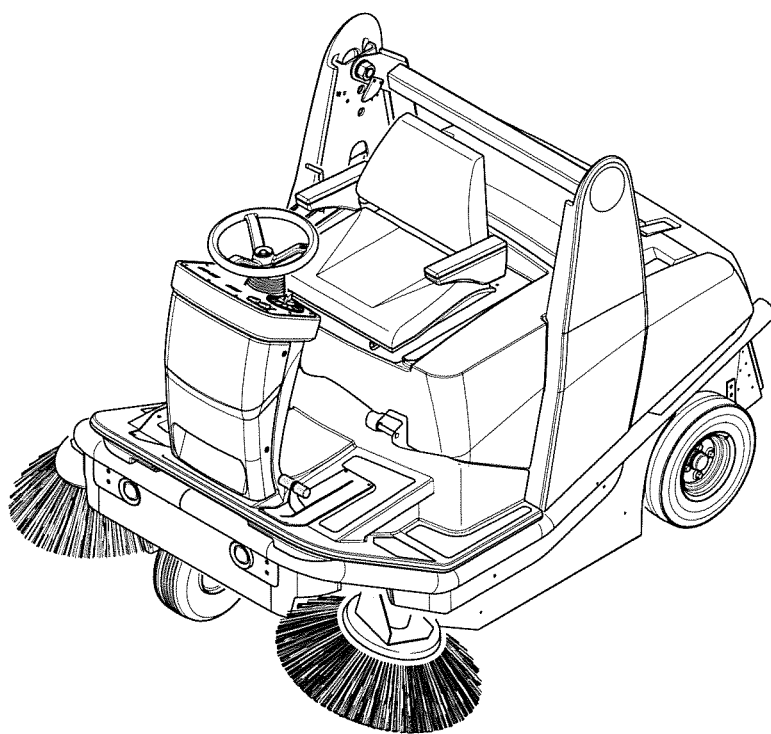


KM 120/150 R Bp
KM 120/150 R Bp Pack



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Register and win!
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Please read and comply with these original instructions prior to the initial operation of your appliance and store them for later use or subsequent owners.

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Environmental protection



The packaging material can be recycled. Please do not throw the packaging material into household waste; please send it for recycling.



Old appliances contain valuable materials that can be recycled; these should be sent for recycling. Batteries, oil, and similar substances must not enter the environment. Please dispose of your old appliances using appropriate collection systems.

Notes about the ingredients (REACH)

You will find current information about the ingredients at:
<http://www.karcher.de/de/unternehmen/umweltschutz/REACH.htm>

Symbols in the operating instructions

Danger

Immediate danger that can cause severe injury or even death.

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.

Proper use

Use this appliance only as directed in these operating instructions.

- The machine with working equipment must be checked to ensure that it is in proper working order and is operating safely prior to use. Otherwise, the appliance must not be used.
- This sweeper has been designed to sweep dirt and debris from indoor as well as outdoor surfaces.
- The machine can only be used on public highways with the StVZO extension kit.
- The machine is not suitable for vacuuming dust which endangers health.
- The machine may not be modified.
- Never vacuum up explosive liquids, combustible gases or undiluted acids and solvents. This includes petrol, paint thinner or heating oil which can generate explosive fumes or mixtures upon contact with the suction air. Acetone, undiluted acids and solvents must also be avoided as they can harm the materials on the machine.
- Do not sweep/vacuum up any burning or glowing objects.
- The machine is only suitable for use on the types of surfaces specified in the operating instructions.
- The machine may only be operated on the surfaces approved by the company or its authorised representatives.

- The machine may not be used or stored in hazardous areas. It is not allowed to use the appliance in hazardous locations.
- The following applies in general: Keep highly-flammable substances away from the appliance (danger of explosion/fire).

Suitable surfaces

- Asphalt
- Industrial floor
- Screed
- Concrete
- Paving stones

Safety instructions

- The machine (without roof cover) has been approved for use on surfaces with gradients of up to 12%.
- The machine (with roof cover) has been approved for use on surfaces with gradients of up to 10%.

Safety Devices

Safety devices serve for the protection of the user and must not be put out of operation or bypassed with respect to their function.

Emergency-stop button

To put all functions out of operation immediately: Press emergency-stop button.

- The machine comes to a sudden halt when you press the emergency-stop button.
- The emergency-stop has a direct effect on all machine functions.
- The display continues.

After emergency-stop, the key switch must remain in position "1" to ensure the following functions:

- Functioning of the overall lamp (optional).

Seat contact mat

The machine is equipped with a seat contact mat. When you quit the driver seat, the machine comes to a halt after a delay of approx. 1.5 seconds and the activated sweep function is switched off.

General notes

Your sales outlet should be informed about any transit damage noted when unpacking the product.

- Warning and information plates on the machine provide important directions for safe operation.
- In addition to the information contained in the operating instructions, all statutory safety and accident prevention regulations must be observed.

⚠ Danger

Risk of injury!

Danger of tipping if gradient is too high.

- *In drive direction, do not drive across inclinations of more than 12% (without roof cover) or more than 10% (with roof cover) respectively.*

Danger of tipping when driving round bends at high speed.

- *Drive slowly when cornering.*

Danger of tipping on unstable ground.

- *Only use the machine on sound surfaces.*

Danger of tipping with excessive sideways tilt.

- *The gradient perpendicular to the direction of travel should not exceed 10%.*

Battery-operated machines

Note

Warranty claims will be entertained only if you use batteries and chargers recommended by Kärcher.

- Always follow the instructions of the battery manufacturer and the charger manufacturer. Please follow the statutory requirements for handling and disposing batteries.
- Never leave the batteries in a discharged state; recharge them as soon as possible.
- Always keep the batteries clean and dry to avoid creep currents. Protect the batteries and avoid contact with impurities such as metal dust.
- Do not place tools or similar items on the battery. Risk of short-circuit and explosion.
- Do not work with open flames, generate sparks or smoke in the vicinity of a battery or a battery charging room. Danger of explosion.
- Do not touch hot parts of the machine such as the drive motor (risk of burns).
- Be careful while handling battery acid. Follow the respective safety instructions!
- Used batteries are to be disposed according to the EC guideline 91/ 157 EWG in an environment-friendly manner.

Function

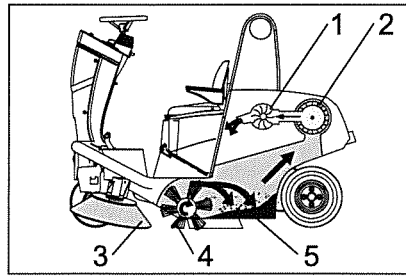


Figure 1

The sweeper operates using the overthrow principle.

- The side brushes (3) clean the corners and edges of the surface, moving dirt and debris into the path of the roller brush.
- The rotating roller brush (4) moves the dirt and debris directly into the waste container (5).
- The dust raised in the container is separated by the dust filter (2) and the filtered clean air is drawn off by the suction fan (1).

