

Operating manual

AMAZONE

Control terminal

AmaDrill+



MG3856
BAH0040-9 01.19

Please read and observe this
operating manual before initial
operation of the implement!
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.



Identification data

Control terminal AMADRILL+

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.

Please send orders to your AMAZONE dealer.

Formalities of the operating manual

Document number: MG3856

Compilation date: 01.19

© Copyright AMAZONEN-WERKE H. DREYER SE & Co. KG, 2019

All rights reserved.

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

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 trust in our products

Before initial operation, read and observe this operating manual, and particularly the safety information.

1	User information	7
1.1	Purpose of the document.....	7
1.2	Locations in the operating manual.....	7
1.1	Diagrams.....	7
2	General safety instructions.....	8
2.1	Obligations and liability	8
2.2	Informal safety measures.....	8
2.3	User workstation	8
2.4	Safety-conscious working	9
2.5	Handling the product.....	9
2.6	Representation of safety symbols.....	10
3	Product description	11
3.1	Intended use	12
3.2	CE marking	12
4	Layout and function.....	13
4.1	Operation with DMC Primera direct seed drills.....	13
4.2	Rotary cultivator operation.....	13
4.3	Operation with seed drills.....	14
4.3.1	Operation with cam wheel seed drill.....	14
4.3.2	Operation with pneumatic seed drills.....	15
4.4	Work display.....	17
4.5	Button assignment	18
4.6	Creation of tramlines.....	20
5	Start-up	24
5.1	Installing the control terminal	24
5.2	Connecting the control terminal	24
5.3	Switching the control terminal on/off.....	25
6	Settings.....	26
6.1	Enter implement data.....	26
6.2	Displaying / altering the working width.....	27
6.3	Displaying / altering the target blower fan speed (during standstill).....	27
6.4	Displaying / altering the target blower fan speed (during operation).....	28
6.5	Displaying / altering the tramline rhythm.....	28
6.6	Calibration of the Vario gearbox	29
6.7	Calibration value (pulses per 100 m).....	30
6.7.1	Determining / storing the calibration value (pulses per 100 m)	30
6.7.2	Displaying / editing the stored calibration value (pulses per 100 m)	31
6.7.3	Calculating the number of crank turns for the calibration test	32
6.7.4	Calibration test on seed drills with Vario gearbox <u>without</u> seed rate remote control	33
6.7.5	Calibration test for seed drills with Vario gear motor (up to model year 2014).....	35
6.7.6	Calibration test for implements with vario gear motor (as of model year 2015)	37
6.7.7	Calibration test for implements with full metering (pneumatic seed drills).....	39
6.8	Pre-metering prior to startup	41
6.8.1	Start-up ramp	41
6.8.2	Activate pre-metering.....	41
7	Work commencement.....	42
7.1	Tramline counter	43
7.1.1	Setting the tramline counter.....	43
7.1.2	Block the tramline counter	43
7.2	Worked area.....	44
7.2.1	Displaying the worked part area	44

7.2.2	Erasing the part area memory.....	44
7.2.3	Display the total area	44
7.3	Display during work.....	45
7.4	Function buttons.....	46
7.4.1	Display of the current blower fan speed.....	46
7.4.2	Displaying the target spread rate	46
7.4.3	Displaying the speed of the metering roller drive motor.....	46
7.4.4	Displaying the scale position of the Vario gearbox setting lever.....	47
7.4.5	Interrupting the sowing process by switching off the metering roller drive	47
8	Faults.....	48
8.1	Fault display A3.....	48
8.2	Fault display A4.....	48
8.3	Fault display A5.....	49
8.4	Fault display A6 (DMC Primera only).....	50
8.5	Fault display A7.....	51
8.6	Fault display A8.....	51
8.7	Fault display A9.....	51
8.8	Fault display A10.....	52
8.9	Fault display A11.....	52
8.10	Fault display A12.....	52
8.11	Fault display A13.....	53
9	Tables.....	54
9.1	Machine data table.....	54
9.2	Table for adjustable tramline rhythms.....	61
9.3	Table for calibration values / crank turns (guide values).....	62
9.4	Table for calibration values / crank turns for the calibration test.....	65
9.5	Table for metering roller / code number	66
9.6	Table for seed rate reduction while creating tramlines	68
9.6.1	Calculation of the seed rate reduction:.....	68
9.6.2	Table for seed rate reduction:	68

1 User information

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

1.1 Purpose of the document

This operating manual

- describes the operation of the control terminal
- provides important information on safe and efficient handling
- is a component of the control terminal and must always be kept with the implement or carried in the towing vehicle
- must be kept 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 in the direction of travel.

1.1 Diagrams

Instructions and responses

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

Example:

1. Instruction 1
→ Implement response to instruction 1
2. Instruction 2

Lists

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

Example:

- Point 1
- Point 2

Item numbers in diagrams

Numbers in round brackets refer to the item numbers in the diagrams. The first number refers to the diagram and the second number to the item.

Example: (Fig. 3/6)

- Figure 3
- Item 6



2 General safety instructions

This section contains important instructions for operating the control terminal safely.

2.1 Obligations and liability

Comply with the instructions in the operating manual

Knowledge of the basic safety instructions and safety regulations is a basic prerequisite for safe handling and fault-free operation of the control terminal.

Guarantee and liability

Our "General conditions of sales and delivery" are always applicable. These shall be available to the operator, at the latest on conclusion of the contract.

Guarantee and liability claims for damage to people or property will be excluded if they can be traced back to one or more of the following causes:

- Non-intended use of the control terminal
- Improper installation, commissioning and operation of the control terminal
- Non-compliance with the instructions in the operating manual regarding commissioning, operation and maintenance
- Unauthorised structural changes of the control terminal.

2.2 Informal safety measures

As well as all the safety information in this operating manual, comply with the general, national regulations pertaining to accident prevention and environmental protection.

2.3 User workstation

The control terminal must only be operated by one person sitting in the driver's seat of the tractor.

2.4 Safety-conscious working

Besides the safety information in this operating manual, the generally applicable national workplace safety and accident prevention regulations are binding.

2.5 Handling the product

Do not subject the control terminal to any mechanical vibrations or impact.

Do not allow the control terminal to fall.

Do not touch the display of the control terminal with sharp objects, as this could damage the display.

Protect the control terminal from wetness and moisture.

Do not place the control terminal near heat sources such as radiators or ovens.

Never open the housing of the control terminal.
If repairs are necessary, contact a specialist workshop.

2.6 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 severity of the risk, and carries the following meaning:



DANGER

Indicates a direct threat at high risk which will result in death or most serious bodily harm (loss of limbs or long-term harm), should it not be prevented.

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 cause 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 disturbance to the environment.



NOTE

Indicates handling tips and particularly useful information.

These instructions will help you to use all the functions of your machine in the best way possible.

3 Product description

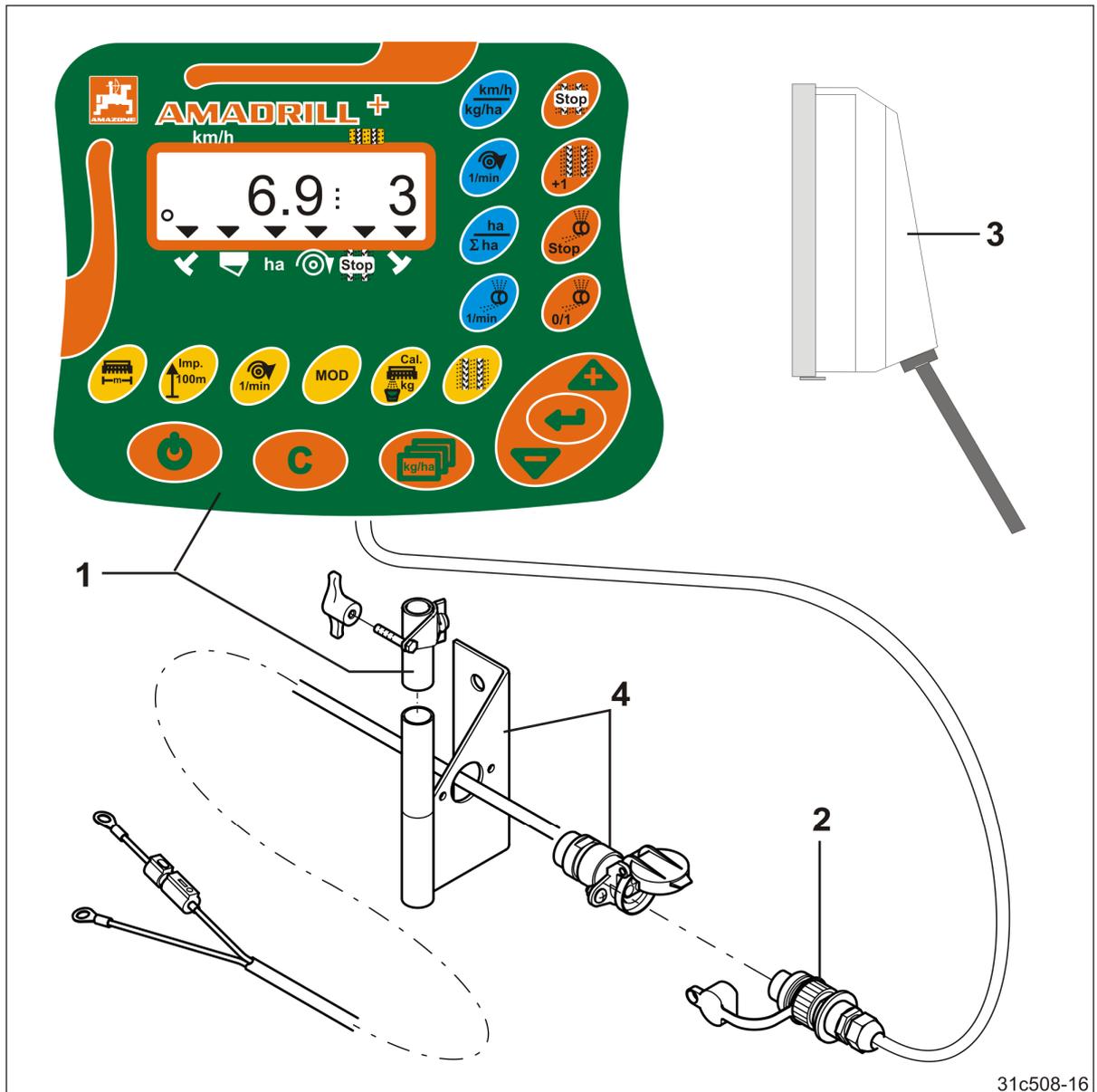


Fig. 1

Standard equipment Fig. 1/...

- (1) Control terminal with fastening bracket
- (2) Socket connection, 12V
- (3) Wiring harness with 20-pin connector

Special equipment Fig. 1/...

- (4) Bracket with battery cable choice of one or two sockets

Product description

3.1 Intended use

The control terminal is intended exclusively for conventional use as a display and monitoring device in agricultural applications.

Intended use also includes observing all instructions in this operating manual.

