



Hako

Mounting and Instruction Manual

**Hako Grass and Leaf Vacuumer (8380)
for Hako-Citymaster 1200 und Hakotrac 4200 DA**

Introduction

Introduction

Have the mounting action described in the present assembly instructions executed in a local Hako service centre or workshop. The qualified personnel required for these works is available in the above mentioned workshops only.

Proper use

The Grass and Leaf Vacuumer is an implement to be attached to the Hako-Citymaster 1200 / Hakotrac 4200 DA.

The unit is to be exclusively used for mowing lawn and meadow as well as mowing greens.

Any other use is deemed to be improper use and the owner bears the risks.

Proper use also comprises compliance with the operation, maintenance and repair instructions as specified by the manufacturer.

Safety provisions

Please observe the general safety regulations of the relevant machine contained in the valid instruction manual Hako-Citymaster 1200 / Hakotrac 4200 DA.

The present mounting instructions apply together with the previously mentioned instruction manual.

Switch engine off before mounting.

Acceptance of the Machine

Upon receipt please check the machine for possible damage in transit. For refund of such damage have the Deutsche Bahn AG or your freight forwarder confirm such damage; mail us notification and waybill.

Please note positively that Hako cannot accept any legal claims which are referred to the explanations given in these mounting instructions.

In case of any possible repairs, please make sure that only genuine spare parts are installed, since only genuine spare parts will give you the certitude to have a reliable and operable machine at all times.

We reserve the right for technical improvement.

Valid as from: 04/2006

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Safety Information

1 Safety Information

1.1 General Safety Provisions

Carefully read the present mounting instructions and the instruction manual before first operation of the rotation mower and comply with the provisions contained when operating the tool.

Observe as well the instructions contained in the manual of the machine to which the rotation mower is attached.



Please note the following safety provisions:




- **The rotation mower may be used, serviced and repaired only by persons who are familiar with the unit and are aware of possible hazards involved.**
- **Unauthorized modification of the units exempts the manufacturer from liability for damages resulting from such modifications.**
- **The operator shall use the unit within its design limits.**
- **Apart from the provisions contained in this mounting instructions and the instruction manual, the general safety instructions and the accident prevention regulations as imposed by law will have to be complied with. Comply with the safety regulations of the driving unit.**
- **Participation in road traffic is admitted only if the driver bears the type approval and driving licence as specified by national traffic legislation and if the unit is equipped accordingly.**
- **Comply with the local provisions in case of usage of the vehicle on public roads.**
- **The responsible driver only is allowed to start the vehicle. Comply with the pre-requisites as specified by StVZO (German Motor Vehicle Construction and Use Regulations)**

Safety Information

1.2 Safety and Warning Symbols

1.2.1 Generally Applicable Symbols

All paragraphs in this manual referring to your personal safety, the safety of your machine and the environment protection are attributed one of the following warning symbols:

Symbol	Hazardous for ...	Description
DANGER 	persons and goods	dangerous situation caused by misuse inaccurate adherence of instructions or prescribed work routine
CAUTION 	the machine	important information on handling the Hako-Citymaster 1200 / Hakotrac 4200 DA in order to maintain operability
Ecological hazard 	the environment	due to use of substances representing an inherent danger to health of environment

Safety Information

1.3 Labels at the Machine

The following safety and information labels are legibly attached to the vehicle. Replace missing or illegible labels immediately.

Nameplate (Fig. 1/1)



High-pressure cleaner (Fig. 1/2)



Pinching hazard (Fig. 1/3)

