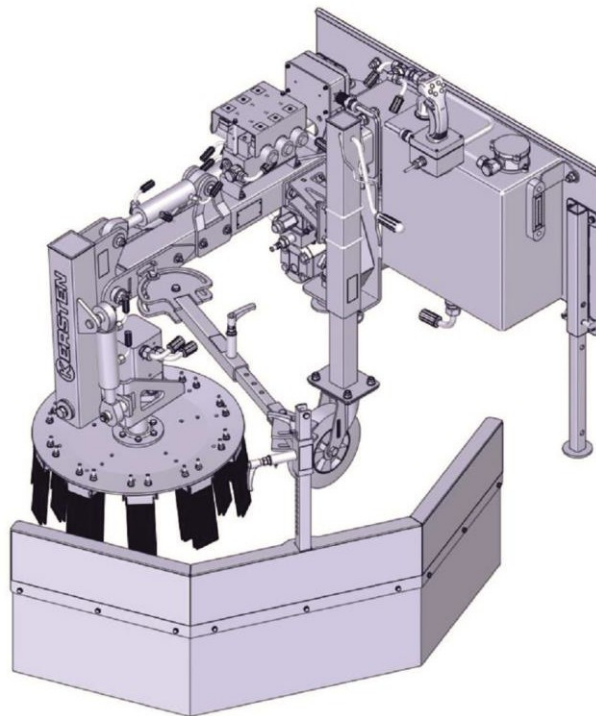




# Original operating instructions

## Weebrush UB 6080 MH



Order Number: B00082

from Nasch.- No.:

Rev.: R00

Stand: 2017-10-23



Manufactured by Kersten  
**Arealmaschinen GmbH**  
Empeler Straße 95  
D - 46459 Rees  
[www.kersten-maschinen.de](http://www.kersten-maschinen.de)



Distributed in UK by  
**Kersten (UK) Ltd** Tel. 0118 986 9253  
Progress House  
39 Boulton Road Reading, RG2 0NH  
[www.kerstenuk.com](http://www.kerstenuk.com) - [info@kerstenuk.com](mailto:info@kerstenuk.com)

All rights reserved. This documentation is protected by copyright. Kersten Arealmaschinen GmbH reserves all rights not expressly granted. Without prior written consent and except as permitted by law, this documentation may not be reproduced, distributed or made publicly available in any other way.

Changes without prior notice are reserved. The original document has been published in German. All translations are copies of the original document.

Copyright 2017 by Kersten Arealmaschinen GmbH

Kersten Arealmaschinen GmbH  
Empeler Straße 95  
46459 Rees  
Deutschland

Telefon: +49 2851 9234-10  
Telefax: +49 2851 9234-44  
[Info@kersten-maschinen.de](mailto:Info@kersten-maschinen.de)  
<http://www.kersten-maschinen.de/>

### Information about the operating instructions

This manual enables the safe and efficient handling of the machine. The instructions are part of the machine and must be kept accessible to the personnel in the immediate vicinity of the machine at all times.

The personnel must read and understand this manual carefully before beginning any work. The basic prerequisite for safe working is compliance with all specified safety instructions and instructions in this manual.



#### Risk of accident and property damage if used improperly!

As self-propelled implements and attachments can cause serious accidents or hazards if used improperly, a briefing of competent and authorized persons is mandatory when commissioning the Kersten implement for the first time. The best way to familiarize yourself with its basic functions and its handling is to choose a free and level terrain for your first trip.

- For further information and difficulties of any kind please contact the dealer, importer or directly to the manufacturer.
- Pass on all safety instructions to other users!

In addition, the local health and safety regulations and general safety regulations apply to the area of application of the machine.

### Co-Applicable Documents

In addition to these instructions, the following documents and the safety instructions listed there must be observed:

- Operating instructions of the component parts
- Operating instructions of the carrier vehicle

### Customer service of the manufacturer

For technical information please contact the customer service of the machine manufacturer:

Manufacturer address	Kersten Arealmaschinen GmbH Empeler Straße 95 46459 Rees Deutschland
service phone	+ 49 2851 9234-10
Fax	+ 49 2851 9234-44
E-Mail	<a href="mailto:Info@kersten-maschinen.de">Info@kersten-maschinen.de</a>
Internet	<a href="http://www.kersten-maschinen.de">http://www.kersten-maschinen.de</a>



#### For inquiries please have the following information ready:

- Machine / device type
- Order number of the machine
- In case of problems: exact description or exact error messages

<b>1</b>	<b>Pictures</b>	<b>6</b>
<b>2</b>	<b>Preface</b>	<b>13</b>
2.1	Overview .....	13
<b>3</b>	<b>Security</b>	<b>14</b>
3.1	Symbols in this manual.....	14
3.2	Pictograms.....	16
3.3	Intended use .....	18
3.4	Occupational and Hazardous Areas.....	19
3.5	Safety during the work process .....	20
3.6	Safety devices .....	22
3.7	Safety labeling .....	22
3.8	Residual hazards.....	23
3.9	Environmental Protection .....	26
3.10	Safety instructions for maintenance / troubleshooting .....	27
3.11	Safety instructions for disassembly and disposal .....	30
<b>4</b>	<b>Function Description</b>	<b>31</b>
4.1	Hydraulics .....	31
<b>5</b>	<b>Transport, packaging and storage</b>	<b>32</b>
5.1	Safety.....	32
5.2	Transport inspection .....	32
5.3	Packaging .....	33
5.4	Transport of the machine.....	33
<b>6</b>	<b>Assembly / installation, installation, commissioning</b>	<b>35</b>
6.1	Safety.....	35
6.2	Mechanical coupling / uncoupling.....	35
6.3	Connecting / disconnecting hydraulic hoses .....	35
<b>7</b>	<b>Operation</b>	<b>37</b>
7.1	Adjusting the brush plate .....	37
7.2	Swinging the weed brush .....	37
7.3	Adjustment of the brush plate.....	38
7.4	Adjusting the splash guard .....	38
7.5	Adjusting the brush plate .....	39
<b>8</b>	<b>Maintenance</b>	<b>41</b>
8.1	Safety.....	41
8.2	Parts .....	41
8.3	Maintenance .....	42
8.3.1	Daily test.....	42
8.3.2	Maintenance after 50 operating hours / longer downtime.....	43
8.3.3	Changing brush elements .....	44
8.3.4	Changing the brush plate .....	45
8.3.5	Check safety features.....	46
8.4	Measures after maintenance .....	46

<b>9</b>	<b>Disassembly, Disposal</b>	<b>47</b>
9.1	Safety .....	47
9.2	Disassembly .....	47
9.3	Disposal.....	47
<b>10</b>	<b>Technical Data</b>	<b>49</b>
10.1	Declaration of Conformity.....	50

