

# CV 66/2 Service Manual



<b>2</b>	<b>Safety instructions</b>	<b>3</b>
2.1	Hazard levels	3
<b>3</b>	<b>Technical Features</b>	<b>3</b>
3.1	Operation and control	3
3.2	Vacuuming	3
3.3	Electrical system	3
<b>4</b>	<b>Setup and function</b>	<b>4</b>
4.1	Appliance view	4
4.2	View from below	4
<b>5</b>	<b>Basic settings and service procedures</b>	<b>4</b>
5.1	General information	4
5.2	Remove operating panel	5
5.3	Replacing the mains cable	5
5.4	Replace appliance switch	5
5.5	Replace wire harness	6
5.6	Removing the handle	6
5.7	Removing the appliance hood	7
5.8	Replacing the drive belt of the brush roller	9
5.9	Clean/replace the suction channel	10
5.10	Replacing the brush rollers	11
5.11	Replace the toothed belt in the brush head gear	11
5.12	Replace suction turbine	12
5.13	Remove the brush head.	12
5.14	Remove the height adjustment of the brush head	13
5.15	Remove the microswitch of the brush motor	13
5.16	Replace the pressure switch	14
<b>6</b>	<b>Troubleshooting</b>	<b>15</b>
<b>7</b>	<b>Circuit diagram</b>	
<b>8</b>	<b>Technical specifications</b>	<b>16</b>
<b>9</b>	<b>Special tools</b>	<b>16</b>
<b>10</b>	<b>Tightening torques</b>	<b>16</b>

## 1 Preface

Good servicing requires detailed and practice-oriented training as well as good well-structured training materials. Hence we offer regular basic and advanced training programmes covering the entire product range for all service engineers. In addition to this, we also prepare service manuals for important appliances - these can be initially used as instruction guides and later on as reference guides. Apart from this, we also regular information about product enhancements and their servicing.

If you should require supplements, have corrections or questions regarding this document, please address these citing the following subject to:

*international-service@de.kaercher.com*

Subject:	<b>Case 107171</b>
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The responsible product specialist will take care of your issue.

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## 2 Safety instructions

### 2.1 Hazard levels

#### **Danger**

*Immediate danger that can cause severe injury or even death.*

## 3 Technical Features

The appliance is only to be used for dry cleaning of floors.

### 3.1 Operation and control

The appliance can be used in a forward motion by pushing it on the push handle.

### 3.2 Vacuuming

The brush roller brushes dirt out of the floor covering. The suction turbine produces a vacuum pressure, which pulls the dirt from the brush head into the filter bag.

Due to the one-sided arrangement of the brushes, the right side of the appliance can clean all the way to the edge.

#### **Note:**

If the display for a full filter bag is illuminated, switch the appliance off and replace the filter bag.

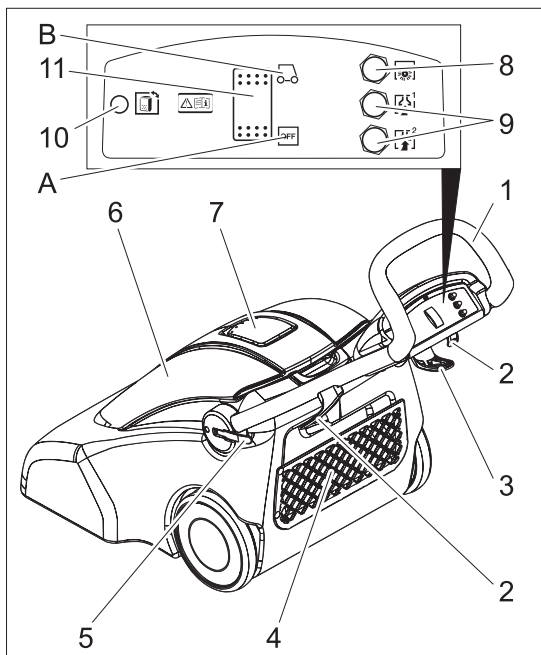
### 3.3 Electrical system

The switches for the operation of the appliance are located in the push handle.

- Mains connection 220 - 240V / 50 - 60Hz / 16A.