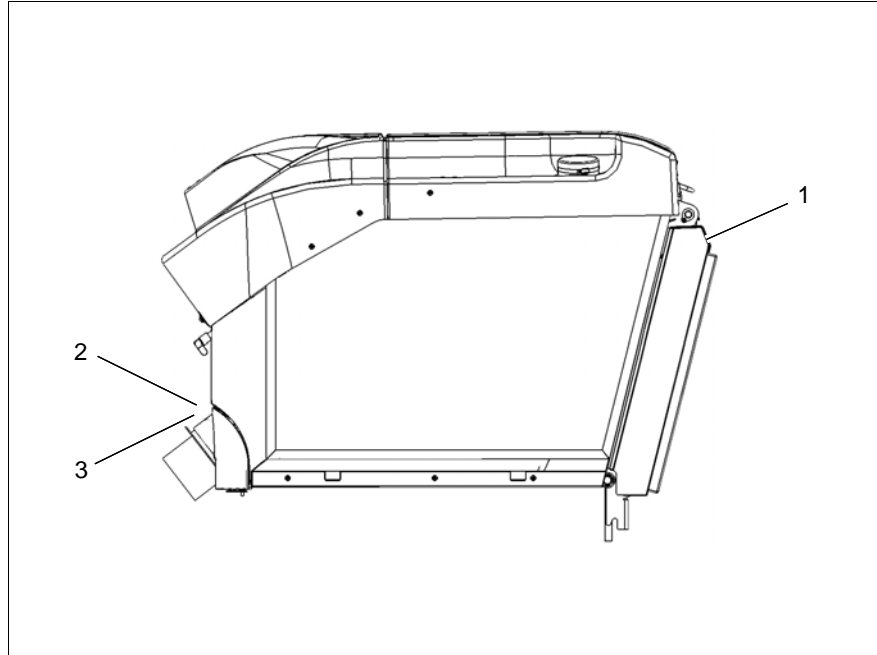


Fig1

Safety Information

1.4 Operating instructions



Observe the following operating instructions:

- Prior to first operation of the Grass and Leaf Vacuumers check the operational safety of the unit and remedy any malfunction immediately
- Check the surface to mow for objects such as stones or others before start mowing and mind parts to be thrown up by impact of blades even during operation. Special care is advised when mowing slopes
- Special attention or, in specific cases, interruption of work is advised if persons stay in the working area. For safety reasons, an increase of engine speed is not admitted
- Caution! During operation, observance of the operation and safety instructions of the machine to which the rotation mower has been attached is advised

1.5 Maintenance Provisions



Observe the following maintenance instructions:

- Before mounting/dismounting the hopper secure the stand against rolling (block threstle rollers)
- Then place hopper on solid and level ground
- Empty hopper completely before placing
- Switch off the suction fan before proceeding to maintenance work in the area of the suction fan (e.g. air outlet and air intake)
- Pinching hazard when lowering hopper!
- Before mounting/dismounting the hopper secure the stand against rolling (block threstle rollers)
- Then place hopper on solid and level ground
- Empty hopper completely before placing



Reinigungsmittel, Öle, Kraftstoffe, Farbe usw. sind aufzufangen und ordnungsgemäß zu entsorgen. Verschüttete Stoffe sofort aufnehmen.

Retrofit Grass and Leaf Vacuumer

2 Retrofit Grass and Leaf Vacuumer



Find the operating elements described in paragraph 3.1.

The grass and leaf vacuumer may be fitted to a Hako-Citymaster 1200 / Hako-trac 4200 DA. Dismount the loading platform or the dirt hopper before.

2.1 Dismount Loading Platform

- Clean vehicle and park it on a clean and level ground
- Release and remove bolt between loading platform and lifting cylinder (Fig. 3/3)
- Fold lifting cylinder to the inside and let platform down slowly
- Loosen safety screw at the fixing bolts (Fig. 2/1) and remove together with bushings (Fig. 2/2)

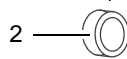


Fig2

Retrofit Grass and Leaf Vacuumer

- Have two persons carefully taken off the loading platform (Fig. 3/1)
- Fold lifting cylinder (Fig. 3/3) backwards and use tip-switch (Fig. 11/2) to extract it

