



Assembly and Instruction Manual

Pre-sweep suction unit (7180.50)

Introduction

Foreword

The installation procedures described in this assembly manual should only be undertaken by a Hako service centre or a workshop authorised by Hako. Members of staff with the required level of training and expertise are only guaranteed in the said workshops. This assembly manual may be used only in conjunction with the operating manual of the machine.

Place the machine on a level surface and secure it with the parking brake. Switch off the machine, unplug the battery connector and remove the key.

We would expressly advise you that no legal claims may be asserted based on the contents of this manual. In the case of necessary repair work, please make sure that only original spare parts are used. Only original spare parts guarantee constant and reliable operational readiness of your machine. We reserve the right to make changes in the interests of further technical development.

Valid as from: November 2018

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Intended use

The Pre-sweep suction unit is for the wet cleaning of hard indoor floor surfaces. This machine is intended for commercial use, e.g. in multi-storey car parks or in the logistics and industrial sector. Any use extending beyond this is not intended use. The manufacturer is not liable for any damage resulting from this and the user alone bears the risk.



The Pre-sweep suction unit is not for use on public walkways and roads.

Intended use also includes compliance with the operating, maintenance and servicing conditions specified by the manufacturer.

The Pre-sweep suction unit may only be used, maintained and repaired by persons who are familiar with this work and have been instructed about the dangers.

The relevant accident prevention regulations as well as the other generally recognised safety engineering and occupational medical rules must be complied with.

By virtue of its design and construction as well as in the version distributed by us, the machine meets the usual health and safety requirements of the EC Directives (see Declaration of Conformity). This declaration loses its validity in the event of a modification to the machine not authorised by us. The manufacturer does not accept liability for damage resulting from unauthorised modifications to the machine.

Notes on warranty

The terms defined in the purchase agreement apply. Claims for compensation in relation to damage are excluded from the terms of the warranty when the damage is the result of the failure to observe rules concerning servicing and maintenance. Maintenance work must be carried out by an authorised Hako service centre and confirmed in the "Maintenance Report"; which serves as a warranty logbook.

The warranty does not cover: natural wear and tear caused by overuse, defective fuses, improper handling and use and unauthorised modifications. Warranty claims will not be accepted if damage has occurred to the machine due to the use of parts or accessories which have not been explicitly approved of by us or from failure to observe maintenance rules.

Acceptance of the machine




Inspect the machine immediately on delivery for signs of transport damage. You will be compensated for this provided that you immediately have the damage confirmed by the transport company and send in the damage report together with the consignment note to our authorised dealer.

Safety information

1 Safety information

1.1 Safety and warning symbols

All texts that affect your safety, the safety of the machine and the environment are marked with these symbols in the operating manual:

Symbol	Damage for...	Definition
Safety instructions 	persons or property	Safety instructions for avoiding dangerous situations as a result of failure to comply with instructions or prescribed work procedures.
Note 	the machine	Important machine handling instructions in order to maintain usability.
Environmental danger 	the environment	Environmental danger due to the use of substances from which a health and environmental risk proceeds.

1.2 Safety instructions

Please observe the safety instructions of the relevant machine in the applicable operating manual.

The following safety instructions also refer to the pre-sweep suction unit.

Operating information

- The pre-sweep suction unit is not suitable for removing combustible or explosive liquids, dusts or materials that are hazardous to health. Burning objects such as glowing cigarettes must not be picked up. The collection of wood dust such as beech and oak dust is also prohibited – health hazard!
- Ensure there is sufficient ventilation when carrying out sweeping work in enclosed rooms.
- The permissible total weight of the dirt hopper must not be exceeded. Monitor the filling level of the dirt hopper at regular intervals.

Maintenance instructions

- Shaking the filter is only permitted with the dirt hopper inserted.
- Only tip out the contents of the dirt hopper from a low height in order to prevent the formation of dust.
- The dirt hopper must be cleaned at regular intervals to prevent the accumulation of bacteria.

Safety information

1.3 Labels on the pre-sweep suction unit

The following safety and instruction labels are affixed to the vehicle in a clearly visible and legible location. Renew missing or illegible labels immediately.

