

Operating Manual

SWE-57

Front sweeper



Table of contents

1	Introduction	5
2	Identification	6
2.1	Intended use	7
2.2	Reasonably foreseeable misuse.....	8
3	General instructions	9
3.1	Warranty and liability	9
3.2	Target group of the operating manual	9
3.3	Objective of the operating manual	10
3.4	Accident prevention.....	10
3.5	Instruction	10
4	General safety instructions	11
4.1	Area of applicability	11
4.2	Depiction of safety information	11
4.3	Warning pictograms	11
4.3.1	General warning pictograms	12
4.3.2	Machine-specific warning pictograms.....	12
4.4	Obligations	14
4.4.1	Obligations of the owner	14
4.4.2	Obligations of the operating personnel.....	14
4.5	Safety devices.....	15
4.5.1	Guards on the machine.....	15
4.5.2	Safety instructions: Warning pictograms and general decals	17
4.6	Dangers due to energy sources.....	18
4.6.1	Dangers due to mechanical energy.....	18
4.6.2	Dangers due to hydraulic energy	19
4.6.3	Danger from airborne sound / noise	19
4.7	Residual risks.....	19
4.8	Additional notice.....	20
4.9	Personal protective equipment (PPE).....	20
5	Delivery and transport	21
6	Construction and functionality.....	23
6.1	Description	23
6.2	Overview	23
6.3	Safe parking of the machine – stability	24
6.4	Work site – Danger zone	25
6.4.1	Work site.....	25
6.4.2	Hazard area	25

6.5	Technical data.....	26
6.6	Hydraulic diagrams.....	28
6.7	Accessories.....	35
7	Assembly.....	36
7.1	Mounting on tractor or carrier vehicle	36
7.1.1	Attachment of cat. 0 coupling triangle	37
7.1.2	Attachment of cat. 1 arrestor hook without balls.....	38
7.1.3	Attachment of cat. 1 arrestor hook with balls.....	39
7.1.4	Attachment of cat. 1 quick coupling triangle	40
7.1.5	ScanFrame attachment.....	41
7.2	Adjusting the inclination of the attachment	42
7.3	Mounting the universal joint shaft	43
7.3.1	Adaptation and lubrication of universal joint shaft.....	43
7.3.2	Mounting the universal joint shaft.....	43
7.4	Connecting the hydraulic connections to the carrier vehicle	44
7.5	Mounting of accessories.....	45
7.5.1	Mounting of the dirt container.....	45
7.5.2	Mounting of the splash plate (with splash guard).....	46
7.5.3	Mounting the side broom.....	46
7.5.4	Mounting of the water sprinkler	48
7.5.5	Mounting of the water sprinkler side broom extension.....	48
7.5.6	Mounting the warning flag mount	49
8	Commissioning.....	50
9	Operation	52
9.1	Prior to starting work	53
9.2	Adjusting the sweeper roller	54
9.3	Swiveling the machine.....	55
9.3.1	Manual swiveling.....	55
9.3.2	Hydraulic swiveling	55
9.4	Sweeping	56
9.4.1	Sweeping without the dirt container (free sweeping)	56
9.4.2	Sweeping with the dirt container	56
9.5	Operation of accessories.....	56
9.5.1	Dirt container	56
9.5.2	Splash plate (with splash guard)	57
9.5.3	Side broom	57
9.5.4	Water sprinkler system.....	58
9.5.5	Water sprinkler side broom extension	58
9.6	Transport.....	59

10	Decommissioning	60
10.1	Storage of machine	60
10.2	Disposal of machine	60
11	Maintenance.....	61
11.1	Maintenance schedule	62
11.2	Lubricating schedule	63
11.2.1	Position of lubricating nipples.....	63
11.2.2	Lubrication/tensioning of chain.....	63
11.2.3	Lubrication of the universal joint shaft	64
11.3	Replacing the sweeper roller	65
11.4	Check hydraulic system	66
11.5	Clean the machine	66
11.6	Wear and spare parts lists.....	67
12	Fault	68
13	Repair	70
14	Disposal	70
15	List of illustrations.....	I
16	List of tables	II
17	Height scale sticker + template.....	III
18	EC Declaration of Conformity	V
19	Declaration of Conformity	VI

1 Introduction

Welcome to matev!

Thank you for purchasing a matev product and for your confidence in our products. Should you ever require assistance, please do not hesitate to contact your sales partner.

When the machine is delivered, the owner receives instruction regarding operation and maintenance of the machine from his dealer. The owner must ensure that operating and maintenance personnel have been instructed in full scope in the operation and maintenance of the machine.

We strongly recommend that you read this manual carefully before operating the machine. It contains detailed instructions for the safe and effective use of your machine. Please be aware that we can provide no warranty in the case of damage caused by improper use.

Products from matev are subject to modification in accordance with technical advances. All information, illustrations, and technical specifications represent the latest status at the time this manual was published. The manufacturer reserves the right to make changes at any time in the interest of technical progress. The illustrations in this manual are for explanatory purposes and may differ from the actual design.

When directions (left, right, front, rear) are specified in the operating manual, they always refer to the carrier vehicle's direction of travel.

The front PTO shaft direction of rotation is always specified in the top view from the front. CW (clockwise), CCW (counter clockwise).

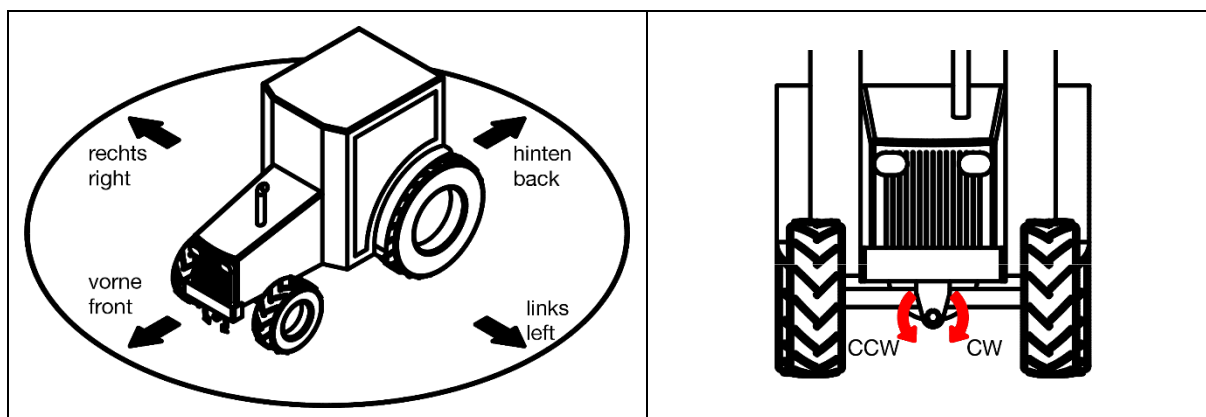


Fig. 1: Definition of orientation and direction of rotation

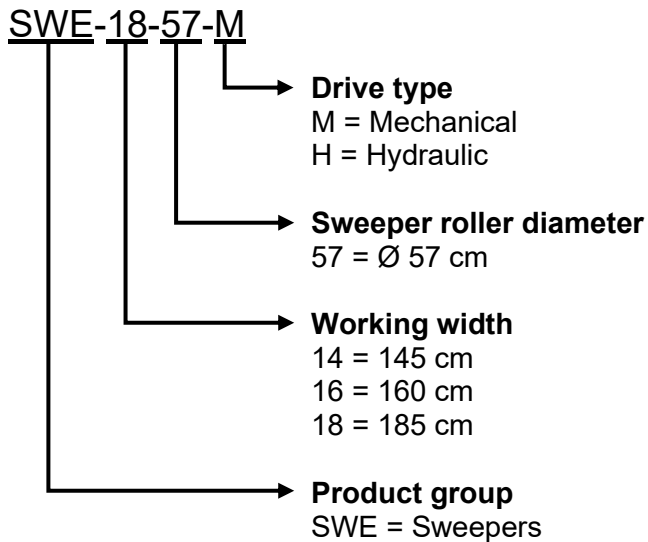
We would also like to point out that this operating manual is the exclusive property of matev GmbH. Reproduction or dissemination of the manual requires our permission in writing.

Thank you for your confidence and enjoy your matev product!

2 Identification

Product name: Front sweeper SWE-57

Type: SWE-14-57, SWE-16-57, SWE-18-57



Type plate:



Fig. 2: Type plate DE



Fig. 3: Type plate EN



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2.1 Intended use

The SWE-57 front sweeper, in combination with a suitable carrier vehicle, is intended for sweeping dirt and snow (snow up to a depth of about 5 cm) from paved surfaces such as asphalt, concrete, cobblestone, etc. and may be used only for these applications.

The machine must be mounted and operated on the front of a suitable carrier vehicle, such as municipal tractors, implement carriers, etc. with a power output of 30 to 60 HP. The machine's drive train must be configured for a suitable carrier vehicle and the speed of the sweeper roller must not exceed 250 rpm.

The direction of rotation must be as shown in the figure so the sweepings are flung forward. The machine may be operated only with this sweeper roller direction of rotation.

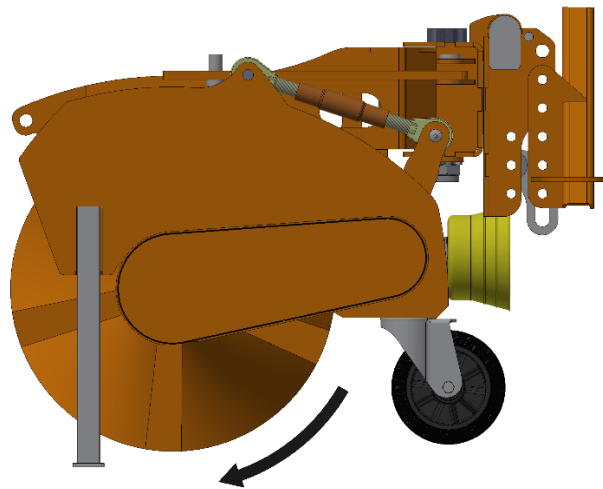


Fig. 4: Direction of rotation

Intended use also includes compliance with local laws, regulations and standards.

Attachment of the implement to tractors or carrier vehicles must be **in compliance with the permissible axle loads.**

Before operation, the machine must be inspected to ensure it is in good operating condition. If not in perfect condition, do not use the machine.

Any other use or extended use of the machine is deemed improper and is therefore unauthorized. Matev GmbH will accept no liability for resulting damages.

Intended use also comprises:

- Observance of all information in this operating manual
- Observance of all safety instructions
- Compliance with maintenance and servicing schedules
- The applicable accident prevention regulations and other generally recognized occupational safety and traffic regulations must be observed.
- The machine should only be operated, serviced, and repaired by individuals who are familiar with these tasks and who have been informed of the hazards.
- Intended use also comprises the exclusive use of original replacement parts and additional equipment or such components and equipment that meet the manufacturer's technical requirements.

2.2 Reasonably foreseeable misuse

The following constitute reasonably foreseeable incorrect use:

- Use of the machine on unsuitable carrier vehicles
- Operation of the machine with the incorrect rotational direction or number of sweeper rollers
- Operation of the sweeper with the sweeper roller set too low
- Use of the machine in violation of the intended use
- Do not use the machine to transport people or objects
- Do not use the machine to tow loads
- Operation of the machine in violation of the safety instructions regarding assembly, operation, maintenance servicing and troubleshooting specified in the operating manual
- Removal or bypassing of safety devices on the machine
- Operation of the machine in the case of obvious faults
- Execution of repairs, cleaning and maintenance tasks without having shut down and secured the machine
- Unauthorized modifications to the machine will result in dangers and exclusion of liability on the part of the manufacturer. Resulting damage can cause:
 - Health hazards for the operator or for third parties
 - Damage to the tractor and the implements
 - Environmental damage
 - Immediate invalidation of the warranty and CE

3 General instructions

3.1 Warranty and liability

The general terms and conditions of matev GmbH apply.

Warranty and liability claims for personal injury and property damage are excluded if they are due to one or more of the following causes:

- Unauthorized use
- Incorrect assembly, commissioning, operation and maintenance
- Operation with defective safety devices
- Failure to observe the information in the operating manual
- Unauthorized structural modifications
- Faulty maintenance, repairs or servicing
- Disasters caused by foreign objects or force majeure

3.2 Target group of the operating manual

The operating manual is intended for the owner and for personnel with the following qualifications

3.2.1 Qualifications of assembly and maintenance personnel

Assembly and maintenance of safety-related components may be carried out only by personnel with the following qualifications:

- They must have completed specialized training as an agricultural mechanic, auto mechanic, etc.
- Personnel without qualified training must be supervised by an employee with qualified training.
- They must have read and understood this operating manual.
- They must be familiar with the relevant safety regulations (accident prevention).

3.2.2 Qualifications of operating personnel

- They must be fully instructed on how to operate the machine.
- They must have read and understood this operating manual.
- They must be familiar with the relevant safety regulations (accident prevention).

3.3 Objective of the operating manual

This operating manual serves as an aid and contains all information that must be observed regarding general safety, transport, assembly, operation and maintenance.

This operating manual, including all safety instructions, must be

- Observed, read and understood by all personnel who work with the implement
- Accessible to all personnel
- Consulted in case of the slightest doubt

Goals:

- Accident prevention
- Increased reliability and longer service life

3.4 Accident prevention

Safety and accident prevention regulations are governed by the laws of each country. The shop foreman or the assigned occupational safety and health specialist of the company carrying out the work is responsible for compliance with the applicable regulations.

3.5 Instruction

When the machine is delivered, the owner receives instruction regarding operation and maintenance.

The owner must take measures to ensure that operating and maintenance personnel are fully instructed regarding operation and maintenance.

4 General safety instructions

4.1 Area of applicability

The machine is designed and constructed in accordance with the state of the art and based on recognized technical safety regulations. To prevent danger to life and limb of the user and third parties, as well as damage, use the machine only for the intended purpose and if it is clearly in safe operating condition.

The owner or personnel authorized by the owner are responsible for any property damage or personal injuries resulting from failure to comply with the instructions in the operating manual. Faults that could impair safety must be remedied without delay. All safety instructions and danger notices on the machine must be observed and must be legible at all times.

4.2 Depiction of safety information

The safety instructions in the text are combined with pictograms and signal words which together indicate the severity of the expected risk. This information must be read carefully to prevent injuries and damage to the machine.



Danger!

Hazardous situations that will result in serious injuries or death.



Attention!

Hazardous situations that could result in moderate injuries or material damage.



Notice!

Recommendations or information for the operator. Read this notice. It will facilitate your work.

4.3 Warning pictograms

Warning pictograms point out dangers that cannot be counteracted by means of safety measures. Strict observance of the pictograms is necessary to prevent severe injuries or death.

Danger!



Missing warning notices must be replaced immediately. Do not operate the machine if warning notices are missing.

You can order the warning pictograms in chapter 4.5.2 with the specified spare parts number.

4.3.1 General warning pictograms

This section explains general warning pictograms.



Attention!
Read the operating manual and observe the safety instructions!
 Order no.: V0002922



Attention!
Prior to performing maintenance and repair tasks, turn off the engine and remove the key!
 Order no.: V0002925

4.3.2 Machine-specific warning pictograms

This section explains machine-specific warning pictograms and notices for operation and maintenance of the machine.



Attention!
Injuries due to fluid escaping under high pressure.
Observe the notice in the operating manual!¹
 Order no.: V0002929
¹ not applicable for machines with no hydraulic components.



Attention!
Danger of injury from moving parts!
Only touch machine parts after they have come to a complete standstill!
 Order no.: V0002920



Attention!
Danger from flinging parts when the engine is running – maintain a safe distance!
 Order no.: V0002931



Attention!
Do not enter the area of the drive shaft!²
 Order no.: V0002930
² depending on the machine configuration; not applicable for hydraulic drive.



Attention!
Do not open or remove protective devices when the engine is running!
 Order no.: V0002924



Attention!
Never reach into the crushing hazard zone if there is a danger of moving parts!
 Order no.: V0002938



Attention!
Never reach into the crushing hazard zone if there is a danger of moving parts!
 Order no.: V0003453



Lubricating point

Order no.: V0002963



Tighten all screws after each use!

Order no.: V0002965



Check all screws for tightness after every use!³

Order no.: V0002976

³ only for machines that are used outside of German-speaking countries.



Machine drive suitable for PTO shaft speed of 1000 rpm!⁴

Order no.: V0002950

⁴ depending on the machine configuration; not applicable for hydraulic drive.



Machine drive suitable for PTO shaft speed of 2000 rpm!⁴

Order no.: V0002951

⁴ depending on the machine configuration; not applicable for hydraulic drive.



Rotary direction of machine from the direction of travel!⁴

Order no.: V0002952

⁴ depending on the machine configuration; not applicable for hydraulic drive.



Rotary direction of machine from the direction of travel!⁴

Order no.: V0002980

⁴ depending on the machine configuration; not applicable for hydraulic drive.



Height scale left for sweeper roller adjustment!⁵

Order no.: V0004148

⁵ template required, see appendix.



Height scale right for sweeper roller adjustment!⁵

Order no.: V0004149

⁵ template required, see appendix.

4.4 Obligations



Attention! Danger due to negligence

Despite numerous protective and safety devices, negligent behavior can result in dangers. Work with great care and caution at all times.

Failure to observe the safety instructions will void all claims for damages.

4.4.1 Obligations of the owner

The safe condition and use of the machine are necessary for safe operation. The owner is therefore responsible for ensuring compliance with the following:

- Make sure that the machine is operated by trained and authorized personnel only.
- Prohibit unsafe and dangerous work practices.
- Supervise the actions of personnel as necessary.
Have personnel confirm by signing that they have understood the operating manual.
- Ensure that a copy of the complete operating manual is available at all times.
- Check the condition of the operating manual and the safety and warning notices on the machine regularly to ensure that they are complete and legible.
- Require personnel to wear suitable personal protective equipment (PPE) during tasks that involve an increased risk of injury.
- Define responsibilities precisely for different tasks (operation, maintenance).
- Require operating and maintenance personnel to immediately report any safety deficiencies to their supervisors.

4.4.2 Obligations of the operating personnel

- Before using the machine, check the safety devices, supply lines and the overall condition of the machine.
- Do not switch on the machine until damage and defects have been eliminated and it is in safe operating condition.
- In case of damage, do not operate the machine.
- The operator is responsible for third parties in the work area.
- Danger will result from unauthorized interference with the machine. When leaving the machine, secure the machine against unauthorized use.
- After finishing work, secure the machine against unauthorized startup.
- Operation of the machine is permitted only if personnel have received instruction or training.
- Dangers will result from unauthorized actions on the machine.
Observe all instructions given. Do not carry out any activities that are not authorized.
Consult appropriate specialists if necessary.

4.5 Safety devices

Machines are equipped with various safety devices to protect people who work with the machine or are in the direct vicinity of the machine while working, to avoid premature wear and also to prevent environmental damage. These safety devices are integral components of the machine; it is prohibited to manipulate or remove them. Missing or damaged safety devices must be replaced immediately.

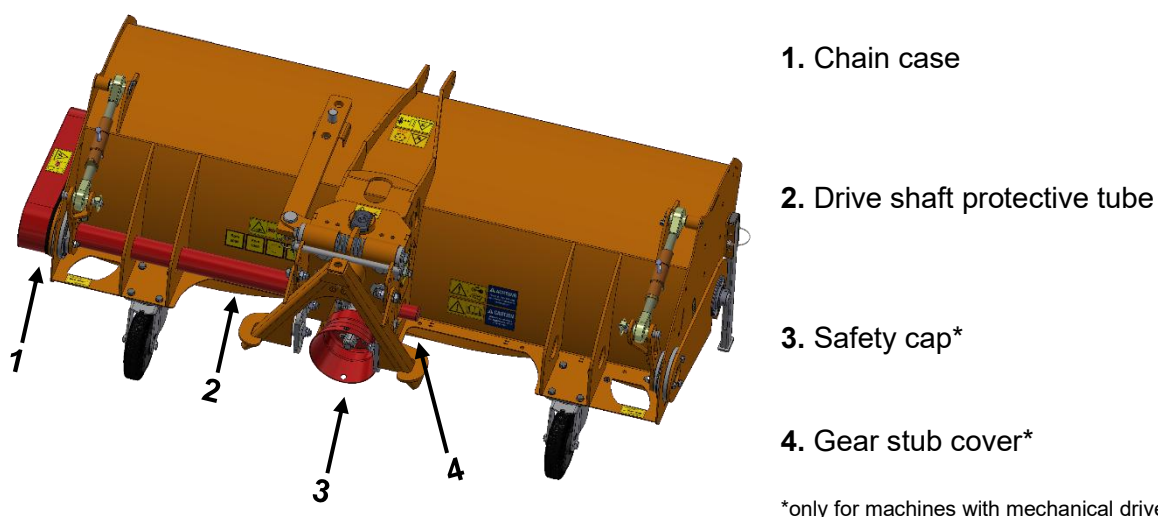
There are two types of safety devices: those that prevent contact with the hazard point, and those that point out a hazard on the machine.

4.5.1 Guards on the machine



Danger!

Before each use of the machine, ensure that all of the safety devices described here are complete and fully functional. Do not operate the implement if any safety devices are missing or damaged.



1. Chain case

2. Drive shaft protective tube

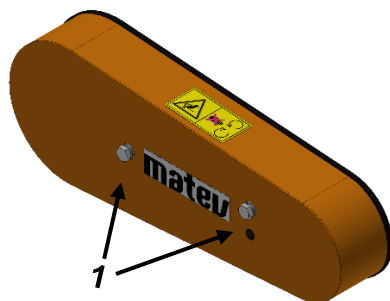
3. Safety cap*

4. Gear stub cover*

*only for machines with mechanical drive

Fig. 5: Guards on the machine

1. Safety device: Chain case



The chain case serves to cover the chain drive and is fastened on the sweeper roller arm by means of two screws (1). The chain case prevents personnel from reaching into the chain drive.

Fig. 6: Chain case

2. Safety device: Drive shaft protective tube

Under the drive shaft protective tube is the drive shaft, which connects the gearbox and the chain drive. It eliminates the possibility of coming into contact with the drive shaft. The drive shaft protective tube is locked with a screw **(1)**; it must be ensured that the drive shaft is completely covered and that no contact is possible.

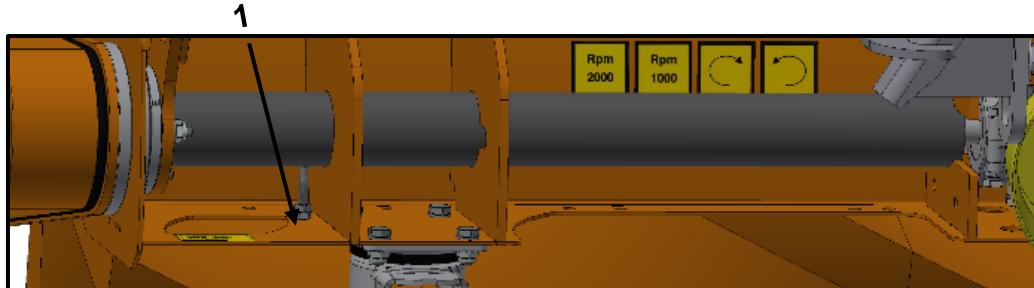
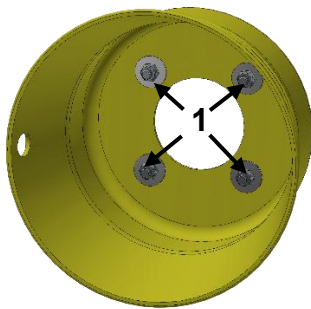


Fig. 7: Drive shaft protective tube

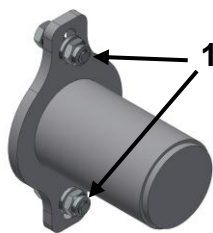
3. Safety device: Safety cap



The safety cap covers the joint of the universal joint shaft to prevent contact. It is fastened on the gearbox with four screws **(1)**.

Fig. 8: Safety cap

4. Safety device: Gear stub cover



Under the gear stub cover is the exposed gear stub. The gear stub ensures that the gear stub is completely covered in order to prevent contact. The gear stub is fastened on the gearbox with two screws **(1)**.

Fig. 9: Gear stub cover

4.5.2 Safety instructions: Warning pictograms and general decals



Danger!

Missing warning notices must be replaced immediately.
Do not operate the machine if warning notices are missing.

