

# tielbürger

## Greenkeeper 110

GB

AI-200-001GI



Copyright © 2016 by Julius Tielbürger GmbH & Co. KG, Stemwede Any reproduction, whether in whole or in part, is not permitted. KR-362-169GI REV. 00

171506096/0EN

EN – Translation

**Julius Tielbürger** GmbH & Co. KG Maschinenfabrik  
Postdamm 12 D-32351 Stemwede-Oppenwehe Germany Tel.: +49 (0) 57 73/80 20 Fax: +49 (0) 57 73/81 75  
Website: [www.tielbuerger.de](http://www.tielbuerger.de)

This document is a publication by Julius Tielbürger GmbH & Co. KG, Postdamm 12, D-32351 Stemwede-Oppenwehe, Germany ([www.tielbuenger.de](http://www.tielbuenger.de)).

The document is up to date with the latest technology at the time of printing. Subject to technical and equipment changes. The drawings and illustrations shown may differ from the original.

All rights reserved, including those of translation. Any type of reproduction, such as photocopy, microfilm or storing in electronic data processing systems, requires written authorisation from the publisher. Any reproduction, whether in whole or in part, is prohibited.

All trademarks, registered trademarks, trade names and brand names are the property of their rightful owners and are acknowledged by us.

© Copyright 2016 by Julius Tielbürger GmbH & Co. KG

# Content

<b>1 Operating and installation instructions .....</b>	<b>4</b>
1.1 General .....	4
1.2 Warnings and symbols.....	5
<b>2 Basic safety instructions .....</b>	<b>6</b>
2.1 Intended use.....	6
2.2 Organisational measures.....	6
2.3 Personnel selection and qualifications; basic obligations.....	7
<b>3 Scope and condition of delivery .....</b>	<b>8</b>
<b>4 Illustration of the machine and danger zone, component description, position of safety stickers and labels.....</b>	<b>9</b>
<b>5 Components of the Tielbürger quick-change system.....</b>	<b>10</b>
5.1 Accessories .....	10
<b>6 Installation .....</b>	<b>11</b>
<b>7 Start-up .....</b>	<b>14</b>
7.1 Basic safety instructions for normal operation.....	14
7.2 Special safety instructions for normal operation.....	14
<b>8 Instruction manual.....</b>	<b>15</b>
<b>9 Exploded drawing .....</b>	<b>17</b>
<b>10 Manufacturer's declaration .....</b>	<b>18</b>

## 1 Operating and installation instructions

### 1.1 General

These operating and installation instructions are intended to help users familiarise themselves with the product and use it in line with its intended applications. The operating instructions contain important information on how to operate the product safely, properly and economically. Observing these operating and installation instructions helps to avert risks, to reduce repair costs and downtime and to increase the reliability and service life of the product.

The operating instructions must be supplemented by the relevant national rules and regulations for accident prevention and environmental protection.

The operating instructions must always be available wherever the product is in use.

The operating instructions must be read and applied by any person in charge of carrying out work with or on the product, such as:

- Operation, including setting up, fault rectification in the course of work, removal of production waste, maintenance and disposal of operating and auxiliary materials
- Maintenance (servicing, inspection, repair) and/or
- Transport.

The generally recognised rules of technology for safe and proper working must be observed in addition to the operating instructions and mandatory regulations for accident prevention which apply to the country and place of use.

## 1.2 Warnings and symbols



Read the operating instructions



**DANGER!**

Indicates an immediate threat of danger. If this instruction is ignored, there is a risk of death or extremely serious injury.



**WARNING:**

Indicates a potentially hazardous situation. If this instruction is ignored, there may be a risk of death or extremely serious injury.



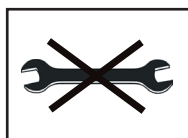
**CAUTION:**

Indicates a potentially hazardous situation. If this instruction is ignored, there may be a risk of minor injury.



**IMPORTANT:**

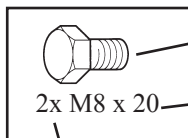
Indicates operating tips and other useful information.



