

BR 35/12

Service Manual



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Preface

Good service work requires extensive and practice-oriented training as well as 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: **Fall 116366**

The responsible product specialist will take care of your issue.

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Description in this service manual

Service groups

Example:

Install/uninstall ANRA wheel axle

A	N	R	A	Install/uninstall wheel axle
Product group	Service group	Functional group, component, activity		Plain text description

Observe the allocation of service groups to the appliance components in the overview diagram in Chapter "Overview over the service and functional groups".

Functional group structure

010	Safety instructions
020	Overview
030	Function
040	Service activities
050	Maintenance and inspection
060	Error diagnosis
070	Peculiarities/ others
080 - 100	Not assigned
110	Replacement times

Textual description

- ➔ Instruction
- *Preparatory operations*

1

2 Key numerical

A

B Key alphanumerical

- Enumeration / General list

Safety instructions

Service and maintenance tasks may only be performed by qualified and specially trained specialists.

Observe safety information in the chapters!

⚠ Danger

First pull out the plug from the mains before carrying out any tasks on the machine.

⚠ Safety note

Pointer to hazards, sources of errors.

Caution

Risk of damage by electrostatic discharge (ESD)! Take suitable measures for discharging electrostatic charge prior to performing work on the appliance electronics.

Hazard levels

⚠ Danger

Immediate danger that can cause severe injury or even death.

Note

indicates useful tips and important information.

⚠ Warning

Possible hazardous situation that could lead to severe injury or even death.

Caution

Possible hazardous situation that could lead to mild injury to persons or damage to property.

Technical Features

General



The scrubbing vacuum cleaner is used for the wet cleaning of level floors.

It can be easily adjusted to the cleaning task by setting the water quantity.

The cleaning head is steerable. Steering angle 360°



A working width of 350 mm and a capacity of 12 l in the fresh and wastewater tank each enable effective cleaning with long action times.

The wastewater tank can be removed for easier emptying.

The battery can be charged on a 230V power outlet by means of the integrated charger.

The steering column can be folded up for transportation. The steering wheel serves as a carrying handle.

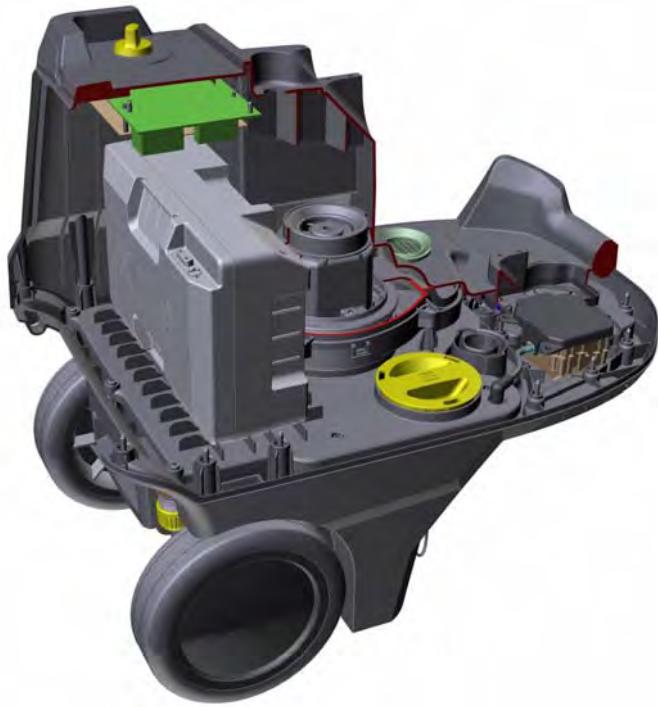
Tools used

- Screwdriver T20
- Screwdriver T15

Field of application

This service manual describes the appliance BR 35/12 C BP (Pack).

Li-ion battery



The appliance contains a built in Li-ion battery. The handling of this battery is subject to special criteria. A defective Li-ion battery can only be replaced as a whole. The replacement or repair of individual cells is not possible.

⚠ Danger

- Alterations and modifications on the appliance are prohibited.
- **Do not open the battery**, as there is a risk of an electrical shock; also, irritating or caustic vapors can escape.
- **Do not expose the battery to direct sunlight, heat or fire**, there is a risk of explosion.
- Do not operate the charger in explosive environment.
- Do not expose the battery to mechanical strain when handling it.
- Check the plug for damage, bent contacts and soiling prior to connecting it.

⚠ Warning

- Keep the battery and the charger out of reach of children.
- Do not charge damaged batteries.
- Do not dispose of defective battery in the domestic waste.
- Avoid contact with liquids oozing out of defective battery packs. Rinse thoroughly if you accidentally come in contact with the fluid. Also consult a doctor if the fluid comes in contact with your eyes.

Caution

- Observe recommendations of the lawmaker for handling Li-ion batteries.
- The mains voltage must correspond with the voltage indicated on the type plate of the appliance.
- Use the charger only to charge approved battery packs.
- The accumulator may only be operated with this appliance. It is dangerous and prohibited to use it for other purposes.

Note

Observe further safety instructions and regulations on handling and transporting defective Li-ion batteries in Chapter "AG service group energy supply"

Safety installations

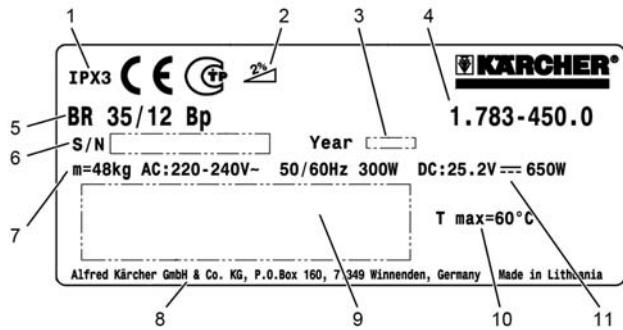
Safety devices serve to protect the user and must not be rendered in operational or their functions bypassed.

Observe safety information in the chapters!

Safety button

If the safety switch is released, the brush drive shuts off.

Type plate



The type plate is located on the bottom rear of the appliance frame.

- 1 IP rating/ protection class
- 2 Max. working range incline
- 3 Year of manufacture
- 4 Part number
- 5 Appliance description
- 6 Serial number
- 7 Specifications
- 8 Address of manufacturer
- 9 Bar code. Contains part and serial number.
- 10 Admissible temperature range
- 11 Performance data

Overview of the appliance

Connection view



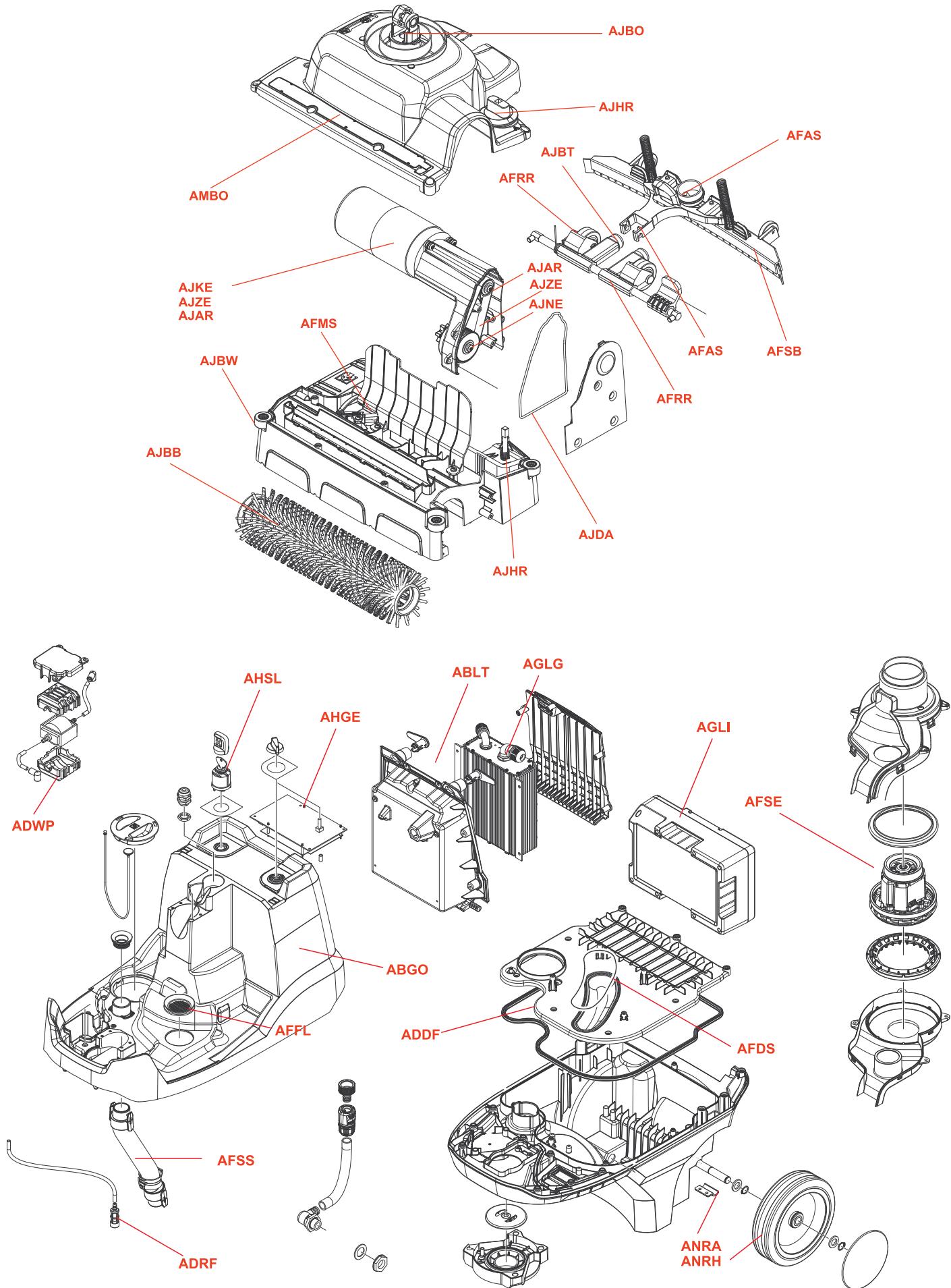
- | | | |
|----|---|----|
| 1 | Safety button | S5 |
| 2 | Steering wheel | |
| 3 | Star knob, height adjustment of the steering wheel | |
| 4 | Steering column | |
| 5 | Star knob, transport position of the steering wheel | |
| 6 | Key switch | S1 |
| 7 | On-board charger | U1 |
| 8 | Rear wheel | |
| 9 | Support roller, vacuum bar | |
| 10 | Rubber lips of vacuum bar | |
| 11 | Height adjustment cleaning head | |
| 12 | Brush roller motor | M1 |
| 13 | Water distribution bar | |
| 14 | Dirt water reservoir | |
| 15 | Handle of the dirt container | |
| 16 | Cover dirt water reservoir | |
| 17 | Unlocking device, cover wastewater tank | |

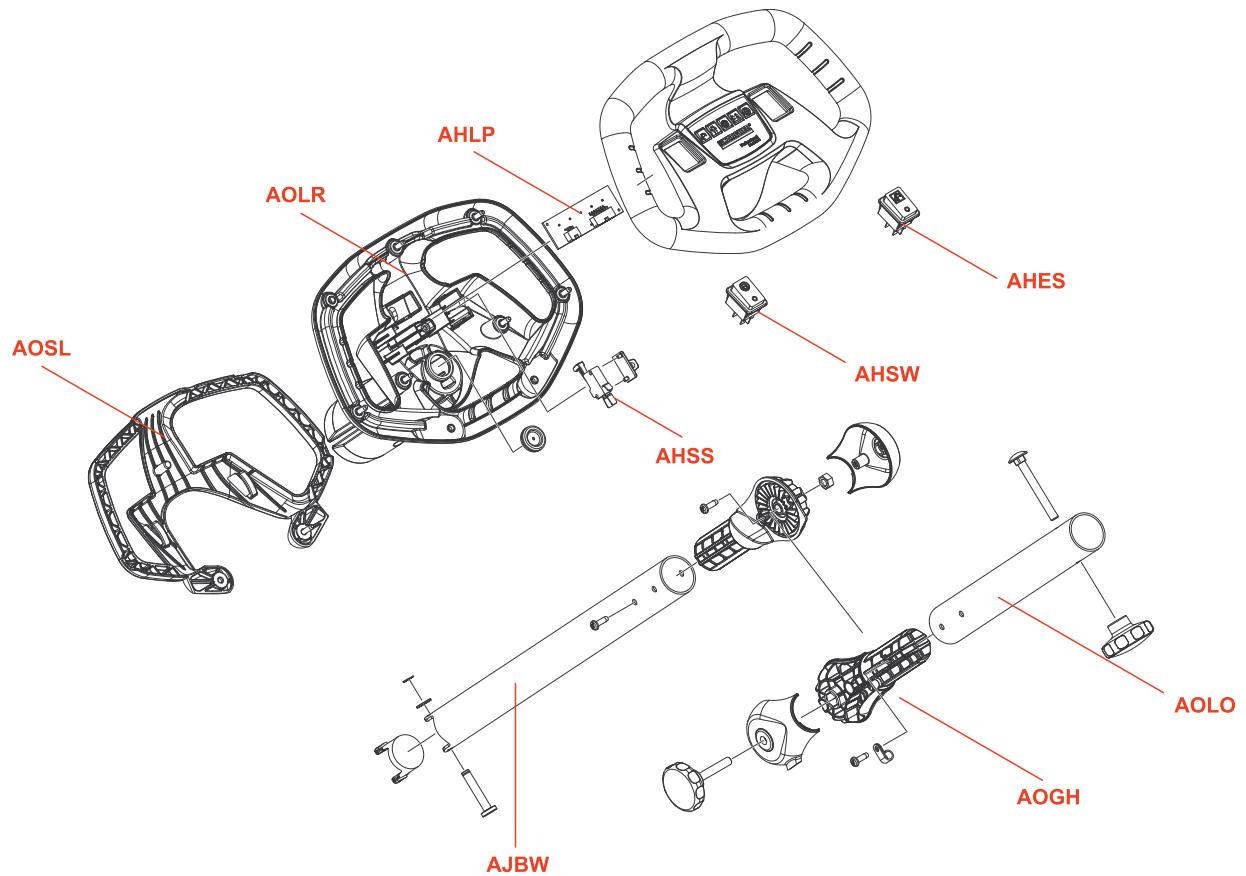
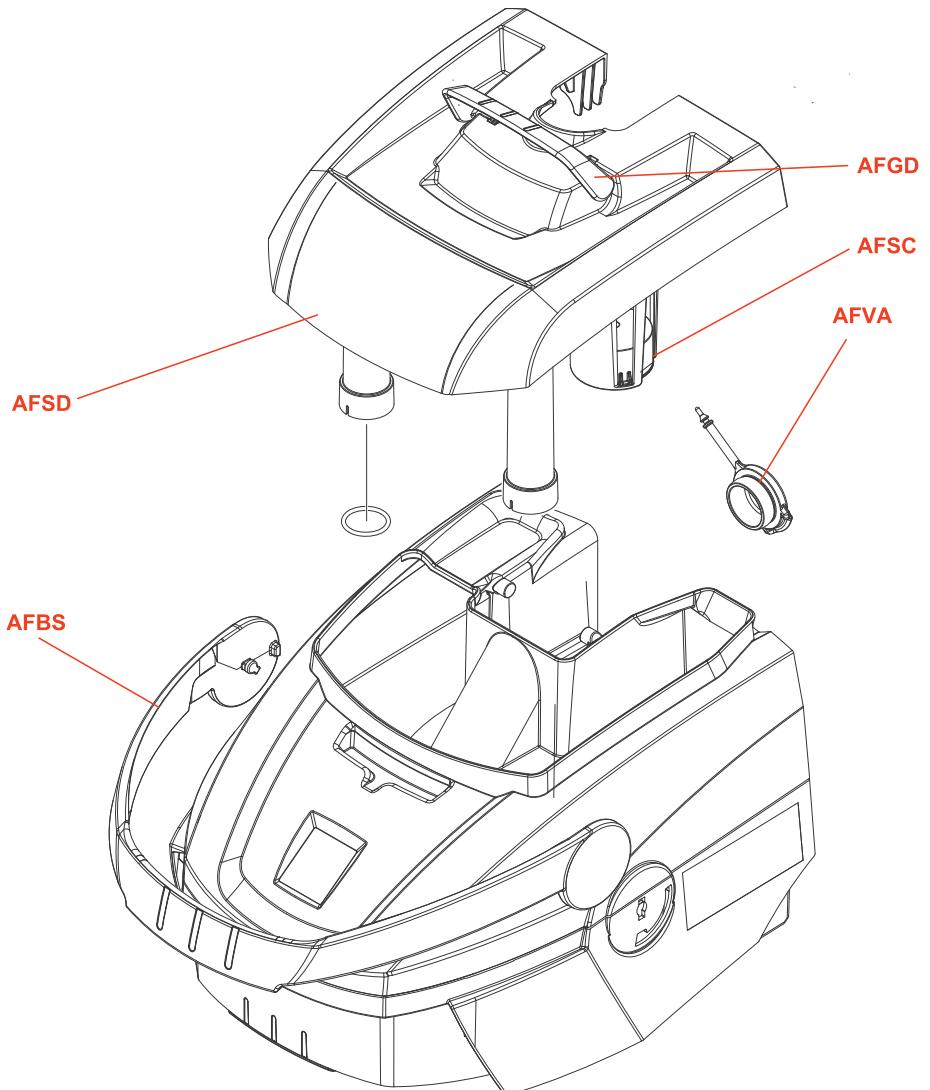
Rear view



- | | | |
|----|---|----|
| 1 | Control lamp to apply detergent solution | D1 |
| 2 | Indicator lamp vacuuming
Green: Suction turbine in operation
Orange, flashing: Suction turbine overloaded | D2 |
| 3 | Indicator lamp brush drive
Green: Brush is rotating
Orange, flashing: Brush overloaded | D3 |
| 4 | Battery status display
Green Battery charged
Orange: Battery almost empty
Red Appliance switches off: Load battery | D4 |
| 5 | Indicator lamp Eco function | D5 |
| 6 | Switch Eco function | S4 |
| 7 | Key switch | S1 |
| 8 | On-board charger | U1 |
| 9 | Cable hook, power cable on-board charger | |
| 10 | Dosage cleaning solution | |
| 11 | Switch for detergent solution | S3 |

Overview over the service and functional groups





AB service group bodywork / chassis

010 Safety information

General

Observe general safety information!