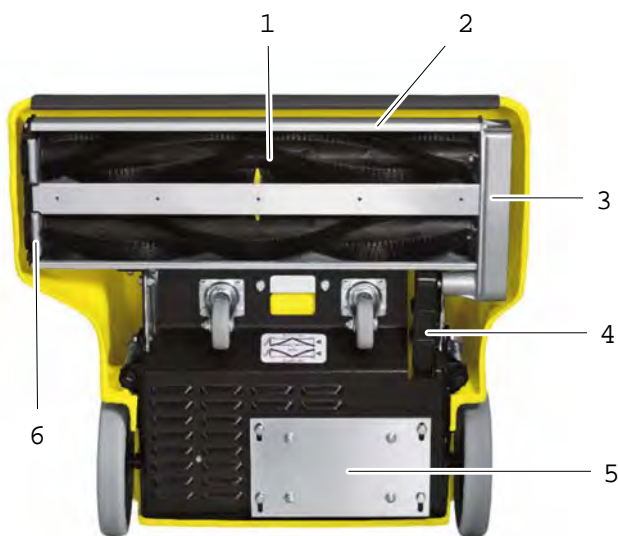
## 4 Setup and function

### 4.1 Appliance view



- 1 Pushing handle, adjustable
- 2 Cable clamp
- 3 Cable holder, rotating
- 4 Storage compartment
- 5 Lock of pushing handle
- 6 Lid of filter chamber
- 7 Suction hose connection (for optional suction set)
- 8 Fuse for brush drive
- 9 Fuse for suction turbine
- 10 Display 'Filter bag is full'
- 11 Power switch

### 4.2 View from below



- 1 Brush roller
- 2 Brush head
- 3 Brush head gear
- 4 Drive belt cover
- 5 Brush motor support plate
- 6 Safety sheet metal plates, brush roller removal

### 4.3 Special accessories

Description	Order No.
Dry vacuum set to clean corners and edges	8.630-501.0



## 5 Basic settings and service procedures

### 5.1 General information

- There are sharp edges in the appliance! Wear gloves during the disassembly.
- The cables are secured by cable ties. If a cable tie is removed, it must be replaced with a new one.
- Watch for cable connections during removal and installation. If connectors or lines are damaged, they must be replaced.
- Some of the plastic parts cannot be removed without being damaged and must be replaced.
- Increased force is required for the hood.

- The appliance is very heavy! 2 persons are required for lifting and tilting.
- Perform the function test after the work is completed

## 5.2 Remove operating panel

The operating panel includes the appliance switch, the fuses for the brush motor and the suction turbines and the ring core throttles. The operating panel is connected to the appliance via a harness, which is routed along the right handlebar.



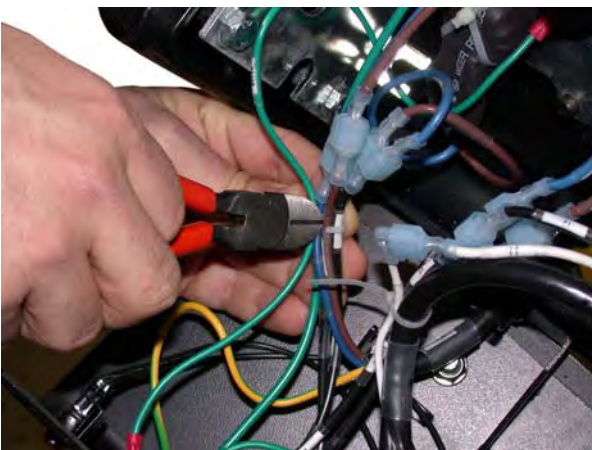
- Remove the marked screws.
- Pull the cover off toward the back.
- Reroute the mains cable during removal



## 5.3 Replacing the mains cable

If the mains cable or the mains plug are damaged, they must be replaced.

- Remove the cover (see "Disassembly of operating panel")



- Carefully open cable tie (cut)
- Disconnect the connectors on the supply line



- Separate the protective conductor from the grounding clip. For this, loosen the nut and pull off all the ring ferrules. The protective conductor is installed last.

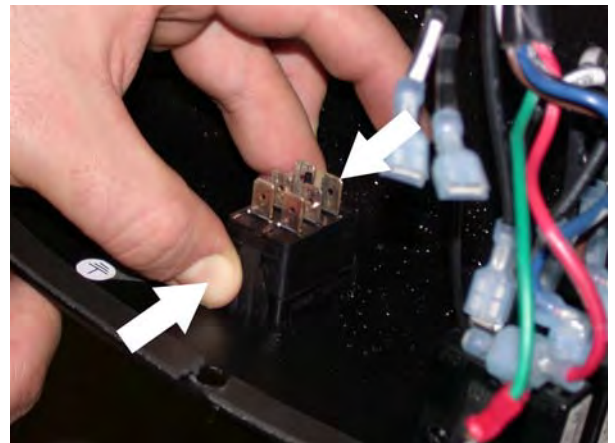


- Remove the traction relief: Unscrew the locknut, hold against traction relief
- Pull the mains cable out toward the back
- Route a new mains cable
- Restore the protective conductor and the connections
- Bundle the cables with the harness
- Reinstall the cover

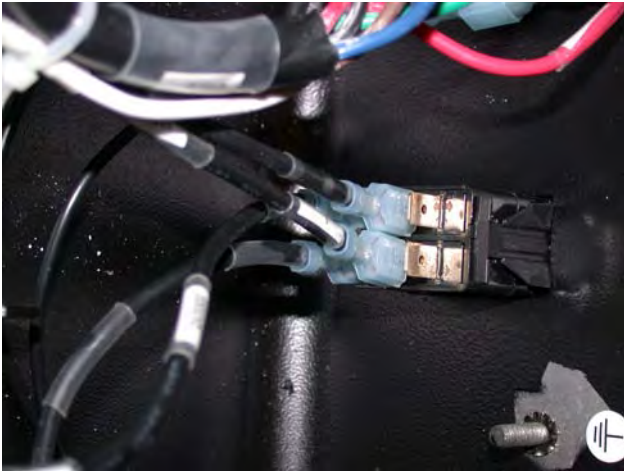
## 5.4 Replace appliance switch

A defective appliance switch must be completely replaced.