Do not use a tool



Work on a workbench



Symbol  
2x M8 x 20 Type  
Quantity

Symbol	Type Examples	Explanation
Bolt	M8 x 16	M = Metric S = Diameter in mm 16 = Length in mm
Washer	8.1 - 58 - 5	8.1 = Inner diameter 58 = Outer diameter 5 = Material thickness in mm
Nut	M8 (L)	M = Metric 8 = Inner diameter in mm (L) = Lock nut
Combination spanner Hexagon head screwdriver Screwdriver	8	8 = Size in mm
Crosshead screwdriver	PZ 2 PH 2	PZ 2 = Pozidriv size 2 PH 2 = Phillips size 2

## 2 Basic safety instructions

### 2.1 Intended use

The product has been constructed using state-of-the-art technology and in line with the recognised technical safety regulations. However, use of this product may still result in the risk of injury or death to the user or third parties, or of damage to the product and other material assets.

Only use the product in technically perfect working order, for its intended use and with safety and hazards in mind, in compliance with the installation instructions. In particular, you must immediately rectify faults that could impair safety or have such faults rectified immediately by a third party.

The product is exclusively intended to be installed on the machines approved by the manufacturer and

is intended for the accessories approved by the manufacturer.

The Greenkeeper is a lawn maintenance machine designed to rake moss and thatch out of the lawn. Regular raking minimises the formation of moss. The Greenkeeper must not be used to aerate soil – if the spring tines are positioned too low they can break and may cause further damage.

Please always observe the setting instructions.

Intended use also includes complying with the installation instructions and adhering to the inspection and maintenance conditions.

### 2.2 Organisational measures

The operating instructions must always be to hand wherever the product is in use.

In addition to the operating instructions, observe and follow the generally valid legal regulations and any other binding regulations for accident prevention and environmental protection.

Such obligations may also include handling hazardous substances or making available/wearing personal protective equipment and complying with road traffic regulations, for example.

Supplement the operating instructions with instructions including site management and reporting obligations concerning special operational requirements, for example with regard to work organisation, workflows, personnel used, etc.

Any personnel instructed to perform work on the product must have read the operating instructions before starting work, specifically the section entitled "Safety instructions". Reading the instructions after work has begun is too late. This applies in particular to personnel who only work on the product occasionally, for example for set-up and maintenance.

At least occasionally, check that the personnel are working with safety and hazards in mind while following the operating instructions.

Personnel must not have long hair which is not tied back or wear loose clothing or jewellery including rings. There is a risk of injury from being caught or drawn into the machine, for example.

Wear personal protective equipment if necessary or required by regulations.

Observe all safety and hazard notices on the product. Ensure that all safety and hazard notices at/on the machine can be read in full at all times.

In the event of any modification to the product or any change in the product's performance that may affect safety, shut down the product immediately and report the fault to the office/person responsible.

Do not modify, convert or attach equipment to the product without approval from the supplier if this could impair safety. This also applies to fitting and adjusting safety equipment and valves, as well as for welding on supporting parts.

Spare parts must fulfil the technical requirements determined by the manufacturer. This must always be guaranteed for genuine spare parts.

Adhere to the prescribed time periods or those indicated in the operating instructions for recurring tests/inspections.

Workshop equipment which is appropriate for the work is mandatory for carrying out maintenance measures. Make personnel aware of the location of fire extinguishers and how to use them.

Observe the fire alarm and fire fighting procedures.

### 2.3 Personnel selection and qualifications; basic obligations

Work on/with the product may only be carried out by reliable personnel. Observe the legal minimum age.

Only use trained or instructed personnel and clearly define the responsibilities of the personnel for operation, set-up, maintenance and repair.

Ensure that only authorised personnel work on the product.

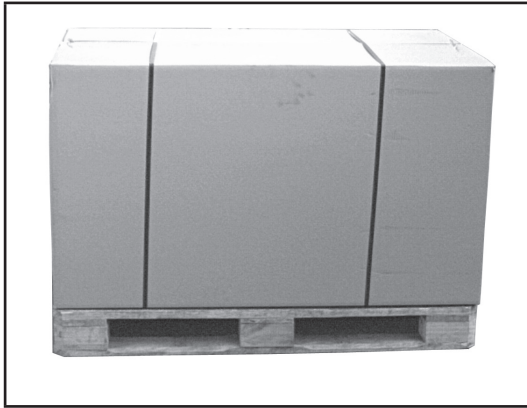
Only allow personnel who are yet to complete training, instruction and induction or who are still completing a general apprenticeship to carry out work on the product under the constant supervision of an experienced person.