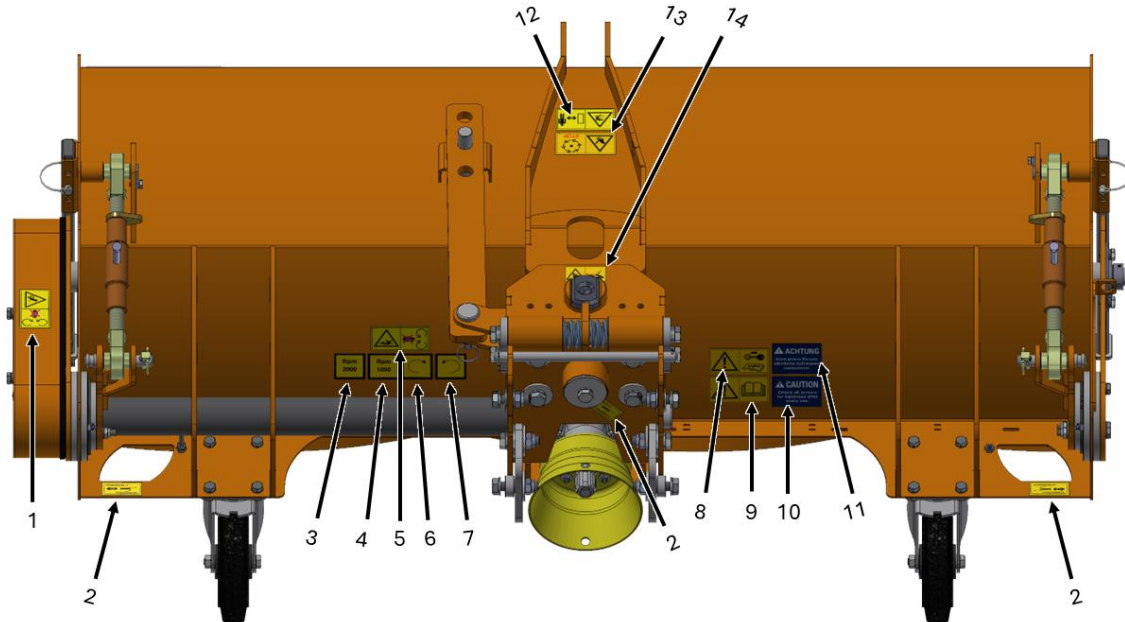


Fig. 10: Safety notices on the machine 1

- | | | |
|------------------------|-------------------------|-------------------------|
| 1. Order no.: V0002924 | 6. Order no.: V0002980 | 11. Order no.: V0002965 |
| 2. Order no.: V0002963 | 7. Order no.: V0002952 | 12. Order no.: V0002931 |
| 3. Order no.: V0002951 | 8. Order no.: V0002925 | 13. Order no.: V0002920 |
| 4. Order no.: V0002950 | 9. Order no.: V0002922 | 14. Order no.: V0003453 |
| 5. Order no.: V0002930 | 10. Order no.: V0002976 | |

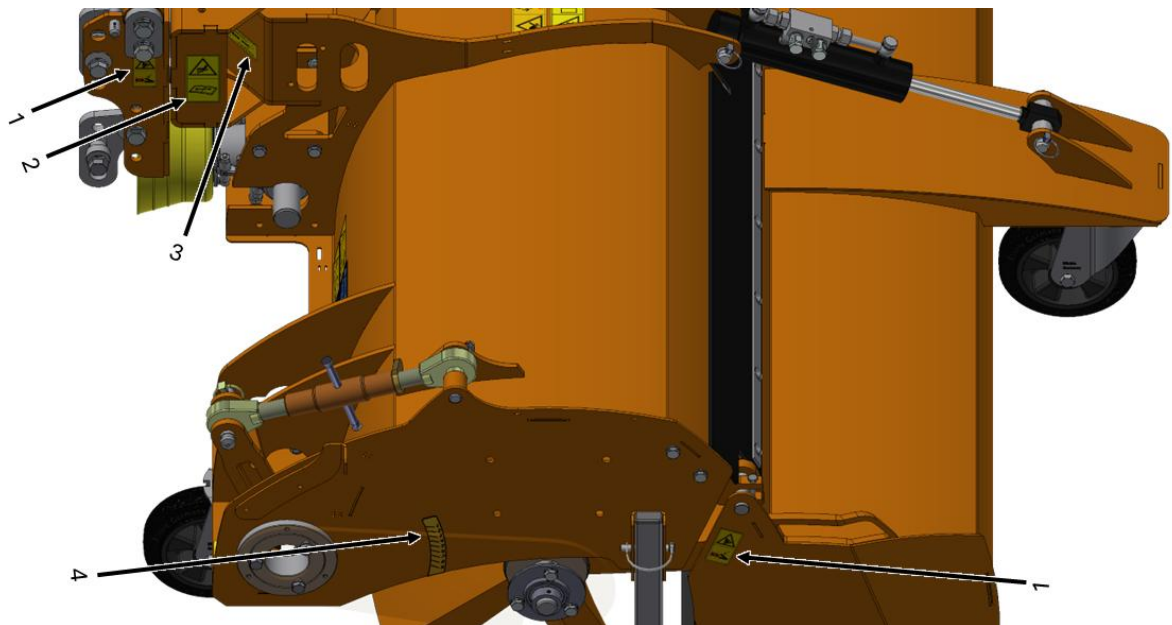


Fig. 11: Safety notices on the machine 2

- | | |
|------------------------|------------------------|
| 1. Order no.: V0002938 | 3. Order no.: V0002963 |
| 2. Order no.: V0002929 | 4. Order no.: V0004149 |



Fig. 12: Safety notices on the machine 3

1. Order no.: V0002938
2. Order no.: V0004148
3. Type plate
4. Order no.: V0003092
5. Order no.: V0003091

4.6 Dangers due to energy sources

4.6.1 Dangers due to mechanical energy



Attention! Danger of crushing and amputation

Removing the safety covers will result in dangers. Do not open any protective covers. Do not remove any connections or covers from protective enclosures.



Attention! Risk of injury from pulling in or catching

There is a danger of being pulled in by moving parts.



Attention! Risk of injury due to tipping or rolling of the machine

Park the machine on a level surface and secure it to prevent tipping and rolling.



Notice!

Instruct the operating personnel about the dangers due to mechanical energy.

4.6.2 Dangers due to hydraulic energy

Attention! Risk of injury due to hydraulic energy



Before working on the hydraulic system, switch off the vehicle and remove the ignition key.
Do not open any hydraulic connections as long as there is pressure in the hydraulic lines.

Notice!



Instruct the operating personnel about the dangers due to hydraulic energy.
Check all hydraulic lines for damage regularly during repairs and servicing.

4.6.3 Danger from airborne sound / noise

Danger! Danger of injury from airborne sound / noise



The continuous sound pressure level depends on the following:

- the carrier vehicle
- the local conditions at the site of use

Notice!



Instruct the operating personnel about the dangers from airborne sound and noise.
Wear hearing protection, if necessary.

4.7 Residual risks

Despite all precautions taken, residual risks can exist that are not obvious!

Residual risks can be reduced by complying with operating manual, the safety instructions and the intended use.

Attention! Danger of injury due to malfunctions



Shut down the machine immediately in case of malfunctions.
Do not start up the machine again until it has been properly repaired.

Attention! Danger of slipping



Watch out for dirty areas in the vicinity of the machine and clean the ground, if necessary.

Attention! Unauthorized access prohibited



Danger will result from unauthorized access to the machine's operating area.
The owner must take measures to prevent unauthorized personnel from accessing the danger zone.

4.8 Additional notice

All work on the machine is subject to the regulations of the accident prevention regulations of the Employer's Liability Insurance Association.

The following must also be observed:

- Applicable binding accident prevention regulations
- Applicable binding regulations at the place of use
- Recognized technical rules for safe and professional work procedures
- Existing environmental protection regulations
- Other applicable regulations

Notice!



Instruction of employees with regard to hazards and the required protective measures must be repeated at regular intervals, however at least once per year. Operating instructions, to be prepared by the owner, are required for occupational health and safety requirements! These instructions, together with the operating manual, must be observed by the operator of the machine in their entirety!

4.9 Personal protective equipment (PPE)



Safety shoes!

Wear safety shoes with non-slip soles when working on the machine.



Gloves

Wear gloves when cleaning.



Safety goggles!

Wear safety goggles when cleaning.



Hearing protection

Wear suitable hearing protection when working with the machine.



Notice!

Wear close-fitting clothing when working on the machine

5 Delivery and transport



Notice!

Observe the basic safety instructions in the section “General safety instructions”.

Attention! Risk of injury due to raised loads



Dangers exist due to human error and insufficiently secured loads.

Task involving transport may be carried out only by specially trained personnel. Never enter the area beneath suspended loads. Secure the load to prevent a change of position.



Attention! Risk of injury due to unsafe transport routes

There is a danger of stumbling and slipping when transporting the machine. Paths, ramps and steps for transport must have non-slip surfaces, with no obstacles and well lit. Rough surfaces prevent slipping.

The machine is delivered lashed on a pallet.

Lift the machine off of the pallet

1. Remove the protective packaging and the transport safeguard.
 2. Use suitable means (crane or forklift) to lift the machine from the pallet and set it down. See Lifting and suspension points.
 3. Alternatively, the sweeper can also be raised from the pallet using the lift mechanism of a suitable carrier vehicle.
- Use special aids to prevent chafing of ropes and slings on sharp edges and corners, such as: Corner guards
 - Inspect the delivered parts for completeness, damage or other abnormalities.
 - Observe the applicable safety and accident prevention regulations during transport.

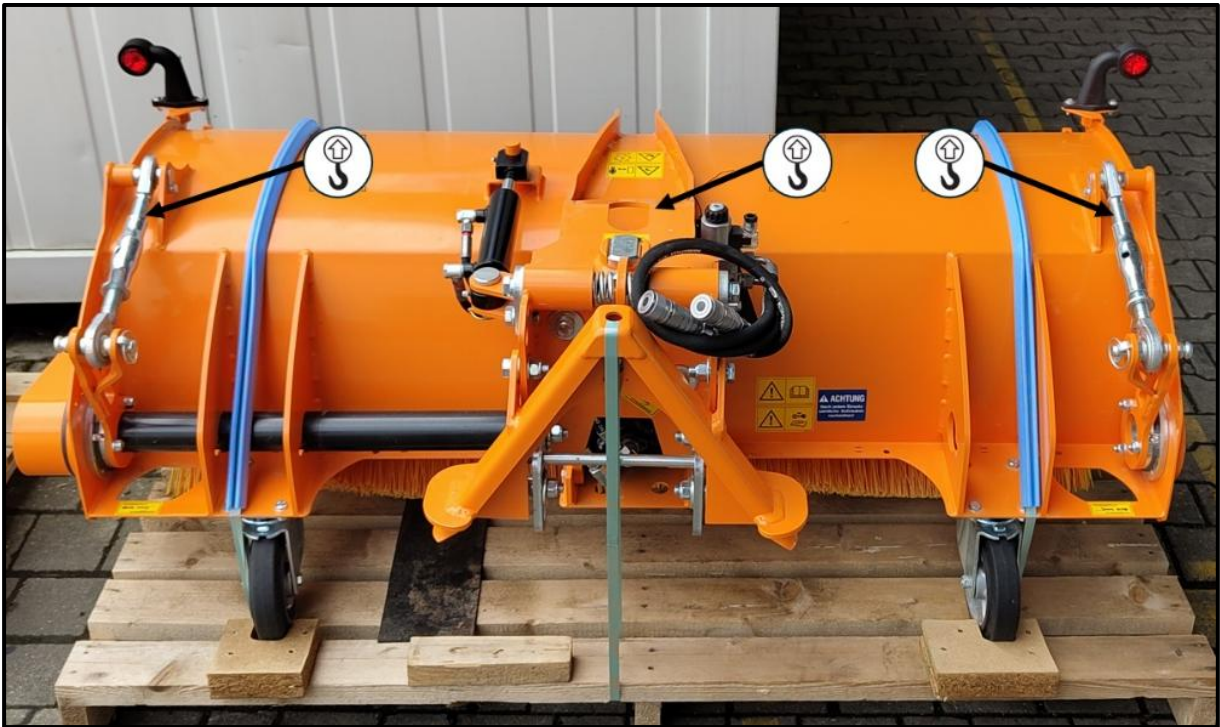


Fig. 13: Lifting and suspension points

Long-distance transport

If you want to transport the machine over longer distances (e.g. via a freight forwarder), you must lash the machine onto a pallet, as when originally delivered.

6 Construction and functionality

6.1 Description

The sweeper is mounted on the front of a carrier vehicle and is designed for sweeping surfaces, paths, etc. It is driven either mechanically by a PTO shaft or hydraulically by a hydraulic motor. It is a free-sweeping machine, which means that a certain amount of dust can be stirred up.

6.2 Overview

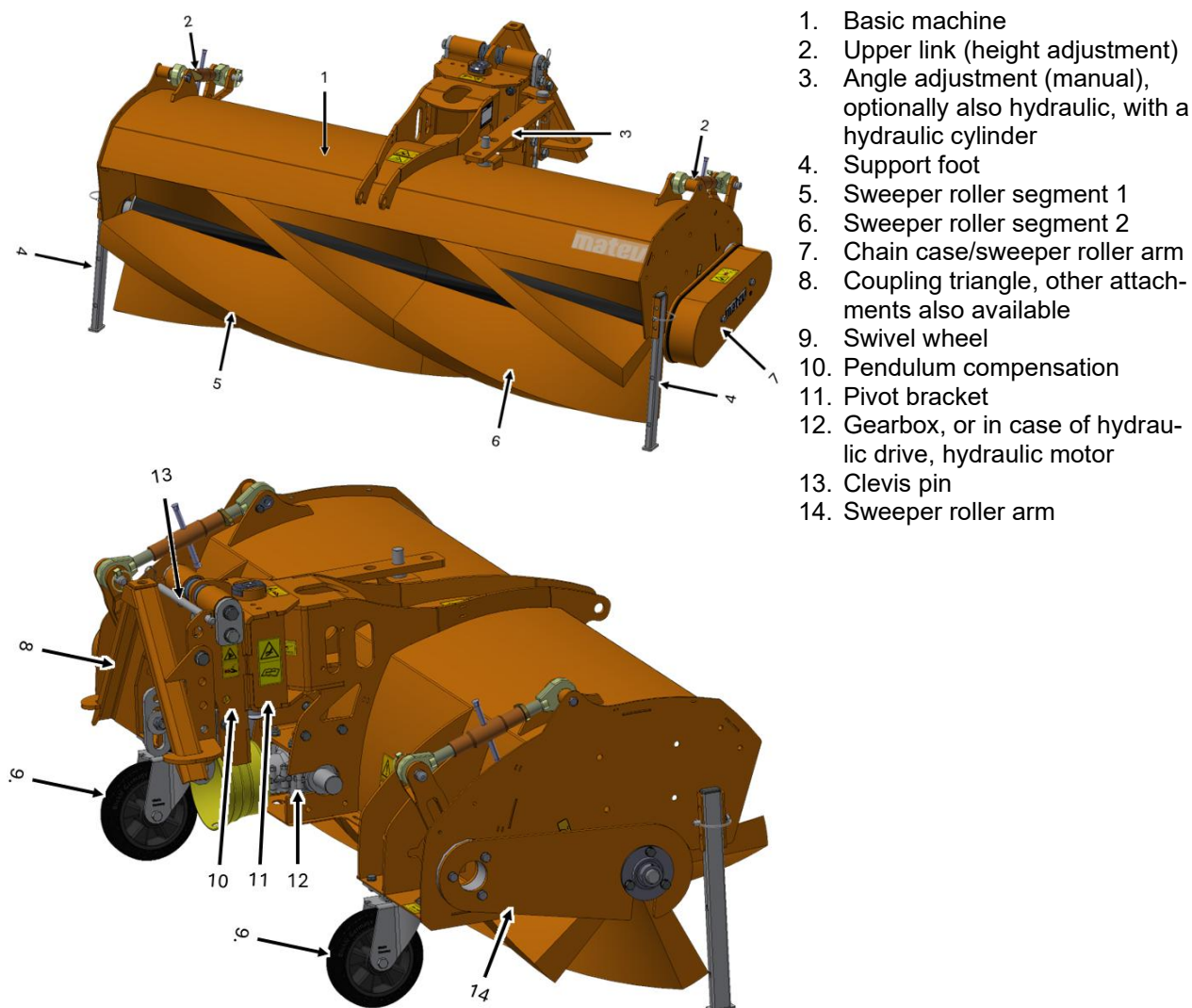


Fig. 14: Overview

6.3 Safe parking of the machine – stability

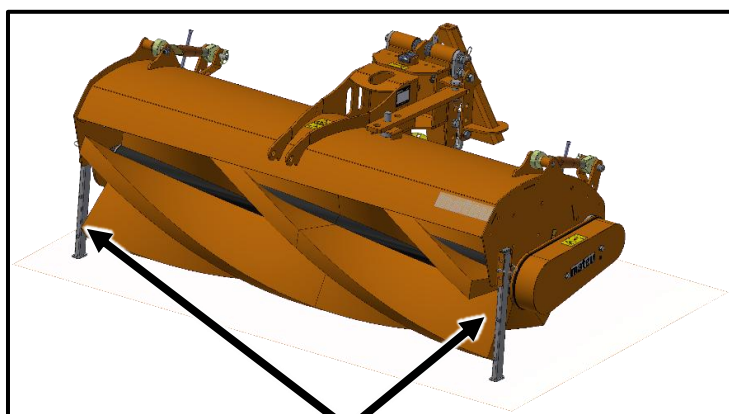
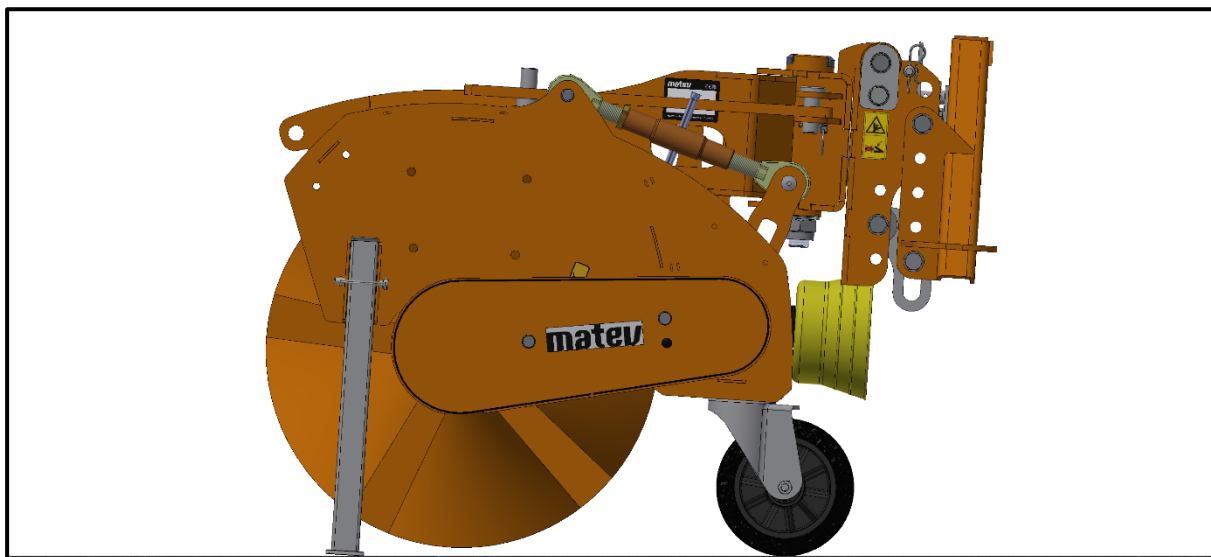
**Attention! Risk of injury due to tipping or rolling of the machine**

Park the machine on a level surface and secure it to prevent tipping and rolling.

**Notice!**

Do not park the sweeper on the sweeper roller.

When parking the sweeper, make sure that the sweeper roller itself does not touch the ground. This can cause compression of the sweeper roller bristles and imbalance in the sweeper roller. The machine must therefore be parked on the wheels and support feet, as shown below. For parking, with the machine raised, remove the two pipe linchpins (2), then move the support feet (1) into the position shown, and then secure with the pipe linchpins (2). Now the machine can be parked on a level and solid surface.



Support feet (1)



Pipe linchpin (2)

Fig. 15: Safely park the machine

6.4 Work site – Danger zone

6.4.1 Work site

The machine is operated from the driver's seat of the carrier vehicle.

6.4.2 Hazard area



Danger!

Do not enter the danger zone while work is in progress!

Stop the machine immediately if anyone enters the danger zone.

The danger zone extends a distance of 10 m in every direction around the sweeper. At no time may anyone enter this zone, due to the danger from flinging objects/sweepings. The only exception is the machine operator in the carrier vehicle.

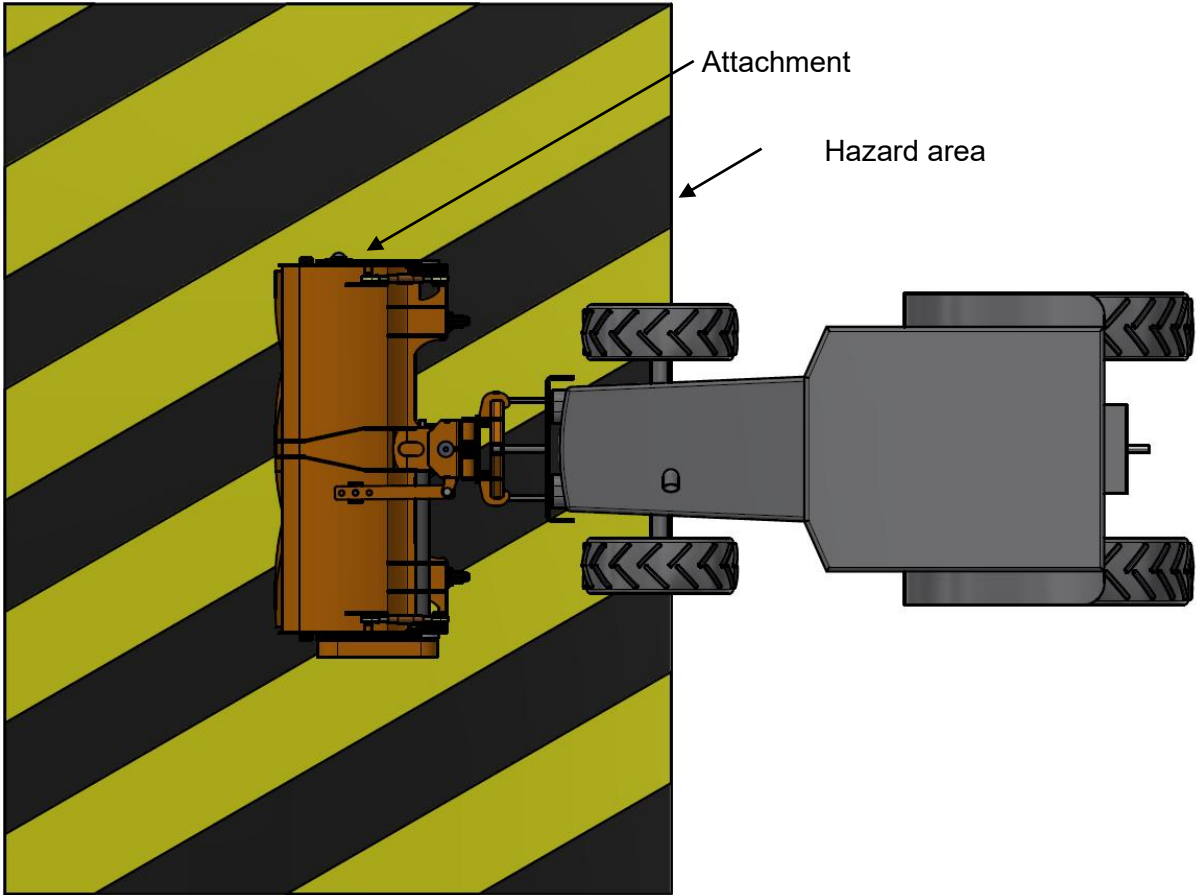
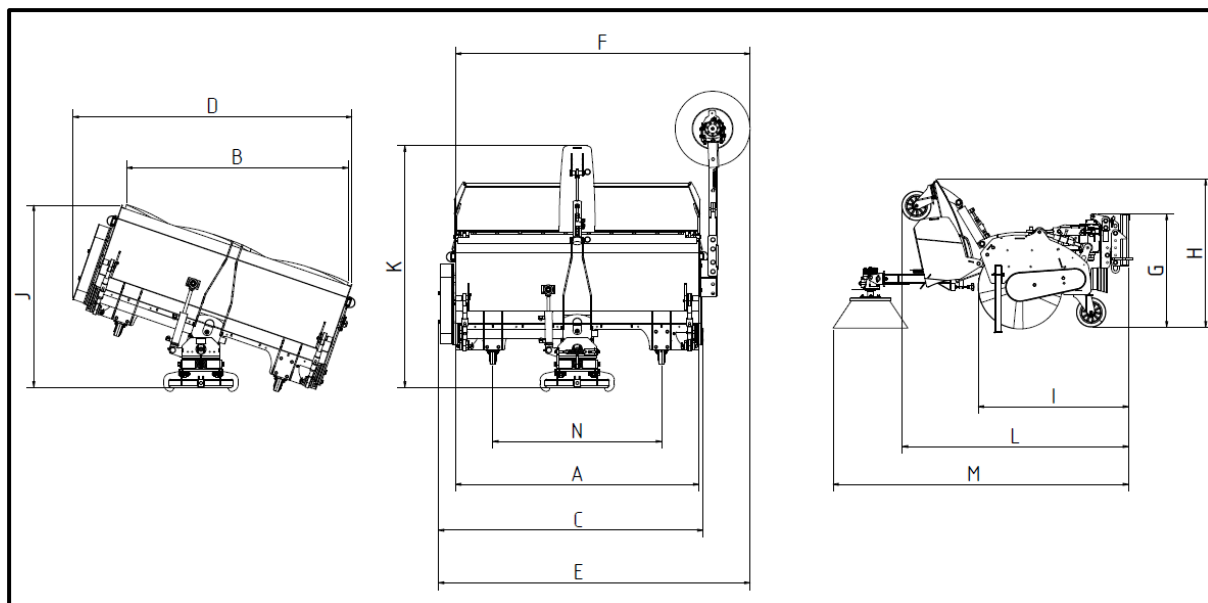