Other uses to those specified above are forbidden and shall be considered as improper.

For any damage resulting from improper use

- the operator bears the sole responsibility
- AMAZONEN-WERKE accepts no liability.

3.2 CE marking

The CE marking (Fig. 2) signals compliance with the stipulations of the valid EU directives.



Fig. 2

Electrical equipment

Battery voltage: 12 V (volts)

4 Layout and function

The following section provides information on the structure of the control terminal and the functions of the individual components.

The control terminal has 6-digit display (Fig. 3/1).

The control terminal is equipped with an EEPROM (memory chip) for storing data.

The data are again available for the next use, even after a long period of deactivation of the on-board power supply.



Fig. 3

4.1 Operation with DMC Primera direct seed drills

The control terminal issues an alarm when the set minimum fertiliser quantity is reached in the fertiliser hopper.

4.2 Rotary cultivator operation

The control terminal monitors the function of the overload clutch. Acoustic alarm in event of tool carrier standstill.

4.3 Operation with seed drills

The AmaDrill+

- adapts the seeding rate to the working speed when equipped with the appropriate equipment
- measures the covered part area [ha].
- stores the cultivated total area [ha].
- indicates the forward speed [km/h].
- controls the tramline control and the tramline marker
- indicates the position of the hydraulically operated track markers
- initiates an alarm when the set minimum quantity is reached in the tank (fill level sensor required).

4.3.1 Operation with cam wheel seed drill

The AmaDrill+ monitors the lay shaft drive (Fig. 4/1) for seed drills equipped with tramline control.



Fig. 4

The AmaDrill+ regulates and controls the seeding rate via the seed rate remote control.

The seed rate remote control is activated by an electric cylinder 12V stroke = 130 mm (Fig. 5/1).

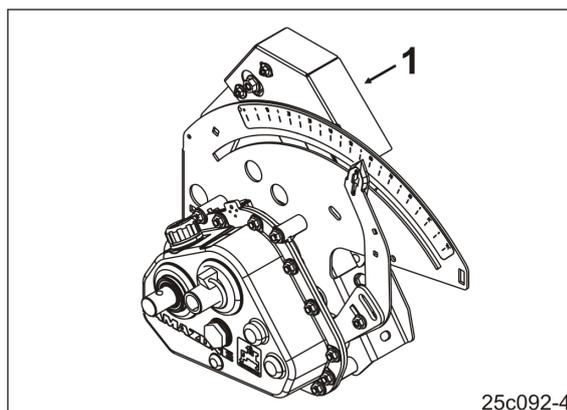


Fig. 5

4.3.2 Operation with pneumatic seed drills

Full metering

Implements with full metering have an electric gear motor that drives the metering rollers in the metering units. The AmaDrill+ controls and regulates the electric gear motor for a uniform seeding rate.

Pneumatic seed drills are equipped with different electric gear motors. When entering the implement data the AmaDrill+ requires the precise type designation of your electric gear motor in coded form. The type designation is on the rating plate of the electric gear motor, e.g.

- Electric gearbox EA365 (Fig. 6/1)



Fig. 6

- Electric gear motor EA423 (Fig. 7/1)

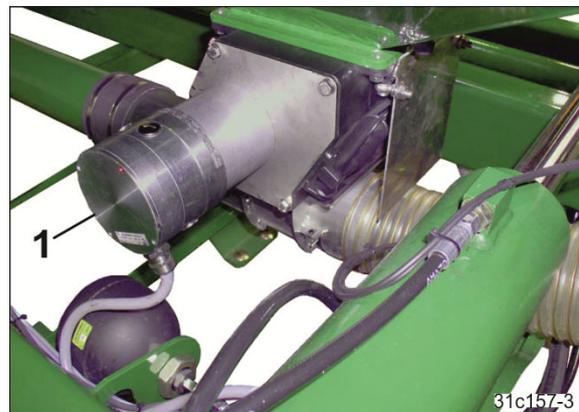


Fig. 7

- Electric gear motor EA419 (Fig. 8/1).



Fig. 8

Layout and function

Micropellet spreader

The AmaDrill+ regulates and controls the seeding rate of the micropellet spreader.

The metering unit of the micropellet spreader is driven by an electric gear motor (Fig. 9/1).



Fig. 9

Distributor head

The AmaDrill+ monitors the tramline control in the distributor head (Fig. 10/1). An acoustic alarm sounds in the event of incorrect shutter position.



Fig. 10

Blower fan

The control terminal monitors the fan speed.

If the actual speed deviates by more than 10 % from the target speed, an acoustic signal is initiated and in the display the control lamp (Fig. 11/1) above the speed symbol (Fig. 11/2) flashes.

The speed monitoring is only active when the seed drill is working.



Fig. 11

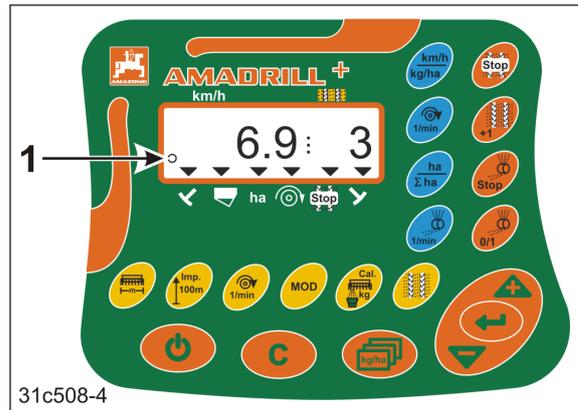
4.4 Work display

The work display (Fig. 12) appears with the first pulse from the distance sensor.

The flashing circle symbol (Fig. 12/1) during work indicates that

- The control terminal receives pulses from the distance sensor
- The control terminal is working correctly.

The work display depends on the working situation [see table (Fig. 13)].



31c508-4

Fig. 12

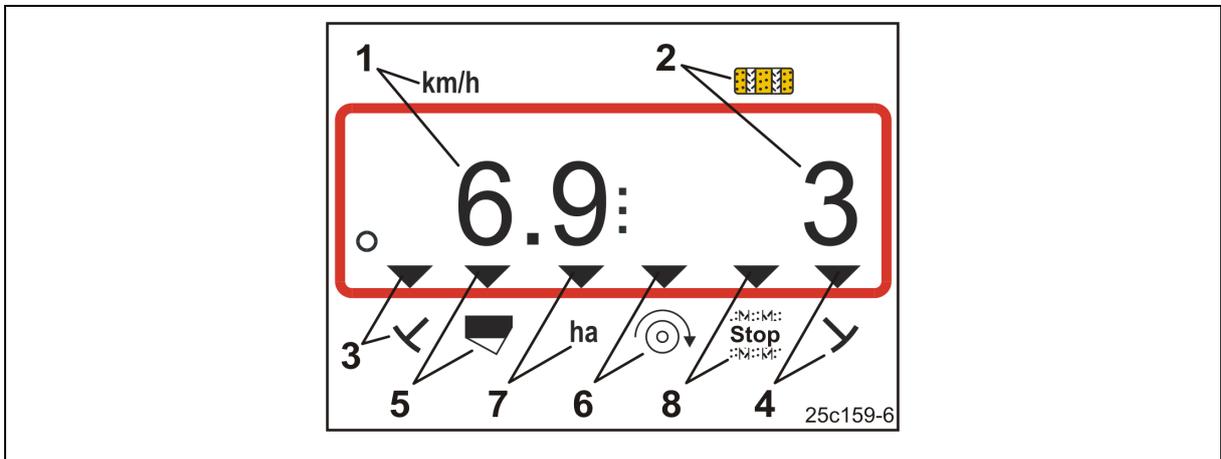


Fig. 13/...	Display and/or control symbol		Sensor
1	Forward speed [km/h]		pulses from the distance sensor
2	Tramline counter position		Control terminal data
3 or 4	Control symbol	Left track marker in working position	pulse, e.g. from track marker sensor
	Control symbol	Right track marker in working position	
Display appears automatically in event of faults:			
5	Control symbol	Refill hopper	pulses from level sensor
6	Control symbol	Blower fan speed deviation above 10%	pulses from fan sensor (pneumatic seed drills)
Displays called up via function buttons:			
7	Control symbol	Worked area [ha]	pulses from the distance sensor
8	Control symbol	Blocking the tramline counter	Manual entry

Fig. 13

4.5 Button assignment

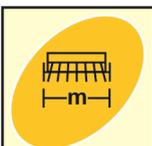
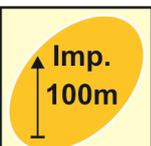
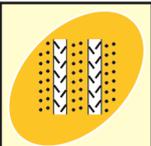
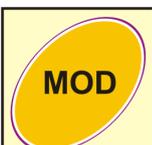
Button	Button assignment	Button	Button assignment
	Switching on/off		Correction button
	<ul style="list-style-type: none"> Data input confirmation 100% setting 		Display target spread rate [kg/ha]
	Reduce <ul style="list-style-type: none"> the displayed value the spread rate [%] 		Increase <ul style="list-style-type: none"> the displayed value the spread rate [%]
	Input/display of working width [m]		Input/display of a soil-dependent number of pulses of a 100 m-long calibration distance
	Input/display of fan nominal speed [rpm.]		Input of tramline rhythm
[Yellow button]			
	Select and change mode and code		Settings for calibration test

Fig. 14

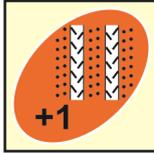
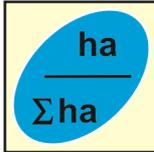
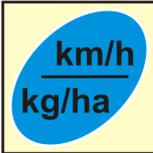
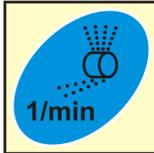
Button	Button assignment	Button	Button assignment
	Block the tramline counter		Shift on the tramline counter
	For full metering: Block metering roller		For full metering: Pre-metering during start-up <u>With valve timing gear seeder:</u> Calibrate the Vario gearbox with seed rate remote control
 [Blue button]	Display of fan speed <u>Alternative via button actuation</u>		<u>Alternative via button actuation</u> Display of the cultivated <ul style="list-style-type: none"> • part area [ha] • total area [ha]
	(1) Display (current) <ul style="list-style-type: none"> • Working speed [km/h] • Tramline counter (2) Display (current) <ul style="list-style-type: none"> • Spread rate [kg] • Tramline counter 		<u>Full metering display:</u> Metering roller speed <u>Valve timing gear display:</u> Scale position of the seed rate remote control pointer

Fig. 15

4.6 Creation of tramlines

As described in the operating manual for the seed drill, the tramline control allows the creation of tramlines at pre-selected intervals on the field.

When creating a tramline

- the tramline counter shows the number "0" on the control terminal
- the tramline coulters do not deposit any seeds in the soil.
- the seed rate must be reduced by the quantity that is otherwise deposited by the tramline coulters (see section "Table for seed rate reduction while creating tramlines", Seite 68)
- the reduced seed rate is adjustable (see section "Machine data table", Mode 7, Seite 56).

The seeding rate must not be reduced when creating the tramlines with

- Seed drills D9
- Seed drills AD
- Seed drills AD-P 3000/3500/4000 Super/Special.



