

Operating manual

MRM-120 / MRM-120 AS

Suction sweeper



Table of contents

Table of contents	2
1 Introduction	4
2 About this operating manual	5
3 Technical data	6
3.1 Basic implement	6
3.2 Side broom	7
3.3 Active suction, mechanical	7
3.4 Power diagram, hydraulic	8
4 General safety notices	9
4.1 Presentation of the general safety notices	9
4.2 Intended use	9
4.3 Instructions for the owner	10
4.3.1 Qualifications of personnel for installation and maintenance tasks	10
4.3.2 Qualifications of operating personnel	10
4.3.3 Accident prevention	10
4.3.4 Instruction	10
4.4 Warning signs	10
4.4.1 General warning signs	10
4.4.2 Machine-specific notice	11
4.5 Safety devices	12
4.5.1 Protective device on the machine	13
4.5.2 Protective devices on the machine with active suction unit (option)	13
4.5.3 Safety notices on the machine	14
4.5.4 Other stickers	17
5 Equipment variants	18
5.1 Suction unit	18
5.2 Side broom	18
5.3 Work aids	19
6 Installation	20
6.1 Mounting the multifunction suction nozzle	20
7 Operating the multifunction suction nozzle	21
7.1 Application area	21
7.2 Coupling the implement on the carrier vehicle	21
7.2.1 Lifting devices	22
7.2.2 Hydraulic connection	22
7.2.3 Coupling the front PTO shaft	22
7.3 Preparing the implement for work deployment	22
7.3.1 Adjusting the overall height of the leaf suction nozzle	22

7.3.2	Adjusting the suction gap	23
7.3.3	Active suction unit	24
7.3.4	Mounting the suction hose	25
7.4	Operating the side brooms	26
7.4.1	Connecting the side brooms	26
7.4.2	Adjusting the side brooms	28
7.4.3	Using the multifunction suction nozzle without mounted side brooms	29
8	Maintenance.....	31
8.1	Safety when performing maintenance	31
8.2	Maintenance.....	31
8.3	Lubricating schedule	31
8.3.1	Maintenance schedule for basic implement and side brooms.....	33
8.3.2	Maintenance schedule for active suction unit, mechanical	34
9	Fault	35
10	Repair	35
11	Disposal	35
12	Warranty.....	36
13	List of illustrations.....	37
14	List of tables	37

1 Introduction

We welcome you to the matev family

and thank you for purchasing a matev GmbH product, we appreciate your trust. You have acquired a quality product, if contrary to expectations you should have problems with the implement, contact your responsible sales partner.

Company stamp – sales partner

Before using the product for the first time, please read this operating manual carefully and conscientiously all the way through. The manual describes the handling of the implement in detail and will support you in working safely and effectively.

For damage that occurs due to improper use, we will not accept any warranty claims.

Variants may be described in the manual that do not match the scope of delivery of your implement.

Please enter the data of the rating plate on the implement in the manual. This information will be helpful in communication if there is a service case.

matev GmbH	
90579 Langenzenn	
CE	
Modell:	<input type="text"/>
Code Nr.:	<input type="text"/>
Fabr. Nr.:	<input type="text"/>
Baujahr:	<input type="text"/>
Ges.Gew.:	<input type="text"/>

The matev products are subject to change in the interest of technical progress. 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.

Regards

matev GmbH

2 About this operating manual

Prior to first use, read the manual carefully and conscientiously all the way through.

Keep this manual where it is easily accessible. This will enable you to refer to important information and handling instructions as needed.

At transfer of the machine the owner of the machine receives instruction in the operation and maintenance of the machine from the owner's sales partner.

The owner must ensure that operating and maintenance personnel have been instructed in full scope in the operation and maintenance of the machine.

Listings with bullet points are marked as follows:

- Text
- Text
- Text . . .

Handling instructions are marked in the sequence, in which they should be executed, as follows:

1. Text
2. Text
3. Text . . .

If directions (left, right, rear, front) are specified in the operating manual, these directions are always based on the direction of travel of the carrier vehicle.

The direction of travel of the front PTO shaft is always specified from the front as viewed from above. Right rotation CW (clockwise) left rotation CCW (counterclockwise).

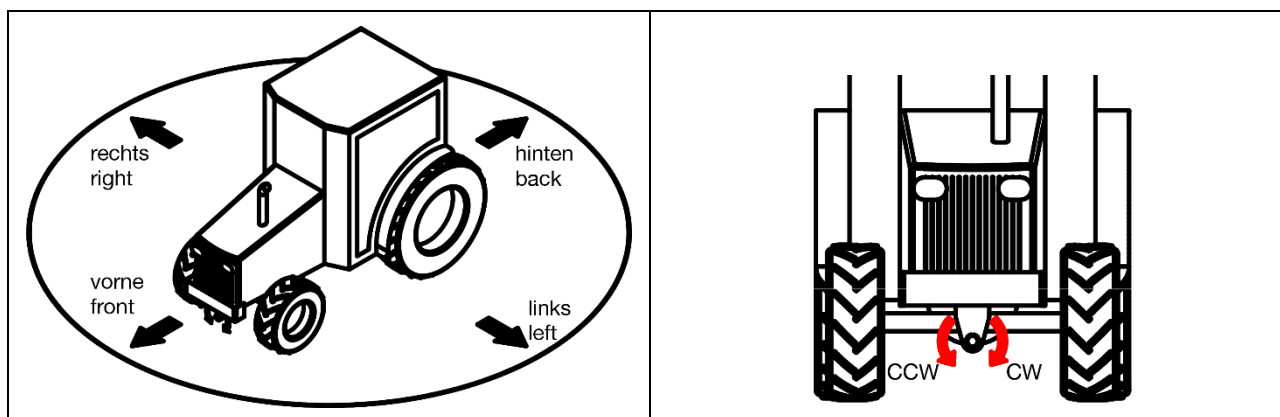


Fig. 1: Definition of alignment and direction of rotation

3 Technical data

3.1 Basic implement

Dimensions (L/W/H) in mm.

Basic implement	880 (1050) ¹ x 1300 x 700
-----------------	--------------------------------------

Working width in mm

Working width – basic implement	1200
---------------------------------	------

Weight in kg

Basic implement without accessories	105 (125) ¹
-------------------------------------	------------------------

Chassis

Casters	Height-adjustable, airless
---------	----------------------------

Drive sweeper roller (hydraulic)

Direction of rotation	Counter to the direction of rotation
-----------------------	--------------------------------------

Oil quantity / oil pressure	From 12 l/min at 80 bar
-----------------------------	-------------------------

Required hydraulic power	1.5 kW
--------------------------	--------

Interface to the carrier vehicle

Coupling triangle	Cat. 0, Cat. 1, height-adjustable via matev hole pattern Carrier-specific attachments on request
-------------------	---

¹ with mounted pressure roller

3.2 Side broom	
Maximum width, multifunction suction nozzle in mm	
1 side broom / 2 side brooms	1700 / 2100
Weight in kg	
Weight per side broom	20 kg
Basic implement	880 x 1300 x 700
Drive for side brooms	
Required hydraulic power per side broom	1.5 kW (2.5 kW ²)
rpm	Variably adjustable
3.3 Active suction, mechanical	
Drive, active suction unit	
Turbine rpm	3400 rpm
Drive shaft	1" 15-piece
Drive PTO	2000 rpm CW/CCW

² For weed removal

3.4 Power diagram, hydraulic

Please use the diagram below to assess whether your vehicle has enough hydraulic power available.

1. Add the power specifications of all attachments present on your machine.
2. Be aware of the information concerning the hydraulics of your vehicle.



Note!

As a rule, the hydraulic power of your vehicle available for additional implements, is considerably lower than the engine power.

3. Enter the information in the table below:
Example: maximum hydraulic pressure on the vehicle 150 bar. Oil volumetric flow of 40 l/min. equals a maximum hydraulic power of 8.8 kW.