Fig. 16: Hazard area

6.5 Technical data

Machine:	SWE-14-57	SWE-16-57	SWE-18-57
Technical data:			
Suitable for carrier vehicles	30-60 HP	30-60 HP	30-60 HP
Working width	1450 mm	1600 mm	1850 mm
Swivel angle per side	20°	20°	20°
Working width, swiveled 20°	1360 mm	1500 mm	1740 mm
Sweeper roller diameter	570 mm	570 mm	570 mm
Weight with cat. 0 and mech. drive	Approx. 210 kg	Approx. 225 kg	Approx. 240 kg
Attachment options	Cat. 0 / Cat. 1/ cat. 1 quick arres- tor hook / ScanFrame	Cat. 0 / Cat. 1/ cat. 1 quick arres- tor hook / ScanFrame	Cat. 0 / Cat. 1/ cat. 1 quick arres- tor hook / ScanFrame
Drive data (depending on machine configuration):			
PTO stub profile for sweeper ¹	1 3/8" – 6-piece	1 3/8" – 6-piece	1 3/8" – 6-piece
PTO stub profile for carrier vehicle ¹	1 3/8" – 6-piece 1" 15-piece	1 3/8" – 6-piece 1" 15-piece	1 3/8" – 6-piece 1" 15-piece
PTO shaft speed ¹	1000/2000 rpm	1000/2000 rpm	1000/2000 rpm
PTO shaft direction of rotation ¹	CW/CCW	CW/CCW	CW/CCW
Oil quantity required for 170 bar, de- pending on drive set ²	30-38/38-48/ 48-60 l/min	30-38/38-48/ 48-60 l/min	30-38/38-48/ 48-60 l/min
¹ only for mechanical drive ² only for hydraulic drive			
Accessories:			
Dirt container dimensions (LxWxH)	710 x 1510 x 630 mm	710 x 1710 x 630 mm	710 x 1910 x 630 mm
Dirt container weight	Approx. 70 kg	Approx. 75 kg	Approx. 80 kg
Dirt container capacity	120l	135l	150l
Splash plate dimensions (LxWxH)	1440 x 320 x 150 mm	1640 x 320 x 150 mm	1840 x 320 x 150 mm
Splash plate weight	Approx. 14 kg	Approx. 16 kg	Approx. 18 kg
Side broom dimensions (LxWxH)	1400 x 600 x 500 mm		
Side broom weight	Approx. 35 kg		

Table 1: Technical data



	SWE-14-57	SWE-16-57	SWE-18-57
Working width A	145 cm	160 cm	185 cm
Working width swiveled 20° B	136 cm	150 cm	174 cm
Machine width C	163 cm	183 cm	203 cm
Machine width swiveled 20° D	171 cm	190 cm	209 cm
Machine width with side broom E	192 cm	212 cm	232 cm
Working width with side broom approx. F	180 cm	200 cm	220 cm
Machine height G	77 cm	77 cm	77 cm
Machine height with dirt container open H	100 cm	100 cm	100 cm
Machine length I	103 cm	103 cm	103 cm
Machine length swiveled 20° J	121 cm	124 cm	127 cm
Machine length with dirt container K	164 cm	164 cm	164 cm
Machine length with dirt container open L	155 cm	155 cm	155 cm
Machine length with side broom approx. M	201 cm	201 cm	201 cm
Track width of swivel wheels N	95 cm	115 cm	135 cm
All dimensions with cat. 0 coupling triangle, mounted in center position			

Table 2: Dimensions

6.6 Hydraulic diagrams

Hydraulic combinations overview				
SWE-57 M (mechanically driven)				
Hydraulics overview for tractors with <u>one</u> free control circuit				
Hyd. combination	Hyd. swiveling	Dirt container	Side broom	
<u>1</u>	x	0	0	
<u>2</u>	0	x	0	
<u>3</u>	0	x	x	
<u>4</u>	x	x	0	

Hydraulics overview for tractors with <u>two</u> free control circuits				
Hyd. combination	Hyd. swiveling	Dirt container	Side broom	
<u>1</u>	x	0	0	
<u>2</u>	0	x	0	
<u>5</u>	0	x	x	
<u>6</u>	x	x	0	
<u>7</u>	x	x	x	

SWE-57 H (hydraulically driven)				
Hydraulics overview for tractors with <u>one</u> free control circuit				
Hyd. combination	Hyd. swiveling	Dirt container	Side broom	Hyd. Drive
<u>8</u>	0	0	0	x
<u>9</u>	0	x	0	x
<u>10</u>	x	0	0	x
<u>11</u>	0	x	x	x

Hydraulics overview for tractors with <u>two</u> free control circuits				
Hyd. combination	Hyd. swiveling	Dirt container	Side broom	Hyd. Drive
<u>8</u>	0	0	0	x
<u>5</u>	0	x	0	x
<u>12</u>	0	x	x	x
<u>13</u>	x	0	0	x
<u>14</u>	x	x	0	x
<u>15</u>	x	x	x	x

