

# Operation Manual

## Mower Tractor Scarifier 100 cm

51705



Illustration similar, may vary depending on model

Read and follow the operating instructions and safety information before using for the first time.

Technical changes reserved!

Due to further developments, illustrations, functioning steps, and technical data can differ insignificantly.

Updating the documentation

If you have suggestions for improvement or have found any irregularities, please contact us.



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## Introduction

Thank you for purchasing this quality product. **To minimise the risk of injury we urge that our clients take some basic safety precautions when using this device. Please read the operation instructions carefully and make sure you have understood its content.**

Keep these operation instructions safe.

## Safety instructions

### General

- **READ and UNDERSTAND this manual completely before using the 100 cm (40") scarifier.**
- The operator must read and understand all safety, warning, operating, maintenance, and storage instructions before operating this device.
- Failure to properly operate and maintain the scarifier could result in serious injury to the operator or bystanders.

### Operation warnings

- Do at no time carry passengers, sit, or stand on the scarifier.
- Do not allow children to play on, stand upon, or climb onto the scarifier.
- Before use, always inspect the device to assure that it is in good operating condition.
- Immediately replace or repair damaged or worn parts.
- Always check and tighten hardware and assembled parts before operation.
- Do not exceed the maximum tray load capacity of 31.75 kg (70 lbs).
- Avoid large holes and ditches when operating the device.
- Be careful when operating the scarifier on steep grades (hill).
- **ALWAYS** operate at reduce speed in rough terrain, along creeks, ditches, and on hillsides.
- Do not operate close to creeks, ditches, and public highways.
- To avoid personal injury and/or damages to the device, **DO NOT EXCEED 8 km/h (5 miles/h).**
- Always use caution when loading and unloading extra weight on the tray.
- Only tow with recommended vehicles (lawn/garden tractors and ATVs).
- Always refer to the vehicle owner's manual for proper towing.
- The scarifier is not designed to be used with zero-turn mowers.
- Always secure and lock the scarifier thatcher to the vehicle hitch before operating.

### Crush and cut hazards

- Always keep your hands and feet away from moving parts while operating the device.
- Always wear safety gear, eye protection, gloves and work boots when operating the device.



**WARNING:** The warnings, cautions, and instructions outlined in this instruction manual cannot cover all possible conditions or situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be integrated into this product and must be supplied by the operator.

## Requirement of assembly

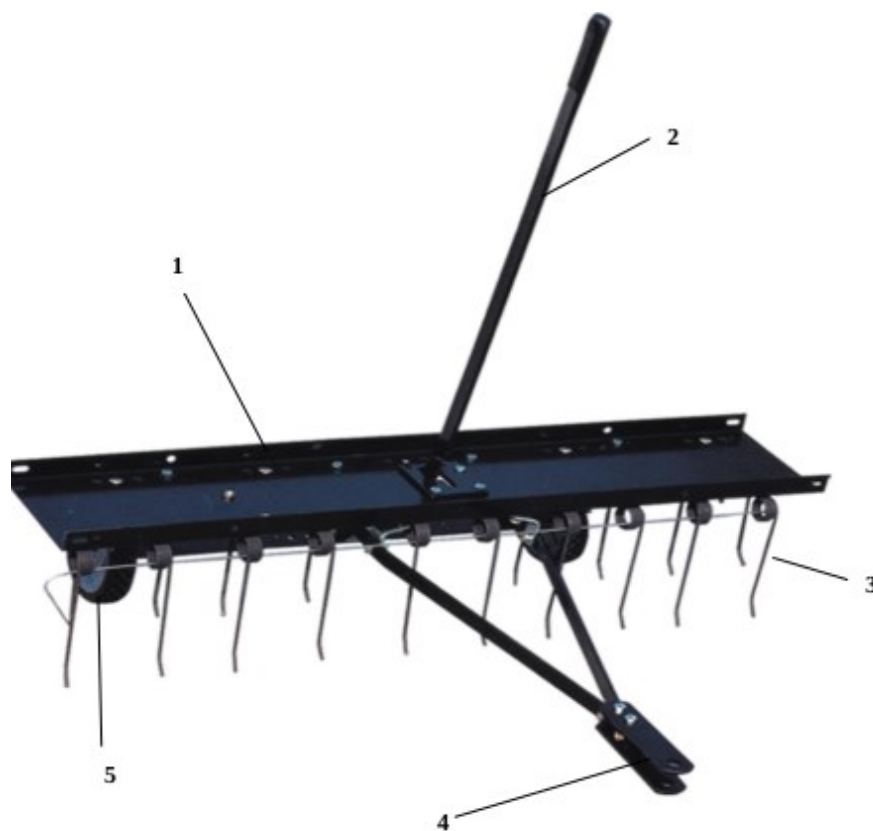
This product requires assembly before use. See "Assembly" section for instructions. Because of the weight and/or size of the 100 cm (40") scarifier, it is recommended that another adult be present to assist with the assembly. **INSPECT ALL COMPONENTS** closely upon receipt to make sure no components are missing or damaged.