Device elements

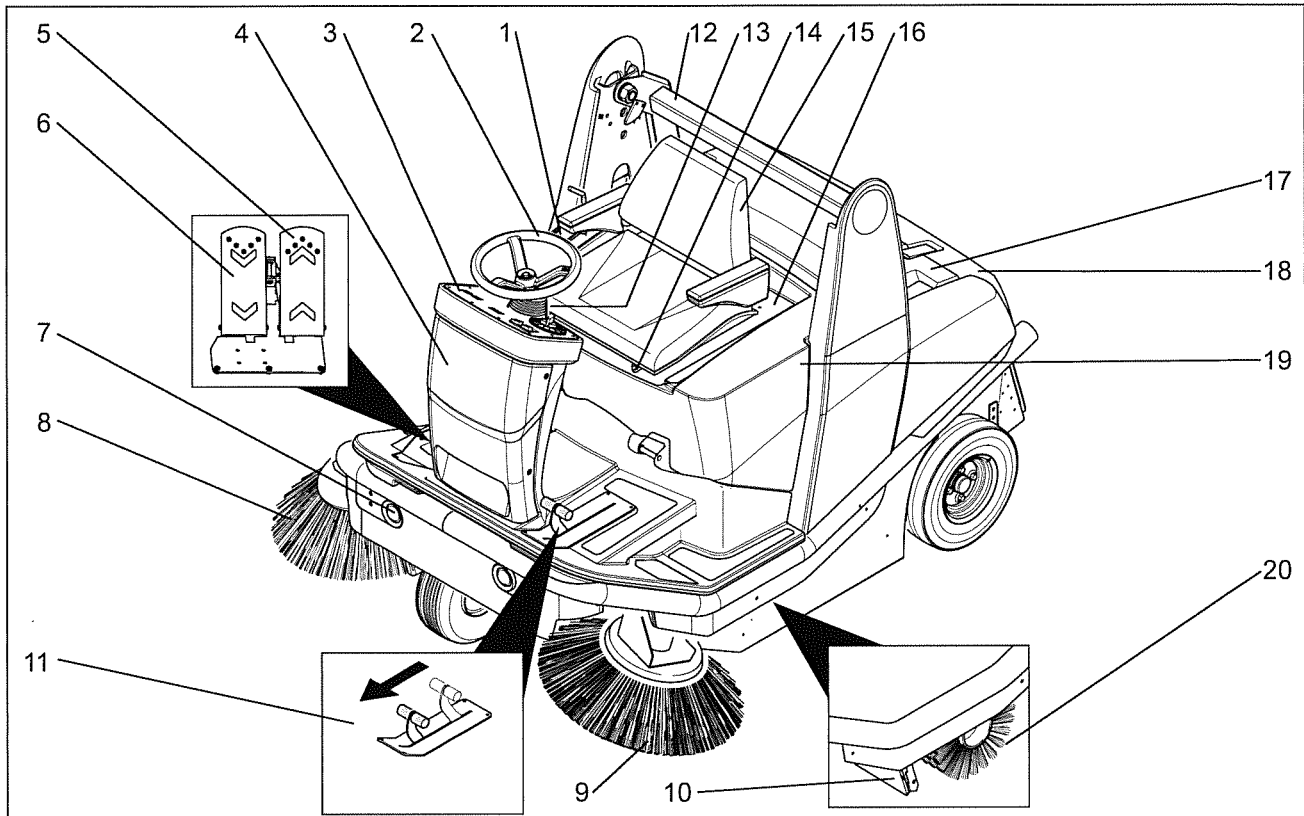


Figure 2

- 1 Operating unit: Waste container
- 2 Steering wheel
- 3 Operator console
- 4 Fuses (behind front panel)
- 5 Accelerator pedal, forwards
- 6 Accelerator pedal, reverse
- 7 Lights
- 8 Right side brush
- 9 Left side brush (optional)
- 10 Bulk waste flap
- 11 Pedal for raising/lowering bulk waste flap
- 12 Lift/tilt emptying mechanism
- 13 Lever for steering wheel adjustment
- 14 Lever for seat adjustment
- 15 Seat (with seat contact mat)
- 16 Seat bracket
- 17 Filter case
- 18 Waste container
- 19 Cover
- 20 Roller brush

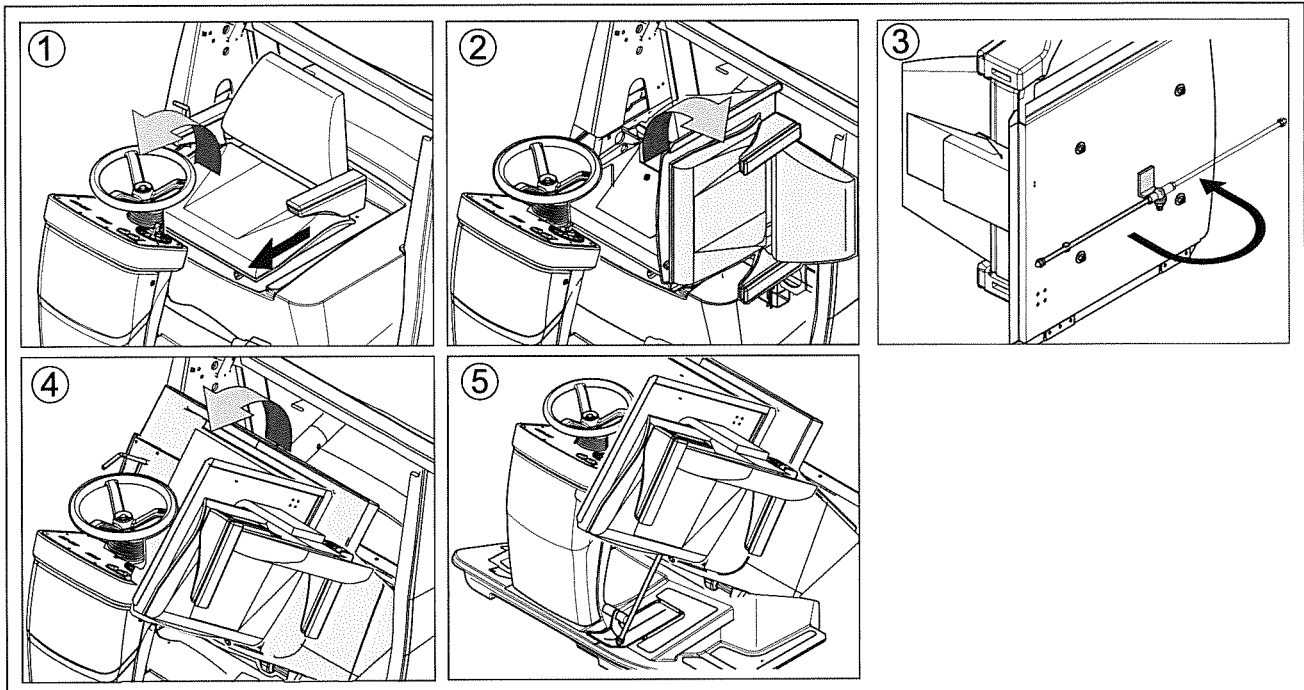


Figure 3

⚠ Danger

Risk of injury! When open, the cover must be propped up using the retaining rod.

Figure 1

- Operate steering wheel adjustment lever and fold steering wheel forwards.
- Operate seat adjustment lever and slide seat forwards.

Figure 2

- Fold seat bracket to the side.

Figure 3

- Fold out retaining rod.

Figure 4

- Fold cover forwards.

Figure 5

- Insert retaining rod into the recess next to the bulk waste flap pedal.

Follow this sequence in reverse order to close the cover.

