockage in the delivery system. ► Replace the setting motor (EA355) if defective.
F35252	Shutter path measurement system on the left has failed (MEL001)	The signal from the path measurement system of the right shutter is less than 0.5 V	► Eliminate damage or interruptions on the cable to the shutter motor.
F35253	Shutter path measurement system on the right has failed (MEL002)	The signal from the path measurement system of the right shutter is less than 0.5 V	► Eliminate damage or interruptions on the cable to the shutter motor.
F35259	Delivery system motor: power consumption on the right is too high (MEL022)	The power consumption of the setting motor on the right delivery system is above 7.5 A.	► Eliminate blockage in the delivery system. ► Replace the setting motor (EA355) if defective.

Error code	Error	Cause	Solution
F35261	Overcurrent at output EEL 092/EEL 093 spread fan illumination	The power consumption of the spread fan illumination is too high	► Check light and wiring harness. ► Replace the light (NA297) if defective. ► Replace the wiring harness if defective.
F35264	Angle sensor for shutter unit working mode has failed (BEL105)	The signal for the angle sensor for shutter unit working mode (BEL105) is outside the permitted signal range of 2 to 22 mA	► Check sensor BEL105. ► Check the sensor connection cable.
F35265	Floor belt at standstill	The floor belt was switched on, but the belt speed is not being detected.	► Check hydraulic supply. ► Check the floor belt hydraulic valve (KHY060). ► Check the speed sensor on the floor belt (BEL060).
F35266	Overcurrent at output EEL 090 hopper lighting	The power consumption of the hopper lighting is too high	► Check light and wiring harness. ► Replace the light if defective. ► Replace the wiring harness if defective.
F35267	Left AutoTS motor has failed (MEL054)	The signal from the path measurement system of the linear drive for the right AutoTS gearbox is less than 0.5 V	► Eliminate damage or interruptions on the cable to the linear drive. ► Replace the linear drive (EA460) if defective.
F35268	Left AutoTS motor has failed (MEL053)	The signal from the path measurement system of the linear drive on the left AutoTS gearbox is less than 0.5 V	► Eliminate damage or interruptions on the cable to the linear drive. ► Replace the linear drive (EA460) if defective.
F35269	Right AutoTS motor not in target position (MEL054)	The sensor value of the linear drive for the right AutoTS spreading vane is not reaching the required value	► Switch AutoTS again. ► Remove soiling from the spreading disk. ► Re-calibrate AutoTS. ► Eliminate damage or interruptions on the cable to the linear drive. ► Replace the linear drive (EA477) if defective.

Error code	Error	Cause	Solution
F35270	Left AutoTS motor not in target position (MEL053)	The sensor value of the linear drive for the left AutoTS spreading vane is not reaching the required value	► Switch AutoTS again. ► Remove soiling from the spreading disk. ► Re-calibrate AutoTS. ► Eliminate damage or interruptions on the cable to the linear drive. ► Replace the linear drive (EA477) if defective.
F35281	Drawbar weigh cell has failed (BEL031)	The signal value of the drawbar weigh cell is less than 2 mA or greater than 22 mA.	► Eliminate damage or interruption on the cable to the weigh cell. ► Replace the weigh cell if defective.
F35281	Axle weigh cell failed (BEL032)	The signal value of the axle weigh cell is less than 2 mA or greater than 22 mA.	► Eliminate damage or interruption on the cable to the weigh cell. ► Replace the weigh cell if defective.
F35283	Hopper is overloaded	The permissible payload for this spreader model has been exceeded.	► *To reduce the payload of the implement:* Remove spreading material from the hopper.
F35309	Checking the left stop valve	A voltage greater than or equal to 3 V or lower than 0 V is detected on the job computer output to the left stop valve while the valve is not activated	► Check wiring harness. ► Check job computer.
F35310	Checking the right stop valve	A voltage greater than or equal to 3 V or lower than 0 V is detected on the job computer output to the right stop valve while the valve is not activated	► Check wiring harness. ► Check job computer.
F35311	Checking the yaw rate sensor	The yaw rate sensor does not receive all of the required signals	► Check wiring harness. ► Check job computer.
F35312	Steering is not calibrated	After starting the implement, a valid calibration was not found or calibration of the steering system was aborted	► For calibrating the steering system, see the operating manual.