Service and maintenance tasks may only be performed by qualified and specially trained specialists.

⚠ Danger

First pull out the plug from the mains before carrying out any tasks on the machine.

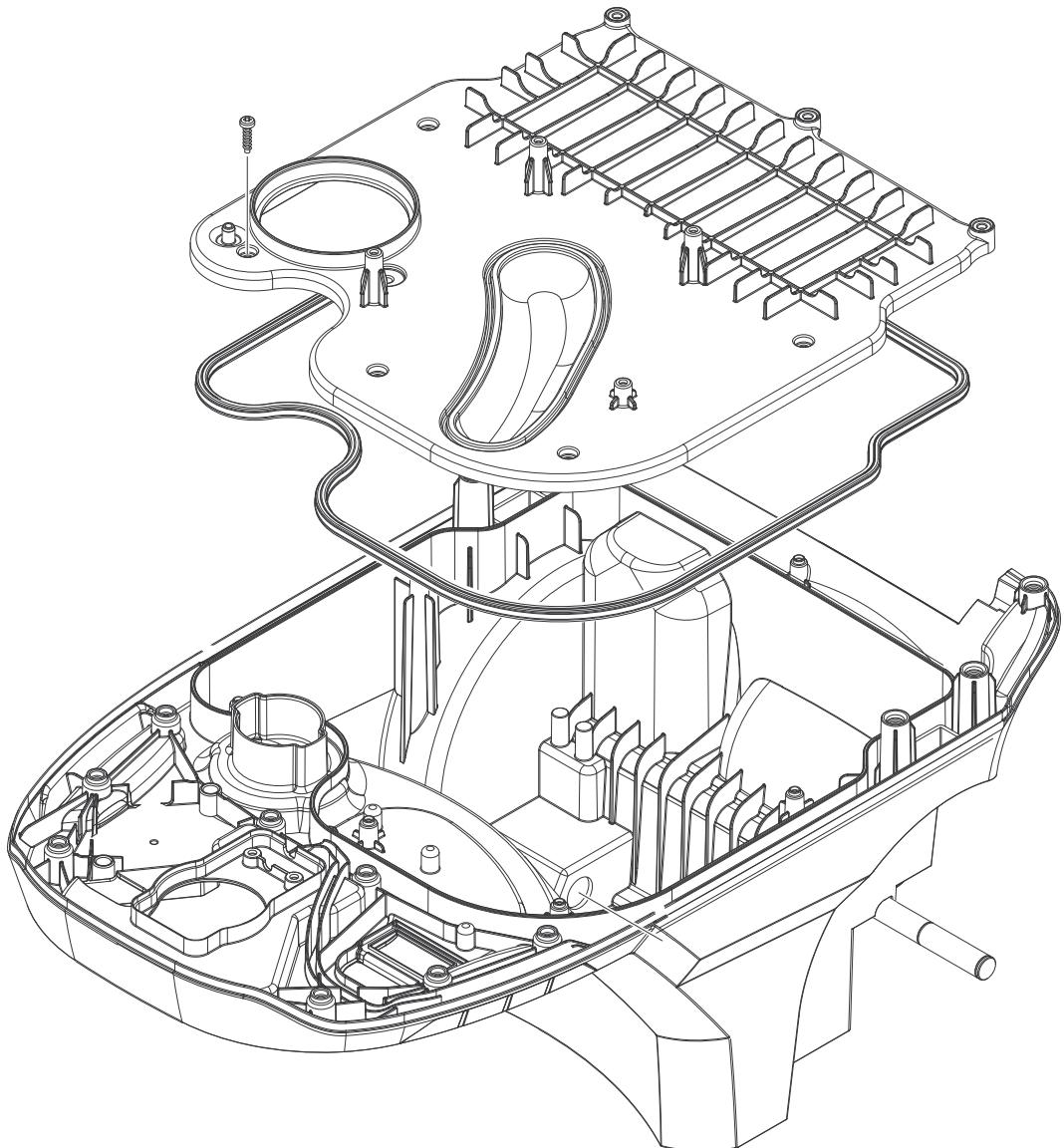
Caution

Risk of damage by electrostatic discharge (ESD)!

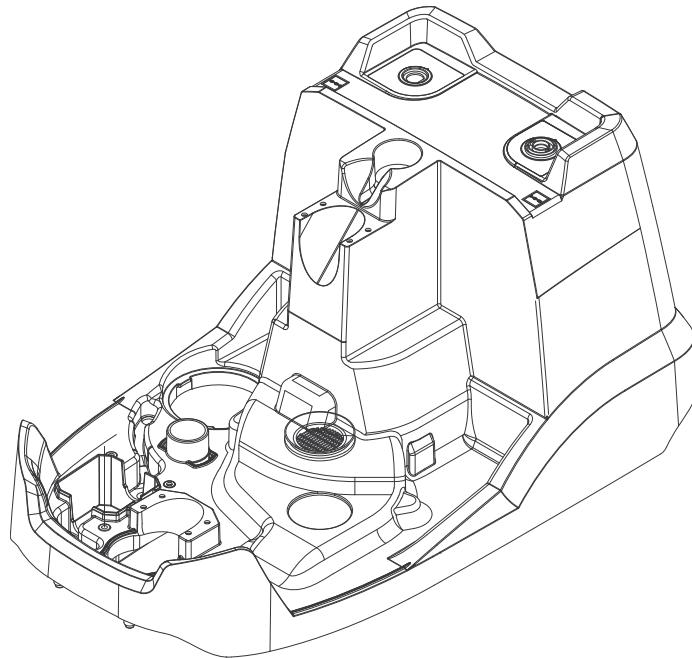
Take suitable measures for discharging electrostatic charge prior to performing work on the appliance electronics.

020 Overview

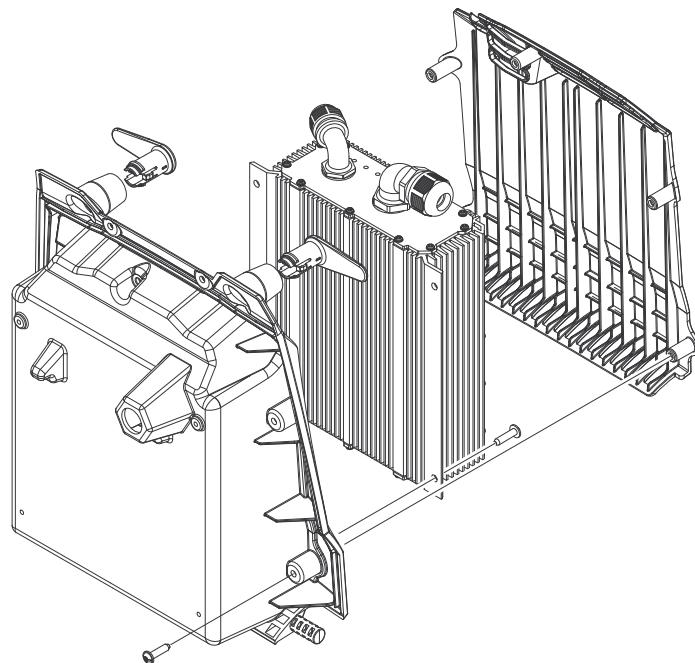
Bottom part of the appliance



Appliance cover



Charger base



030 Function

Bottom part of the appliance

The bottom part of the appliance is the supporting chassis.

In the bottom part there are

- Li-ion battery
- Fresh water tank
- Suction turbine
- Chassis
- Steering
- Cleaning head

installed.

Top part of appliance

The top part of the appliance carries the wastewater tank and the steering column.

In the appliance cover there are

- Appliance electronics
- Operator console

installed.

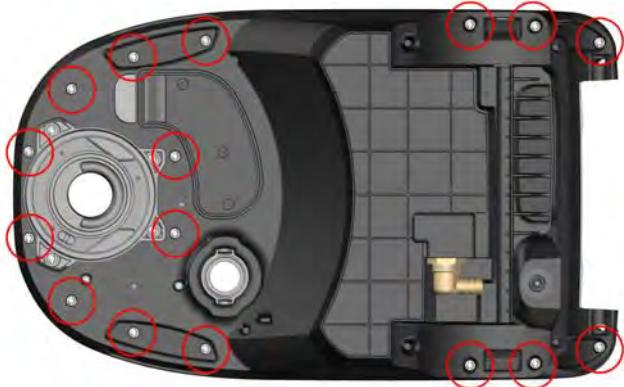
Charger base

The charger is installed in the charger base. The charger base is also the rear appliance cover.

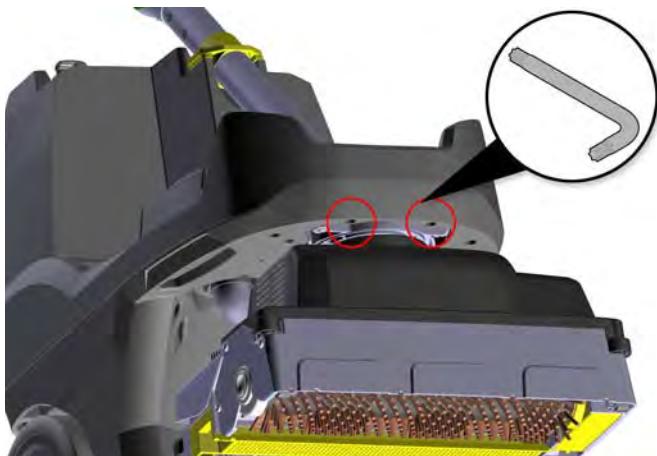
040 Service activities

ABGO Uninstalling/installing the top part of the appliance

- Remove the dirt water reservoir.
- Uninstall/install the upper steering column AOLO
- Uninstall/install appliance electronics AHGE
- Uninstall/install wheel axle ANRA
- Uninstall/install water pump ADWP



→ Tilt the appliance rearward.
→ Unscrew the screws.

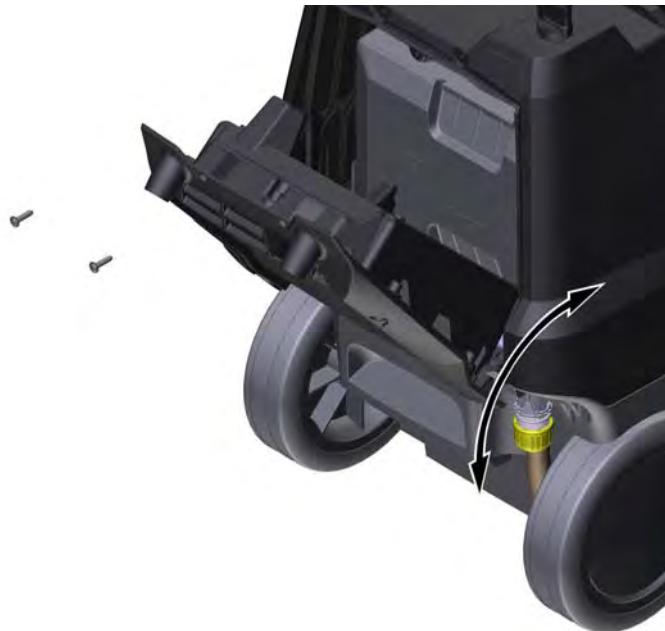


Note
Use special tool to unscrew the front screws
6.815-163.0

→ Remove the hood.



ABLT Uninstalling/installing charger base



Note

Check the cable connections prior to replacing components!

- Unscrew two screws on the charger base.
- Tilt the charger base backwards.
- Disconnect electrical connection.
- Push the charger base out of the suspension.

050 Maintenance and inspection

Service group does not contain any maintenance and inspection points.

060 Error diagnosis

Findings	Possible cause	Correction
Access to other appliance parts		
Damage, cracks	External mechanical impact	Replace casing, instruct operator
Cracked screw bosses	Incorrect lifting	Replace casing, instruct operator
Casing distorted	Thermal impact	Replace casing

070 Peculiarities/ others

The service group does not contain any peculiarities.

110 Replacement times

Basic work	Description	Work value
ABGO	Uninstall/install the top part of the appliance	
ABLT	Uninstall/install charger base	

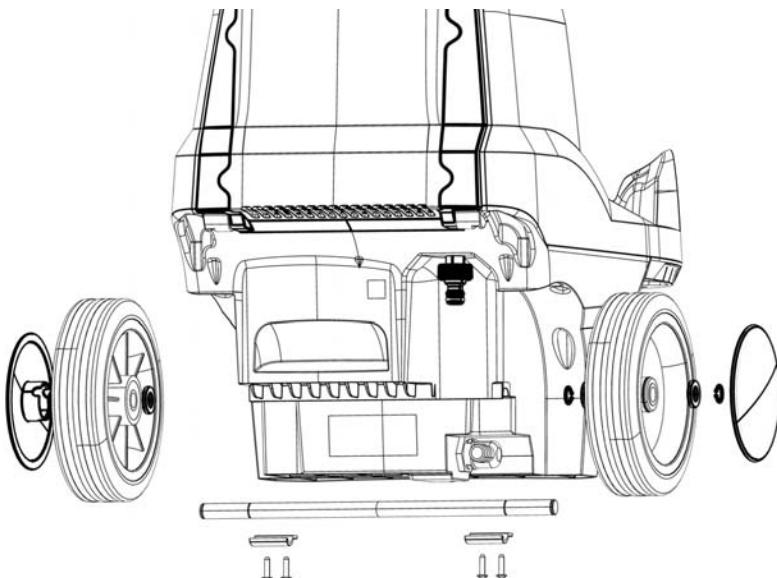
AN service group running gear

010 Safety information

For this service group there is no special safety information.

Observe general safety information!

020 Overview



030 Function

The running gear carries the appliance.

The wheels can be replaced individually.

The wheel axle is attached to the appliance by means of two holders.

040 Service activities

ANRA Install/uninstall wheel axle



- Remove the dirt water reservoir.
- Empty the fresh water reservoir.
- Tilt the appliance to the side and rest it.
- Unscrew the screws on the holders.
- Remove the wheel axle from the appliance.

ANRH Uninstalling/installing rear wheel



- Remove the wheel cover. For this, lift the cover using a screwdriver and carefully release it.
- Remove the retaining ring.
- Remove the wheel from the axle and replace it.

Note

*Pay attention to the washers during disassembly.
Grease the axle prior to installing the new wheel.*

050 Maintenance and inspection

- Check wheels for ease of movement.
- Check whether the axle is bent.
- Check whether both holders are present and secured.

060 Error diagnosis

The service group does not contain any error diagnosis.

070 Peculiarities/ others

The service group does not contain any peculiarities.

110 Replacement times

Basic work	Description	Work value
ANRA	Install/uninstall wheel axle	
ANRH	Uninstall/install the rear wheel	

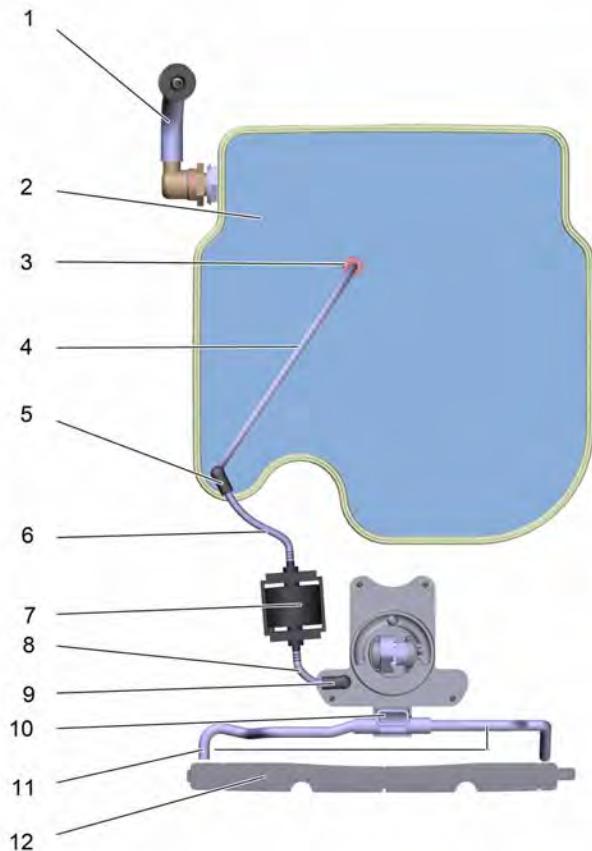
AD service group fresh water system

010 Safety information

For this service group there is no special safety information.

Observe general safety information!

020 Overview



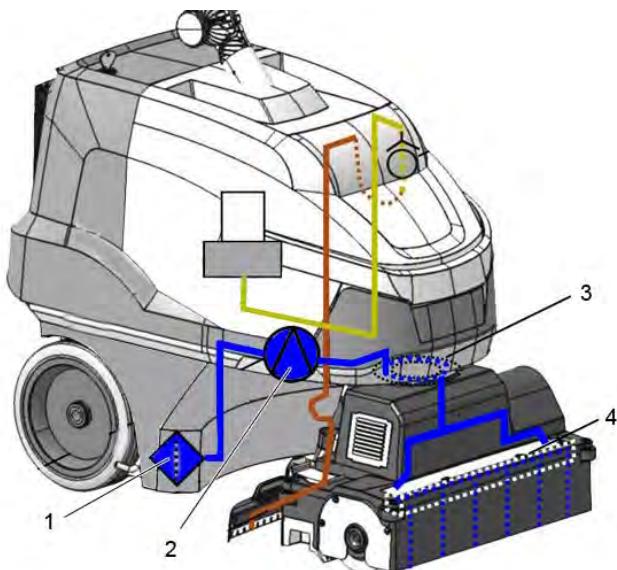
The water system of the BR 35/12

- | | | |
|----|--|----|
| 1 | Fresh water discharge hose | |
| 2 | Fresh water tank | |
| 3 | Water filter | |
| 4 | Water hose in the fresh water tank | |
| 5 | Angular spout | |
| 6 | Water hose to the water pump | |
| 7 | Water pump | M3 |
| 8 | Water hose to the collection funnel | |
| 9 | Angular spout | |
| 10 | Labyrinth (in base plate of the cleaning head) | |
| 11 | Water hoses to the water distribution bar | |
| 12 | Water distribution bar | |

Note

A frequent cause for poor water supply are clotted lines or filters due to overdosage of detergent.