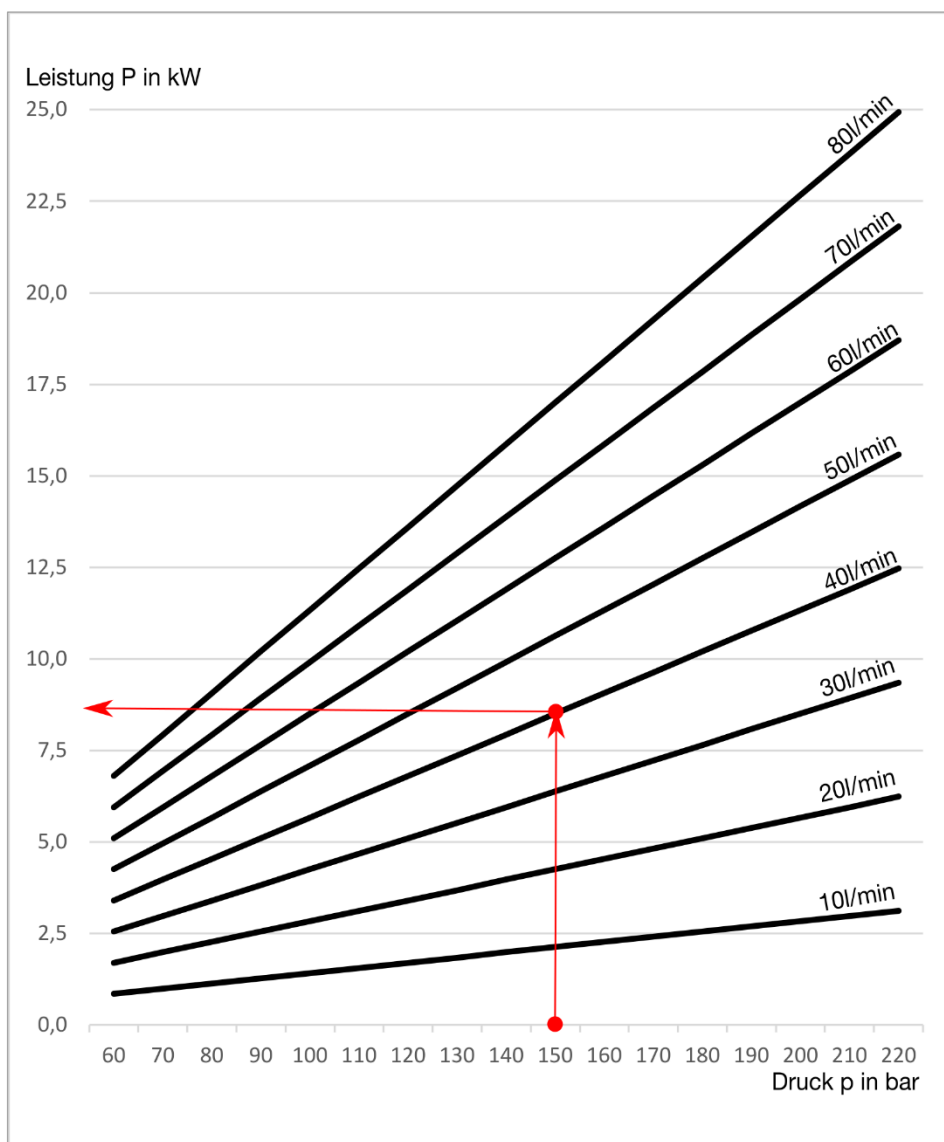


Fig. 2: Hydraulic power diagram

4 General safety notices

Guidelines and instructions that you must comply with when dealing with machines are presented in this section.

4.1 Presentation of the general safety notices

The safety notices used in the text employ pictograms and signal words, which in combination indicate the severity of the risk to be expected.



Danger!
Dangerous situations that can directly result in severe or fatal injuries.



Attention!
Dangerous situations that can possibly result in minor injuries or material damage.



Note!
Recommendations or information for the operator.
Read this note. It facilitates your work.

4.2 Intended use



Danger!
To avoid misuse, also read the section 7.1 Application area all the way through.

- The implements are designed for municipal tractors or for use on comparable carrier vehicles.
- They must only be operated on carrier vehicles with the power range specified in the technical data.
- Intended use also includes compliance with the operating, service, and maintenance conditions prescribed by the manufacturer.
- Moreover intended use includes exclusive use of original spare parts and supplemental equipment, or use of such parts and equipment that meet the technical requirements specified by the manufacturer.
- Unauthorized modifications to the implements result in exclusion of liability on the part of the manufacturer.

All other uses are excluded!

Non-intended use causes:

- Danger of injury to the operator or third parties
- Carrier vehicle damage or implement damage
- Environmental damage

4.3 Instructions for the owner

4.3.1 Qualifications of personnel for installation and maintenance tasks

Installation and maintenance tasks on safety-relevant tasks must only be executed by personnel with the following qualifications:

- They must have a technical education, such as agricultural machine mechanic, auto mechanic, etc.
- Persons without qualified training must be supervised by a person with qualified training.
- They must have read and understood this operating manual.
- They must be aware of the appropriate safety regulations (accident prevention).

4.3.2 Qualifications of operating personnel

- They must be completely instructed in the operation of the machine.
- They must have read and understood this operating manual.
- They must be aware of the appropriate safety regulations (accident prevention).

4.3.3 Accident prevention

The safety regulations and accident prevention regulations are legally regulated in every country. The workshop manager or the appointed specialist for occupational health and safety is responsible for compliance with the valid regulations.

4.3.4 Instruction

At transfer of the implement the owner receives instruction in the operation and maintenance of the implement from the sales partner.

The owner must ensure that operating and maintenance personnel have been instructed in full scope in the operation and maintenance of the trailer.

4.4 Warning signs

Warning signs indicate hazards that cannot be countered through protective measures. To avoid severe or fatal injuries the warning signs must always be obeyed.



Danger!

Missing warning signs must be replaced without delay.

Do not operate the implement if the warning signs are missing.

You can order the warning signs by specifying the spare parts numbers listed in section 4.5.

4.4.1 General warning signs

In this section the non-specific, generally-valid warning signs are explained.



Read the operating manual and comply with the safety notices.



Prior to performing maintenance and repair tasks, turn off the engine and remove the key.



Injuries due to fluid escaping under high pressure.
Comply with the notice in the operating manual.

4.4.2 Machine-specific notice

Machine-specific warning signs and instructions concerning operation and maintenance of the machine are explained in this section.



Only touch machine parts after they have come to a complete standstill!



Do not open or remove protective devices when the engine is running.



Implement is only suitable for a PTO shaft speed of 2000 rpm!
Predominantly mid-mount, front, or independent engine PTO shafts.



Implement is only suitable for a PTO shaft speed of 1000 rpm!
Usually an independent engine PTO shaft.



Implement is only suitable for clockwise PTO shaft rotation! (CW)



Implement is only suitable for counterclockwise PTO shaft rotation! (CCW)

The direction of rotation is always specified when viewing the end of the PTO shaft from the front.



After each use re-tighten all screws



Lubricating point

4.5 Safety devices

There are various safety devices on machines to protect people who work with a machine, or who are in the direct vicinity of the machine, to prevent premature wear, and also to prevent environmental damage. These safety devices are a fixed component of the machine and must not be manipulated or removed. Missing or damaged safety devices must be replaced without delay.

Concerning the safety devices, a distinction is made between protective devices that prevent contact with a danger point, and safety notices that alert to a hazard on the machine.

Likewise, hazards can occur through insufficient maintenance, consequently the maintenance instructions must also be classified as safety notices.



Each time before starting to drive, ensure that all described safety notices and safety devices are completely present and functional. Do not operate the implement if safety notices or safety devices are missing or damaged.