Seed drills D9 and AD:

For D9 and AD seed drills, the drive shafts of the tramline metering wheels remain at a standstill when creating the tramlines.

AD-P 3000/3500/4000 Super/Special:

AD-P 3000/3500/4000 Super/Special pack top seed drills are equipped with seed return flow. The seed of the tramline coulters is routed back into the seed hopper when creating tramlines.

AD-P 3001/3501/4001:

AD-P 3001/3501/4001 Super/Special pack top seed drills are not equipped with seed return flow. For these seed drills, the seeding rate must be reduced.

The required tramline rhythm (see seed drill operating manual) is determined from the desired tramline spacing and the seed drill working width. All adjustable tramline rhythms can be found in section "Table for adjustable tramline rhythms", Seite 61. The tramline rhythm must be entered on the control terminal (see section "Displaying / altering the tramline rhythm", Seite 28).

The control terminal counts up the tramlines in the tramline counter

- after actuation of the track markers, e.g. before turning at the end of the field
- after the machine is raised (without track markers), e.g. for turning at the end of the field.

The tramline counter can be blocked (see section "Block the tramline counter", Seite 43)

- before raising the track marker, e.g. before an obstacle
- before machine standstill (without track markers), e.g. in the event of a work interruption on the field.



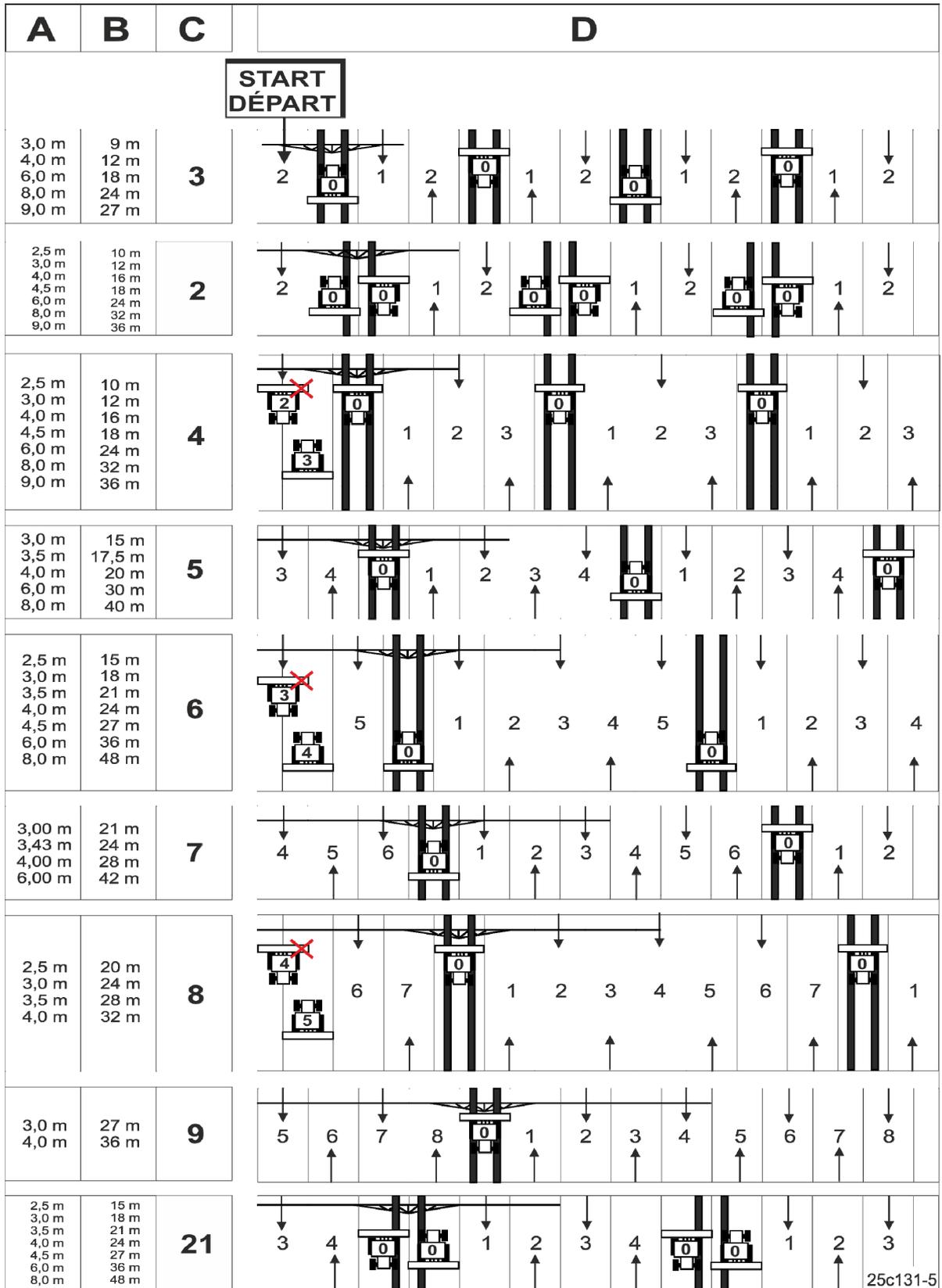
Before resuming work

- activate the tramline counter
- check the tramline counter display.

Layout and function

The creation of tramlines is shown in Figure (Fig. 16) using various examples:

- A = Working width of the seed drill
- B = Tramline spacing (= working width fertiliser spreader/field sprayer)
- C = Tramline rhythm (entered on the control terminal)
- D = Tramline counter
(during operation, the field passes are numbered consecutively and displayed on the control terminal).



25c131-5

Fig. 16

5 Start-up

5.1 Installing the control terminal

1. Screw the bracket (Fig. 17/1) so that is free from vibrations and electrically connected to the right of the driver's position in the tractor cab, within visual range and easy to access (Fig. 17/2).

The distance from the radio unit or aerial must be at least 1 m.



The control terminal must have a conductive connection via the bracket to the tractor chassis!

Remove the paint at the installation points before installing the bracket!

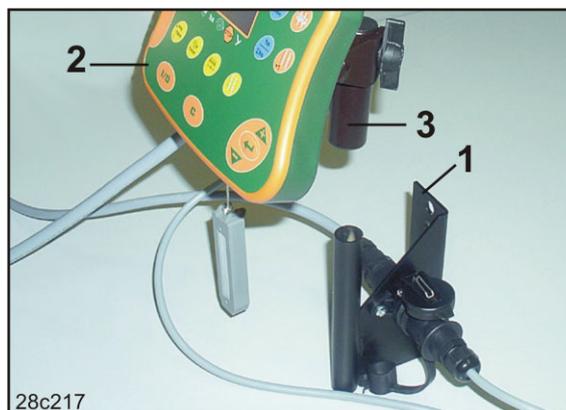


Fig. 17

2. Equip the control terminal with the counterpart (Fig. 17/3).

5.2 Connecting the control terminal

1. Fit the counterpart (Fig. 18/1) onto the bracket and clamp it in place with the wing screw (Fig. 18/2).

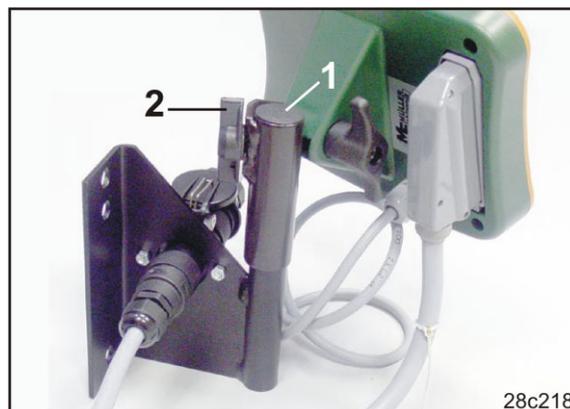


Fig. 18

2. Insert the power cable (Fig. 19/1) into the bracket and the 12V tractor socket.
3. Connect the bracket and the control terminal with the power cable (Fig. 19/2).
4. Couple the seed drill or soil tillage implement to the tractor vehicle (see operating manual for seed drill or soil tillage implement).
5. Route the implement cable into the tractor cab and plug the implement plug (Fig. 19/3) into the terminal.

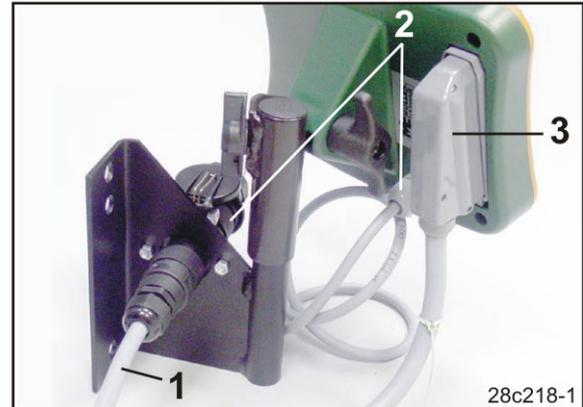


Fig. 19



The implement plug is secured against unintentional release by means of a spring-loaded lever. Actuate the lever before releasing the implement plug.

5.3 Switching the control terminal on/off

Switch the control terminal on and off by pressing the  button.

Enter the implement-specific data (see section "Settings", Seite 26). When the control terminal is switched back on, the data is available again.

Before using a seed drill of a different type, enter the implement-specific data on the control terminal.

When switching on the control terminal, the software version of the control terminal briefly appears.

If the supply voltage, e.g. when starting the tractor, drops below 10 volts, the control terminal is switched off.

6 Settings

6.1 Enter implement data

The control terminal requires input of the implement data in coded form (see Fig. 20).

Refer to the machine data in the table (see section "Machine data table", Seite 54).



Press the  button repeatedly to display the inventory data.

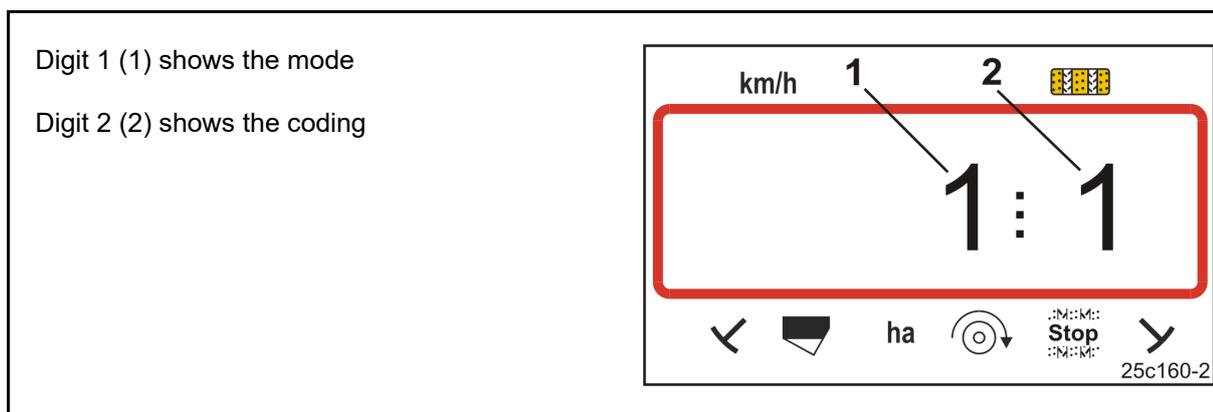


Fig. 20

Open the necessary modes (1, 2, 3, etc.) and enter the machine data in coded form:

1. Press buttons  and .
2. Press the  button repeatedly until the desired mode is displayed (Fig. 20/1).
3. Press the  or  button.
→ Set the code (see section "Machine data table", Seite 54).
4. Press .
- Confirm the set value.
5. Press .
- Exit the menu.