Company logo (Fig. 1/1)



Type plate (Fig. 1/2)



Cylindrical brush wear compensation (Fig. 1/3)



Side brush wear compensation (Fig. 1/4)



Shaking system (Fig. 1/5)

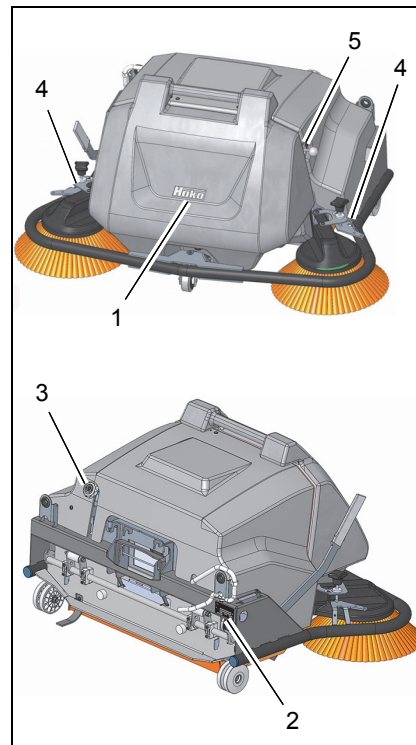


Fig. 1

2 Pre-sweep suction unit installation

2.1 Parts list

1x complete pre-sweep suction unit (Fig. 2/1)

2.2 Assembly

Requirements:

Pre-sweep suction unit set-up components (7180.55) are fitted to the basic machine.

Assembly:

1. Slide the pre-sweep suction unit as far as the swivel bracket on the machine in a central position. Lever is in the change position (Fig. 2/3).
2. Move lever in position *P* (Fig. 2/4).
3. Insert the plug into the socket at the front right of the machine and secure with the knurled nut (Fig. 2/5).
The pre-sweep suction unit is now attached to the machine.

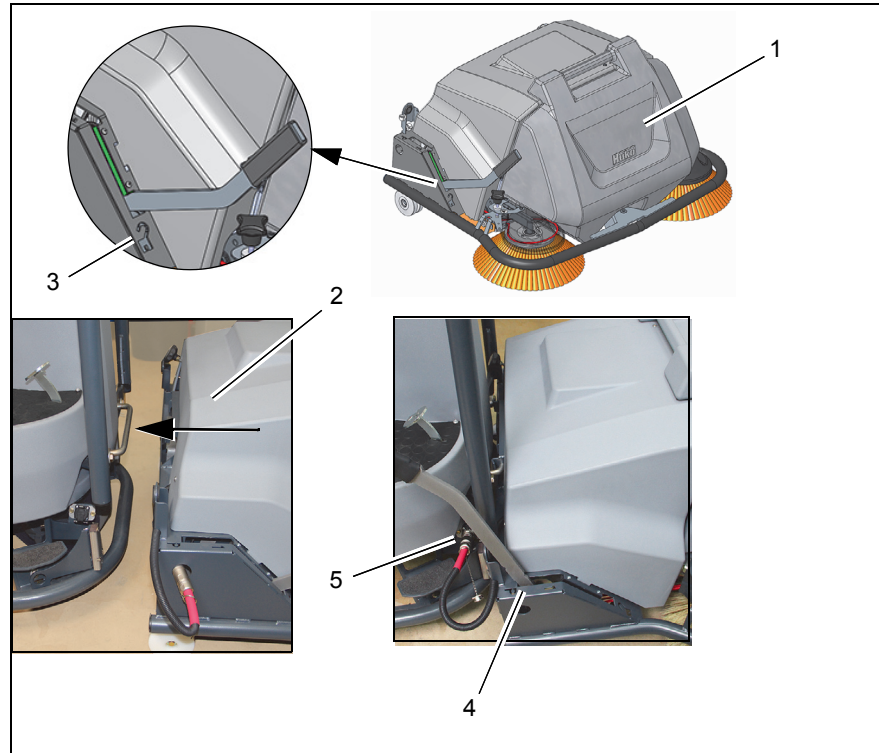


Fig. 2

Pre-sweep suction unit installation

2.2.1 Check settings:

If the pre-sweep suction unit is attached to the machine and the lever is in the sweeping position (Pos. 1) (Fig. 3/1), the frame must be aligned parallel to the floor.