030 Function



1 Fresh water tank

2 Water pump

3 Labyrinth

4 Water distribution bar

Detergent solution/ fresh water is delivered from the fresh water tank by the water pump.

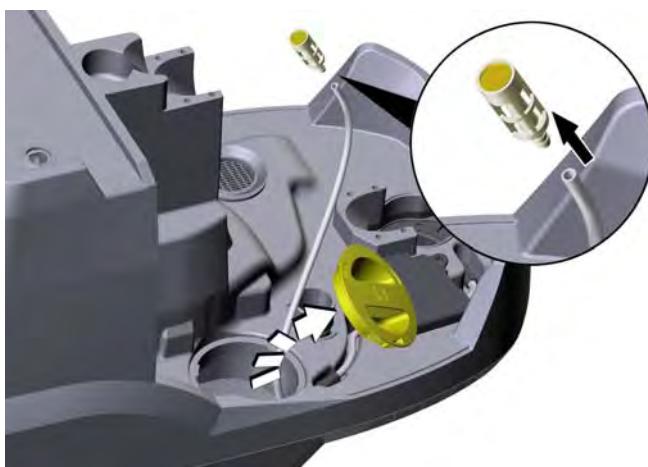
Foreign objects and soiling in the cleaning detergent solution/ fresh water are retained by the water filter. The detergent solution/ fresh water flows through the hose system onto the labyrinth.

From the labyrinth the water flows through the hose system onto the water distribution bar of the cleaning head.

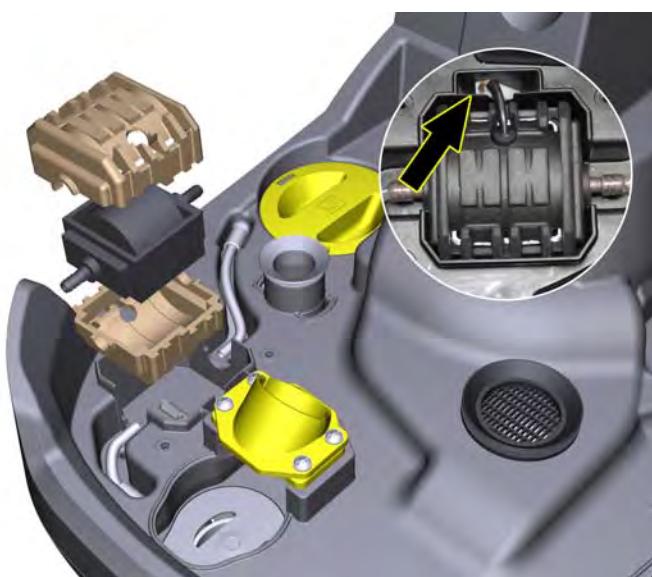
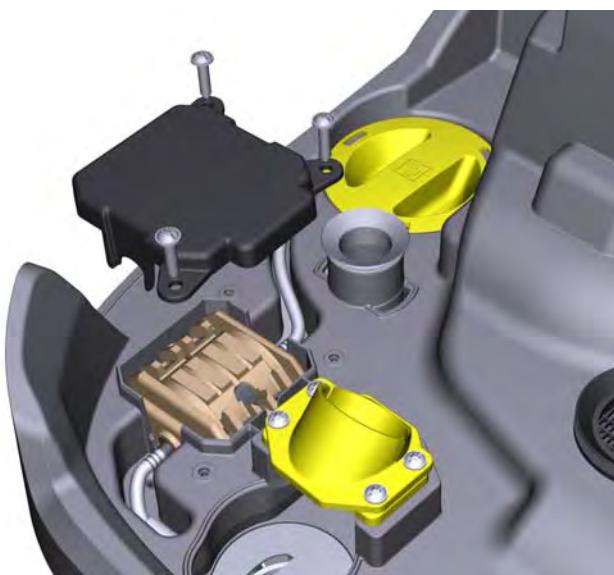
The water distribution bar equally distributes the water onto the brush roller.

040 Service activities

ADRF Cleaning/ replacing water filter



ADWP Uninstall/install water pump



- Remove the dirt water reservoir.

→ Open the closure of the fresh water tank.

→ Pull the water filter on the water hose out of the fresh water tank.

Note

Ensure that the water hose is not pulled off of the angular bush.

→ Remove the water filter from the water hose.

→ Clean or replace the water filter.

- Remove the dirt water reservoir.

→ Unscrew the screws.

→ Remove cover.

→ Disconnect the connector.

Note

The connector plug lies in the notch next to the water pump. Ensure that the connection cable does not fall into the appliance upon unplugging.

→ Remove the upper half shell of the vibration damper.

→ Remove the hoses from the water pump.

Note

Prior to replacement, check whether the water pump can be made practicable again by rinsing.

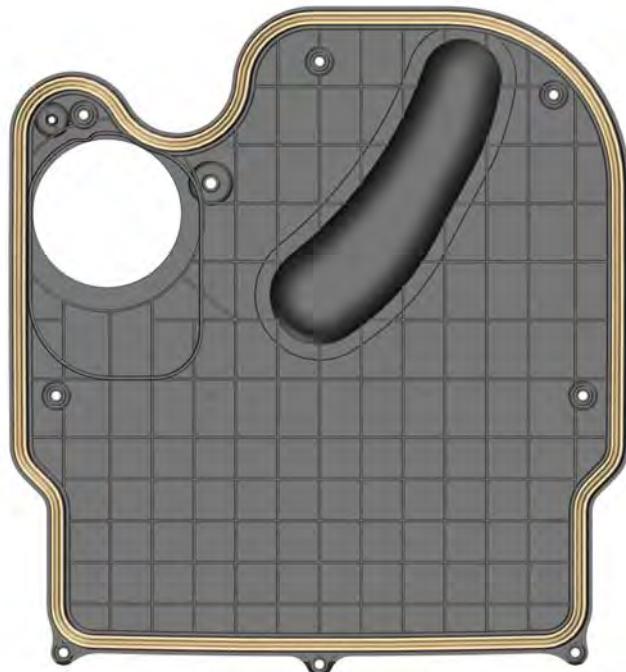
→ Ensure that the water pump is correctly seated in the vibration dampers during installation.

ADDF Uninstalling/installing cover/ seal of the fresh water tank



- Remove the dirt water reservoir.
- Uninstall/install the upper steering column AOLO
- Uninstall/install appliance electronics AHGE
- Completely uninstall/ install the cleaning head AJBW
- Uninstall/ install suction turbine AFSE
- ➔ Unscrew the screws.
- ➔ Remove cover of the fresh water tank.

- ➔ Insert new seal in the cover.
- ➔ Ensure that the seal is not squeezed during installation.



050 Maintenance and inspection

Service group does not contain any maintenance and inspection points.

060 Error diagnosis

Findings	Possible cause	Correction
No water discharge at the brush roller although the water pump is running	Fresh water hose is clogged	Clean/ replace fresh water hose.
	Fresh water hose pulled off inside the appliance	Attach fresh water hose.
	Filter of the fresh water tank is clogged	Clean/ replace filter.
	Water distribution bar is clogged.	Clean the water distributor bar.

070 Peculiarities/ others

The service group does not contain any peculiarities.

110 Replacement times

Basic work	Description	Work value
ADRF	Clean/replace the water filter	
ADWP	Uninstall/install water pump	
ADDF	Uninstall/install cover/ seal of the fresh water tank	

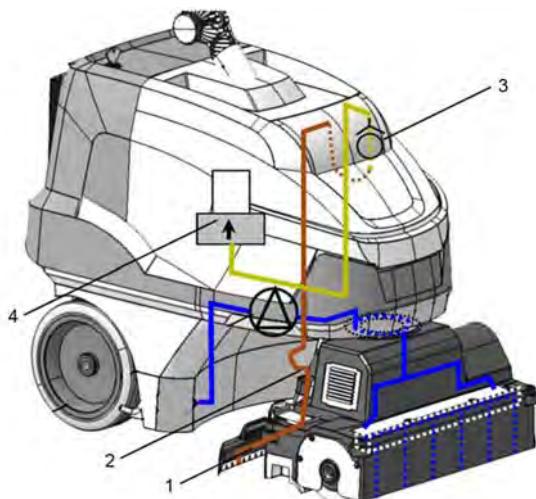
AF service group suction system

010 Safety information

For this service group there is no special safety information.

Observe general safety information!

020 Overview



- 1 Vacuum bar
- 2 Suction channel
- 3 Float air duct
- 4 Suction turbine

M2

030 Function

Wastewater is sucked through the intake port into the wastewater tank via the vacuum bar.

The suction turbine generates the necessary vacuum in the wastewater tank.

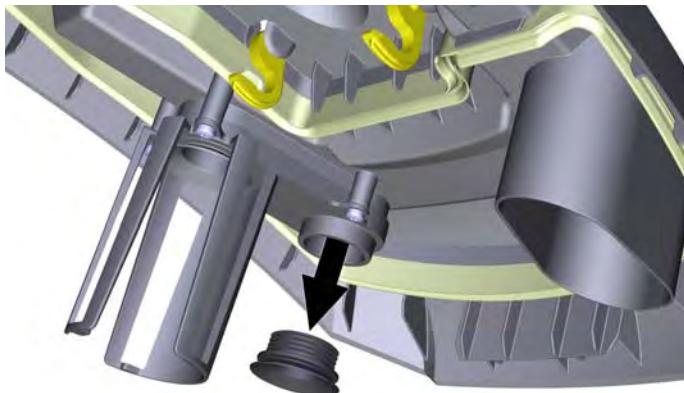
In order to protect the suction turbine from damage caused by water ingress, the float closes the air duct when the wastewater tank is full.

040 Service activities

AFDS Uninstalling/ installing seal/ casing of the intake port



- Remove the float from the rising pipe.
- Remove the seal from the intake port.
- Examine seal, clean in case of soiling, replace in case of damage.
- Insert float, check the sealing effect.



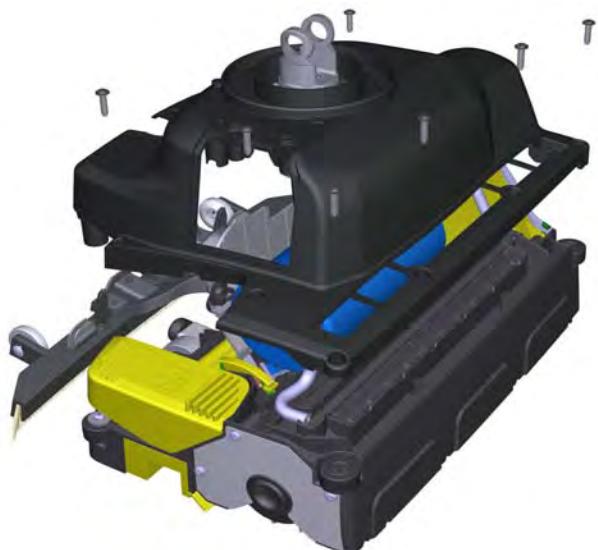
- Remove the rear seal from the intake port.
- Examine seal, clean in case of soiling, replace in case of damage.



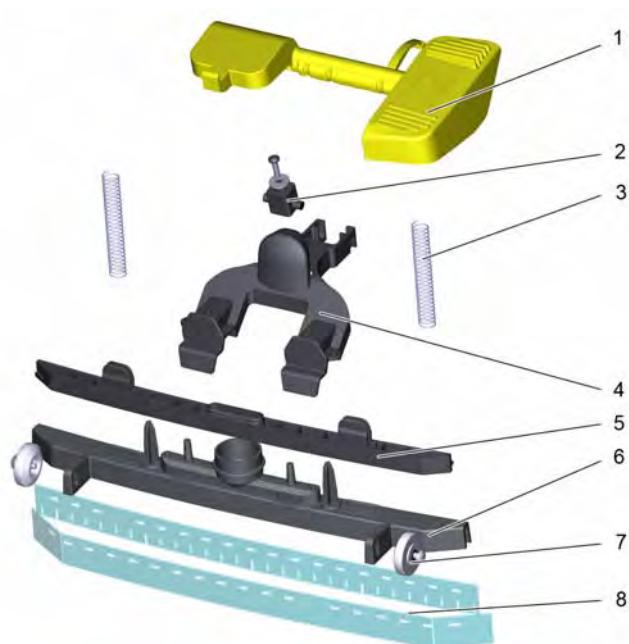
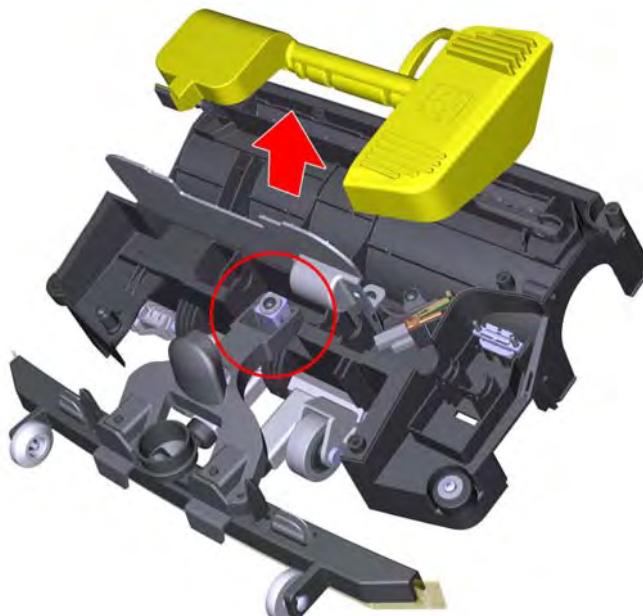
- Remove the float from the rising pipe.
- Remove the seal from the intake port.
- Remove the rear seal from the intake port.
- Unscrew the screws.
- Remove the intake port casing.

AFAS Uninstalling/installing suspension of the vacuum bar

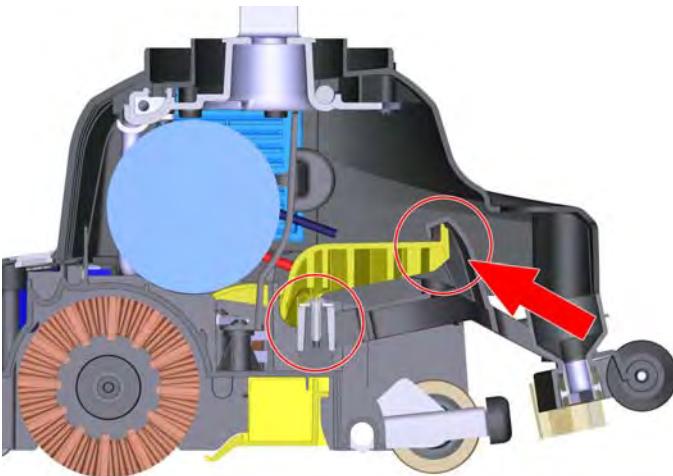
■ *Uninstall/ install the upper part of the cleaning head AJBO*



- Push the pedal out of the holder towards the top.
- Unscrew the screw on the joint.
- Remove the vacuum bar and the vacuum bar lifting device from the cleaning head.



- 1 Pedal
- 2 Joint
- 3 Spring
- 4 Vacuum bar lifting device/ vacuum bar holder
- 5 Holder vacuum lips
- 6 Vacuum bar
- 7 Support roller
- 8 Vacuum lip

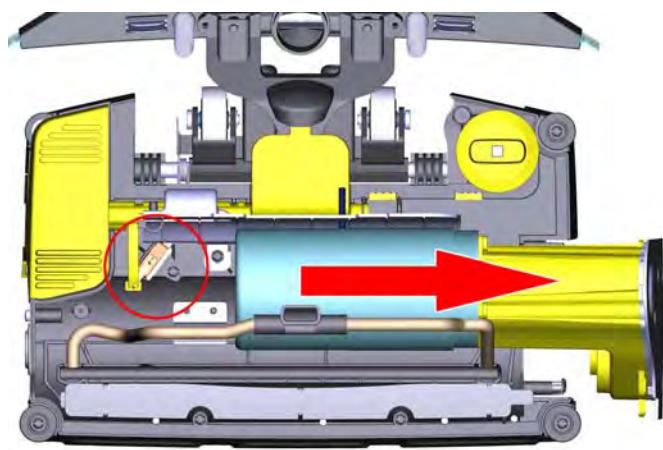


→ Replace defective components.

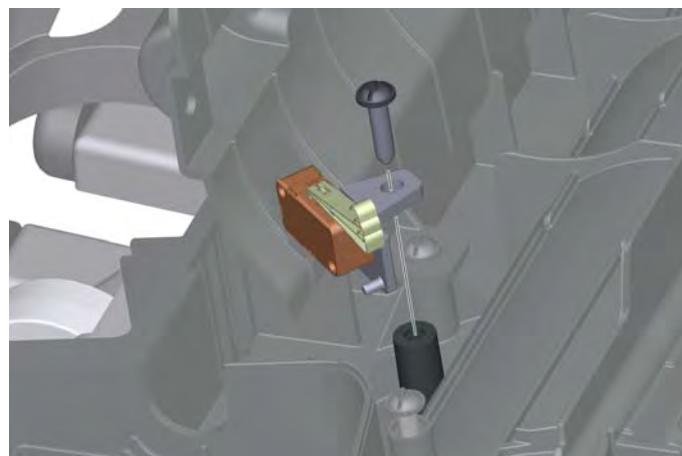
Note

Upon installing the vacuum bar lifting device, ensure that the pedal engages in the vacuum bar holder. Pay attention to the proper position and ease of movement of the bearing block upon installing the joint.