Work on the product's electrical equipment may only be carried out by a qualified electrician or by trained personnel under the guidance and supervision of a qualified electrician in accordance with electrical engineering regulations.

Work on chassis, braking and steering systems must only be carried out by qualified personnel trained for such work.

Only personnel who possess specific knowledge of and experience in hydraulics are allowed to carry out work on hydraulic equipment.

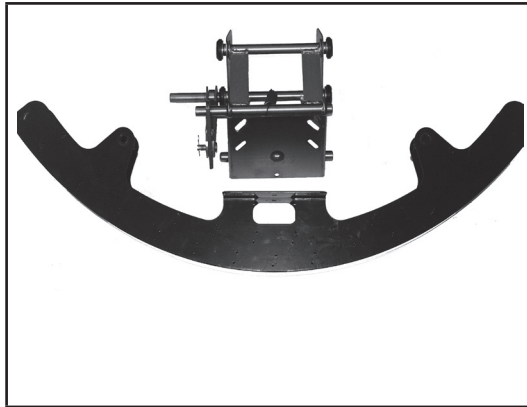
### 3 Scope and condition of delivery



1) Product packaging



2) Inspect the original packaging



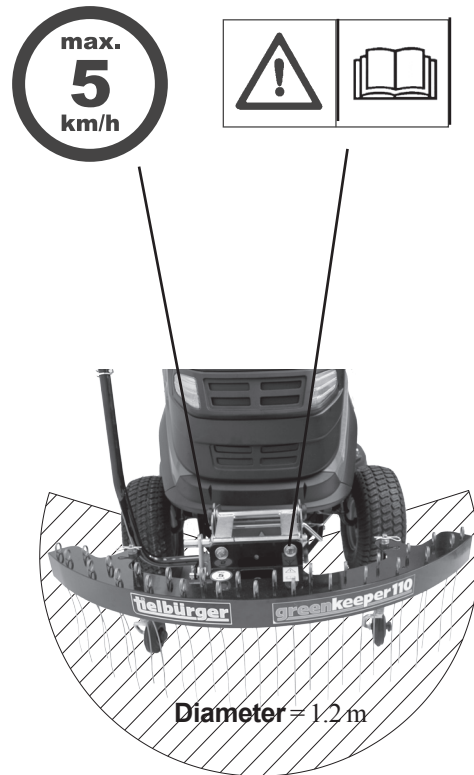
3) Please recycle the packaging material

The product is delivered in a collapsible box:

- 1 Greenkeeper
- 1 Accessories bag containing small parts
- 2 Support wheel
- 1 Parallel lifting



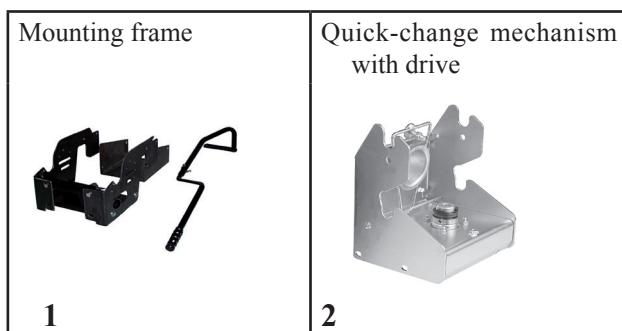
#### 4 Illustration of the machine and danger zone, component description, position of safety stickers and labels



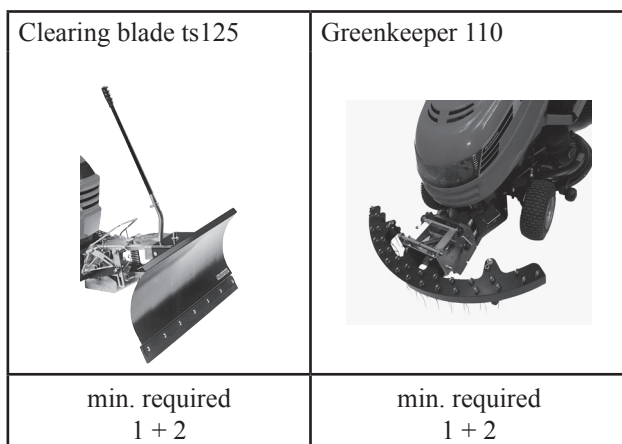
Before putting the machine into operation, read and take note of the operating and safety instructions.