# 1 Pictures

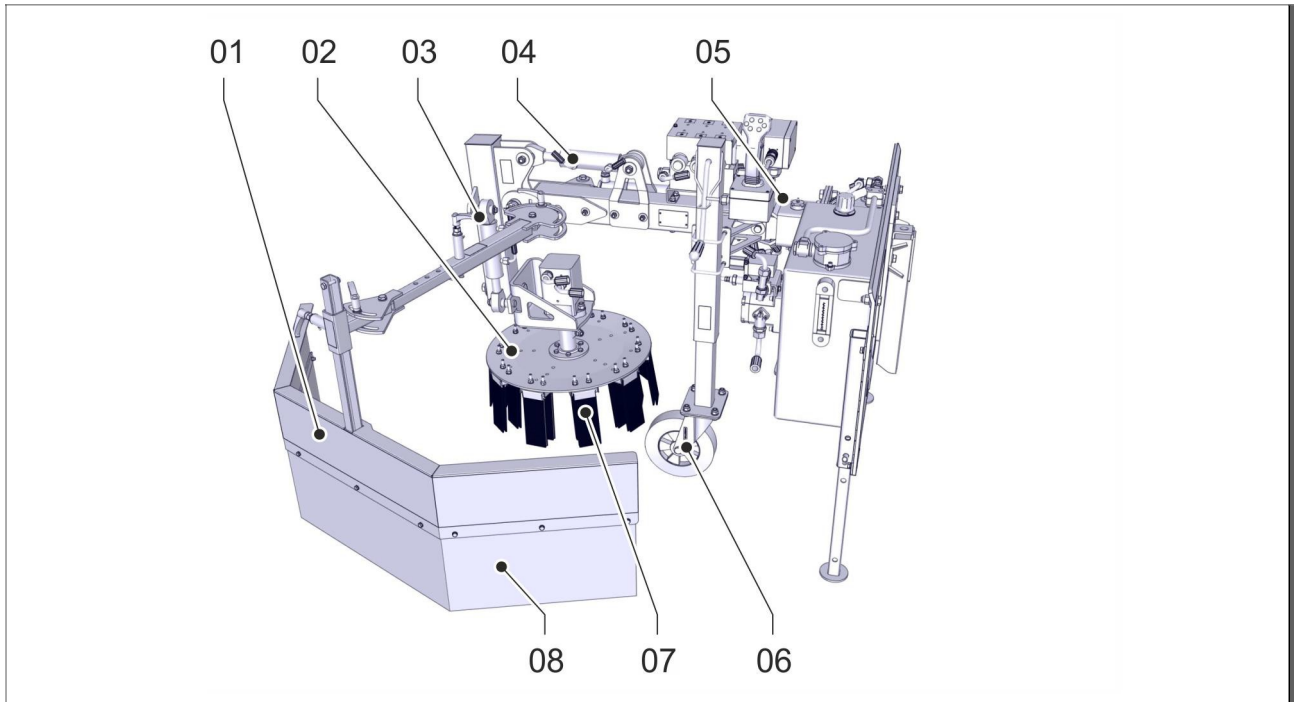


Fig. 1: Overall overview

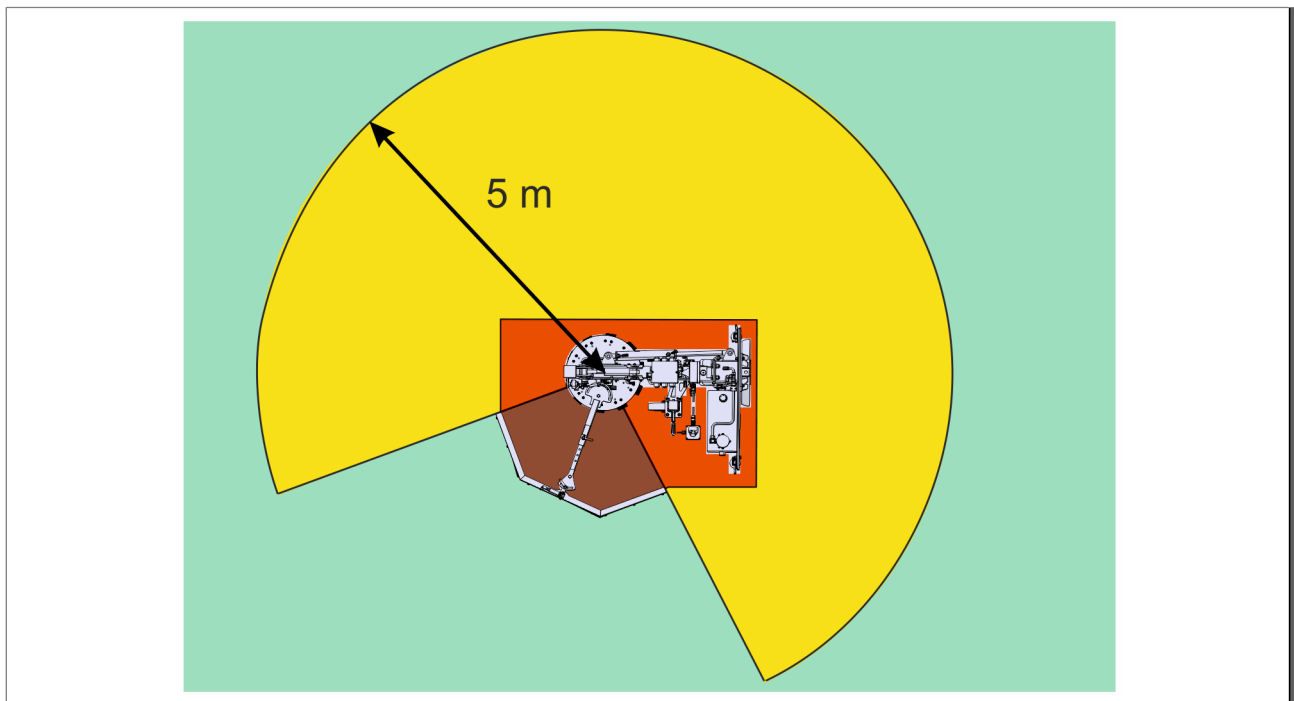


Fig. 2: Gedanger zone UB6080M

Pictures

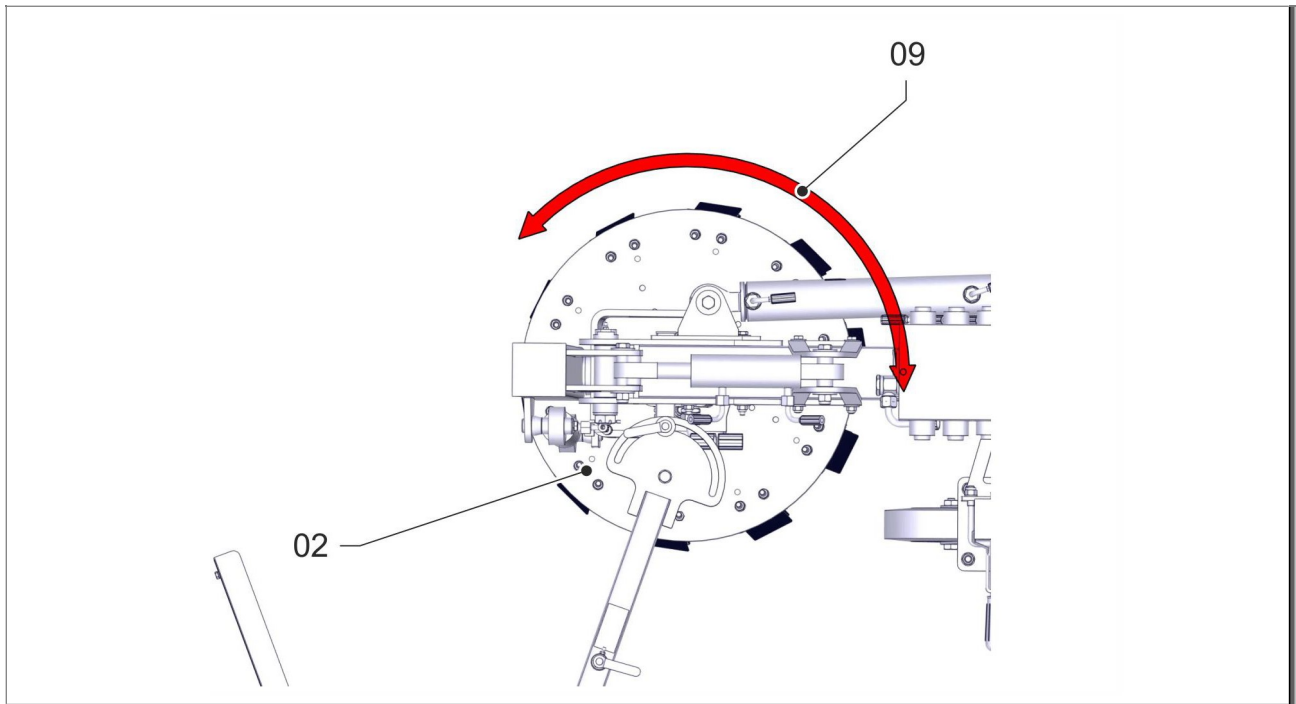


Fig. 3: Work area of the brush plate

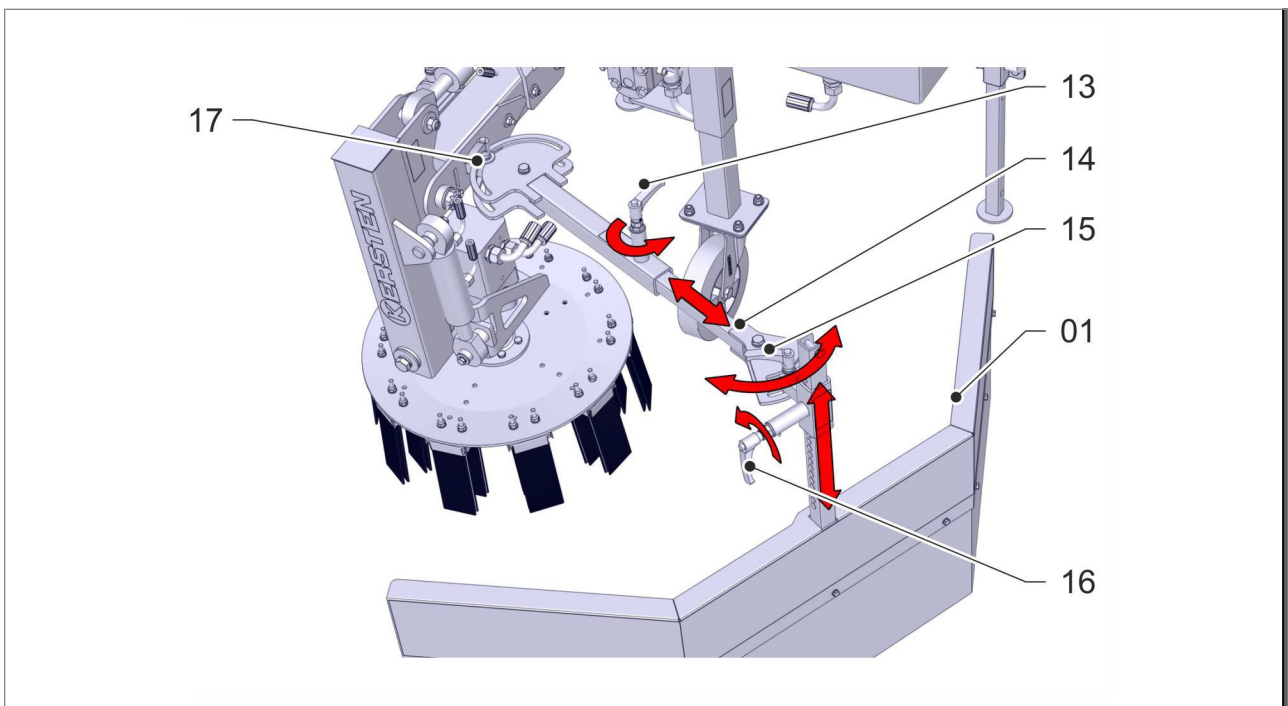


Fig. 5: Adjustment of the splash guard

Pictures

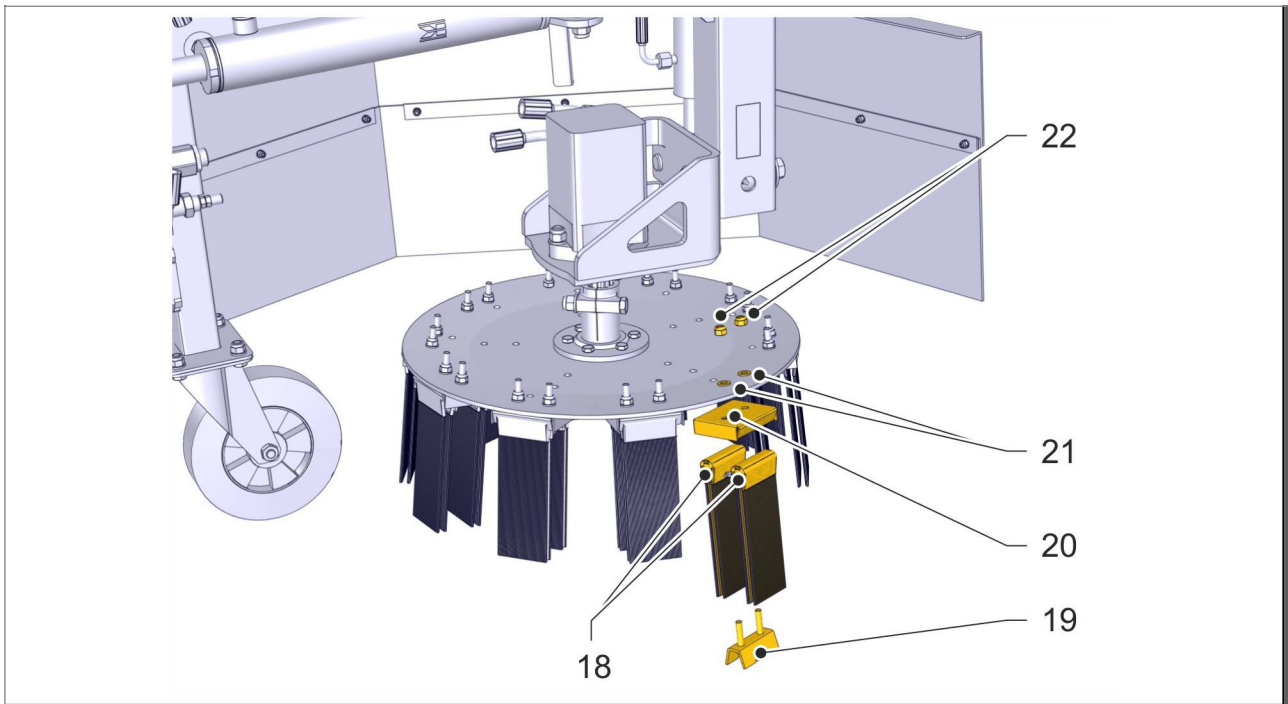


Fig. 6: Swap the brushes

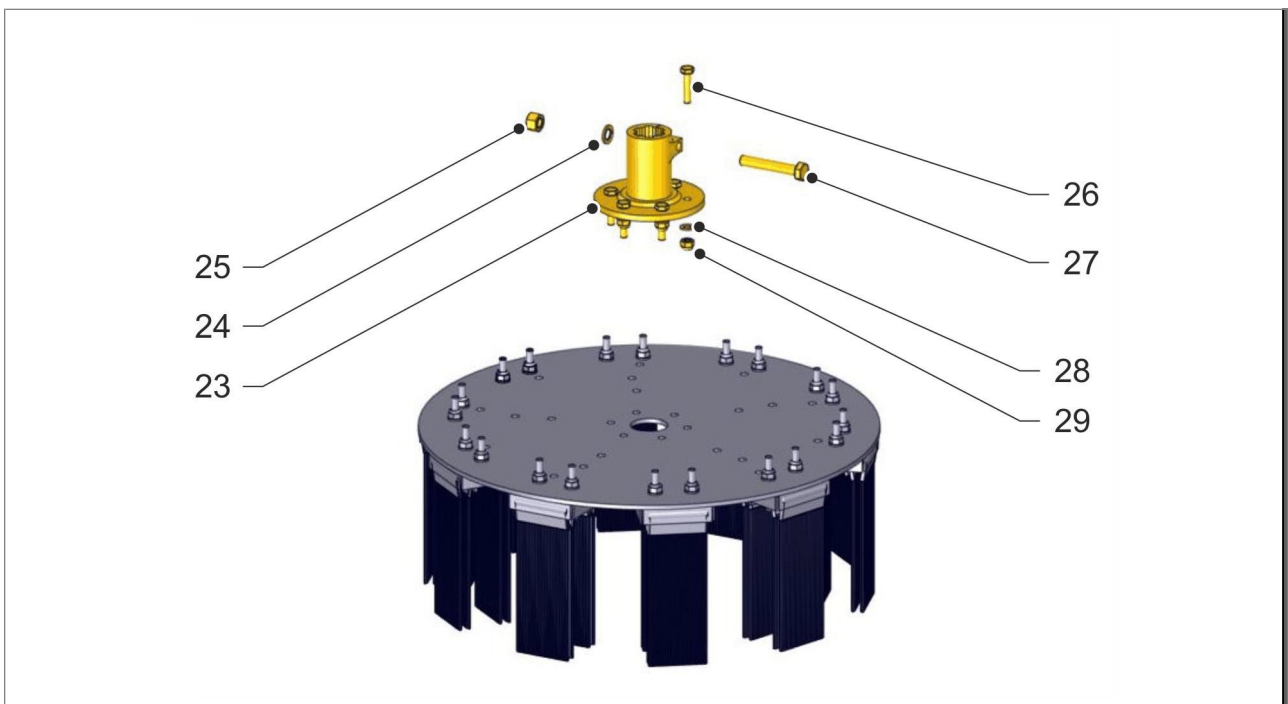


Fig. 7: Exchange complete brush plate



**Pictures**

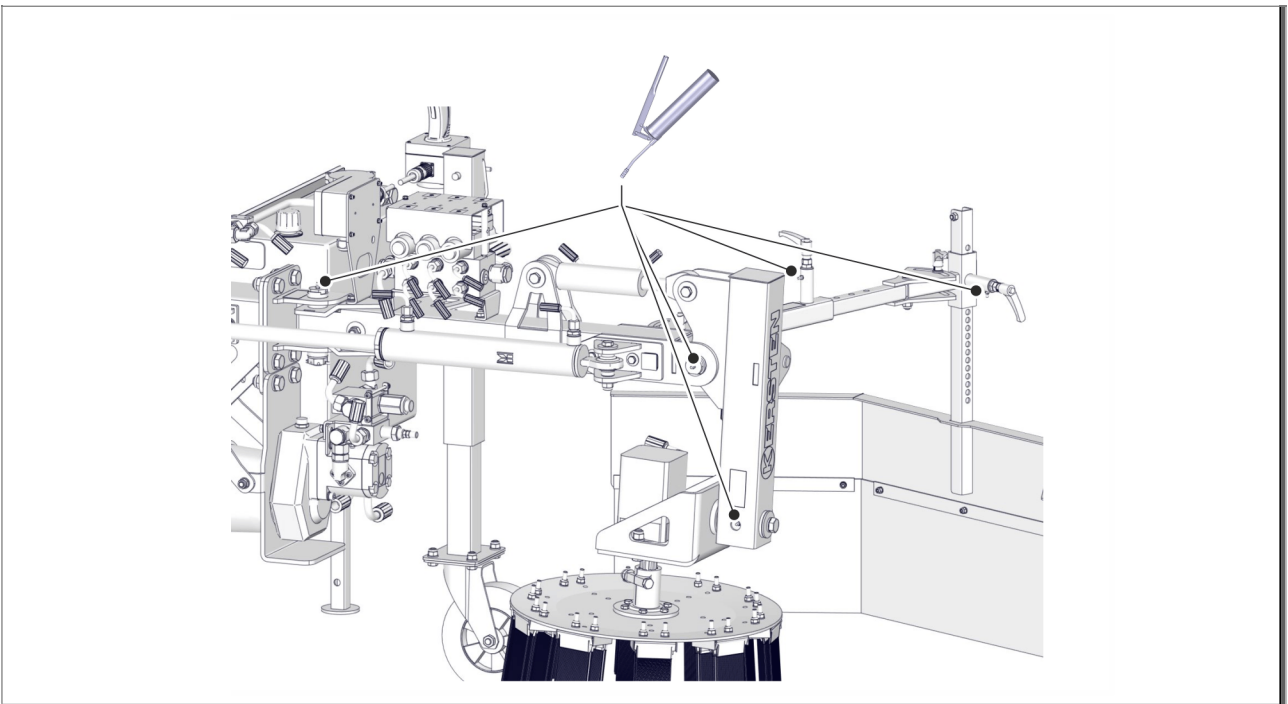


Fig. 8: Lubrication

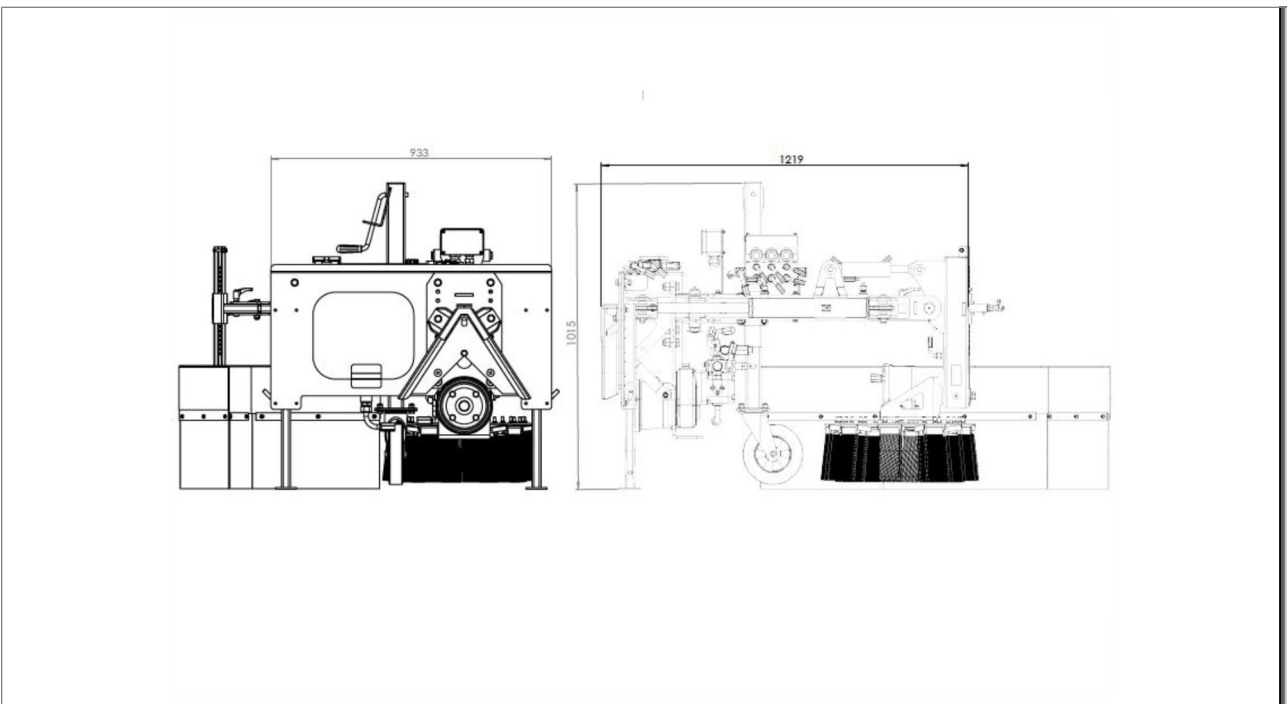


Fig. 9: Layout UB6080M

Pictures

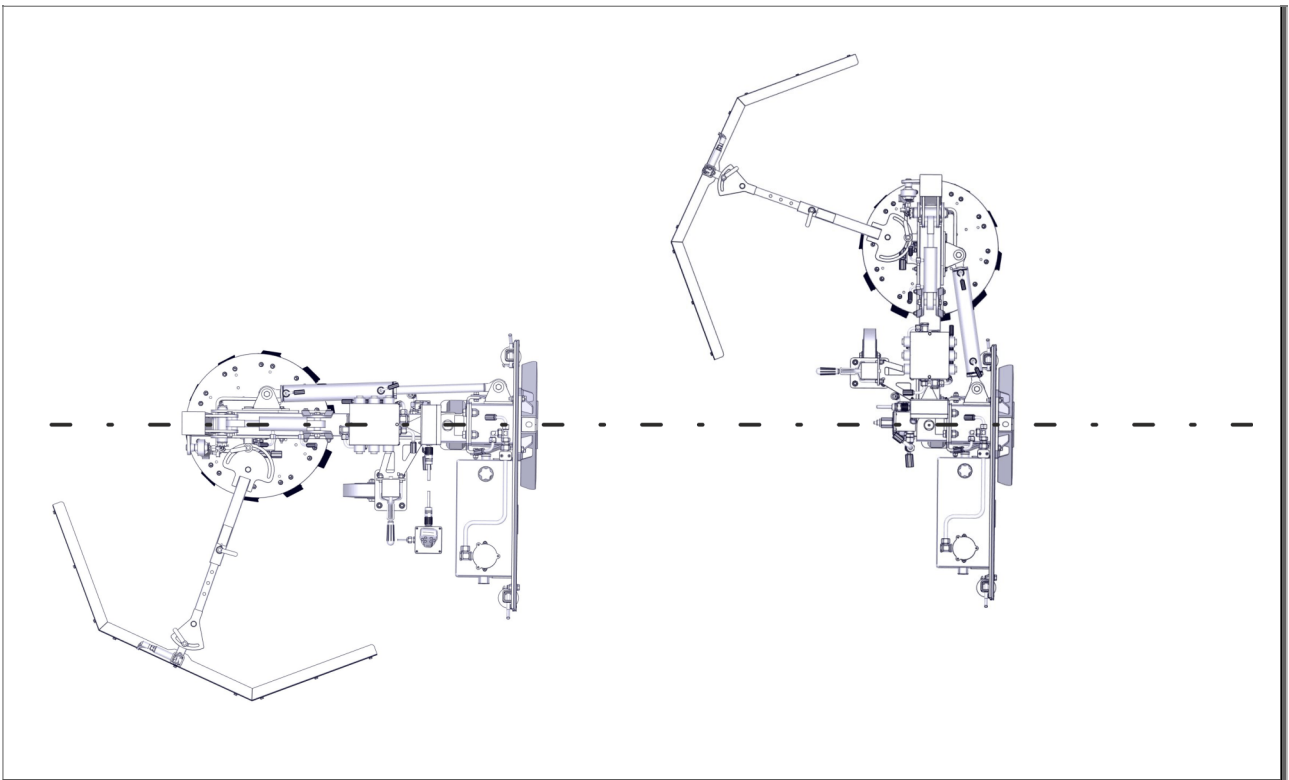


Fig. 10: Deflection to the right

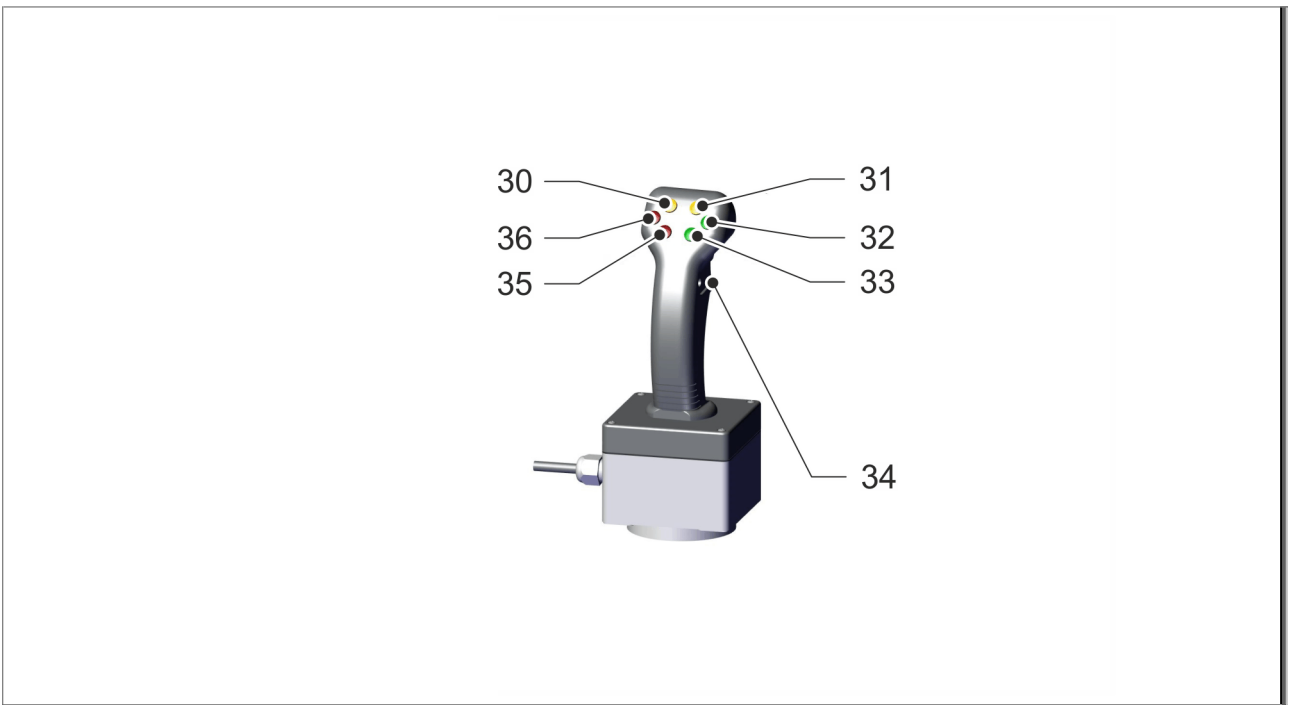


Fig. 11: Joystick

**Pictures**

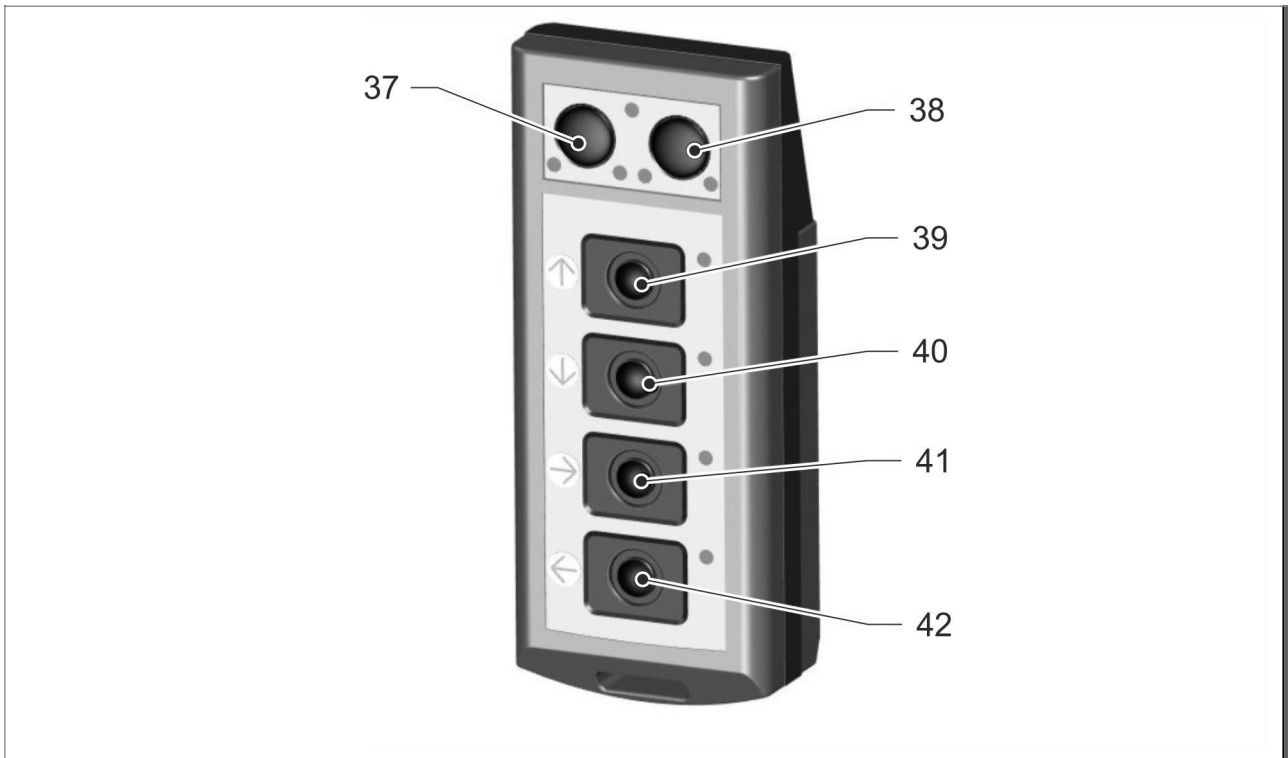


Fig. 12: Remote Control

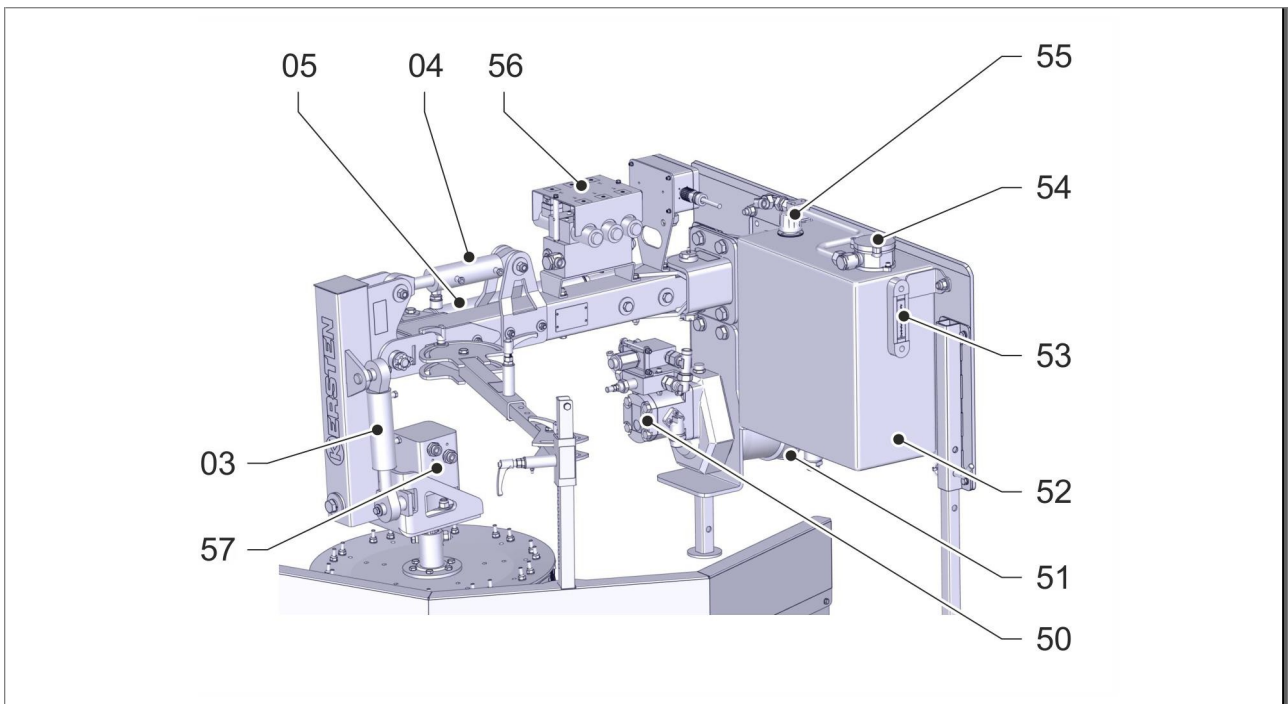


Fig. 13: Hydraulic view 1

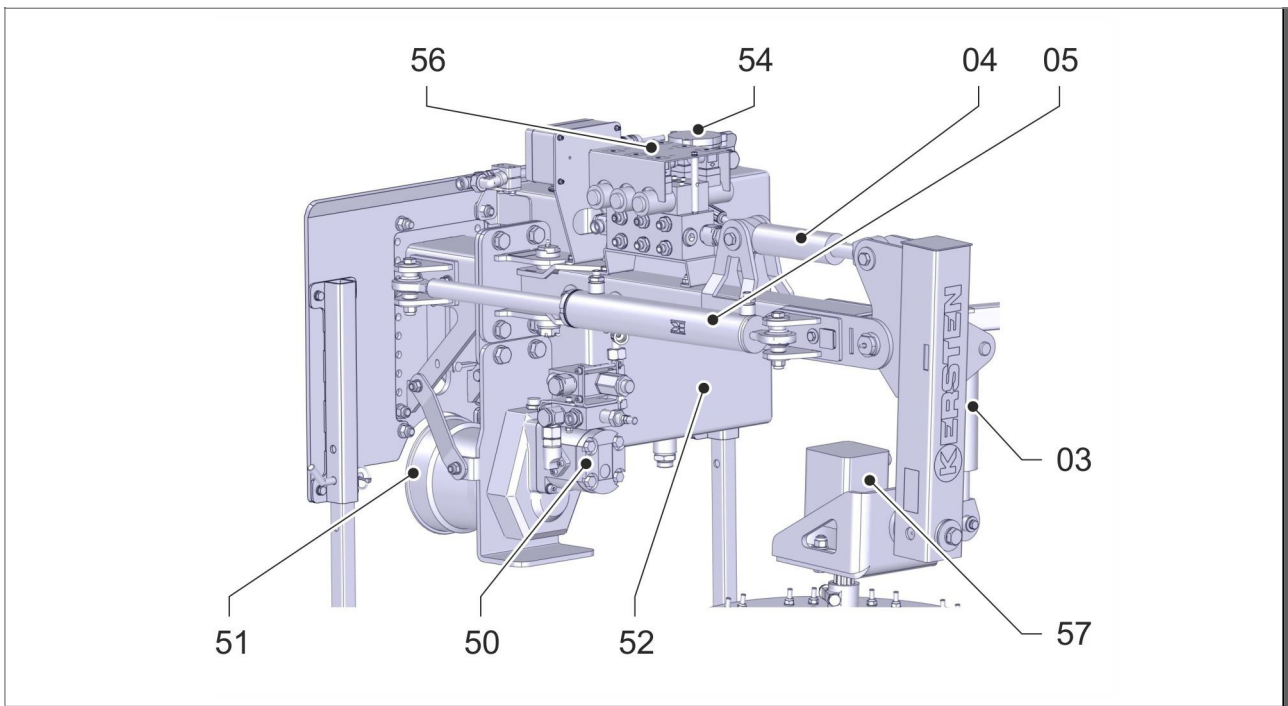


Fig. 14: Hydraulic view 2

## 2 Foreword

Dear Customer,

Thank you for choosing a quality product from Kersten.

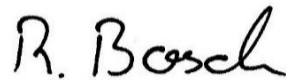
This product has been manufactured according to the latest manufacturing techniques and comprehensive quality assurance measures, because only when you are satisfied with your device, our goal is reached.

Before using this machine or implement for the first time, please read this manual thoroughly and thoroughly.

If you do not understand any of the information contained in this safety data sheet or the product-specific installation or operating instructions, please contact your sales representative or the machine manufacturer directly.

Keep this manual handy. If necessary, you can read important information and instructions.

Have fun with your Kersten - device wishes you



Dipl.- Ing. (FH) Robert Bosch  
Managing Director

### 2.1 Overview

Figure 1 (See Chapter 1 Figures on page 6) shows the basic structure of the weed brush.

The weed brush consists of a steel construction with an angle gear on which the brush plate (02) is mounted. The brush plate (02) can be equipped with a tufting (07) or with wire rope pegs. By the rotation of the brush plate (02) and the propulsion of the carrier vehicle, the weeds are removed from the joints and collected by a side mounted splash guard frame with signal band (01) and rubber spray tabs (08).

## 3 Security

### 3.1 Symbols in this manual

#### Safety instructions

The following occupational safety symbols stand for all safety instructions that indicate a danger to the life and limb of persons and are marked by a pictogram, a signal word and a signal color.

The documentation explains the hazardous situations at the relevant locations.

Follow these instructions!



Observe the locally valid safety and accident prevention regulations!

#### DANGER

##### Type and source of danger

Dieses Symbol warnt vor einer unmittelbaren Gefahr für das Leben und die

This symbol warns of an imminent danger to the life and health of persons.

Failure to comply with these instructions will result in serious health effects, including life-threatening injuries and extensive damage to property.