Error code	Error	Cause	Solution
F35313	100 m pulses not calibrated	The pulses of the wheel speed sensors are not calibrated and the steering mode should be changed or the calibration of the wheel speed sensors was aborted without valid calibration factors	► For calibration of the pulses of the wheel speed sensors, see the operating manual.
F35315	Checking the left speed sensor	When calibrating the pulses of the wheel speed sensors, the left sensor has not counted any pulses and the right sensor has counted more than 100 pulses	► Check wiring harness. ► Check the left speed sensor.
F35316	Checking the right wheel speed sensor	When calibrating the pulses of the wheel speed sensors, the right sensor has not counted any pulses and the left sensor has counted more than 100 pulses	► Check wiring harness. ► Check the right speed sensor.
F35317	Base computer switches to safe mode: restart	The base computer detected an internal error, e.g. overcurrent. All outputs on the base computer will be switched off.	► *To interrupt the power supply to the implement:* Disconnect the ISOBUS plug. ► Restart the implement. ► Eliminate any damage or interruptions on the cable connection to the speed sensor. ► *If the error occurs again:* Contact Customer Service.
F35318	Lime limiter in working position	The implement is not in lime mode and the lime limiter is in working position	► Swing the lime limiter into parking position via the hydraulic activation element. ► Check the limiter working position sensor.

Error code	Error	Cause	Solution
F35320	Product data transfer failed	Transferring of the product data failed, because e.g. the connection between the smartphone and the Bluetooth adapter is interrupted.	► Check the connection between the smartphone and implement. ► Check whether there is space in the implement's product database. ► Restart the transfer. ► Restart mySpreader. ► Update the mySpreader app if necessary.
F35321	Update of the product data available from the mySpreader app	When the product data transfer from the mySpreader app to the implement is started, the following message appears	► Check the data and apply it if necessary.
F35322	New product data available from the mySpreader app	The product data in the mySpreader app is updated	► Check the data and apply it if necessary.
F35323	Axle angle sensor has failed	The sensor signal is outside of the permissible range of 2 to 22 mA.	► Check wiring harness. ► Check the axle angle sensor.
F35324	Low fill level	In active spreading, the low level sensor registered a low fill level.	► Fill the hopper.
F35325	Spreading disks do not turn	Spreading disks are switched on. Spreading disk speed is not detected.	► Check the oil supply. ► Check spreading disk speed sensor. ► Check spreading disk hydraulic valve. ► Check wiring harness.
F35326	Left agitator is blocked (MEL003)	The left agitator is blocked after being reversed several times	► Check the agitator for blockage and eliminate the blockage if necessary.
F35327	Right agitator is blocked (MEL004)	The right agitator is blocked after being reversed several times	► Check the agitator for blockage and eliminate the blockage if necessary.
F35328	Left agitator has failed (MEL003)	A minimum current of less than 200 mA is flowing through the left agitator while the agitator is activated	► Check wiring harness. ► Check job computer.
F35329	Right agitator has failed (MEL004)	A minimum current of less than 200 mA is flowing through the right agitator while the agitator is being activated	► Check wiring harness. ► Check job computer.
F35330	Internal error	General error, cause unknown	► See page 67

Error code	Error	Cause	Solution
F35331	Line interrupted	The component cannot be activated because the connection to the component is interrupted.	► See page 67
F35332	External current on output, load voltage switched off, restart implement	Voltage can be measured on an output of the job computer, even though the output is not activated	► See page 67
F35333	Overcurrent	Excessive current is measured on the job computer output, if there is a short-circuit in the lines or if the component is overloaded. The error message appears starting at 8 A current.	► See page 68
F35334	External current on output	Current can be measured on the job computer output, even though the output is not activated	► See page 68
F35335	Internal error	General error, cause unknown	► See page 69
F35336	Line interrupted	The component cannot be activated because the connection to the component is interrupted.	► See page 69
F35339	External current on output, load voltage switched off, restart implement	Voltage can be measured on an output of the job computer, even though the output is not activated	► See page 69
F35338	Overcurrent	Excessive current is measured on the job computer output, if there is a short-circuit in the lines or if the component is overloaded. The error message appears starting at 8 A current.	► See page 70
F35339	External current on output	Current can be measured on the job computer output, even though the output is not activated	► See page 70
F35340	For pre-metering, switch on the spreading disks and switch off the main part-width section switch	The button for pre-metering lime is activated while the spreading disks are not switched on	► Switch on the spreading disks. ► Deactivate the main part-width section switch.
F35341	Calibration factor implausible, calibration factor not applied.	The calibration factor determined for the fill level indicator varies excessively from the usual values	► See page 70