AFMS Uninstalling/installing microswitch suction turbine

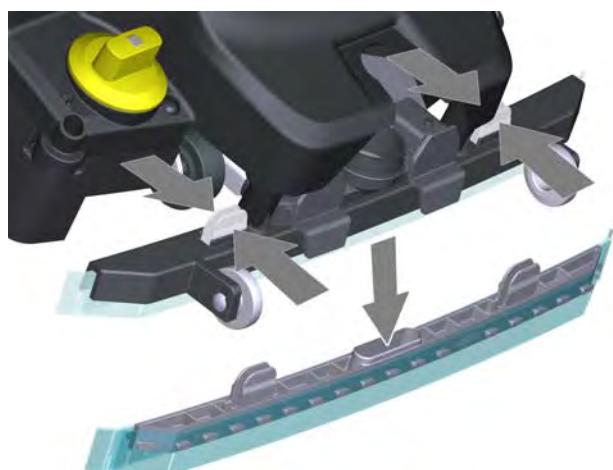


- Completely uninstall/ install the cleaning head AJBW
- Uninstall/ install the upper part of the cleaning head AJBO
- Slightly pull the motor and the transmission out of the appliance so that the microswitch becomes accessible.
- Uninstall pedal.



- Unscrew the screw on the holder of the microswitch.
- Remove the microswitch with the holder from the cleaning head.
- Remove the holder from the side of the microswitch.
- Separate the electric connectors.

AFSB Uninstalling/ installing vacuum bar / vacuum lip



- Compress the clamps on the vacuum bar.
- Remove the vacuum lip holder from the vacuum bar towards the bottom.
- Remove the vacuum lips from the holder and replace them.

AFRR Uninstalling/installing support roller of the vacuum bar



- Swivel the running gear downwards.
- Remove the safety ring on the screw by means of a screwdriver.
- Remove the bolts to the side.
- Remove the wheel towards the back.

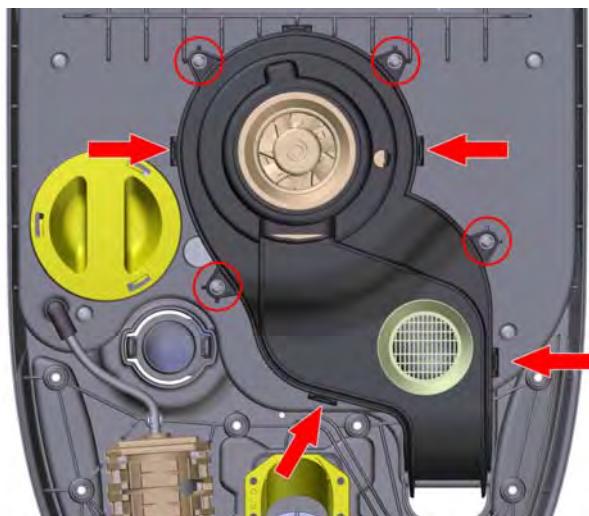
AFSE Uninstall/ install suction turbine



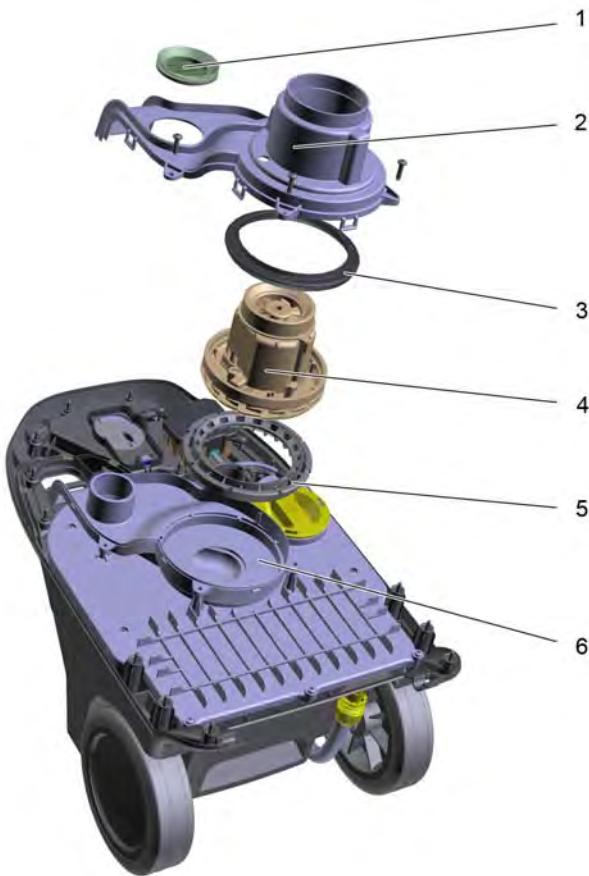
- Remove the dirt water reservoir.
- Uninstall lint trap of the wastewater tank.
- Remove the seal of the intake port.
- Uninstall water pump.
- Uninstall charger base.
- Uninstall Li-ion battery.
- Uninstall wheel axle.
- Uninstall suction hose.
- Uninstall bearing shells of the steering column.
- ➔ Tilt steering column forwards and secure it.
- ➔ Unscrew the screws of the upper part of the casing.
- ➔ Slightly lift the upper part of the casing so that the suction turbine becomes accessible.
- ➔ Support upper part of the casing.

Note

Ensure that the appliance electronics and the cable connections are not damaged upon removing the suction turbine.



- ➔ Unscrew the screws.
- ➔ Open the clamps on the upper part of the intake port casing.
- ➔ Remove upper part of the intake port casing.



- 1 Fluff filter
 - 2 Upper part of the intake port casing.
 - 3 Upper sealing ring
 - 4 Suction turbine
 - 5 Lower sealing ring
 - 6 Bottom part of the intake port casing.
- Remove the upper sealing ring from the suction turbine.
- Remove the suction turbine from the casing.
- Remove the lower sealing ring from the intake port casing.

Note

Check sealing rings for damage and replace as necessary.

- Replace defective suction turbine.

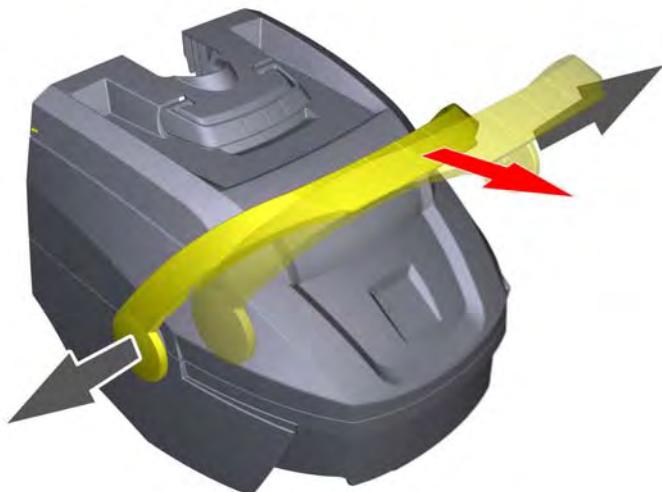
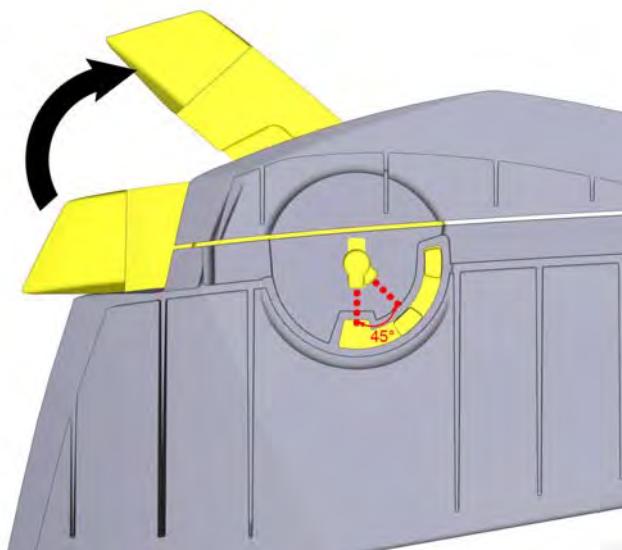
AFSE Uninstalling/ installing suction hose



- Squeeze the locking hook on the suction hose coupling sleeve to unlock it.
- Pull the suction hose out of the appliance.
- Pull suction hose off the cleaning head.
- Check the suction hose and the connection bushing for leaks, replace if necessary.

AFBS Uninstalling/installing bracket of the wastewater tank

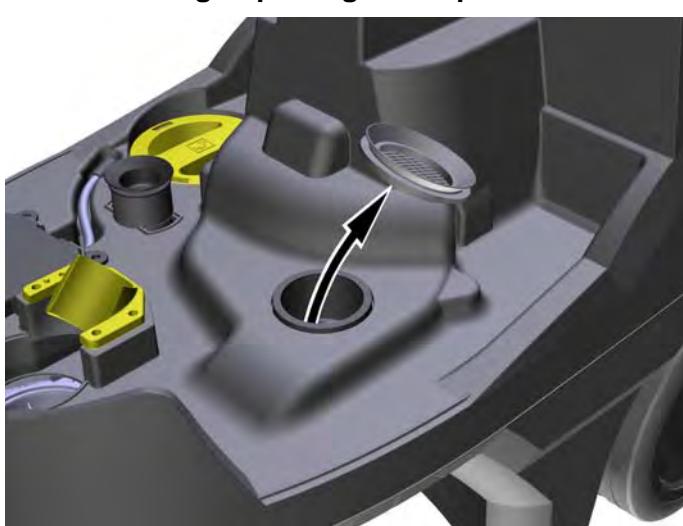
→ Swivel up the bracket by 45 degree.



- Pull the bracket out of the holders on the left and right side.
- Pull out the bracket towards the front.

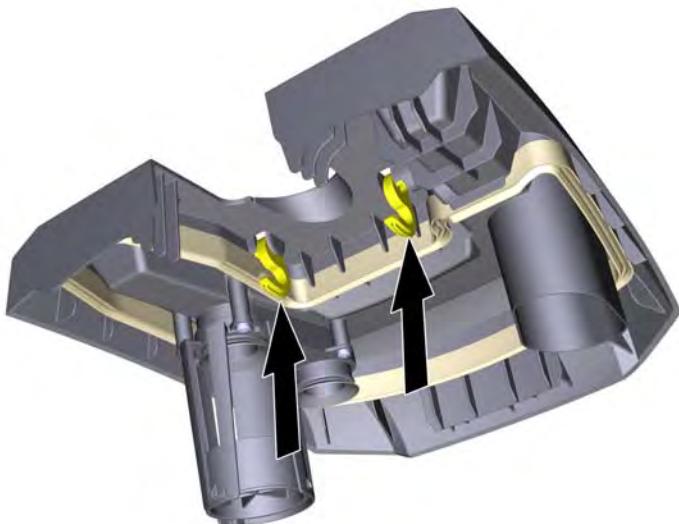
AFFL Cleaning/ replacing lint trap of the wastewater tank

- Remove the dirt water reservoir.
- Remove lint trap.
- Clean lint trap, replace if damaged.
- Ensure proper seating of the lint trap during installation.



AFGD Uninstalling/ installing handle/ locking mechanism of the wastewater tank

- Remove the cover of the wastewater tank.
- Push the handle out of the retainers from below.



- Remove the handle from the lid towards the top.

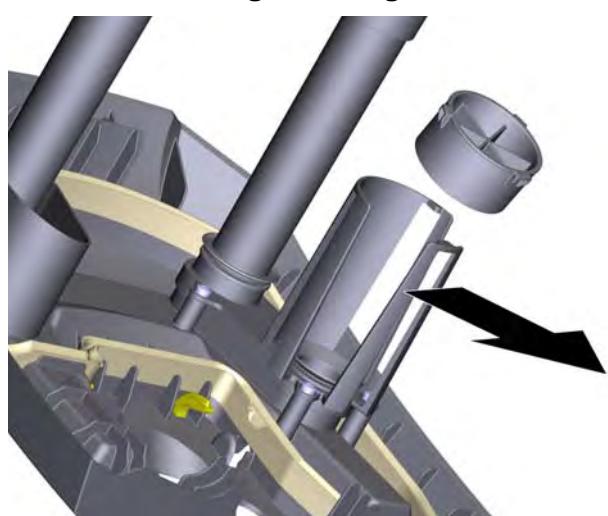


AFSC Uninstalling/installing float of the wastewater tank

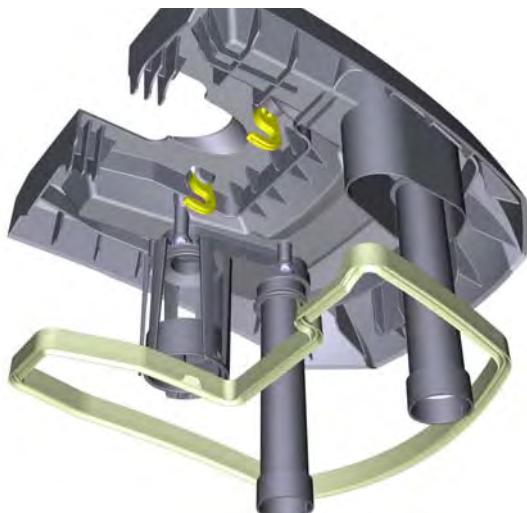
- Remove the cover of the wastewater tank.
- Push solitary guide forwards.
- Remove the float from the rising pipe.

Note

Check the guide for soiling / damage if the float is sluggish. Do not use lubricants!



AFSD Replacing the seal of the lid of the wastewater tank



- Remove the cover of the wastewater tank.
- Remove the seal.



- Insert new seal, press down firmly.

AFVA Uninstalling/ installing closure of the drain of the wastewater tank



- Remove the cover from the waste water reservoir.
- Pull the retaining strap out of the mounting.
- Replace closure.

050 Maintenance and inspection

- Clean the vacuum lips, check for wear and replace the vacuum bar if required.
- Check and clean seals, replace damaged seals.
- Check the suction hose for damages.
- Check suction hose for clogging.
- Check suction hose to see it is leak-proof.

060 Error diagnosis

Findings	Possible cause	Correction
No shutdown despite closed float	Seal of the intake port is damaged	Replace washers
	Intake port casing is damaged	Replace casing
Vacuum bar oscillating in the vacuuming operation	Vacuum bar installed incorrectly.	Properly install the vacuum bar.
	Vacuum bar suspension damaged	Replace vacuum bar suspension.
No suction effect of the vacuum bar, water remains on the cleaned surface.	Vacuum lips soiled/ worn.	Clean the vacuum lips, check for wear and replace if necessary.
Vacuum bar has a time lag on one side, has too much contact.	Support roller defective / worn.	Replace support roller.
No suction effect.	Suction turbine does not run	Check/replace the suction turbine.
	Suction hose kinked	Check suction hose, lay correctly.
	Suction hose / connection defective	Replace suction hose.
	Closure of the drain of the wastewater tank damaged.	Replace closure.
	Seal of the lid of the wastewater tank damaged.	Replace seal.
Bracket broken	Mechanical impact	Replace bracket
Bracket does not snap in place	Holder, snap-in noses or bracket damaged	Replace bracket. Replace wastewater tank.
Insufficient vacuum performance	Lint trap soiled	Clean the fluff filter.
Large foreign objects in the wastewater tank	Lint trap damaged	Replace the lint trap.
Handle broken	Mechanical impact	Replace handle
Lid does not snap in place	Locking hook damaged	Replace handle
Wastewater in the appliance	Closure of the drain of the wastewater tank damaged.	Replace closure.
Suction turbine does not start up	Suction turbine defective.	Replace the suction turbine.
	Microswitch of suction turbine defective	Replace the micro switch.

070 Peculiarities/ others

The service group does not contain any peculiarities.

110 Replacement times

Basic work	Description	Work value
AFDS	Uninstall/ install seal/ casing of the intake port	
AFAS	Uninstall/install suspension of the vacuum bar	
AFSB	Uninstall/ install vacuum bar / vacuum lip	
AFRR	Uninstall/install support roller of the vacuum bar	
AFSD	Uninstall/ install suction turbine	
AFSS	Uninstall/ install suction hose	
AFBS	Uninstall/install bracket of the wastewater tank	
AFFL	Clean/ replace lint trap of the wastewater tank	
AFGD	Uninstall/ install handle/ locking mechanism of the wastewater tank	
AFSC	Uninstall/install float of the wastewater tank	
AFSE	Replace seal of the lid of the wastewater tank	
AFVA	Uninstall/ install closure of the drain of the wastewater tank	

AG service group energy supply

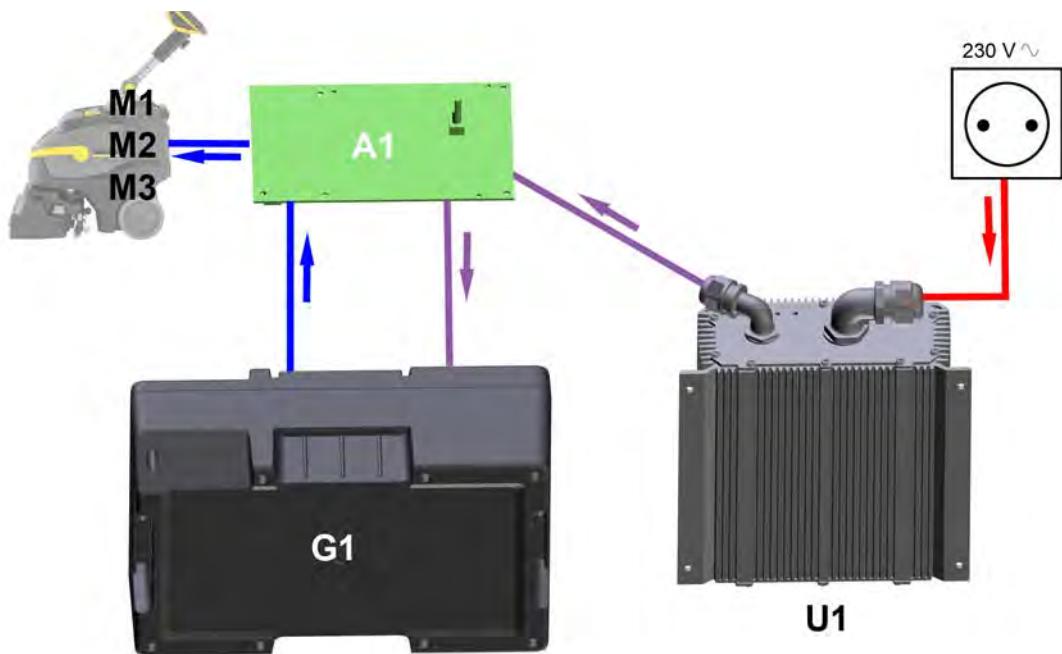
010 Safety information

⚠ Warning

The appliance contains a built in Li-ion battery. The handling of this battery is subject to special criteria. A defective battery can only be replaced as a whole. The replacement or repair of individual cells is not possible.