- Action that must be avoided so that the danger does not occur

#### WARNING



##### Type and source of danger

This symbol warns of an imminent danger to the life and health of persons, as well as environmental and material damage.

Failure to comply with these instructions can result in serious health effects including life-threatening injuries or extensive environmental and material damage.

- Action that must be avoided so that the danger does not occur

#### ATTENTION



##### Type and source of danger

This symbol warns of an imminent danger to the health of persons as well as environmental and material damage.

Failure to comply with these instructions may result in moderate or slight health effects or even injury or result in extensive environmental and material damage.

- Action that must be avoided so that the danger does not occur

## NOTE



### Type and source of machine or plant damage

This symbol warns of a dangerous situation and serves to identify a note on the handling of the machine or system.

Failure to follow these instructions may result in extensive property damage

- Action that must be avoided so that the machine or system damage does not occur

### Tips and recommendations



This symbol highlights useful tips and recommendations, as well as information for efficient and trouble-free operation.

### Further markings

To highlight instructions, results, listings, references, and other elements, this guide uses the following labels:

Identification	Explanation
1., 2., 3. ...	Step-by-step instructions
→	Results of action steps
•	Listings without a specified order
[Taster]	Operating elements (eg buttons, switches), display elements (eg signal lights)
"Display"	Screen elements (eg buttons, assignment of function keys)

## 3.2 Pictograms

### Follow instructions



Do not use the marked machine until the instructions have been read.

### Wear protective clothing



This label indicates that protective clothing must be worn in the area concerned.

Protective clothing is tight-fitting workwear with low tear resistance, tight sleeves and no protruding parts.

### Wear safety shoes



This sign indicates safety shoes must be worn in the area concerned.

Safety shoes protect the feet from bruising, falling parts and slipping on slippery surfaces

### Tragen wearing safety gloves



This label indicates that protective gloves must be worn in the area concerned.

Protective gloves are used to protect hands from friction, abrasions, punctures, cuts or deeper injuries, as well as from contact with hot surfaces.

### Wearing safety goggles



This label indicates that protective goggles must be worn in the area in question.

The safety glasses are used to protect the eyes from flying parts and liquid splashes.



### Operating instructions and safety instructions



Before commissioning read and observe the operating instructions and safety instructions.



Never open or remove protective devices while the engine is running.



Follow the instructions in the technical manual. Smudge!



Touch machine parts only when they have come to a complete stop