6.2 Displaying / altering the working width

1. Press .
- Display: Stored working width [m], e.g. 3.0 m (Fig. 21).
2. Change the working width [m] with the  and  buttons.
3. Press .
- Save the selected value.

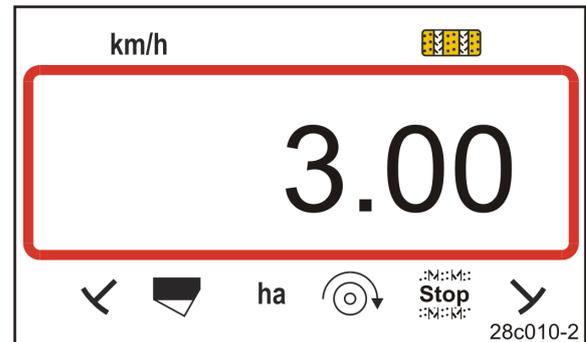


Fig. 21

6.3 Displaying / altering the target blower fan speed (during standstill)



Switching off blower fan speed monitoring (see below) on single grain seed drills ED with micropellet spreader.

This setting is only possible for pneumatic seed drills.

1. Press the  button (yellow).
- Display: Target blower fan speed [rpm.].
2. Change the target blower fan speed with the  and  buttons.
3. Press .
- Store the selected value.

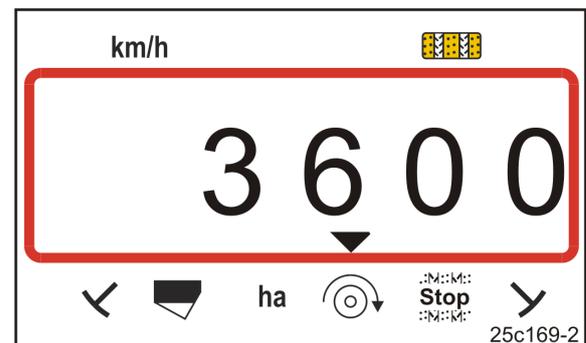


Fig. 22

Switching off the blower fan speed monitoring

Switch off the blower fan speed monitoring

- on single grain seed drills ED with micropellet spreader: set the target blower fan speed to "1".
- on pneumatic seed drills: blower fan monitoring cannot be switched off.

6.4 Displaying / altering the target blower fan speed (during operation)

This setting is only possible for pneumatic seed drills.

1. Press the  button (blue).

→ Display (Fig. 23)
Current fan speed
(e.g. 3600 rpm).



Fig. 23

2. Press the  button and  button (yellow) simultaneously.

3. Press .

→ Save the selected value.

6.5 Displaying / altering the tramline rhythm

1. Press .

→ Display:
Stored tramline rhythm,
e.g. 7 (Fig. 24).

2. Change the tramline rhythm
with the  and  buttons.

3. Press .

→ Save the selected value.

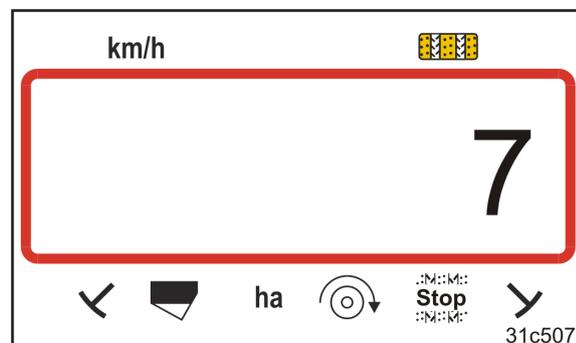


Fig. 24

6.6 Calibration of the Vario gearbox

1. Press the  and  buttons simultaneously.
 2. Press and hold the  button until the pointer (Fig. 25/1) is set to the scale value "0" and the yellow LED (Fig. 25/2) lights up.
 3. If necessary, unscrew the lever (Fig. 25/3) until the pointer is set to "0" and the yellow LED lights up.
 4. Press .
- Save the setting.

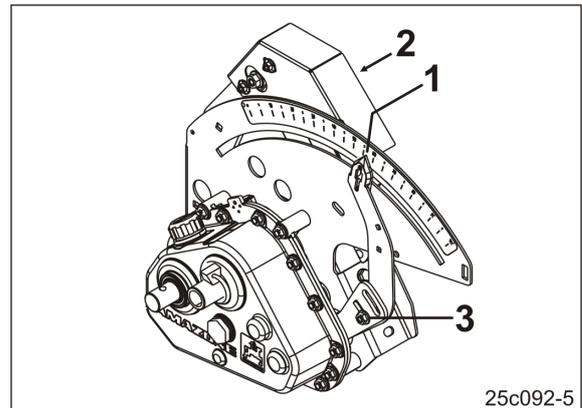


Fig. 25

5. Press and hold the  and  buttons until the pointer indicates a scale value greater than "80".
 6. Press .
- Store the setting.
7. Read the scale value and enter it on the control terminal with the  and  buttons.
 8. Press .
- Save the value.

6.7 Calibration value (pulses per 100 m)

The control terminal requires the calibration value "Pulses per 100 m" to

- determine the forward speed [km/h]
- determine the worked area [ha]
- perform a calibration test with crank turns or electric drive.

If the calibration value is unknown, determine the "pulses per 100 m" calibration value by means of a calibration run (see section "Determining / storing the calibration value (pulses per 100 m)", unterhalb). The calibration value must be determined under the predominating operating conditions on the field.

If the "pulses per 100 m" calibration value is known, it can be entered manually (see section "Displaying / editing the stored calibration value (pulses per 100 m)", Seite 31).

Determine the calibration value

- before initial use.
- when changing from heavy to light soil and vice versa. The slippage of the measuring or driving wheel may alter on different soils, thereby affecting the calibration value (imp./100 m).
- when connecting the control terminal to a different implement type
- if there is a difference between the indicated and actual travel speed
- if there are differences between the measured and actual worked area.

6.7.1 Determining / storing the calibration value (pulses per 100 m)

1. On the field, measure out a calibration distance of exactly 100 m. Mark the start and end point of the calibration distance.
2. Move tractor to starting position (Fig. 26) and seed drill to working position (if necessary, interrupt seed metering).

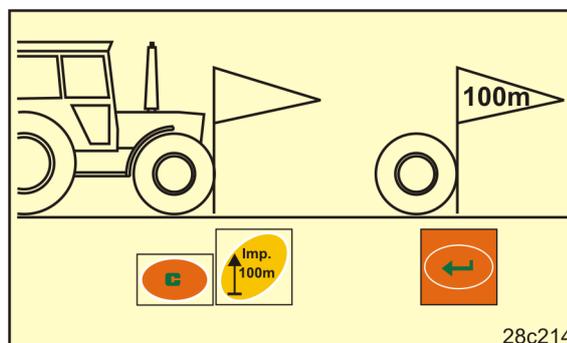


Fig. 26

3. Press and hold the  button.

4. Press .

→ The display shows "0".

5. Start.

→ The display shows the pulses.



Do not press a button during the calibration run.

6. Stop after exactly 100 m.
- The display (Fig. 27) shows the calibration value (e.g. 1005 pul./100 m).
7. Enter the calculated calibration value in the table (Fig. 61, Seite 65) (recommendation).
8. Press .
- Save the calibration value (pul./100 m).



Fig. 27



The calibration value (imp./100 m) must not be less than 250. Otherwise the control terminal will not work properly.



You can enter the determined calibration value in the table (Fig. 61).

6.7.2 Displaying / editing the stored calibration value (pulses per 100 m)

1. Bring implement to a standstill.
2. Press .
- Display:
The stored calibration value (pul./100 m), e.g. 1053 (Fig. 28).
3. Alter the stored calibration value (imp./100 m) by using the  and  buttons.
4. Press .
- Save the selected value.



Fig. 28

6.7.3 Calculating the number of crank turns for the calibration test

If the calibration value differs from the values in the Table (see Chap. 9.3, Seite 62)

- recalculate the number of crank turns for the calibration test (see below)
- enter the number of crank turns in Table (Fig. 61)
- carry out a calibration test with the calculated number of crank turns (see seed drill operating manual).

$$\text{Conversion factor} = \frac{\text{Pul./100 m (actual)}}{\text{Pul./100 m (value from Table)}^{1)}$$

¹⁾ see Tables (see Chap. 9.3, Seite 62)

$$\text{Crank turns (actual)} = \text{Crank turns (value from Table)}^{1} \times \text{Conversion factor}$$

¹⁾ see Tables (see Chap. 9.3, Seite 62)

Example:

Seed drill: AD-P 03 Special

Working width: 3.00 m

Pul./100 m (measured): 1339

Pul./100 m
(from Tables (see Chap. 9.3, Seite 62): 1409

Crank turns
(from Tables (see Chap. 9.3, Seite 62): 38.5

$$\text{Conversion factor} = \frac{1339}{1409} = 0.95$$

$$\text{Crank turns (actual)} = 38.5 \times 0.95 = 36.6$$

6.7.4 Calibration test on seed drills with Vario gearbox without seed rate remote control

Calibration test on cam wheel seed drills (e.g. D9) and pneumatic seed drills (e.g. AD-P) with Vario gearbox without seed rate remote control (Fig. 29).

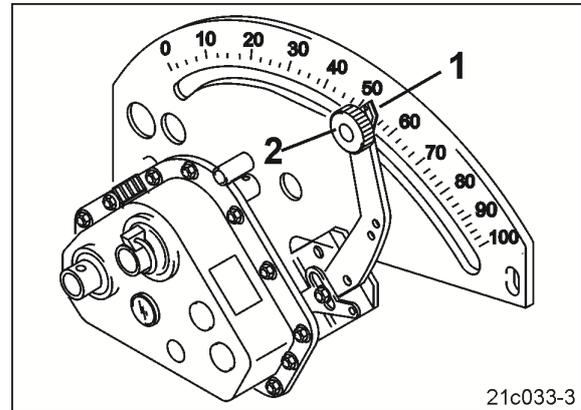


Fig. 29

1. Prepare the seed drill for the calibration test as described in the seed drill operating manual (set up calibration trough, etc.).