2.2.2 Correct setting:

If this is not the case, the following steps must be taken:

1. Disconnect the pre-sweep suction unit.
2. Unscrew the swivel bracket (Fig. 3/2) from the machine. The tilt angle of the frame is determined by adding or removing the washers (Fig. 3/3). The following applies: the more the washers are used, the more the frame will tilt downwards at the front.

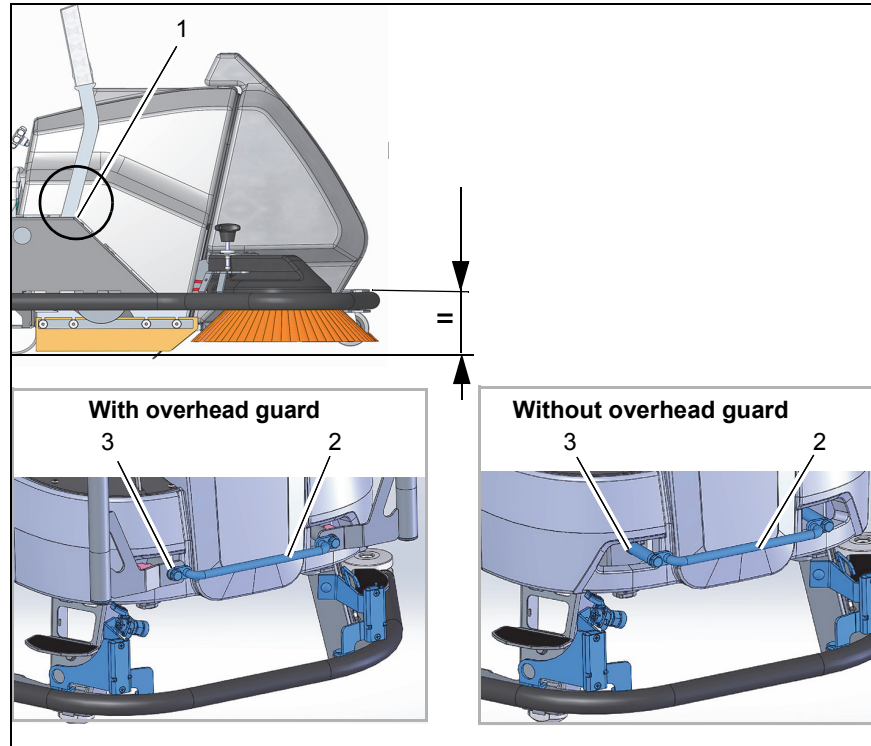


Fig. 3

3 Operation

3.1 Sweeping operation



Do not use the pre-sweep suction unit unless the dirt hopper is attached!

Sweeping up dust that is hazardous to health is not permitted!

Ensure that there is sufficient ventilation when performing sweeping tasks in enclosed rooms!

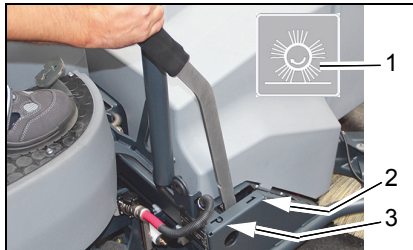


Fig. 4

1. Switch the machine on and press the *Pre-sweep suction unit* (Fig. 4/1) button on the control panel.
2. Move the lever of the pre-sweep unit from pos. P to pos. 1 (Fig. 4/2) and set off.

3.2 Stop sweeping operation

1. Press the *Pre-sweep suction unit* (Fig. 4/1) button on the control panel.
2. Move the lever of the pre-sweep unit from pos. 1 to pos. P (Fig. 4/3).

3.3 After sweeping

1. Drive to a suitable maintenance location.
2. Operate the shaking system.
3. Empty the dirt hopper.
4. Check the cylindrical brush compartment for contamination and remove if necessary.
5. Clean the pre-sweep suction unit if necessary.



Do not clean the electrical components using water! Risk of electrocution!

Make sure that the dust filter is not wet.

Insert the dirt hopper before cleaning.