## Description

- This 100 cm (40") scarifier has a robust steel construction and is designed to remove dead grass, matted thatch, debris, and large clippings. The 100 cm (40") scarifier features a fully enclosed weight tray to increase the penetration depth. Never exceed the rated loaded capacity of the tray of 31.75 kg (70 lbs) when operating the scarifier.
- Technical specifications on the 100 cm (40") scarifier are provided in the "Technical specifications" section of this manual.

## Controls and features identification

**Read this owner's manual before operating the device. Familiarise yourself with the location and function of the controls and features.  
Save this manual for future reference.**



No	Name	Comment
1	Scarifier tray	Do not exceed maximum load capacity 31.75 kg (70 lbs).
2	Lift handle	Positions tines up or down.
3	Tines	Removes debris from the ground.
4	Hitch	Pin-type design use only with approve vehicles.
5	Tyres/wheels	All-terrain for easy manoeuvring.

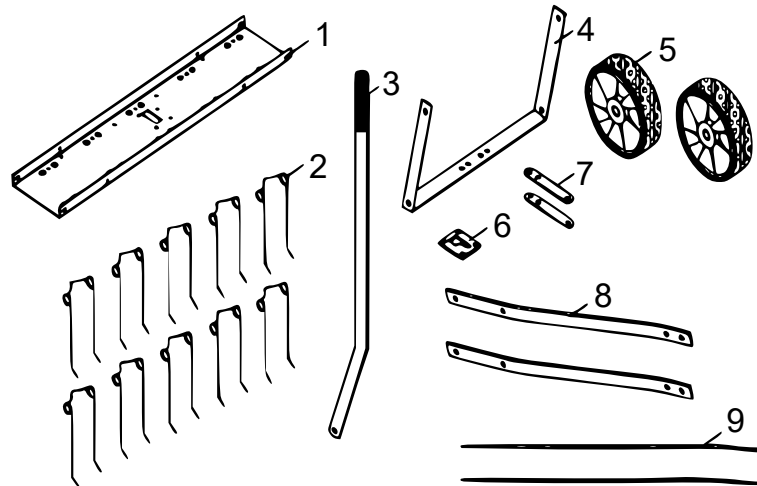
### **CAUTION:**

Read and follow all instructions for assembly and operation. Failure to properly assemble this device could result in serious injury to the user or bystanders, or cause device damage.

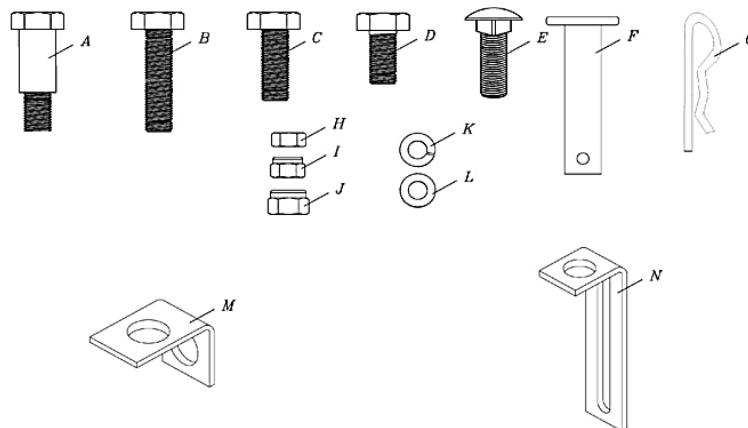
## Scarifier components and assembly

Take all parts out of the shipping crate and inspect components to ensure there are no missing pieces before starting to assemble the scarifier, follow the steps below.