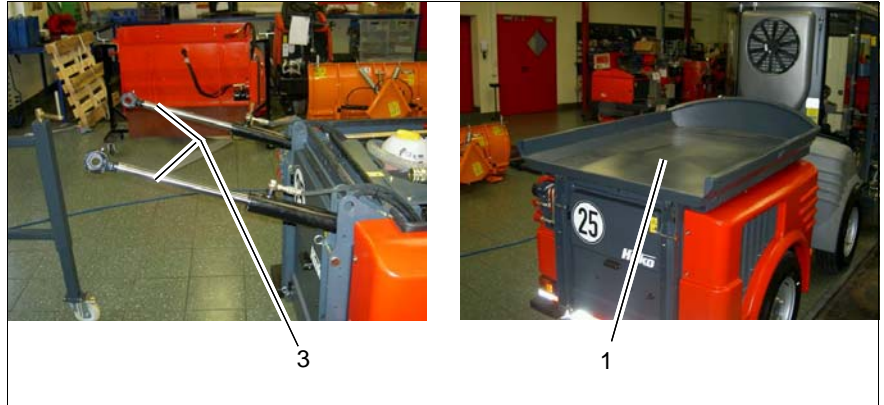


Fig3

Retrofit Grass and Leaf Vacuumer

2.2 Dismount Dirt Hopper

- Empty and clean vehicle and park it on level and clean ground
- Lift dirt hopper by means of tip-switch (Fig. 11/2). Fasten the four links (Fig. 4/1) from the enclosure to the dirt hopper
- Lower dirt hopper again
- If required, dismount camera (option)
- Loosen fixing screws (Fig. 4/3) and remove rear fairings (Fig. 4/2)
- Remove bolts (Fig. 4/4) of the lifting cylinders

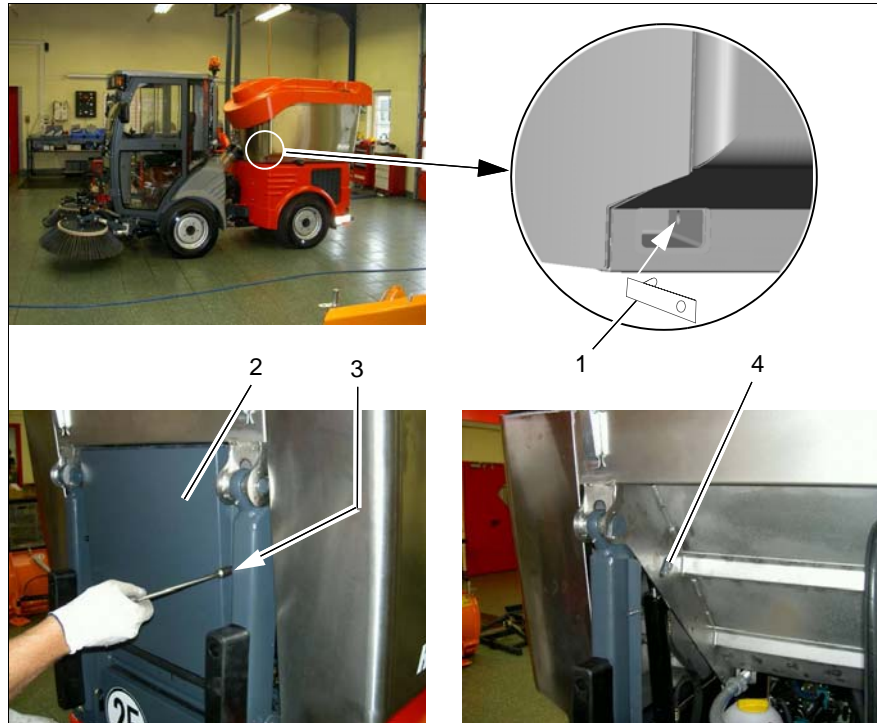


Fig4

Retrofit Grass and Leaf Vacuumer

- Plug support stands (Fig. 5/1) into openings on both sides and secure with (enclosed) bolts and wire pins at the links (Fig. 5/1)
- Dismount bolts at the rear (Fig. 5/2) and use tool if required
- Loosen GEKA coupling (Fig. 5/3) of the soiled water recirculation systems.