## 5 Components of the Tielbürger quick-change system


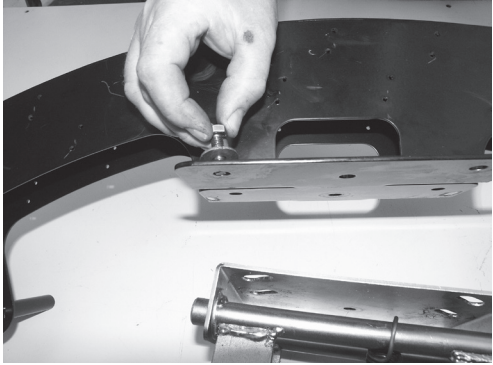




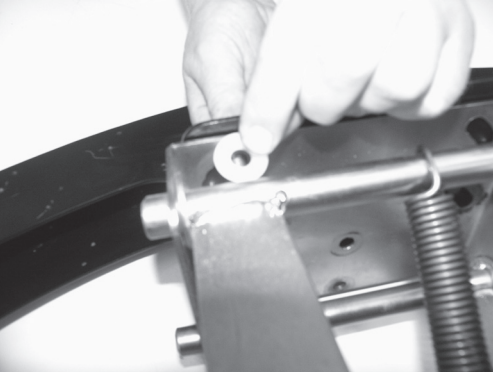

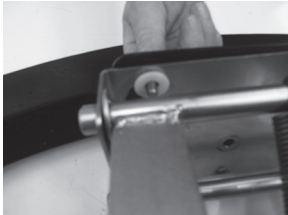


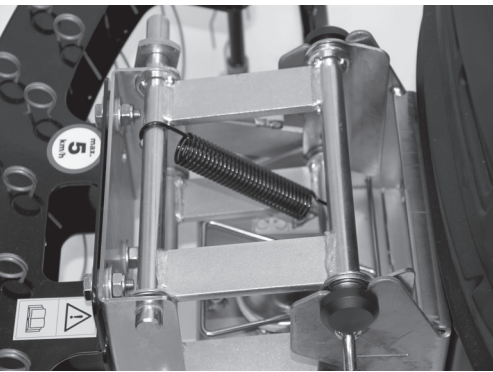
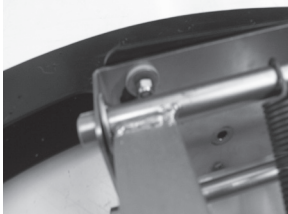


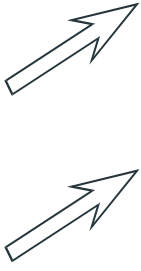
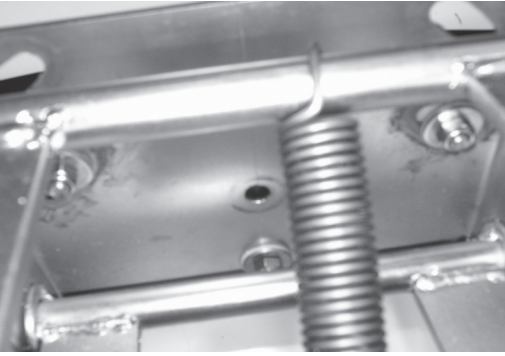







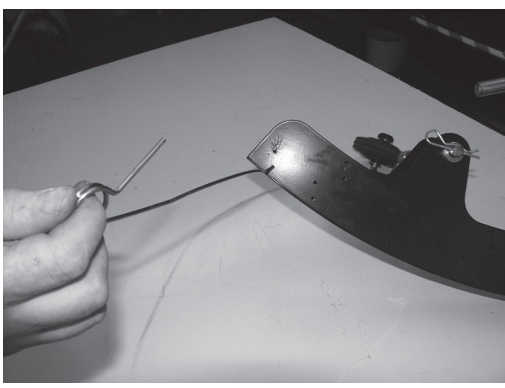
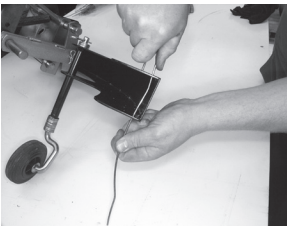
### 5.1 Accessories