Observe the safety information "Li-ion battery" in the general part of this service manual as well as the respective country-specific regulations concerning handling, transport and disposal!

020 Overview



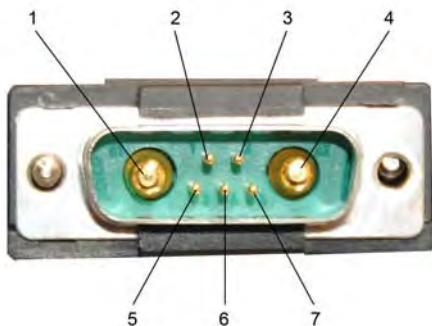
030 Function

The charger is connected to the appliance electronics.

The charge management is controlled by the charger.

The Li-ion battery is equipped with its own internal electronics, which monitors the charging process and internal safety functions (temperature monitoring, cell parameters).

The internal electronics of the Li-ion battery communicates with the charger via a system cable.



- 1 Negative terminal (-)
- 2 Communication (K)
- 3 Battery wake-up signal (W)
- 4 Positive terminal (+)
- 5 Emergency shutdown (ER)
- 6 Earth (GND)
- 7 Temperature monitoring (NC)

The appliance functions are supplied with battery power via the appliance electronics.

Charging process

When the mains voltage is applied, the charger activates the immobiliser. The immobiliser prevents appliance functions during the charging phase.

The charger sends voltage impulses to wake up the Li-ion battery.

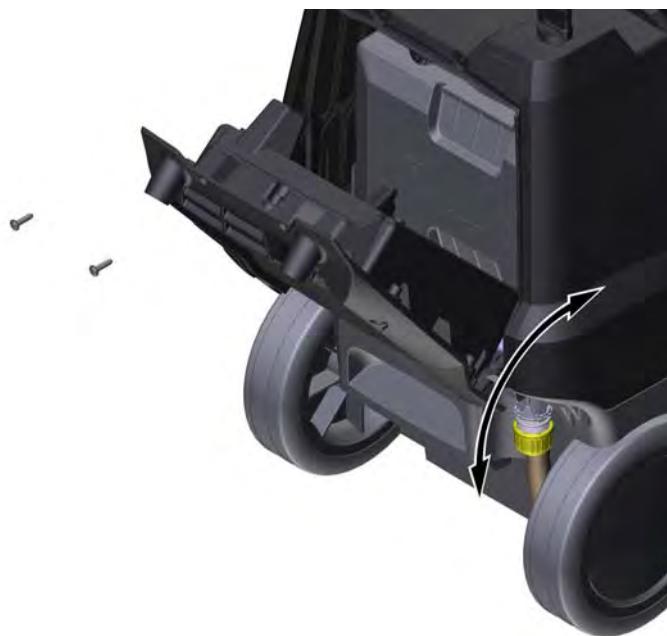
As soon as the charger detects a battery voltage, the charging process starts with a defined charging curve.

If safety-critical conditions occur during the charging process, the charging process of the Li-ion battery is interrupted

The appliance electronics is not involved in the charging process.

040 Service activities

AGLI Uninstalling/ installing Li-ion battery



Note

Check the cable connections prior to replacing components!

- Unscrew two screws on the charger base.
- Tilt the charger base backwards.
- Loosen the screw connection of the connector plug of the Li-ion battery.
- Remove connector plug of the Li-ion battery.
- Remove the Li-ion battery from the appliance.
- Replace Li-ion battery.
- Dispose of worn / defective Li-ion battery in accordance with the applicable regulations.

AGLG Uninstall/ install charger



- Uninstall charger base.
- Disconnect electrical connection.



- Unscrew the screws.
- Separate the casing halves.
- Push the cable through the cable bushing.
- Remove the charger from the casing.

050 Maintenance and inspection

Service group does not contain any maintenance and inspection points.

060 Error diagnosis

Findings	Possible cause	Correction
Short operating time of the appliance.	Li-ion battery worn	Replace battery.
No function	Li-ion battery defective	Replace battery.
Battery is not being charged	Li-ion battery/ charger defective	Check, replace battery/ charger.
Fault indicator lamp is on	Fault charger Li-ion battery defective	Check / replace the charger. Replace battery.
Accumulator is not being charged	Charger is defective.	Check / replace the charger.

070 Peculiarities/ others

Defective or damaged Li-ion batteries are subject to special transport regulations:

Li-ion batteries are hazardous material, UN3480. They are therefore generally subject to transport regulations, depending on the transport carrier. The transport of damaged Li-ion batteries must be organised and accounted for in accordance with the local regulations by the local Kärcher agencies.

Regulations as per ADR (661)

The transport of defective Li-ion batteries is only permitted in accordance with the additional requirements established by the competent authority.

Without this regulatory permit the transport of damaged Li-ion batteries on the road is not permitted. Marine or air transport of damaged Li-ion batteries is basically not admissible as per today's standards. Only packaging approved for these goods by the competent authority must be used.

Each shipment must contain a copy of the permit issued by the competent authority or the transport document must contain a reference to the permit of the competent authority.

The competent authority of the contracting party of the ADR that issued a permit in accordance with this special provision must inform the office of the UN-ECE for the purpose of announcing this information via its website. Recommendations of the United Nations for technical requirements on the transport of damaged Li-ion batteries must be considered upon the granting of a permit.

Among damaged Li-ion batteries are especially batteries in which the manufacturer has detected defects that impair the safety, Li-ion batteries with damaged or severely distorted casings, leaking cells or batteries with gas leaks or Li-ion batteries with defects that can not be diagnosed prior to the transport to the place where the analysis takes place.

Service life of Li-ion batteries

Li-ion batteries have an expected service life that is equivalent to the service life of the appliances. If the use of the Li-ion battery is terminated, it must be disposed of as hazardous material in accordance with the applicable local provisions by an expert company.

A precondition for any transport of the Li-ion battery is the absence of damage as per ADR, special provision 661. The classification of the Li-ion battery is done on site by the Kärcher service. In order to determine if a Li-ion battery is free of damage and can still be transported as hazardous material, we recommend the following procedure:

This procedure refers to the Li-ion batteries of the appliance BR/BD 35/12 and regulates the transport of Li-ion batteries that are free of damage.

The responsibility for the transport is assumed by the person that declares the battery as free of defects in accordance with ADR, SV661 and makes the decision for the transport. If an expert is to be called in for the decision via the Service-International, his/her requirements are to be supported and implemented as effectively as possible by the local service. A return transport of Li-ion batteries that are free of damage to the Kärcher headquarters always requires the approval of the Service-International.

Li-ion batteries that have been classified as defective by the local service or an expert must no longer be transported by means of transportation and must be disposed of professionally and in accordance with the regulations by an adequate company.

The tested container for the storage of the Li-ion battery for a dormant phase of 48 hours can be purchased under the part number 6.652-000.0 We suggest that the Kärcher service carries the container as soon as they are called to an assignment with a potentially damaged Li-ion battery.

Likewise the UN tested original packaging of the Li-ion battery can be ordered under the part number 6.652-001.0. The accompanying documents for the transport of hazardous materials of Li-ion batteries free of damage can be requested via the Service-International.

110 Replacement times

Basic work	Description	Work value
AGLI	Uninstall/ install Li-ion battery	
AGLG	Uninstall/ install charger	

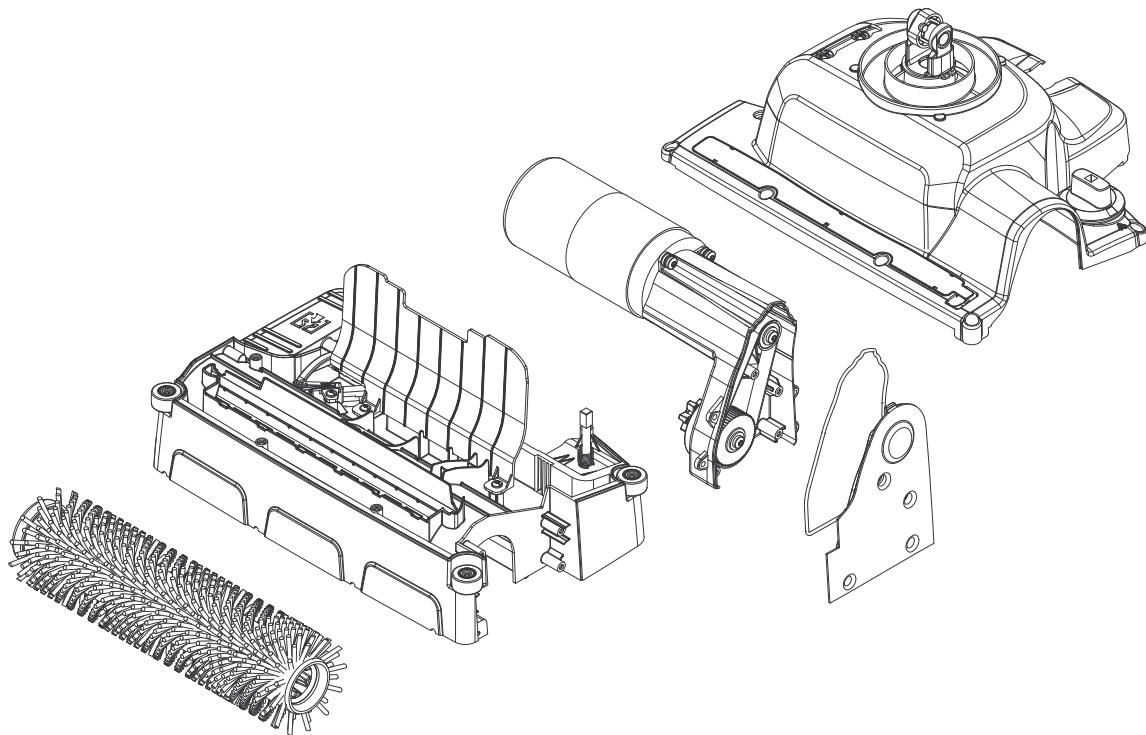
AJ service group cleaning head R

010 Safety information

For this service group there is no special safety information.

Observe general safety information!

020 Overview



030 Function

The brush motor drives the brush roller via a belt drive.

The cleaning head is connected to the appliance via a central joint.

The supply cables are routed through the central joint.

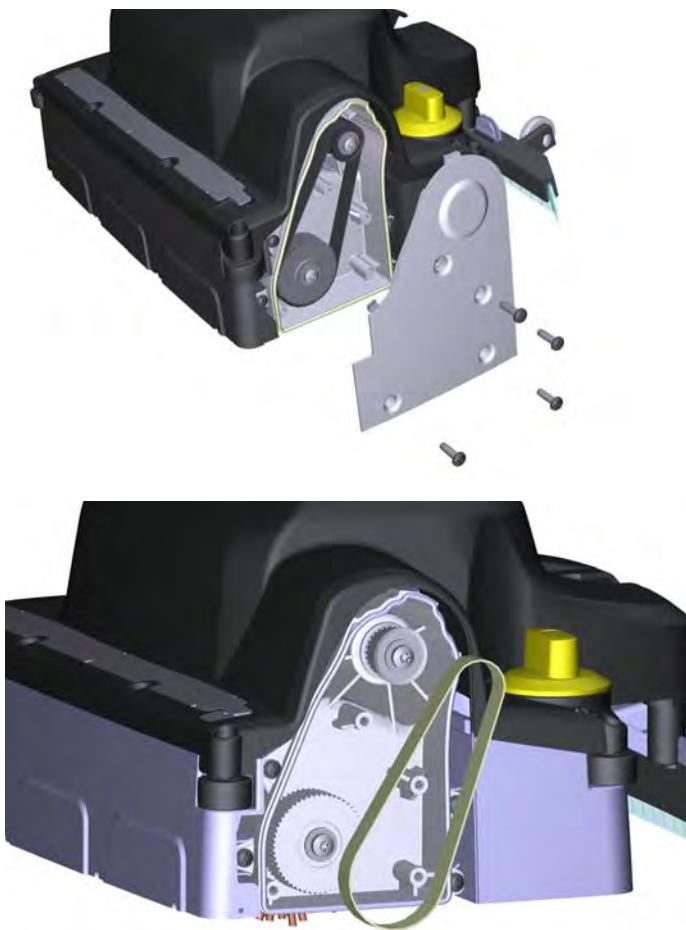
The central joint transfers the steering movement to the cleaning head.

With this appliance the suction bar is attached to the cleaning head.

The height of the cleaning head can be adjusted via the running gear.

040 Service activities

AJZE Uninstalling/installing drive belt



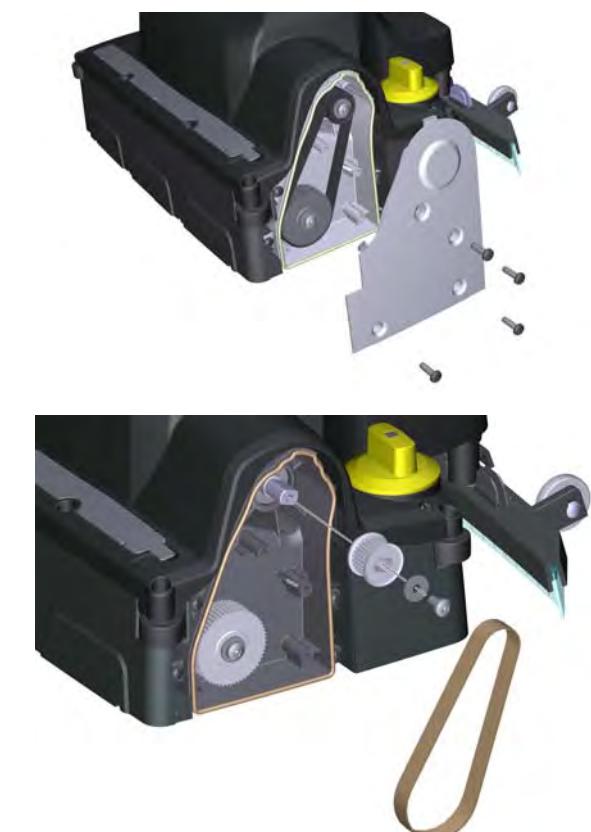
- Unscrew the screws.
- Remove transmission cover.

- Remove the drive belt.

Should you not be able to remove/ install the drive belt by hand, pull the pulley of the drive off the shaft using a puller tool. By occasional rotary movements during removal the toothed belt also leaves the pulley.

- Insert a new drive belt.

AJAR Uninstalling/ installing pulleys of the drive motor



- Unscrew the screws.
- Remove transmission cover.

■ *Uninstalling/installing drive belt AJZE*

- Unscrew the screw of the drive shaft.
- Remove the drive pinion from the shaft using a puller tool.

Note

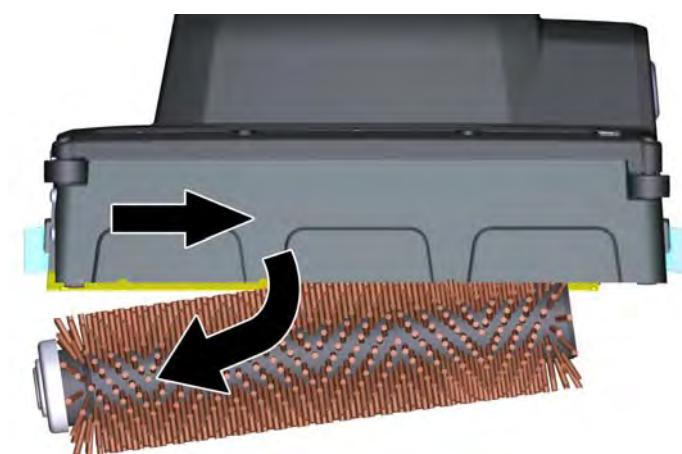
It is possible that the drive pinion cannot be removed without being damaged. Replace damaged drive pinion.

AJNE Uninstalling/ installing pulley of the drive



- *Uninstalling/installing drive belt AJZE*
 - Unscrew the screw of the carrier spindle.
 - Remove the pulley from the carrier spindle.

AJBB Uninstalling/ installing brush roller



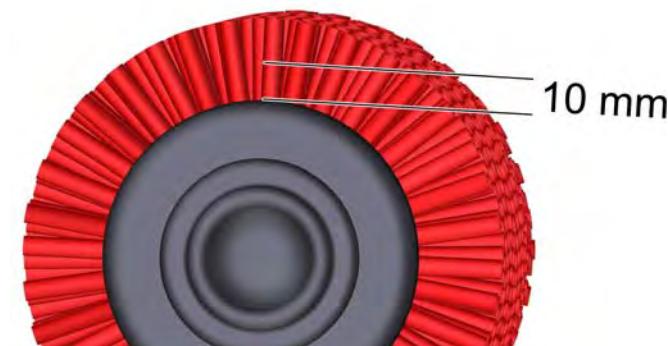
- Push the brush roller towards the catch.
 - Swivel the brush roller out of the cleaning head and remove.

Note

Imbalance or noise can be caused by foreign objects in the brush roller.

Check brush roller for foreign bodies

- Check brush roller for wear, minimum length of the bristles 10 mm.