Operator console

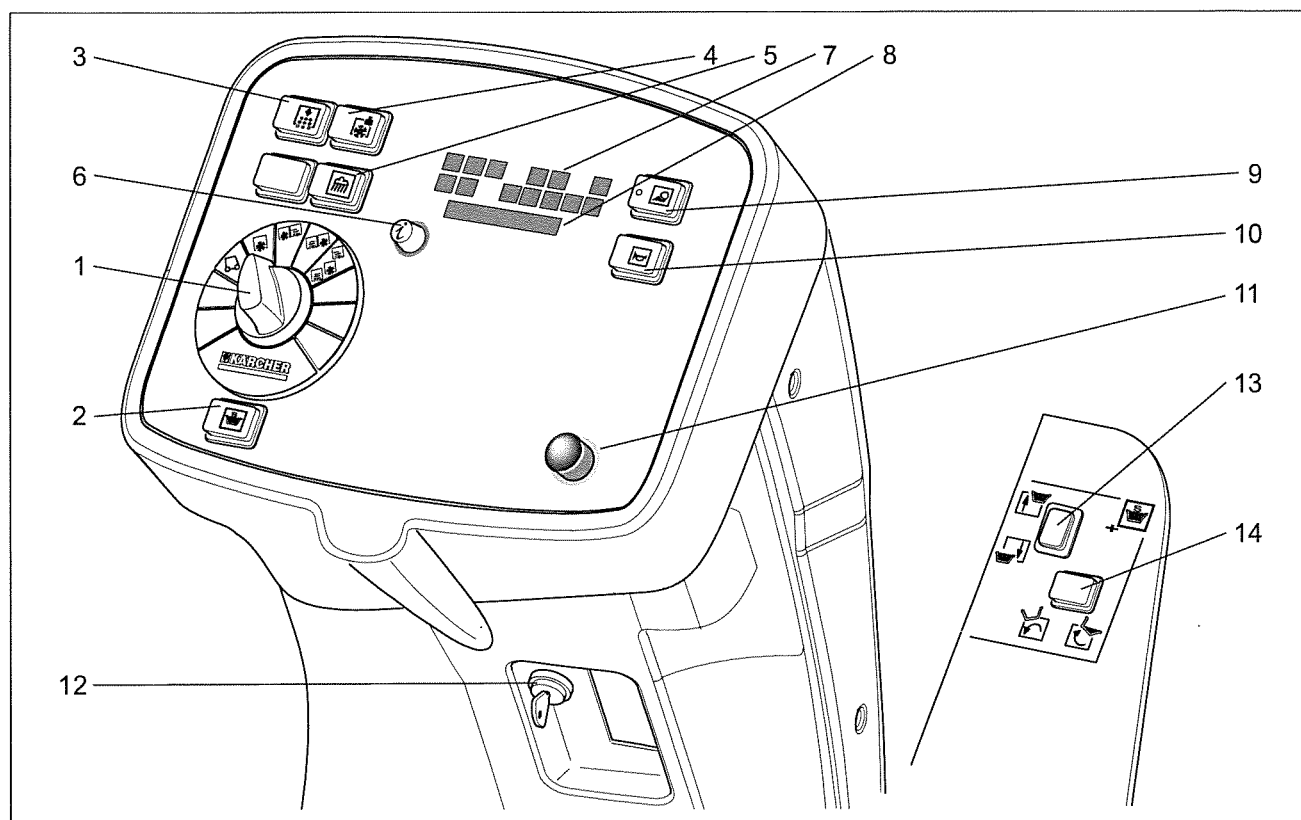


Figure 4

- 1 Programme switch
- 2 Switch two-hand operations Lift/tilt emptying mechanism
- 3 Button for filter shaker system
- 4 Button for power-operating mode
- 5 Switch for wet sweeping
- 6 Info button
- 7 Indicator lamps
- 8 Display
- 9 Switch for working lamp
- 10 Horn switch
- 11 Emergency-stop button
- 12 Key switch
- 13 Raise/lower waste container
- 14 Tilt waste container outwards/inwards

Indicator lamps

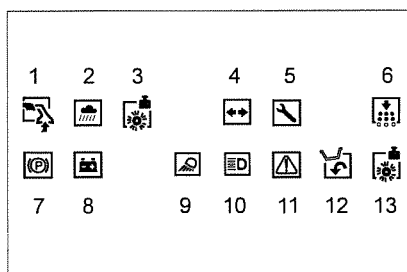


Figure 5

- 1 Active manual suction (optional)
- 2 Wet sweeping active
- 3 Power operating type active
- 4 Display of travel direction (optional)
- 5 Service
- 6 Filter shake off, automatic/ manual active; control lamp blinks green
 - Automatic system for filter shake off is switched on; control lamp glows green
 - Automatic system for filter shake off is switched off; control lamp is off
- 7 Automatic immobilisation brake is active
- 8 Battery monitoring
- 9 Side-marker lamp switched on (optional, StVZO)
- 10 High beam switched on (optional, StVZO)
- 11 General fault
- 12 Waster container not tilted in
- 13 Overload on sweep roller

Colour coding











- The operating elements for the cleaning process are yellow.
- The controls for the maintenance and service are light gray.

Before Startup

Batteries

Safety notes regarding the batteries

Please observe the following warning notes when handling batteries:

| | |
|---|---|
|  | Observe the directions on the battery, in the instructions for use and in the vehicle operating instructions! |
|  | Wear an eye shield! |
|  | Keep away children from acid and batteries! |
|  | Risk of explosion! |
|  | Fire, sparks, open light, and smoking not allowed! |
|  | Danger of causticization! |
|  | First aid! |
|  | Warning note! |
|  | Disposal! |
|  | Do not throw the battery in the dustbin! |

⚠ Danger

Risk of explosion! Do not put tools or similar on the battery, i.e. on the terminal poles and cell connectors.

⚠ Danger

Risk of injury! Ensure that wounds never come into contact with lead. Always clean your hands after having worked with batteries.

Installing and connecting the battery

Note

KM 120/150 R Bp pack contains in-built battery and charger.

- Open cover and secure it (Diag. 3).
- Insert battery in battery mount.
- Screw on mounts on battery base.

⚠ Warning

Pay attention to correct poles.

Attach the connection cable provided with the pack.

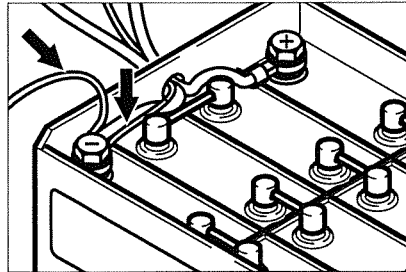


Figure 6

- Connect pole terminal (red cable) to positive pole (+).
- Connect the pole clamps and 2 more thin cables at the minus pole (-).
- Close cover.

⚠ Warning

Charge the battery before commissioning the machine.

Charging battery

Note

Before commissioning the charger and charging the batteries, set the key switch to "0".

Note

The device is equipped with a safety mechanism to prevent total discharge, i.e. when the permissible minimum capacity is reached, then the machine can only be driven and existing lamps can be switched on. In such a case, the battery monitoring symbol on the control console glows red.

- Drive the machine directly to the charging station; avoid any steep gradients in the process.

Note

While using other batteries (for e.g. batteries from other manufacturers) the total discharge protection level must be reset by the Kärcher aftersales service according to the respective battery.

⚠ Danger

Risk of electric shock. Observe supply network and fuse protection - see "Charger". Only use the charger in dry rooms with sufficient ventilation!

Note

Average charging time is approx. 10 -12 hours.

⚠ Danger

Risk of explosion! Maintenance-free batteries can only be charged with the seat being tilted upward.

- Tilt the seat upward.

⚠ Danger

Risk of injury! Comply with safety regulations on the handling of batteries. Observe the directions provided by the manufacturer of the charger.

(1) Charging procedure KM 120/150 R Bp Pack

⚠ Danger

Risk of injury! The charger should be used only if the mains connection line is in an undamaged state. Get the manufacturer, the customer service agent or a qualified person to immediately replace a damaged mains connection line.

Note

Normally, the machine is equipped with a maintenance-free battery.

- Insert the plug of the charger into the socket.

Note

The charger has electronic controls and automatically switches off the charging process. All functions of the machine are automatically interrupted during the charging process.

The battery control display shows the progress of the charging process when the plug is inserted:

| | |
|--------------------------|--------------|
| Fault | blinks red |
| Battery not connected | glows red |
| Battery is being charged | glows orange |
| Battery is charged | glows green |

(2) Charging procedure KM 120/150 R Bp

- Disconnect battery.

- Connect positive terminal cable from the charger to the positive pole connection on the battery.

- Connect negative terminal cable from the charger to the negative pole connection on the battery.

- Plug in mains connector and switch on charger.

Note

The recommended chargers (matching the batteries used) are regulated electronically and will automatically switch off the charging process. All functions of the machine are automatically interrupted during the charging process.

Low maintenance batteries

- Add distilled water one hour before the charging process comes to an end; follow the correct acid level. There are corresponding indicators on the battery.

⚠ Danger

Danger of chemical burns. Adding water to the battery in its discharged state can cause the acid to leak! Use safety glasses while handling battery acid and follow the safety instructions to avoid personal injury or damage to clothes. Should the acid spray on to the skin or clothes, rinse immediately with lots of water.

⚠ Warning

Risk of damage. Use only distilled or desalinated water (VDE 0510) for filling the battery. Do not add any substances (so-called performance improving agents), else warranty claims will not be entertained.

After charging

- Switch off the charger and remove the plug from the socket.
- If the machine does not have a built-in charger: Pull the battery cable from the charger cable and connect it to the machine.

Recommended batteries, chargers

| | Order number |
|------------------------------|--------------|
| Battery incl. charger 240 Ah | 2.641-044 |
| Battery incl. charger 400 Ah | 2.640-996 |

Batteries and chargers are available in specialised stores.

Maximum battery dimensions

| Length | Width | Height |
|--------|--------|--------|
| 827 mm | 324 mm | 462 mm |

Pay attention to the following if you are using maintenance-free batteries in KM 120/150 R Bp:

- It is necessary to conform to the maximum battery dimensions.
- While charging maintenance-free batteries, it is necessary to tilt the seat upward.
- While charging maintenance-free batteries, follow the specifications of the battery manufacturer.

Check fluid level in the battery and adjust if required

⚠ Warning

Regularly check the fluid level in acid-filled batteries.

- Unscrew all cell caps.
- Where fluid level is too low, top up cells to the mark provided with distilled water.
- Charge battery.
- Screw in cell caps.

Remove the battery

- Disconnect battery.
- Remove the battery from the battery holder.
- Dispose of the used batteries according to the local provisions.

Unloading

⚠ Warning

Do not use a forklift truck to unload the machine as this may damage it.

Note

Press the emergency-stop button to immediately deactivate all functions and turn the key switch to the "0" position.

To unload the machine, proceed as follows:

- Cut plastic packing belt and remove foil.
- Remove the elastic tape fasteners at the stop points.
- Four indicated floor boards of the pallet are fastened with screws. Unscrew these boards.
- Place the boards on the edge of the pallet. Place the boards in such a way that they lie in front of the four wheels of the machine. Fasten the boards with screws.