Table 3: Hydraulic combinations

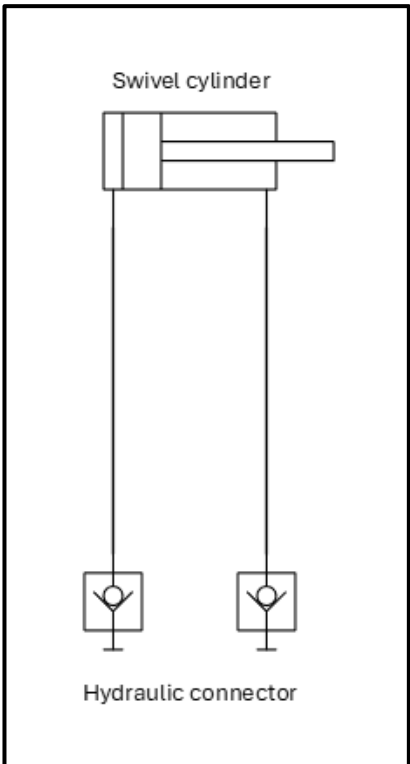


Fig. 17: Hydraulic combination 1

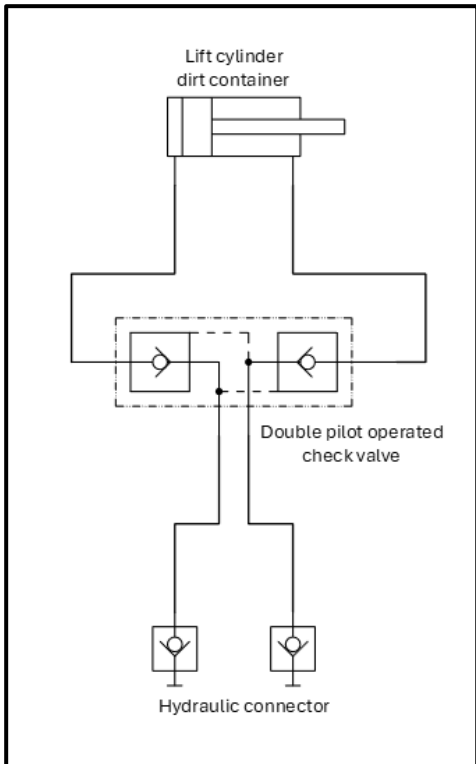


Fig. 18: Hydraulic combination 2

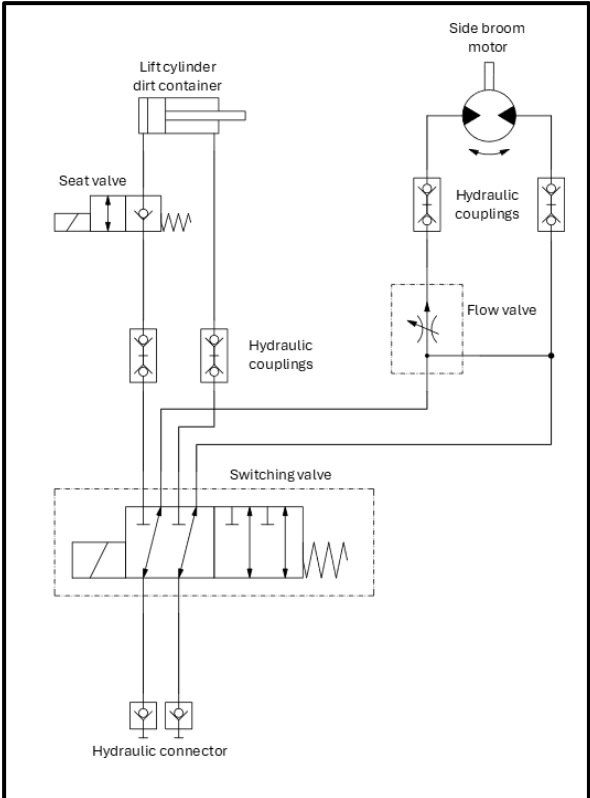


Fig. 19: Hydraulic combination 3

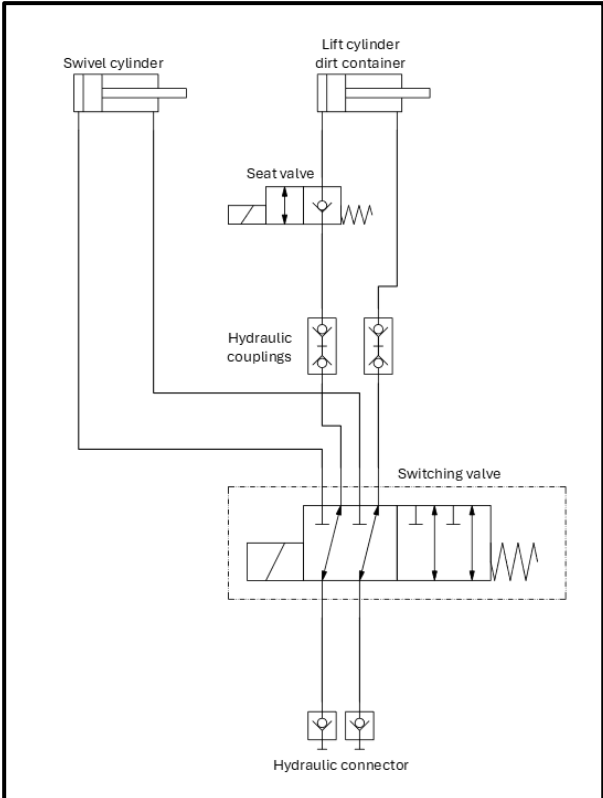


Fig. 20: Hydraulic combination 4

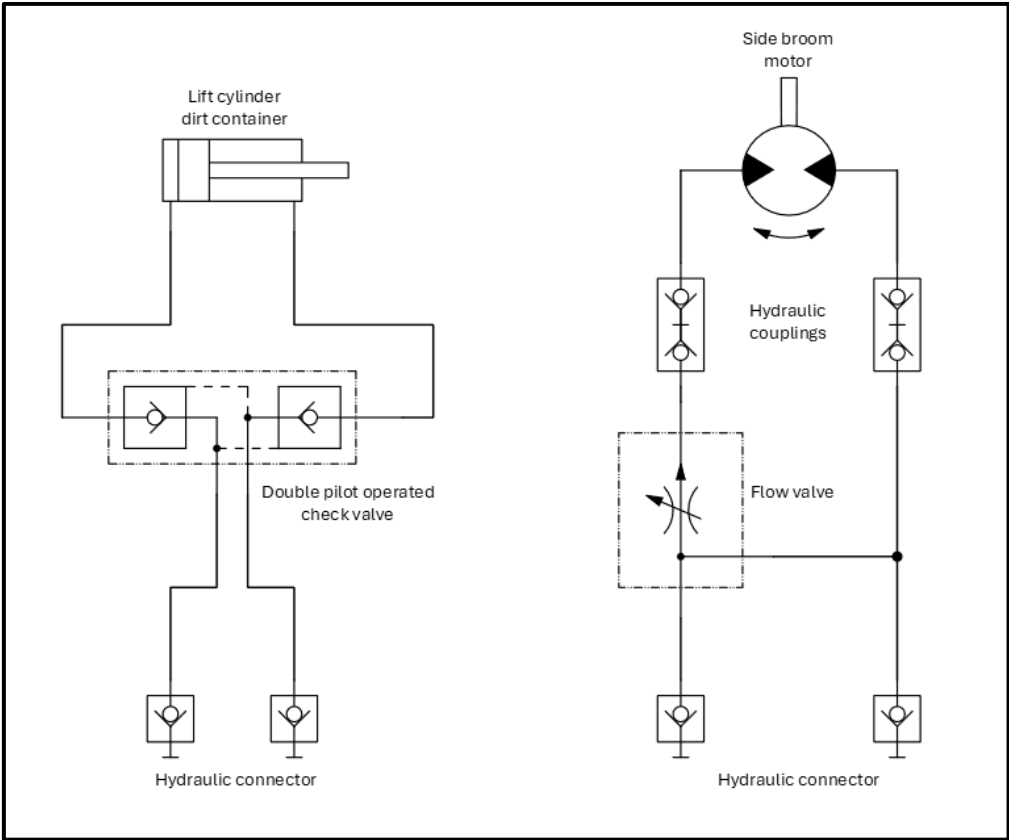


Fig. 21: Hydraulic combination 5

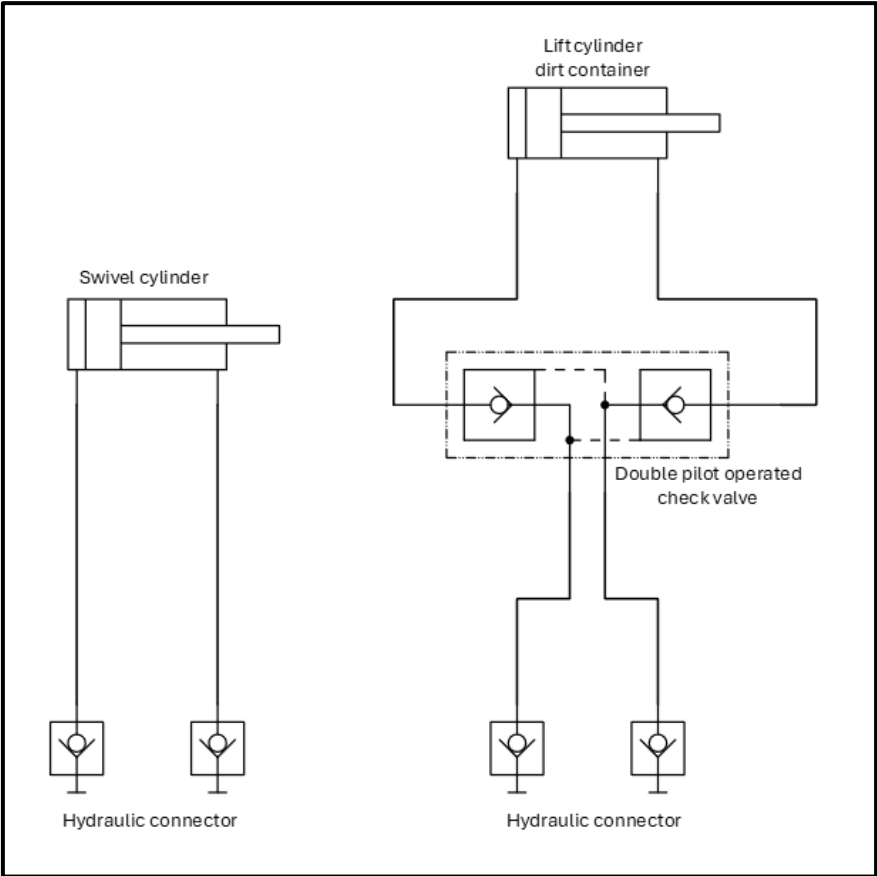


Fig. 22: Hydraulic combination 6

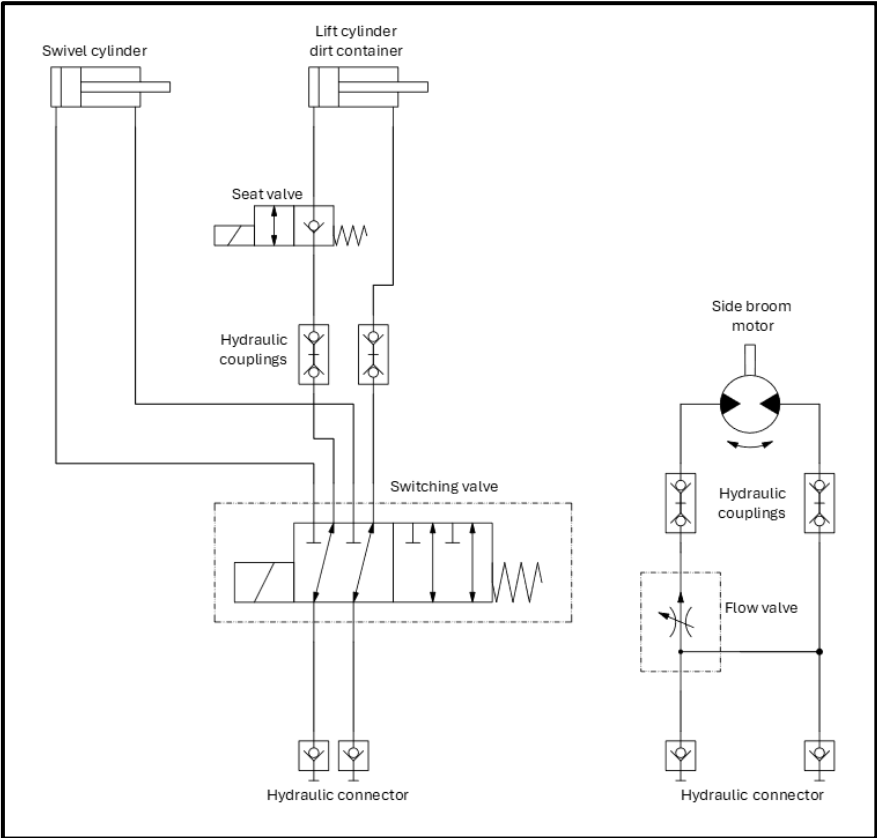


Fig. 23: Hydraulic combination 7

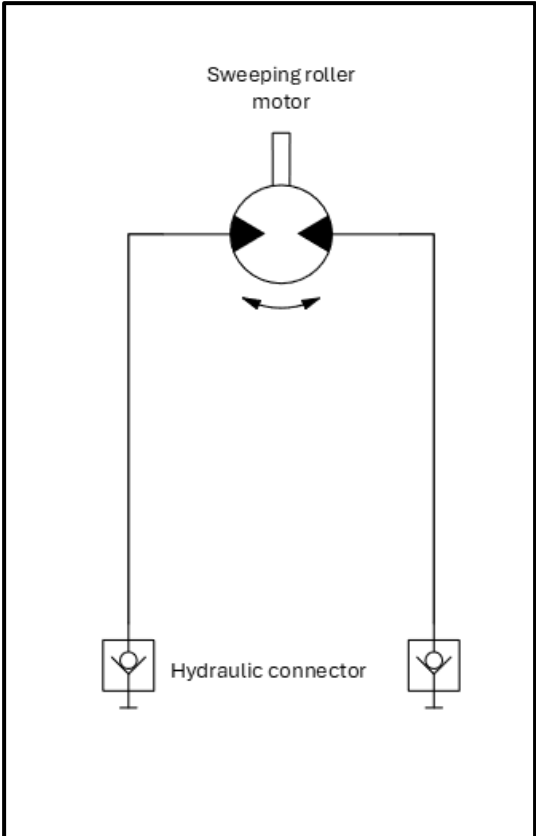


Fig. 24: Hydraulic combination 8

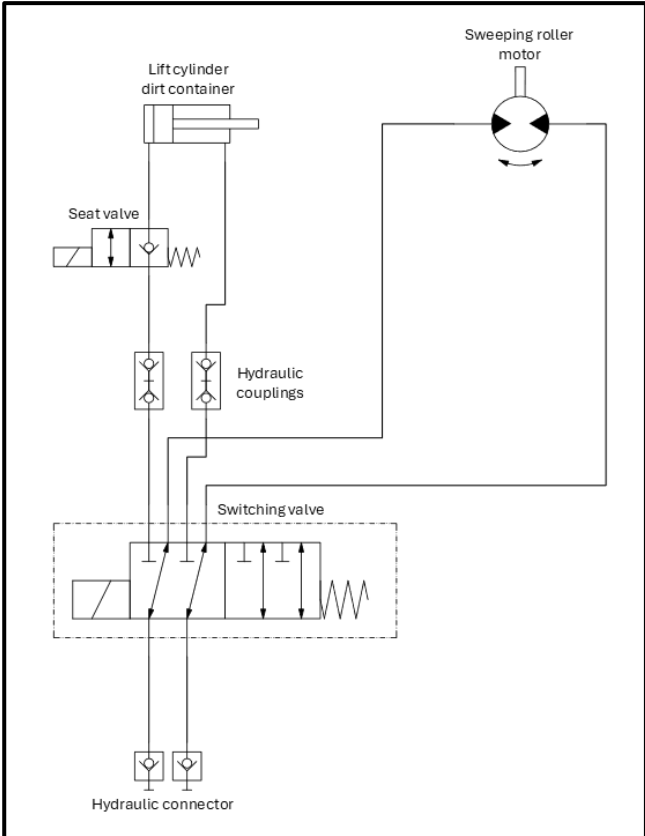


Fig. 25: Hydraulic combination 9

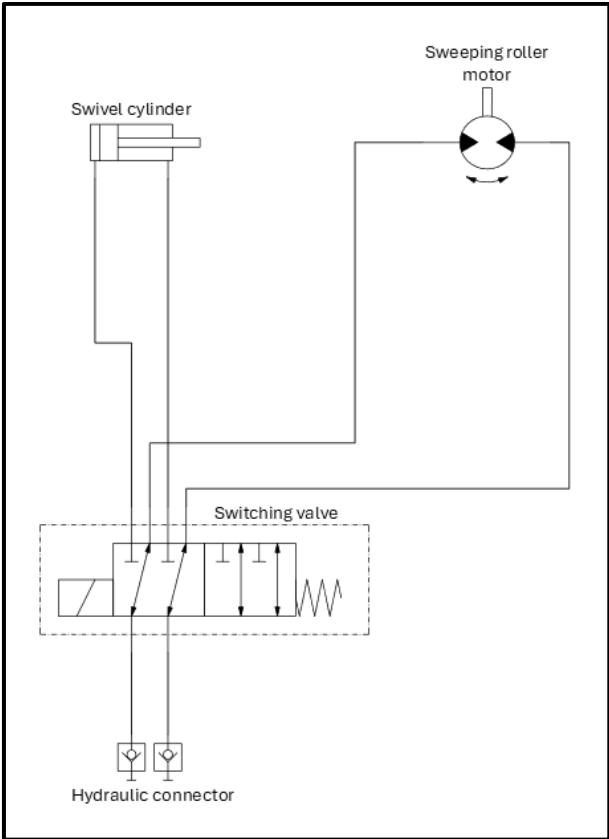


Fig. 26: Hydraulic combination 10

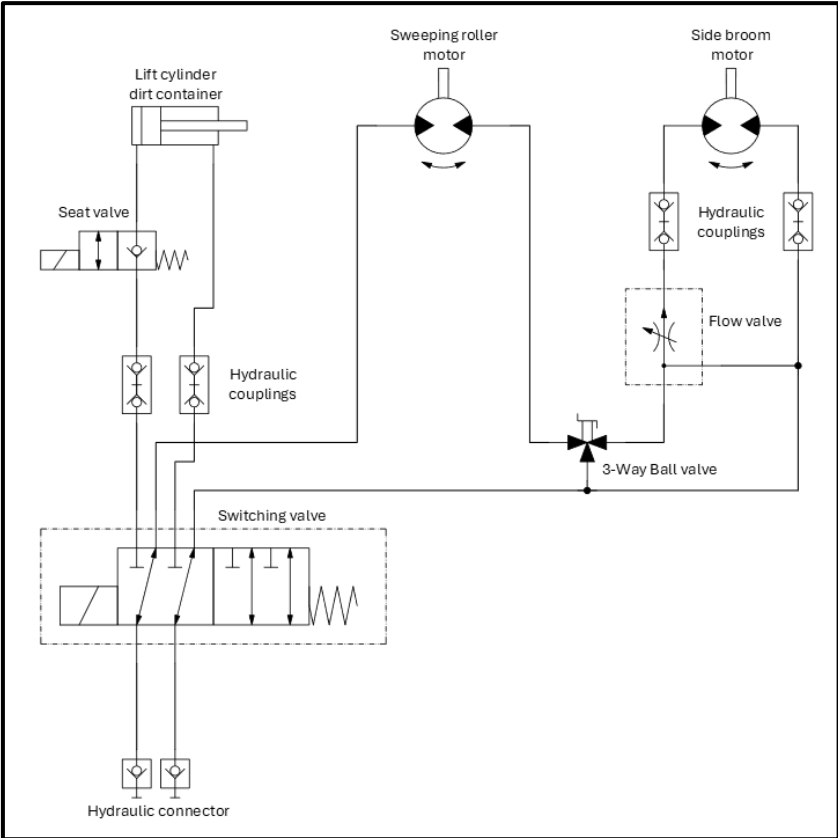


Fig. 27: Hydraulic combination 11

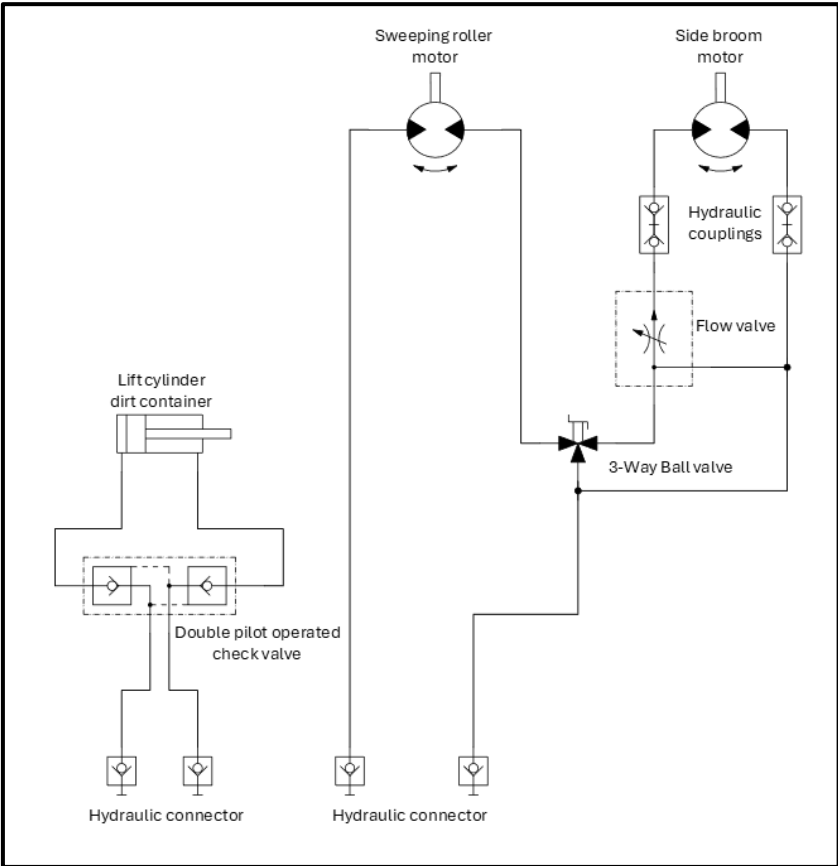


Fig. 28: Hydraulic combination 12

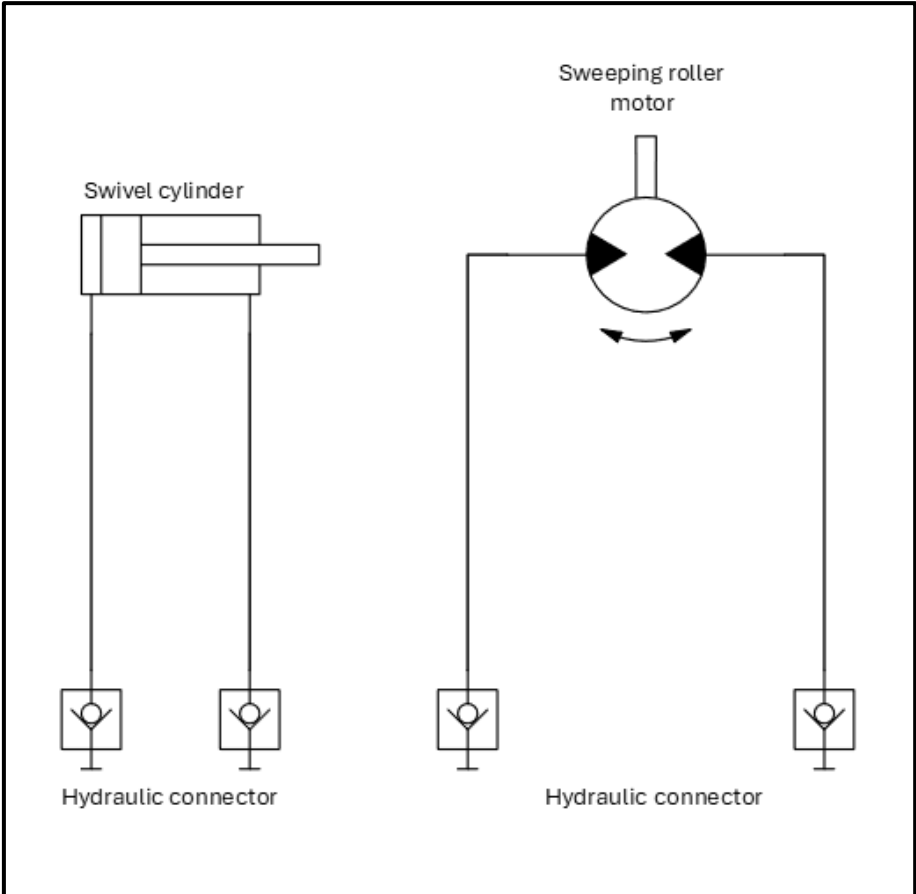


Fig. 29: Hydraulic combination 13

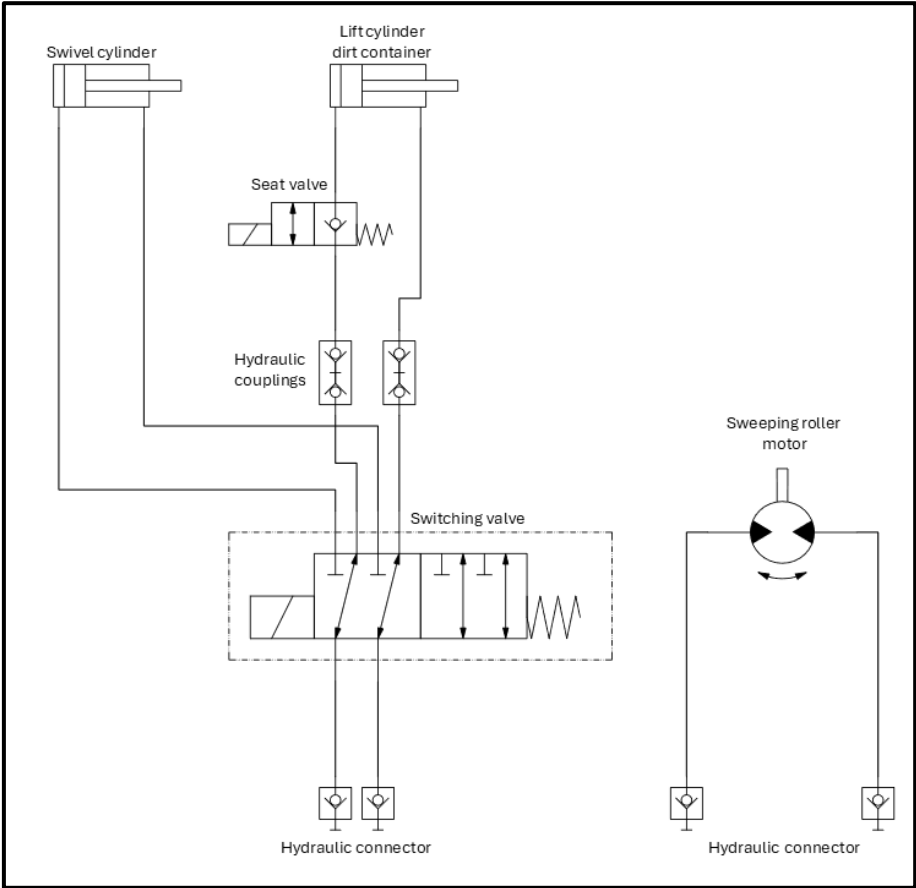


Fig. 30: Hydraulic combination 14

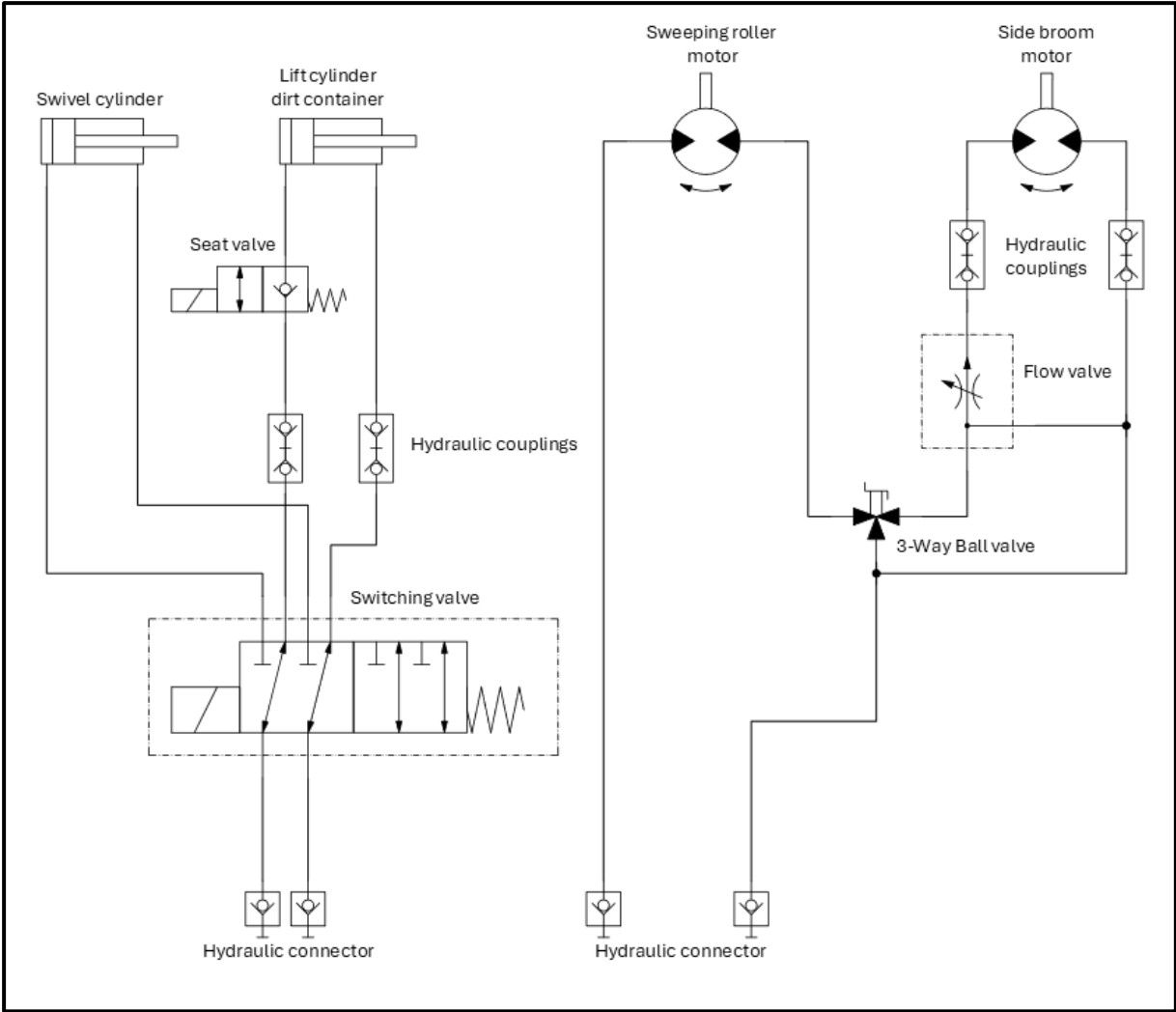
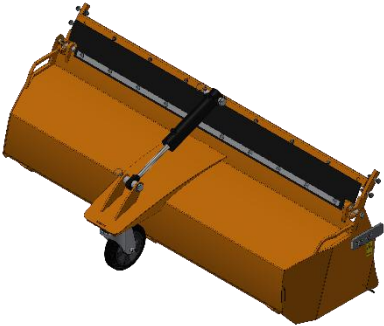
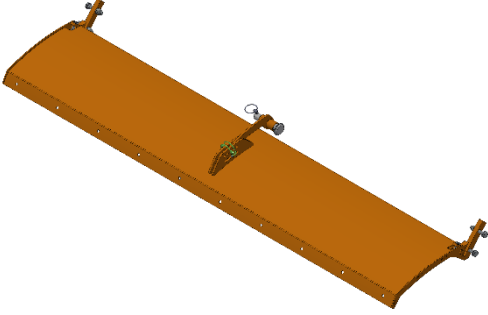
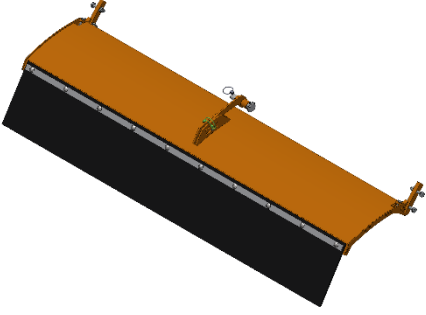

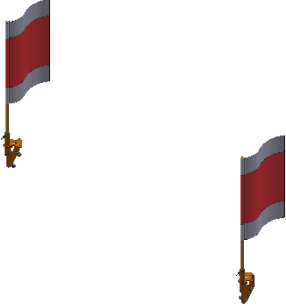


Fig. 31: Hydraulic combination 15

6.7 Accessories

<p>Dirt container</p>	
<p>Splash plate</p>	
<p>Splash plate with splash guard</p>	
<p>Side broom</p>	
<p>Warning flags, with holder (Holder can also be used for lighting set)</p>	




<p>Lighting set, with holder (Holder can also be used for warning flags)</p>	
<p>Water sprinkler system</p>	
<p>Water sprinkler system Side broom extension</p>	

Table 4: Optional accessories

7 Assembly



Notice!

Observe the basic safety instructions in the section “General safety instructions”.

Attention! Danger of injury due to mechanical energy



Dangers exist, such as pinching, pulling in, catching.
Never operate the machine without the safety devices.
All safety devices must be functioning before operating the machine. These safety devices may be removed only for maintenance.

7.1 Mounting on tractor or carrier vehicle

Mounting differs depending on the selected attachment; in the following, several mounting variants are described. The description refers to attachments for a matev front power lift and coupling support; if you have a front power lift or coupling support from other manufacturers, the procedure may be different.

7.1.1 Attachment of cat. 0 coupling triangle

1. Lower the lift mechanism and approach the attachment
2. Raise the lift mechanism until the coupling support and the coupling A-frame are properly connected
3. Connect the coupling support and coupling triangle with the clevis pin (1) and secure the latter with the cotter pin (2)

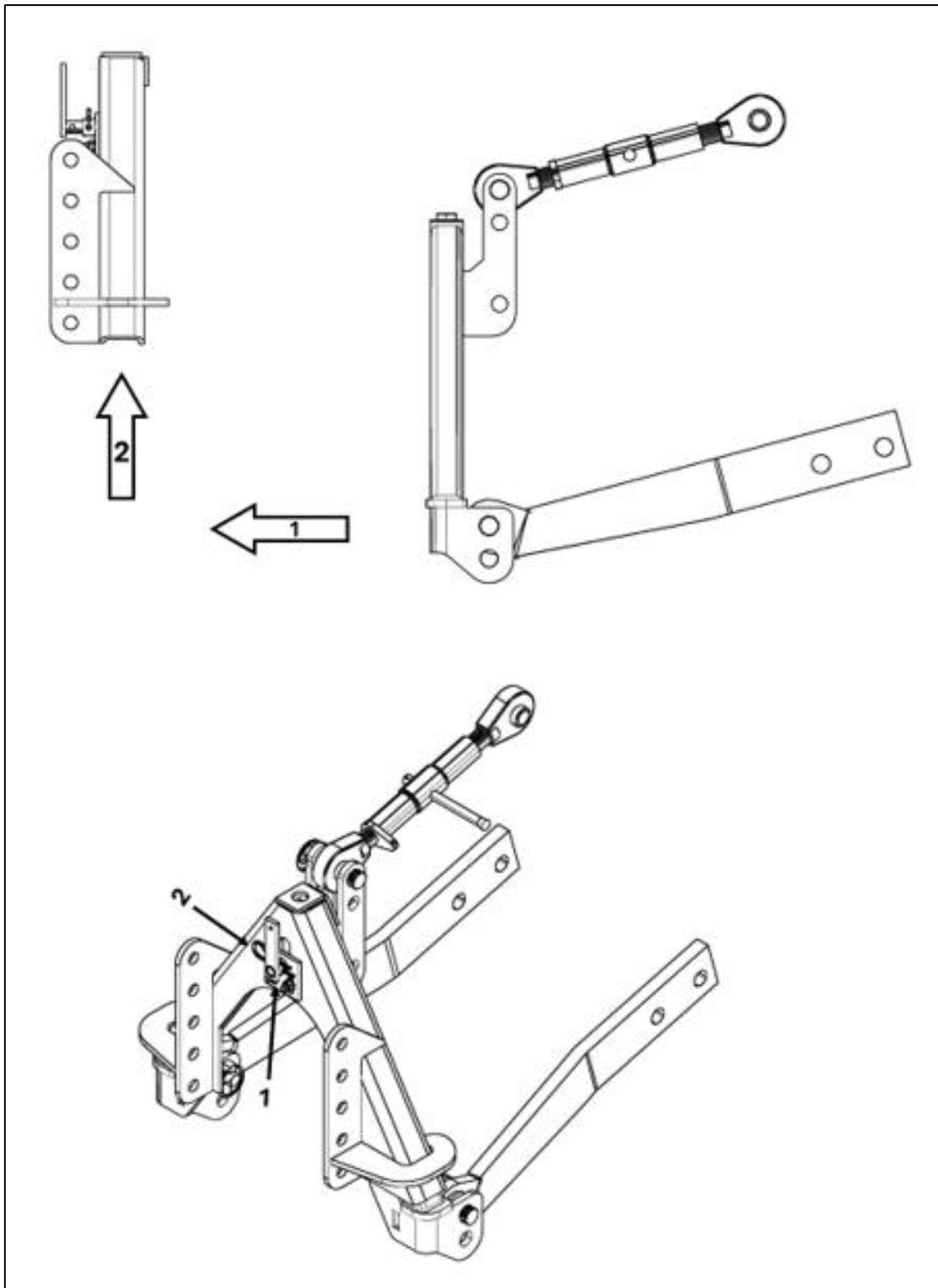


Fig. 32: Attachment of cat. 0 coupling triangle

7.1.2 Attachment of cat. 1 arrestor hook without balls

1. Lower the lift mechanism and approach the attachment
2. Raise the lift mechanism until the lower links are in contact with the two pins of the implement triangle and can be locked
3. Use the locking mechanisms to lock the lower links and implement triangle (2) (left and right!)
4. Connect the upper link to the implement triangle with the clevis pin and linchpin (1) and secure, as shown

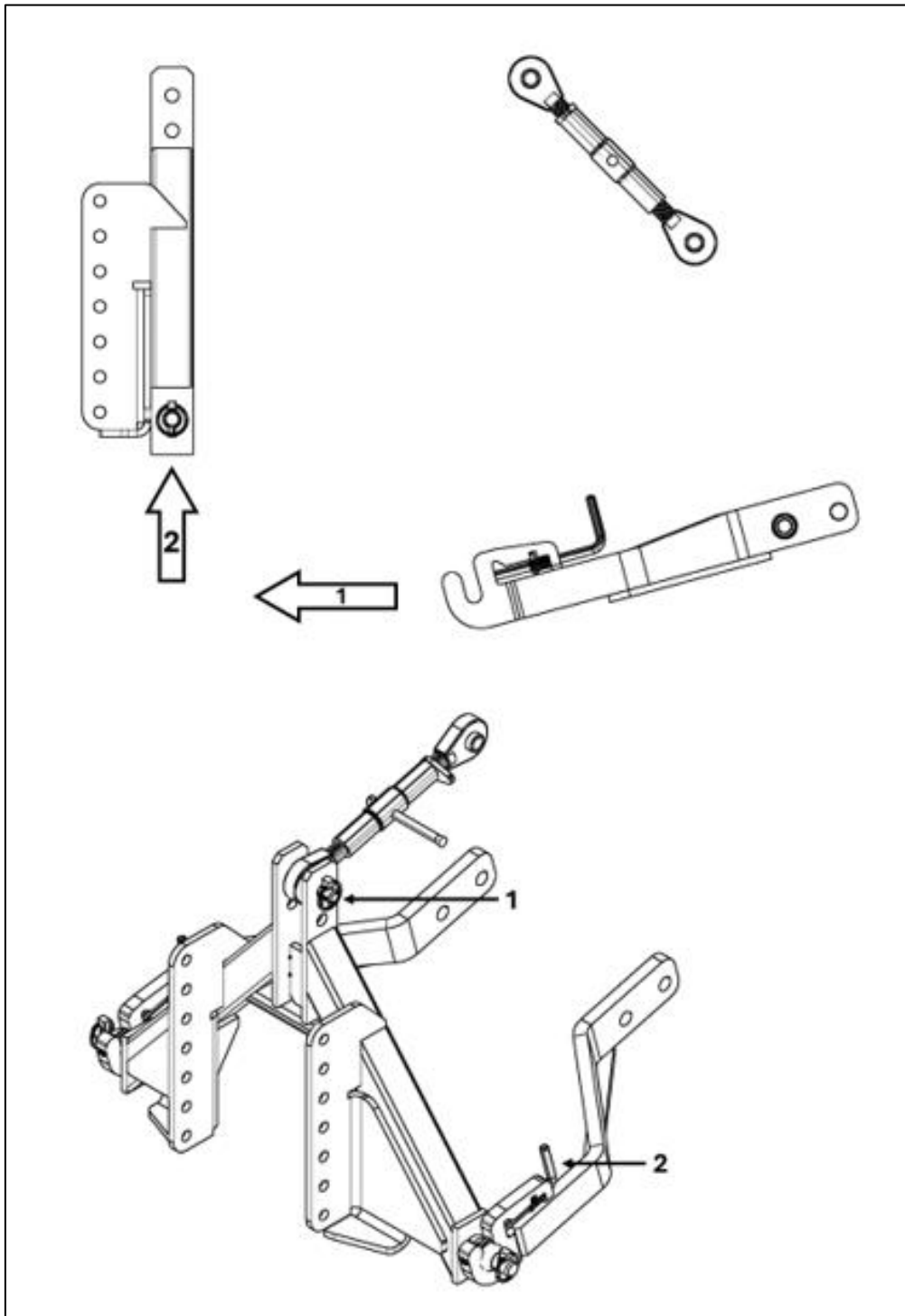


Fig. 33: Attachment of cat. 1 arrestor hook

7.1.3 Attachment of cat. 1 arrestor hook with balls

1. Lower the lift mechanism and approach the attachment
2. Raise the lift mechanism until the arrestor hooks on the implement triangle lock
3. Check to ensure that the arrestor hooks (**2**) are properly engaged
4. Connect the upper link to the implement triangle with the clevis pin and linchpin (**1**) and secure, as shown

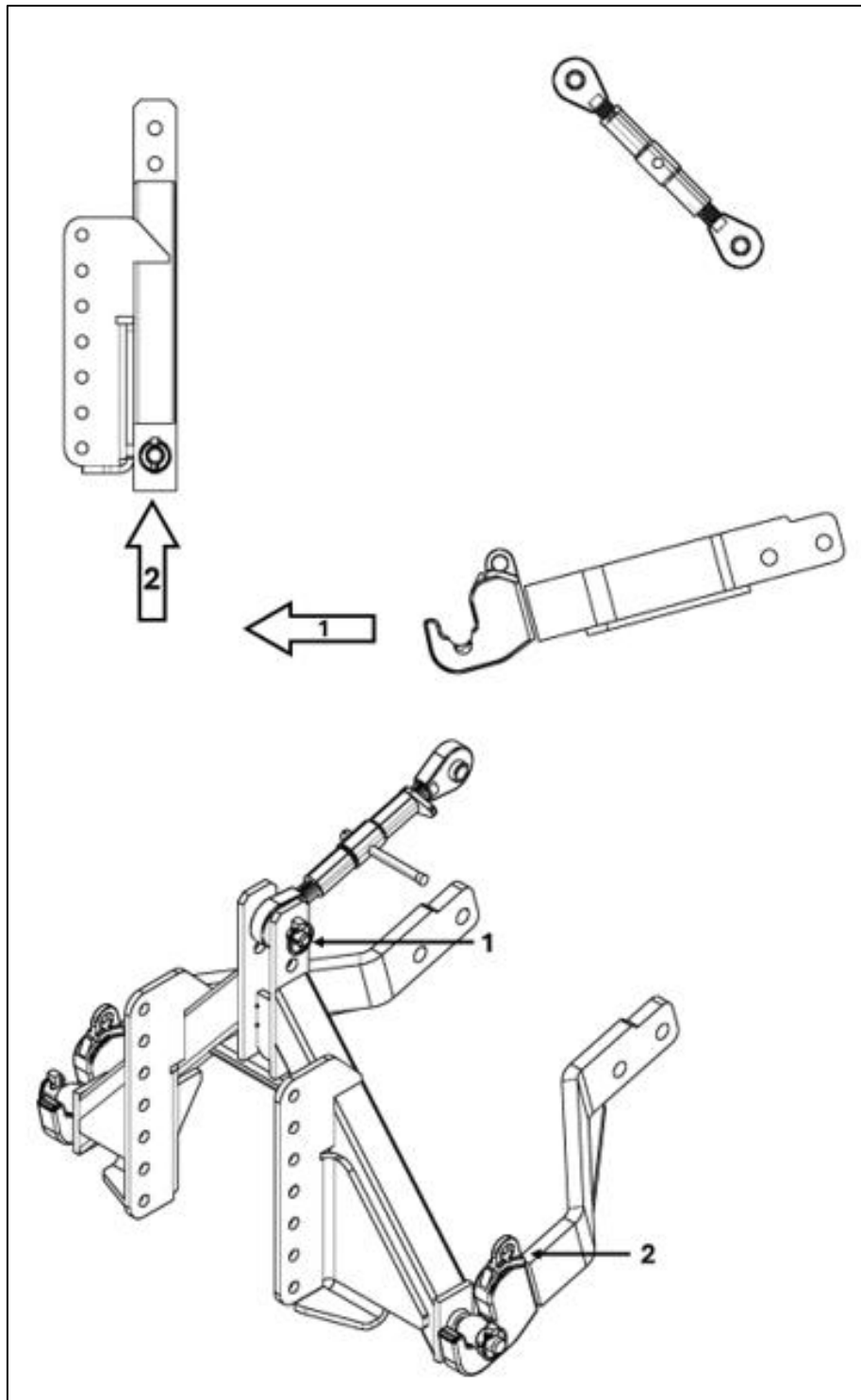


Fig. 34: Attachment of cat. 1 arrestor hook

7.1.4 Attachment of cat. 1 quick coupling triangle

1. Lower the lift mechanism and approach the attachment
2. Raise the lift mechanism until the coupling support and the coupling A-frame are properly connected
3. Check to ensure that the locking mechanism (1) is properly engaged