Danger from passing parts while the engine is running.  
Keep safety distance!

### 3.3 Intended use

**⚠ WARNING****Danger of injury / risk of environmental damage due to improper use of the machine!**

Incorrect use of the machine can result in injury, as well as the risk of damage to the environment and property (on the machine or system)!

- The machine must only be used for the usual or common use in plant care for weed removal on flat surfaces.
- The weed brush is designed to be used with a front lift carrier machine.
- Any further use is considered improper use. The manufacturer is not liable for damage resulting from this, the risk being solely borne by the operator.
- Proper use includes compliance with the operating, maintenance and service conditions prescribed by the manufacturer.
- The attachment may only be used, maintained and repaired by persons who are familiar with it and have been informed of the dangers.
- The relevant accident prevention regulations as well as the other generally recognized safety and occupational health rules must be observed.
- Unauthorized modifications to the machine lead to the exclusion of liability of the manufacturer for the resulting damage.

### 3.4 Occupational and Hazardous Areas

The plan view of the machine shown in Figure 2 (See Chapter 1 Illustrations on page 6) shows the work area, the safety area and the danger area.

The scope of delivery essentially consists of the shown and listed machine. It is the weed brush UB6080M.

- RED → Danger area
- YELLOW → safety area (radius of 5 meters around the brush plate (02))
- GREEN → Workspace

#### WARNING



#### **Danger of injury / risk of environmental damage from working / staying in the danger area!**

Working / stopping in the danger zone poses a risk of injury, as well as the risk of damage to the environment and property (on the machine or system)!

- The user is responsible towards third parties in the danger and safety area of the machine!
- Staying in the danger and safety area of the machine is prohibited! Refer all persons from the danger and security area. The security area has a radius of 5 m around the brush plate.
- When approaching people to the danger and safety area, the machine must be switched off.
- The operator must make sure that there are no persons or property in the ejection area (safety area)
- Check both the danger area and the safety area before switching on the implement and starting it up. Especially on children and animals is important. Make sure you have enough sight!
- Park the implement in hard-to-see areas and make sure that no one is in the area of danger and safety.
- Before starting work, remove foreign objects from the surface to be worked. Pay attention to other foreign objects during work and eliminate them in good time.
- When working in enclosed areas, the safety distance to the border must be maintained so as not to damage the machine or brushes
- When working in the immediate vicinity of public roads and paths, these should not be approached longitudinally, but preferably as far as possible, thereby minimizing the risk of injury to third parties due to flying objects.