Cleaning the machine with a high-pressure cleaner or steam jet is not permitted!

3.3.1 Parking the pre-sweep suction unit

1. Unplug the plug at the machine-side and plug into the retaining hole (Fig. 5/1).
2. Move the lever to the change/parking position (Fig. 5/2).
3. Park the pre-sweep suction unit on a solid surface and in a dry, clean location.

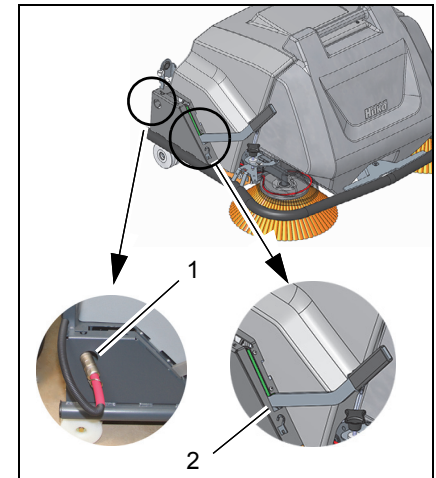


Fig. 5

Technical data

4 Technical data

Machine length	mm	800
Height of machine	mm	660
Machine width (above swivel bracket)	mm	1220
Working width	mm	1300
Cylindrical brush width	mm	670
Cylindrical brush, minimum diameter	mm	200
Cylindrical brush speed	rpm	500
Sweeping level width	mm	45±10
Side brush diameter	mm	400
Side brush speed	rpm	92
Theoretical sweeping capacity	m ² /h	10400
Dirt hopper volume (maximum load 20 kg)	Litres	16
Filter area	m ²	1.4
Filter use category ZH 1/487	KAT	U
Drive motor (P1)	W	750
Nominal voltage	V	36
Permissible total weight	kg	115

5 Maintenance and Servicing

General



Always pay attention to the safety information chapter in the associated operating manual before performing care and maintenance work!

Compliance with the maintenance work recommended by us gives you the certainty of always having an operational machine available.

Daily and weekly maintenance and repair work can be undertaken by a driver trained for this, all further Hako system maintenance work may be undertaken only by trained and qualified personnel. Please contact your nearest Hako service centre or authorised Hako dealer. Any warranty claim is null and void if this is not complied with and damage results.

Please always state the serial number in all enquiries and spare part orders (see type plate).

Maintenance and Servicing

5.1 Maintenance plan Hako system maintenance by the customer

The following maintenance work is performed by the customer.

Activity	Intervals	
	Daily	Weekly
Clean the cylindrical brush compartment	o	o
Clean the plate filter using the shaking system	o	o
Empty the dirt hopper	o	o
Inspect the side brush for wear and damage, replace if necessary		o
Inspect the cylindrical brush for wear and damage, replace if necessary		o
Inspect the sweeping level of the side brush, adjust if necessary		o
Inspect the sweeping level of the cylindrical brush, adjust if necessary		o
Inspect the front apron and the sealing strips in the cylindrical brush compartment for wear and damage, replace if necessary		o
Inspect the dirt hopper seal, replace if necessary		o
Clean the machine		o

5.2 Dirt hopper

5.2.1 Emptying the dirt hopper

Check the fill level of the dirt hopper at regular intervals (max. load 20 kg) and empty if necessary.

1. Turn off the machine.
2. Pull the dirt hopper (Fig. 6/1) upwards using the handle (Fig. 6/2) and dispose of the contents in an environmentally friendly way.
3. Reinsert the dirt hopper.

5.2.2 Dirt hopper seal

Inspect the dirt hopper seal (Fig. 6/3) weekly and replace if wear is present.