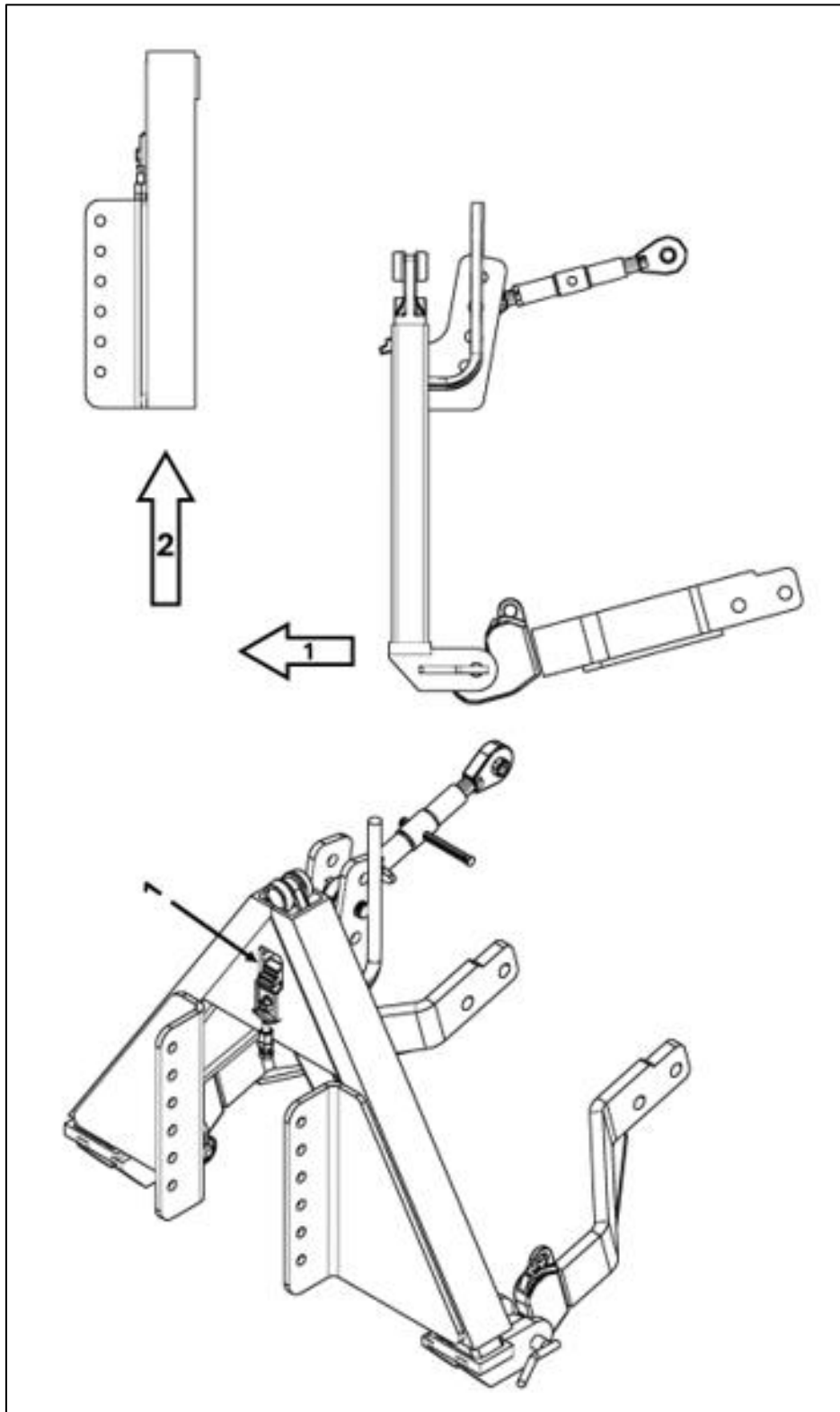


Fig. 35: Attachment of cat. 1 quick coupling triangle

7.1.5 ScanFrame attachment

1. Lower the lift mechanism and approach the attachment
2. Raise the lift mechanism until the coupling support and the coupling A-frame are properly connected
3. Check to ensure that the locking mechanism (1) is properly engaged

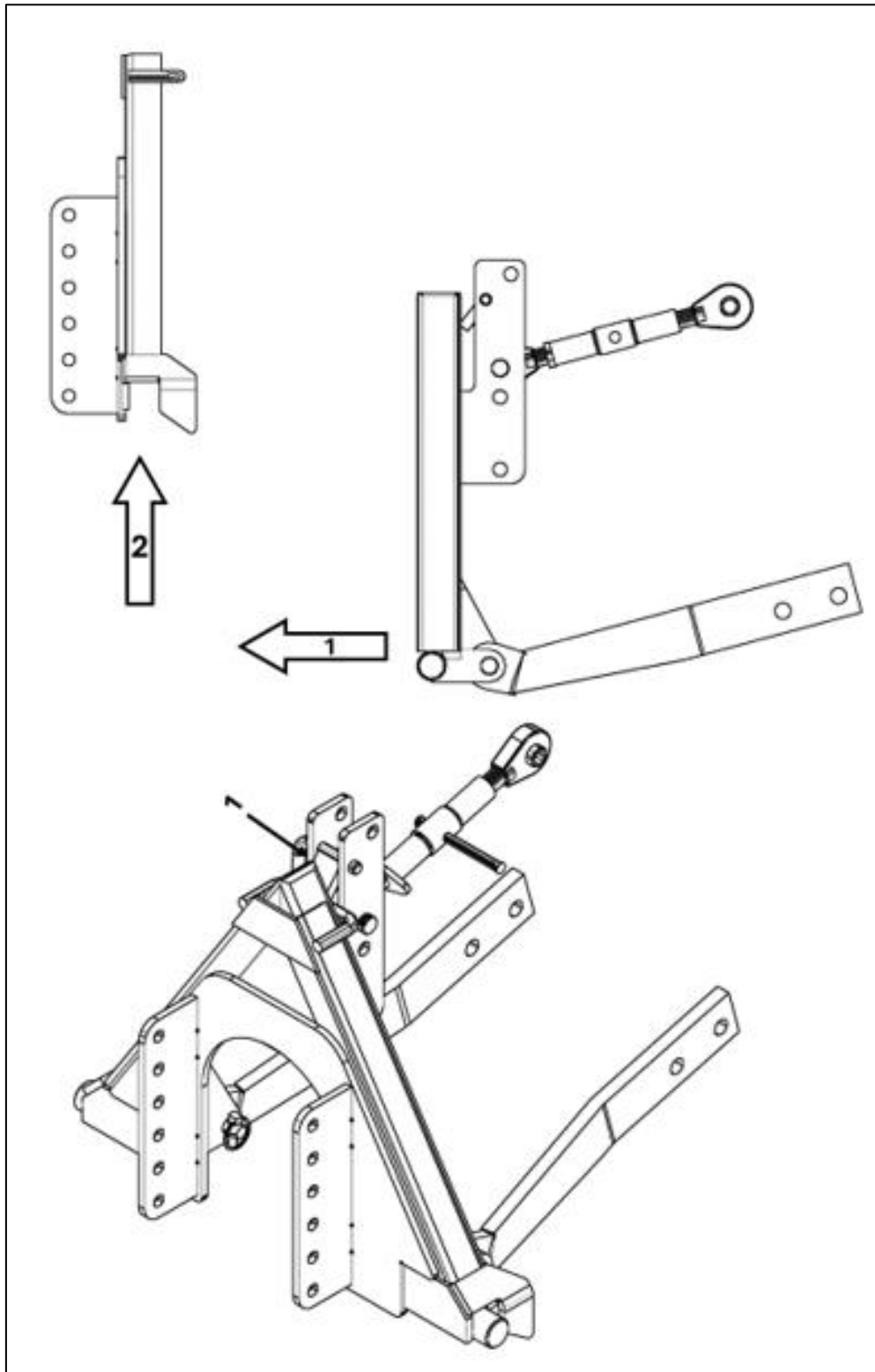


Fig. 36: Attachment ScanFrame

7.2 Adjusting the inclination of the attachment



Notice!

The angle of attachments must be adjusted each time they are attached to the carrier vehicle, and during adjustment of an attachment.



Danger!

Switch off the tractor and remove the ignition key before attaching the implement.

Adjust the upper link (1) of your lift mechanism so that the marked surface is parallel to the ground.

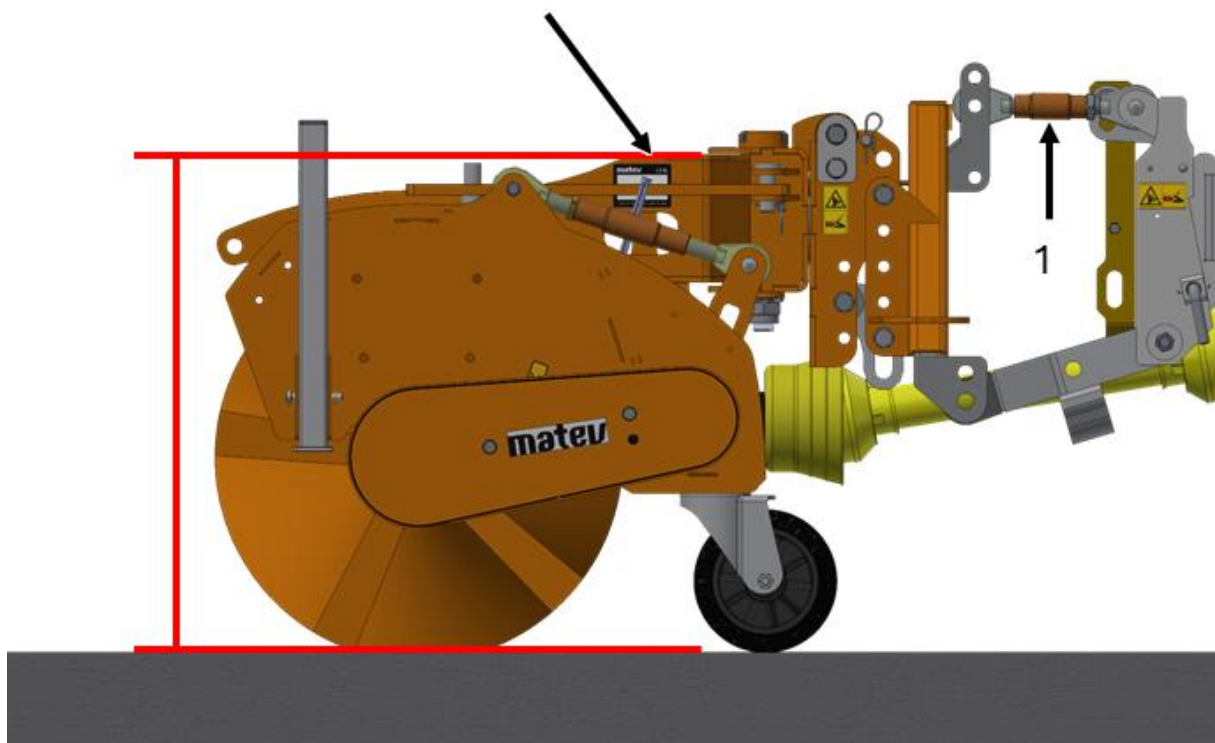


Fig. 37: Adjust inclination

7.3 Mounting the universal joint shaft



Attention!

Damage can occur to the machine or to the tractor / carrier vehicle.
Only use the provided universal joint shaft.



Danger!

Switch off the tractor and remove the ignition key before attaching the implement.



Notice!

Also observe the information in the operating manual provided by the universal joint shaft manufacturer.



Danger!

Compliance with the safety and maintenance instructions that are contained in the operating manual provided with the universal joint shaft is essential!

7.3.1 Adaptation and lubrication of universal joint shaft

Depending on tractor type the supplied universal joint shaft may be too long. In this case, they must be shortened and greased as described in the operating manual for the universal joint shaft.

7.3.2 Mounting the universal joint shaft



Attention!

Before mounting the universal joint shaft, switch off the vehicle and remove the ignition key.

Mount the universal joint shaft between the machine and the vehicle, as described in the operating manual. It should then look like the picture below.

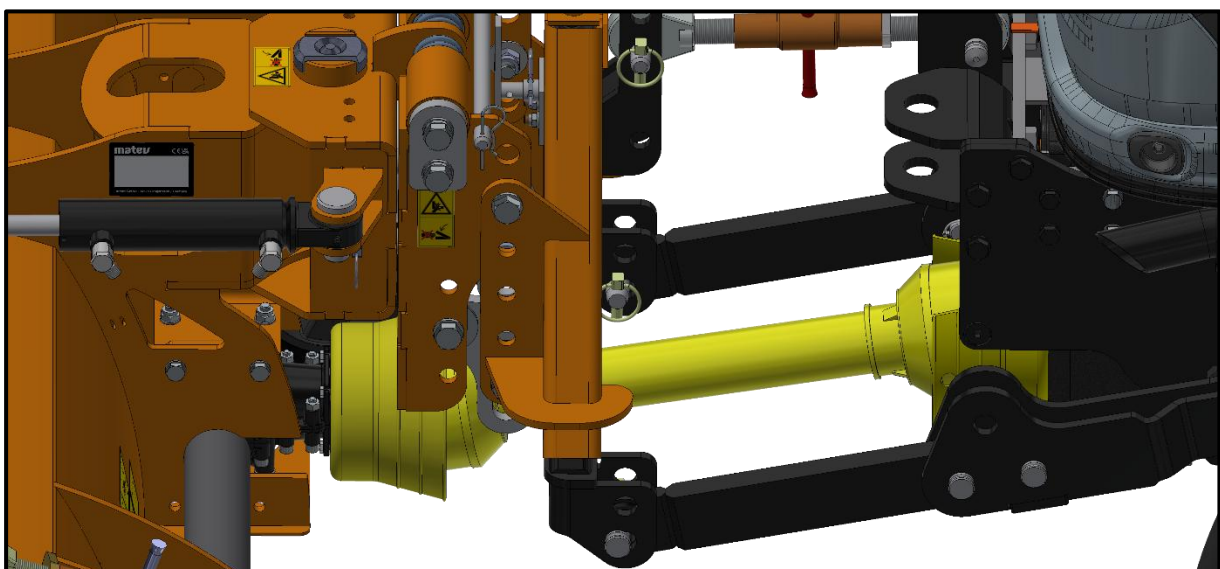


Fig. 38: Universal joint shaft mounted

7.4 Connecting the hydraulic connections to the carrier vehicle



Attention! Risk of injury due to hydraulic energy

Before working on the hydraulic system, switch off the vehicle and remove the ignition key.



Notice!

Before connecting the hydraulic hoses from the machine to the vehicle, depressurize the hydraulic circuit on the carrier vehicle.

Check all hydraulic connections for damage and replace, if necessary.

Depending on the hydraulic combination, either one or two double-acting hydraulic circuits are needed.

1. Depressurize the hydraulic circuits before connecting the hydraulic couplings
2. Remove dust caps and check connectors and sleeves to ensure they are clean
3. Plug hydraulic plugs into the hydraulic couplings
4. For hydraulic combinations with hydraulic motors in only one circuit, it is recommended to connect the return flow line to the non-pressurized return flow of the carrier vehicle, if available

7.5 Mounting of accessories

7.5.1 Mounting of the dirt container

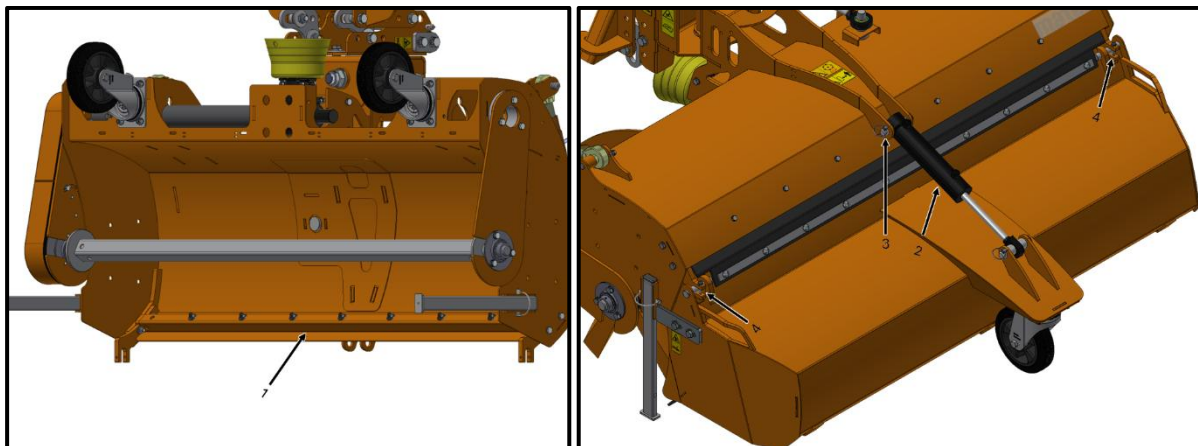


Fig. 39: Mounting of accessories – attaching the dirt container

To mount the dirt container, the holder **(1)** must first be bolted onto the machine; it is possible that the holder **(1)** is already mounted. The dirt container can now be inserted in the hooks of the holder **(1)** and secured with the two screws **(4)**. Now attach the hydraulic cylinder **(2)** and insert the clevis pin **(3)**, then secure the latter with the linchpin.

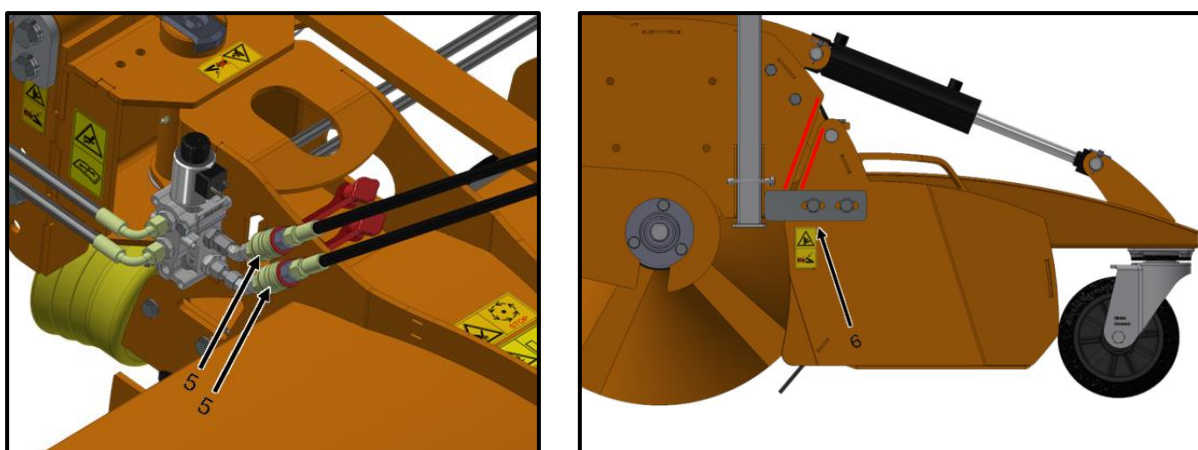


Fig. 40: Mounting of accessories – connecting and adjusting the dirt container

In some machine configurations, the hydraulic connectors **(5)** still have to be inserted into the hydraulic couplings on the switching valve. Otherwise, there are longer hydraulic hoses with hydraulic connectors on the hydraulic cylinder, which are connected directly to the carrier vehicle.

The dirt container can still be adjusted at the eye of the hydraulic cylinder **(2)**. The dirt container is optimally adjusted when the side plate of the dirt container is parallel to the side plate of the sweeper while the entire machine is lowered to the ground in float position. When the machine is raised, the dirt container must not drop; this is adjusted with the stops **(6)** (left and right).

Disassembly is carried out in reverse sequence.

7.5.2 Mounting of the splash plate (with splash guard)

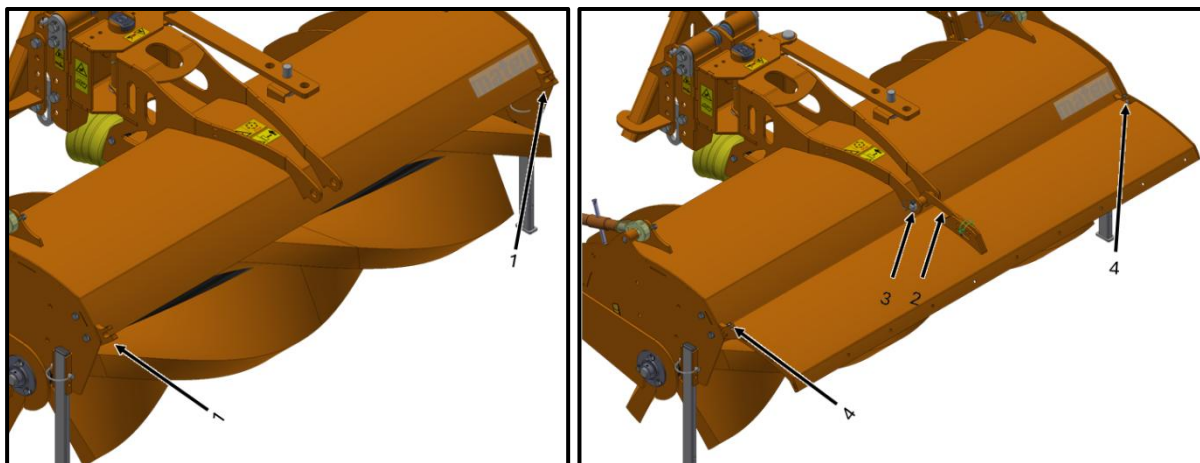


Fig. 41: Mounting of accessories – splash plate

To mount the splash plate, the two holders **(1)** must first be bolted onto the machine; it is possible that the holders **(1)** are already mounted. The splash plate can now be inserted in the holders **(1)** and secured with the two screws **(4)**. Now attach the adjusting lever **(2)** and insert the clevis pin **(3)**, then secure the latter with the linchpin.

Disassembly is carried out in reverse sequence.

The holders **(1)** for the splash plate are not identical to the holders for the dirt container.

When driving on public roads, without a splash plate, the holders **(1)** must be removed.

7.5.3 Mounting the side broom

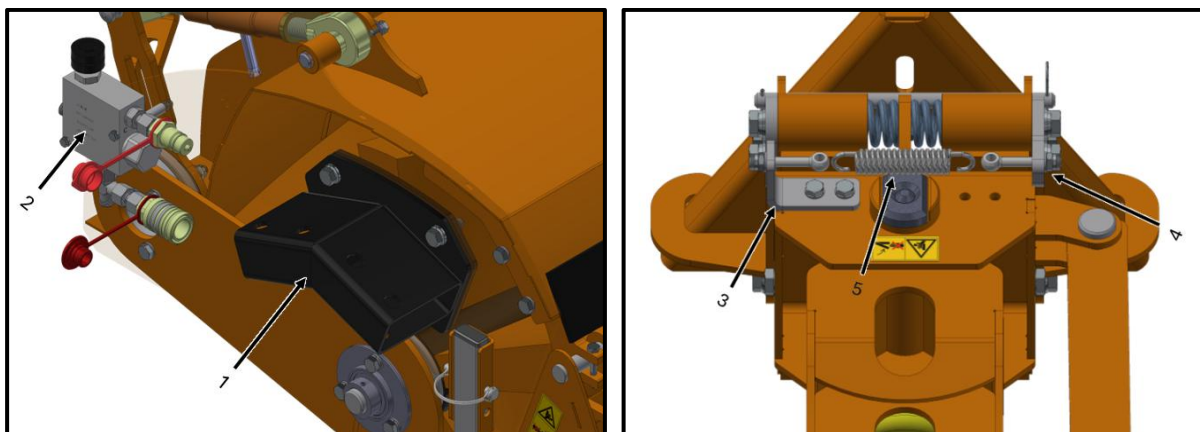


Fig. 42: Mounting of the side broom – holder, flow control valve and spring unit

To mount the side broom, first mount the holder **(1)**, the flow control valve **(2)**, including the hydraulic unit and spring unit, consisting of the holders **(3)** and **(4)**, as well as the tension spring **(5)**; it is possible that this is already mounted.