### Component and hardware parts



Nº	Name	Qty.	Nº	Name	Qty.
1	Tine shield	1	6	Lift plate	1
2	Spring tines	10	7	Hitch bracket	2
3	Lift handle	1	8	Hitch mount arms	2
4	Axle bracket	1	9	Spring alignment wires	2
5	Wheels	2			



Nº	Name	Qty.	Nº	Name	Qty.
A	Shoulder bolt	2	H	Hexagonal nut M8	14
B	Hexagonal bolt M8x50	2	I	Hexagonal lock nut M8	19
C	Hexagonal bolt M8x30	2	J	Hexagonal lock nut M10	2
D	Hexagonal bolt M8x20	15	K	Lock washer ø8	14
E	Carriage bolt M8x25	14	L	Big flat washer ø8	10
F	Hitch pin ø10	1	M	Angle bracket	4
G	Hair cotter pin ø3	1	N	Hitch arm Mounting bracket	3

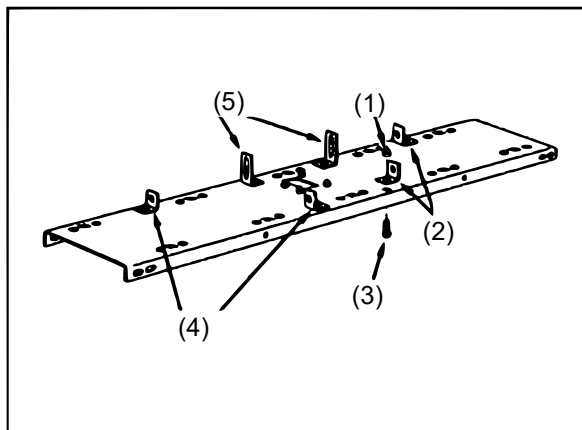
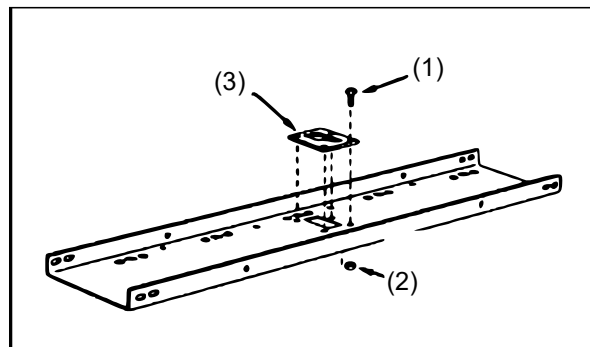
### Assembly instructions

Tools required for assembly (1 of each):

- 13 mm wrench
- 14 mm wrench
- Adjustable wrench
- Pliers

Before assembling the scarifier, lay out all of the parts and hardware as shown on the previous pages. The 100 cm (40") scarifier is shown in the following drawings. The assembly of the 100 cm (40") and 120 cm (48") is the same except as noted in the instructions.

1. Assemble the lift plate **(3)** to the top of the tine shield using four M8×20 hex bolts **(1)** and M8 hex lock nuts **(2)** as shown in figure. Tighten.



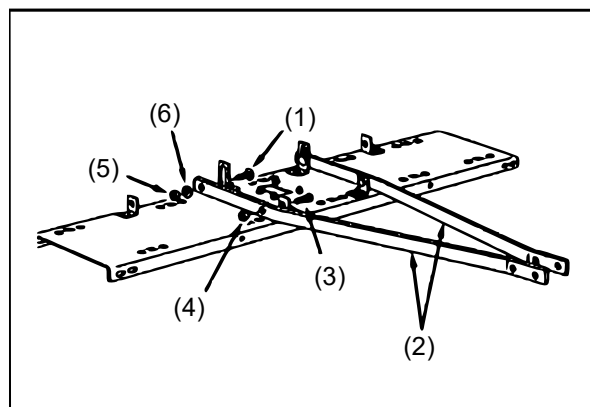
2. Turn the tine shield upside down.