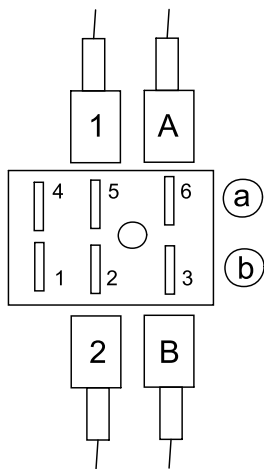
- Remove the cover (see "Disassembly of operating panel")
- Carefully open cable tie (cut)
- Remove the connections from the switch



- Press together the locking nose on the switch
- Pull the switch from the holder toward the bottom
- Insert new switch - observe the installation position: Pin pointing toward the bottom, use mark "Off" on the operating panel as a guide



→ Restore cable connections. Contact arrangement:



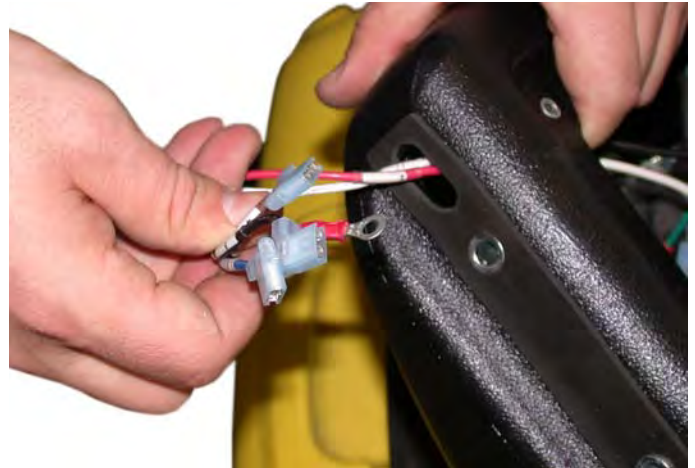
- Bundle the cables with the harness
- Reinstall the cover
- Check the function and make sure that the switch was installed in the correct position.

### 5.5 Replace wire harness

- Remove the cover (see "Disassembly of operating panel")
- Carefully open cable tie (cut)
- Disconnect the connectors on the wire harness
- Remove the operating from the handle by removing 4 screws from the side



→ Take the operating panel off toward the front and pull out the wire harness through the side boring. Do not damage the plug!



- Remove the handle and the handlebars (see "Removing the handle")
- Pull the wire harness out of the column
- Disconnect the connectors in the appliance
- Route a new wire harness
- Restore the connections
- Reassemble the handle and the operating panel

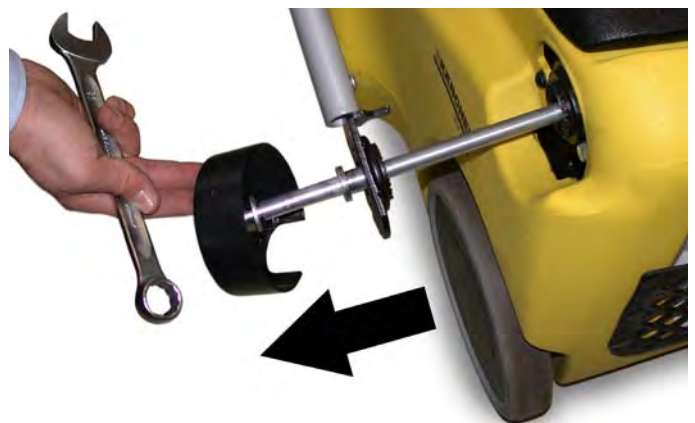
### 5.6 Removing the handle

The handle must be removed in order to be able to remove the appliance hood. The handle can be adjusted via a shaft and locks. This adjustment must be dismantled in the shown sequence to prevent damage.

- Remove the plastic cover from the right side (side without adjustment lever).



→ Unscrew the screw from the shaft and remove the column including the lock.



→ Pull the shaft out of the left side. The adjustment lever and the shaft are connected via a joint. The connection is secured by a splint. The plastic cap can only be removed if this splint and the connecting piece are removed.