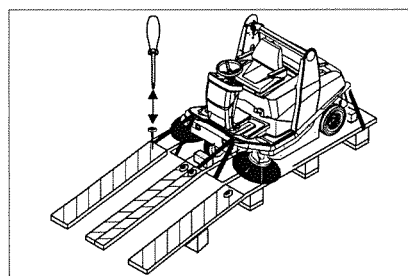


Figure 7

- Slide the four support beams included in the packaging under the ramp.
- Remove the wooden blocks used for arresting the wheels and slide them under the ramp.

(1) Machine without built-in battery

- Loosen immobilizing brake (see "move sweep machine").
- Slide the machine over the prepared ramp from the pallet.

(2) Machine with built-in battery

- Connect battery (see section on Care and maintenance)
- Release emergency-stop button by turning.
- Set main switch to "1".
- Press the drive direction switch and slowly move the machine down from the ramp.
- Set main switch back to "0".

Move the sweep machine

⚠ Danger

Risk of injury! Before releasing the immobilizing brake, the machine must be secured to prevent it rolling away. After releasing the immobilizing brake, the machine rolls without brakes.

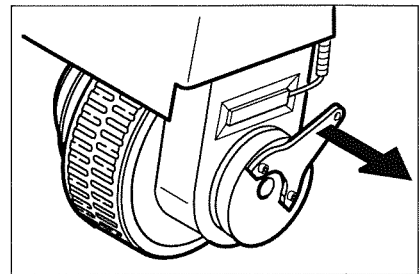


Figure 8

- Remove the brake level from the wheel and put it in its position.

The immobilizing brake is thus deactivated; the machine can now be moved.

⚠ Warning

Danger of damage to the controls! Never move the machine faster than 8 km/h.

Start up

General notes

- Park the sweeper on an even surface.
- Remove the key.

Inspection and maintenance work

- Check charging status of battery. *
- Check side brush. *
- Check roller brush. *
- Empty waste container.

* For description, see section on Care and maintenance.

Operation

Note

Press emergency-stop switch to immediately switch off all functions of the machine.

Adjusting driver's seat

- Pull seat adjustment lever outwards.
- Slide seat, release lever and lock in place.
- Check that the seat is properly locked in position by attempting to move it backwards and forwards.

Check immobilizing brake

⚠ Danger

Danger of accident. The immobilizing brake must always be checked first on an even surface before starting the machine.

- Take the seating position.
- Release emergency-stop button by turning.
- Set main switch to "1".
- Select pedal for direction of travel.
- Gently depress drive pedal.
- The brake must get released and you must be able to hear it (the control lamp for immobilizing brake on the console switches off). The machine must roll slightly on a plane surface. When the pedal is released, the brake falls in an audible manner. Switch off the machine and call the aftersales service if the above-mentioned events do not occur.

Programme selection

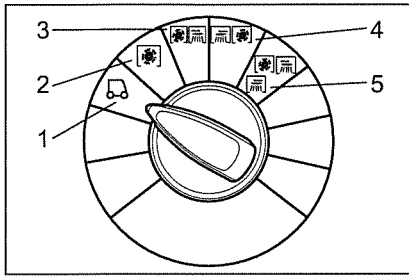


Figure 9

- 1 Driving
Driving to the Place of Use.
- 2 Sweeping with sweep roller
Roller brush is lowered.
- 3 Sweeping with right side brush
Sweep roller and right side brush are lowered.
- 4 Sweep using left side brush (optional)
Sweep roller and left side brush are lowered.
- 5 Sweep using both brushes (optional)
Sweep roller and both brushes are lowered.

Info button

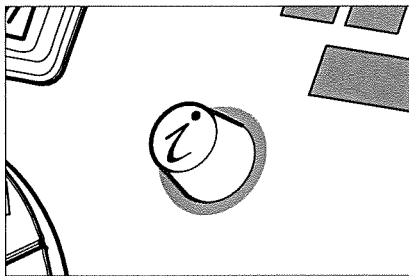


Figure 10

- Use the Info button to select the menu items and do the settings.
- Turning the button to the right/left scrolls through the menus forward/backward.
 - The selected setting gets accepted by pressing the button.

Settings

Operator menu

- Release emergency-stop button by turning.
- Sit on the seat and set main switch to "1".

The display shows the battery charging status and the number of operating hours.

| | |
|-------------------------|-------------|
| Battery charging status | E ■■■ _ _ F |
| Operating hour counter | 23 h 08 m |

- Select the desired menu item by turning the Info button. The currently set value is displayed as a bar.

Note

The menu item "Setting speed of side brushes" is displayed only when the program switch is at the steps 3, 4 or 5.

| No. | Display main menu |
|-----|---|
| 1 | Display battery charging status + Operating hours counter |
| 2 | Quit Operator menu |
| 3 | Set speed of side brushes |
| 4 | Accept factory settings? |
| 5 | Info menu |

- Press Info button, the bar display blinks.
- Reset the parameter by turning the Info button between "min" and "max".
- Confirm the changed setting by pressing the Info button or wait till the set value is automatically accepted after 10 seconds.

Note

If the selected parameter does not change within 10 seconds, then the display goes back to displaying the battery charging status and the operating hours counter.

- All settings are saved in the powerless state of the machine.

Reset parameter in the Operator menu

- Select menu item no. 4 "Accept factory settings?" by turning the Info button.
- Press Info button. The factory settings of all parameters are restored.

Filter dedusting

- Switch on manual filter shake off.



- Press Filter shake off button. Control lamp "Filter shake off" blinks green. Filter shake off starts after a delay of one second.

Note

The machine is set at the factory to automatic filter shake off. The control lamp "Filter shake off" glows green.

- Switch off automatic filter shake off.
- Press the filter shake off button twice within 1 second. Control lamp "Filter shake off" goes off.
- Switch on the automatic filter shake off.
- Press the filter shake off button twice within 1 second. Control lamp "Filter shake off" glows green.

Starting the machine

Note

The machine is equipped with a seat contact mat. When you quit the driver seat, the machine comes to a halt after a delay of approx. 1.5 seconds and the activated sweep function is switched off.

Turning on the Appliance

- Sit on the driver's seat.
- Do NOT press the accelerator pedal.

- Set programme switch to step 1 (driving).
- Set main switch to "1".

Drive the machine

⚠ Danger

Danger of accident. If the machine does not brake, then proceed as follows:

- If the device does not come to a halt on a ramp with a gradient of 2% when you release the drive pedal, then the emergency-stop button may be pressed for safety reasons only if the mechanical functioning of the immobilizing brake has been checked properly before commissioning the device.
- Switch off the machine only after it comes to a complete halt (on an even surface) and call up the aftersales service!
- Further, follow all warning instructions for braking.
- Release emergency-stop button by turning.
- Sit on the seat and set main switch to "1".

Drive forward

- Press right accelerator pedal down slowly.

Reverse drive

⚠ Danger

Risk of injury! While reversing, ensure that there is nobody in the way, ask them to move if somebody is around.

- Press left accelerator pedal down slowly.

Note

Driving method

- The accelerator pedal can be used to vary the driving speed infinitely.

Brakes

- Release the accelerator pedal, the machine brakes automatically and stops.

Driving over obstacles

Driving over fixed obstacles which are 50 mm high or less:

- Drive forwards slowly and carefully.

Driving over fixed obstacles which are more than 50 mm high:

- Only drive over these obstacles using a suitable ramp.

Overload

In case of overloading, the drive motor automatically switches off after a certain period. A fault message is displayed on the console. The concerned unit gets switched off if the controls get overheated.

- Allow machine to cool down at least for 15 minutes.
- Turn the main switch to "0" and turn it back to "1".

Sweeping mode

⚠ Danger

Risk of injury! If the bulk waste flap is open, stones or gravel may be flung forwards by the roller brush. Make sure that this does not endanger persons, animals or objects.

⚠ Warning

Do not sweep up packing strips, wire or similar objects as this may damage the sweeping mechanism.

Note

The sweeping roller and the side brushes automatically switch off when the machine is idling.

⚠ Warning

To avoid damaging the floor, do not continue to operate the sweeping machine in the same position.

Note

To achieve an optimum cleaning result, the driving speed should be adjusted to take specific situations into account.

Note

During operation, the waste container should be emptied at regular intervals.

Note

When cleaning surfaces, only lower the roller brush.

Note

Also lower side brush when cleaning along edges.

Note

After switching the program switch from sweeping mode to step 1 (driving), the dust filter is automatically shaken off for a period of approx. 15 seconds. The display remains activated during this period.