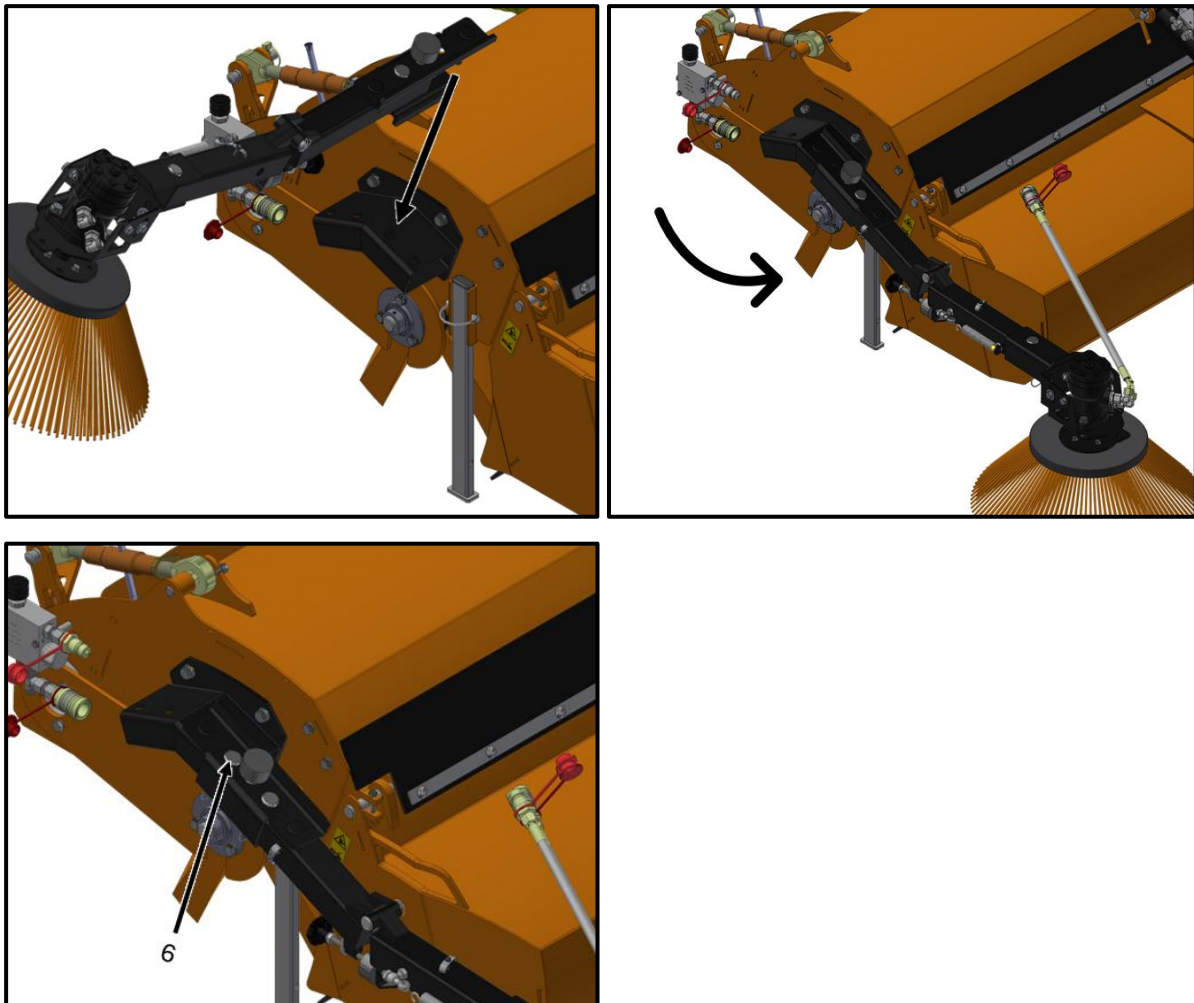


Fig. 43: Mounting the side broom

Now hang the side broom, as shown above, insert the clevis pin **(6)** and secure with a linch-pin. In addition, the hydraulic lines from the motor to the flow control valve **(2)** must be connected. If the machine is too far to one side in center position, the tension springs **(5)** must be adjusted by increasing/decreasing the tension.

To remove the side broom, the holder **(1)** and flow control valve **(2)** can remain mounted; however, the tension springs **(5)** should be removed. For removal of the side broom, carry out the above steps in reverse sequence.

7.5.4 Mounting of the water sprinkler

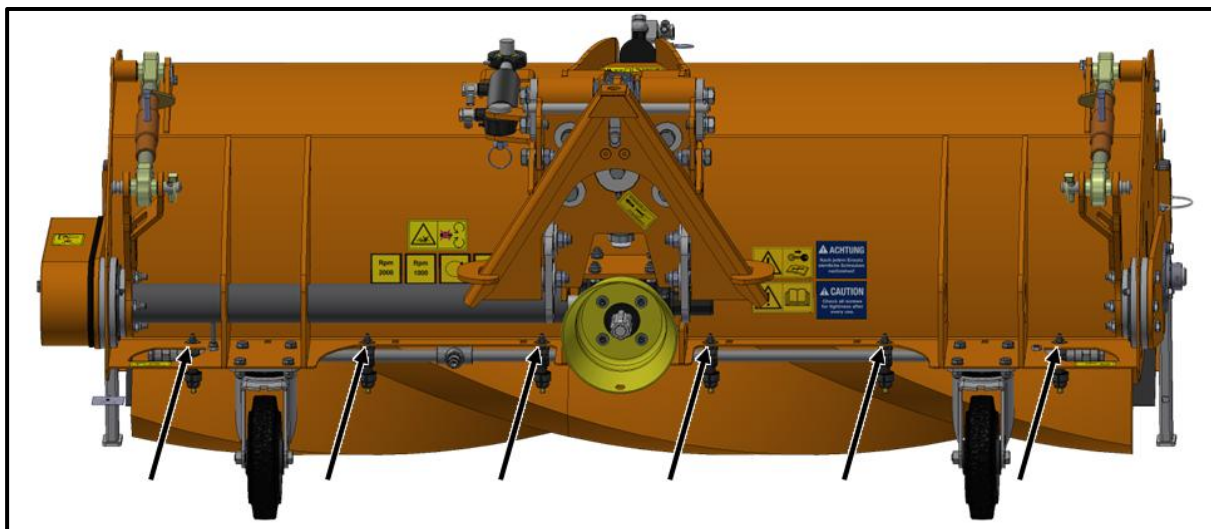


Fig. 44: Mounting of water sprinkler

The water sprinkler is mounted under the machine with six screws.

7.5.5 Mounting of the water sprinkler side broom extension

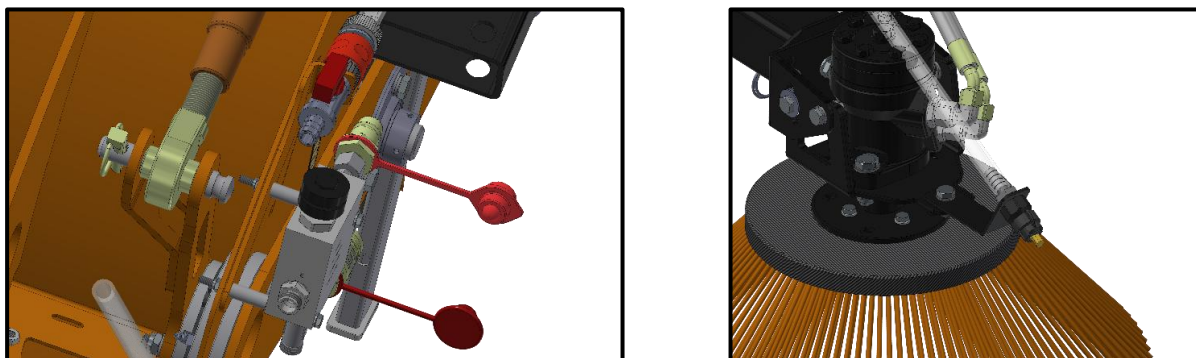


Fig. 45: Mounting of the water sprinkler extension – holder

The holder for the shut-off valve is mounted under the flow divider. The holder with the nozzle is bolted onto the side broom at the front.

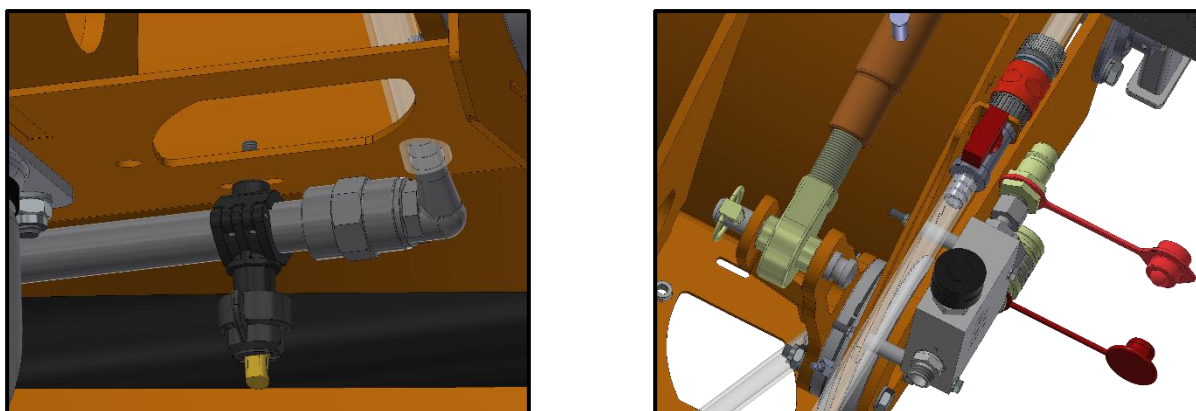


Fig. 46: Mounting of the water sprinkler extension – hose routing

The angled hose nozzle must be screwed into the water sprinkler (using sealing tape) and the hose must be routed between the nozzle and the shut-off valve. Plug the hose coupling onto the valve connection and connect to the nozzle with a hose.

7.5.6 Mounting the warning flag mount

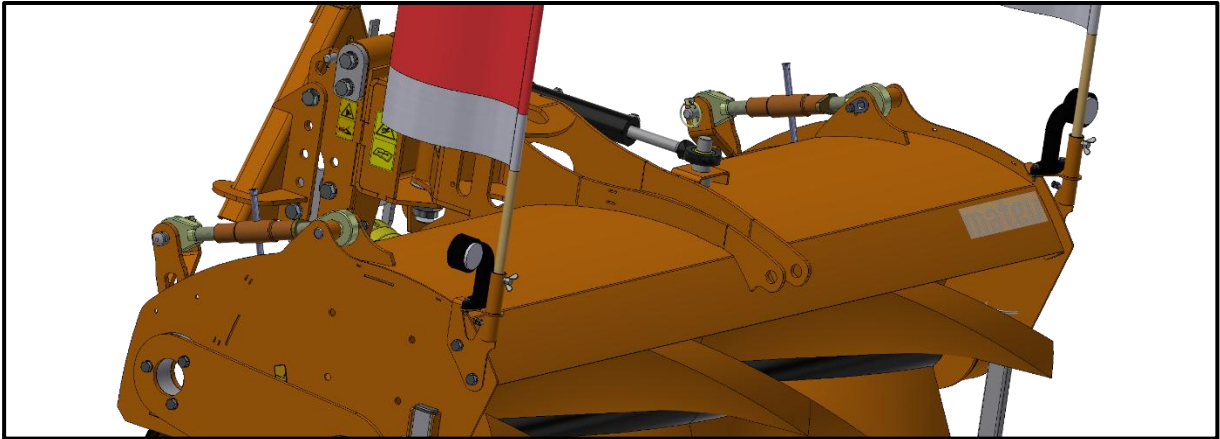


Fig. 47: Mounting the warning flag mount

The warning flag holders are mounted on the machine with two screws each. If holders for a splash plate or a dirt container are already mounted, the screws for these holders should be used.

The lights are bolted to the holders with two screws each.

After the warning flags are inserted into the holders, they are secured with a wing screw.

8 Commissioning

**Attention!**

The machine may be used only for its intended purpose.

**Notice!**

Observe the basic safety instructions in the section “General safety instructions”.

Attention! Danger of injury due to mechanical energy

Dangers exist, such as pinching, pulling in, catching.
Never operate the machine without the safety devices.
All safety devices must be functioning before operating the machine. These safety devices may be removed only for maintenance.

Attention! Danger of slipping due to contamination

After operation or in the event of faults in the machine the ground may be contaminated.
Clean up any contamination on the ground.

Inspect the machine and all mechanical, hydraulic and electrical components for damage!

Attention! Risk of injury due to damage and defects

Define responsibilities of the operating personnel.

Before operating the machine, make sure that all required guards and safety devices are correctly installed.

Do not operate the machine until such defects have been remedied.



Immediately replace any defective components of the machine.

Do not remove or bypass any safety devices or work without them.

Check installation conditions after first operation and after extended non-use.

Function checks before operating:

1. Sweeper roller turns freely
2. Chain is properly tensioned
3. Machine can be swiveled easily
4. Yaw compensation is functioning
5. Hydraulic system has no leaks and is correctly connected
6. Machine is properly mounted on the carrier vehicle – the angle is set correctly and the sweeper roller adjustment has been checked



Notice!

After about 3 operating hours, check to ensure that all screws are tight.

9 Operation

**Attention!**

The machine may be used only for its intended purpose.

**Notice!**

Observe the basic safety instructions in the section “General safety instructions”. Observe applicable laws and regulations.

Attention! Danger of crushing

Removing the safety devices will result in dangers. Mechanical dangers include pinching, pulling in, and catching. Do not open any protective covers. Do not remove any connections or covers of protective housings.

**Notice!**

Before switching on the machine, you must be aware of what action to take in the event of a malfunction.

**Attention!**

Maintain safe distances!

The sweeper can be used to sweep dirt or snow or to collect dirt using a suitable dirt container (available as an accessory).

For proper operation, the angle and height of the sweeper roller must be adjusted correctly. If the sweeper is adjusted too high, the surface will be inadequately cleaned. However if the sweeper is adjusted too high, the machine has excessive ground pressure and thus it can be damaged. The sweeper roller must be adjusted by means of two upper links so that it just touches the ground when the machine is lowered. Because the sweeper roller is a wear part, its setting must be checked and adjusted before each use.

When sweeping dirt, the machine can be used either with or without the dirt container. When sweeping snow, on the other hand, the machine must always be used without the container. If the machine is used with a container, the machine must be set crosswise to the direction of travel. Without a container, the machine can be inclined with the hydraulic angle adjustment (e.g. for sweeping surfaces).

9.1 Prior to starting work

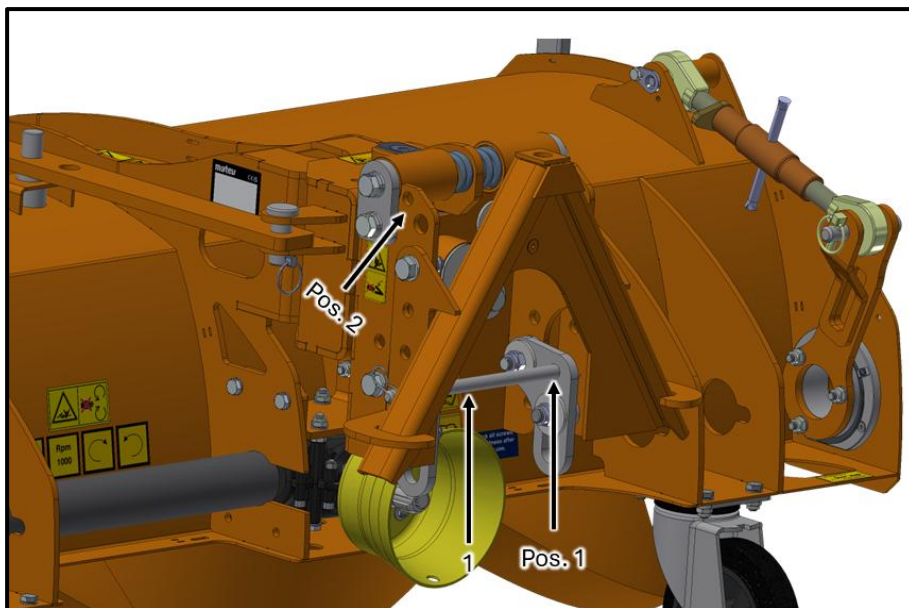


Fig. 48: Connection of yaw compensation before starting work

Before driving, the clevis pin **(1)** must be in the correct position! On machines without a dirt container, put the clevis pin **(1)** in **Position 1** and secure with the cotter pin. This blocks forward/backward movement of the yaw compensation.

On machines with a dirt container, put the clevis pin **(1)** in **Position 2** and secure with the cotter pin. This releases the yaw compensation, so the machine can swing forward and backward; Danger of crushing!

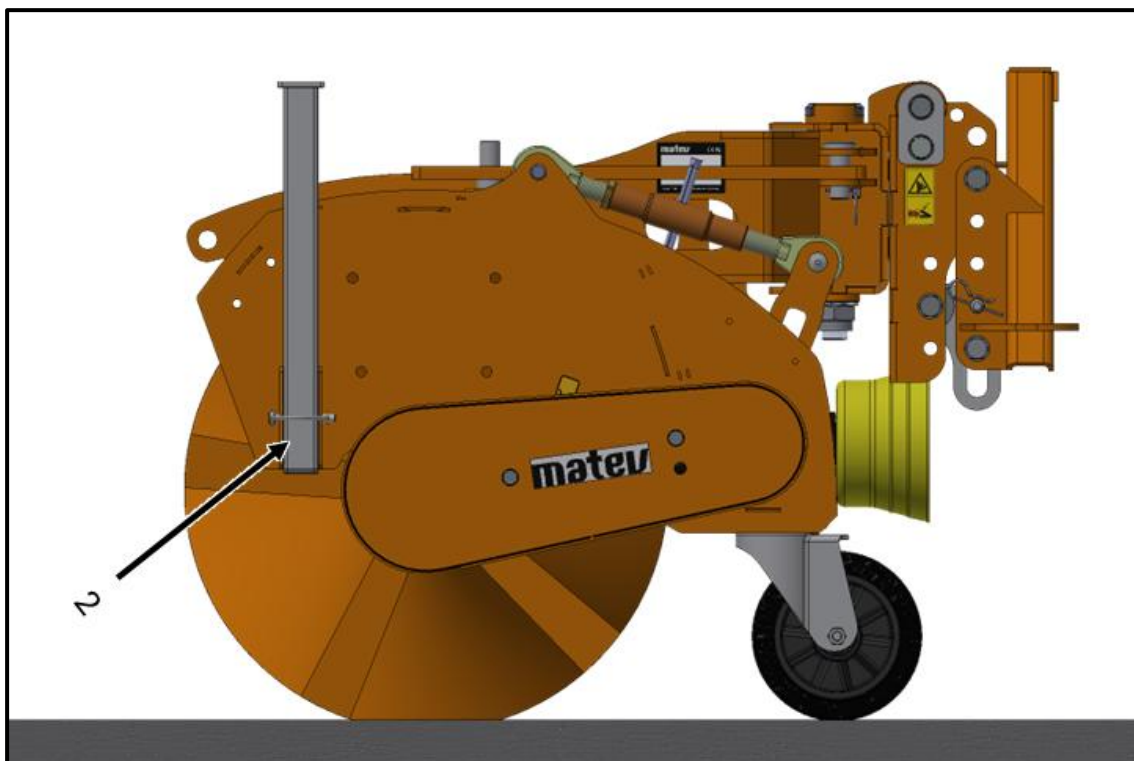


Fig. 49: Support feet before starting work

Also before driving, the support feet **(2)** (left and right) must be in working position; to do this, the machine must be raised from the carrier vehicle and secured against lowering. Now the support feet **(2)** can be mounted as shown and secured with the pipe linchpins.

9.2 Adjusting the sweeper roller

To achieve effective sweeping results, it is essential that the sweeper roller is set to the correct depth. If the sweeper roller is set too low, this will result in premature wear and will not achieve better results.

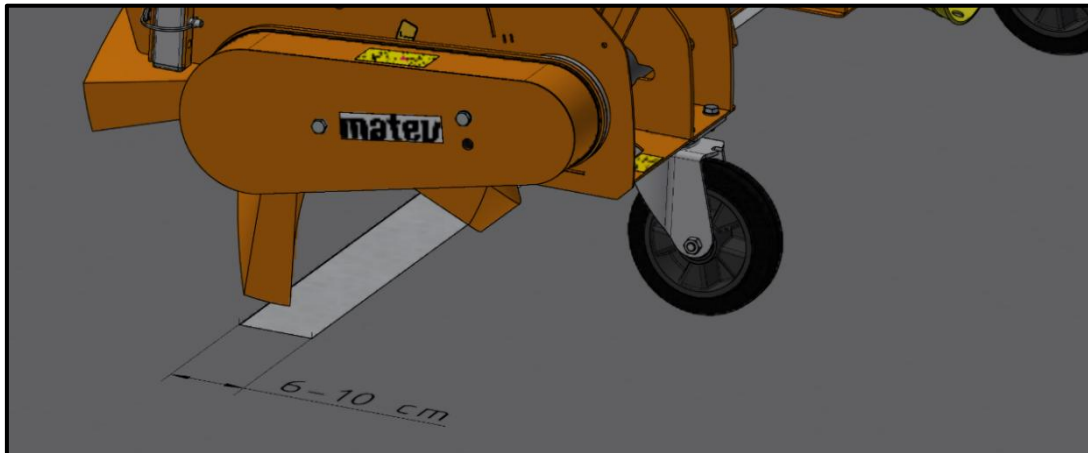


Fig. 50: Checking the sweeper roller pressure

The sweeper should be in working position and then switched on at working speed. There should be an even sweeping pattern with a width of 6-10 cm. Switch the machine off and raise it to check the sweeping pattern. If the sweeping pattern is uneven or too narrow/wide, the sweeper roller must be adjusted accordingly.

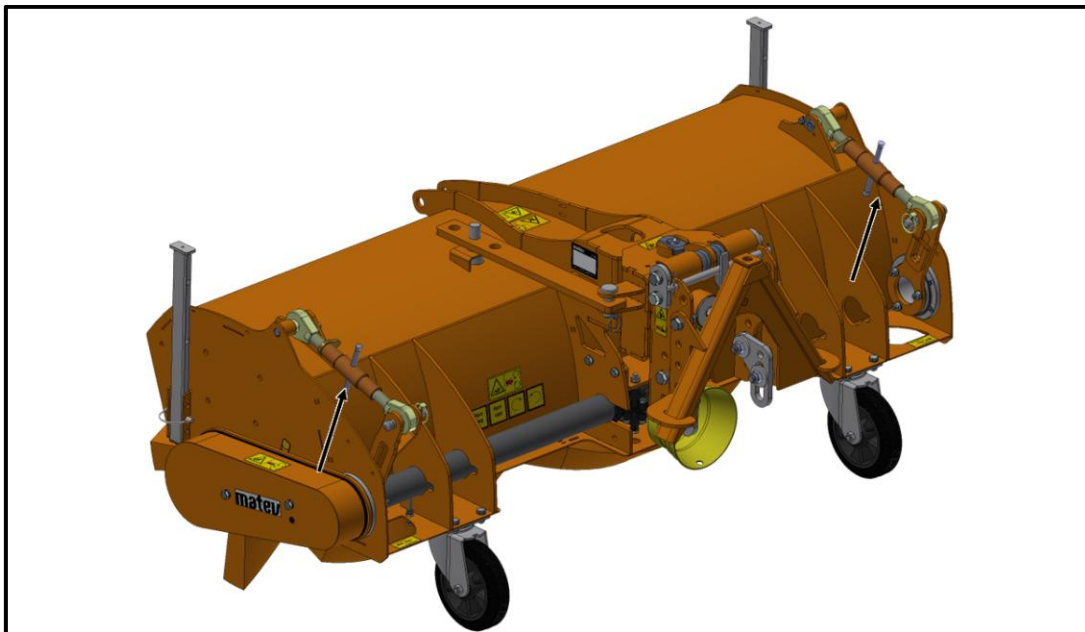


Fig. 51: Checking the sweeper roller pressure

The height of the sweeper roller can be adjusted using the two upper links marked in the figure. This is done by turning the upper links together or apart. Adjust the sweeper roller based on the sweeping pattern. The two height scales will help you when adjusting the sweeper roller. The sweeper roller wears out over time and therefore must be readjusted regularly.



Notice!

After adjusting the sweeper roller, the inclination of the sweeper to the attachment must be checked and adjusted, if necessary.

9.3 Swiveling the machine

To sweep dirt or snow to one side, it is possible to swivel the machine 20° in one direction. Depending on the machine configuration, this can also be done hydraulically. The machine should always be raised when swiveling.

9.3.1 Manual swiveling

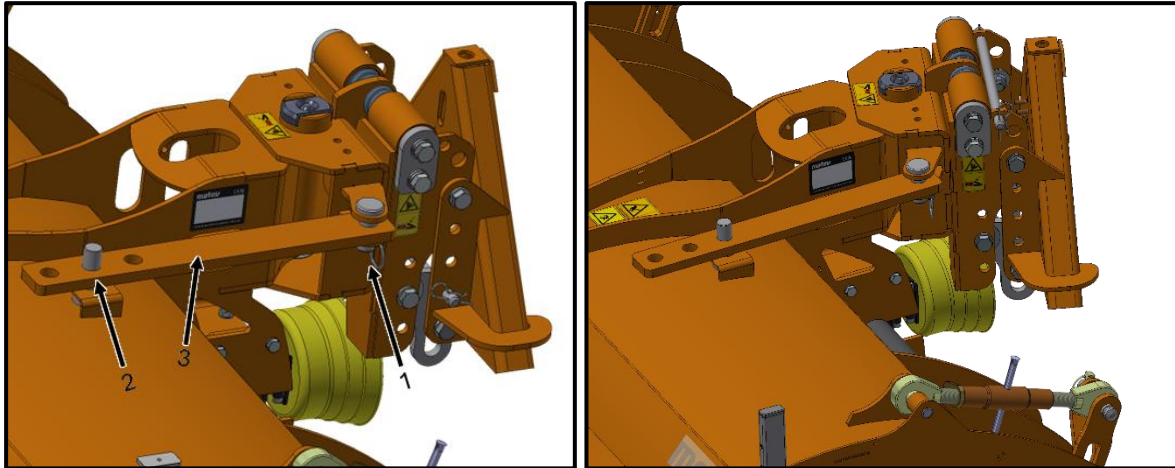


Fig. 52: Swiveling the machine – manually

Shut off the carrier vehicle motor when manually swiveling the sweeper! Exercise extreme caution when swiveling – Danger of crushing! To swivel the sweeper, you must first remove the clevis pin (1). Now you can place the desired hole of the adjusting bar (3) onto the pin (2), then swivel the machine and insert the clevis pin (1), then secure the latter with the lynchpin.