4.5.1 Protective device on the machine

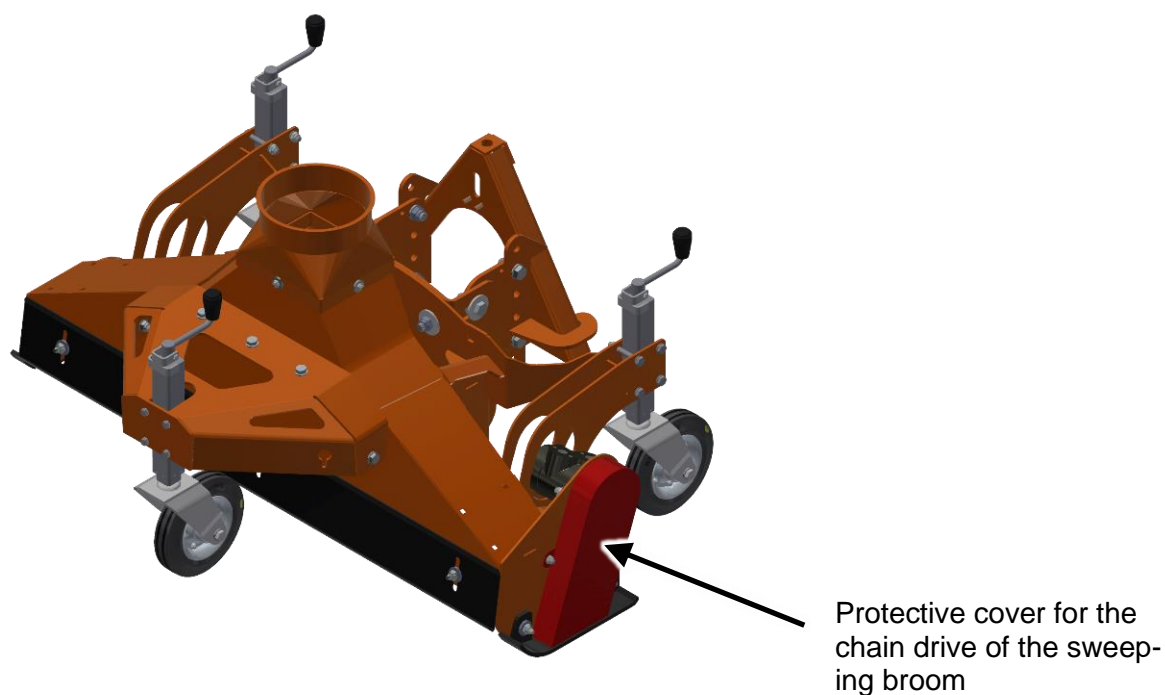


Fig. 3: Protective cover of the chain drive

4.5.2 Protective devices on the machine with active suction unit (option)

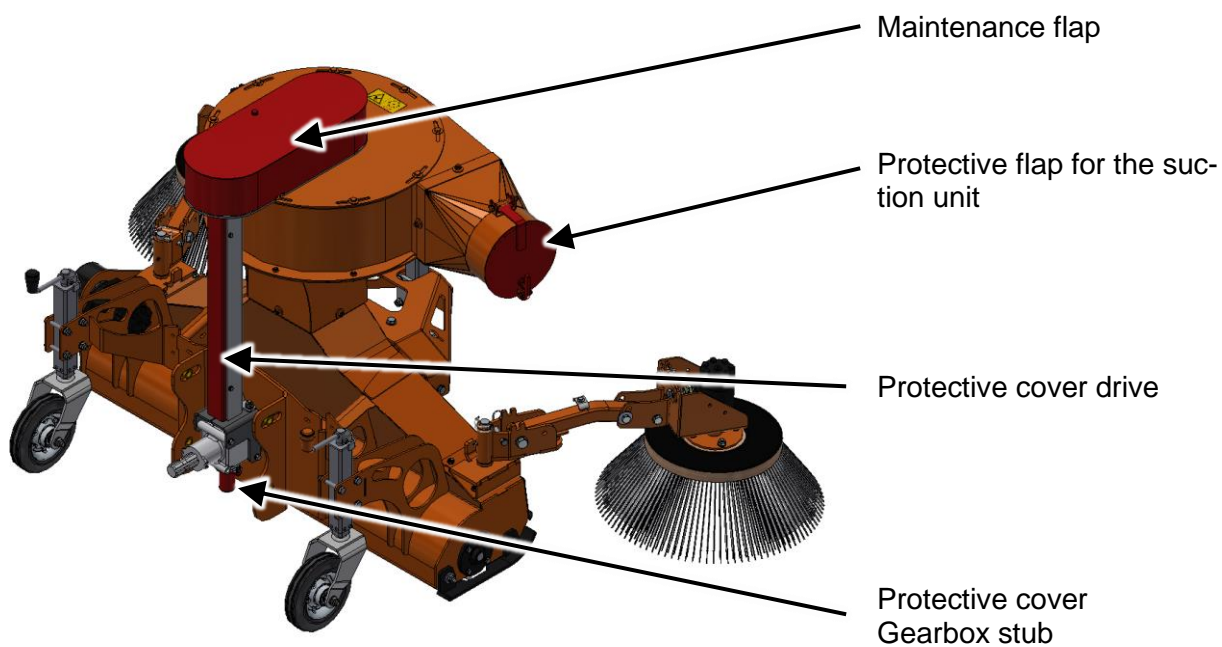


Fig. 4: Protective cover for active suction (hydraulic and mechanical)

4.5.3 Safety notices on the machine

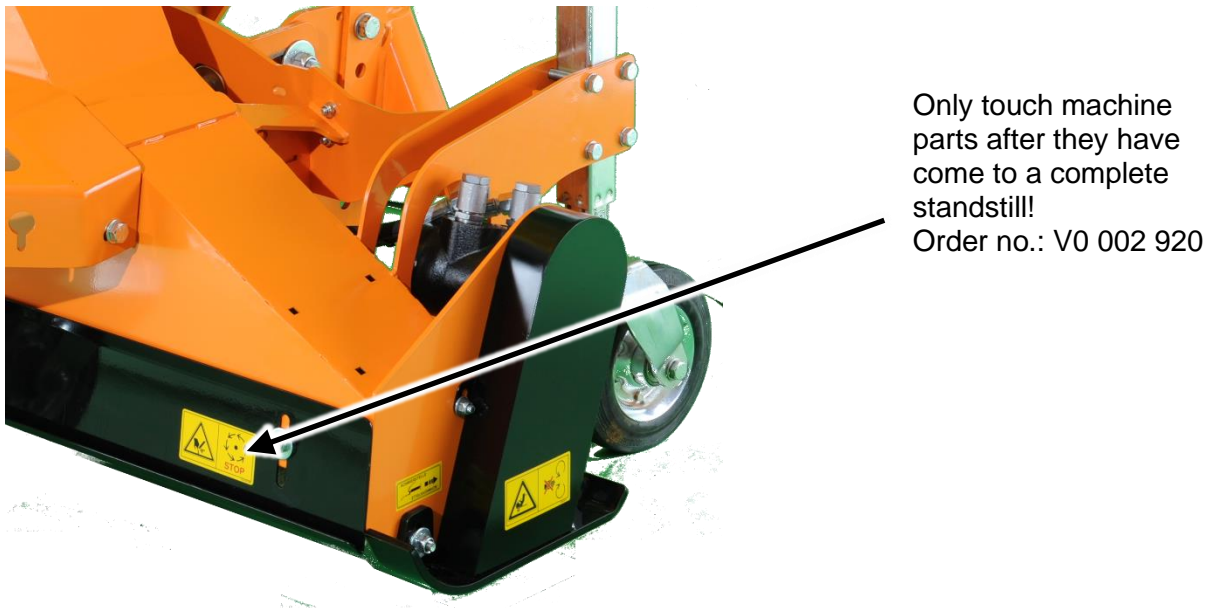


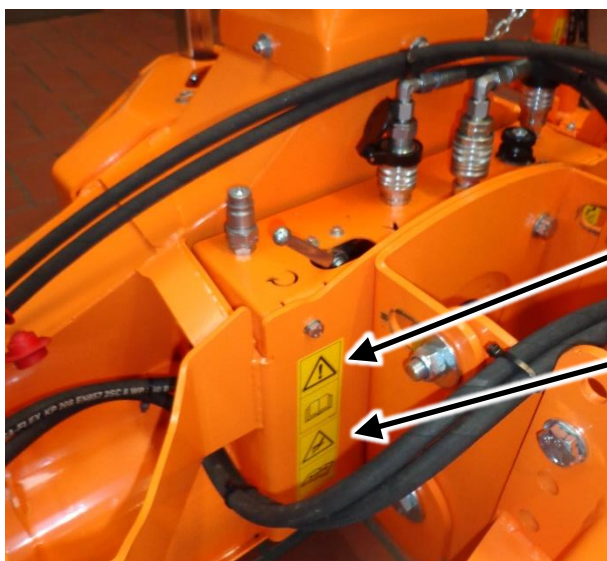
Fig. 5: Safety notice on front panel

Lubricating point
Order no.: V0 002 963

Do not open or remove
protective devices when
the engine is running.
Order no.: V0 002 924



Fig. 6: Chain drive



Read the manual
Order no.: V0 002 923

Danger due to hydraulic
equipment
Order no.: V0 002 929

Fig. 7: Safety notice – hydraulics

Switch off engine
Order no.: V0 002 925

Retighten screws
Order no.: V0 002 965



Fig. 8: Safety notice – maintenance

Lubricating point
Order no.: V0 002 963

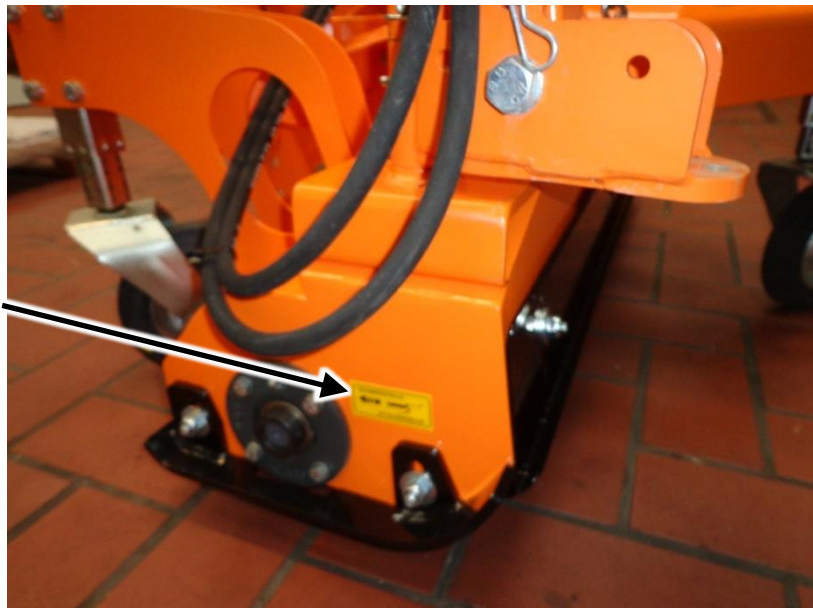


Fig. 9: Maintenance notice – pedestal bearing, sweeper roller

Lubricating point
Order no.: V0 002 963

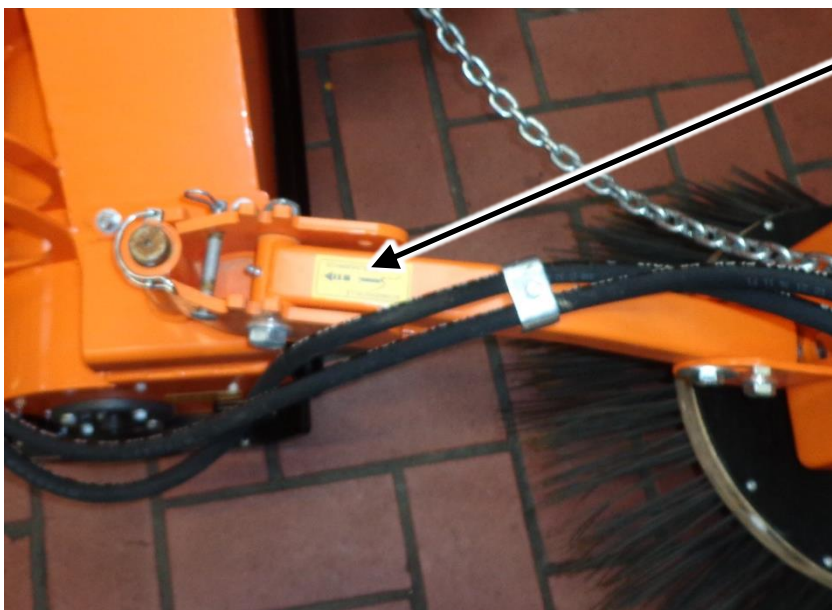


Fig. 10: Maintenance notice – side broom

4.5.4 Other stickers

Rating plate



Fig. 11: Position of the rating plate


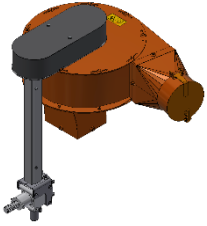

matev logo



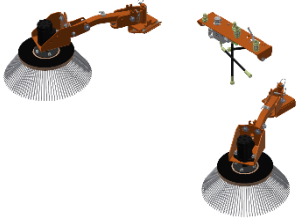
Fig. 12: Position of the matev logo

5 Equipmentvariants

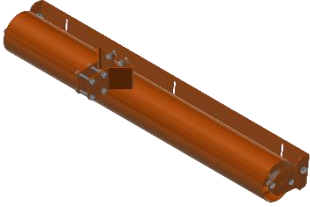

5.1 Suction unit

	<p>Basic implement suction unit. Separate suction unit is required, e.g. matev collection unit (CLS).</p>
	<p>Active suction unit, mechanical, separate collection container is required, e.g. matev three-sided dumper (TRL) with appropriate accessories</p>
	<p>Universal hose routing via cab roof (must be adapted to the carrier vehicle)</p>