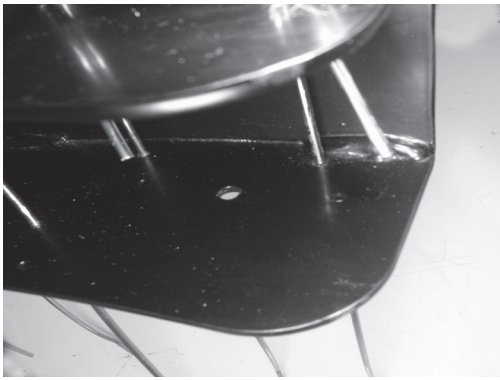
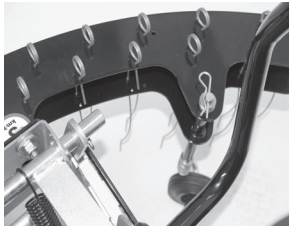


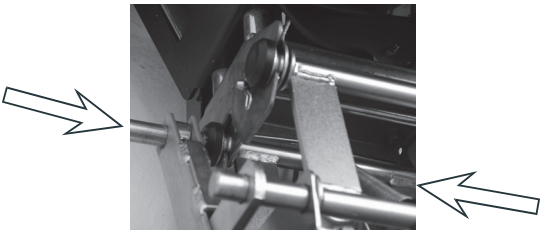
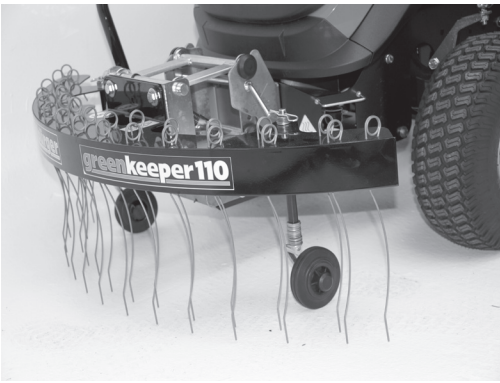



Ask your authorised Tielbürger specialist dealer for the latest implements.  
You can find further information on our website: [www.tielbuenger.de](http://www.tielbuenger.de)

**6 Installation**

 6 x 16.5 x 30 x 42.5		<p><b>For high quick-change mechanisms above 145 mm (measured from the lower edge of the quick-change mechanism to the ground)</b></p>
 3 x M10 x 30		<p>Push the bolt with washer through the drilled hole in the spring holder. Use the upper drilled holes.</p>
 3 x 16.5 x 25 x 2		 <p>Place the plastic washer onto the bolt.</p>
 3 x 20.5 x 25 x 2		<p>Guide the spring holder and bolt through the drilled hole in the parallelogram and push another plastic washer onto the bolt.</p>
 3 x M10		
 3 x 10.5 x 30 x 2.5		<p>Install using a washer and nuts (do not tighten the nuts).</p>
		

		<p><b>For low quick-change mechanisms below 145 mm</b> Use the lower drilled holes.</p>
 <p>15 x 13 x 28 x 3</p>		<p>Slide the washers onto the swing arm. (The washers regulate the height. As a default setting, slide 15 washers to the end of the swing arm).</p> 
 <p>5 x 13 x 28 x 3</p>		<p>Guide the swing arm through the pipe on the spring holder.</p>  <p>Secure using washers and R-pin.</p>
 <p>1 x 3</p>		<p>Insert the spring tine through the front drilled holes.</p>  <p>Press the rear part of the spring tine together and guide it through the second drilled hole.</p>

		<p>The rear drilled hole of the in the bottom part of the spring holder remains unused.</p> 
		<p>Hook the Greenkeeper 110 into the quick-change mechanism and secure with bolt and R-pin.</p> 
		<p>Correctly installed Greenkeeper 110</p>
	<p><b>CAUTION:</b> Check that all of the screws and nuts are seated firmly.</p>	

## 7 Start-up

### 7.1 Basic safety instructions for normal operation

---

Never operate the machine in a manner that could compromise safety.

Before beginning work, familiarise yourself with the work environment at the location where the machine is used. The work environment includes, for example, obstacles in the work and traffic area, the load-bearing capacity of the floor and the required means of cordoning the location where the machine is used off from the public traffic area.

Take appropriate measures to ensure that the product is only operated in a safe and fully functional condition. Only operate the product when all protective equipment and safety-critical equipment, for example detachable protective equipment, sound-insulating equipment and extraction equipment, is present and in proper working order.