Error code	Error	Cause	Solution
F35342	Left wheel sensor BEL500 failed	Wheel speed left is 20 seconds less than 2 km/h and wheel speed right is greater than 8 km/h	► See page 71
F35343	Right wheel sensor BEL500 failed	The wheel speed on the right is 20 seconds lower than 2 km/h and higher than 8 km/h on the left	► See page 71

F35330

Internal error

CMS-T-00015382-A.1

One or more messages are displayed in addition:

- Left shutter MEL001
- Right shutter MEL002
- Left delivery system MEL021
- Right delivery system MEL022
- AutoTS MEL054
- Hopper lighting EEL090
- Spread fan lighting EEL092

1. Restart job computer.

2. *If the error message is repeated:*
   Job computer is defective. In this case, please contact Customer Service.

F35331

Line interrupted

CMS-T-00015383-A.1

One or more messages are displayed in addition:

- Left shutter MEL001
- Right shutter MEL002
- Left delivery system MEL021
- Right delivery system MEL022
- AutoTS MEL054
- Hopper lighting EEL090
- Spread fan lighting EEL092

1. Check the connectors and pins on the job computer and on the component.

2. Check the wiring harness for line break.

3. Check the component cited in the message.

F35332

External current on output, load voltage switched off, restart implement

CMS-T-00015384-A.1

One or more messages are displayed in addition:

- Left shutter MEL001
- Right shutter MEL002

- Left delivery system MEL021
- Right delivery system MEL022
- AutoTS MEL054
- Hopper lighting EEL090
- Spread fan lighting EEL092

1. Check wiring harness.
2. Check the component cited in the message.
3. Restart the implement.

F35333

Overcurrent

CMS-T-00015385-A.1

One or more messages are displayed in addition:

- Left shutter MEL001
- Right shutter MEL002
- Left delivery system MEL021
- Right delivery system MEL022
- AutoTS MEL054
- Hopper lighting EEL090
- Spread fan lighting EEL092

1. Check wiring harness.
2. Check the component cited in the message.

F35334

External current on output

CMS-T-00015386-A.1

One or more messages are displayed in addition:

- Left shutter MEL001
- Right shutter MEL002
- Left delivery system MEL021
- Right delivery system MEL022
- AutoTS MEL054
- Hopper lighting EEL090
- Spread fan lighting EEL092

1. Check wiring harness.
2. Check the component cited in the message.

F35335

Internal error

CMS-T-00015387-A.1

One or more messages are displayed in addition:

- Floor belt KHY060
- Left steering valve KHY513
- Right steering valve KHY515
- Check left stop valve KHY514
- Check left stop valve KHY514

1. Restart job computer.

➡

2. *If the error message is repeated:*
   Job computer is defective. In this case, please contact Customer Service.

F35336

Line interrupted

CMS-T-00015388-A.1

One or more messages are displayed in addition:

- Floor belt KHY060
- Left steering valve KHY513
- Right steering valve KHY515
- Check left stop valve KHY514
- Check right stop valve KHY516

1. Check the connectors and pins on the job computer and on the component.
2. Check the wiring harness for line break.
3. Check the component cited in the message.

F35339

External current on output, load voltage switched off, restart implement

CMS-T-00015389-A.1

One or more messages are displayed in addition:

- Floor belt KHY060
- Left steering valve KHY513
- Right steering valve KHY515

- Check left stop valve KHY514
- Check right stop valve KHY516

1. Check wiring harness.
2. Check the component cited in the message.

F35338

Overcurrent

CMS-T-00015390-A.1

One or more messages are displayed in addition:

- Floor belt KHY060
- Left steering valve KHY513
- Right steering valve KHY515
- Check left stop valve KHY514
- Check right stop valve KHY516

1. Check wiring harness.
2. Check the component cited in the message.

F35339

External current on output

CMS-T-00015391-A.1

One or more messages are displayed in addition:

- Floor belt KHY060
- Left steering valve KHY513
- Right steering valve KHY515
- Check left stop valve KHY514
- Check right stop valve KHY516

1. Check wiring harness.
2. Check the component cited in the message.

F35341

Calibration factor implausible, calibration factor not applied

CMS-T-00015393-A.1

- Determined calibration factor:
- Minimum calibration factor: 0.500
- Maximum calibration factor: 1.500

1. Check the weight entered for calibration for possible input errors.

2. Check drawbar weigh cell.

3. Check axle weigh cell.

F35342

Left wheel sensor BEL500 failed

CMS-T-00015394-A.1

The wheel sensor may fail when driving in very long curves with a small turning radius.