- When working on public roads and squares or in the immediate vicinity, warning and danger signs should be set up to attract the attention of third parties.

## 3.5 Safety during the work process

### Before starting work

#### WARNING



#### **Risk of injury / risk of environmental damage due to non-compliance with the safety measures!**

Non-compliance with the safety measures can result in injury, as well as the risk of damage to the environment and property (on the machine or the carrier vehicle)!

- Before starting work, you must familiarize yourself with all the equipment and actuators and their function; it must be ensured that all safety equipment is properly installed and in the protective position. It's too late during the work assignment!
- Check the machine for operational safety before each use!
- Before each use, check that the drive shaft is firmly seated on the drive stub on the carrier vehicle and on the implement.
- The hydraulic connections and hoses must be checked for leaks and replaced if necessary.
- Never operate the machine with defective or missing protective devices.

## During operation

### WARNING



#### **Risk of injury / risk of environmental damage due to non-compliance with the safety measures!**

Non-compliance with the safety measures can result in injury, as well as the risk of damage to the environment and property (on the machine or the carrier vehicle)!

- If persons or vehicles approach the danger or safety area (radius 5 m), stop the implement immediately.
- Never leave the control room while driving!
- The operating station should not be left until the brushes of the attachment have come to a standstill!
- Do not make adjustments to the attachment during operation - risk of accident!
- The transport of persons and objects is prohibited!
- If, for example, the attachment has caught a foreign object and blocked it, stop the engine and clean the attachment with a suitable tool! Always switch off the engine and disconnect the spark plug connector when intervening or cleaning the attachment! The safety instructions of the self-propelled implement must be observed.
- In the event of damage to the self-propelled implement or attachment, stop the engine immediately and have the damage repaired.

## Leaving the machine

### WARNING



#### **Risk of injury / risk of environmental damage due to non-compliance with the safety measures!**

Non-compliance with the safety measures can result in injury, as well as the risk of damage to the environment and property (on the machine or the carrier vehicle)!

- Secure the carrier vehicle against rolling away by using wheel chocks or, if necessary, by applying the parking brake
- Secure the device against unauthorized use
- Never leave the appliance unattended while it is still in operation!

## Coupling and uncoupling attachments

### WARNING



#### **Risk of injury / risk of environmental damage due to non-compliance with the safety measures!**

Non-compliance with the safety measures can result in injury, as well as the risk of damage to the environment and property (on the machine or system)!