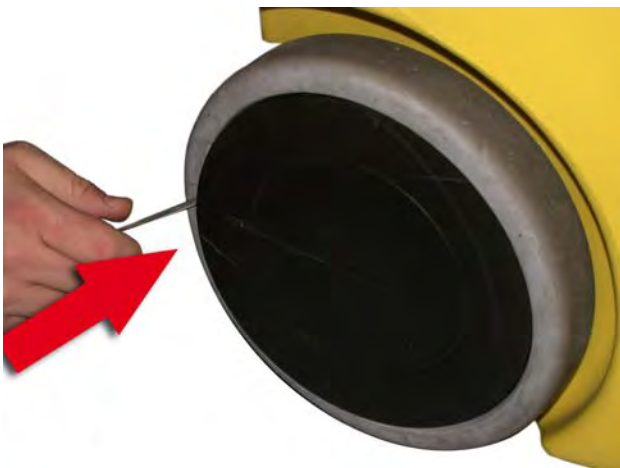
To change a broken height adjustment lever, you must proceed as described above.

- Turn the lever by 90° and pull it out to remove the lever from the plastic cover
- Replace the splint after removing it
- Assemble the handle and the adjustment in reverse order of removal

### 5.7 Removing the appliance hood

Several disassembly steps are necessary to remove the appliance hood, which are described in more detail in other chapters. These points are not specifically marked in the text.

- Remove operating panel
- Removing the handle



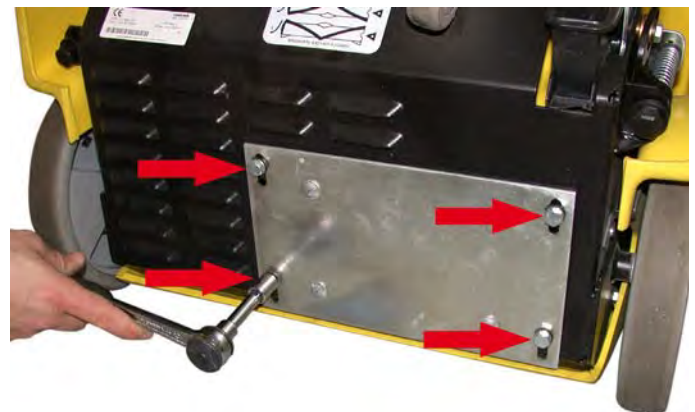
- Remove the wheel cover. For this, lift the cover using a screwdriver and carefully release it.
- If the locking nose should break off, the cover must be replaced.



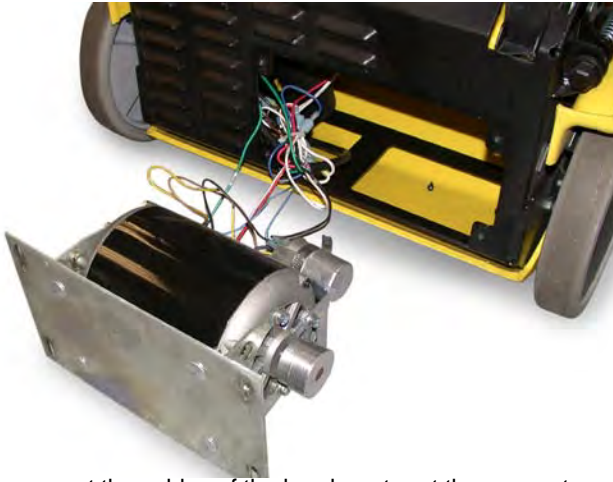
- Unscrew the screw from the wheel shaft
- Removing the wheel



- Remove the fastening angles on both sides
- Tilt the appliance rearward



- Remove the brush motor - loosen all 4 screws
- Remove the brush motor and pull off the drive belt



- Disconnect the cables of the brush motor at the connectors
- Tilt appliance back
- Remove the cover with filter basket



- Disconnect the connector on the pressure switch
- Do not remove the pressure switch



- Unscrew the screws on the hinge (increased force: The screws are secured with screw adhesive)



- Unscrew the fastening screw at the top of the frame
- Slide the wire harness into the appliance so that it will not be pinched when the hood is lifted



- Disconnect the micro switch cable in the appliance from the connections
- Loosen the hose clamp on the suction hose, do not pull off
- Pull the suction hose off the brush head
- Remove the cover from the appliance and set aside
- Remove the suction turbine and disconnect the connections



- Lift the hood off evenly toward the top, agitate a little
- If you are unable to lift off the appliance hood, pull the side parts apart a little.
- There is a support strut in the frame. If the hood gets stuck on it, it must be removed.





Position of the support strut - appliance hood removed for clarity.



- Open the fastening screws of the strut on both sides.
- The strut will fall into the inside of the appliance
- The appliance hood can now be removed.
- When the appliance is assembled, this strut must be installed pointing straight up.
- When the hood is attached, the strut will be pushed into its original position.
- Install the hood from the rear to the front
- If you experience difficulties when installing the hood, watch for edges, use rubber hammer if necessary
- While installing, check and ensure that no cables are crushed
- Assembly of the appliance in reverse order

### 5.8 Replacing the drive belt of the brush roller

The brush roller is connected to the drive motor via a drive belt. If the drive belt is worn or damaged, it must be replaced.