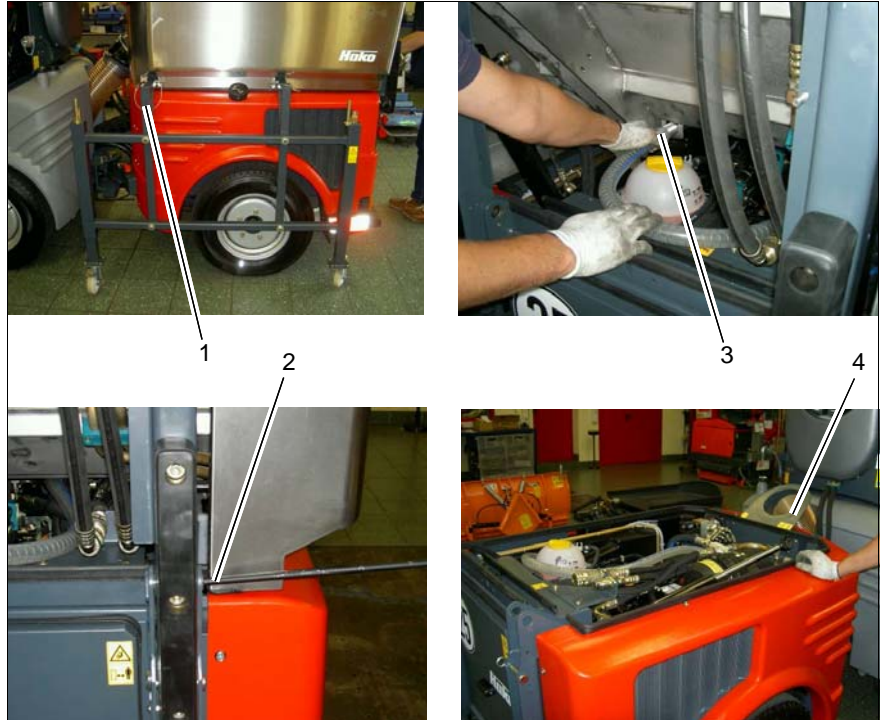


Fig5

Retrofit Grass and Leaf Vacuumer

- Loosen both hydraulic couplings (Fig. 6/1)
- Loosen hexagon socket screws (Fig. 6/2) - SW 14 mm - of the rear supports
- Evenly wind up support stands until rear supports (Fig. 6/3) are free.
- Remove upper fixing screw (Fig. 6/4) of the hydraulic holder and fold lifting cylinders back.
- Displace dirt hopper.



Mind the lifting cylinders when displacing the dirt hopper!

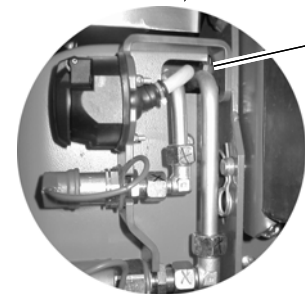
- Unscrew suction hose holder (Fig. 5/4)



1

2

3



4

Fig6

Retrofit Grass and Leaf Vacuumer

2.3 Mount Gras and Leaf Vacuumer

- Mount suction hose adapter (Fig. 7/1) with four fixing screws to the rear cart
- Fasten suction hose to the suction pipe by hose clamp