Sweeping with roller brush (basic-operating mode)

Note

Two operating modes are possible with the roller brush. In the basic-operating mode, the roller brush is only subjected to a small amount of wear and tear.

→ Set programme switch to step 2. Roller brush is lowered.

Sweeping with roller brush (power-operating mode)

Note

Two operating modes are possible with the roller brush. Power-operating mode increases cleaning performance.

→ Set programme switch to step 2. Roller brush is lowered.



→ Press power button. Control lamp glows green.

Note

The following actions reset the power button automatically:

- Press the power button again.

- Set programme switch to step 1 (driving).

- Switching off the machine.

The indicator lamp goes out and the basic-operating mode is activated.

Note

To sweep up larger items with a height of 60 mm, e.g. soft drink cans, the bulk waste flap must be raised briefly.

Sweeping with bulk waste flap raised

Raising bulk waste flap:

→ Press the pedal for the bulk waste flap forwards and keep pressed down.

→ To lower it, take foot off pedal.

Note

An optimum cleaning result can only be achieved if the bulk waste flap has been lowered completely.

Sweeping with side brushes

To sweep in edge area on right-hand side:

→ Set programme switch to step 3. The right side brush and roller brush are lowered.

To sweep in edge area on left-hand side:

→ Set programme switch to step 4. The left side brush and roller brush are lowered.

To sweep in edge areas on right- and left-hand side:

→ Set programme switch to step 5. Both side brushes and roller brush are lowered.

Note

Roller brush and side brush start operating automatically.

- You can reduce the speed of the side brushes to sweep the fine dust.

Note

The menu item "Setting speed of side brushes" is displayed only when the program switch is at the steps 3, 4 or 5.

→ Select menu item no. 3 "Setting speed of side brushes" by turning the Info button. The currently set value is displayed as a bar.

| Adjustable parameters | min ■■■■ _ _ max | |
|-----------------------|-----------------------|----------------------|
| | Speed of side brushes | minimum speed 20% |

→ Press Info button, the bar display blinks.

→ Reset the parameter by turning the Info button between "min" and "max".

→ Accept modified setting by pressing the Info button or wait till the set value is accepted automatically.

Sweeping dry floors



→ Press wet sweeping button. Indicator lamp goes off.

Sweeping damp or wet floors

→ Press wet sweeping button. Control lamp glows green.

Note

The suction blower switches off. This protects the filter from moisture.

Emptying waste container

Note

Wait until the automatic filter shaking process is finished and the dust has settled before you open or empty the waste container.

⚠ Danger

Risk of injury! When emptying the waste container, care should be taken to ensure that no persons or animals are within its swivelling range.

⚠ Danger

Danger of crushing. Never reach into the rod assembly for the drainage mechanism. Stay away from the area under the raised container.

⚠ Danger

Danger of tipping. Place the machine on an even surface during emptying.

→ Stop the machine.

→ Set programme switch to step 1 (driving).

Note

The container can only be tilted and emptied once a set minimum level has been reached.

Note

A two-handed operation is required to carry out the following steps.

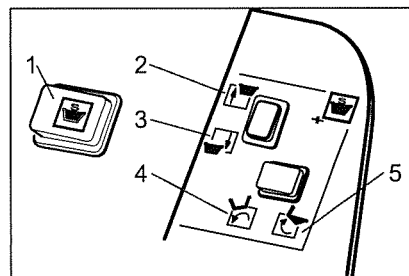


Figure 11

→ Raise waste container. Press button 1 (operator console) and 2 simultaneously.

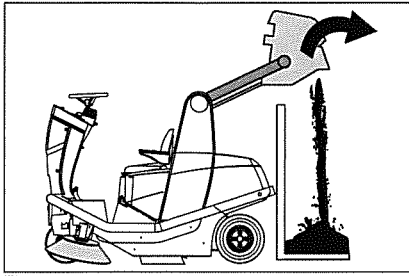


Figure 12

Once the required height has been reached:

- Tip waste container out. Press button 1 (operator console) and 5 simultaneously.
- Tip waste container back in. Press button 1 (operator console) and 4 simultaneously.
- Lower waste container. Press button 1 (operator console) and 3 simultaneously.

Note

The container can only be fully retracted if it is tipped back into its starting position beforehand. In such a case, the symbol "Waste container not tipped" on the control console glows red.

Shutting down

- Set programme switch to step 1 (driving). The side brush and roller brush are raised.
- Turn main key to "0" and remove it.

Note

Once the machine has been switched off, the dust filter is shaken automatically for approx. 15 seconds. The display remains activated during this period.

Transport

⚠ Danger

Risk of injury! When loading or unloading the machine, it may only be operated on gradients of max. 10%. Drive slowly.

- Turn main key to "0" and remove it.
- When transporting in vehicles, secure the appliance according to the guidelines from slipping and tipping over.
- Secure the wheels of the machine with wheel chocks.
 - Secure the machine with tensioning straps or cables.

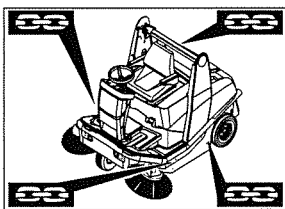


Figure 13

Caution

Observe markings for fixing points on base frame (chain symbols).

Caution

Risk of injury and damage! Observe the weight of the appliance when you transport it.

Shutdown

If the sweeper is going to be out of service for a longer time period, observe the following points:

- Park the sweeper on an even surface.
- Set programme switch to step 1 (driving). The roller brush and side brushes are raised to prevent the bristles being damaged.
- Turn main key to "0" and remove it.
- Lock the sweeper to ensure that it does not roll off.
- Clean the inside and outside of the sweeper.

⚠ Warning

Danger of damage to the machine because of water penetrating into the machine! The machine should not be sprayed using a high pressure water jet.

- Park the machine in a safe and dry place.
- Disconnect battery.
- Charge battery and recharge it approx. every 2 months.

Storing the device

This appliance must only be stored in interior rooms.

Caution

Risk of injury and damage! Note the weight of the appliance in case of storage.

Maintenance and care

Cleaning the inside of the machine

⚠ Danger

Risk of injury! Wear dust mask and protective goggles.

- Open cover and secure it (Diag. 3).
- Clean machine with a cloth.
- Blow through machine with compressed air.
- Close cover.

External cleaning of the appliance

- Clean the machine with a damp cloth which has been soaked in mild detergent.

Note

Do not use aggressive cleaning agents.

Maintenance intervals

Note

The elapsed-time counter shows the timing of the maintenance intervals.

Maintenance by the customer

Daily maintenance:

- Check the sweeping roller and the side brush for wear and wrapped belts.
- Check function of all operator control elements.

Weekly maintenance:

- Check fluid level of battery.

- Check dust filter for sweeping system.
- Check hydraulic lines for leaks.
- Check moving parts for freedom of movement.
- Check the sealing strips in the sweeping area for position and wear.

Maintenance to be carried out every 100 operating hours:

- Check function of seat contact mat.
- Check tension, wear and function of drive belts (V-belt and circular belt).

Maintenance following wear:

- Replace sealing strips.
- Replace roller brush.
- Replace side brush.

Note

For description, see section on Maintenance work.

Note

Where maintenance is carried out by the customer, all service and maintenance work must be undertaken by a qualified specialist. If required, a specialised Kärcher dealer may be contacted at any time.

Maintenance by Customer Service

Maintenance to be carried out after 20 operating hours:

- Carry out initial inspection.

Maintenance to be carried out every 100 operating hours

Maintenance to be carried out every 200 operating hours

Maintenance to be carried out every 300 operating hours

Note

In order to safeguard warranty claims, all service and maintenance work during the warranty period must be carried out by the authorised Kärcher Customer Service in accordance with the maintenance booklet.

Maintenance Works

Preparation:

- Park the sweeper on an even surface.
- Turn main key to "0" and remove it.
- Press emergency-stop button.

General notes on safety

⚠ Danger

Risk of injury! While working around the lift/tilt emptying mechanism, raise the waste container to its highest point and secure.

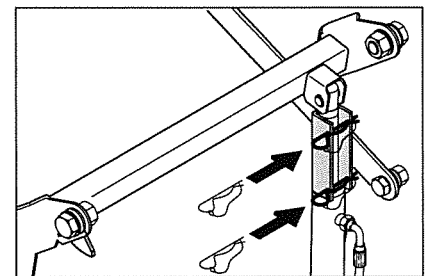


Figure 14

- Insert safety support into the piston rod for the lifting cylinder and secure it.

⚠ Danger

Risk of injury! Allow the machine sufficient time to cool down before carrying out any maintenance and repair work.