2. Press .

3. Using the  or  buttons, enter the code number (see table) of the metering wheel.

	Mechanical seed drills		Pneumatic seed drills
Metering wheel	Normal seed metering wheel	Fine seed metering wheel	Metering roller
Code number	3	1	See table Fig. 62, Seite 66

4. Press .

5. Press .

6. Enter the desired spread rate (kg/ha).

7. Press .

8. Read the scale value (e.g. 50) for the first calibration test from the seed drill operating manual.

9. Press .

10. Press the  or  button.

→ Enter the scale value for the first calibration test on the control terminal.

11. Set the gearbox setting lever (Fig. 29/1) to the scale value and fasten with the knurled screw (Fig. 29/2).

Settings

12. Press .



The gearbox setting value on the control terminal must be the same as the scale value indicated by the gearbox setting lever.

13. Press the  and  buttons simultaneously.

14. Start with the crank turns for the calibration test.

15. Stop the cranks when you hear an acoustic signal, then press the  button.

In its calculations, the AmaDrill+ takes account of the additional rotations after the acoustic signal.

16. Weigh the collected seed quantity.

17. Press the  or  button.

→ Enter the weight [kg] of the collected seed quantity on the control terminal.

18. Press .

→ Save the value.

→ The AmaDrill+ calculates the required gearbox setting based on the data from the calibration test and displays the required scale value on the control terminal.

19. Set the gearbox setting lever (Fig. 29/1) to the scale value and fasten with the knurled screw (Fig. 29/2).

20. Repeat the calibration test and check whether the desired spread rate (kg/ha) is achieved.

6.7.5 Calibration test for seed drills with Vario gear motor (up to model year 2014)

Equipment:

- AmaDrill+
up to year of manufacture 2014
- Seed drill
with electric cylinder (Fig. 30/1).

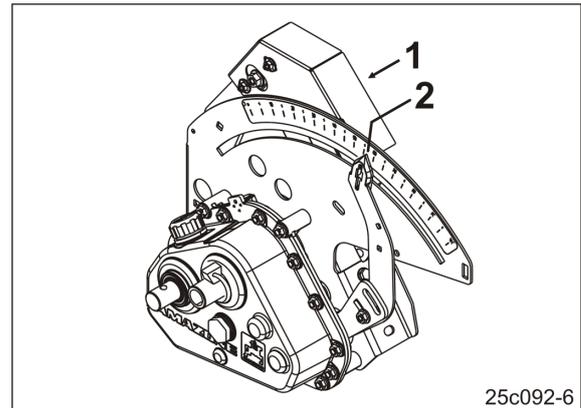


Fig. 30

1. Prepare the seed drill for the calibration test as described in the seed drill operating manual (set up calibration trough, etc.).

2. Press .

3. Press the  or  button.

→ Enter the desired application rate (kg/ha).

4. Press .

5. Press .

6. Press the  or  button.

→ Enter the scale value of the pointer (e.g. 50, refer to the seed drill operating manual) for the first calibration test (Fig. 30/2).

7. Press .

8. Press the  and  buttons simultaneously.

→ The pointer (Fig. 30/2) moves to the scale value entered (e.g. 50).



The scale value must be the same as the gear setting value displayed on the AmaDrill+.

Otherwise, calibrate the Vario gearbox (see section "Calibration of the Vario gearbox", Seite 29).

Settings

9. Start with the crank turns for the calibration test.
10. Stop the cranks when you hear an acoustic signal, then press the  button.
In its calculations, the AmaDrill+ takes account of the additional rotations after the acoustic signal.
11. Weigh the collected seed quantity.
12. Press the  or  button.
→ Enter the weight [kg] of the collected seed quantity.
13. Press .
→ Save the value.
→ The AmaDrill+ calculates the required gearbox setting based on the data from the calibration test. The pointer (Fig. 30/2) moves to the calculated scale value.
14. Repeat the calibration test with the last gear setting to verify it is correct.

6.7.6 Calibration test for implements with vario gear motor (as of model year 2015)

Equipment:

- AmaDrill+ as of year of manufacture 2015
- Seed drill with electric cylinder (Fig. 31/1).

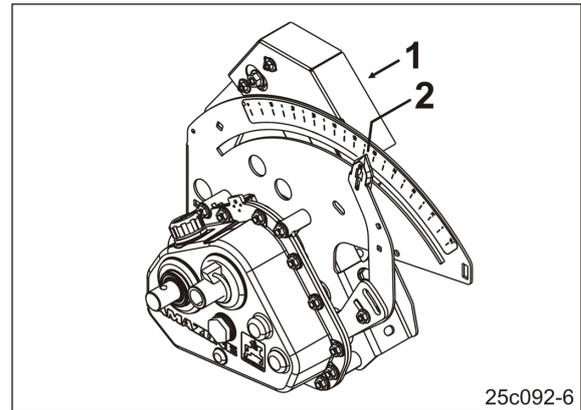


Fig. 31

1. Prepare the seed drill for the calibration test as described in the seed drill operating manual (set up calibration trough, etc.).

2. Press .

3. Press the  button or  button

→ Enter the code number:

	Mechanical seed drills		Pneumatic seed drills
Metering wheel	Normal seed metering wheel	Fine seed metering wheel	Metering roller
Code number	3	1	See table Fig. 62, Seite 66

4. Press .

5. Press .

6. Enter the desired spread rate (kg/ha).

7. Press .

Settings

8. Press .
9. Press the  or  button.
 - Enter the scale value of the pointer (e.g. 50, refer to the seed drill operating manual) for the first calibration test (Fig. 31/2).
10. Press .
11. Press the  and  buttons simultaneously.
 - The pointer (Fig. 31/2) moves to the scale value entered (e.g. 50).



The scale value must be the same as the gearbox setting value displayed on the control terminal.

If not, the Vario gearbox will need to be calibrated (see section "Calibration of the Vario gearbox", Seite 29).

12. Start with the crank turns for the calibration test.
13. Stop the cranks when you hear an acoustic signal, then press the  button.
 - In its calculations, the AmaDrill+ takes account of the additional rotations after the acoustic signal.
14. Weigh the collected seed quantity.
15. Press the  or  button.
 - Enter the weight [kg] of the collected seed quantity.
16. Press .
 - Save the value.
 - The AmaDrill+ calculates the required gearbox setting based on the data from the calibration test. The pointer (Fig. 31/2) moves to the calculated scale value.
17. Repeat the calibration test with the last gear setting to verify it is correct.

6.7.7 Calibration test for implements with full metering (pneumatic seed drills)

1. Prepare the seed drill for the calibration test as described in the seed drill operating manual (set up calibration trough,



2. Press

3. **Up to year of manufacture 2015:**

Enter the code number of the metering roller

- o See table Fig. 62, Seite 66
- o See section Enter implement data, page 26.

Set the calibration value to 1,000 (see Mode 15, Seite 60)

4. **As of year of manufacturer 2015:**

Enter the code number of the metering roller

- o See table Fig. 62, Seite 66
- o See section Enter implement data, page 26.

The calibration factor will be automatically set to 1,000 (see Mode 15, Seite 60).



5. Press



6. Press

7. Enter the desired spread rate (kg/ha).



8. Press



9. Press

10. Enter the subsequent, anticipated working speed (km/h).



11. Press



12. Press



13. Press

→ Start the metering roller drive (electric motor) for approx. 3 seconds [the time can be set in Mode 8 ()].

→ The cells of the metering wheels are filled.

14. Wait until the metering roller drive has come to a standstill.

Settings

15. Press buttons  and  simultaneously
→ Start the metering roller drive (electric motor) for the calibration test.



The number of engine revolutions for the calibration test until the signal tone sounds is governed by the seeding rate:

- 0 to 14.9 kg → motor revolutions on 1/10 ha
- 15 to 29.9 kg → motor revolutions on 1/20 ha
- 30 kg or more → Engine revolutions to 1/40 ha.

16. When the signal sounds press the  button.
In its calculations, the AmaDrill+ takes account of the additional rotations after the acoustic signal.

→ The theoretical calibrated seed quantity [kg] is indicated in the display.

17. Weigh the seed quantity actually collected [kg].

18. Press the  or  button.

→ Enter the weight [kg] of the collected seed quantity.

19. Press .

→ Save the value.

20. If the collected seed quantity deviates significantly from the displayed theoretical seed quantity, the calibration test is to be repeated.

6.8 Pre-metering prior to startup

Pre-metering is only possible for pneumatic seed drills with full metering functionality.

These machines introduce the seed into the air stream underneath the metering unit immediately after the tractor starts.

The seed requires a few seconds before it arrives in the coulters and is deposited in the soil. The first few metres after the machine has started are not sown.

Pre-metering provides a remedy prior to startup.

When the button is pressed to activate the pre-metering function (see "Activate pre-metering", unterhalb) the metering roller starts to rotate with a simulated tractor speed. The simulated tractor forward speed can be adjusted (see "Calibration test for implements with full metering", Seite 39).

The seed is dosed into the air stream. After approx. 3 seconds [the time can be set in Mode 8 ()], when the seed has arrived in the coulters, the driver starts up the tractor.

6.8.1 Start-up ramp

When starting the tractor, the control terminal receives the first pulse. The metering roller then rotates for approx. 10 seconds [adjustable in Mode 9 ()] at 50% [adjustable in Seite 56 ()] of the simulated tractor speed and then with the actual values. The simulated tractor speed can be adjusted (see "Mode 10", Seite 56).

If the actual speed is higher than the simulated tractor speed within the first 10 seconds, the simulated process will be terminated and operation continues with the actual values.

6.8.2 Activate pre-metering



- Activate pre-metering
- The metering roller motor starts to rotate.
- The pre-metering process runs as described (see section "Pre-metering prior to startup", oben).

Observe a waiting period after activating the pre-metering process [the time can be set in Mode 8 ()]. When the seed has arrived in the coulters the driver starts up the tractor.

7 Work commencement

1. Place machine in starting position (standstill).

Display at standstill:

Digit 1 (Fig. 32/1) shows the travel speed (0 km/h).

Digit 2 (Fig. 32/2) shows the tramline counter 4

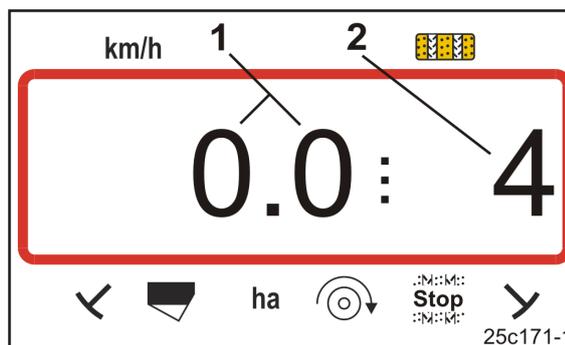


Fig. 32

2. Lower the correct track marker (see seed drill operating manual).



The tramline control can be coupled with the track marker control.
The tramline counter can continue counting when the track marker is actuated.

3. Set the tramline counter (see Chap. „Setting the tramline counter“, Seite 43).

4. Delete the part area memory (see Chap. „Erasing the part area memory“, Seite 44).



It is not mandatory to delete the part area memory.

5. Activate pre-metering (see section "Activate pre-metering", Seite 41).



It is not mandatory to activate pre-metering. This function, however, is only possible with full metering.