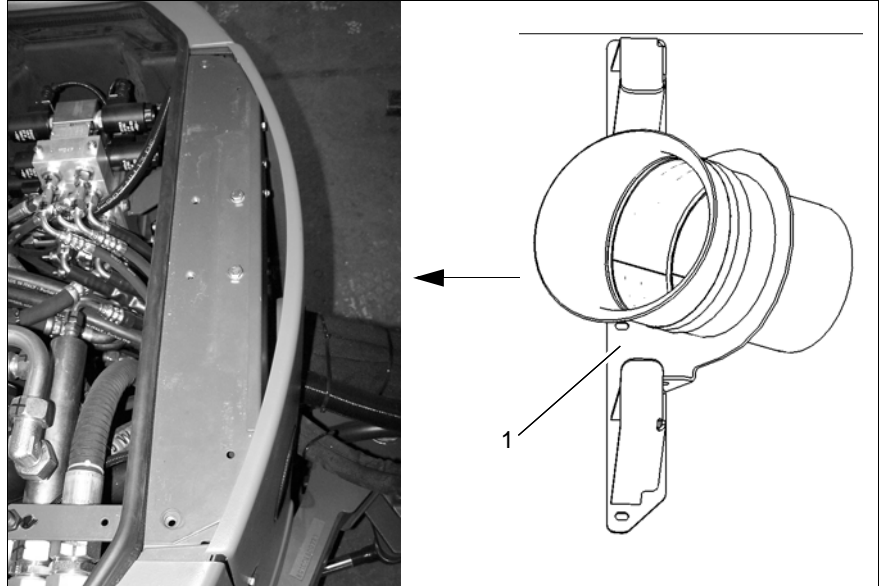


Fig7

Retrofit Grass and Leaf Vacuumer

- Take hopper with stand (Fig. 8/1) above the rear cart. Provide for sufficient clearance!
- Insert lifting cylinders (Fig. 3/3) into rear support while approaching
- Use cranks of the stand to evenly lower the hopper onto the rear cart. The grass and leaf vacuumer then centres on the suction hose adapter (Fig. 7/1)
- Plug bolts (Fig. 8/2) and (Fig. 8/3) to the rear support and mount by means of SW14 hexagon socket screws (Fig. 8/4). Secure bolts by means of oval flange bolts or wire pins.

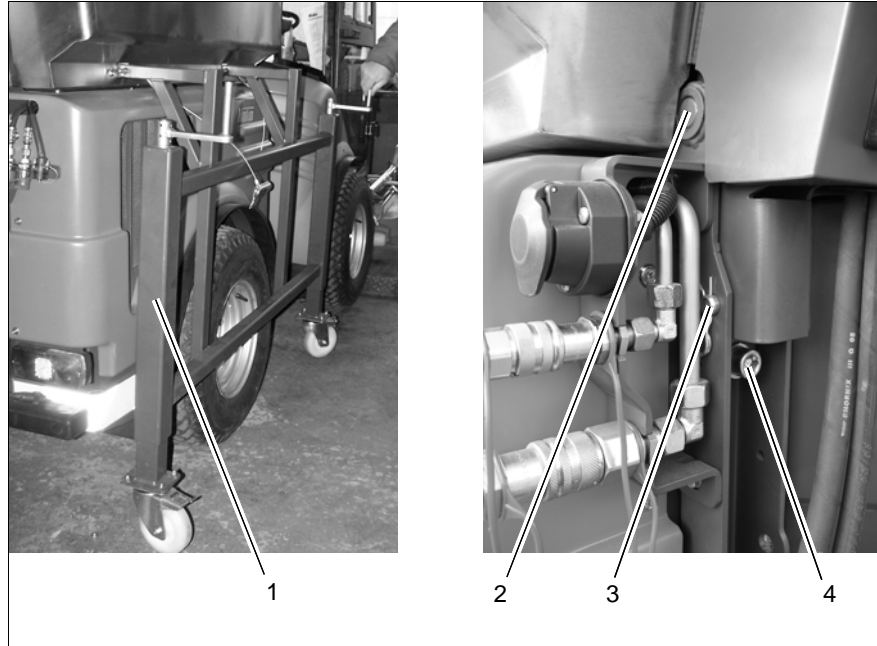


Fig8

Retrofit Grass and Leaf Vacuumer

- Remove collision protection (Fig. 9/1) and cover (Fig. 9/2) together with the four fixing screws 'A'
- Mount lifting cylinder (Fig. 3/3) with bolts (Fig. 9/3) and secure with oval flange bolt. If required position lifting cylinder by means of the hand pump (Fig. 9/4)
- Use tip-switch (Fig. 11/2) to extract the lifting cylinders and stop hydraulic supply by means of lever (Fig. 9/5)
- If required mount camera (Fig. 9/6) (Option)