1. Check wiring harness.

2. Check wheel sensor.

F35343

Right wheel sensor BEL501 failed

CMS-T-00015395-A.1

The wheel sensor may fail when driving in very long curves with a small turning radius.

1. Check wiring harness.

2. Check wheel sensor.

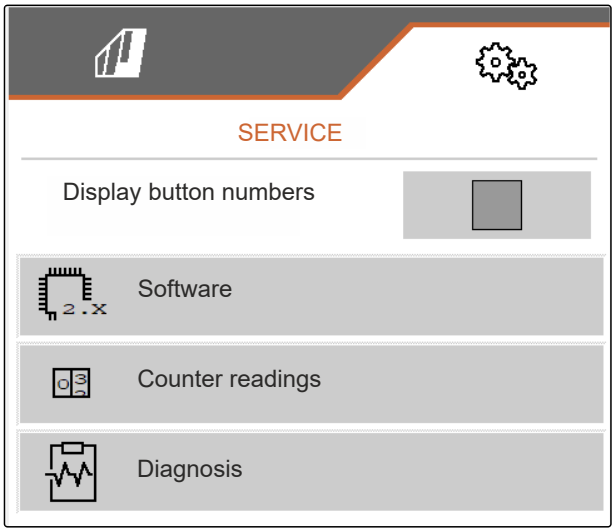
Calling up service information 19

CMS-T-00010692-C.1

The following information can be called up:

- Software versions
- Counter readings
- Diagnostics

1. In the *"Settings"* menu, select *"Service"*.
2. *To number the buttons on the button bar:*
   Select *"Display button numbers"*.
3. *To call up the software information or the implement identification number:*
   Select *"Software"*.
4. *To call up the counter readings:*
   Select *"Counter readings"*.
5. *To call up the diagnostics for the hopper, the spreader unit or the ECU:*
   Select *"Diagnostics"*.

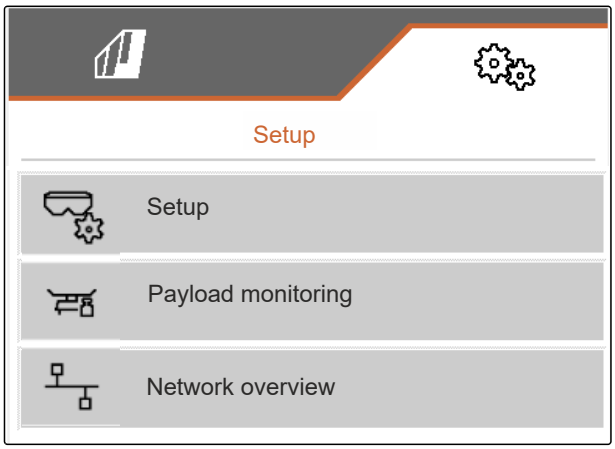


CMS-I-00007361

6. *To make the standard settings:*
   Select *"Setup"*.

- Calibrate the fill level indicator, See page 73.
- Only for customer service: Enter the correction factor for FlowControl.
- Calibrate motors, See page 73.

7. *To display payload monitoring:*
   Select *"Payload monitoring"*.
8. *To display the ISOBUS participants:*
   Select *"Network overview"*.



CMS-I-00009862

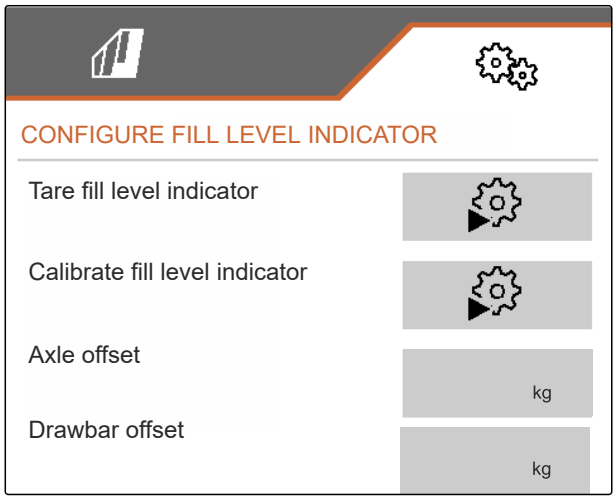
Maintaining the implement 20

CMS-T-00009886-C.1

20.1 Configuring the fill level indicator

CMS-T-00015160-B.1

If the fill level indicator is not working correctly, it must be tared and calibrated.