- The corresponding instructions and safety regulations of the carrier vehicle must be observed.
- Use suitable tools and gloves when changing attachments and their parts.
- When mounting and dismounting, bring the required support devices into their respective position and ensure adequate stability.
- Secure the self-propelled working machine and the attachment against rolling away (parking brake, wheel chocks).
- When attaching attachments, there is a risk of injury (crushing). Special care is necessary.
- Attach implements according to regulations and fix in the prescribed places.

## 3.6 Safety

### DANGER



#### **Danger of life or injury due to non-functioning safety devices!**

Failure to operate or disable the safety equipment can result in serious injury or even death.

- Before starting work, check that all safety devices are installed correctly and correctly.
- Never override or bypass safety devices.
- Make sure that all safety devices are always accessible.

### **Splash guard with signal band and rubber squirt lugs**

The Splash Guard with Signal Strap (01) and Rubber Splash Valve (08) shown in Figure 1 (See Chapter 1 Illustrations on page 6) isolates the danger zone of the machine and protects people from debris, dirt and liquids.

## 3.7 Safety labeling

The following icons and signs are in the workspace.  
They refer to the immediate environment in which they are installed.

**⚠ WARNING****Danger of injury due to illegible or missing signs!**

Missing and illegible labels and signs can cause serious health effects or life-threatening injuries.

- Keep all safety, warning and operating instructions in an always legible state.
- Replace damaged signs or labels immediately.

### 3.8 Residual hazards

The machine is designed according to the state of the art and according to current safety requirements. Nevertheless, residual risks remain, which require prudent action. The following lists the residual risks and the resulting behavior and measures.

#### Improper transport

**NOTE****Property damage due to improper transport**

If transported improperly, transport items may fall or fall over. This can result in material damage to a considerable amount.

- Take care when unloading the transport pieces on delivery as well as during in-house transport and observe the symbols and notes on the packaging.
- Use only the intended attachment points.
- Remove packaging only shortly before installation.

## Dirt and surrounding objects

### ⚠ ATTENTION



#### **Danger of injury by falling over dirt and objects lying around!**

Dirt and objects lying around make slides and tramps. In a fall, injuries can be caused.

- Always keep the work area clean.
- Remove objects that are no longer needed from the work area and especially from the ground.
- Mark unavoidable stumbling points with yellow-black marking tape.
- Remove tools or components from the work area and store in a suitable location outside the machine.

## Cleaning supplies

### ⚠ WARNING



#### **Risk of injury due to improper handling of cleaning agents or materials**

Improper handling of cleaning agents or materials can result in serious health effects or life-threatening injuries

- Read the material safety data sheets and manufacturer's instructions applicable to the cleaning materials or materials
- Wear appropriate protective equipment (eg gloves, safety shoes, protective suit, respirator, goggles, etc.)
- Ensure adequate ventilation of the environment
- Be careful when handling hot cleaning agents or substances.  
Touching it can cause burns and scalds
- If necessary, clean parts, assemblies or components of adhering oils, greases and other contaminants
- Avoid skin contact with cleaning agents or substances
- Do not inhale vapors from cleaning agents or substances
- Do not handle close to open fire and do not smoke



### Noise level

Valid noise protection regulations as well as the warnings of the complete documentation must be observed. The local noise level depends on the local ambient noise. The noise level must be checked at regular intervals by the operator.

#### WARNING



##### **Risk of injury due to noise!**

The noise level in the work area can cause severe hearing damage.

- Covers, insulating materials and other insulating equipment must not be removed and must be replaced if damaged.
- If the daily noise exposure level exceeds 85 dB (A), wear the ear protection in this case from the operator side.
- Only stay in the danger area as far as necessary.

### Moving components

#### DANGER



##### **Danger of life or injury due to moving components!**

Improper handling of moving components can cause death or injury as well as material damage to the machine or system

- Do not interfere with moving components or handle moving components during operation.
- Never open covers during operation.
- Note the after-run time: Make sure that no components are moving before opening the covers.
- Wear tight-fitting work clothing with low tear resistance in the danger area.

### Sharp edges and sharp corners

#### ATTENTION



##### **Risk of injury due to sharp edges and sharp corners!**

Scharfe Sharp edges and sharp corners can lead to skin abrasions and cuts.

- Use caution when working near sharp edges and sharp corners.
- If in doubt wear protective gloves.

## Hydraulics

### DANGER



#### **Danger of life or injury due to hydraulic energy!**

By hydraulically driven moving components there is a risk of life or injury.

- Work on the hydraulic system should only be carried out by qualified hydraulics.
- Do not interfere with moving components or handle moving components during operation.
- Do not open covers during operation.
- Wear tight-fitting work clothing with low tear resistance in the danger area.

## Operating resources / Lubricants / Oils

### WARNING



#### **Danger of injury due to improper handling of equipment or –Substances who!**

Improper handling of equipment or materials can result in serious health effects or life-threatening injuries.

- Read the material safety data sheets and manufacturer's instructions applicable to the equipment and / or materials
- Wear appropriate protective equipment (eg gloves, safety shoes, protective suit, respirator, goggles, etc.)
- After accidental eye contact, rinse eyes thoroughly with plenty of water and seek medical attention.
- After skin contact rinse thoroughly with plenty of water.
- Ensure adequate ventilation of the environment
- Be careful when handling hot equipment or materials. Touching it can cause burns and scalds
- If necessary, clean parts, assemblies or components of adhering oils, greases and other contaminants
- Avoid skin contact with equipment or materials
- Do not inhale vapors from equipment or materials
- Do not handle close to open fire and do not smoke

## 3.9 Environmental Protection

### WARNING



**Danger of environmental damage due to improper handling of operating materials or operating materials as well as cleaning agents or cleaning agents!**

Improper handling of operating materials or materials as well as cleaning agents or materials can result in extensive environmental and material damage.

- Read the material safety data sheets and manufacturer's instructions applicable to the operating materials, cleaning agents and cleaning agents
- Store materials and operating fluids that are hazardous to water and soil, such as oil-contaminated parts, assemblies or components in secured areas or drip pans
- Bind worn equipment or operating materials as well as cleaning agents or cleaning agents with a binder and dispose of according to local regulations
- If necessary, clean parts, assemblies or components of adhering oils, greases and other contaminants
- Do not allow leaked equipment or operating materials as well as detergents or cleaning agents to seep into the ground or into drains

---

**The following environmentally hazardous substances are used:**

**Lubricants**

Lubricants such as fats and oils contain toxic substances. They must not get into the environment. Disposal must be carried out by a disposal specialist.

**Oils**

Oils (such as lubricating, hydraulic or cleaning oils) must not be released into the environment. Oils lead to longer-term harmful effects in waters. Disposal must be carried out by a disposal specialist.

Observe the safety data sheets of the manufacturer

**Electronic components**

Electronic components may contain toxic substances. They must not get into the environment. Disposal must be carried out by a disposal specialist.

**Batteries**

Batteries contain toxic heavy metals. They are subject to special waste treatment and must be delivered to municipal collection points or disposed of by a specialist company.

## **3.10 Safety instructions for maintenance / troubleshooting**

**Behavior in case of dangerous malfunctions**

Basically:

1. Immediately initiate emergency stop in the case of faults that pose an immediate danger to persons or property.
2. Determine the cause of the fault.

3. Falls die Störungsbehebung Arbeiten im Gefahrenbereich erfordert, Maschine ausschalten und gegen Wiedereinschalten sichern.
4. Je nach Art der Störung diese von autorisiertem Fachpersonal beseitigen lassen oder selbst beheben.

**⚠ DANGER**

**Danger of life or injury due to improperly performed maintenance work / work for fault elimination!**

Due to improper maintenance / work for fault elimination, there is a risk of death or injury as well as a risk of property damage to the machine or system!

- Observe all safety information in this chapter, as well as the relevant local safety and accident prevention regulations
- Only repair faults that require intervention and maintenance and cleaning work if it is ensured that the machine is stationary and secured against being switched on again.
- Release blocks only when it has been ensured that no dangerous movement of machine parts occurs due to loosening.
- Ensure adequate assembly freedom before starting work.
- Pay attention to order and cleanliness at the installation site! Loose components lying on or around each other and tools are accident sources.
- If components have been removed, make sure they are correctly installed, reinstall all fasteners.
- Observe the following before restarting:
- Ensure that all work has been carried out and completed in accordance with the instructions given in this manual.
- Make sure that there are no persons in the danger zone.
- Make sure all covers, and safety devices are installed and working properly.
- Wait until the oil has cooled to below 50 ° C before starting work
- Before starting work, have a temperature-resistant container with the necessary capacity ready.

**⚠ WARNING**

**Risk of injury / risk of environmental damage due to lack of / faulty maintenance!**

There is a risk of injury due to a lack of maintenance, as well as a risk of damage to the environment and property (on the machine or system)!

- Simple cleaning and adjustment work may be carried out by operating personnel. Maintenance and repair work may only be carried out by trained specialist personnel.
- Instructions and instructions from the original operating instructions of the installed components must be observed.
- If guards and working tools are subject to wear, these must be checked regularly and replaced if necessary.

**Security**


---

- After maintenance and cleaning work, be sure to reinstall the guards and put them in the protective position!
- Only use original spare parts from the manufacturer, as these correspond to the technical requirements and thus the risk of accidents is minimized!
- Cleaning with the high-pressure cleaner should be carried out so that the water jet is not held directly in bearings, turned parts, grease nipples, shaft seals, wheel hubs, etc. After each cleaning with the high-pressure cleaner, the lubrication points must be re-greased. In case of infringement, the right to guarantee expires!
- For the first time after 5 operating hours and as a result, regularly check that the nuts and bolts are tight and retighten if necessary.
- Before carrying out any repairs, make sure that the hydraulic system is depressurized, because fluids under pressure can penetrate the skin and cause serious injuries! Therefore, seek medical attention immediately - risk of infection!
- Check hydraulic connections for the first time after 5 operating hours, tighten if necessary!


**Only tightening has no success!**

First loosen a leaking hydraulic screw connection, then move hose or screw connection. Subsequently, the screw can be tightened again.

- Inspect hydraulic hoses at regular intervals for damage and aging and replace if necessary.
- Hydraulic hose lines must be completely replaced every 6 years at the latest. The date of manufacture is stamped on the hose assembly.
- Recycle used oils and greases.
- Immediately remove excess oil with oil binder.
- Remove excess fat.

---

**NOTE**

**Incorrect quantities of oil or grease, as well as impurities can cause damage to gears and components!**

Damage to components can shorten the life of components.

- The quantity of oil as well as the position of the closing elements of gears depends on their design and installation position
  - After removing the oil level screw, the oil level must not exceed 3 to 5 mm below the prescribed filling level
  - Close the gearbox again immediately after the oil level check or the oil change
  - Do not rinse components (gears, bearings, etc.) using cleaning agents until after consulting the manufacturer.
  - When regreasing lubrication points via grease nipples, the lubricant must not be pressed in with high pressure or hard lubrication surges. The maximum permissible lubrication pressure is 15 bar.
-

### 3.11 Safety instructions for disassembly and disposal

**⚠ WARNING**



**Risk of injury due to improper disassembly!**

Stored residual energy, angular components, points and corners on or in the machine or on the required tools can cause injuries.