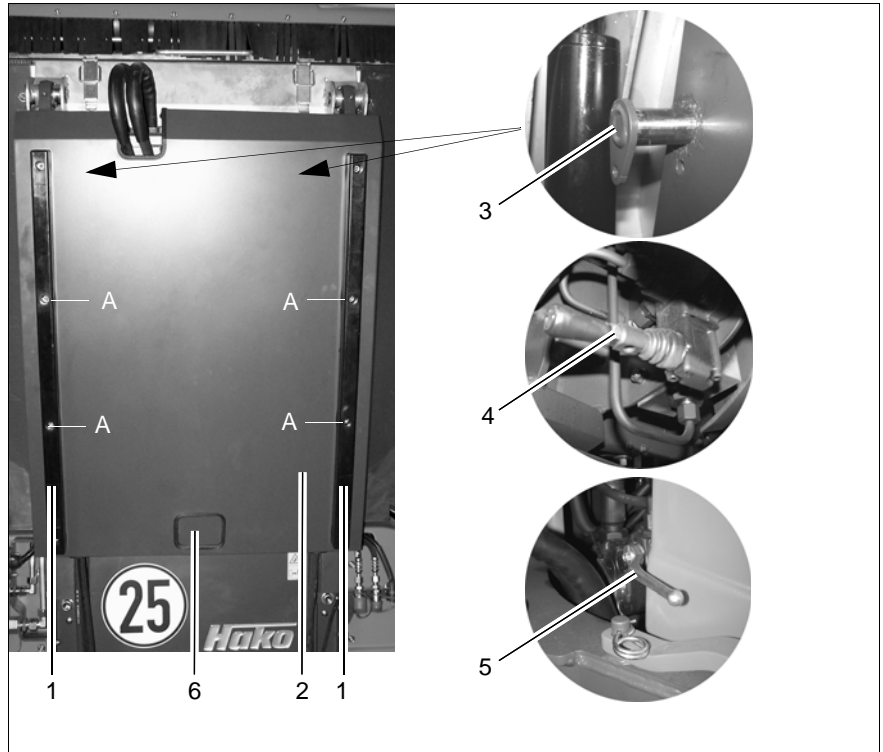


Fig9

Retrofit Grass and Leaf Vacuumer

- Connect left-hand hydraulic ports (Fig. 10/1) for fan and right-hand hydraulic ports (Fig. 10/2) for hydraulic cylinders.
- Connect coding plug (Fig. 10/3)
- Use tip-switch (Fig. 11/2) to lift the hopper and pre-mount fairing (Fig. 10/4) to the suction pipe adapter (do not tighten fixing screws).
- Carefully lower hopper and make fairing fit
- Lift hopper again and tighten fairing screws.
- Mount collision protection (Fig. 9/1) and cover (Fig. 9/2) again
- Remove stand (Fig. 8/1)