CMS-I-00009871

1. Completely empty the hopper.
2. Align the implement horizontally.
3. In the *"Settings"* menu, select *"Service"* > *"Setup"* > *"Configure fill level indicator"*.
4. Select *"Tare fill level indicator"*.

➡ The theoretical hopper fill level will be displayed.

5. ✓ Save values

   or

   ✕ Discard values.
6. Select *"Calibrate fill level indicator"*.
7. › Continue.
8. Fill the hopper. Fill quantity must be known.

NOTE

Minimum fill quantity: 2,204.62 lb (1,000 kg)

9. Enter the quantity filled as the actual tank content.
10. › Continue.

➡ The new calibration factor will be displayed.

11. ✓ Save values

or

✕ Discard values.

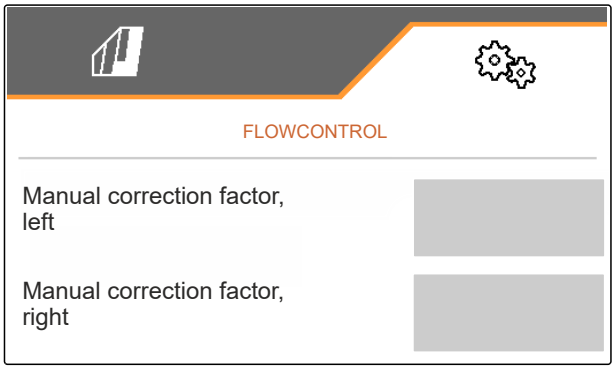
20.2 Configuring FlowControl

CMS-T-00015161-A.1

▶ Enter manual correction factor left.

▶ Enter manual correction factor right.

➡ Default value: Value range



CMS-I-00009870

20.3 Calibrating AutoTS

CMS-T-00015162-A.1

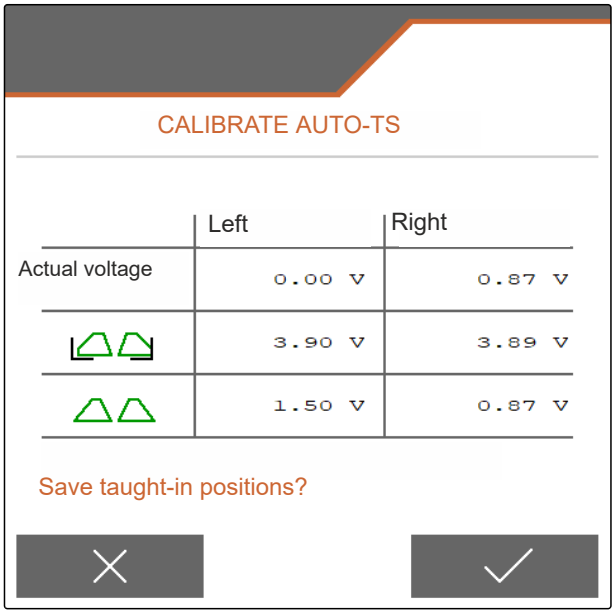
NOTE

Not for spreading lime

1. In the *"Settings"* menu, select *"Service"* > *"Setup"* > *"Calibrating motors"*.
2. Open *"Calibrate AutoTS"*.
3. Move to boundary spreading position.
4. Move the delivery vane to the boundary spreading position.
5. › Continue
6. Move to normal spreading position.
7. › Continue
8. ✓ Save taught-in position

or

✕ Discard them.