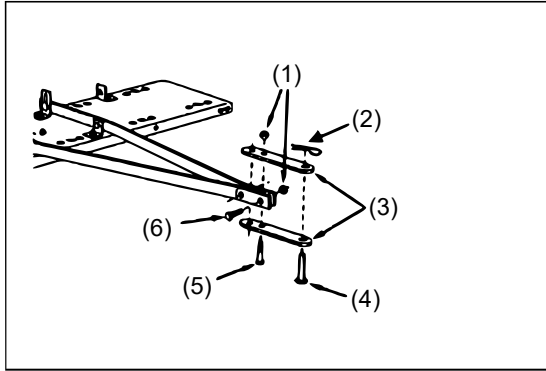
3. Assemble two (tall) hitch arm mount brackets **(5)** and two (short) angle brackets **(4)** to the bottom of the tine shield. Fasten the brackets to the four round holes at the rear of the tine shield using four M8×20 hex bolts **(3)** and M8 hex lock nuts **(1)**. Do not tighten yet.

4. Assemble two angle brackets **(4)** to the round holes in the bottom of the tine shield at the front. Use two M8×20 hex bolts **(3)** and M8 hex lock nuts **(1)**. Do not tighten yet.

5. Fasten the hitch mount arms **(2)** to the outside of the angle brackets at the front of the tine shield. Use two M8×20 hex bolts **(3)** and M8 hex lock nuts **(4)**. Tighten and then loosen the nuts slightly.

6. Fasten the hitch mount arms to the outside of the hitch arm mount brackets **(2)** at the rear of the tine shield. Use two M8×25 carriage bolts **(1)**,  $\varnothing 8$  lock washers **(6)** and M8 hex nuts **(5)**. Do not tighten yet.





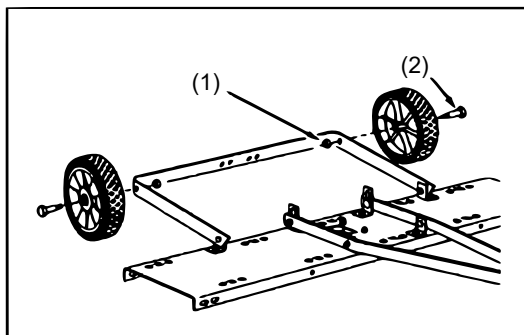
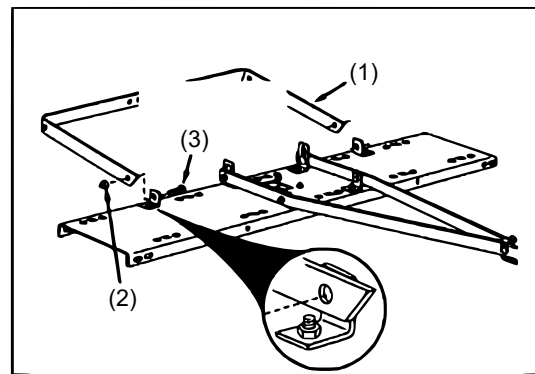
7. Assemble the front ends of the hitch mount arms together using two M8×30 hex bolts **(6)** and M8 hex lock nuts **(1)**. Do not tighten yet.

8. Assemble the hitch brackets **(3)** to the top and bottom of the hitch mount arms using two M8×50 hex bolts **(5)** and M8 hex lock nuts **(1)**. Do not tighten yet.

9. Assemble the  $\varnothing 10$  hitch pin **(4)** through the hitch brackets and secure it with a  $\varnothing 3$  hair cotter pin **(2)**.

10. Tighten the bolts and nuts assembled in the previous steps in the following order: 8 – 7 – 3 – 4 – 5 (slightly re-loosen afterwards) – 6.