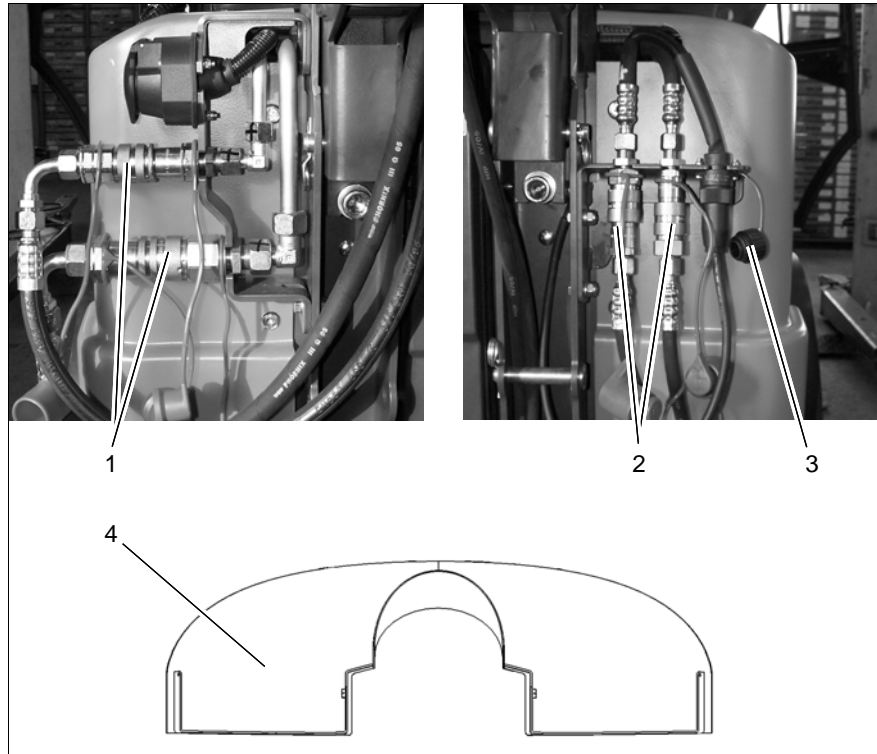


Fig10

3 Operation

3.1 Suction Fan Speed

Speed selector (Fig. 11/1) for suction fan. Set selector to maximum speed for operation.

3.2 Lift/Lower Structure

Tip-switch (Fig. 11/2) for lifting/lowering structure:

- dirt hopper or
- loading platform or
- hopper for grass and leaf vacuumer

Before operation, lock hydraulic circuit for dirt hopper/loading platform lifting cylinders by means of lever (Fig. 9/5).

3.3 Open Hopper Lid

Before emptying/cleaning the hopper open lid by means of toggle-type fasteners (Fig. 11/3).

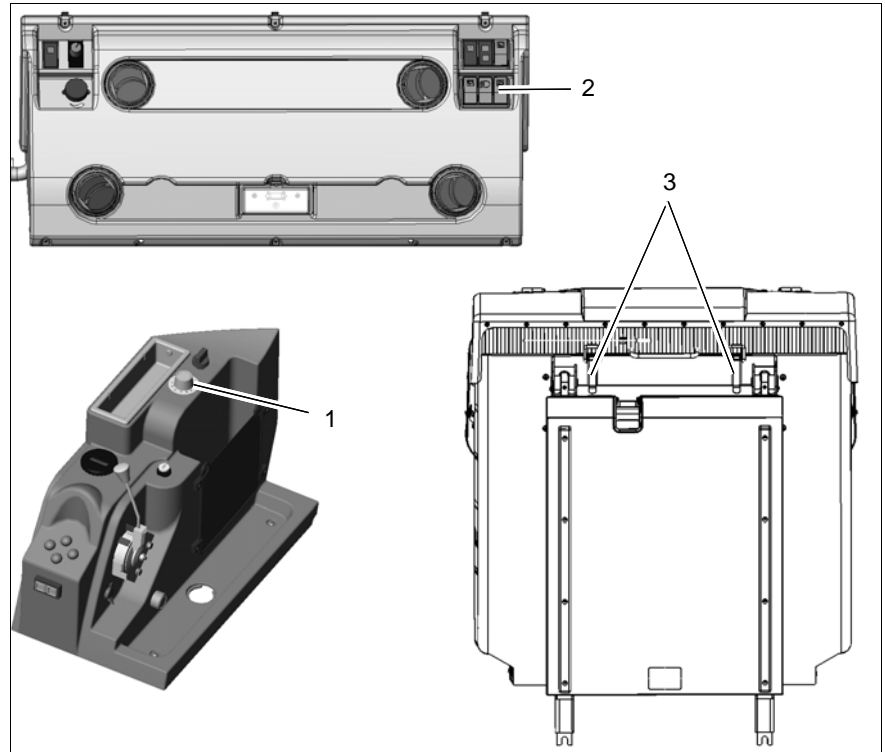


Fig11

4 Maintenance

4.1 Empty Hopper

As soon as suction performance reduces or leaves or cut grass is not properly collected, proceed to the following steps:

1. Start vehicle and ride to appropriate discharge site
2. Back vehicle to discharge place
3. Switch off suction fan.
4. Open toggle-type fasteners (Fig. 12/3) of the hopper lid
5. Set speed selector to working mode and lift and empty hopper
6. Set speed selector to neutral position and engage parking brake



Mind sufficient stability of the vehicle when tipping the hopper

7. Lower hopper again and close lid by fasteners

4.2 Clean Hopper

Proceed to the cleaning procedure described in the following in at least daily intervals or, in cases of heavy soiling even more frequently.