1. Turn off the machine.
2. Remove the dirt hopper.
3. Remove the damaged seal.
4. Press the new seal onto the edges.

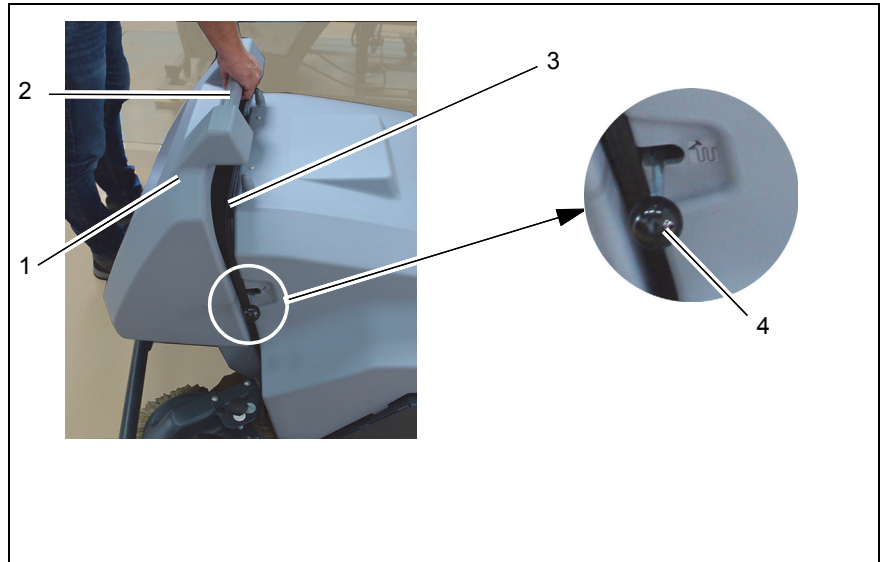


Fig. 6

Maintenance and Servicing

5.3 Filter

5.3.1 Shaking the filter

Clean the filter multiple times per day using the shaking system (Fig. 6/4). To clean the filter, pull out the lever of the shaking system several times and slide back in again.

5.3.2 Cleaning the filter

1. Switch off the machine and remove the dirt hopper.
2. Swivel the yellow handle (Fig. 7/1) upwards and pull the filter (Fig. 7/2) out of the frame.



Health hazard!
Do not inhale the dust.
Wear a suitable dust mask.

3. Allow the filter to fall horizontally onto a smooth floor from a height of approx. 1 m.
The dirty side must be facing the floor (Fig. 7/3)!
4. The filter is installed in the reverse order.



Ensure that the installation position is correct! Markings (Fig. 7/4) can be found on the frame of the filter.

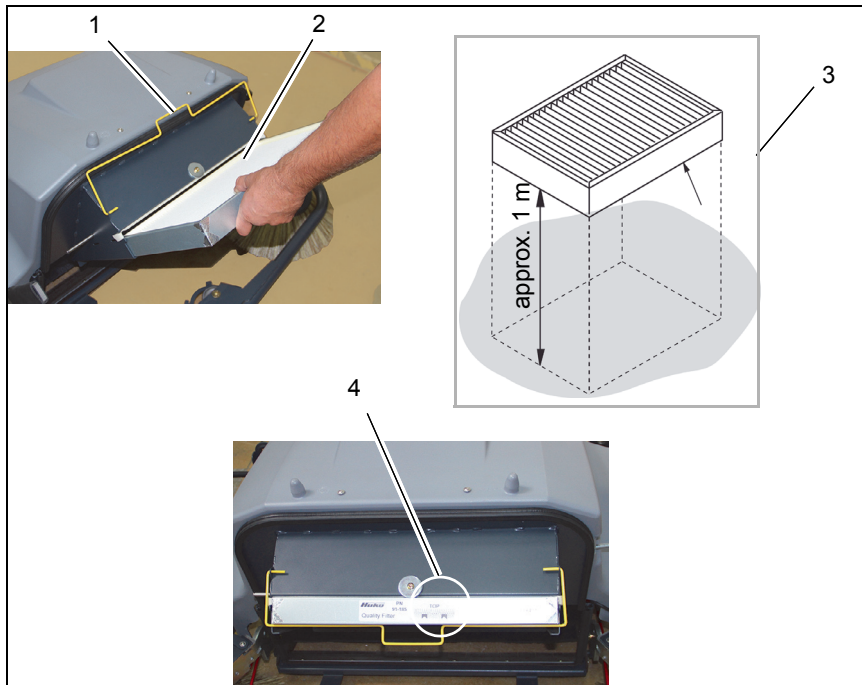


Fig. 7

5.4 Cylindrical brush

5.4.1 Cleaning the cylindrical brush and the cylindrical brush compartment

Inspect the cylindrical brush (Fig. 8/1) for soiling daily.