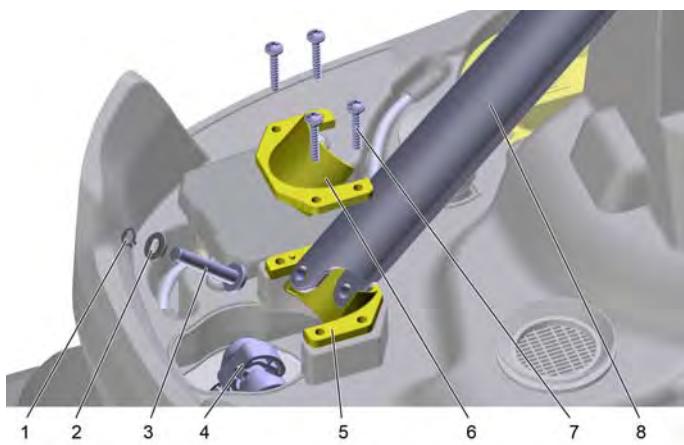


AJBW uninstall/ install the cleaning head completely



- Remove the dirt water reservoir.

The cleaning head is connected to the steering column via a cardan joint.



1 Safety ring

2 Disc

3 Pivot pin

4 Bearing cleaning head

5 Bearing shell bottom steering column

6 Bearing shell upper steering column

7 Screws

8 Steering column

→ Unscrew the screws.

→ Remove the upper bearing shells.

Note

Uninstall both steering column bearings (top and bottom).

→ Remove the safety ring from the bolt.

→ Bring the steering column in an upright position and pull out the bolt.

→ Remove the steering column from the bearing.

→ Unscrew the screws.

→ Remove the motor cover towards the top.

→ Disconnect electrical connection between cleaning head and appliance.





- Remove blade receptacles from the cable ends.
- Attach pull wire to the cable end
- Pull suction hose off the connection piece.



- Push the bearing sleeves of the cardan joint together
- Remove the cardan joint from the suspension.



- Pull the sealing plate with the cable loom out of the cleaning head bearing.



- Remove the ball from the bearing guide.
- Uninstall the retaining ring of the bearing.
- Remove the cleaning head from the appliance towards the bottom, pay attention to cables.



Overview suspension

- 1 Bearing sleeve outside
- 2 Bearing pin
- 3 Safety ring
- 4 Bearing sleeve inside
- 5 Bearing ball (path delimiter)
- 6 Base plate

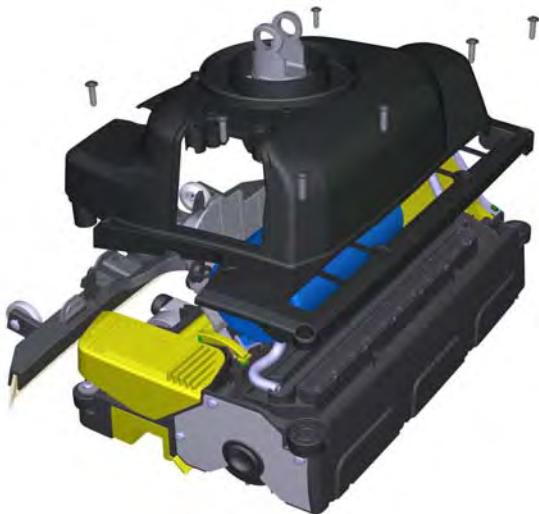
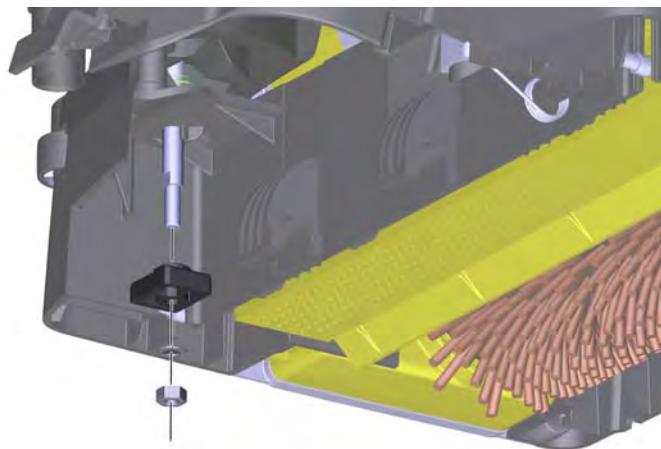


Observe during installation:

- Lay the cable loom around the cardan joint in a loop for strain relief.
Loop length: 250mm

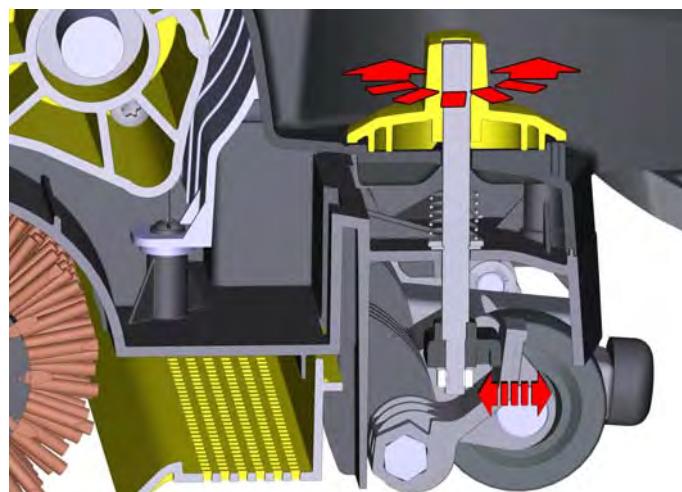
AJBO Uninstall/ install the upper part of cleaning head

- Completely uninstall/ install the cleaning head AJBW
- Push the running gear of the cleaning head out of the retainer.
- Uninstall/ install vacuum bar AFSB
- ➔ Uninstall the sliding part of the height adjustment



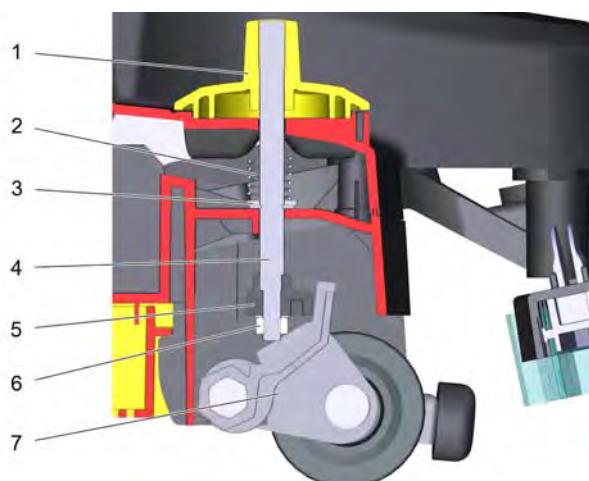
- ➔ Uninstall the cover of the motor.
- ➔ Remove cover of the water distribution bar.
- ➔ Unscrew the screws.
- ➔ Remove cleaning head casing.

AJHR Uninstalling/ installing height adjustment of the cleaning head



Function of the height adjustment

The brush contact pressure is controlled via the height adjustment of the running gear.
The sliding part pushes the lever of the running gear outwards when the rotary handle is turned.
The rotary handle locks in 4 positions.



- 1 Turning handle
- 2 Spring
- 3 Disc
- 4 Square shaft
- 5 Sliding part
- 6 Locknut
- 7 Chassis

■ *Uninstall/ install the upper part of the cleaning head AJBO*



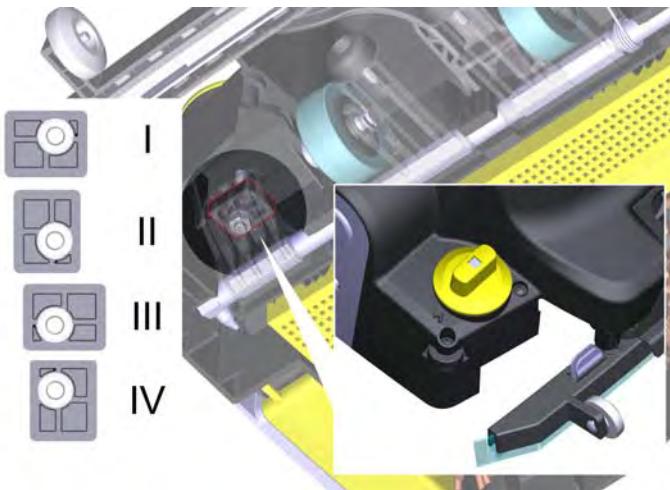
→ Unscrew the locknut.

→ Remove the sliding part from the square shaft.

→ Pull the square shaft out of the upper part towards the top.

→ Remove the rotary handle from the square shaft.





Note

Upon installation of the height adjustment ensure that the sliding part and the rotary handle coincide.

AJBT Uninstalling/ installing stopper support of cleaning head

- Remove the dirt water reservoir.
- ➔ Tilt the appliance rearward.
- ➔ Unfold the cleaning head support.
- ➔ Unscrew the screws on the stoppers.
- ➔ Replace stoppers.

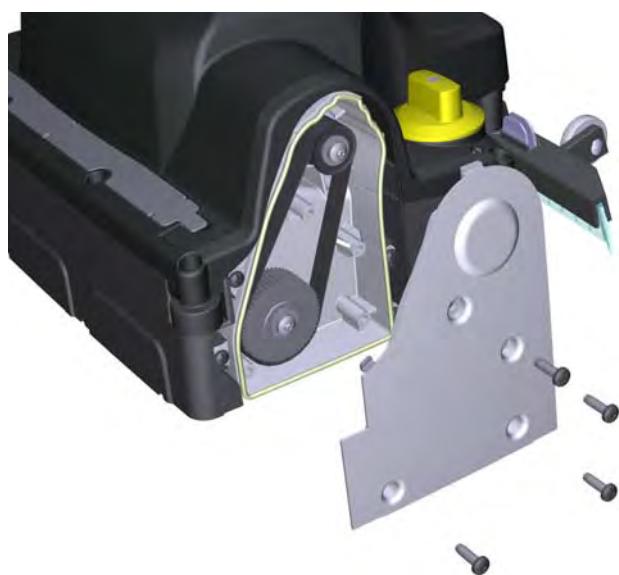
Note

Always replace both stoppers.

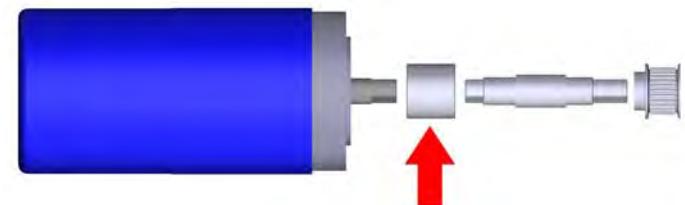
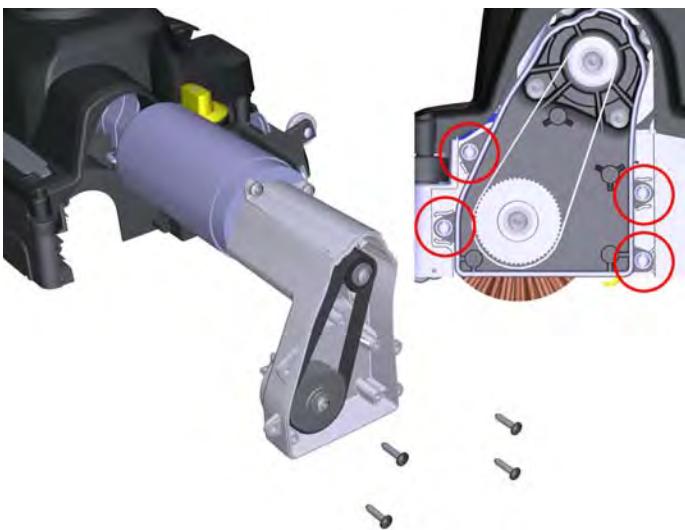
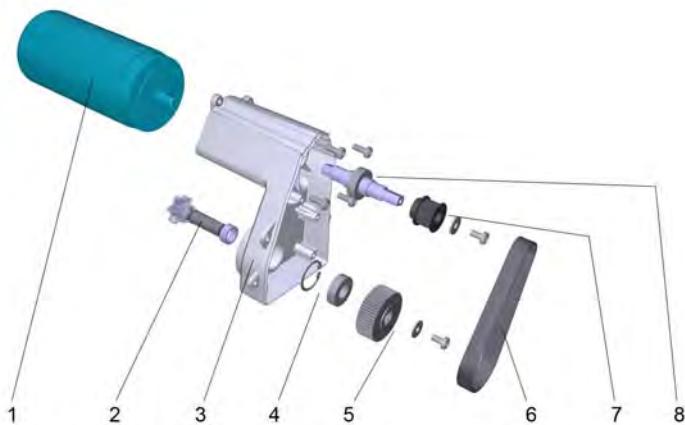


AJDA Uninstalling/installing seal of the drive belt cover

- ➔ Unscrew the screws.
- ➔ Remove transmission cover.
- ➔ Pull the seal out of the transmission casing.
- ➔ Check seal for damage and replace as necessary.



AJME Uninstalling/ installing brush motor



1 Brush motor (M1)

2 Towing arm

3 Gear housing

4 Bearings

5 Pulley

6 Drive belt

7 Drive pinion

8 Drive shaft

→ Uninstall transmission cover.

→ Uninstall motor cover.

→ Disconnect the plug connection to the brush motor.

→ Unscrew the screws of the transmission mounting.

→ Pull the brush motor and the transmission out of the cleaning head.

→ Unscrew the screws of the brush motor.

→ Remove the brush motor from the drive shaft.

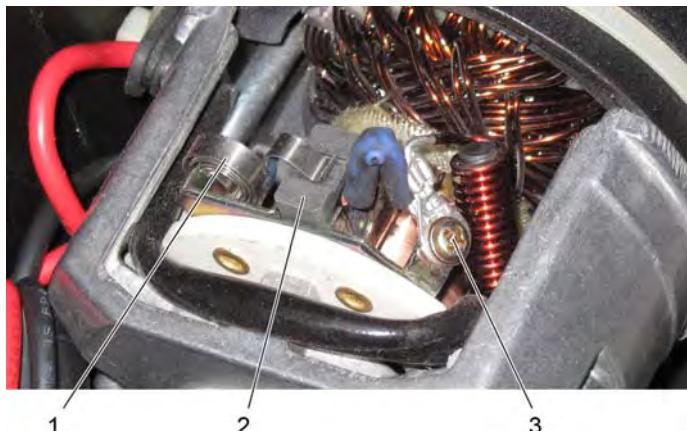
Note

The brush motor and the drive shaft are connected via a clutch. Ensure proper position of the clutch upon installation.

AJKE Uninstalling/ installing sliding contacts of brush motor



- *Uninstall/ install brush motor AJME*
- Unscrew the screws of the protective cap.
- Remove the protective cap.



- 1 Press spring
- 2 Glide contact (carbon brush)
- 3 Terminal sliding contact



- Lift the contact springs off the sliding contact.
- Pull the sliding contact out of the duct.
- Carefully set the contact spring down on the insertion slot.
- Disconnect electrical connection on the terminal.

Note

Always replace both glide contacts at once.

050 Maintenance and inspection

- Check the drive belt for tension and damage
- Check the seal of the cover of the drive belt.
- Check sliding contacts (carbon brushes) of the brush motor.
- Check the brush roller for wear, replace if required.

060 Error diagnosis

Findings	Possible cause	Correction
Brush roller does not rotate Noise in the cleaning head	Drive pinion loose/ damaged. Drive belt damaged.	Replace the drive pinion Replace drive belt.
Cleaning effect inadequate	Brush roller is soiled or worn.	Check/replace the brush rollers.
The brush roller touches the ground in the parking position.	Stoppers of the cleaning head support are worn/ missing	Replace/ attach stoppers.
Damaged drive belt, drive pinion, pulley.	Moisture or dirt in the transmission casing	Replace seal of the cover.

070 Peculiarities/ others

The service group does not contain any peculiarities.

110 Replacement times

Basic work	Description	Work value
AJZE	Uninstall/install drive belt	
AJAR	Uninstall/ install drive pinion	
AJNE	Uninstall/ install pulley of the drive	
AJBB	Uninstall/ install brush roller	
AJBW	Completely uninstall/ install the cleaning head	
AJBO	Uninstall/ install the upper part of the cleaning head	
AJBT	Uninstall/ install stopper support of cleaning head	
AJDA	Uninstall/install seal of the drive belt cover	
AJME	Uninstall/ install brush motor	

AH service group electrics

010 Safety information

⚠ Danger

First pull out the plug from the mains before carrying out any tasks on the machine.