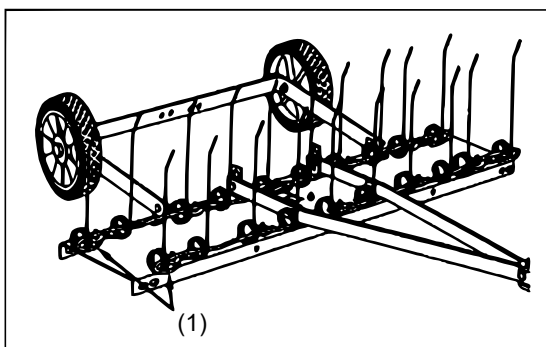
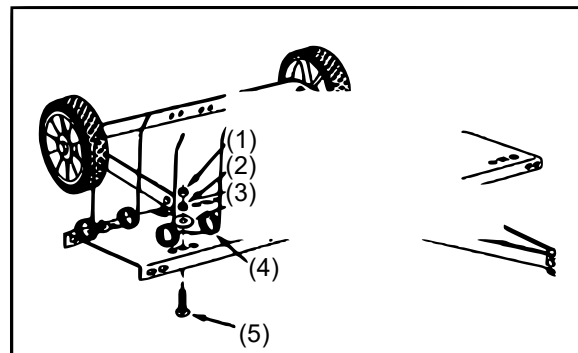
11. Assemble the axle bracket **(1)** on the outside of the angle brackets using two M8×20 hex bolts **(3)** and M8 hex lock nuts **(2)**. The ends of the axle bracket must point as shown in the figure. Tighten and then slightly re-loosen the bolts and nuts.



12. Assemble the wheels to the axle bracket using two shoulder bolts **(2)** and two M10 hex lock nuts **(1)**. Tighten.

13. Fasten ten spring tines **(4)** to the square holes in the bottom of the tine shield. Use a M8×25 carriage bolt **(5)**,  $\varnothing 8$  big flat washer **(3)**,  $\varnothing 8$  lock washer **(2)** and M8 hex nut **(1)** for each spring tine. Tighten.

**!** **NOTE:** Spring tines must seat between dimples.



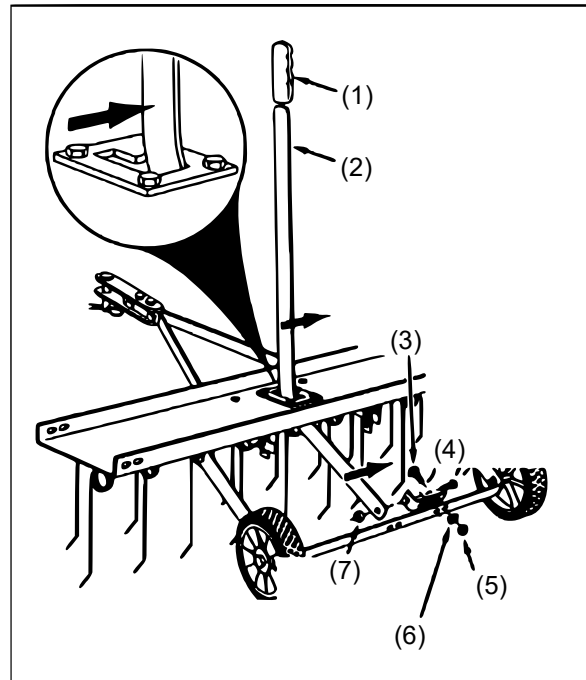
14. Assemble the spring align wires **(1)** through the front and rear rows of spring tines, passing the wires in between the hitch mount arms and the tine shield. Bend the ends of the wires to secure them.



15. Assemble a hitch arm mount bracket to the axle bracket using two M8×25 carriage bolts (3), ø8 lock washers (6) and M8 hex nuts (5). Do not tighten yet.

16. Insert the lift handle (2) down through the tine shield. Attach it to the hitch arm mount bracket just assembled using an M8×20 hex bolt (4) and an M8 hex lock nut (7). Tighten.

17. Position the hitch arm mount bracket so that there is side tension on the lift handle (2) with grip (1) when it is locked in the up position. Tighten the nuts.