6. Observe a waiting period after activating the pre-metering process.

7. Start.

7.1 Tramline counter

7.1.1 Setting the tramline counter



Press the  button repeatedly until the correct tramline counter is displayed e.g.: Tramline counter 2, see Fig. 16, Seite 23 under the lettering "START".

7.1.2 Block the tramline counter



Press

- Further advancing of the tramline counter is blocked.
- The number (Fig. 33/1) of the tramline counter flashes on the display.
- The control symbol (Fig. 33/2) marks the stop symbol.



Press

- The tramline counter is active again.

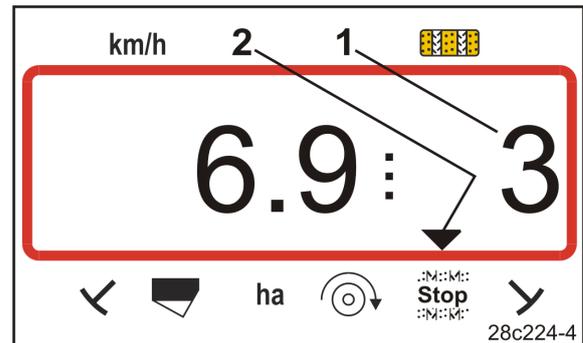


Fig. 33

7.2 Worked area

7.2.1 Displaying the worked part area



Press

- Display (Fig. 34) worked part area (e.g. 10.5 ha).



Fig. 34

7.2.2 Erasing the part area memory

1. Press and hold the button.
2. Press .
 - The part area memory is set to 0 [ha].
3. Press the button .
 - Back to the work display (Fig. 36 or Fig. 37).

7.2.3 Display the total area

1. Press the button twice.
 - Display (Fig. 35): total worked area (e.g. 105.1 ha).



The data cannot be deleted.



2. Press .
 - Back to work display (Fig. 36 or Fig. 37).

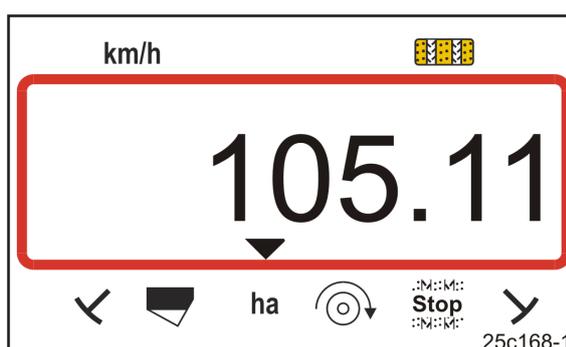


Fig. 35

7.3 Display during work



Pressing the  button during operation switches the display (Fig. 36 and Fig. 37).

Display during work (Fig. 36):

- the travel speed (Fig. 36/1), e.g. 6.9 km/h
- the setting of the tramline counter (Fig. 36/2), e.g. tramline counter 3
- the left track marker (Fig. 36/3) is in the working position
- the right track marker (Fig. 36/4) is raised.

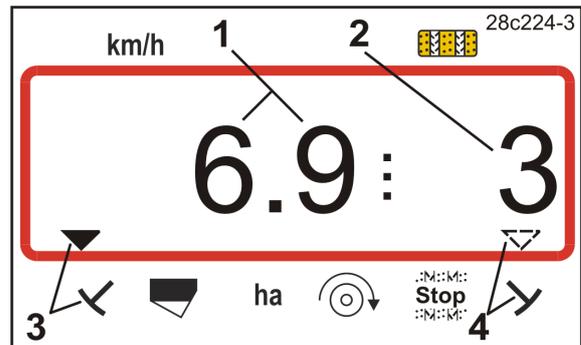


Fig. 36

Display during work (Fig. 37):

- current spread rate (Fig. 37/1), e.g. 125.0 [kg/ha]
- the setting of the tramline counter (Fig. 37/2), e.g. tramline counter 3



Fig. 37



The counting process of the tramline counter is supported by an acoustic signal.

7.4 Function buttons

Data can be displayed for approx. 10 seconds during seeding by actuating the function buttons.

7.4.1 Display of the current blower fan speed

This display is only possible for pneumatic seed drills.

Press button .

→ Display (Fig. 38):
current blower fan speed
(e.g. 3600 [rpm]).

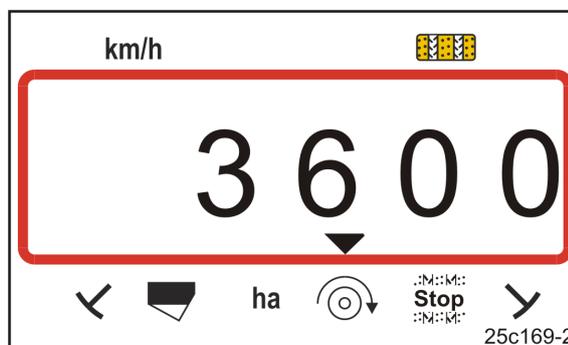


Fig. 38

7.4.2 Displaying the target spread rate

Press .

→ Display (Fig. 39):
target spread rate
(e.g. 130.0 [kg/ha]).



Fig. 39

7.4.3 Displaying the speed of the metering roller drive motor

This display is only possible for pneumatic seed drills with full metering functionality.

Press .

→ Display (Fig. 40):

Momentary metering roller speed
(e.g. 20 [rpm]).



Fig. 40

7.4.4 Displaying the scale position of the Vario gearbox setting lever

This display is only possible for seed drills with Vario gearbox and electric seed rate remote control.



→ Display (Fig. 41):

Momentary scale position (e.g. 37) of the Vario gearbox setting lever.

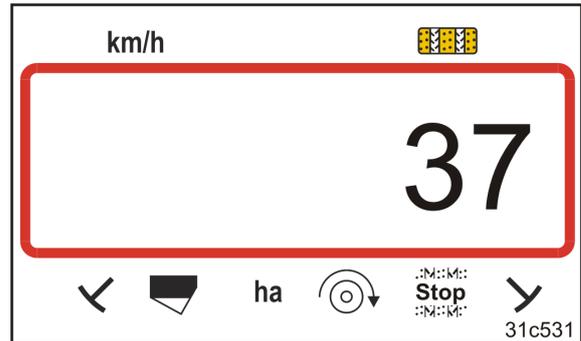


Fig. 41

7.4.5 Interrupting the sowing process by switching off the metering roller drive

This setting is only possible for pneumatic seed drills with full metering functionality.



→ Display (Fig. 42): "Stop".

The metering roller drive is disconnected.
The metering roller stops.



Fig. 42



→ The metering roller drive is reactivated.



CAUTION

Adjustment, maintenance and repair work on the metering unit

- only execute when the control terminal is switched off

- do not carry out after pressing the  button.

The metering roller can move suddenly and cause an injury.

8 Faults

8.1 Fault display A3

Tramline fault message

The occurrence of a tramline fault activates

- the display (Fig. 43)
- an acoustic signal.

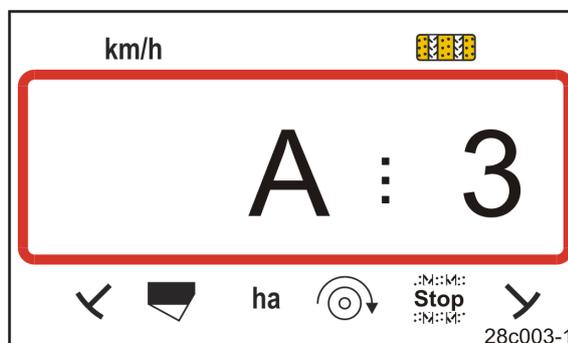


Fig. 43

8.2 Fault display A4

Alarm message at standstill of the universal joint shaft of the active soil tillage implement (e.g. of the rotary cultivator)

The control terminal issues an alarm as soon as the overload clutch of the universal joint shaft of the soil tillage implement is activated.

When the universal joint shaft is at standstill the following appears:

- the display (Fig. 44)
- an acoustic signal.

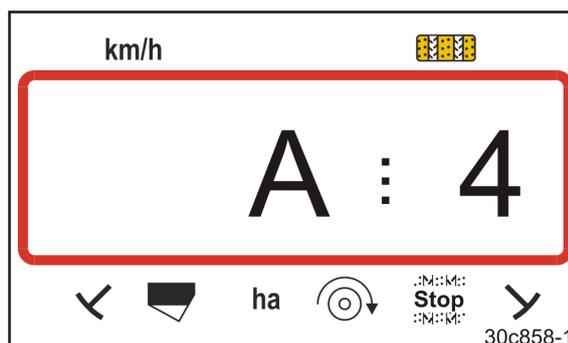


Fig. 44

8.3 Fault display A5

Alarm message

- **in the event of insufficient seed quantity**
 - for machines with fill level sensor
- **in the event of a malfunction of the seed seeding shaft**
 - only on the DMC Primera
 - only on machines with combined seed level and seeding shaft monitoring

In the event of an alarm

- the display (Fig. 45) appears
- an acoustic signal (triple signal tone) is emitted.

The display switches in the event of insufficient seed quantity.

The control symbol (Fig. 46/1) marks the fill level symbol.

The alarm is repeated when the machine is used again, e.g. after turning at the end of the field.

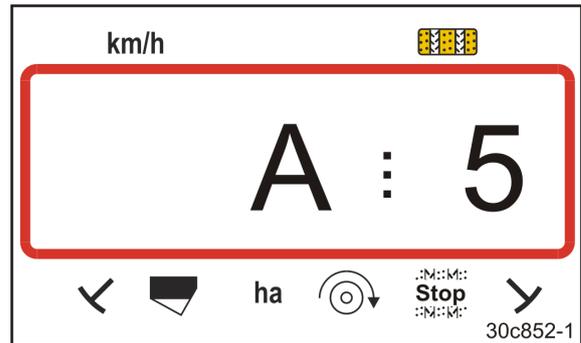


Fig. 45

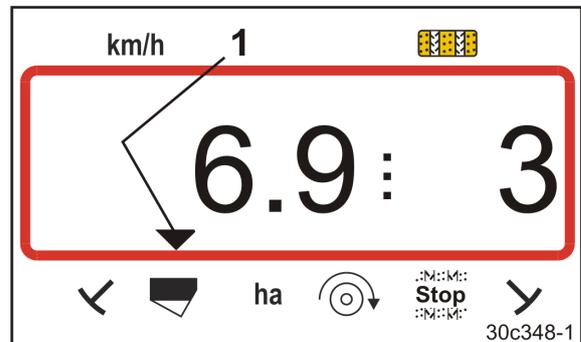


Fig. 46

8.4 Fault display A6 (DMC Primera only)

Alarm message

- **in the event of insufficient fertiliser**
 - only on the DMC Primera with fill level sensor
- **in the event of a malfunction of the fertiliser seeding shaft**
 - only on the DMC Primera

In the event of an alarm

- the display (Fig. 47) appears
- an acoustic signal (triple signal tone) is emitted.

The display switches in the event of insufficient fertiliser.

The control symbol (Fig. 48/1) marks the fill level symbol.

The alarm is repeated when the machine is used again, e.g. after turning at the end of the field.