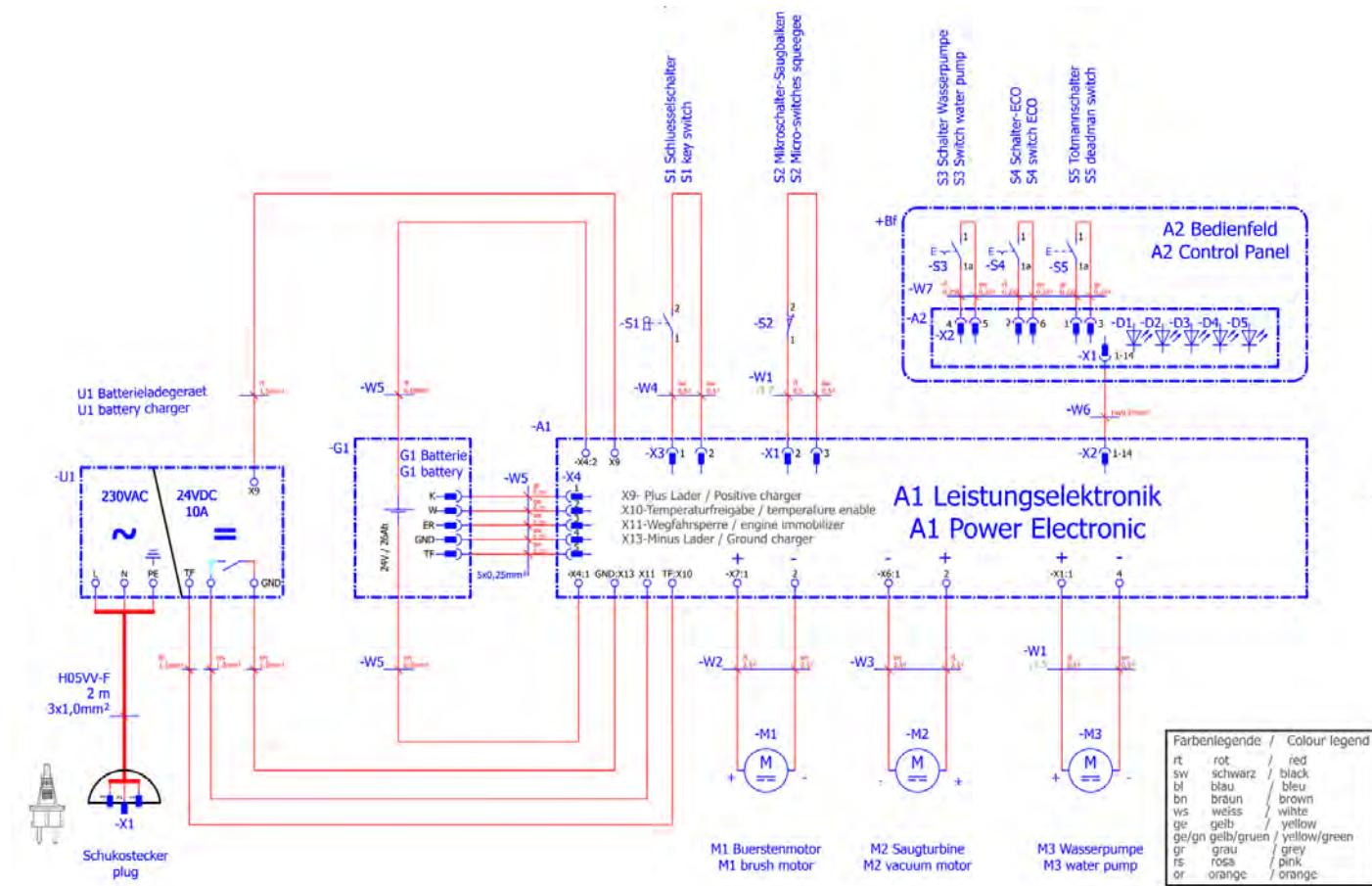
⚠ Danger

Mortal danger due to exploding Li-ion battery! Always uninstall the Li-ion battery and remove the connector plug prior to performing work on the appliance electronics. Observe the safety instructions for handling Li-ion batteries.

Caution

Risk of damage by electrostatic discharge (ESD)! Take suitable measures for discharging electrostatic charge prior to performing work on the appliance electronics.

020 Overview



The illustration serves as an overview over the electrical components of the BR 35/12 C only! Always access the latest circuit diagram in DISIS for work on the appliance.

030 Function

The appliance electronics controls all appliance functions.

Charger and Li-ion battery communicate via the appliance electronics.

The steering wheel control panel is connected to the appliance electronics.

The indicator lamps and switches are accommodated in the steering wheel control panel.

The key switch is also the main switch and bolted down in the upper part of the casing.

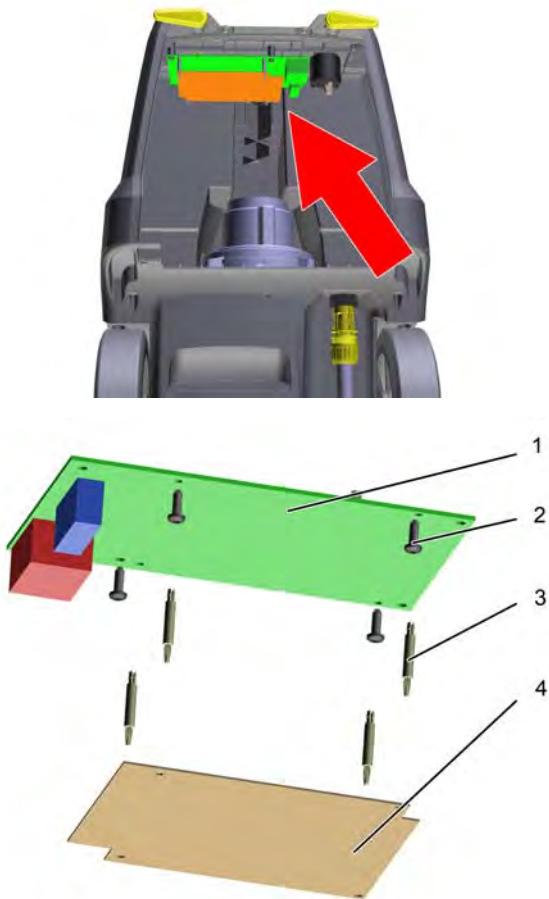
The safety switch is installed in the steering wheel and is operated via the safety lever

040 Service activities

Note

Error codes, troubleshooting and test methods are described in Chapter "Measuring methods and test specifications".

AHGE Uninstalling/installing appliance electronics



Note

Check the cable connections prior to replacing components!

The appliance electronics is inside the appliance on the bottom side of the appliance hood.

- *Uninstall/ install Li-ion battery AGLI*

1 Appliance electronics A1

2 Screws

3 Spacer

4 Protective cover

→ Remove the protective cover from the spacers.

→ Unscrew the screws.

→ Carefully remove the appliance electronics from the appliance.

Caution

Risk of damage by electrostatic discharge (ESD)!

Take suitable measures for discharging electrostatic charge prior to performing work on the appliance electronics.

→ Remove electrical connections from the board.

1 Charger control X10/
X11

2 Microswitch vacuum bar X3

3 Control panel steering wheel X2

4 Switch Eco function/ water pump X1

5 Charger positive terminal (+) X9

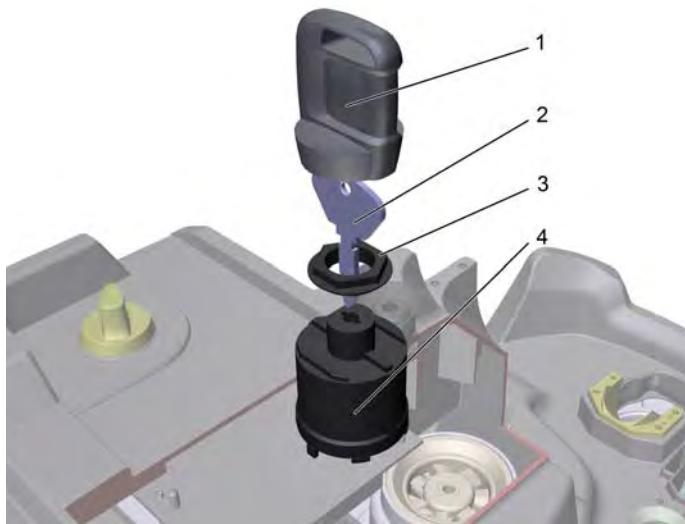
6 Li-ion battery (cable W5) X4

7 Charger negative terminal (-) X13

8 Brush motor X7

9 Suction turbine X6

AHSL Uninstalling/ installing key switch



- 1 Cover flap
- 2 Key
- 3 Locknut
- 4 Key switch

S1

→ Remove the key.

Note

A flexible cover is attached to the key in order to protect the key against damage. This cover can be removed and replaced.

Replace bent key (risk of breakage).

→ Unscrew the locknut.

→ Remove the key switch from the casing towards the bottom.

→ Pull the connector plug off the key switch.

Test the key switch:

→ Connect an ohmmeter to the two contacts of the key switch.

→ Operate the key switch and check for continuity.

AHES Uninstalling/ installing switch of the ECO function



■ Disassemble steering wheel halves.

→ Disconnect electrical connection.

→ Squeeze the retaining clips on the switch.

→ Pull the switch out of the steering wheel shell towards the front.

AHSW Uninstalling/installing switch of the water pump



■ Disassemble steering wheel halves.

→ Disconnect electrical connection.

→ Squeeze the retaining clips on the switch.

→ Pull the switch out of the steering wheel shell towards the front.

AHLP Uninstalling/ installing steering wheel control panel

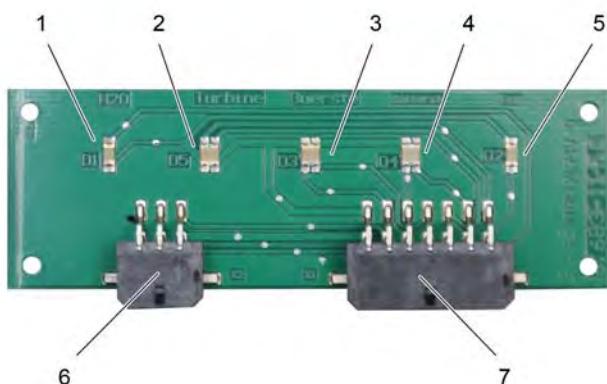


- Disassemble steering wheel halves.

Note

Check the cable connections prior to replacing components!

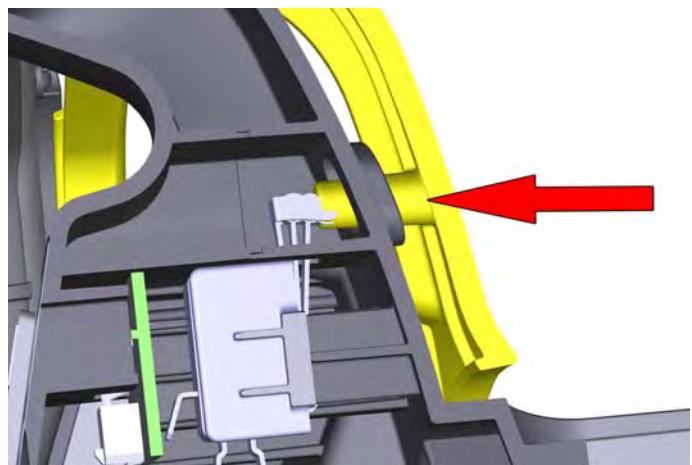
- Remove the connector plug from the electronics.
- Remove the control panel from the holder.



1	Indicator lamp water pump	D1
2	Indicator lamp suction turbine	D2
3	Indicator lamp brush roller	D3
4	Indicator lamp battery	D4
5	Indicator lamp Eco function	D5
6	Plug contact (Microfit port)	X2
7	Plug contact (Microfit port)	X1

AHSS Uninstalling/ installing safety switch

- Disassemble steering wheel halves.
- Unscrew the screw on the holder of the safety switch.
- Remove the safety switch and the holder from the steering wheel.
- Remove the holder from the safety switch.
- Remove the plug from the safety switch.
- Test the safety switch, replace as necessary.



⚠ Warning

Risk of injury due to faulty safety installation! Upon installation ensure that the actuating bolt correctly operates the safety switch and can be moved without resistance.

050 Maintenance and inspection

Service group does not contain any maintenance and inspection points.

060 Error diagnosis

Findings	Possible cause	Correction
All indicator lamps are on	Fault in the appliance electronics	Check/ replace appliance electronics.
No function	Appliance electronics defective	Check/ replace appliance electronics.
No operation possible	Fault in the appliance electronics	Check/ replace appliance electronics.
Key broken off	Mechanical impact	Replace key switch, instruct operator
No function of the key switch	Water in the key switch	Replace key switch, check cover, instruct operator
	Defective switch	Replace key switch
	Electrical connection	Check the connector.
No Eco function	Defective switch	Replace the switch
No fresh water function	Defective switch	Replace the switch
Appliance cannot be switched on	Safety switch defective	Check / replace safety switch.

070 Peculiarities/ others

The connection cable W6 is lead to the steering column through a cable gland.

The connection cable runs through the steering column to the steering wheel control unit.

Observe during disassembly:

- Disconnect the cable on the appliance electronics.
- Loosen and uninstall the cable gland.
- Guide the plug through the opening as shown.





- Disassemble the articulated joint of the steering column.
- Loosen cable protection.
- Pull the cable out of the joint halves



- Pull the cable out of the appliance through the opening in the steering wheel



110 Replacement times

Basic work	Description	Work value
AHGE	Uninstall/install appliance electronics	
AHSL	Uninstall/ install key switch	
AHES	Uninstall/ install switch of the Eco function	
AHSW	Uninstall/install switch of the water pump	
AHLP	Uninstall/ install control unit of the steering wheel	

AO service group steering

010 Safety information

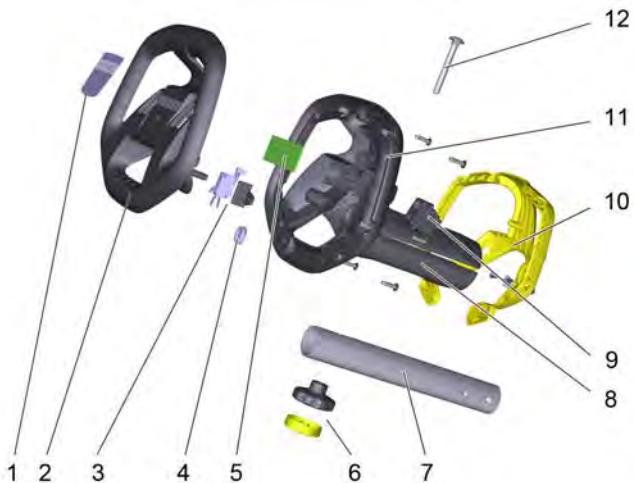
⚠ Warning

Risk of injury due to rolling or accidentally operated appliance! After work on the steering wheel, check safety lever and safety switch for function.

Observe general safety information!

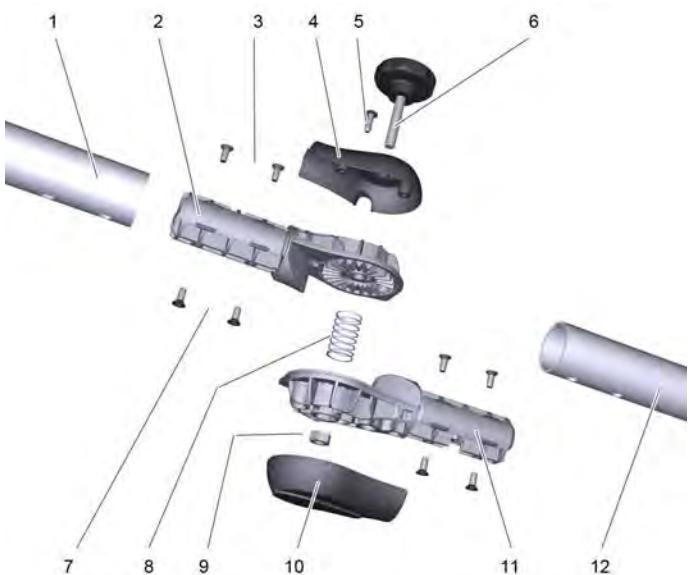
020 Overview

Steering wheel



- 1 Display film
- 2 Upper steering wheel half
- 3 Safety switch / holder
- 4 Cable sleeve
- 5 Operating field
- 6 Star knob steering wheel height adjustment
- 7 Tube steering column
- 8 Retainer steering column
- 9 Switch
- 10 Lever safety switch
- 11 Lower steering wheel half
- 12 Screw steering wheel height adjustment

Steering column



- 1 Tube, upper steering column
- 2 Upper joint half
- 3 Screws
- 4 Cover of the upper joint half
- 5 Screw of the cover
- 6 Star handle
- 7 Screws
- 8 Spring
- 9 Locknut
- 10 Cover of the lower joint half
- 11 Lower joint half
- 12 Tube, lower steering column

Cardan joint steering cleaning head



- 1 Bearing sleeve outside
- 2 Bearing/ base plate cleaning head
- 3 Lower steering column
- 4 Socket pin
- 5 Bearing sleeve inside
- 6 Bearing pin

030 Function

The cleaning head of the BR 35/12 C can be turned by 360°.

The steering directly acts on the cardan joint of the cleaning head.

The lower steering column has a double bearing in the casing of the appliance.

The bearings consist of two screwed bearing shells each.

The lower and upper steering column are connected with an articulated joint.

The steering wheel is attached to the upper steering column.

The height of the steering wheel can be adjusted.

The control unit, the switch for the water pump and the Eco function as well as the safety switch are installed in the steering wheel.

040 Service activities

AOGH Uninstalling/ installing articulated joint of the steering column

- Unscrew the screws.
- Remove the tubes of the steering column from the articulated joint.



Note

The cable is routed through the upper joint half and the upper tube to the steering wheel. After removing the tubes from the joint, open the strain relief and remove the cable from the joint half.

Ensure that the yellow marking is placed inside the strain relief and the cable is not squeezed upon installation.

- Disassemble joint.
- Replace worn out joint halves.
- Replace damaged star knob.
- Insert missing spring.

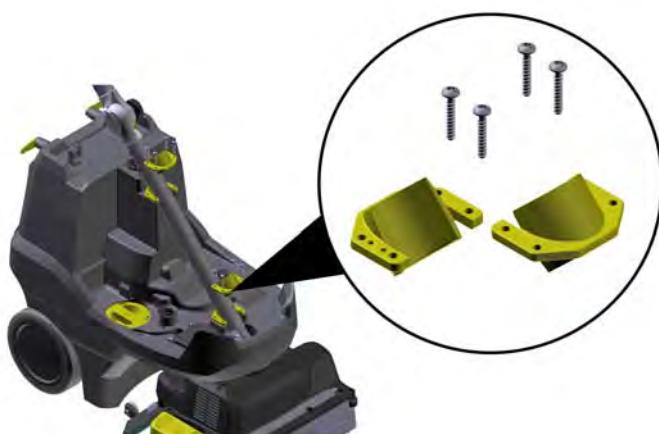
AOLA Uninstalling/ installing bearing shells of the steering

The steering column is guided by two bearings in the appliance.

The bearings consist of two screwed bearing shells each made of plastic.

The two bearing shells are identical, they cannot be confused or turned the wrong way upon installation.

- Unscrew the screws.
- Remove the upper bearing shell.
- Swivel up the steering column.
- Remove lower bearing shell.