9.3.2 Hydraulic swiveling

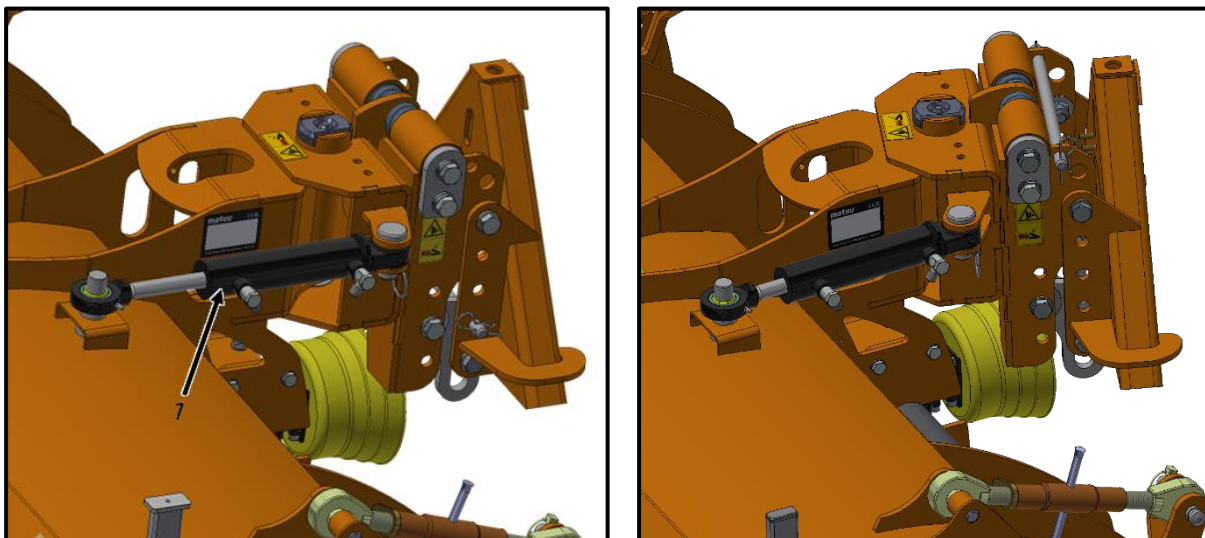


Fig. 53: Swiveling the machine – hydraulically

Hydraulic swiveling of the machine is carried out by the hydraulic cylinder (1), which is controlled by the carrier vehicle. While swiveling the machine, make sure that no one is within the swivel range / danger zone.

9.4 Sweeping



Attention!

The front sweeper can be damaged. Before each use, check to ensure proper adjustment of the sweeper roller.

Always operate the front sweeper from the driver seat of the tractor.

9.4.1 Sweeping without the dirt container (free sweeping)

Do not allow material to accumulate in front of the sweeper, which is especially likely when sweeping snow and can result in damage to the machine.

Attention!



Third persons can be injured and objects can be damaged. While sweeping, stones or similar objects can be thrown forward by the sweeper roller. Consequently always maintain an adequate distance to persons who could be injured or objects that could be damaged.

The manufacture accepts no liability in such cases of injury or damage.

1. With the angle adjustment element, adjust the front sweeper to the desired diagonal position.
2. Lower the front sweeper.
3. Always set the hydraulic system for lowering the machine to float position.
4. Switch on the sweeper roller.
5. Drive forward at a slow speed (about 5 – 7 km/h).

9.4.2 Sweeping with the dirt container



Attention!

Do not swivel the machine with the dirt container!

Swiveling the sweeper with the dirt container can damage the sweeper.

1. The front sweeper must be set crosswise to the direction of travel.
2. Lower the front sweeper.
3. Always set the hydraulic system for lowering the machine to float position.
4. Switch on the sweeper roller.
5. Drive forward at a slow speed.

Emptying the dirt container

1. Drive to the unload point.
2. Swing the dirt container upward. The dirt falls out.

9.5 Operation of accessories

9.5.1 Dirt container

The dirt container is emptied by means of the hydraulic cylinder, which is controlled from the carrier vehicle. Raise the machine with the carrier vehicle's lift mechanism and empty the dirt container; this can stir up dust. Now you can close the dirt container again; make sure that the dirt container is completely closed.

Do not allow anyone near the machine during emptying, as dust can be stirred up.

9.5.2 Splash plate (with splash guard)

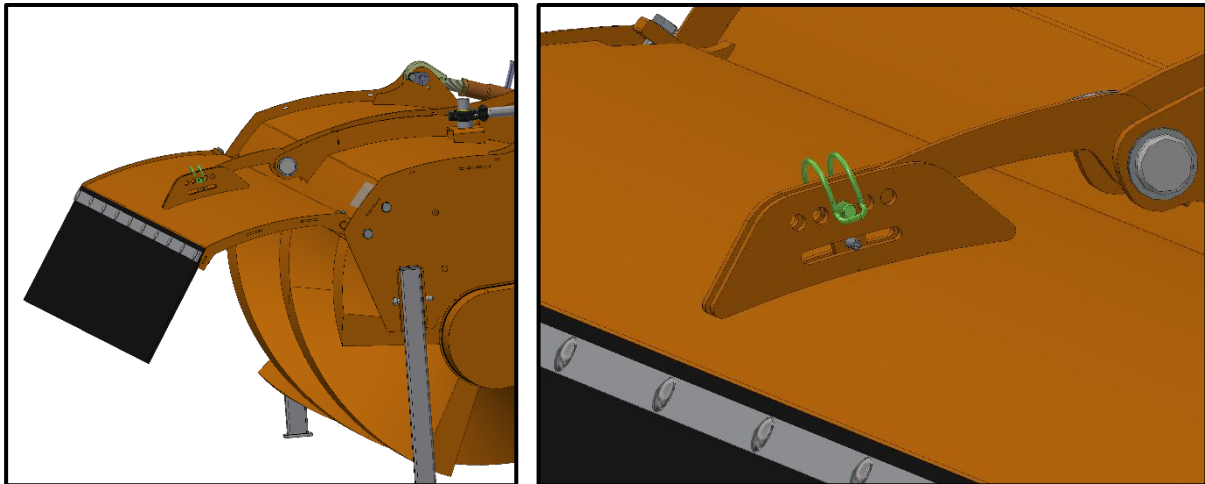


Fig. 54: Operation of splash plate

The splash plate can be adjusted higher or lower, depending on the requirements. To do so, remove the linchpin, put the splash plate into the desired position, and secure it again with the linchpin.

9.5.3 Side broom

Depending on the machine configuration, the side broom is activated either directly by the carrier vehicle or it can be activated using a 3-way valve, after which it is driven along with the sweeper.

The speed of the side broom can be adjusted with the flow divider.

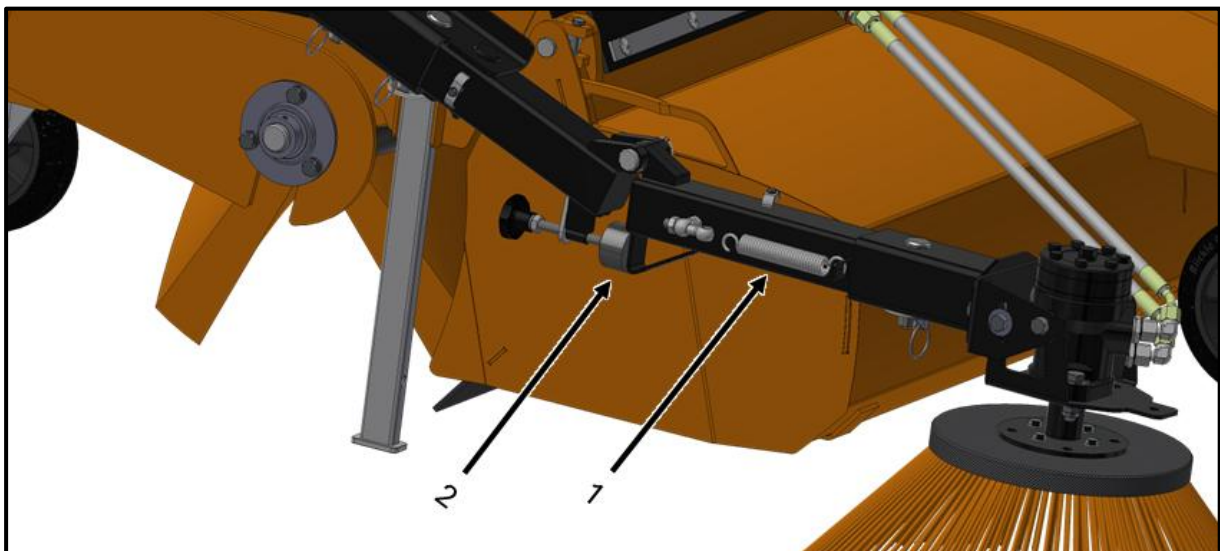


Fig. 55: Operation of side broom

The tension spring **(1)** is used to adjust the amount of side pressure generated by the side broom.

The rubber buffer **(2)** is for adjusting the depth.

9.5.4 Water sprinkler system



Fig. 56: Operation of water sprinkler

The water sprinkler is connected to the valve connection with a hose coupling.

9.5.5 Water sprinkler side broom extension

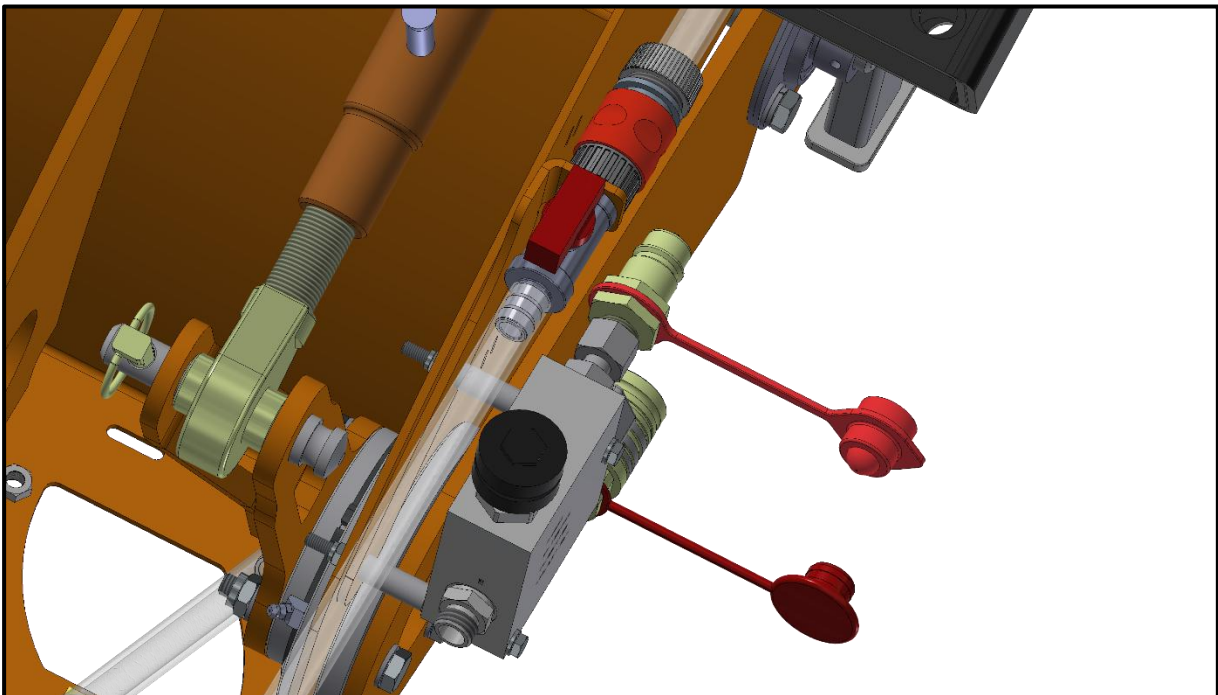


Fig. 57: Operation of water sprinkler extension

The shut-off valve is used to activate or deactivate the water sprinkler extension for the side broom.

9.6 Transport



Notice!

When transporting the machine, the driving behavior of the carrier vehicle can change.

During transport, i.e. when driving from one site to another without the machine being engaged, put the machine in transport position.

In transport position, the machine is raised completely with the carrier vehicle lift mechanism and secured against lowering. The machine must be switched off and in center position, i.e. not swiveled. In addition, the dirt container must be empty and folded down. The yaw compensation must be deactivated for transport. The side broom must be raised.

10 Decommissioning

**Notice!**

Observe the basic safety instructions in the section “General safety instructions”.

10.1 Storage of machine

If the machine is not used for an extended period:

- Clean the machine thoroughly
- Touch up any paint damage
- Spray bare parts with anti-corrosive oil

The storage area must be cool and dry to prevent corrosion on the single components of the machine.

- Pack the machine during storage to prevent damage from external influences.
- Use cardboard and other suitable packaging material.
- Secure the machine to prevent tipping or instability!

10.2 Disposal of machine

**Notice!**

Dispose of packaging material in accordance with local regulations.

- Dispose of cardboard, protective plastic packaging material and preservatives separately and properly.
- Dispose of the machine in accordance with local disposal regulations and the environmental protection laws of the country of use.
- Once the machine has reached the end of its service life, it must be dismantled properly for safe and proper disposal. This applies in particular to parts or substances that are harmful to the environment.

11 Maintenance



Notice!

Observe the basic safety instructions in the section “General safety instructions”.



Danger!

The attachment must not be switched on during maintenance work. Switch off the carrier vehicle engine and remove the ignition key.

Attention! Danger of crushing due to moving parts.



Never reach into the crushing hazard zone if parts are moving or can move. Be aware of after-run times of moving parts!

Properly reattach all protective devices that have been dismantled after executing the maintenance tasks.



Attention!

Personal injury and material damage to the tractor and implements can occur. Before each use of the implements check all safety-relevant parts and the hydraulic connections.



Notice!

After the first 20 hours of operation check all screw connections and pin connections. Subject the implement to regular maintenance. Use lubricating grease to lubricate the moving parts. See lubrication schedule.



Notice!

Do not allow grease or oil to enter the environment or sewage system. Collect grease and oil, and disposal of properly.

- Observe the general accident prevention regulations.
- Carry out specified setup, maintenance and servicing tasks according to schedule.
- Replace defective machine parts without delay!
- Inform the operating personnel before starting maintenance and servicing tasks.

Maintenance can also be carried out by operating personnel, if they have the proper training or instruction. In this case, it must be set down in writing which tasks may be carried out by the operator and which require the skills of a specialist.

- Use only tools that are in perfect working condition.
- Have suitable containers at hand for small parts during dismantling.
- Use only original replacement parts that are approved by the manufacturer

!

11.1 Maintenance schedule



Notice!

This section describes the maintenance tasks that are necessary for optimal and trouble-free operation of the machine.

Contact your sales partner if you have any questions about maintenance tasks and intervals.

Interval	Maintenance tasks	Personnel
Each use	<ul style="list-style-type: none"> • Check to ensure that all safety notices and safety devices are complete and functioning. (See section: 4.5) • Inspection of hydraulic hoses and lines for leaks • Check all screw connections and pin connections. Tighten any loose screws and secure loose pin connections with the securing elements provided. 	<ul style="list-style-type: none"> • Operator • Operator • Specialist
As necessary, or before/after extended non-use	<ul style="list-style-type: none"> • Lubricate moving parts of the machine • Clean the machine • Inspect wear parts and replace, if necessary 	<ul style="list-style-type: none"> • Operator • Operator • Specialist
After 20 operating hours	<ul style="list-style-type: none"> • Check/adjust chain tension • Check chain tensioner for wear • Lubricate chain as necessary 	<ul style="list-style-type: none"> • Specialist • Specialist • Specialist
Start of season End of season	<ul style="list-style-type: none"> • Lubricate moving parts of the machine • Clean the machine • Inspect wear parts and replace, if necessary • Check all screw connections and pin connections. Tighten any loose screws and secure loose pin connections with the securing elements provided. 	<ul style="list-style-type: none"> • Operator • Operator • Specialist • Specialist
After each sweeper roller replacement	<ul style="list-style-type: none"> • Lubricate contact surfaces between sweeper roller shaft and bearings 	<ul style="list-style-type: none"> • Specialist
Every 6 years	<ul style="list-style-type: none"> • It is recommended to replace hydraulic hoses every 6 years. 	<ul style="list-style-type: none"> • Specialist

Table 5: Maintenance schedule

If increased wear is detected during regular checks, shorten the required maintenance intervals based on the signs of wear.

Log all maintenance work that is carried out!

11.2 Lubricating schedule

11.2.1 Position of lubricating nipples

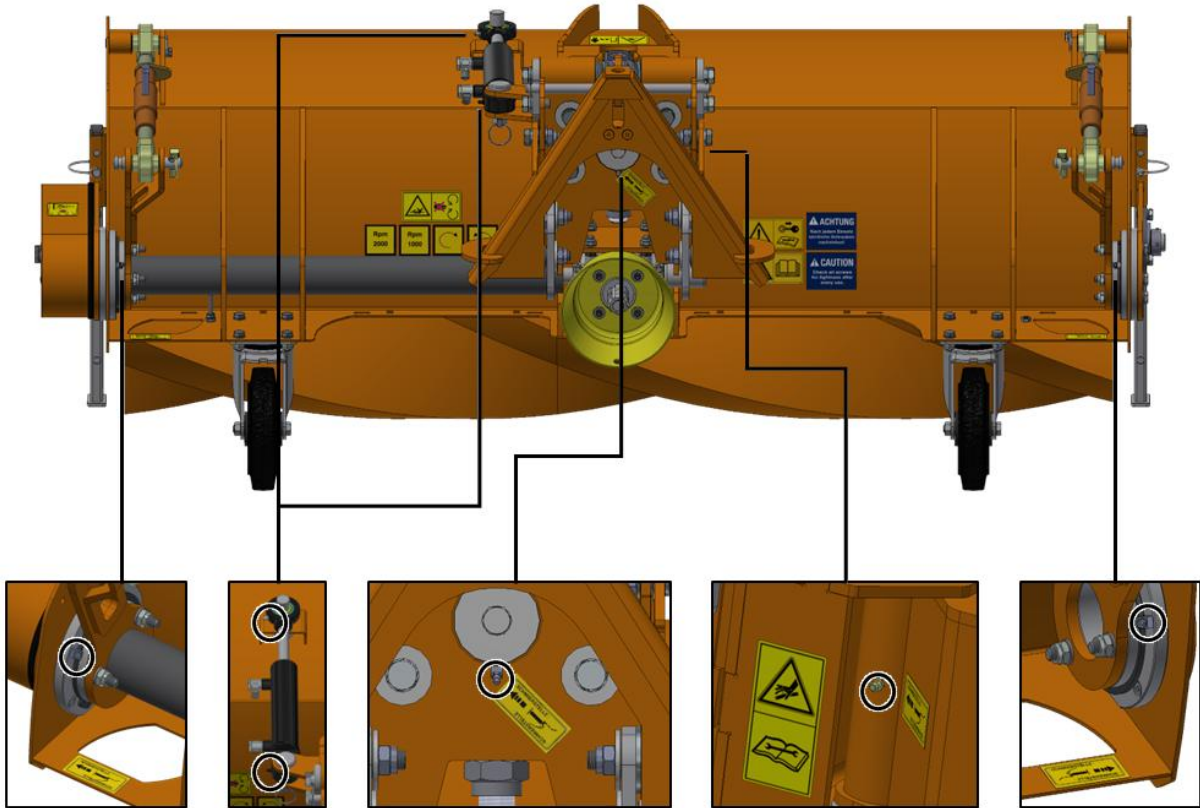


Fig. 58: Lubricating points

11.2.2 Lubrication/tensioning of chain

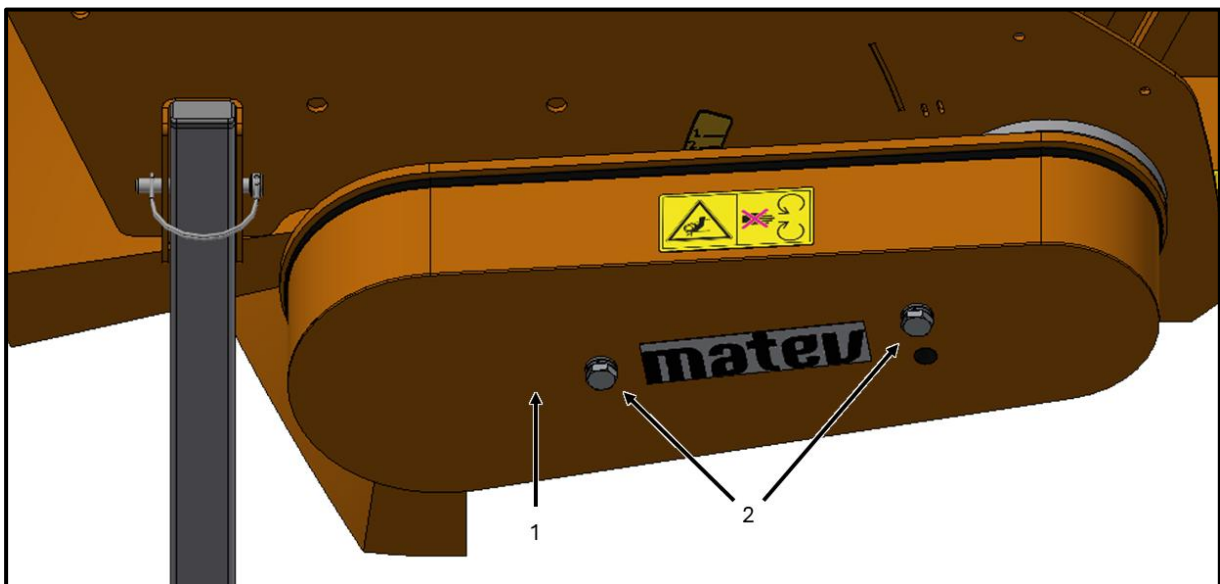


Fig. 59: Removing the chain case

To check the chain tension, or to lubricate the chain, the two screws **(2)** must be removed. Then the chain case **(1)** can be removed.

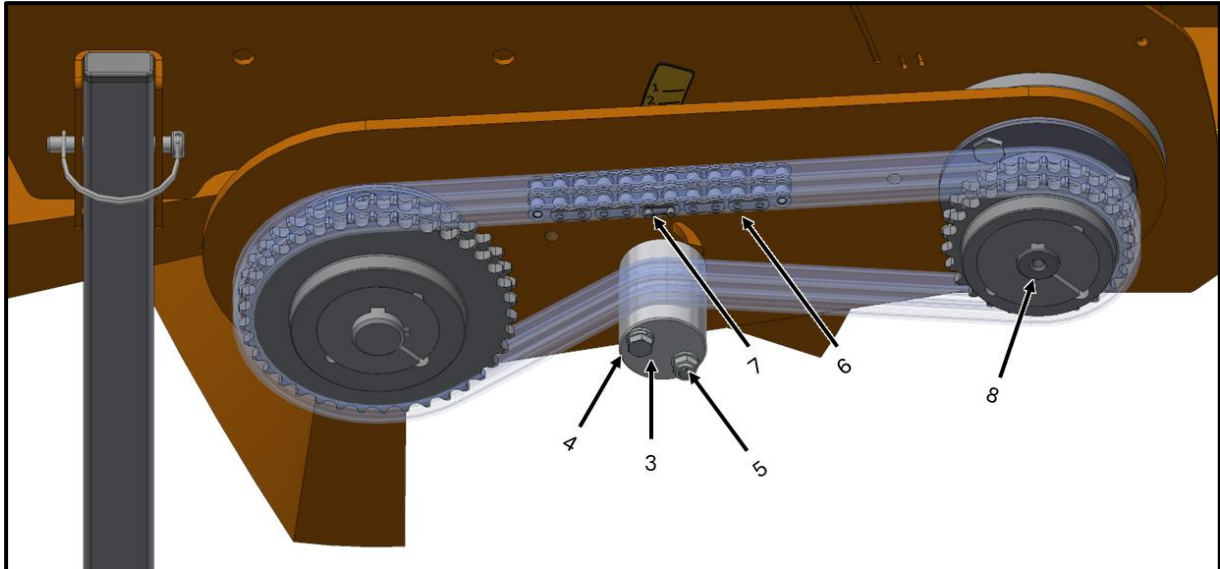


Fig. 60: Lubrication/tensioning of chain

Now the chain (6) can be lubricated. To prolong the life of the chain (6), it is recommended to first clean the chain (6) before lubricating it. The chain (6) should not be over-lubricated.

The chain (6) can sag somewhat, but not too much; if the chain (6) sags excessively, the tension must be increased as follows:

1. Loosen the screw (4) and nut (5)
2. Turn the chain tensioner (3) until the chain (6) is properly tensioned
3. Tighten the nut (5) and the screw (4)

If the chain (6) can no longer be tensioned properly, it is worn and must be replaced. It is also possible that the chain tensioner (3) is worn; in this case, the chain tensioner can be turned once before it has to be replaced.

After tensioning the chain, remount the chain case (1) by putting the chain case in place and securing it with the two screws (2).

11.2.3 Lubrication of the universal joint shaft

The universal joint shaft must be serviced in accordance with the manufacturer's operating instructions.

Lubricants used:



Notice!

Observe the manufacturer's safety instructions.

For lubricating nipples on bearings, pin connections and the chain:

Multi-purpose grease with temperature resistance of -30 °C to + 120 °C.

11.3 Replacing the sweeper roller

Note!

When the bristles are worn down to a length of about 10-12 cm, the sweeping performance decreases. The sweeper roller is worn out and must be replaced.



The sweeper roller consists of two segments; both segments must always be replaced together.

Accessories such as a dirt container must be removed to replace the sweeper roller.

It is easiest to replace the sweeper roller when the machine is mounted on a carrier vehicle. Use the lift mechanism to lower the machine to the ground, with the support feet folded up. Now remove the two upper link pins (1), allow the upper links (2) to swing away so that the sweeper roller is suspended freely on the arms. Caution: Danger of crushing!