- Make sure there is enough space before starting work.
  - Be careful with open sharp-edged components.
  - Pay attention to order and cleanliness in the workplace! Loose components lying on or around each other and tools are accident sources.
  - Disassemble components professionally. Note partially high dead weight of the components. If necessary, use lifting gear.
  - Secure components so they do not fall or fall over.
-

## 4 Function Description

Figure 1 (See Chapter 1 Illustrations on page 6) shows the basic structure of the weed brush.

The weed brush consists of a steel construction with a bevel gear on which brush plate (02) is mounted. The brush plate (02) can be equipped with a tufting (07) or with wire rope pegs. By the rotation of the brush plate (02) and the propulsion of the carrier vehicle, the weeds are removed from the joints and collected by a side mounted splash guard frame with signal band (01) and rubber spray tabs (08).

### 4.1 Hydraulics

Figures 13 and 14 (See Chapter 1 Figures on page 6) show the various hydraulic components.

The propeller shaft of the vehicle is connected via an interface (51) with the hydraulic pump (50). The PTO shaft drives the pump (50). The pump (50) ensures the circulation of the hydraulic oil. The system is supplied with hydraulic oil via an oil tank (52). The tank (52) is via a filler neck

(55) filled with oil and can be controlled by a level gauge glass with thermometer (53). Above the oil tank, a filter unit (54) is mounted, which filters out dirt from the oil.

About three hydraulic cylinders (03, 04, 05), the weed brush can be adjusted and moved. The hydraulic cylinders are controlled by means of a valve unit (56). The brush head is driven by a hydraulic motor (57).

## 5 Transport, Packaging and Storage



Assembly, installation and commissioning are carried out exclusively by employees of the dealer or by persons authorized by him.

Nevertheless, it may happen that operators or maintenance personnel of the operator are entrusted with the handling of packages during the installation and further use. The following notes be sure to pay attention.

### 5.1 Safety



**It is essential to observe all the safety instructions listed in the chapter Safety!**

(See chapter 3 Safety on page 14)

### 5.2 Transport Inspection

Upon receipt, check the delivery for completeness and shipping damage.

For externally visible transport damage, proceed as follows:

- Do not accept delivery or only with reservations.
- Note the extent of damage on the transport documents or on the delivery note of the transporter.
- Initiate a complaint.



Claim any shortcoming as soon as it is recognized. Claims for damages can only be asserted within the applicable complaint period.



## 5.3 Packaging

### Handling of packaging materials

The packaging material must be disposed of in accordance with the applicable legal regulations and local regulations.

#### NOTE



#### **Danger to the environment through incorrect disposal!**

Packaging materials are valuable raw materials and, in many cases, can continue to be used or sensibly processed and recycled. Incorrect disposal of packaging materials can be hazardous to the environment.

- Dispose of packaging materials in an environmentally friendly manner.
- Observe the locally applicable disposal regulations. If necessary, commission a specialist company with disposal.

## 5.4 Transport der Maschine

The machine is usually transported together with the required carrier vehicle.

#### NOTE



#### **Property damage due to improper handling!**

Improper handling of the machine can lead to damage.

- Do not tip the machine or turn the horizontal axis.
- Vehicles, aids and lifting gear must be suitable for the weight of the transport units.
- The driver must be authorized to drive the vehicle.

Protective gear

- Protective clothing
- Protective gloves
- Safety shoes

The following points must be observed when transporting the machine / carrier vehicle:

- The transport vehicles must be suitable for the transport weight and the dimensions of the machine / carrier vehicle combination to be transported.
- The machine and carrier vehicle must be attached to the marked attachment points.
- Sufficiently dimensioned slings / lashings are to be used.
- The slings / lashings must not be damaged.
- For transport, only functionally correct, safety-relevant and load-compliant vehicles and aids or lifting tackle / lashing must be used.
- Do not stack the individual transport units!

## 6 Assembly / installation, installation, commissioning

### 6.1 Safety



**It is essential to observe all the safety instructions listed in the chapter Safety!**

(See chapter 3 Safety on page 14)

### 6.2 Mechanical coupling / uncoupling

#### ATTENTION



**Risk of injury / risk of environmental damage during coupling and uncoupling!**

By coupling and uncoupling, there is a risk of injury from crushing, as well as the risk of environmental and material damage (on the machine or system)!

- Observe the information from the operating instructions of the carrier vehicle!
- Special care is required!

#### **Coupling**

The following points should be observed when coupling the attachment:

1. Hook the attachment frame of the weed broom into the tractor front linkage and lock it.
2. Adjust the top link so that the machine is parallel to the ground.
3. Slide the PTO shaft onto the profiled shaft of the carrier vehicle and attach the chain to the carrier machine to prevent the PTO shaft guard from rotating. If the PTO shaft is too long, it must be shortened by a qualified person.
4. If necessary, securely fasten the electric cable of the joystick to the carrier vehicle along the bonnet.
5. Insert the plug into the 3-pin socket on the carrier vehicle

#### **Uncouple**

Uncoupling is done in the reverse order

### 6.3 Connecting / disconnecting hydraulic hoses

When connecting and disconnecting hydraulic hoses, the following points should be noted.

- Stop the engine of the carrier machine!
- Move hydraulic controls back and forth to relieve any overpressure.

- Before connecting hydraulic hoses, make sure that the hydraulic system of the carrier vehicle is not under pressure. The entire machine must not be under pressure
- Make sure all connections are clean before connecting. Impurities in the hydraulic oil cause severe damage to the hydraulic system
- Remove the protective covers from the couplings and establish the hydraulic connection.
- For a weed brush without control unit, insert the 6 hydraulic plug-in couplings in pairs into the control unit of the carrier vehicle.
- For the weed brush with control unit, insert the two hydraulic plug-in couplings in the carrier vehicle.

## 7 Service

### 7.1 Adjusting the brush plate

Figures 1 and 3 (See Chapter 1 Illustrations on page 6) show the adjustment of the brush plate.

The working height of the brush plate (02) is adjusted via the trailing support wheel (06). The working height depends on the position of the brush plate (02) and the degree of wear of the tufts (07).

After rainfall and wet weather particularly, good work results are achieved. The driving speed depends on the strength of the weed growth.

The position of the brush plate (02) depends i.a. according to the strength of the weed growth. The working area of the brush plate (09) is indicated by the red arrow. A good performance is achieved when viewed in the direction of travel, the brush plate (02) is inclined to the right and slightly backwards.

### 7.2 Swinging the weed brush

Figure 10 (See Chapter 1 Illustrations on page 6) shows the forwarding of the weed brush. By the Vorschwenken the weed brush, the lateral deflection (work area) is increased.

The lateral deflection of the weed brush can be realized via the laterally placed hydraulic cylinder.

- Hydraulic cylinder with stepless adjustment to the right from 0 ° to a maximum of 90 °

In the version for left-hand traffic, the receiving plate, as well as the attachments are mirror images. In this case, a deflection of 0 ° to a maximum of 90 ° to the left side of the vehicle is realized.

## 7.3 Adjustment of the brush plate

Figure 1 (See Chapter 1 Illustrations on page 6) shows the adjustment of the brush plate.

The tilt angle adjustment of the brush plate is made via the hydraulic cylinder or upper link (03 and 04). The cylinder (03) pivots the brush plate laterally to the direction of travel. The top link (04) pivots the brush plate forward or backward to the direction of travel. With the top link

(05) the weed brush can be swiveled up to 40 °.

During road driving, the weed brush must be parallel to the tractor.

## 7.4 Adjusting the splash guard

Figure 1 (See Chapter 1 Illustrations on page 6) shows the components of the splash guard.

Due to the rotation of the brush plate, materials such as weeds, stones and other objects are thrown away. To prevent this material from leaving the work area, a side splash guard (01, 08) is attached to the machine.



### WARNING

#### **Danger of injury / risk of environmental damage due to incorrectly set splash guard!**

Incorrectly adjusted splash guard may result in injury, risk of damage to the environment and property (on the machine or system)!

- The splash guard must always be set up correctly

Figure 5 (See Chapter 1 Illustrations on page 6) shows the setting of the splash guard

The setting of the splash guard depends on the setting of the brush plate and the local conditions.

By loosening the clamping lever (17), the telescopic pivot arm (14) can be adjusted at an angle. The same applies to the splash guard (01), which is adjusted by the clamping lever (15) at an angle.

The telescopic swivel arm (14) of the splash guard must be moved in or out, depending on the diameter and setting of the brush plate (02). The procedure is as follows:

1. Loosen the clamping lever (13) to the left
2. Pull the clamping lever (13)
3. Adjust the telescopic swivel arm (14)
4. Release the clamping lever (13); Make sure that it engages in a hole
5. Tighten the clamping lever (13) to the right

The rubber tab (08) of the splash guard must be lightly resting on the ground in working position. When adjusting the height of the splash guard, and when adjusting the telescopic swivel arm (14), release the clamping lever (13) and retighten after adjusting the splash guard.

## 7.5 Adjusting the brush plate

Both the deflection and the inclination of the brush plate are adjusted either via top link or hydraulic cylinder.

If hydraulic cylinders are used and these are not directly connected to the carrier machine, operation is either via a joystick or via a remote control. The operating instructions of the respective manufacturer must be observed.

### Operation by joystick

Figure 11 (See Chapter 1 Illustrations on page 6) shows the various control knobs on the joystick.



- Make sure that the electrical connection to the carrier vehicle is made.

Assignment of the control buttons:

In the front area of the joystick there are 6 pushbuttons, which are arranged in pairs and which are color-coded.

Here, the paired pushbuttons have the following function:

- 30-31 (yellow): swing entire UB right / left
- 32-33 (green): turn brush plate right / left
- 35-36 (red): tilt the brush plates front / rear

There is a red pushbutton in the back of the joystick (34, not visible in the illustration). This push button is used for release and must be pressed simultaneously when operating the front pushbuttons.

### Operation by remote control

Figure 12 (See Chapter 1 Illustrations on page 6) shows the various control buttons on the remote control.



- Make sure that the remote control battery is charged before starting work.
- For handling the remote control, the supplied operating manual from the manufacturer must be considered.

Assignment of the control buttons:

- 37-38: swing entire UB right / left
- 39-40: Tilt the brush plate front / rear
- 41-42: Turn brush plate right / left



## 8 Maintenance

### 8.1 Safety



**It is essential to observe all the safety instructions listed in the chapter Safety!**

(See chapter 3 Safety on page 14)

### 8.2 Parts

#### Wrong spare parts

 **DANGER**



**Danger of life or injury due to the use of incorrect spare parts!**

This symbol warns of an imminent danger to the life and health of persons. The use of incorrect or faulty spare parts can cause death or injury as well as the risk of property damage to the machine or system!

- Use only original spare parts from the manufacturer or replacement parts approved by the manufacturer.
- If in doubt, contact our customer service / customer service (see manufacturer's service on page 3).

#### Procurement of spare parts

Replacement and wear parts must be ordered through Customer Service (see Customer Service on page 3).