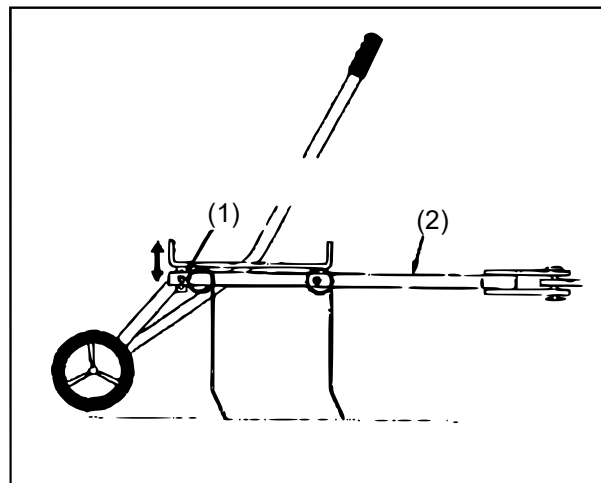
### Operation and adjustments

Regular removal of thatch is critical to maintenance of a healthy lawn. Thatch is a layer of stems, clippings, runners, roots and leaves that have not decayed. Excessive thatch prevents air, water and fertiliser from reaching the roots. The scarifier effectively dislodges excessive thatch from your lawn. Read these instructions to help avoid improper adjustment and operation.

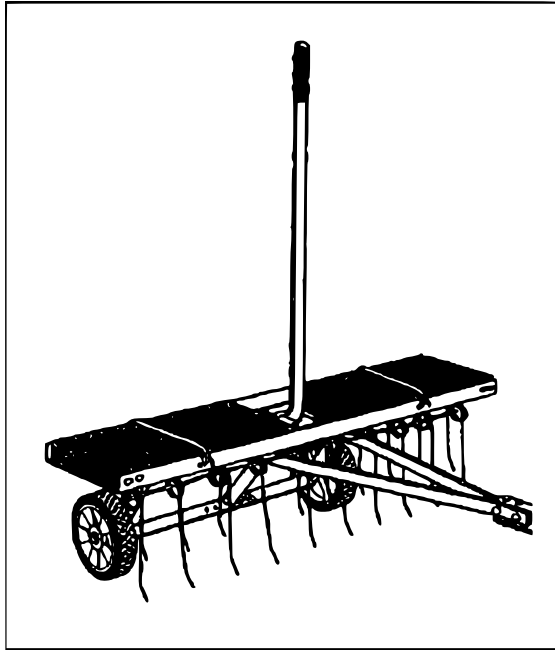
Proper adjustment of the tine shield and spring tines is important for effective performance. Refer to the following steps for the proper adjustment before operating the scarifier.

1. Move the towing vehicle onto a level surface, such as a driveway or garage floor and attach the tine scarifier to the vehicle hitch.

2. To adjust the spring tine shield, lower the scarifier into operating position using the lift handle (2). Loosen the two hex nuts and carriage bolts (1) which fasten the rear of the hitch mount arm to the hitch arm mount brackets. Adjust the tin shield until it is level and both the front and rear spring tines are in contact with the ground. Retighten the hex nuts.







3. If the scarifier appears to be “jumping” during use, then extra weight should be added to the tine shield. In most conditions extra weight will be needed. Concrete patio blocks are recommended for weight because of their low profile; however, any type of weight is suitable if it can be tied down to the shield. Secure weight by using suitable binding material such as rubber tie down straps or wire, fastening to the holes in the shield flange.