1. Disconnect the pre-sweep suction unit from the machine.
2. Remove the dirt hopper.
3. Tilt the pre-sweep suction unit backwards (see fig.).
4. Remove rolled-up bands from the cylindrical brush.
5. Inspect the front apron (Fig. 8/2) and the sealing strips (Fig. 8/3) for soiling daily and clean if necessary.

5.4.2 Replacing the cylindrical brush:

Inspect the cylindrical brush once per week and replace if wear is present. Follow instructions 1.-3. under *Cleaning the cylindrical brush and the cylindrical brush compartment*.

4. Loosen the nuts and washers (Fig. 8/4) and remove the first half shell.
5. Manually rotate the cylindrical brush shaft (Fig. 8/5) 180° and remove the second half shell.
6. Attach the new half shells in the reverse order.
7. The sweeping level must be readjusted after replacing the cylindrical brush.

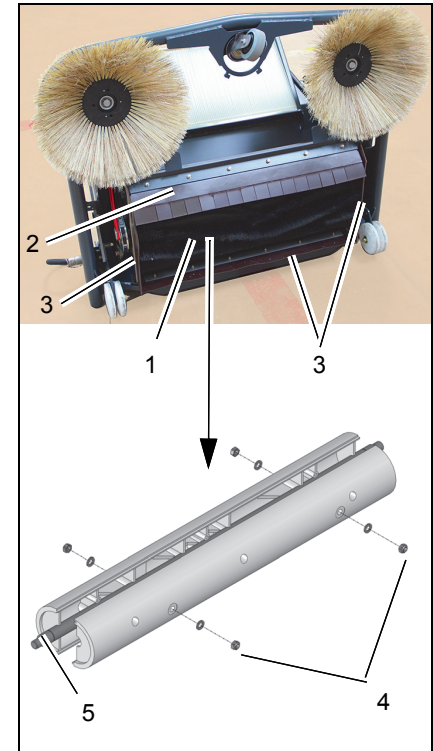


Fig. 8

Maintenance and Servicing

5.4.3 Adjusting the sweeping level

In the event of brush wear and after replacing the cylindrical brush, the sweeping level (Fig. 8/1) must be readjusted.



Mark the floor with chalk to check the sweeping level.

1. Switch off the machine using the key switch.
2. Rotate the adjustment dial (Fig. 9/1) until the cylindrical brush is touching the floor.
3. Switch on the machine and let the cylindrical brush rotate briefly while stationary.
4. If the setting is correct, a parallel-running sweeping level of approx. 45 +/- 10 mm must be marked on the ground.
5. If necessary, repeat the process until the setting is correct.

5.4.4 Replacing the sealing strips of the cylindrical brush compartment

The sealing strips must be in perfect condition for the sweeping machine to operate efficiently.

Inspect the sealing strip of the cylindrical brush compartment (Fig. 9/2) for wear and check for damage at regular intervals.

Replace defective sealing strips as follows.

Follow instructions 1.-3. under 4.6.1 *Cleaning the cylindrical brush and the cylindrical brush compartment.*

4. Remove the mushroom-head screws, washers, nuts and terminal strip of the defective sealing strip.
5. Install the new sealing strip in the reverse order.

The lateral sealing strips are adjustable (elongated holes in the sealing strips). Adjustment dimension: approx. 1 mm from floor

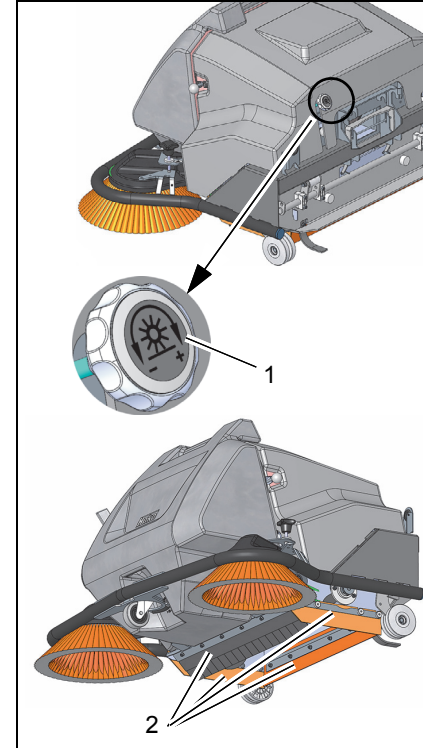


Fig. 9

5.5 Side brushes

5.5.1 Changing the side brush

Inspect the side brushes once per week and replace if wear is present.