5.2 Side broom

	<p>Side broom, widens the work area.</p>
---	--

5.3 Work aids

	<p>Pressure roller for dry, loose leaves</p>
	<p>Manual suction nozzle is used to take-up material in places that are difficult to access. The suction hose is fastened on the manual suction nozzle. The manual suction nozzle is fastened with a quick-release clamp on the suction port of the multifunction suction nozzle and can be taken off without a tool.</p> <p>Does not function with the active suction unit.</p>

6 Installation

6.1 Mounting the multifunction suction nozzle

The multifunction suction nozzle is delivered completely mounted by your dealer. If you purchase accessories retroactively, such as a side broom, this accessory will also be completely mounted by your dealer.

Your dealer will instruct you in the handling and all safety aspects of the multifunction suction nozzle and the accessory.



Danger!

Do not place the multifunction suction nozzle in operation, if you have not received instruction in the safety aspects. The owner is responsible for ensuring that all operators of the multifunction suction nozzle are properly trained.

The multifunction suction nozzle will be especially configured for your carrier vehicle. If you want to operate the multifunction suction nozzle on a different vehicle, ensure for yourself that the vehicles have identical coupling devices and comparable hydraulic power ratings. If your multifunction suction nozzle has an active suction unit with mechanical drive, ensure for yourself that the direction of rotation and the speed of the front PTO shafts are identical.

If you are not sure whether you can use the multifunction suction nozzle on a different vehicle, please consult with your dealer.



Danger!

Your dealer will configure the multifunction suction nozzle for a carrier vehicle. If you change the model of the carrier vehicle, the relevant technical characteristics of the carrier vehicles must be identical.

More detailed information is provided in the technical data, in section 3

7 Operating the multifunction suction nozzle



For tasks on the machine, it must be ensured that it stands on a level, firm substrate, and is safeguarded against rolling.

All tasks on the work machine may only be executed, if the possibility of sudden start-up of the machine is excluded.



Safeguard the machine against unintentional start-up by uncoupling it from the vehicle, or switching off the vehicle and removing the ignition key

7.1 Application area

Due to the extensive equipment possibilities, the matev MRM-H 120 multifunction suction nozzle is perfectly suited for large-area material removal on different substrates. Thanks to the high-performance and robust rotor brush, even wet, firmly compacted, driven-over material can be detached from the substrate.

Large objects damage the collection device and the broom of the suction nozzle. Such objects must be removed from the work area before the area is driven over with the multifunction suction nozzle. A rough guideline is that everything that you can effortlessly sweep with a street broom, can also be removed with the multifunction suction nozzle.

In addition, weeds can be detached and removed with the optionally available steel bristle side broom. Adequate hydraulic power on the tractor must be ensured.



Check the hydraulic power, as described in section 3.4. If you are unsure, ask your sales partner.

The work speed with the multifunction suction nozzle should not exceed walking speed.

7.2 Coupling the implement on the carrier vehicle

The mechanical and hydraulic connection of your multifunction suction nozzle on the carrier vehicle has been configured individually to your vehicle by the sales partner. Your sales partner will explain the work steps for coupling to you, as part of the formal instruction. In addition, you can refer to the operating manual for the carrier vehicle or the retrofitted accessories.



The machine will be individually configured to your vehicle model. Operation of the machine on other vehicles with deviating technical characteristics can result in machine damage. Consult with your sales partner if you are in doubt.

7.2.1 Lifting devices

The machine is designed exclusively as a front work device. It is coupled on the available lifting device on the carrier vehicle.

Your sales partner will explain the work steps for coupling to you, as part of the formal instruction. In addition, you can refer to the operating manual for the carrier vehicle or the retrofitted lifting device.

7.2.2 Hydraulic connection

The machine is equipped with a hydraulic drive. Different hydraulic couplings can be used depending on the type of carrier vehicle.

You need a constant oil flow for operation of the multifunction suction nozzle. This oil flow is made available by the carrier machine. More detailed information is provided in the operating manual of your vehicle, or of the special accessory, such as the matev arrest kit for control levers.

7.2.3 Coupling the front PTO shaft

For the active mechanical suction unit option, you require a front PTO shaft on your carrier vehicle. Your sales partner will instruct you in the handling of the front PTO shaft. Additional information is provided in the documentation for your vehicle or the operating manual of the retrofitted front PTO shaft.

7.3 Preparing the implement for work deployment



Ensure that the leaf suction nozzle cannot be switched on.



Execute all adjustment tasks on a level, non-inclined substrate.

7.3.1 Adjusting the overall height of the leaf suction nozzle

The leaf suction nozzle is equipped with three height-adjustable wheels and pendulum compensation, that compensate for ground unevenness.

The wheels can be adjusted in height by means of a crank. To ensure that the wheels cannot come out of the adjusted position during operation, there is a lock plate that prevents the crank from turning (see Fig. 13 and Fig. 14).

It must be ensured that the multifunction suction nozzle is parallel to the substrate.



The overall height must be adjusted in such a manner that the sweeping broom of the multifunction suction nozzle barely touches the ground.

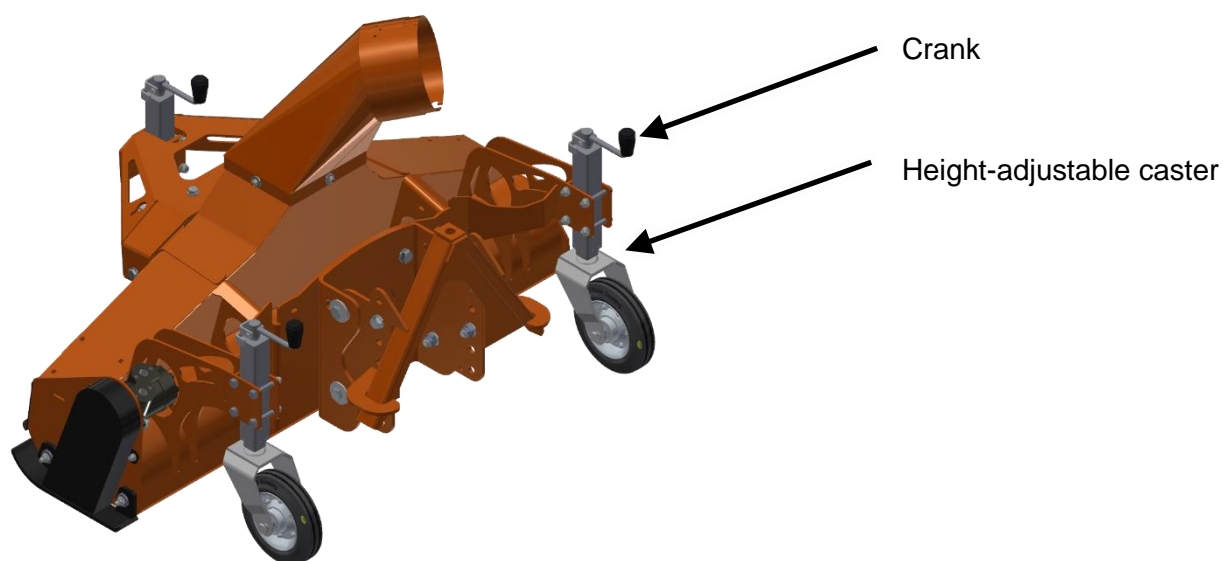


Fig. 13: Height-adjustable multifunction suction nozzle

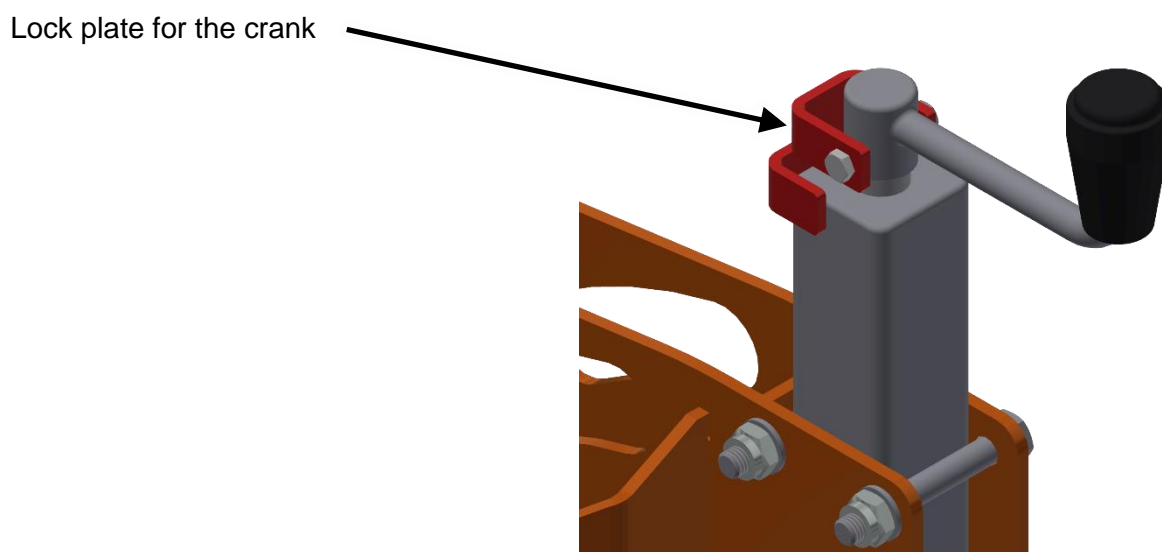


Fig. 14: Lock plate for height-adjustment of the caster

7.3.2 Adjusting the suction gap

On the front side, the multifunction suction nozzle has a sliding plate, with which the suction gap can be changed. For loose, piled material (dry leaves) the suction gap should be selected as large as possible, for heavy flat material (e.g. road grit) the gap should be as small as possible.