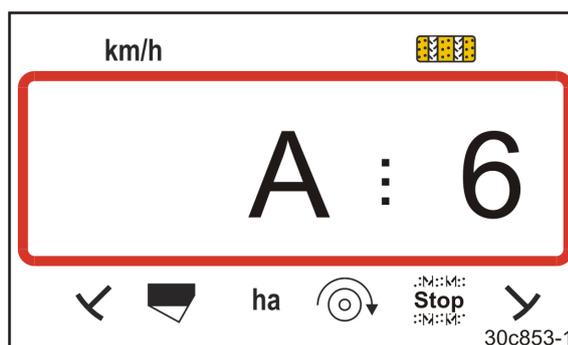


Fig. 47

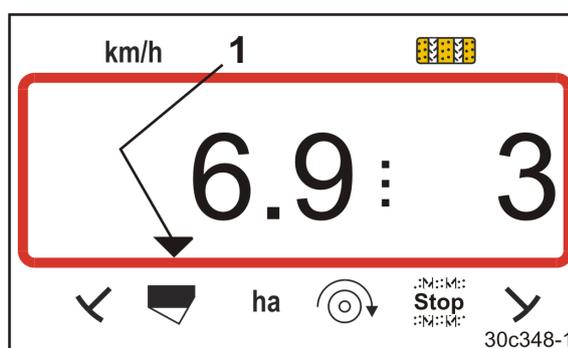


Fig. 48

Switching off the alarm message

1. Press and hold button (blue) 
 2. Press .
- The warning message is switched off.



The alarm message can only be switched off after the alarm has been triggered.

Alarm deactivation only applies until the control terminal is switched off.

8.5 Fault display A7

Data for one or more setpoints is missing (e.g. target fan speed).

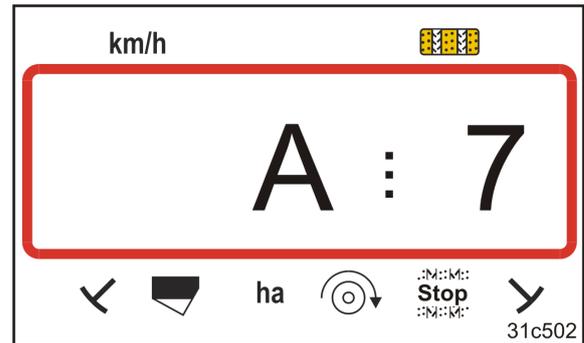


Fig. 49

8.6 Fault display A8

Pneum. seed drills with full metering:

Metering roller control defective.

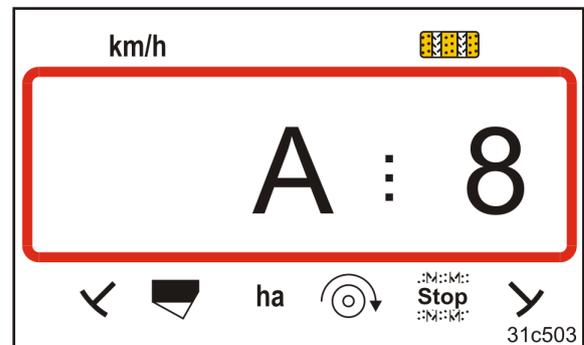


Fig. 50

8.7 Fault display A9

Seed drills with Vario gearbox:

The actual position of the gear setting lever does not correspond to the target position. The gearbox setting lever does not point to the required scale value.

Pneum. seed drills with full metering:

The required speed of the metering roller is not reached.

Reduce the working speed.

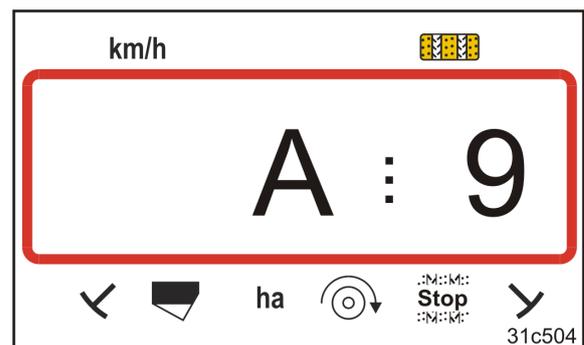


Fig. 51

8.8 Fault display A10

Pneum. seed drills with full metering:

The maintenance flap of the metering unit is open.



Fig. 52

8.9 Fault display A11

Interruption during zero point travel (see section "Calibration of the Vario gearbox", Seite 29).



Fig. 53

8.10 Fault display A12

Pneum. seed drills with full metering:

The target spread rate cannot be maintained.



Fig. 54

8.11 Fault display A13

Pneum. seed drills with full metering:

If the fan speed drops to a value below 200 rpm, the electric motor that drives the metering roller in the metering unit stops.

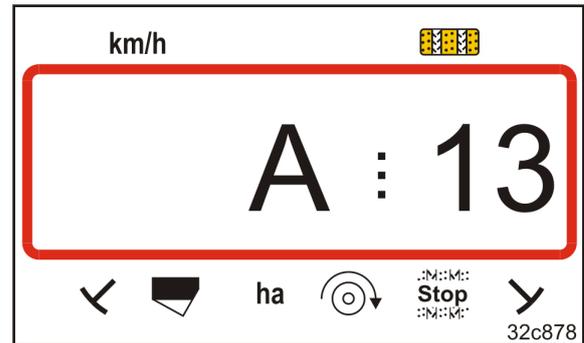


Fig. 55

Switching off the alarm message

1. Increase the blower fan speed to the required rpm.

2. Press  as soon as the blower fan speed is above 200 rpm.

→ The warning message is switched off.

→ The metering roller in the metering unit is turning with the required speed.

9 Tables

9.1 Machine data table

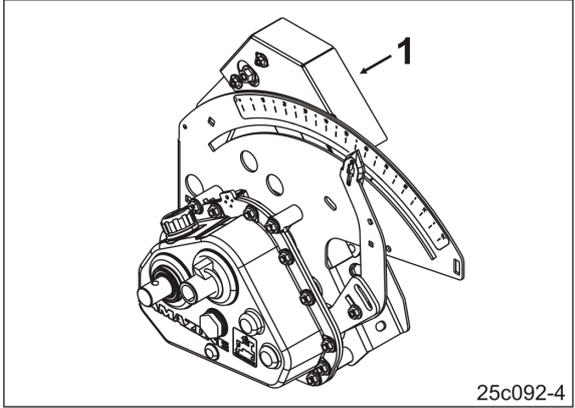
Mode 1	Code	Activating functions of the control terminal
	1	Activate all functions of the control terminal
	2	Only activate the hectare counter of the control terminal
Mode 2	Code	Number of track marker sensors
	0	Machine with 2 track marker sensors, e.g. front tank seeding combination with 2 track marker sensors (Fig. 56/1).  Fig. 56
	1	Machine with 1 track marker sensor on hydraulic valve (Fig. 57/1)  Fig. 57
		Machine with 1 track marker sensor on marker changeovers (Fig. 58/1)  Fig. 58
2 to 99	The tramline counter counts the field passes. When lifting the track marker, e.g. when lifting the seed drill to turn at the end of the field, the tramline count will be increased. If the seed drill does not have a track marker sensor, enter a number between 2 and 99. The number equals the time in seconds between lifting of the seed drill to turn (standstill of the seed drill) and increasing the tramline count. After the set time elapses, the tramline count is increased. If there is a brief pause before reaching the set time, the tramline counter does not continue to count.	

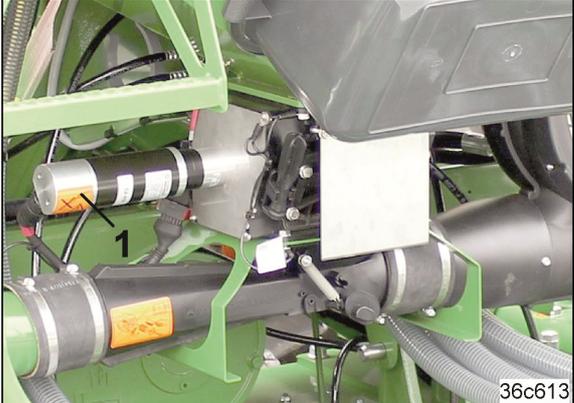
Mode 3	Code	Implement type	
	0	Cam wheel seed drills	D9 Super / Special D9 6000 TC AD
	3	Cam wheel seed drills with seed shaft monitoring	D9 Super / Special D9 6000 TC AD
	1	Pneumatic seed drills	AD-P Citan 6000
	2	Pneumatic seed drills With 2 separate hoppers and with seed shaft monitoring	Citan 01 Condor DMC Primera
	4	Pneumatic seed drills With seed shaft monitoring	AD-P DMC Primera
Mode 4	Code	The period between occurrence of the error in tramline control and triggering of the alarm	
	00	Alarm is switched off	
	10	Setting for pneumatic seed drills (10 seconds)	
	22	Setting for cam wheel seed drills (22 seconds)	
Mode 5	Code	The period in which no alarm must be triggered	
		<ul style="list-style-type: none"> for cam wheel seed drills between the command to create tramlines and standstill of the lay shaft for pneumatic seed drills between the command to create tramlines and closing of the outlets in the distributor head. 	
	00	Do not make this setting (0 seconds)	
	10	Setting for pneumatic seed drills (10 seconds)	
	22	Setting for cam wheel seed drills (22 seconds)	
Mode 6	Code	Rotary cultivator monitoring	
	0	Setting without rotary cultivator monitoring	
	1	Setting with rotary cultivator monitoring	

Tables

Mode 7	Code	Seed rate reduction when creating a tramline (see section "Creation of tramlines", Seite 20 and section "Table for seed rate reduction while creating tramlines", Seite 68)
	0	0% Factory-set value for seed drills <ul style="list-style-type: none"> • Seed drills D9 • Seed drills AD • Seed drills AD-P 3000/3500/4000 Super/Special
	15	15% Factory-set value for pneumatic seed drills, except seed drills AD-P 3000/3500/4000 Super/Special
	0 to 100	0% to 100% = freely adjustable values
Mode 8	Code	Pre-metering time when pressing the button (filling of the metering roller chambers in the metering unit), see section Pre-metering prior to startup, page 41.
	3	Factory-set value (3 seconds)
	0 to 5	Adjustable values (from 0 to 5 seconds)
Mode 9	Code	Pre-metering time when starting up (start-up ramp), see section Start-up ramp, page 41.
	10	Factory-set value (10 seconds)
	0 to 99	Adjustable values (from 0 to 99 seconds)
Mode 10	Code	Pre-metering speed when starting up , [in % of the intended km/h] (start-up ramp), see section Start-up ramp, page 41.
	50	Factory-set value (50%)
	0 to 100	adjustable values (from 0 to 100%)