Do not use vapour jet or high-pressure cleaning equipment. Do not direct water jet onto electrical or electronic parts.

1. Start vehicle and ride to appropriate cleaning site
2. Set speed selector to working mode and switch on suction fan.
3. Connect water hose to water fitting (Fig. 12/2) of the hopper and have the water taken in by the suction fan.
4. Switch off suction fan after cleaning
5. Open fasteners of the hopper lid and empty hopper

6. Clean hopper inside including fan filter (Fig. 12/5) by water jet
7. Lock hopper lid and lower hopper.
8. Check complete vehicle for soiling again and clean if required.

Maintenance

4.3 Hopper Lid Gasket

Die Dichtung (Fig. 12/1) des Behälterdeckels täglich kontrollieren und bei Bedarf erneuern.

4.4 Fitting

For cleaning the suction fan, the hopper front is equipped with a fitting (Fig. 12/2).

The fan filter (Fig. 12/5) is located between suction fan and suction pipe.

4.5 Lubrication Points

Independent of the hours of operation, the following points have to be lubricated at weekly intervals.

Ball joint 2x (Fig. 12/3)

Hydraulic cylinder 4x (Fig. 12/4)

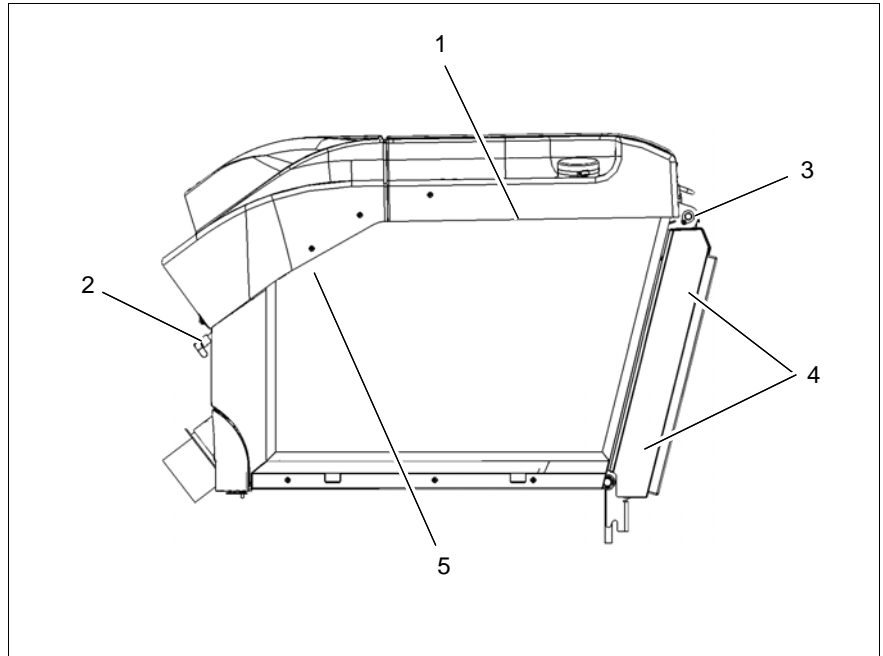


Fig12

Technical data

5 Technical data

Grass and Leaf Vacuumer		
Dimensions and Weight		
Length	mm	1880
Width	mm	1190
Hight	mm	1400
Weight	kg	360
Suction fan		
Speed suction fan	1/min	2375

EC Declaration of Conformity according to Directive 98/37/EC

Hako-Werke GmbH
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declare under our sole responsibility,
that the product

Grass and Leaf Vacuumer

Typ: 8380

to which this declaration relates, corresponds to the relevant basic safety and health requirement of the Directive 98/37/EC, and to the requirements of the other relevant Directives:

89/336/EEC.

For the relevant implementation of the safety and health requirements mentioned in the Directives, the following standard (s) and / or technical specification (s) has (have) been respected:

EN 12100

Bad Oldesloe, 08.04.2006



Bernd Heilmann
Managing Director

Hako

Spitzentechnik für eine saubere und schönere Umwelt

Superior technology for a cleaner and better environment



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