- Remove the screws on the belt cover



- Remove cover



- Loosen the screws on the support plate of the brush motor - do not remove all the way
- Slide the support plate up to relax the drive belt
- Retighten the screws

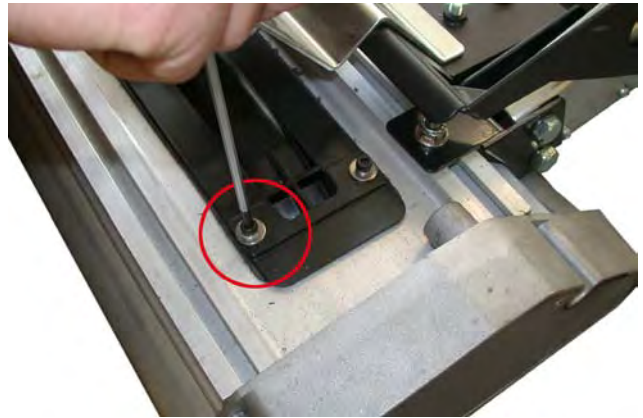


- Remove the drive belt from the front roller and pull it out of the appliance
- Route a new drive belt onto the roller on the motor and stretch it across the top roller - make sure that all guides are in their grooves

## 5.9 Clean/replace the suction channel

There is a suction channel cover on the brush head. This channel can be removed to clean the suction channel.

→ Remove the appliance cover



→ Loosen all 8 screws on the suction channel cover



→ Remove the suction channel cover

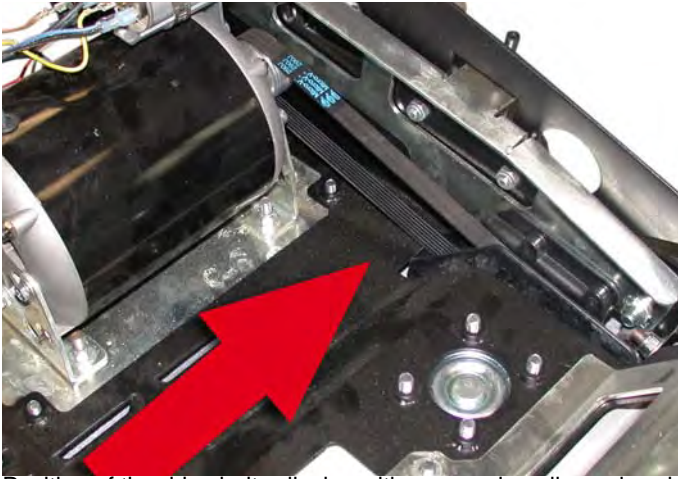
→ Clean the suction channel

→ Clean the suction channel seal prior to installation

→ If the seal was damaged during removal, it must be replaced: Remove the old seal, clean the adhesive surfaces, apply new seal.

→ Reinstall the suction channel cover

→ Reinstall the appliance hood



Position of the drive belt - display with removed appliance hood.

→ Loosen the screw on the support plate

→ Slide the support plate down to tension the drive belt



→ Make sure you slide the support plate straight - do not tilt



→ Check the tension of the drive belt, adjust if necessary

→ Tighten all screws on the brush motor support plate.

→ Reinstall the drive belt cover

## 5.10 Replacing the brush rollers

The brush rollers must be replaced when the brush length has reached its tear indication.



- Tilt the appliance
- Unlock the latch of the brushes



- Remove the brush
- Clean the brush pickup



- When inserting new brushes, observe the pickups
- Always replace both brushes

## 5.11 Replace the toothed belt in the brush head gear

There is a toothed belt in the gears of the brush head, which must be replaced if damaged.

- Remove the appliance cover



- Turn out the 4 screws and remove the gear cover. The screws are secured with screw adhesive.



- Loosen tension pulley screw.
- Fold the tension pulley down



- Remove toothed belt
- Insert new toothed belt
- Fold the tension pulley up (tension toothed belt)
- Tighten tension pulley screw
- Reinstall the gear cover

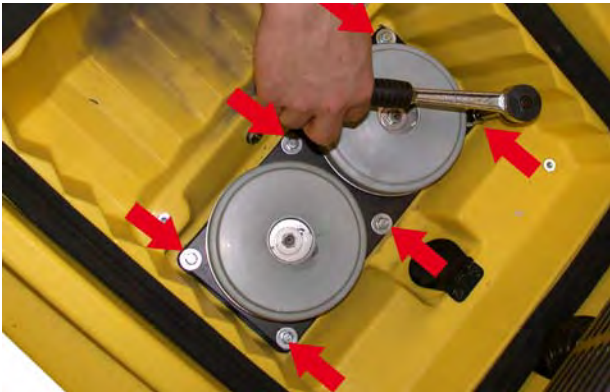
## 5.12 Replace suction turbine

The suction turbine consists of 2 turbine motors in a casing. The turbine unit must be completely replaced.