Mode 11	Code	Simulated working speed (only adjustable on machines with electric full metering unit) The control terminal works with the simulated working speed if the distance sensor fails. The control terminal works with the actual speed again as soon as the distance sensor sends pulses again, e.g. after a repair.	
	0	Factory-set working speed (0 km/h = no simulation)	
	0 to 30	Simulated working speed (from 0 to 30 km/h)	
Mode 12	Code	Seed quantity alteration via button actuation	
	10	Factory-set value (10%)	
	0 to 100	Adjustable values (from 0 to 100 %)	
Mode 13	Code	Type and setting of the working position sensor	
	00	Digital sensor	
	0.5 to 4.5	Analogue sensor	When lifting the machine, the metering motor switches off when reaching the height entered. Enter the height as voltage value (0.5 to 4.5 V). Smaller value: switch off the metering motor at low height Higher value: switch off the metering motor at greater height

Mode 14	Code	Metering roller drive / gearbox actuator
	0	Without electric metering roller drive / gearbox actuator
	1	<p>Electric gear motor (1) EA423 (see rating plate)</p> 
	2	<p>Electric gear motor (1) EA365 (see rating plate)</p> 
	3	<p>Electric cylinder 12 V stroke = 130 mm (1) for seed rate remote control</p> 

Mode 14	Code	Metering drive type	
	4	<p>Electric gear motor (1) EA419 (see rating plate)</p>	 <p>36c613</p>
	5	<p>Electric gear motor (1) EA399 (see rating plate)</p> <p>This motor is installed e.g. on micropellet spreaders.</p>	 <p>34c885</p>

Tables

Mode 15	Code	Calibration factor (only required on machines with electric full metering unit)	
	1,000	Factory-set value	After replacing the metering roller in the metering housing, set the calibration factor to 1,000.
	0,0000 – 9,999	Adjustable values	
Mode 16	Code	Setting the working position sensor: (Mode 16 only appears when an analogue working position sensor has been selected in mode 13.)	
	0.5 to 4.5	Analogue sensor	When lowering the machine, the metering motor switches on when the set height is reached. Enter the height as voltage value (0.5 to 4.5 V).
			<p>The value in Mode 16 cannot be smaller than the value in Mode 13.</p> <p> Smaller value: switch on the metering motor at low height</p> <p>Higher value: switch on the metering motor at greater height</p>
Mode 17	Code	Segment distributor head	
	0	Implement does not have a segment distributor head	
	1	Implement has one or several segment distributor heads	
Mode 18	Code	Sensor that activates the tramline counter	
	0	Working position sensor	
	1	Track marker sensor	



Code number input, see section Enter implement data, page 26.

9.2 Table for adjustable tramline rhythms

	Tramline rhythms														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Tramline counter, controlled and displayed by the control terminal	0	0	0	0	0	0	0	0	0	1	1	0	0	0	
	1	0	1	1	1	1	1	1	1	2	0	1	1	1	
		1	2	2	2	2	2	2	2	3	3	2	2	2	
		2		3	3	3	3	3	3	0	4	3	3	3	
					4	4	4	4	4	5	5	4	4	4	
						5	5	5	5	6	6	5	5	5	
							6	6	6	0	7	6	6	6	
								7	7	8	8	7	7	7	
									8	9	0	8	8	8	
										10	10	9	9	9	
												10	10	10	
													11	11	11
														12	12
															13

Fig. 59

	Tramline rhythms														
	15*	16	17	20	21	22	23	26	32	35					
Tramline counter, controlled and displayed by the control terminal	1	0	0	0	0	0	0	0	0	0					
		1	1	1	0	0	0	1	0	1					
		2	2	2	1	1	1	2	1	2					
		3	3	3	2	2	2	3	2	3					
		4	4	4	3	3	3	4	3	4					
		5	5	5	4	4	4	5	4	5					
		6	6	6		5	5	6	5	6					
		7	7	7		6	6	7	6	7					
		8	8	8			7	8	7	8					
		9	9	9			8	9	8	9					
		10	10					10	9	10					
		11	11						10	11					
		12	12							12					
		13	13							13					
		14	14							14					
		15	15												
			16												

* No tramlines are created

Fig. 60

9.3 Table for calibration values / crank turns (guide values)



The following table values are reference values.

If the actual calibration value (pul./100 m) deviates from the table value, for the calibration test the following will also change

- The number of crank turns
- The rotational speed of the electric drive motor.

The number of crank turns for the calibration test can be recalculated (see front). The rotational speed of the electric drive motor during the calibration test is automatically based on the actual calibration value (pul./100 m).

Mechanical seeding technology

Mounted seed drills D9 Super / Special	Working width	2.5 m	3.0 m	3.5 m	4.0 m	6.0 m
Tyres	Calibration value (imp./100 m)	Crank turns on 1/40 ha				
6.00 – 16 180/90 – 16	740	46.0	38.5	33.0	—	—
10.0/75 – 15	711	—	—	—	28.0	18.5

Mounted seed drills (mechanical)	Working width	2.5 m	3.0 m	3.5 m	4.0 m
	Calibration value (imp./100 m)	Crank turns on 1/40 ha			
AD 25/3000 Special AD 30/35/4000 Super	617	27.0	22.5	19.0	17.0

Pneumatic seeding technology

Pneumatic seed drills (pneumatic)	Working width	2.5 m	3.0 m	3.5 m	4.0 m
	Calibration value (imp./100 m)	Crank turns on 1/40 ha			
AD-P 03 Special with star wheel drive	1409	—	38.5	33.0	29.0
AD-P 03 Super with star wheel drive	1575	—	29.5	—	22.0
AD-P 03 Special AD-P 03 Super With pulse wheel	1230	—	—	—	—

Pack top seed drills (pneumatic)	Calibration value (imp./100 m)
AD-P 30/35/4000 Special With radar	9700
AD-P 30/35/4001 Special With radar	9700

Pack top seed drills (pneumatic)	Calibration value (imp./100 m)
AD-P 30/4000 SUPER With radar	9700

Tine seed drills (pneumatic)	Calibration value (imp./100 m)
Cayena 6001 (-C) With radar	9700

Tables

Large-area seed drill	Citan 12001	Citan 15001
Crank turns on 1/40 ha	9.5	7.7
Calibration value (imp./100 m)	1410	

Large-area seed drill	Condor 12001	Condor 15001
Crank turns on 1/40 ha	9.5	7.7
Calibration value (imp./100 m)	1410	

DMC large-area seed drills	Primera 3000	Primera 4500	Primera 602	Primera 9000	Primera 12000
Crank turns on 1/40 ha	68.0	45.3	34.0	22.7	16.8
Calibration value (imp./100 m)	1023				

Predecessor machines

Mounted seed drills (mechanical)	Working width	2.5 m	3.0 m	4.0 m
	Calibration value (imp./100 m)	Crank turns on 1/40 ha		
AD 03	617	27.0	22.5	17.0
RP-AD 03	672	59.0	49.0	37.0

Pack top seed drills (pneumatic)	Working width	2.5 m	3.0 m	4.0 m
	Calibration value (imp./100 m)	Crank turns on 1/40 ha		
AD-P 02 ¹⁾	1053	27.0	22.5	17.0
RPAD-P 02	1175	59.0	49.0	37.0

¹⁾ With star wheel Ø 1.18

9.5 Table for metering roller / code number

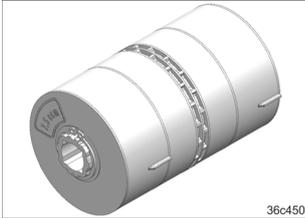
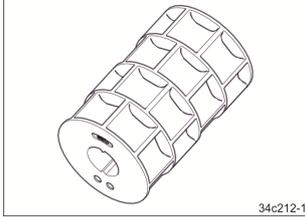
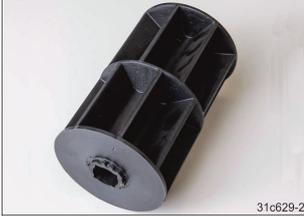
Code no.	Metering roller		
<p style="text-align: center; font-size: 2em;">1</p>	<p style="text-align: center;">7.5 cm³</p>  <p style="text-align: right; font-size: 0.8em;">36c450</p>	<p style="text-align: center;">20 cm³</p>  <p style="text-align: right; font-size: 0.8em;">36c210</p>	<p style="text-align: center;">40 cm³</p>  <p style="text-align: right; font-size: 0.8em;">33c622-1</p>
	<p style="text-align: center;">120 cm³</p>  <p style="text-align: right; font-size: 0.8em;">31c632-2</p>	<p style="text-align: center;">210 cm³</p>  <p style="text-align: right; font-size: 0.8em;">31c631-3</p>	<p style="text-align: center;">350 cm³</p>  <p style="text-align: right; font-size: 0.8em;">34c212-1</p>
	<p style="text-align: center;">600 cm³</p>  <p style="text-align: right; font-size: 0.8em;">31c630-2</p>	<p style="text-align: center;">660 cm³</p>  <p style="text-align: right; font-size: 0.8em;">31c629-2</p>	<p style="text-align: center;">880 cm³</p>  <p style="text-align: right; font-size: 0.8em;">36c047</p>

Fig. 62

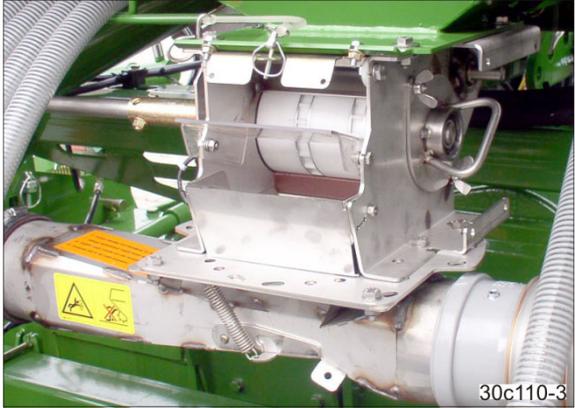
Code no.	Metering roller	Note
<p style="text-align: center;">3</p>	<p style="text-align: center;">700 cm³</p> 	 <p>Metering roller (700 cm³)</p> <ul style="list-style-type: none"> • suitable for metal metering housings (see fig.) • not suitable for plastic metering housings.

Fig. 63



Code number input, see section Calibration test for implements with full metering, page 39.

Working width	Number of seeding coulters	Number of tramlines_ Seeding coulters	 Recommended seed rate reduction [%] when creating tramlines
4.5	27	4	15%
	27	6	22%
	27	8	30%
	36	4	11%
	36	6	17%
	36	8	22%
5.0 m	40	4	10%
	40	6	15%
	40	8	20%
6.0 m	36	4	11%
	36	6	16%
	36	8	22%
	48	4	8%
	48	6	12%
	48	8	17%
8.0 m	64	4	6%
	64	6	9%
	64	8	12%
9.0 m	72	4	6%
	72	6	8%
	72	8	11%
12.0 m	72	4	6%
	72	6	8%
	72	8	11%
	96	4	4%
	96	6	6%
	96	8	8%
15.0 m	90	4	4%
	90	6	7%
	90	8	9%



AMAZONEN-WERKE

H. DREYER SE & Co. KG

Postfach 51
D-49202 Hasbergen-Gaste
Germany

Tel.: + 49 (0) 5405 501-0
email: amazone@amazone.de
http:// www.amazone.de