## 8.3 Maintenance

### 8.3.1 Daily test

Staff:

- Private and commercial operators

Protective gear:

- Protective clothing
- Protective gloves
- Safety goggles

The planning, execution and documentation of tests must be carried out in consideration of the valid regulations and laws by the operator.

To ensure safe operation of the machine, the safety devices must be checked:

The following things should be checked daily on the machine:

- Check protective devices for wear and replace if necessary.
- Check brush elements for wear and replace if necessary.
- Check brush elements for tightness.
- Have damaged brush elements replaced by trained specialist personnel.
- Remove wraps of the brush plate (such as wire).
- Check the smooth running of the moving parts.
- Check the hydraulic connections for leaks before each use.
- Lubricate the PTO shaft according to the manufacturer's instructions.
- Lubricate the grease nipple before use
- Carry out a test run before each use.
- Before each use, the oil level in the hydraulic tank must be checked.

### 8.3.2 Maintenance after 50 operating hours / longer downtime

#### DANGER



#### **Danger of life or injury due to a machine in operation!**

An operating machine poses a risk of life or injury, as well as a risk of property damage to the machine or system!

- Before carrying out any maintenance work, disconnect the machine from the power supply and secure it against being switched on again

The planning, execution and documentation of tests must be carried out taking into account the applicable regulations and laws.

To ensure safe operation of the machine, the safety devices must be checked:

At intervals of a maximum of 50 operating hours, as well as at the beginning and end of the season, all moving parts of the unit must be greased or oiled.

#### **Smudges**

Staff:

- Private and commercial operators

Protective gear:

- Protective clothing
- Protective gloves
- Safety goggles

Figure 8 (See Chapter 1 Illustrations on page 6) shows the parts of the machine to be lubricated.

The machine must be oiled at intervals of 50 operating hours at the points shown.

#### **Hydraulic oil level**

Staff:

- Trained specialist personnel

Protective gear:

- Protective clothing
- Protective gloves
- Safety goggles

- Check the hydraulic oil level. To do this, look in the level glass. The oil level must be at 28 liters. Possibly, is the oil level with - synthetic hydraulic oil AVIA Syntofluid N46.

The filling nozzle is also the ventilation point and is located above the tank in the direction of travel on the left.

### 8.3.3 Changing brush elements

**⚠ DANGER****Danger of life or injury due to a machine in operation!**

An operating machine poses a risk of life or injury, as well as a risk of property damage to the machine or system!

- Before changing the brush elements, disconnect the machine from the power supply and secure it against being switched on again.
- 

Staff:

- trained specialist personnel

Protective gear:

- Protective clothing
- Protective gloves
- Safety goggles

The illustration (See Chapter 1 Illustrations on page 6) shows the components that need to be loosened to replace individual brush elements.

Before changing the individual brush elements, the weed tufts must (18) together with brush holder inner and outer part (19, 20) to be solved. For this purpose, the stop nuts (22) and the washers (21) are removed. Subsequently, the weed tufts (18) can be removed and changed.

### 8.3.4 Changing the brush plate

**⚠ DANGER****Danger of life or injury due to a machine in operation!**

An operating machine poses a risk of life or injury, as well as a risk of property damage to the machine or system!

- Before replacing the brush plate, disconnect the machine from the power supply and secure it against being switched on again.

Staff:

- trained specialist personnel

Protective gear:

- Protective clothing
- Protective gloves
- Safety goggles

The illustration (See Chapter 1 Illustrations on page 6) shows the components that need to be loosened to replace the brush plate.

In addition to individual weed tufts, the entire brush plate can be changed. For this purpose, first the SKT screw (27) and spring ring (24) and SKT mother (25). Subsequently, the individual SKT screws (26) of the mounting flange (23) together with washer (28) and stop nut (29) solved.

### 8.3.5 Check safety features

Staff:

- Operators

Protective gear:

- Protective clothing
- Protective gloves

The planning, execution and documentation of tests must be carried out in consideration of the valid regulations and laws by the operator.

To ensure safe operation of the machine, the safety devices must be checked:

Separating guards (covers)	
Interval	During commissioning, when switching on the machine
Scope	Visual inspection for integrity
Tester	operator
Measures for errors	<ul style="list-style-type: none"> <li>• Lock the danger area</li> <li>• Repair</li> </ul>

## 8.4 Measures after maintenance

Staff:

- Private and commercial operators

After completing the maintenance and before turning on the machine, perform the following steps:

1. Check all previously loosened screw connections for tightness.
2. Verify that all previously removed guards and covers are properly reinstalled.
3. Make sure all tools, materials and other equipment used have been removed from the work area.
4. Clean work area and any leaked substances such. As liquids, processing material or the like remove.
5. Make sure that all safety devices of the machine are working properly.

## 9 Disassembly, disposal

### 9.1 Safety



**It is essential to observe all the safety instructions listed in the chapter Safety!**

(See chapter 3 Safety on page 14)

### 9.2 Disassembly

Before the dismantling begins:

- Switch off the machine and secure it against being switched on again.
- Physically disconnect all power from the machine, discharge stored residual energy.
- Remove operating and auxiliary materials as well as the remaining processing materials and dispose of them in an environmentally sound manner.

Then clean the assemblies and components professionally and disassemble them in compliance with the applicable local health and safety and environmental protection regulations.

### 9.3 Disposal



Unless a return or disposal agreement has been made, disassembled components should be recycled:

- Scrap metals.
- Give plastic elements for recycling.
- Dispose of other components sorted according to material condition.

#### ATTENTION

#### **Danger to the environment through incorrect disposal!**

Incorrect disposal can be hazardous to the environment.

- Have electronic waste, electronic components, lubricants and other additives disposed of by authorized specialist companies.
- In case of doubt, obtain information on environmentally sound disposal from the local municipal authority or specialist waste disposal companies.

#### **Batteries and rechargeable batteries**

#### ATTENTION



#### **Danger to the environment through batteries and rechargeable batteries!**

Components of batteries and rechargeable batteries are poisonous and pose a danger to the environment.

- Never dispose of batteries and rechargeable batteries as household waste and have them disposed of according to the local regulations.



Components of the machine marked with the adjacent symbol must never be disposed of with household waste. Disposal of these components may only be carried out by specialist companies authorized on site.

### Lubricants

**⚠ ATTENTION**



**Danger to the environment through lubricants**

Lubricants such as fats and oils contain toxic substances. They must not get into the environment.

- Disposal must be carried out by a disposal specialist.
-



## 10 Technical specifications

Figure 9 (See Chapter 1 Illustrations on page 6) shows the layout of the machine.

	<b>UB60</b>	<b>UB80</b>
<b>Working width</b>	Ø 60 cm	Ø 80 cm
<b>Number of tools</b>	22 tufts / 11 wire rope heads	26 tufts / 13 wire rope heads
<b>Mold</b>	Tufts or wire ropes	Tufts or wire ropes
<b>Power unit</b>	mechanically, via PTO	mechanically, via PTO
<b>Cultivation recording</b>	Three-point / dome triangle cultivation	Three-point / dome triangle cultivation
<b>Max. Brush plate speed</b>	360 rpm	360 rpm
<b>Tank capacity</b>	30 l	30 l
<b>Oil (throughout the system)</b>	28 l	28 l
<b>Oil quality</b>	AVIA Syntofluid N 46 (synthetic hydraulic oil)	AVIA Syntofluid N 46 (synthetic hydraulic oil)
<b>Max. Oil pressure</b>	180 bar	180 bar
<b>Sound pressure level LpA, eq</b>	dB (A) on the ear of the operator	dB (A) on the ear of the operator
<b>Weight attachment</b>	Measurement based on DIN EN 12733: 2009	Measurement based on DIN EN 12733: 2009
<b>Length Width Height</b>	about 225 kg	about 225 kg

## 10.1 Declaration of Conformity

We, the

Kersten Arealmaschinen GmbH  
Empeler Straße 95  
D- 46459 Rees

explain that the product

**Weedbrush – Mechanically UB 6080 MH**

With all relevant provisions of the EC Machinery Directive 2006/42 / EC.  
The machine is also in compliance with all relevant provisions of the following EC directives:

Low Voltage Directive	2014/35/EU
Pressure Equipment Directive	2014/68/EU

Furthermore, the following standards were applied: EN ISO 12100: 2010

Dipl. Ing. (FH) Robert Bosch, Empeler Strasse 95, D-46459 Rees is authorized to compile the technical documentation.

Rees, 23.10.2017



Dipl. Ing. (FH) Robert Bosch  
Executive Director

---

## A

Pictures	6, 13, 19, 22, 31, 37, 38, 39, 40, 43, 44, 45, 49
Batteries	27, 47
Coupling and uncoupling attachments	22
attaches	22
Connecting hydraulic hoses	35
Contact Person	3
Working area	19
List	35

---

## B

Batteries	27, 47
Service	37
Intended Use	18
Resources	26
Supplies	26
Operating hours	43
Brush elements	44
Brush plate	45

---

## D

Dismantling	47
-------------	----

---

## E

Adjusting the brush plate	37, 39
Adjustment of the splash guard	38
Electronic components	27
Disposal	47
Spare Parts	41
Initial start-up	35

---

## F

Function Description	31
----------------------	----

---

## G

Danger area	19
Rubber splash flap	22

---

## H

Lying objects	24
Hydraulic	31
Hydraulic house	35

---

## I

Installation	35
--------------	----

---

## K

Identification	22
Declaration of conformity	50
Contact details	3
Customer service	3
Customer service	3

---

## L

Storage	32
---------	----

---

## M

Machinery transport	33
Measures after maintenance	46
Mechanical uncoupling	35
Mechanical coupling	35
Assembly	35

---

## O

Oils	26, 27
------	--------

---

**P**

Pictograms.....	16
Exam.....	42

---

**R**

Cleaning supplies .....	24
Residual risks .....	23
Residual risks .....	23

---

**S**

Painter.....	22
Lubricants.....	26,27
Dispose of lubricants .....	48
Dirt .....	24
Service .....	3
Security.....	14, 32, 35, 41, 47
Safety during the work process .....	20
safety equipment .....	22
Check safety devices.....	46
Safety signs .....	22
Signal band.....	22
Splash guard.....	38
Splash guard with signal band and rubber squirt lugs .....	22
Downtime.....	43
Symbols in the manual .....	14

---

**T**

Daily exam .....	42
Technical specifications .....	49
Transport.....	32
Transport of the machine .....	33
Transport insection .....	32
Disconnect hydraulic hoses .....	35

---

**U**

Overview .....	13
Environmental Protection.....	26
Improper Transport .....	23

---

**V**

Packaging .....	32, 33
Adjustment of the brush plate .....	38
Use.....	18
Vorsch wen the weed brush .....	37
Foreword.....	13

---

**W**

Maintenance .....	41
Maintenance after 50 operating hours / longer downtime .....	43
Maintenance work.....	42



# **Kersten**

---

**SITE MAINTENANCE EQUIPMENT**

Distributed in UK by  
**Kersten (UK) Ltd Tel. 0118 986 9253**

Progress House  
39 Boulton Road Reading, RG2 0NH  
www.kerstenuk.com - [info@kerstenuk.com](mailto:info@kerstenuk.com)