- Remove the cover with filter basket



- Remove the cover of the turbine coarse dirt filter, remove the filter and clean it
- The cover is mounted on spacer discs, these must be removed and saved.



- Loosen all 6 screws on the turbine unit



- Remove the turbine unit
- Disconnect the cable connection



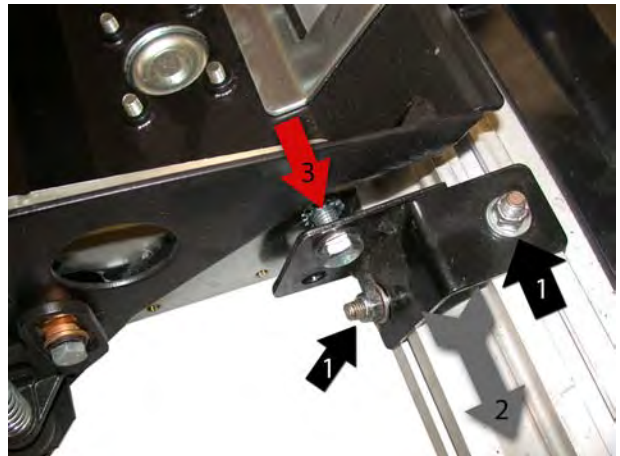
- Remove the turbine unit from the rubber tub
- Guide the cable through the opening
- Do not damage the rubber tub
- Install the new turbine unit in reverse order.
- Install the filter and filter cover - watch for the correct position of the spacer discs
- Install the cover with filter basket

## 5.13 Remove the brush head.

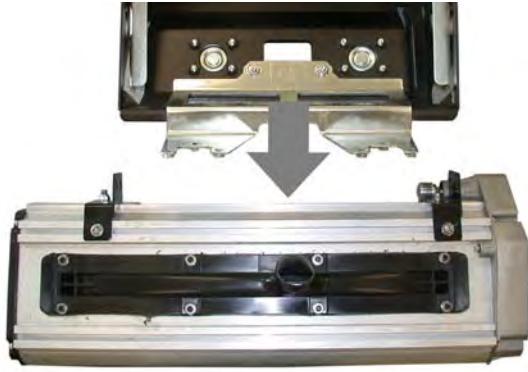
- Remove the appliance cover



- Unscrew the fastening screws from the sides



- Loosen the adjustment screws on the guiderail (1)
- Pull away the holding angle (2)
- The fastening screw (3) is free and can be removed.



- Pull the brush head toward the front
- Installation in reverse order

#### 5.14 Remove the height adjustment of the brush head

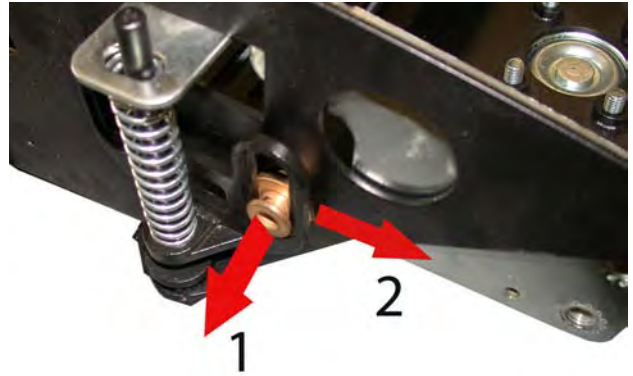
- Remove the appliance cover



The height adjustment is located in the center of the appliance. Both sides are identical. The height adjustment is used to adjust the contact pressure of the brush rollers. A spring is installed as an overload guard.



- Loosen height adjustment screws
- Pull out the screws



- Remove the bushing and the spacer disc
- Tilt out the spring holder and pull out toward the bottom.
- Assembly in reverse order

#### 5.15 Remove the microswitch of the brush motor

The brush motor is switched off as soon as a suction hose is inserted. This function is triggered by a micro switch, which is located in the connection bushing.



- Unscrew 2 fastening screws at the connection bushing.
- Carefully fold the bushing up - the micro switch is pulled out at the same time
- Disconnect the connections on the switch
- Replace the switch
- Recreate connections
- Reinstall the bushings, ensure that the spring of the bushing locks into the pickup
- If the safety plate for the bushing screws falls into the inside during the removal, the connection for the suction hose must be removed:



- Loosen the fastening screws inside the cover



- Remove the Y piece
- Replace the safety plate



- Reinstall the Y piece - this might require increased force.
- Screw in the Y piece