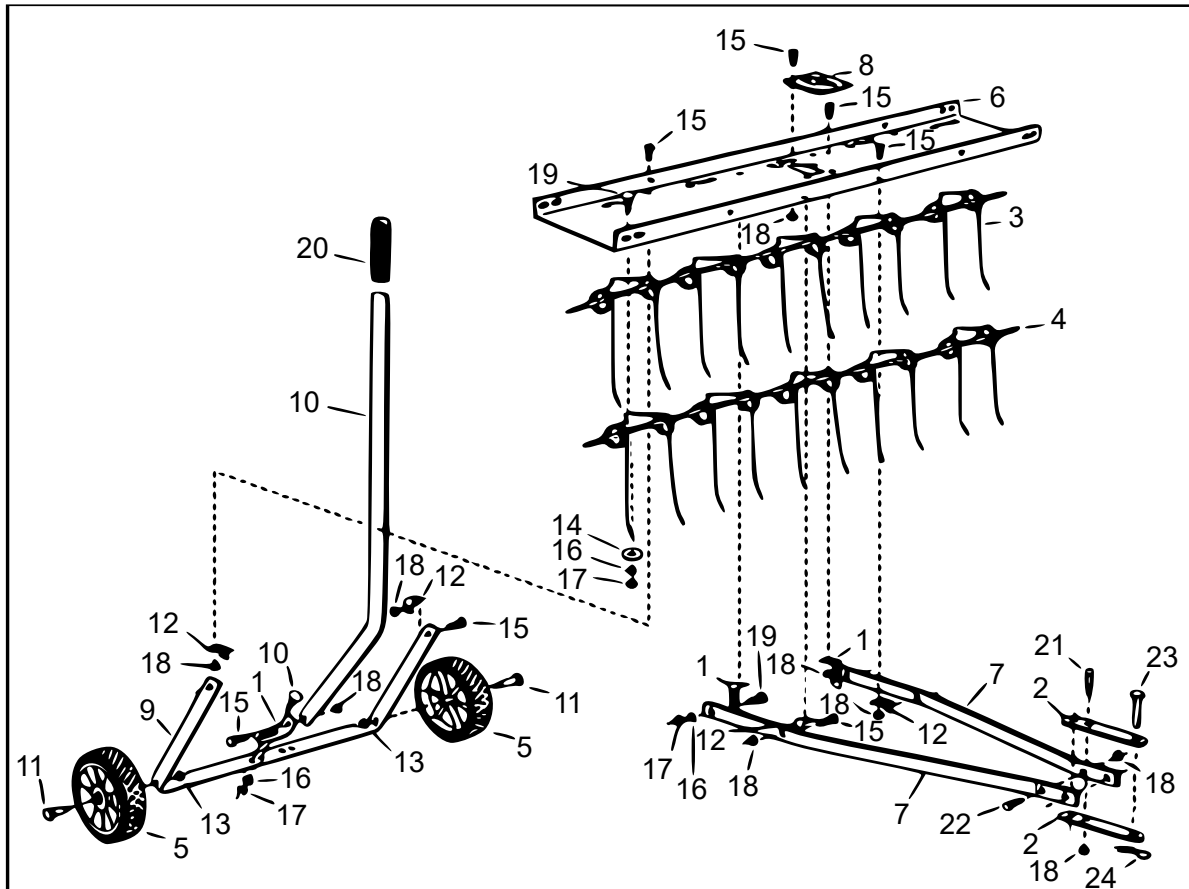
### Maintenance

1. Before each use check all nuts and bolts for tightness.
2. Lubricate wheels as needed.
3. If rust appears on the shield or spring tines, sand lightly and coat with enamel paint.
4. Always store in a dry area, and coat exposed metal with light oil when not in use.

### Technical specifications

<b>Size (cm)</b>	85 × 102 × 37
<b>Operating width (cm)</b>	approx. 100
<b>Length of teeth (cm)</b>	16.5
<b>Loading level (cm)</b>	18–22
<b>Weight (kg)</b>	15

**Explosion view and parts list**



No	Name	Qty.	No	Name	Qty.
1	Hitch arm mount bracket	3	13	Hex lock nut M10	2
2	Hitch bracket	2	14	Big flat washer ø8	10
3	Spring tine	10	15	Hex bolt M8×20	15
4	Spring alignment wire	2	16	Lock washer ø8	14
5	Wheel	2	17	Hex nut M8	14
6	Tine shield (100 cm, 40")	1	18	Hex lock nut M8	19
7	Hitch mount arm	2	19	Carriage bolt M8×25	14
8	Lift plat	1	20	Handle grip	1
9	Axle bracket	1	21	Hex bolt M8×50	2
10	Lift handle	1	22	Hex bolt M8×30	2
11	Shoulder bolt	2	23	Hitch pin M8 (flat head)	1
12	Angle bracket	4	24	Hair cotter pin ø3	1

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