The multifunction suction nozzle can be equipped with an optional pressure roller for loose leaves. The pressure roller replaces the sliding plate and can likewise be adjusted in height via the slotted holes.

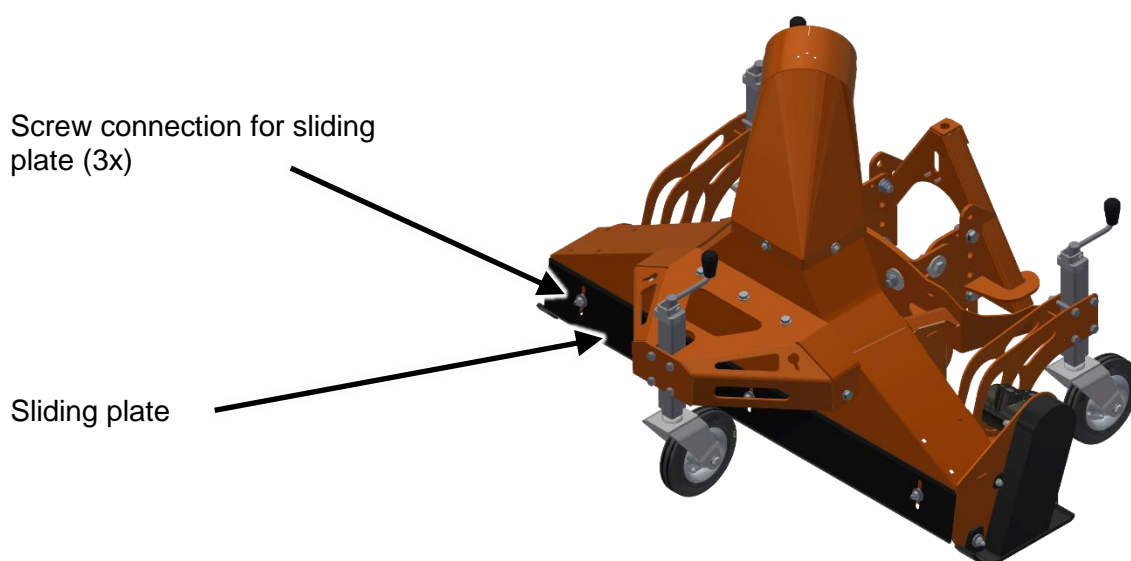


Fig. 15: Adjusting the suction gap

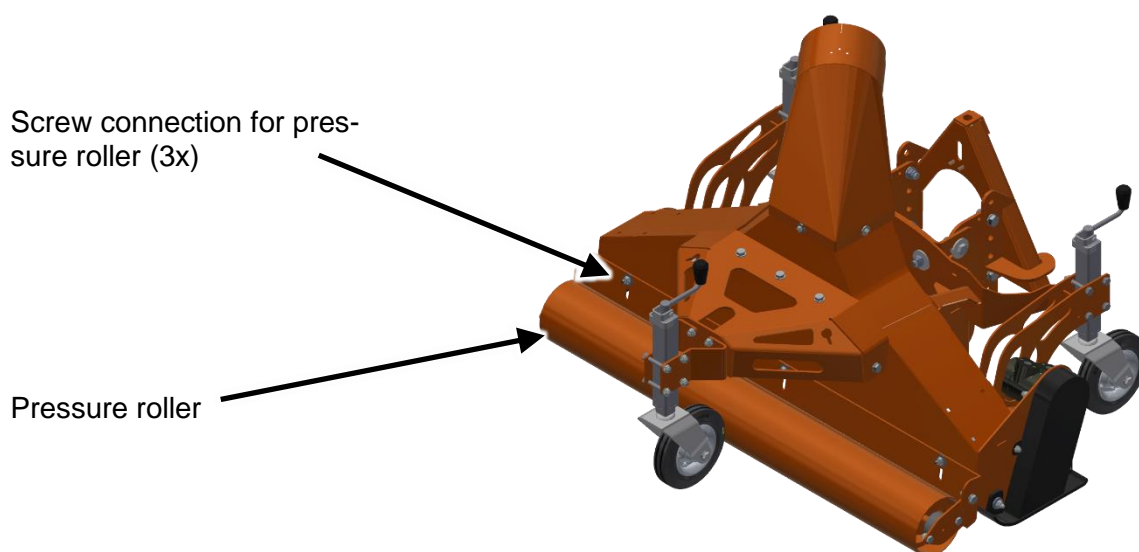


Fig. 16: Adjusting the pressure roller

7.3.3 Active suction unit

The multifunction suction nozzle can be equipped with an optional blower. The blower transports the taken-up material from the multifunction suction nozzle into a separate collection container, e.g. matev trailer, via a hose.

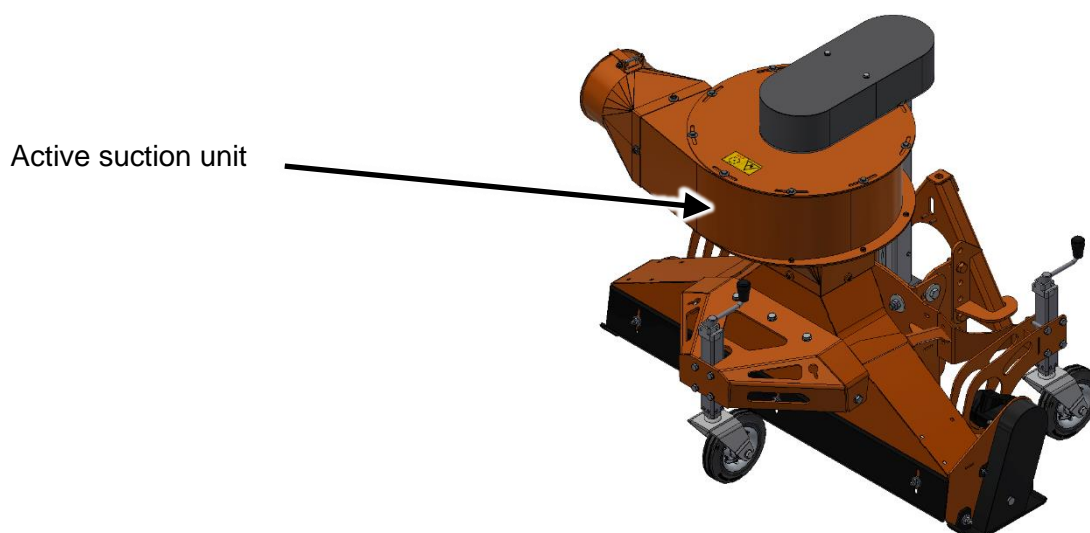


Fig. 17: Active suction unit

7.3.4 Mounting the suction hose



Danger!

Park the vehicle with multifunction suction nozzle on a level surface. Lower the multifunction suction nozzle to the ground. Safeguard the vehicle from rolling, switch off the engine and remove the ignition key.