### 5.16 Replace the pressure switch

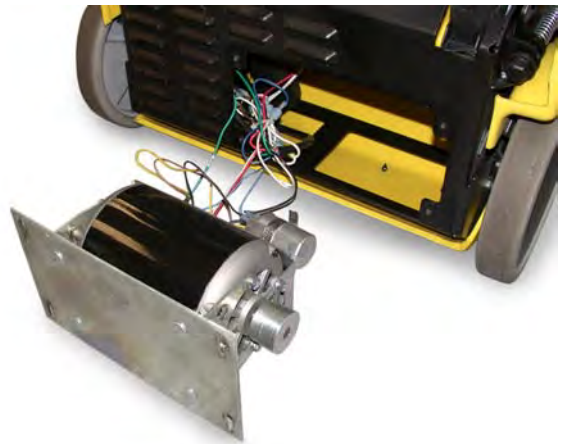
The appliance incorporates a pressure switch, which monitors the vacuum pressure. If this vacuum pressure becomes too high, the pressure switch switches off the suction turbine. If the switch is defective, it must be completely replaced.



- Remove the turbine filter cover



- The pressure switch is located in the center of the turbine tub
- Remove the nut and seal of the pressure switch
  - Tilt the appliance backwards and remove the brush motor



- Remove the brush motor from the appliance



- Disconnect the cable connections on the pressure switch
- Pull out the pressure switch
- Install new pressure switch - watch for tightness!
- Create a cable connection



- ➔ Install brush motor - watch for drive belt!
- ➔ Install turbine filter cover

## 6 Troubleshooting

Fault	Remedy	
Appliance cannot be started	Establish mains contact.	
	Check the mains connection cable for damages. Replace the defective mains cable.	
	Check/replace the startup capacitor.	C2
	Check/replace the startup capacitor startup electronics.	A1
	Check/replace switch "brush drive".	S1, S1.1
Suction is too low	Exchange the paper filter bag.	
	Suction hose/ suction channel blocked; clean suction hose/ suction channel.	
Suction turbine does not run	Check/replace the pressure switch.	S3
	Check/replace the suction turbine.	M3
	Check cable connections / remove defect.	
Brush roller motor is not running	Check/replace the protective switch.	F1
	Check/replace the micro switch.	
	Check/replace the startup capacitor.	C2
	Check/replace the operation capacitor.	C1
	Check/replace the brush roller motor.	M1
	Check/replace the startup capacitor startup electronics.	A1
	Check/replace switch "brush drive".	S1, S1.1
Insufficient cleaning result	Suction is too low	
	Check brush rollers for foreign bodies	
	Check/replace the toothed belt.	
	Suction hose/ suction channel blocked; clean suction hose/ suction channel.	
	Exchange the paper filter bag.	
Gear too loud	Grease the toothed wheels.	
	Check/replace the toothed wheels.	

## 7 Circuit diagram

The circuit diagram is included in the appendix. Circuit diagrams are not generated automatically with the service information. Prior to using the circuit diagram you should verify whether the present version is current.

## 8 Technical specifications

<b>Electrical connection</b>		
Voltage, EU	V	220...240
Frequency	Hz	50 - 60
Average power consumption	W	1350
Maximum power consumption	W	1550
<b>Blower data</b>		
Power	W	2 x 570
Max. power	W	2 x 650
Under-pressure	kPa	14,3
Air quantity	l/s	2 x 52
<b>Brush</b>		
Power	W	373
Max. power	W	400
Drive		Gear belt
Working width	mm	660
Brush diameter	mm	100
Brush speed	1/min	1350
<b>Dimensions and weights</b>		
Height	mm	1120
Width	mm	770
Length	mm	1270
Volume of filter bag	l	35
Weight	kg	72
<b>Noise emission</b>		
Sound pressure level (EN 60704-2-1)	dB(A)	73
<b>Machine vibrations</b>		
Vibration total value (ISO 5349)	m/s <sup>2</sup>	1,5
<b>Power cord</b>		
EU: 8.621-716.0	m	22
GB: 8.621-718.0	m	22
AU: 8.621-717.0	m	22