Check charging status of battery

| | |
|-------------------------|--------------|
| Battery charging status | E ■■■■ _ _ F |
|-------------------------|--------------|

– Display: 1...5 bars

Battery is charged.

– Display: 0 bars

Battery is discharged. The sweeping mode is switched off automatically.

→ Drive the machine directly to the charging station; avoid any steep gradients in the process.

→ Charge battery.

Check fluid level in the battery and adjust if required

⚠ Warning

Regularly check the fluid level in acid-filled batteries.

→ Unscrew all cell caps.

→ Where fluid level is too low, top up cells to the mark provided with distilled water.

→ Charge battery.

→ Screw in cell caps.

Replacing wheel

⚠ Danger

Risk of injury!

→ Park the sweeper on an even surface.

→ Remove the key.

→ When carrying out repairs on public highways, wear warning clothing when working close to passing traffic.

→ Check stability of ground. Also secure the machine with wheel chock(s) to prevent it rolling away.

Check tyres

→ Check tyre contact face for foreign objects.

→ Remove objects found.

Note

Observe the manufacturer's recommendations. The journey may be resumed providing that the directions supplied by the product manufacturer have been observed. The tyre/wheel change should nonetheless be carried out as soon as possible.

→ Open quick-release locks on the relevant side panel.

→ Remove side panel.

→ Loosen wheel nuts.

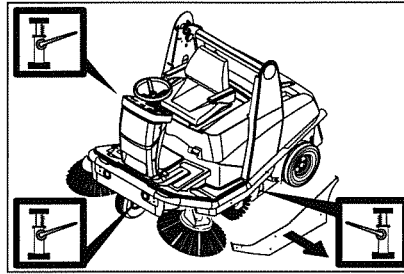


Figure 15

→ Position vehicle jack at the appropriate mounting point for the front or rear wheel.

→ Raise machine using vehicle jack.

→ Remove wheel nuts.

→ Remove wheel.

→ Mount spare wheel.

→ Screw on wheel nuts.

→ Lower machine using vehicle jack.

→ Tighten wheel nuts.

→ Screw on side panel.

Note

Use a suitable commercially available vehicle jack.

Check side brush

→ Park the sweeper on an even surface.

→ Set programme switch to step 1 (driving). Side brushes lift up.

→ Turn main key to "0" and remove it.

→ Check side brush.

Note

The side brush floating mounting adjusts the sweeping track as the bristles wear down. The side brush must be replaced if it becomes too worn.

Replacing side brush

→ Park the sweeper on an even surface.

→ Set programme switch to step 1 (driving). Side brushes lift up.

→ Turn main key to "0" and remove it.

→ Loosen 3 retaining nuts on underside.

→ Clip side brush on to driver and screw on.

Checking roller brush

→ Park the sweeper on an even surface.

→ Set programme switch to step 1 (driving). Roller brush is raised.

→ Turn main key to "0" and remove it.

→ Secure the machine with wheel chock(s) to prevent it from rolling away.

→ Remove belts or cords from roller brush.

Replacing roller brush

Replacement is due if a visible deterioration in sweeping performance caused by bristle wear is evident.

→ Park the sweeper on an even surface.

→ Set programme switch to step 1 (driving). Roller brush is raised.

→ Turn main key to "0" and remove it.

→ Secure the machine with wheel chock(s) to prevent it from rolling away.

→ Open quick-release locks on the right-hand side panel.

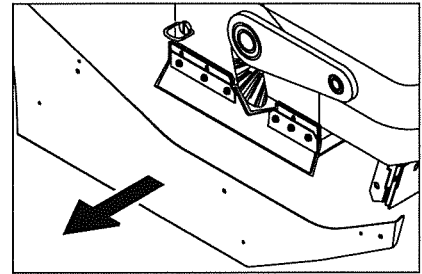


Figure 16

→ Remove side panel.

→ Unscrew and withdraw bolt on the roller brush swinging arm.

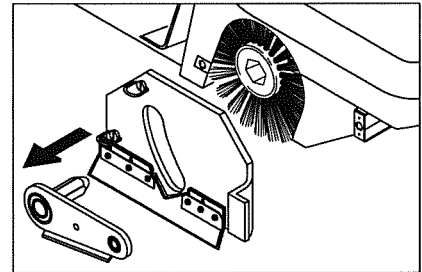


Figure 17

→ Pull out roller brush swinging arm.

→ Remove lifting rod assembly from pins.

→ Open quick-release locks and remove cover.

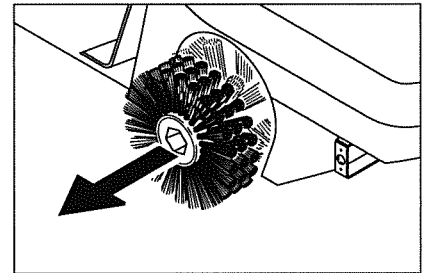


Figure 18

→ Pull out roller brush.

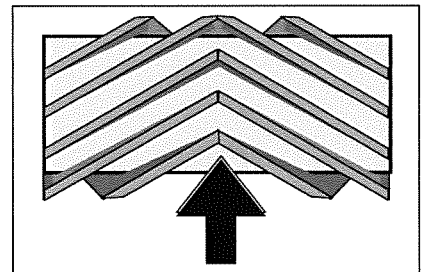


Figure 19

Installation position of roller brush in direction of travel

→ Push new roller brush into the roller brush housing and onto the drive pin.

Note

When installing the new roller brush, ensure correct positioning of the bristle assembly.

→ Position roller brush cover.

→ Push lifting rod assembly on to pins.

→ Push roller brush mount on to the pins.

→ Tighten bolt on the roller brush mount.

→ Position retaining screws for the roller brush cover and screw home.

→ Screw on side panel.

Note

Once the new roller brush has been installed, the sweeping track must be readjusted.

Check and adjust roller brush sweeping track

Note

To do this, the machine must be in basic-operating mode. The power button indicator lamp should not light up.

- Set programme switch to step 1 (driving). The side brush and roller brush are raised.
- Drive sweeper on to a smooth, even surface covered with a visible layer of dust or chalk.
- Lower roller brush and allow it to briefly rotate.
- Raise roller brush.
- Press pedal which raises bulk waste flap and keep pressed.
- Drive machine backwards.

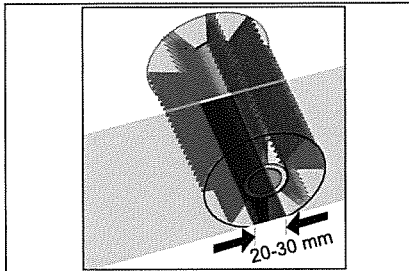


Figure 20

The sweeping track should have an even rectangular shape which is between 20 and 30 mm wide.

Note

The shape of the sweeping track must not be trapezoidal. If so, consult Customer Service.

Note

The sweeping track can be adjusted using a handwheel in basic-operating mode.

- Open cover and secure it (Diag. 3).

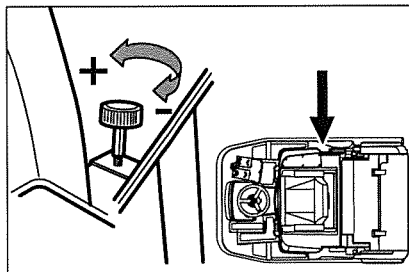


Figure 21

Enlarging sweeping track:

- Turn the adjustment screw in an anti-clockwise direction (+).

Reducing sweeping track:

- Turn the adjustment screw in a clockwise direction (-).

Note

In power-operating mode, the sweeping track is automatically adjusted due to the floating mounting for the side brush as the bristles wear down. The roller brush must be replaced if it becomes too worn.

Adjusting and replacing sealing strips

- Park the sweeper on an even surface.
- Set programme switch to step 1 (driving). Roller brush is raised.
- Turn main key to "0" and remove it.
- Secure the machine with wheel chock(s) to prevent it from rolling away.
- Open the side panel quick-release locks on both sides.
- Remove side panels.
- **Front sealing strip**
- Loosen retaining nuts for the front sealing strip (1) slightly (to replace, unscrew).
- Screw on new sealing strip without fully tightening the nuts.

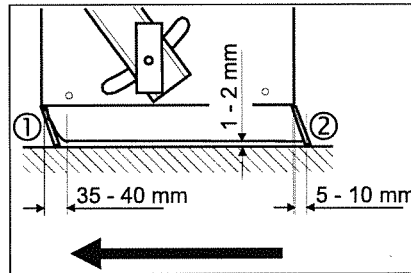


Figure 22

- Adjust sealing strip.
- Set the distance of the sealing strip to the floor so that the bottom edge trails behind at a distance of between 35 and 40 mm.
- Tighten nuts.
- **Rear sealing strip**
- Set the distance between the sealing strip and the floor so that the bottom edge trails behind at a distance of between 5 and 10 mm.
- If worn, replace.
- Remove roller brush.
- Unscrew retaining nuts for rear sealing strip (2).
- Screw on new sealing strip.