Always check for externally visible damage and defects before using the product. Report any machine modifications (including changes in performance) immediately to the office/person responsible. Shut down the product immediately and secure it if necessary.

In the event of a malfunction, shut down and secure the product immediately. Have faults rectified immediately.

Only start the machine from the driver's seat.

Switch the machine on and off in accordance with the operating instructions, observing the control displays.

Before switching on/starting up the machine, ensure that no one can be endangered by the machine starting up.

Before travelling with the machine or beginning work, check that the brakes, steering, signal and lighting systems are fully functional.

Before moving the machine, always check that the accessories are securely in place.

When driving on public roads and paths and in public places, comply with the applicable road traffic regulations and bring the machine into a condition which is permitted by road traffic regulations in advance.

In poor visibility or in the dark, always ensure sufficient lighting.

Always maintain an adequate distance from pit edges and slopes.

Prohibit any manner of working that may impair the stability of the machine.

Do not drive across slopes; always transport work equipment and loaded goods close to the ground, particularly when descending hills.

Always adapt your driving speed to the conditions on sloping terrain. Never change to a lower gear on a slope; you should do this before you reach the slope.

Upon leaving the machine, always secure it against accidentally rolling away and unauthorised use.

### 7.2 Special safety instructions for normal operation

Driving behaviour, steering and braking capability and tipping behaviour are influenced by the attachments and ballast weights, so make sure there is sufficient steering and braking capability.

Do not load the transported goods so high that the transport trough tips.

Only couple or uncouple the product when it is unloaded.



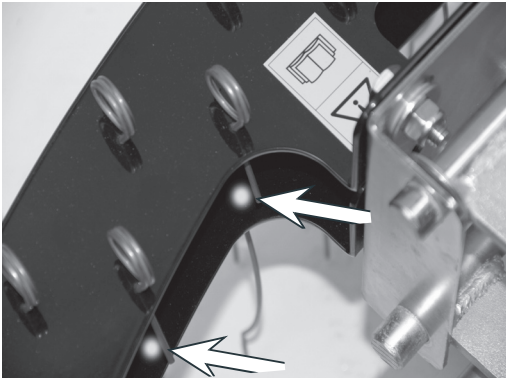
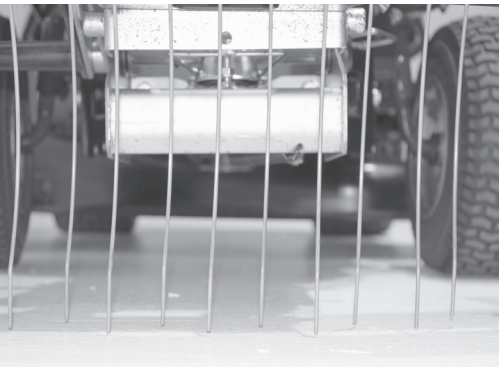
Take special care when coupling and uncoupling the product – risk of injury!

Observe the permissible axle loads, towing capacities, total weights and transport dimensions.

In the event of a malfunction, stop the machine and have faults rectified immediately.

Carrying passengers is not permitted.

8 Instruction manual

		<p>Raise and lower the tool using the control lever.</p>
		<p><b>Keep the tool raised during road transport.</b></p>
		<p>Inserting the spring tines</p> <p>The short ends of the spring tines point towards the lawn tractor, the rear lower drilled hole remains unused.</p>
		<p>Park the Greenkeeper on a flat, solid surface. Use this location to determine the optimum setting for the spring tines. Adjusting the spring tines when parked on a solid surface ensures that they are optimally set up for soft ground (lawns).</p>



Use the washers to adjust the working height.  
The spring tines must not penetrate the soil by more than 2 mm.



The smaller the number of washers used in the lower section,  
the further the spring tines penetrate the soil.  
1 washer corresponds to an adjustment of 2 mm.

Damage caused by spring tines being set too low.