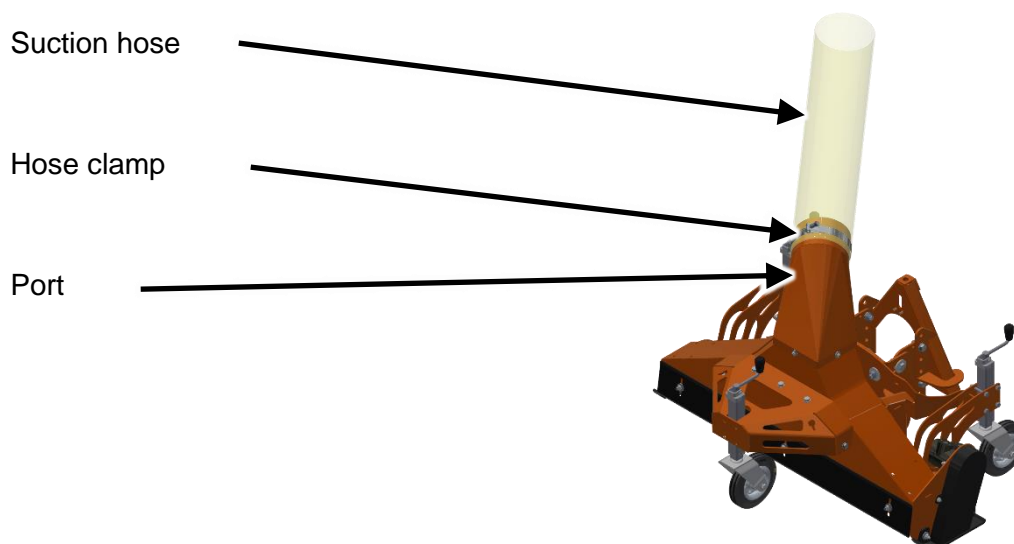


Fig. 18: Mounting the suction hose on the basic implement

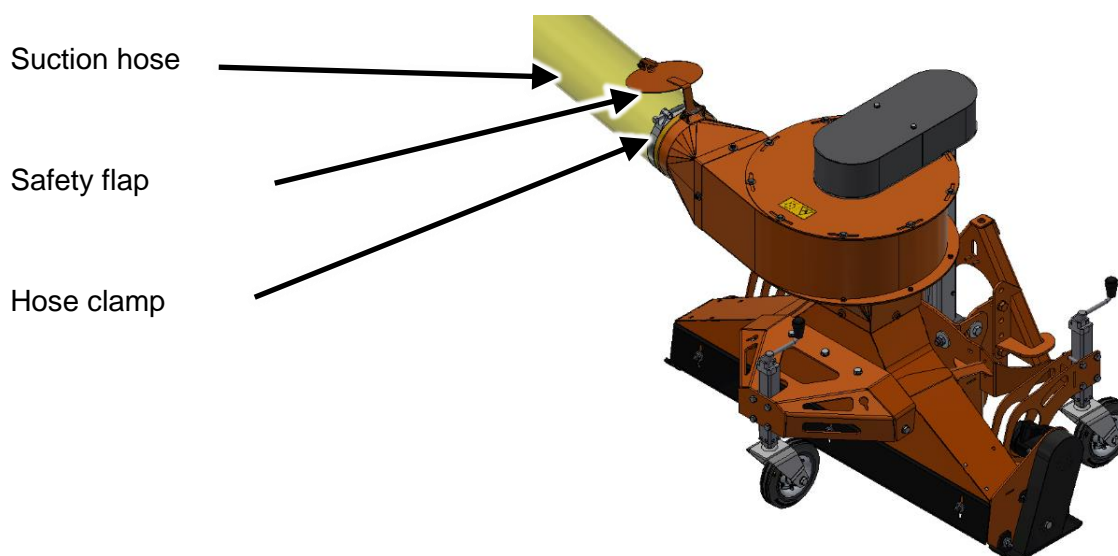


Fig. 19: Mounting the suction hose on the active suction unit

The suction hose is mounted on the suction port of the multifunction nozzle. Ensure that the hose is pushed completely over the cylindrical area of the port.

In addition the active suction unit is equipped with a spring-loaded safety flap. The flap seals the suction port, as soon as no hose is mounted, or if the hose is lost in driving operation. The function of the flap must be checked before the hose is mounted. Without the flap the active suction unit cannot be operated because due to ejected material there is an injury hazard for persons in the vicinity. Likewise access to the rotating turbine would be possible, which can result in significant injuries.



Danger!

Check the safety flap on the active suction unit prior to starting work. Do not operate the multifunction nozzle if the safety flap is missing or defective.

Use a suitable tool to tighten the hose clamp.

7.4 Operating the side brooms

7.4.1 Connecting the side brooms

To widen the work area, the multifunction suction nozzle can be equipped with hydraulically driven side brooms. The carrier vehicle must make the hydraulic power for the side brooms available. Follow the instructions in section 3 to ensure that this is the case.

The side brooms can be mounted on the right, on the left or on both sides.

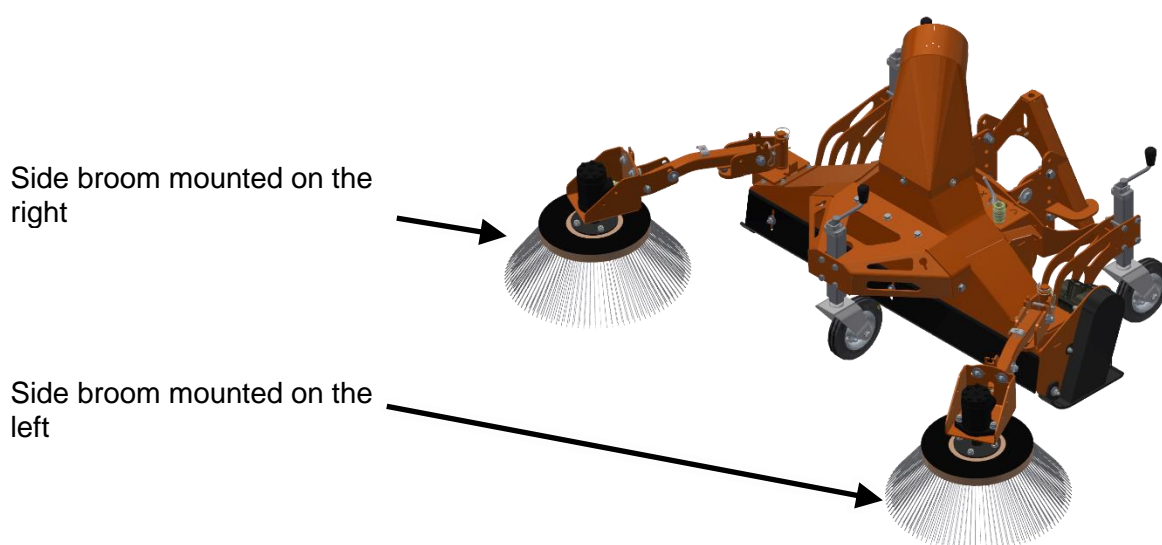


Fig. 20: Side brooms on the basic machine

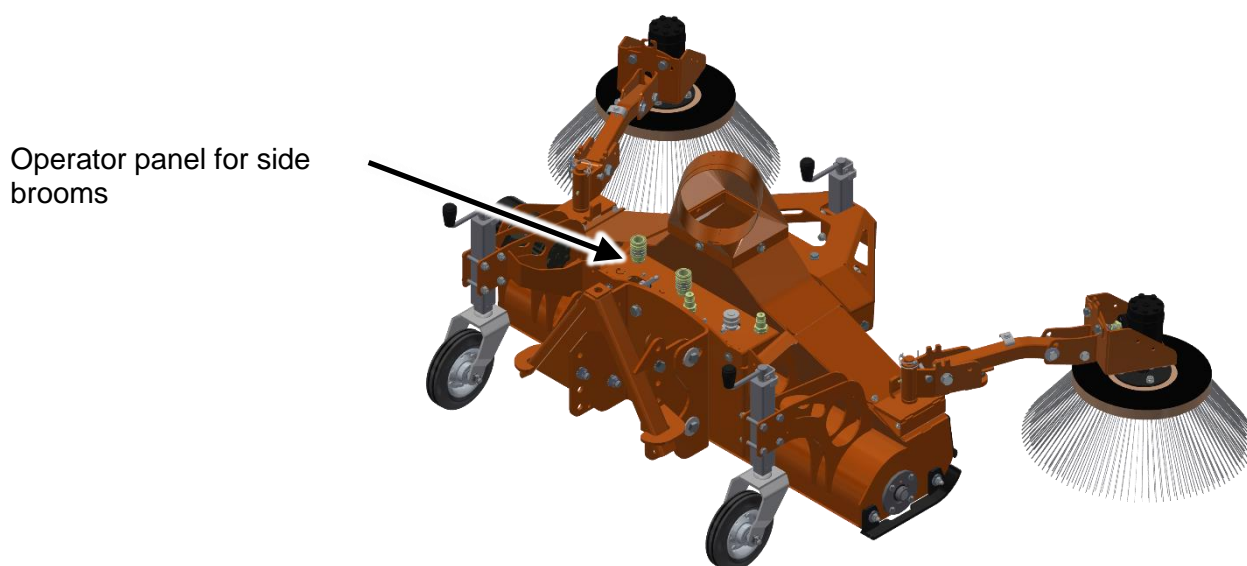


Fig. 21: Operator panel for side brooms

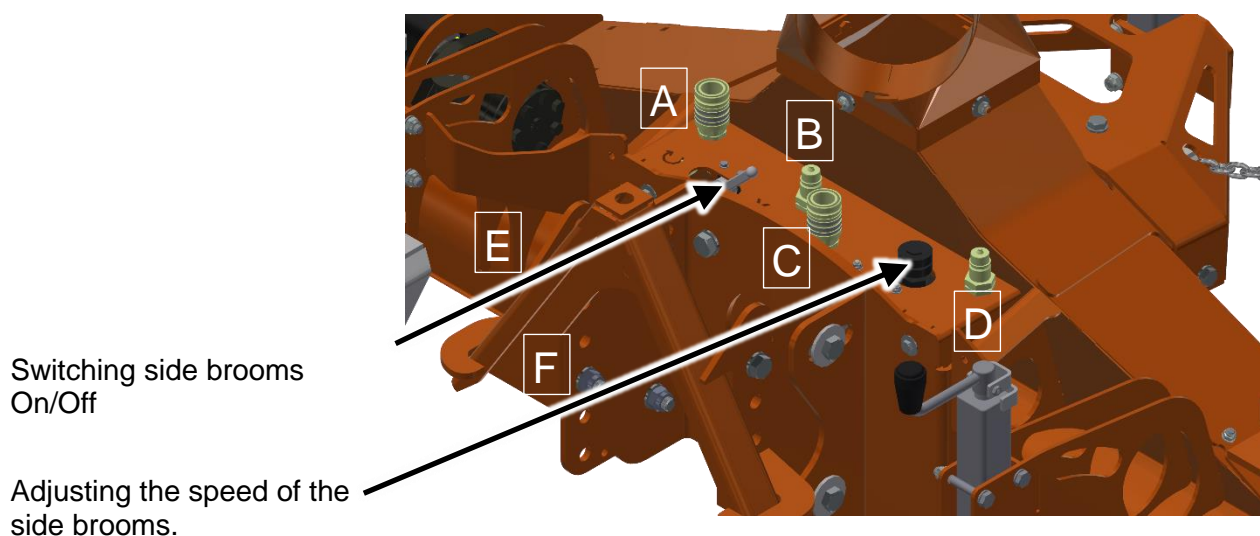


Fig. 22: Connecting the side brooms

The side brooms must be hydraulically connected on the operator panel for the side brooms. You can connect one, as well as two side brooms.