■ Side sealing strips

- Slightly loosen retaining nuts for the side sealing strip (to replace, unscrew).
- Screw on new sealing strip without fully tightening the nuts.
- To set the floor clearance, insert a sheet with a thickness of between 1 and 2 mm under the sealing strip.
- Adjust sealing strip.
- Tighten nuts.
- Screw on side panels.

Replacing dust filter

⚠ Danger

Empty waste container before replacing dust filter. Wear a dust mask when working around the dust filter. Observe safety regulations on the handling of fine particulate material.

- Slightly raise the waste container and tip it a little.

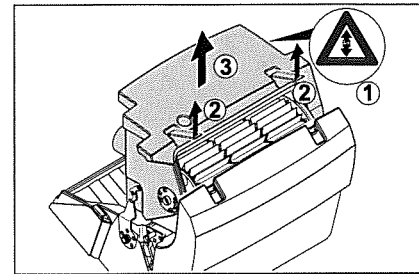


Figure 23

- Disconnect filter motor from power supply (1).
- Disconnect the plug connection of the limit switch.
- Loosen the screw joint of the filter agitator motor.
- Open catches (2).
- Slightly tip the filter box backwards and take it out (3).

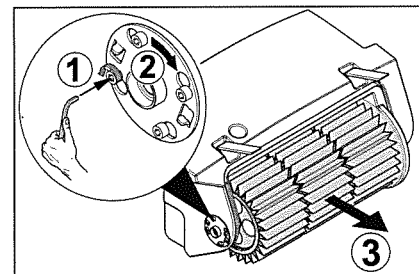


Figure 24

- Loosen filter mount (1), turn (2) and pull out.
- Remove louver filter (3).
- Insert new filter.
- Make sure driver engages with grooves on drive side.
- Snap filter mount back on and tighten screws.

Note

Make sure when installing the new filter that the fins are not damaged and the filter case seal does not get jammed.

Replacing filter case seal

- Lift filter case seal out of groove in the cover.
- Insert new seal.

Checking drive belt

⚠ Danger

The engine requires approx. 3-4 seconds to come to a standstill once it has been switched off. During this time, stay well clear of the working area.

- Turn main key to "0" and remove it.
- Open cover and secure it (Diag. 3).

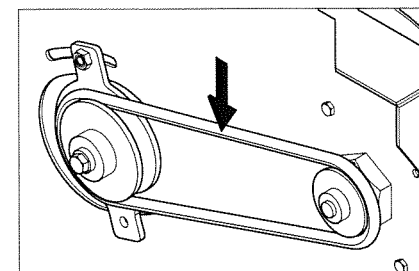


Figure 25

- Check tension of drive belt and V-belt of the suction blower, also check for wear or damage.

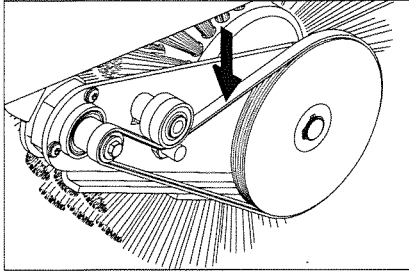


Figure 26

- Check tension of drive belt and V-belt of the roller brush also check for wear or damage.

Check cup seal

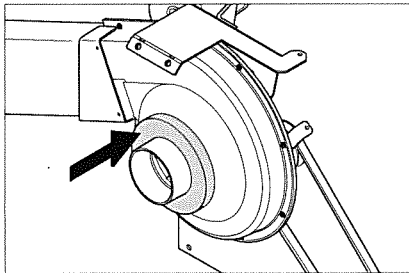


Figure 27

- Check the cup seal at the suction blower regularly to see that it sits properly.

Replacing electric bulb

- Turn main key to "0" and remove it.
- Remove side brush.

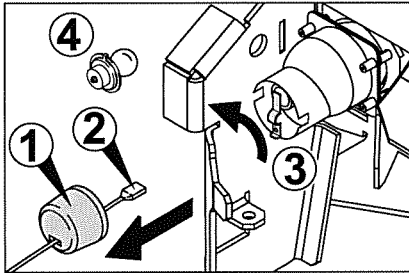


Figure 28

- Remove splash guard (1).
- Disconnect plug (2).
- Twist contact plate to one side (3).
- Remove defective bulb (4).
- Insert new bulb.
- Twist contact plate back into original position.
- Connect plug.
- Mount splash guard.
- Screw on side brush.

Replacing fuses

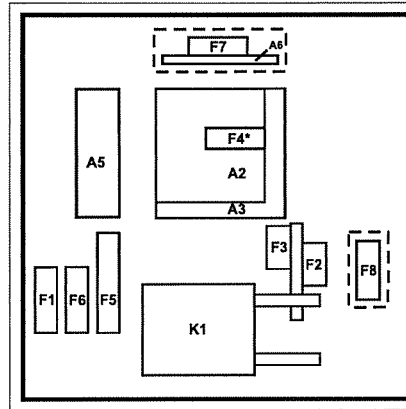


Figure 29

* covered by A2

The operator may only replace the following vehicle flat fuses having the following values:

- 7.5 A (F1) – Fuse - CPU module head.
- 20 A (F6) – Fuse - accessories module.
- 50 A (F5) – Fuse - hydraulic pump.
- 15 A (F8) – Fuse - left side brush (optional).
- 10 A (F7) – Fuse - filter cleaning module (optional).

The drive control/electronic system is installed behind the front panel. To replace a fuse, the front panel must be removed.

- Loosen screws on both sides of the panel.

Note

The assignment of fuses is indicated on the inside of the front panel. Only use fuses with identical safety ratings.

- Replace defective fuses.
- Replace front panel.

Pole fuses

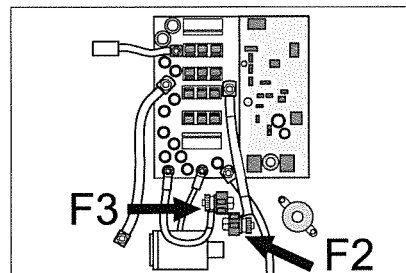


Figure 30

- Replace defective fuse.

Note

Defective pole fuses may only be replaced by a Kärcher service technician or an authorised expert. If these fuses are defective, then check the usage conditions and the entire control system.

Accessories

Installation set suction hose

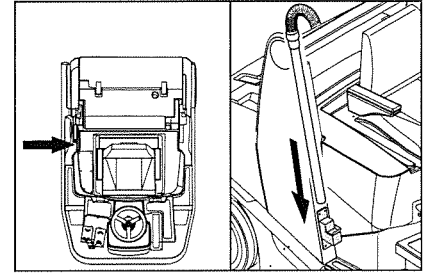


Figure 31

- Remove suction hose from holder.
- Suck in the dirt.
- Insert the suction hose in the holder.

Note

After completing the suction, ensure that the tube of the suction hose lies on the floor of the holder.

Troubleshooting

⚠ Danger

Risk of injury! Before carrying out any tasks on the machine, set the main key to "0" and remove it. Press emergency-stop button.

In case of faults that cannot be remedied using the table below please contact the customer service.

Fault indication

The display shows the existing faults at intervals of 4 seconds.

Example:

- Fault driving function F1/022

If the faults continue to be displayed on the console even after 4 seconds, then proceed as follows:

- Release emergency-stop button.
- Set the key switch to "0" (switch off the machine).
- Wait till the text on the display has disappeared.
- Set the main switch again to "1" (switch on the machine). Carry out the troubleshooting measures in the given sequence only if the fault occurs again. At such times, always bring the main switch to the "0" position and ensure that the emergency-stop button is depressed.
- If the fault cannot be repaired, call customer service and quote the fault code(s) (F1/022 in the example).