## 9 Special tools

Description	Part number
Not required	

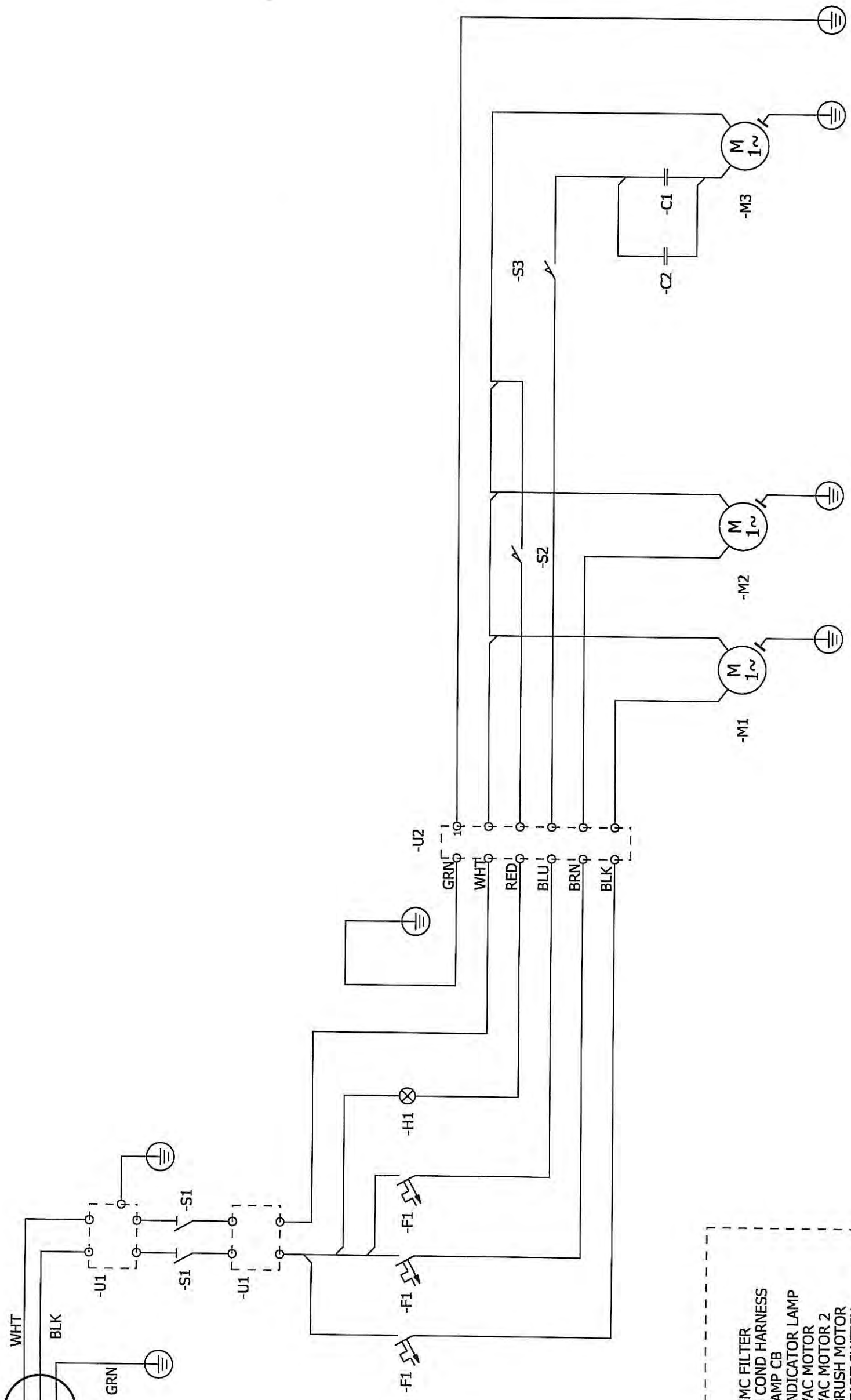
## 10 Tightening torques

Description / Use	Tightening torque (Nm)
Plastic screws 6x 5x20, 4x 5x40, 2x 5x80 / screw connection brush housing - bottom part with top part	0,8
Plastic screws 2x 5x20 / push handle attachment, left	0,8



Description / Use	Tightening torque (Nm)
4x M 8x16 / push handle attachment, left, with gear housing	8,0
Plastic screws 3x 5x20 / screw connection pump lid	0,8
Plastic screws 7x 5x20 / turbine housing	0,8
Plastic screws 6x 5x20 / sheet metal, brush bearing	1,5
Plastic screws 6x 5x20 / gear housing with brush housing	1,5
Plastic screws 8x 5x20 / running gear	1,5
Plastic screws 2x 5x20 / suction channel cover	0,8
Plastic screws 12x 5x20 / fastening screws push handle half bowl - handle	0,8
4x M 6x12 / secure the running gear with screw securing enamel (6.869-002.0)	4,0
4x hexagonal screw M8x12 / flange brush motor	9,0
6x M 5x16 / gear housing cover	1,5
4x M 6x25 / 4x flange - gear housing	6,0
4x M 5x16 / 3x gear cover	1,5
2x M 6x12 / 2x secure pulley with screw securing enamel (6.869-002.0)	4,0

0 1 2 3 4 5 6 7 8 9



- KEY
- U1 EMC FILTER
  - U2 6 COND HARNESS
  - F1 4AMP CB
  - H1 INDICATOR LAMP
  - M1 VAC MOTOR
  - M2 VAC MOTOR 2
  - M3 BRUSH MOTOR
  - S1 START SWITCH
  - S2 PRESSURE SWITCH
  - S3 BRUSH MICRO SWITCH
  - C1 RUN CAPACITOR
  - C2 START CAPACITOR

DATE		SG	SG	b	1	x
DATUM		GEZ.	GEPR.	A-IND	ANZ.	AND./FR.
1.012-524.0						
ANLAGE= SLP			Nu Wave			
DRT +			CV 66/2			
AUFTRAG						
<b>KARCHER</b>						