1. Switch off the machine and remove the dirt hopper (Fig. 10/1).
2. Remove both M6x16 flanged button head bolts, the brush adjuster and the cover (Fig. 10/2).
3. Remove the round belt from the side brush (Fig. 10/3).
4. Loosen the 3 screws of the side brush (Fig. 10/4) and remove.
5. Fit the new side brush in the reverse order. Pay attention to the run of the belt (Fig. 10/5).

5.5.2 Adjusting the sweeping level

The sweeping level must be readjusted if the event of brush wear and after replacing the side brush.

1. Turn off the machine.
2. Rotate the adjusting wheel until half of the side brush is touching the floor.

Compared to a clock, the sweeping level must be from approx. 9 o'clock to 3 o'clock on the floor (Fig. 10/6).

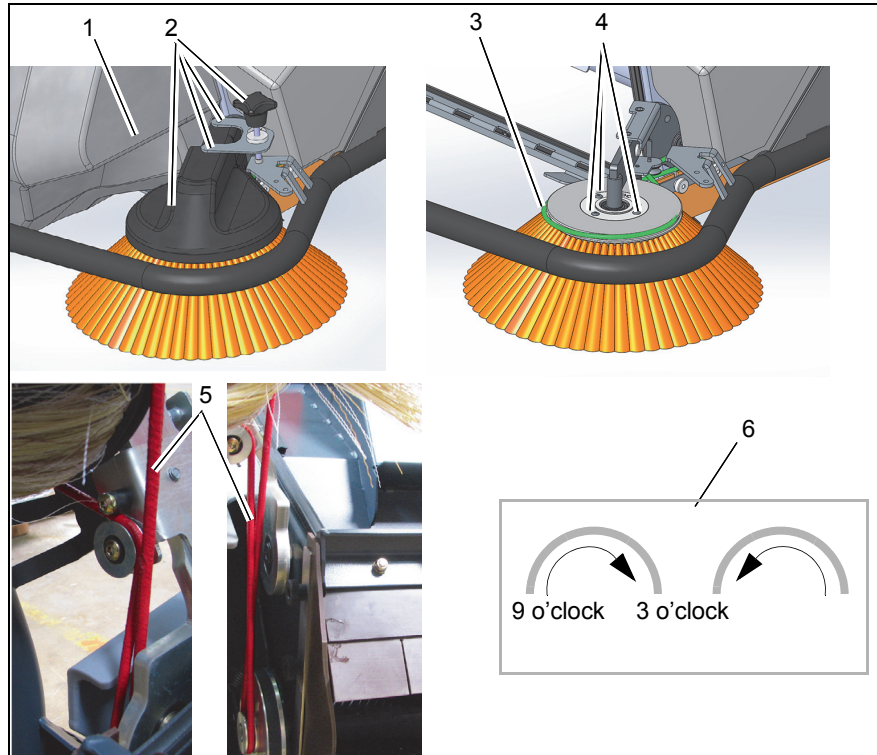


Fig. 10

EC Declaration of Conformity (corresponding to the EC Directive 2006/42/EC)

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

Pre-sweep suction unit
Type: 7180.50

to which this declaration relates corresponds to the relevant basic safety and health requirements of the Directive 2006/42/EC, and to the requirements of the other relevant Directives 2014/30/EC and 2014/53/EC.

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 60335-2-72
EN 61000-6-2
EN 55012

Bad Oldesloe, 25.10.2018



Ricardo Ruiz Porath
Product line Manager
Cleaning Technologie

Name of the person authorised for Hako to compile the technical file:

Ludger Lüttel





Advanced Technology for a Cleaner, Better Environment

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