CMS-I-00007365

20.4 Calibrating shutters

CMS-T-00015163-B.1

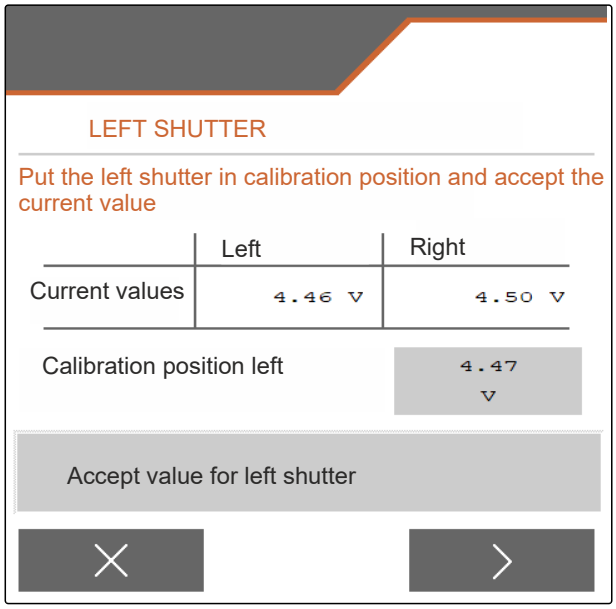
NOTE

Only for double shutter

1. In the *"Settings"* menu, select *"Service"* > *"Setup"* > *"Calibrating motors"*.
2. Call up *"Calibrate shutter"*.
3. Completely open the left double shutter.
4. Close the left double shutter.
5. *When the end value is reached:*
   Select *"Apply value for left shutter"*.
6. Continue.
7. Completely open the right double shutter.
8. Completely close the right double shutter.
9. *When the end value is reached:*
   Select *"Apply value for left shutter"*.
10. Save calibration values

    or

    Discard them.



CMS-I-00009872

20.5 Calibrating the delivery system

CMS-T-00015164-A.1

NOTE

Only for double shutter

1. In the *"Settings"* menu, select *"Service"* > *"Setup"* > *"Calibrating motors"*.
2. Call up *"Calibrate delivery system"*.
3. Select *"Move to calibration values"*.
4. > Continue.
5. +, − Close left delivery system.

➡ The holes in the delivery system and the supply must be aligned.

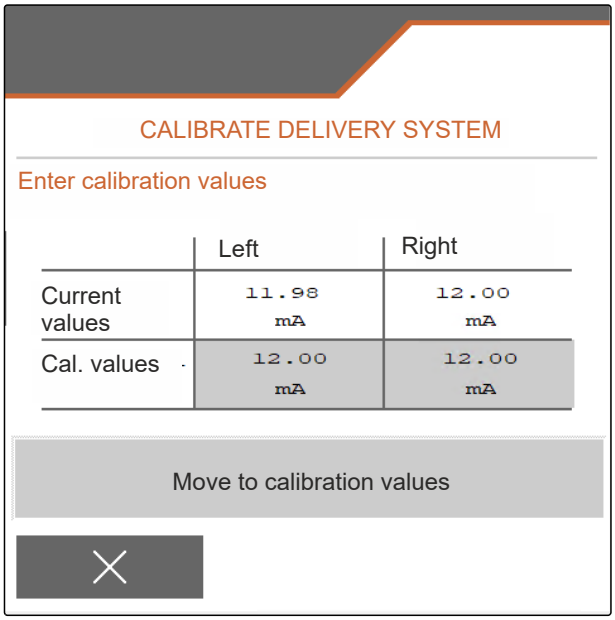
6. +, − Close right delivery system.

➡ The holes in the delivery system and the supply must be aligned.

7. ✓ Save calibration values

   or

   ✕ Discard them.



CMS-I-00009869

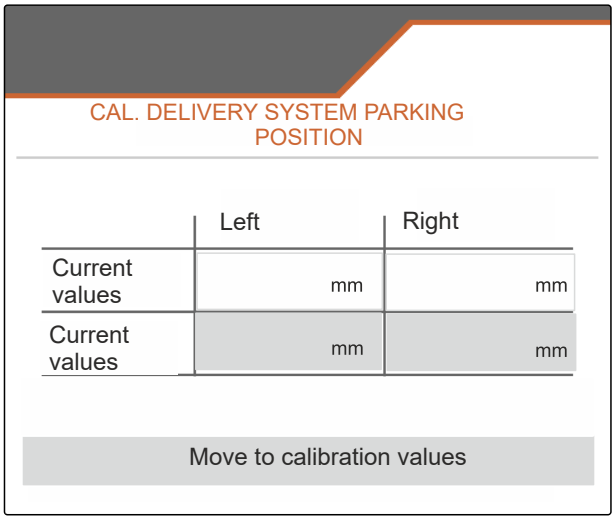
20.6 Calibrating the delivery system parking position

CMS-T-00015165-A.1

1. In the *"Settings"* menu, select *"Service"* > *"Setup"* > *"Calibrating motors"*.
2. Call up *"Calibrate delivery system parking position"*.
3. Select *"Move to calibration values"*.
4. ✓ Save calibration values

   or

   ✕ Discard them.



CMS-I-00009873

Appendix

21

CMS-T-00009900-A.1

21.1 Other applicable documents

CMS-T-00010724-A.1

ZG-TX operating manual

Control terminal operating manual

Lists 22

22.1 Index

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