AOLO Uninstall/install upper steering column



- Remove the dirt water reservoir.
- Uninstall/ install Li-ion battery AGLI
- ➔ Disconnect the cable to the steering wheel electronics on the appliance electronics.
- ➔ Loosen the cable gland.
- ➔ Pass the cable and plug through the opening.



- ➔ Unscrew the star grips.
- ➔ Separate the steering column on the joint.



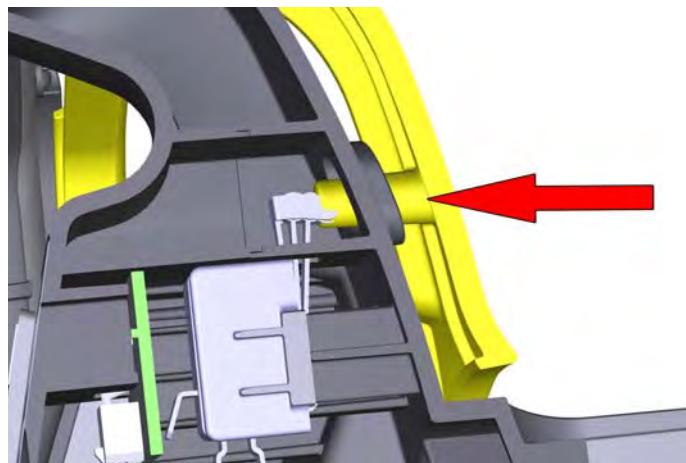
Note

Ensure that the plug is not damaged and no contacts are loosened or cables are pulled off during disassembly.

AOSL Uninstalling/ installing safety lever



- Unscrew the screws.
- Remove the safety lever towards the back.



⚠ Warning

Risk of injury due to faulty safety installation! Upon installation ensure that the actuating bolt correctly operates the safety switch inside and can be moved without resistance.

AOLR Uninstalling/ installing steering wheel



- *Uninstall/ install safety lever AOSL*
- Completely unscrew the knurled nut of the height adjustment.
- Pull the screw of the steering wheel height adjustment out of the retainer.
- Pull the steering wheel off the steering column, pay attention to cable.
- Unscrew the screws of the steering wheel halves.

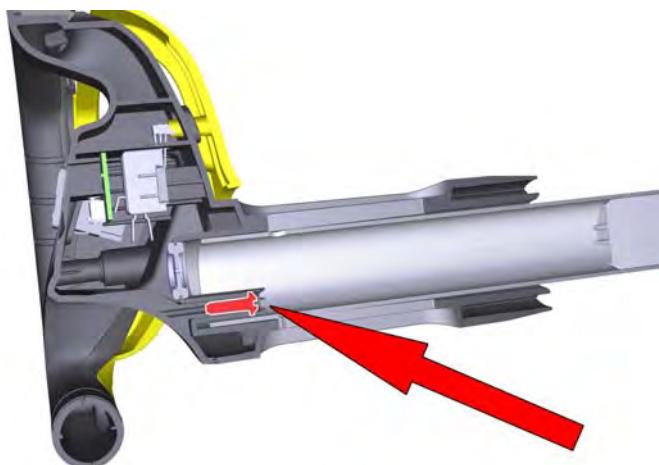
050 Maintenance and inspection

Service group does not contain any maintenance and inspection points.

060 Error diagnosis

Findings	Possible cause	Correction
Steering column can no longer be locked in position	Articulated joint of the steering column defective/ missing parts	Check / replace articulated joint.

070 Peculiarities/ others



Note

One screw of the steering wheel halves is located in the retainer of the steering column and is difficult to access.

110 Replacement times

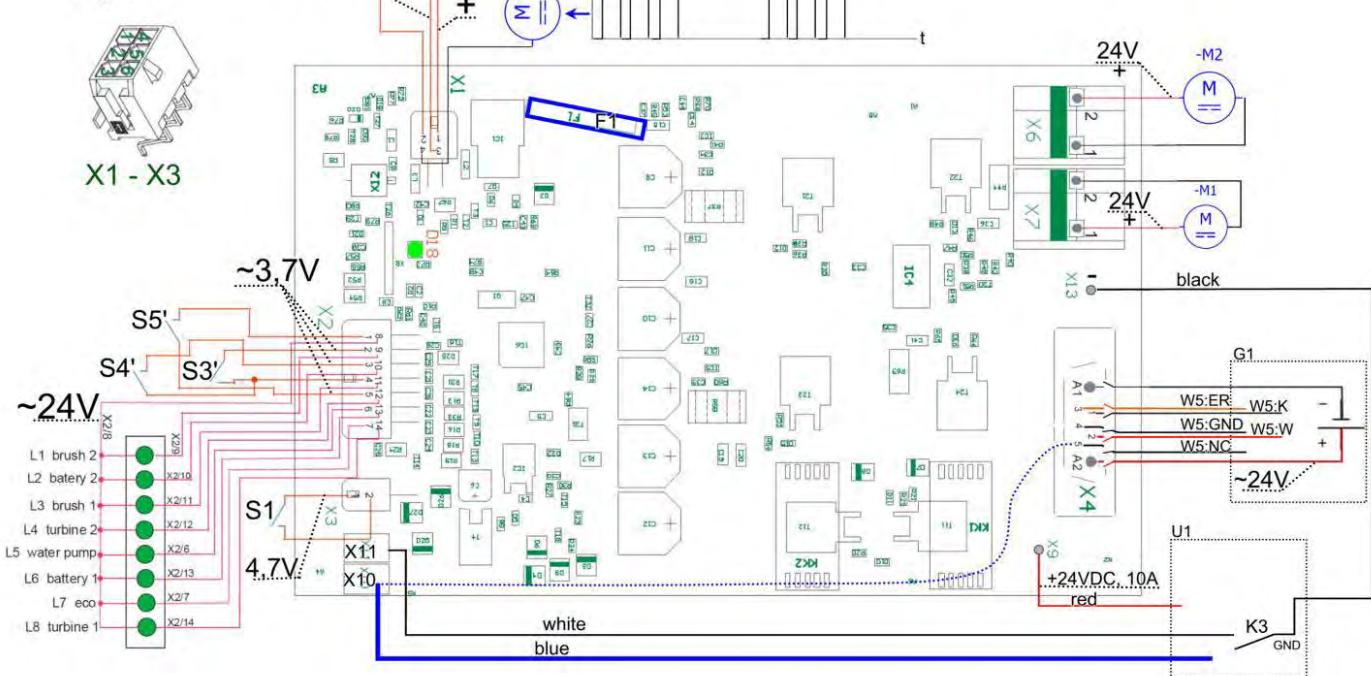
Basic work	Description	Work value
AOGH	Uninstall/ install articulated joint of the steering column	
AOLA	Uninstall/ install bearing shells of the steering	
AOLO	Uninstall/ install upper steering column	
AOSL	Uninstall/ install safety lever	
AOLR	Uninstall/ install steering wheel	

Measuring methods and test specifications

Appliance electronics

Overview inputs / outputs of the appliance electronics

A1: Output/Input Signals



M1	Brush motor	
M2	Suction turbine	
M3	Water pump	
S1	Key switch	
S2	Microswitch vacuum bar	S2
S3	Water pump switch	
S4	Switch Eco function	
S5	Safety button	
G1	Li-ion battery	
U1	Charger	
X1	Connection microswitch vacuum bar	S2
X2	Connection control panel	A2
X3	Connection key switch	S1
X4	Connection Li-ion battery	G1
X6	Connection suction turbine	M2
X7	Connection brush motor	M1
X9	Connection charger positive terminal (+)	red
X10	Connection charger temperature	
X11	Connection charger immobiliser	

X13	Connection charger negative terminal (-)	blk
F1	Fuse battery voltage	
D18	Indicator lamp (LED)	
ER	Emergency shutdown	W5
K	Communication Li-ion battery	W5
GND	Negative terminal	W5
NC	Temperature approval	W5
W	Wake-up signal Li-ion battery	W5

Error codes appliance electronics

Control structure	Behaviour	Meaning
D18	blinking	A1 in order, self-test successful
D18	glows	Error, short circuit of a load

Operating hour counter

Operating hours can be enquired via the indicator lamps of the steering wheel control unit.

Note

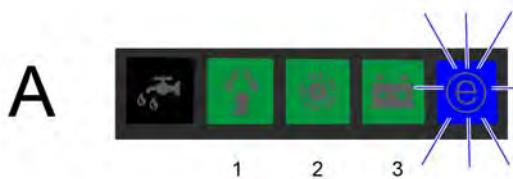
The operating hours of the brush motor are counted.

Check operating hours counter:

- Set the key switch to "0".
- Operate the safety switch 3x in a row within 10 seconds.
- Operating hours are displayed by means of a flashing code.

A Hours (LED green)

B Minutes (LED red)



LED	Colour	Meaning
1	green	Hundred
2	green	Ten
3	green	One
4	blue	Counter
1	OFF	
2	red	Ten
3	red	One
4	blue	Counter

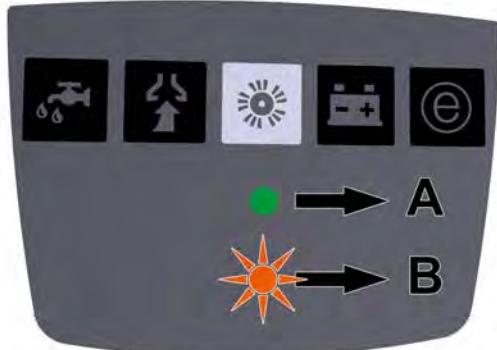
Read:

The corresponding LED for the multiplier illuminates successively, the counter flashes in accordance with the established number.

Example:

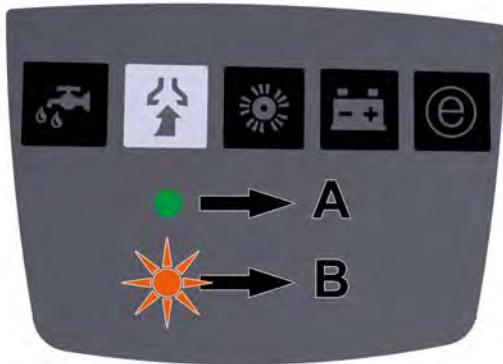
LED	Display	Counter flashes	Result
1	green	3x	300
2	green	2x	20
3	green	5x	5
2	red	0x	0
3	red	9x	9
Result			325h 09 min

Battery and service indicators



A:	glows	green	Brush motor is running
B:	blinking	orange	Brush motor overload

- Suction turbine and water pump are only in operation if the brush motor is running.
- In case of overload the brush motor is switched off.



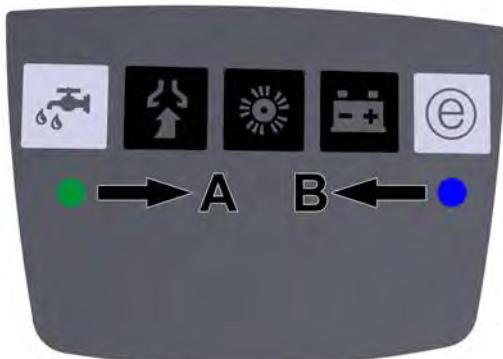
A:	glows	green	Suction turbine is running
B:	blinking	orange	Suction turbine overload

- Suction turbine and water pump are only in operation if the brush motor is running.
- Stopping time of the suction turbine: 5 seconds
- A load check does not take place, only overload is recognised.
- In case of overload, the suction turbine is switched off.



A:	glows	green	Battery full
B:	glows	orange	Battery partially discharged
C:	glows	red	Battery depleted

- The suction turbine of the water pump and the brush motor are switched off at "battery discharged".
- In case of a short circuit of the battery terminals, a reset takes place after 30 seconds.
- After four short circuits the Li-ion battery must be recharged or switched into the sleep mode for its protection.



A:	glows	green	Water pump switched on.
B:	glows	blue	Suction turbine overload

- Suction turbine and water pump are only in operation if the brush motor is running.
- A load check does not take place.
- The Eco operation equals a power reduction of 30% of the brush motor and suction turbine. The water quantity remains the same.

Checking the interface A1 - G1

⚠ Warning

Risk of damage, risk of injury! Remove the W5 cable from the Li-ion battery prior to all measurements and error simulations.

Function	Description	Inspection/activity	Error simulation	Diagram
Emergency shutdown	G1 shuts down in case of error A1 and U1	In case of an emergency shutdown, D18 is flashing, all other indicator lamps are off	Apply 24VDC to X4:1-A1 and X4:2-A1. Insert bridge between X4:1 and X4:3. D18 is flashing, all other indicator lamps are off.	
Wake-up signal	A1 wakes up G1 from the sleep mode	1 S1 in position (ON) 2 Measure voltage between G1- and G1+ (target 24VDC) 3 Wake up G1 manually if measurement is 0 VDC 4 Repeat measurement	Manually wake up G1: Bridge between G1- and W	
Temperature monitoring	Monitors the battery temperature	If the temperature is within the range of 0°C - 45°C, a signal 2.4 VDC is sent to NC		
Immobiliser	Locks A1, controls U1	No appliance function if the charger is active.		
Communication	Is not used!			
Earth (GND)	Is not used!			

Note

30 minutes after switching off all consumers, the Li-ion battery changes into the sleep mode.

The internal error memory is deleted.

Wake-up through A1 upon reactivation or manual wake-up.

Indicator lamps charger



Operating status	Full	Charge	Error	Description
No battery connected	blinking			After 10 charging attempts termination takes place
Internal error	blinking			Self-test not successful
Charging process		blinking		Start charging process, charging current 10 A
Charging process		grows		Battery voltage 28.8V reached, charging current 10 A
Charging process		grows		Battery voltage 29.3V reached, charging current 2.6 A
Charging process completed	grows			Battery voltage 29.4V reached, charging current 0 A
Battery connected		blinking	blinking	After 10 charging attempts termination takes place
Wake-up attempt	blinking	blinking		After 10 wake-up attempts termination takes place
Short circuit charging cable		blinking	blinking	After 10 charging attempts termination takes place
Charger is connected to the mains				

Note

After connecting the charger to the mains, a self-test is performed.

Table of measurement values

Description	Component	Measured between:	Test method/ result	Measured at:
S1	Key switch	PIN1 - PIN2	Continuity with closed switch (position 1)	Switch
		X3/1 - X3/2		Appliance electronics
S2	Microswitch vacuum bar	X1/2 - X1/3	Continuity with closed switch (vacuum bar lowered)	Appliance electronics
S3	Water pump switch	X2/4 - X2/5	Continuity with closed switch (position ON)	Appliance electronics
S4	Switch Eco function	X2/2 - X2/6	Continuity with closed switch (position ON)	Appliance electronics
S5	Safety button	X2/3 - X2/1	Continuity with closed switch (safety lever operated)	Appliance electronics
M1	Brush motor	X7/1 - X7/2	24 VDC	Appliance electronics
M2	Suction turbine	X6/1 - X6/2	24 VDC	Appliance electronics
M3	Water pump	X1/1 - X1/4	12 VDC, variably pulsed via water volume control	Appliance electronics

Technical Documentation

Appliance type	Appliance no.:	Circuit diagram	Operating instructions	Spare parts list
BR 35/12 C	1.783-451.0	0.089-471.0	5.965-984.0	5.972-206.0
BR 35/12 C Adv	1.783-454.0	0.089-471.0	5.965-984.0	5.972-206.0

Technical specifications

Power		
Nominal voltage	V	25,2
Battery capacity	Ah	21
Battery type		Li-ion
Average power consumption	W	500
Suction engine output	W	280
Brush motor performance	W	185
No-load current	A	1,5
Turn-off current	A	15
Operating temperature range	°C	0...40
Vacuuming		
Cleaning power, air quantity	l/s	20
Cleaning power, negative pressure	kPa	8
Suction width	cm	380
Current consumption suction turbine (max)	A	12,5
Fresh water system		
Flow rate detergent solution	l/min	0,3...1,2
Pressure water pump	MPa	0,2
Power water pump	W	
Cleaning brushes		
Working width	mm	350
Brush diameter	mm	96
Brush speed	1/min	1050
Contact pressure	g/m²	150
Speed brush motor	1/min	1600
Charger		
Voltage	V/Hz	220...240 - 50/60
Power Input	W	300
Dimensions and weights		
Theoretical surface cleaning performance	m²/h	1400
Fresh/dirt water reservoir volume	l	12
Top clearance	mm	100
Underclearace	mm	50
Permissible overall weight	kg	48
Transport weight	kg	36
Length x width x height	mm	930x420x1100
Values determined as per EN 60335-2-72		
Total oscillation value	m/s²	<2,5
Uncertainty K	m/s²	0,2
Sound pressure level L _{pA}	dB(A)	65
Uncertainty K _{pA}	dB(A)	2
Sound power level L _{WA} + Uncertainty K _{WA}	dB(A)	84

Special tools

Description	Order number
Screwdriver, angled, T9 - T40	6.815-163.0
Vacuum gauge	4.901-035.0
Puller tool	6.815-010.0

Torques

No data.

Overview over accessories

Description	Part no.:	Description
Brush roller, white (soft)	4.037-036.0	For polishing floors.
Brush roller, red (medium, standard)	4.037-031.0	For cleaning slightly dirtied or sensitive floors.
Brush roller, green (hard)	4.037-038.0	For cleaning heavily dirtied floors.
Brush roller, black (very hard)	4.037-039.0	For cleaning heavily dirtied floors.
Brush roller, orange (high/ low)	4.037-037.0	For scrubbing structured floors (safety tiles, etc.).
Microfibre roller	4.037-040.0	Cleaning brush made of microfibres with especially high cleaning performance, especially for fine stone tiles.
Pad roller shaft	4.762-009.0	For intake of roller pads.
Roller pad, red (medium)	6.369-047.0	For cleaning slightly dirtied floors.
Roller pad, green (hard)	6.369-052.0	For cleaning normal to heavily dirtied floors.
Roller pad, yellow (soft)	6.369-053.0	For polishing floors.
Fill hose	6.680-124.0	For filling the fresh water tank
Suction lip kit	4.037-035.0	As replacement

Circuit diagram

When working on the device, please always use the current circuit diagram in DISIS.