For operation with one side broom, the broom is connected on connections B and C. If two side brooms are connected, one side broom is connected on connections A and B, and the second is connected on connections C and D.

The side brooms can be switched on or off with the lever E.

The speed can be changed with adjusting wheel F.



Do not adjust the speed of the side broom too high, so that debris or rocks are not ejected!

7.4.2 Adjusting the side brooms.

In use, the side brooms are automatically pulled away from the machine. This movement is limited by a chain. Adjust the desired working width via the chain.

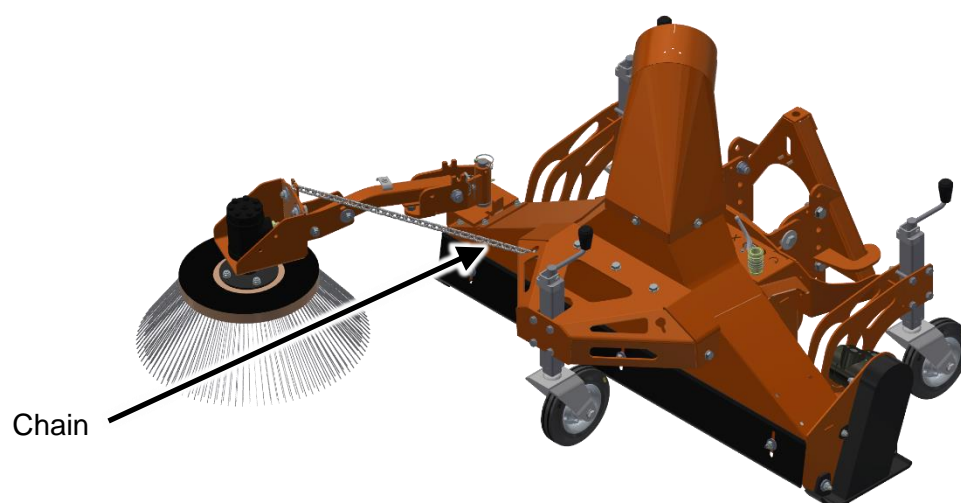


Fig. 23: Chain for side brooms

7.4.3 Using the multifunction suction nozzle without mounted side brooms

If the side brooms are not needed for the tasks, they can be brought into park position and secured there.

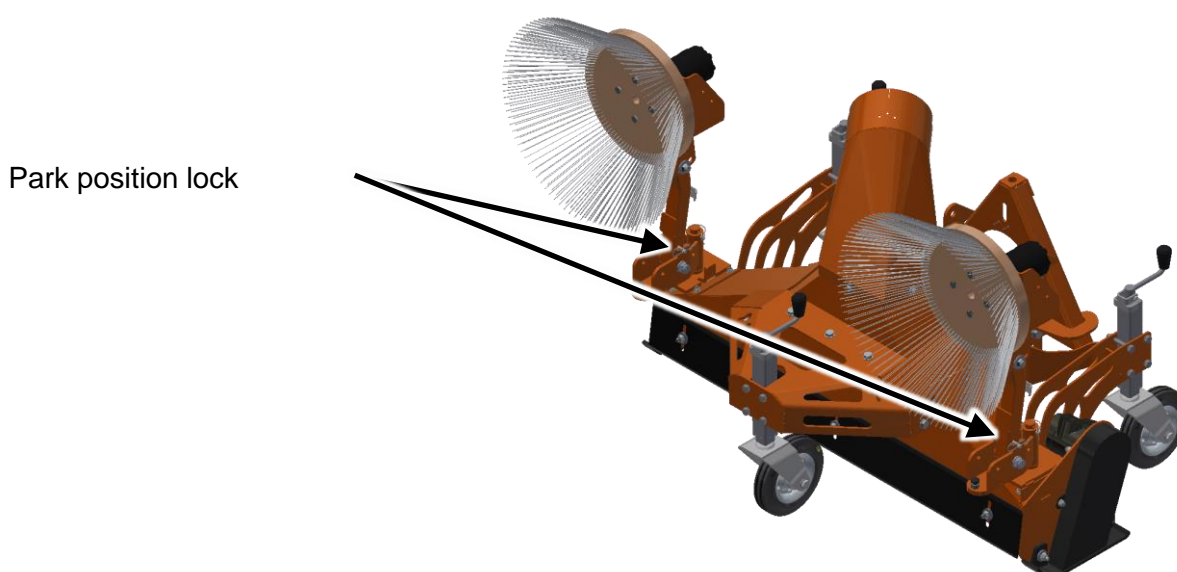


Fig. 24: Side broom in park position

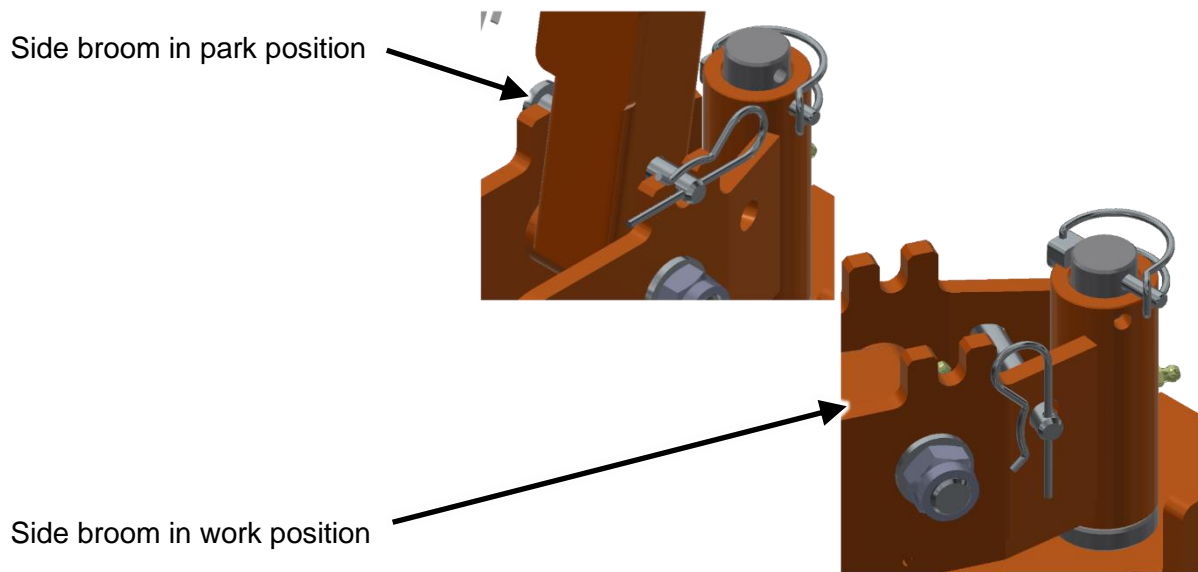


Fig. 25: Securing the side brooms

8 Maintenance

8.1 Safety when performing maintenance



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



The multifunction suction nozzle must not be switched on when maintenance tasks are performed. Switch off the carrier vehicle engine and remove the ignition key.



**Danger of crushing due to moving parts.
Never reach into the crushing hazard zone if parts are moving or can move.**



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



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

8.2 Maintenance

To ensure the operational readiness and occupational health and safety, the following tasks must be executed after each use.

- Clean the machine.
- Check all safety notices and safety devices for completeness and functionality.
- Check hydraulic connections and hoses for leaks.
- Check wear parts, such as V-belts, brushes, blades, etc. and replace them or have them replaced as needed.
- Check all screw and bolt connections. Tighten any loose screws and secure any loose bolted connections with the intended locking elements.

8.3 Lubricating schedule

At regular intervals, and always at the beginning and end of the season, the moving parts of the implement must be lubricated.