Faults with display

| No. | Display | | Cause | Remedy |
|-----|---|-------------------------------------|--|--|
| 1 | Seat switch broken | seat switch open | Seat contact switch has not been activated. | The machine operates only if the operator is seated on the seat. |
| 2 | Release accelerator! | release gaspedal? | The gas pedal is depressed when the main switch is on. | Take your foot off the accelerator before switching on the main switch. If the fault recurs, call customer service. |
| 3 | battery empty -> charge! | battery empty -> charge! | The discharge level of the battery has been reached. Cleaning units can no longer be operated. Drives and lighting can be activated. | Drive the machine to the charging station and charge the battery. |
| 4 | battery totally discharged! | battery totally discharged! | More than the permissible battery capacity has been utilised. All units will be switched off. Machine is no longer ready for operations. | Manually unlock the front wheel brake. (Caution! The appliance does not have any braking effect now!) If unlocking is not possible, then call customer service. Move the machine slowly to the charging station. Charge battery. |
| 5 | Operating hours set to 0! | operating hours set to 0! | Internal machine error while saving the number of operating hours. During restart, the operating hours are always reset to 0. | None, for information. |
| 6 | Module temperature high! Let cool down! | moduletemp. high let cool down! | Controls are too hot. | Set the main switch to "0". Wait at least 15 minutes before turning the main switch to "1" again. |
| 7 | Drive motor hot! Let it cool down! | drive motor hot! let cool down! | Drive motor has got overheated due to a steep climb or locked brake. | Set the main switch to "0". Wait at least 15 minutes before turning the main switch to "1" again. If possible, use the unit only on level surfaces. Check immobilizing brake, if required. |
| 8 | Contactors open!! Emergency-stop button?? | contactors open!! emergency button? | Press emergency-stop button. | Release emergency-stop button by turning. Set the main switch to "0". Wait until display goes off. Set the main switch back to "1". |
| 9 | Shutdown, missing bus supply | Shutdown, missing bus supply | | Inform Customer Service |

Faults without display on the console

| Fault | Remedy |
|---|---|
| Appliance cannot be started | Sit on the driver seat, activate seat contact mat |
| | Release emergency-stop button |
| | Plug in the battery plug (KM 120/150 R Bp) |
| | Set main switch to "1" |
| | Check fuse F1, replace if required. |
| | Check battery; charge it, if needed |
| | Inform Kärcher Customer Service. |
| Machine is not sweeping properly | Check roller brush and side brushes for wear, replace if necessary. |
| | Check function of bulk waste flap |
| | Check sealing strips for wear, adjust or replace as required |
| | Adjust roller mirror |
| | Check hydraulic system (sweeping) for leaks. |
| | Inform Kärcher Customer Service. |
| Dust gathers in the machine | Empty waste container |
| | Check suction fan drive belt |
| | Check sealing cover on suction fan |
| | Check dust filter, clean or replace |
| | Check filter case seal |
| | Check sealing strips for wear, adjust or replace as required |
| Poor cleaning performance at edges | Replace side brush |
| | Check sealing strips for wear, adjust or replace as required |
| | Inform Kärcher Customer Service. |
| Side brush or roller brush switch-on operation is not working | Check fuse F5 of hydraulic unit |
| | Check hydraulic system (sweeping) for leaks. |
| | Inform Kärcher Customer Service. |
| Side brush or roller brush is not being lowered | Check fuse F5 of hydraulic unit |
| | Inform Kärcher Customer Service. |
| Insufficient vacuum performance | Check filter case seal |
| | Check sealing cover on suction fan |
| | Insert lamella filter correct; see Changing dust filter |
| Roller brush does not turn. | Remove belts or cords from roller brush |
| Left side brush (optional) does not work | Test automatic cutout F8 and reset if necessary (press red button) |
| * The fuses are located in the flat insertion sockets on the wiring plate and can be accessed by opening the front panel. | |

Technical specifications

| | | KM 120/150 R Bp / KM 120/150 R Bp Pack |
|---|-------------------|---|
| Machine data | | |
| Length x width x height (without roof cover) | mm | 1900 x 1230 x 1400 |
| Length x width x height (with roof cover) | mm | 1900 x 1230 x 2010 |
| Length x width x height (with roof cover and rotating beacon) | mm | 1900 x 1230 x 2205 |
| Unladen weight (without attachment sets) | kg | 800 |
| Permissible overall weight | kg | 1390 |
| Drive speed (max.) | km/h | 8 |
| Max. sweeping speed | km/h | 6 |
| Max. climbing performance (appliance without protective hood) | % | 12 |
| Max. climbing performance (appliance with protective hood) | % | 10 |
| Roller brush diameter | mm | 300 |
| Roller brush width | mm | 850 |
| Side brush diameter | mm | 600 |
| Surface area, max. | m ² /h | 8700 |
| Working width without side brushes | mm | 850 |
| Working width with 1 side brushes | mm | 1200 |
| Working width with 2 side brushes | mm | 1450 |
| Volume of waste container | l | 150 |
| Protection type, drip-proof | -- | IPX 3 |
| Motors | | |
| – Drive motor | | |
| Type | -- | DC permanent solenoid motor for front and reverse drive |
| Type | -- | Wheel hub motor in front wheel |
| Voltage | V | 24 |
| Rated current | A | 55 |
| Rated power | W | 1000 |
| Type of protection | -- | IP 44 |
| Speed | -- | Phaseless |
| – Fan and roller brush motor | | |
| Type | -- | DC permanent solenoid motor |
| Type | -- | B14 |
| Voltage | V | 24 |
| Rated current | A | 35 |
| Rated power | W | 600 |
| Type of protection | -- | IP 20 |
| Speed | 1/min | 3500 |
| – Side brush motor | | |
| Type | -- | DC permanent solenoid motor |
| Type | -- | Drive motor (angular drive) |
| Voltage | V | 24 |
| Rated current | A | 5 |
| Rated power | W | 100 |
| Type of protection | -- | IP 44 |
| Speed | 1/min | 70 |
| Battery (only KM 120/150 R Bp Pack) | | |
| Type | -- | 24V 4 PzS 240 l |
| Capacity | Ah | 240 |
| Charging time for fully discharged battery | h | 10...15 |
| Operating time after frequent charging | h | ca. 2,5 |
| Charger (only KM 120/150 R Bp Pack) | | |
| Mains voltage | V~ | 230 |
| Output voltage | V | 24 |
| Output current | A | max. 30 |
| Fuses | | |
| Fuse drive module (F2) | A | 180 |
| Fuse Clean module (F3) | A | 100 |
| Fuse Hydraulic pump (F5) | A | 50 |
| Fuse Accessories module (F6) | A | 20 |
| Fuse CPU head module (F1) | A | 7,5 |

| | | |
|---|------------------|---|
| Tyres | | |
| Size, front | -- | 4.00-4 |
| Size, rear | -- | 4.00-8 |
| Brake | | |
| Service brake | -- | electronic |
| Parking brake | -- | Windshield brake, operated electrically |
| Filter and vacuum system | | |
| Filter surface area, fine dust filter | m ² | 9 |
| Category of use – filter for non-hazardous dust | -- | U |
| Nominal vacuum, suction system | mbar | 12 |
| Nominal volume flow, suction system | l/s | 50 |
| Working conditions | | |
| Temperature | °C | -5 and +40 |
| Air humidity, non-condensing | % | 40 - 90 |
| Values determined as per EN 60335-2-72 | | |
| Noise emission | | |
| Sound pressure level L _{pA} | dB(A) | 77 |
| Uncertainty K _{pA} | dB(A) | 2 |
| Sound power level L _{WA} + Uncertainty K _{WA} | dB(A) | 94 |
| Machine vibrations | | |
| Hand-arm vibration value | m/s ² | <2,5 |
| Seat | m/s ² | 0,16 |
| Uncertainty K | m/s ² | 0,2 |

Warranty

The warranty terms published by the relevant sales company are applicable in each country. We will repair potential failures of your appliance within the warranty period free of charge, provided that such failure is caused by faulty material or defects in manufacturing. In the event of a warranty claim please contact your dealer or the nearest authorized Customer Service centre. Please submit the proof of purchase.

CE declaration

We hereby declare that the machine described below complies with the relevant basic safety and health requirements of the EU Directives, both in its basic design and construction as well as in the version put into circulation by us. This declaration shall cease to be valid if the machine is modified without our prior approval.

Product: Ride-on vacuum sweeper
1.511-xxx

Relevant EU Directives
2006/42/EC (+2009/127/EC)
2006/42/EC (+2009/127/EC)
2004/108/EC
2000/14/EC

Applied harmonized standards

EN 60335-1
EN 60335-2-29
EN 60335-2-72
EN 55014-2: 1997 + A2: 2008
EN 55014-1: 2006 + A1: 2009
EN 61000-3-2: 2006 + A2: 2009
EN 61000-3-3: 2008
EN 62233: 2008


Applied national standards:
CISPR 12


Applied conformity evaluation method

2000/14/EC: Appendix V
Sound power level dB(A)
KM 120/150 R BP
Measured: 92
Guaranteed: 94

5.957-695

The undersigned act on behalf and under the power of attorney of the company management.


H. Jenner
CEO


S. Reiser
Head of Approval

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