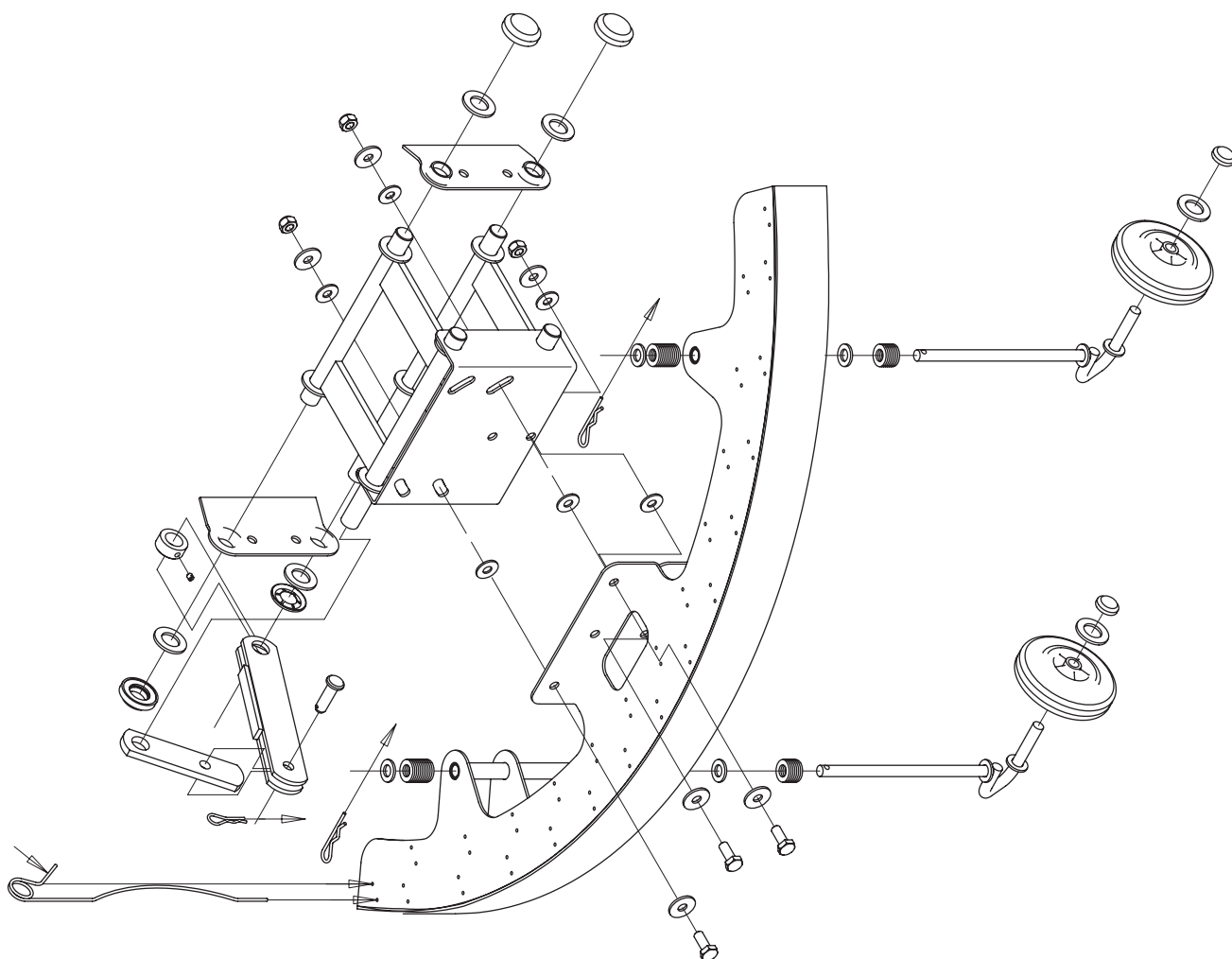
**IMPORTANT:**  
The Greenkeeper is not suitable for use as  
an aerator.  
If the spring tines are positioned too low they  
can break and may cause damage.



## 9 Exploded drawing

**IMPORTANT:**

The "Remarks" column helps you to identify parts. Only use genuine spare parts from the manufacturer. This ensures that the implement will work reliably. Item numbers in brackets are wear parts.



## 10 Manufacturer's declaration

Manufacturer: **Julius Tielbürger GmbH & Co. KG**  
**Maschinenfabrik**  
**Postdamm 12**  
**D-32351 Stemwede-Oppenwehe, Germany**

### **Note:**

**The machine described in these operating instructions, together with the Tielbürger system, is classified as replaceable equipment in accordance with EC Machinery Directive 2006/42/EC.**

**The machine may only be used in accordance with these operating instructions.**

**Any use of the machine not specified in these operating instructions is not permitted.**

**The declaration of conformity is documented in the operating instructions for the associated Tielbürger system.**

KR-362-169GI