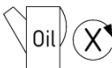

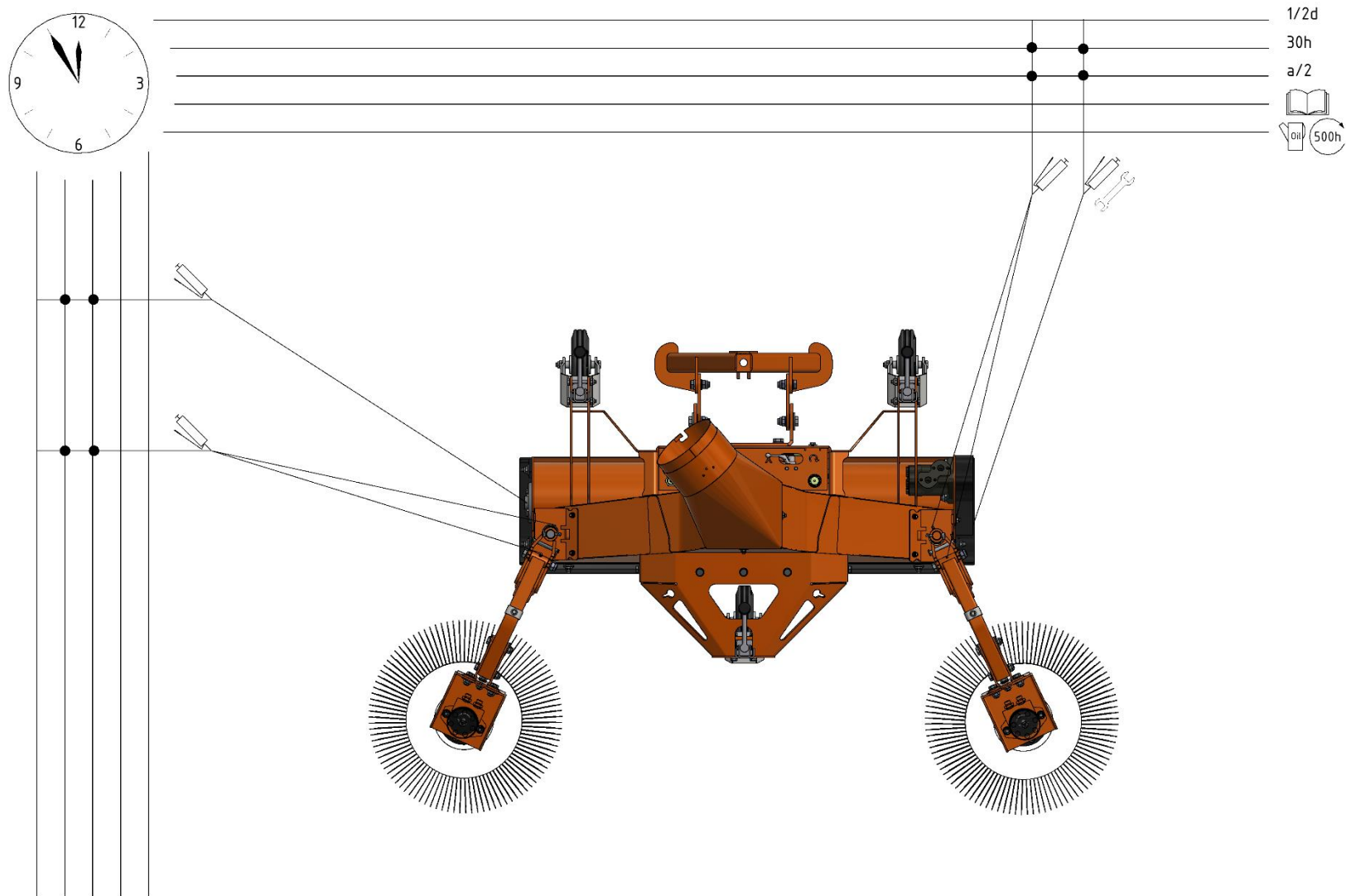
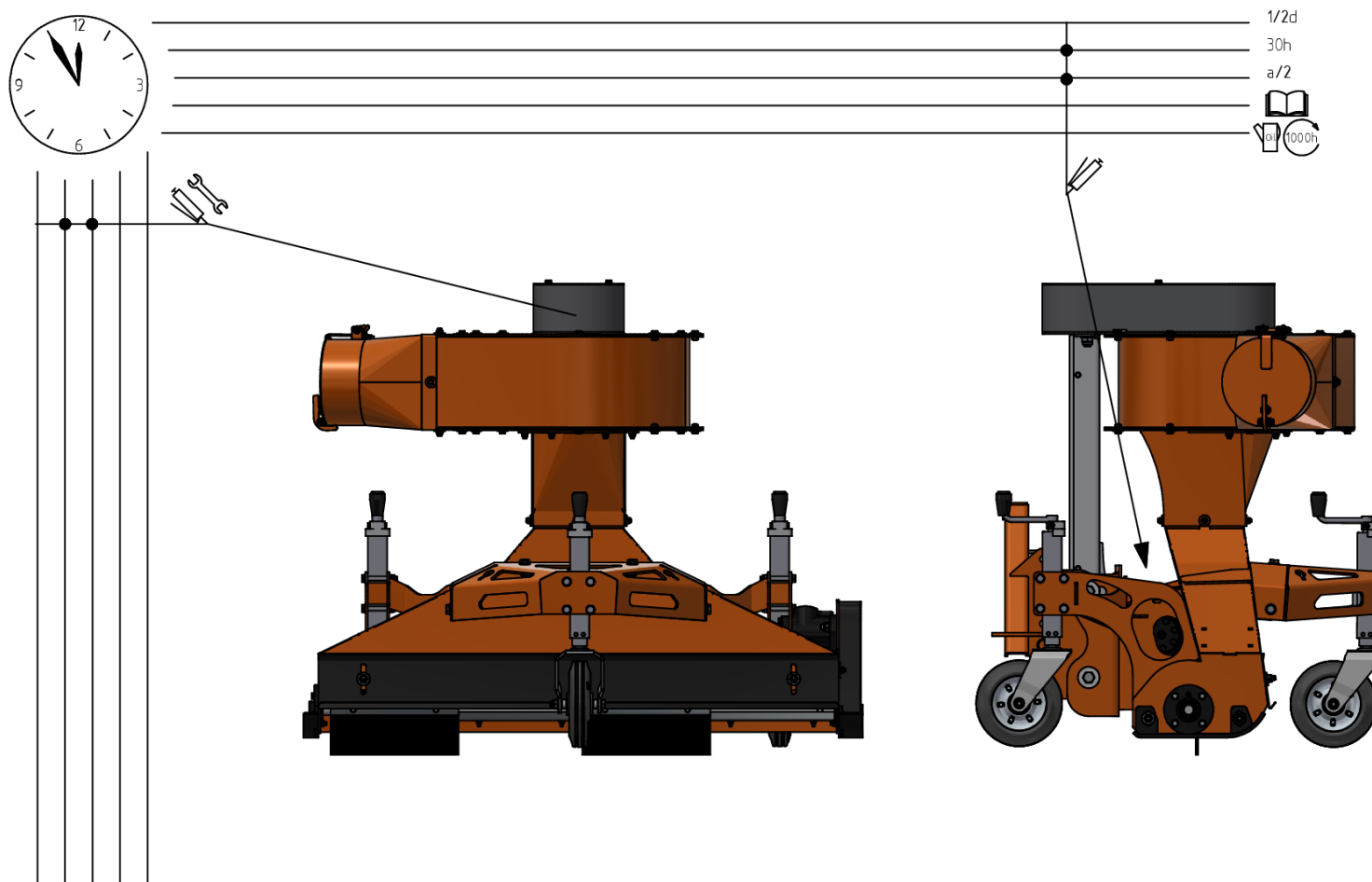
Symbol	Meaning
1/d	Lubricate daily
1/30 h	Lubricate every 30 operating hours
2/a (1/500 h)	Lubricate at the beginning and end of the season and after 500 operating hours
	Use a grease gun
	Check oil level, top-up oil if necessary Change the oil after every X operating hours
	Please comply with the operating manual provided for this component. The lubricating intervals are specified in the operating manual

Table 1: Lubrication schedule symbols

8.3.1 Maintenance schedule for basic implement and side brooms



8.3.2 Maintenance schedule for active suction unit, mechanical



9 Fault

Fault	Possible cause / rectification
Suction hose is clogged	Driving too fast for the given conditions / select an appropriate working speed
Multifunction suction nozzle does not start up	Severe clogging in the machine. Switch-off immediately, remove ignition key, and clean the suction nozzle
Poor sweeping pattern	Driving too fast for the given conditions. Select an appropriate drive speed. Broom is worn. Multifunction nozzle is set too high.

Table 2: Fault

10 Repair

If there are faults, problems, or other indications of malfunction, contact your sales consultant or contact the manufacturer directly:

matev GmbH

Nürnberger Str. 50
90579 Langenzenn, Germany
Tel.: +49 (0) 9101 9087-0

www.matev.eu

info@matev.eu

Also comply with the following instructions:

- Repairs must only be undertaken in the facilities of specialized companies.
- Only original spare parts from matev must be used for repairs.
- No modifications are permitted on the multifunction nozzle.

11 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.

12 Warranty

The general terms and conditions of matev GmbH apply.

13 List of illustrations

Fig. 1: Definition of alignment and direction of rotation	5
Fig. 2: Hydraulic power diagram.....	8
Fig. 3: Protective cover of the chain drive	13
Fig. 4: Protective cover for active suction (hydraulic and mechanical)	13
Fig. 7: Safety notice on front panel.....	14
Fig. 8: Chain drive	14
Fig. 9: Safety notice – hydraulics	15
Fig. 10: Safety notice – maintenance	15
Fig. 11: Maintenance notice – pedestal bearing, sweeper roller	16
Fig. 12: Maintenance notice – side broom	16
Fig. 13: Position of the rating plate	17
Fig. 14: Position of the matev logo	17
Fig. 15: Height-adjustable multifunction suction nozzle	23
Fig. 16: Lock plate for height-adjustment of the caster	23
Fig. 17: Adjusting the suction gap	24
Fig. 18: Adjusting the pressure roller	24
Fig. 19: Active suction unit.....	25
Fig. 20: Mounting the suction hose on the basic implement	25
Fig. 21: Mounting the suction hose on the active suction unit.....	26
Fig. 22: Side brooms on the basic machine	27
Fig. 23: Operator panel for side brooms.....	27
Fig. 24: Connecting the side brooms.....	28
Fig. 25: Chain for side brooms	29
Fig. 26: Side broom in park position.....	29
Fig. 27: Securing the side brooms.....	30

14 List of tables

Table 1: Lubrication schedule symbols	32
Table 2: Fault.....	35