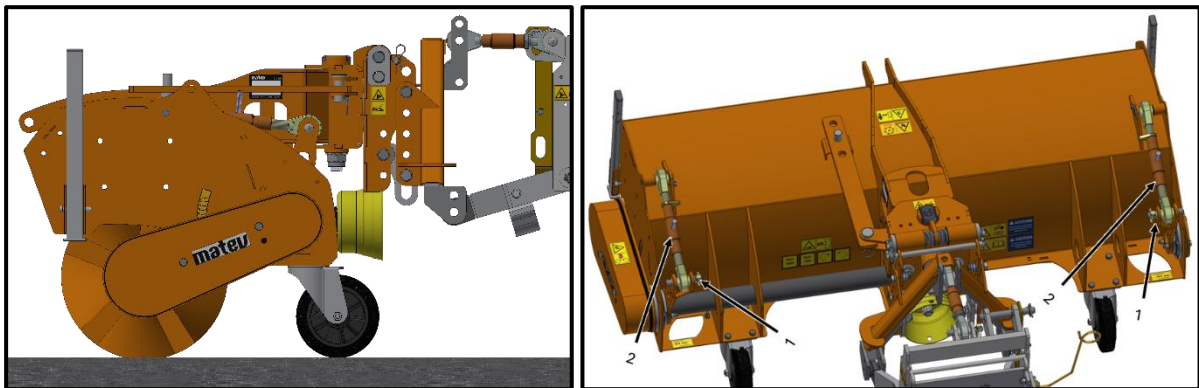


Fig. 61: Replacing the sweeper roller - 1

Use the carrier vehicle's lift mechanism to carefully raise the sweeper; the sweeper roller should remain on the ground. Once you have raised the sweeper far enough that the sweeper roller can be pulled out to the side, secure the machine so that it cannot lower.

Then remove the flange bearing (3). To do so, first loosen the tension ring and then remove the three screws. Now pull the flange bearing (3) from the shaft.

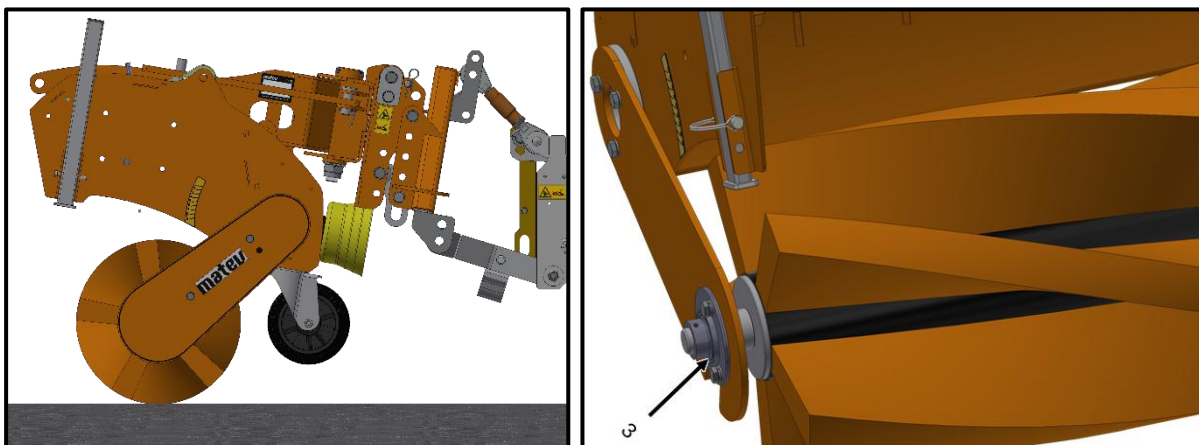


Fig. 62: Replacing the sweeper roller - 2

Then you can swing the arm to the side and remove the clamping element (4), which is secured with a setscrew. Loosen the screw and remove the clamping element (4). Now the sweeper roller segments can be removed.

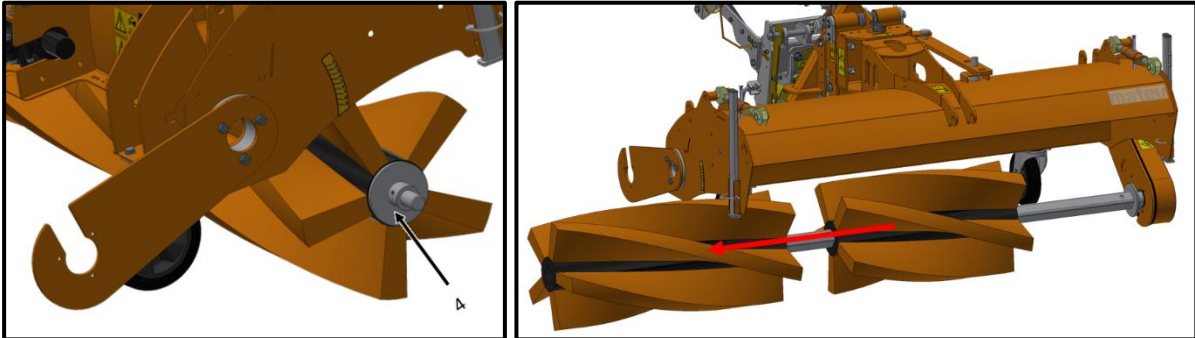


Fig. 63: Replacing the sweeper roller - 3

Then put on the new sweeper roller segments. Make sure that the two sweeper roller segments form a continuous row of bristles. Then reassemble everything in reverse sequence.

1. Secure the sweeper rollers with the clamping element (4)
2. Fold down the arm and place the flange bearing (3) on the sweeper roller shaft
3. Screw the flange bearing onto the arm with the three screws
4. Secure the sweeper roller shaft with the tension ring of the flange bearing (3)
5. Carefully lower the machine with the carrier vehicle's lift mechanism
6. Mount the upper link (2) with the upper link pins (1) and then adjust the sweeper roller depth; see [Adjusting the sweeper roller](#)

11.4 Check hydraulic system

Attention! Risk of injury due to hydraulic energy



Before working on the hydraulic system, switch off the vehicle and remove the ignition key.

Do not open any hydraulic connections as long as there is pressure in the hydraulic lines.

- Check hydraulic hoses for damage and replace, if necessary.
- Check hydraulic connections for leaks and tighten, if necessary.

11.5 Clean the machine



Notice!

Comply with all applicable environmental regulations during cleaning.

- If a high-pressure cleaner is used, do not direct the water jet directly at bearing points and seals.
- Do not use pointed tools for cleaning, since they can damage the paint which can lead to corrosion.
- Remove all equipment after cleaning.
- Carry out a function check after cleaning.

11.6 Wear and spare parts lists



Notice!

Use only original replacement parts.

The wear and spare parts lists are available on the matev website.

Link: [Spare parts - Service - matev: Attachments for municipal technology](#)

Or contact your sales consultant or contact the manufacturer directly:

matev GmbH
Nürnberger Str. 50
90579 Langenzenn
Phone: +49 (0) 9101 9087-0

www.matev.eu

info@matev.eu

12 Fault



Notice!

Observe the basic safety instructions in the section “General safety instructions”.



Attention! Danger of injury due to malfunctions

Shut down the machine immediately in case of malfunctions.
Do not start up the machine again until it has been properly repaired.



Attention! Danger of injury due to malfunctions

Remedy a fault only if you have the specified qualification to do so.



Attention! Risk of crushing due to moving parts

Never reach into the crushing hazard zone if parts are moving or can move. Be aware of after-run times of moving parts!

Properly reattach all protective devices that have been dismantled after executing the maintenance tasks.

Description of fault	Cause	Remedy	Personnel
Sweeper roller does not rotate	<ul style="list-style-type: none"> - Hydraulic connections / universal joint shaft not connected - Machine defect 	<ul style="list-style-type: none"> - Connecting the hydraulic connections / universal joint shaft to the tractor - Contact authorized service center 	<ul style="list-style-type: none"> - Operator - Dealer
Sweeper roller rotates in wrong direction	<ul style="list-style-type: none"> - Hydraulic connections to carrier vehicle are incorrectly connected - Sweeper configuration is not compatible with carrier vehicle 	<ul style="list-style-type: none"> - Properly connect the hydraulic connections to the carrier vehicle - Use compatible carrier vehicle / modify machine configuration 	<ul style="list-style-type: none"> - Operator - Dealer
Poor sweeping result	<ul style="list-style-type: none"> - Incorrect sweeper roller adjustment (too deep / too high) - Sweeper roller is worn out - Incorrect sweeper roller speed - Driving speed too fast - Dirt container full 	<ul style="list-style-type: none"> - Adjust sweeper roller correctly - Adjust/replace sweeper roller - Adjust sweeper roller speed - Reduce driving speed - Emptying the dirt container 	<ul style="list-style-type: none"> - Operator - Specialist - Operator - Operator - Operator

Machine does not swivel	<ul style="list-style-type: none"> - Hydraulic connections not connected - Switching valve not connected - Machine defect 	<ul style="list-style-type: none"> - Connecting the hydraulic connections to the carrier vehicle - Connect switching valve - Contact authorized service center 	<ul style="list-style-type: none"> - Operator - Operator - Dealer
Side broom does not turn	<ul style="list-style-type: none"> - Stop valve closed - Hydraulic connections not connected - Flow control valve closed too far - Machine defect 	<ul style="list-style-type: none"> - Open stop valve - Connect hydraulic connections - Adjust flow control valve setting - Contact authorized service center 	<ul style="list-style-type: none"> - Operator - Operator - Operator - Dealer
Dirt container does not open	<ul style="list-style-type: none"> - Hydraulic connections not connected - Switching valve not connected - Machine defect 	<ul style="list-style-type: none"> - Connect hydraulic connections - Connect switching valve - Contact authorized service center 	<ul style="list-style-type: none"> - Operator - Operator - Dealer
Water sprinkler not functioning	<ul style="list-style-type: none"> - Water tank empty - Nozzle(s) clogged - Filter clogged - Machine defect 	<ul style="list-style-type: none"> - Fill water tank - Clean nozzles - Clean filter - Contact authorized service center 	<ul style="list-style-type: none"> - Operator - Specialist - Specialist - Dealer

Table 6: Troubleshooting table

13 Repair

Please note the following information as well:

- All repairs must be carried out by a specialized company.
- Use only original matev replacement parts.
- Modifications to the machine are prohibited.

In case of faults, problems, or other issues, contact the retailer from whom you purchased the product.

The manufacturer will be glad to help you find a suitable dealer.

14 Disposal

The implement must be disposed of in accordance with the applicable regulations of the municipality or the country.

Take the parts to the collection points for residual waste, special waste, or recycle them depending on material.

matev GmbH does not provide any disposal services.

15 List of illustrations

Fig. 1: Definition of orientation and direction of rotation	5
Fig. 2: Type plate DE	6
Fig. 3: Type plate EN	6
Fig. 4: Direction of rotation	7
Fig. 5: Guards on the machine	15
Fig. 6: Chain case	15
Fig. 7: Drive shaft protective tube	16
Fig. 8: Safety cap	16
Fig. 9: Gear stub cover	16
Fig. 10: Safety notices on the machine 1	17
Fig. 11: Safety notices on the machine 2	17
Fig. 12: Safety notices on the machine 3	18
Fig. 13: Lifting and suspension points	22
Fig. 14: Overview	23
Fig. 15: Safely park the machine	24
Fig. 16: Hazard area	25
Fig. 17: Hydraulic combination 1	28
Fig. 18: Hydraulic combination 2	28
Fig. 19: Hydraulic combination 3	29
Fig. 20: Hydraulic combination 4	29
Fig. 21: Hydraulic combination 5	29
Fig. 22: Hydraulic combination 6	30
Fig. 23: Hydraulic combination 7	30
Fig. 24: Hydraulic combination 8	31
Fig. 25: Hydraulic combination 9	31
Fig. 26: Hydraulic combination 10	31
Fig. 27: Hydraulic combination 11	32
Fig. 28: Hydraulic combination 12	32
Fig. 29: Hydraulic combination 13	33
Fig. 30: Hydraulic combination 14	33
Fig. 31: Hydraulic combination 15	34
Fig. 32: Attachment of cat. 0 coupling triangle	37
Fig. 33: Attachment of cat. 1 arrestor hook	38
Fig. 34: Attachment of cat. 1 arrestor hook	39
Fig. 35: Attachment of cat. 1 quick coupling triangle	40
Fig. 36: Attachment ScanFrame	41
Fig. 37: Adjust inclination	42
Fig. 38: Universal joint shaft mounted	43
Fig. 39: Mounting of accessories – attaching the dirt container	45
Fig. 40: Mounting of accessories – connecting and adjusting the dirt container	45
Fig. 41: Mounting of accessories – splash plate	46
Fig. 42: Mounting of the side broom – holder, flow control valve and spring unit	46
Fig. 43: Mounting the side broom	47
Fig. 44: Mounting of water sprinkler	48
Fig. 45: Mounting of the water sprinkler extension – holder	48
Fig. 46: Mounting of the water sprinkler extension – hose routing	48
Fig. 47: Mounting the warning flag mount	49
Fig. 48: Connection of yaw compensation before starting work	53
Fig. 49: Support feet before starting work	53
Fig. 50: Checking the sweeper roller pressure	54
Fig. 51: Checking the sweeper roller pressure	54
Fig. 52: Swiveling the machine – manually	55
Fig. 53: Swiveling the machine – hydraulically	55
Fig. 54: Operation of splash plate	57
Fig. 55: Operation of side broom	57
Fig. 56: Operation of water sprinkler	58
Fig. 57: Operation of water sprinkler extension	58
Fig. 58: Lubricating points	63

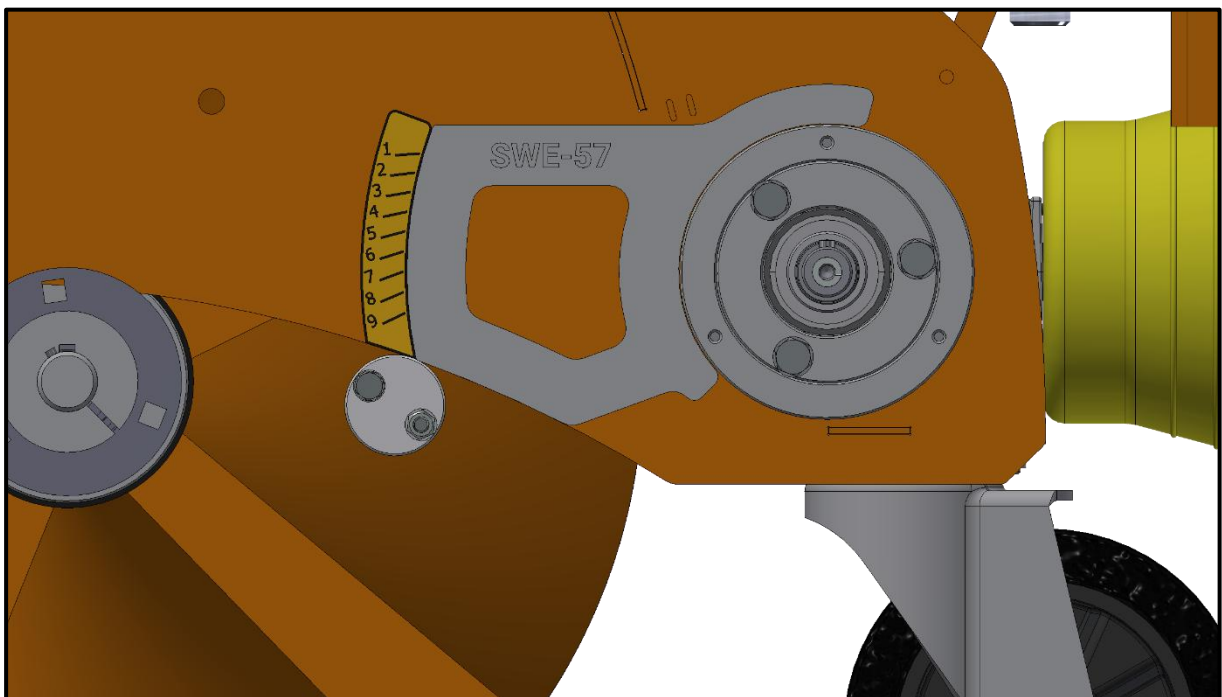
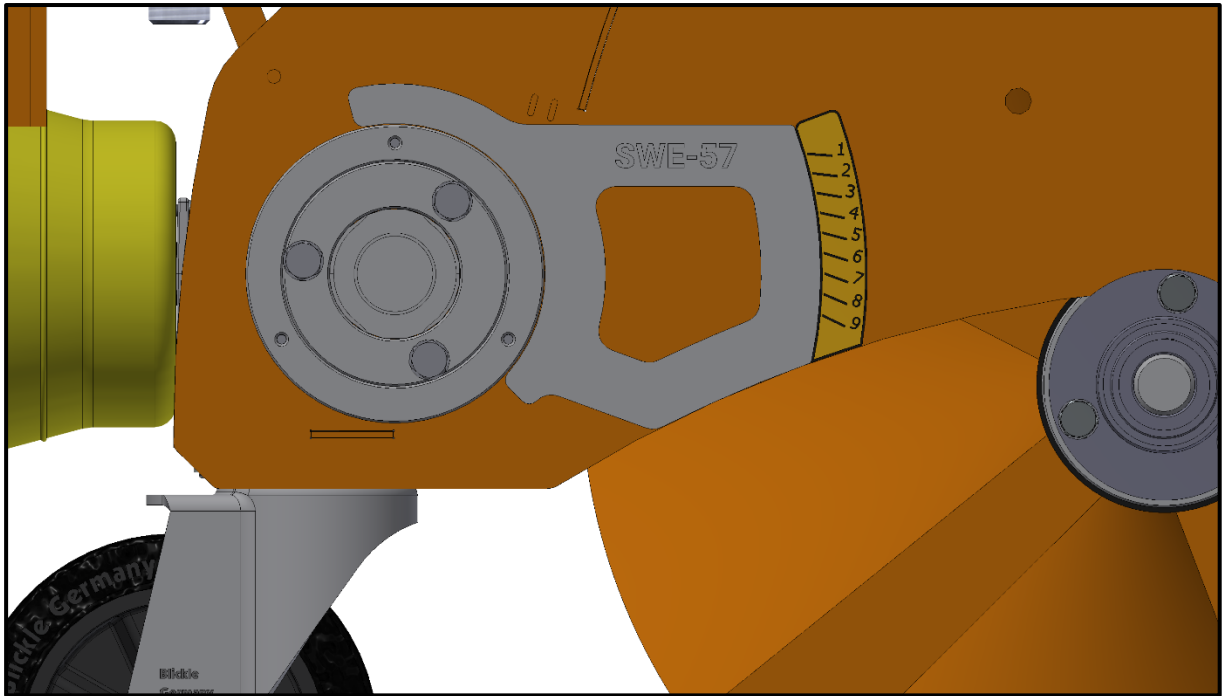
Fig. 59: Removing the chain case	63
Fig. 60: Lubrication/tensioning of chain	64
Fig. 64: Replacing the sweeper roller - 1	65
Fig. 65: Replacing the sweeper roller - 2	65
Fig. 66: Replacing the sweeper roller - 3	66

16 List of tables

Table 1: Technical data	26
Table 2: Dimensions	27
Table 3: Hydraulic combinations	28
Table 4: Optional accessories	36
Table 5: Maintenance schedule	62
Table 6: Troubleshooting table	69

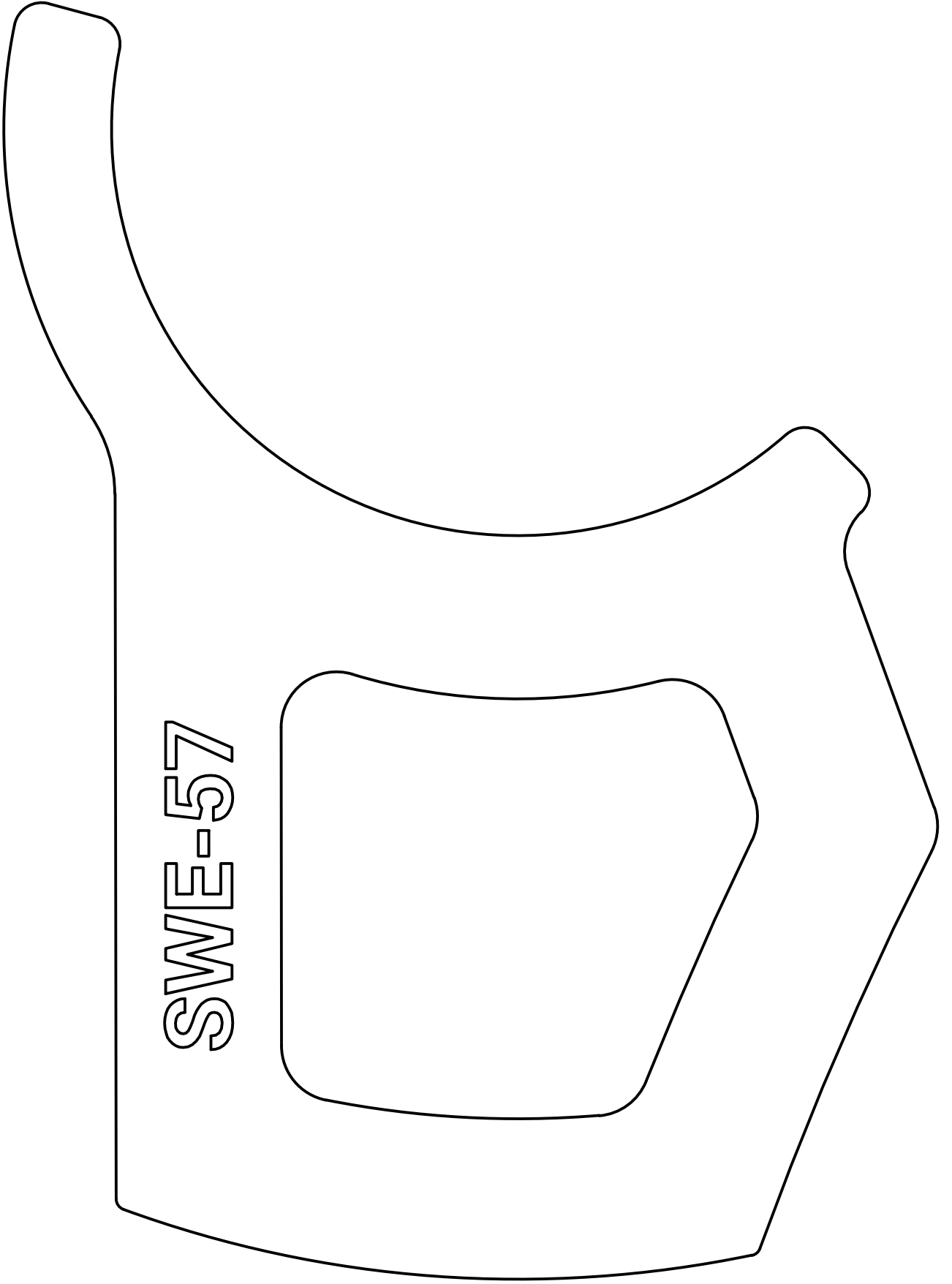
17 Height scale sticker + template

To affix the height scale sticker, the template (next page) must first be cut out and attached to the machine as shown below. This is best achieved when the sweeper roller arms are all the way down. After attaching the template, the height scale sticker can be affixed.





SWE-57



18 EC Declaration of Conformity



The manufacturer / distributor

**matev GmbH
Nürnberger Straße 50
90579 Langenzenn
Germany**

hereby declares that the following products of the front sweeper product series

Product SWE-14-57 / SWE-16-57 / SWE-18-57 (serial numbers acc. to type plate)

comply with all relevant provisions of the applicable legal regulations (hereinafter) – including applicable amendments at the time of the declaration. The manufacturer bears the sole responsibility for issuing this declaration of conformity. This declaration refers only to the machine in the condition in which it was placed on the market; any parts attached and/or subsequent modifications made by the end user are not taken into account.

The following legal regulations were applied: Machinery Directive 2006/42/EC

The following harmonized standards were applied:

- | | |
|---------------------------|--|
| DIN EN ISO 12100:2010-03 | Safety of machinery – General principles for design – Risk assessment and risk reduction |
| DIN EN ISO 4413:2011-04 | Hydraulic fluid power – General rules and safety requirements for systems and their components |
| DIN EN ISO 4254-1:2022-12 | Agricultural machinery - Safety - Part 1: General requirements |

Name of the person who is authorized to compile the technical documents:

Georg Hemmerlein

Place: Langenzenn

Date: 2025-07-10

A handwritten signature in black ink, appearing to be 'G. Hemmerlein', is written over a horizontal line.

Georg Hemmerlein
Managing Director

19 Declaration of Conformity

This declaration is issued under the sole responsibility of the manufacturer



**matev GmbH
Nürnberger Straße 50
90579 Langenzenn
Germany**

Product range: Front sweeper

Product: SWE-14-57 / SWE-16-57 / SWE-18-57

Description:

The object of the declaration above is in conformity with the relevant UK Statutory Instruments (and their amendments):

2008 No. 1597 Supply of Machinery (Safety) Regulations 2008

and the following harmonizing standards were applied:

- | | |
|---------------------------|--|
| DIN EN ISO 12100:2010-03 | Safety of machinery - General principles for design - Risk assessment and risk reduction |
| DIN EN ISO 4413:2011-04 | Hydraulic fluid power - General rules and safety requirements for systems and their components |
| DIN EN ISO 4254-1:2022-12 | Agricultural machinery - Safety - Part 1: General requirements |

Signed for and on behalf of
matev GmbH, Nürnberger Straße 50, 90579 Langenzenn, Germany

Georg Hemmerlein

Place: Langenzenn
Date: 2025-07-10

A handwritten signature in black ink, appearing to read 'G. Hemmerlein', is written over a horizontal line.

Georg Hemmerlein
Managing Director