



Sweeper40 Floor Sweeper Instruction Manual

We aim to provide safer, higher-end and more user-friendly cleaning equipment with the help of the newest technology and innovative ideas.

Preface

This instruction manual contains all the information that you need to use and maintain the machine. Please read it carefully before getting started. Only with correct operation and regular maintenance can the machine be kept in its best working condition.

This instruction manual is an important part of the product and should be kept together with the machine.

In this manual we use illustrations to show the components and functions of the machine. It is possible that some of them contain details that are slightly different from those of yours. However, all the instructions presented here still apply to your product and should be followed strictly during the operation.

Some components of the product may be harmful or dangerous and we have tried our best to include them in this manual. **It is the user's obligation to pay special attention to them during the work.** However, since it is impossible for us to point out all potential dangers, we expect you to be extremely cautious during the work to protect the machine, yourself and other people in the working area.

Only accessories from the original manufacturer can be used on the machine. Using accessories from other sources may lead to low working efficiency or even accidents in extreme cases.

We usually modify or improve our products to meet the latest market demand. However, this is **NOT** suitable for machines that have been sold. We will **NOT** be responsible for any injury or loss caused due to the user's improper operation either.

If you have any question, complaint or suggestion, please feel free to contact us and we will be at your service with all our knowledge and enthusiasm.

We wish you a pleasant experience with our product!

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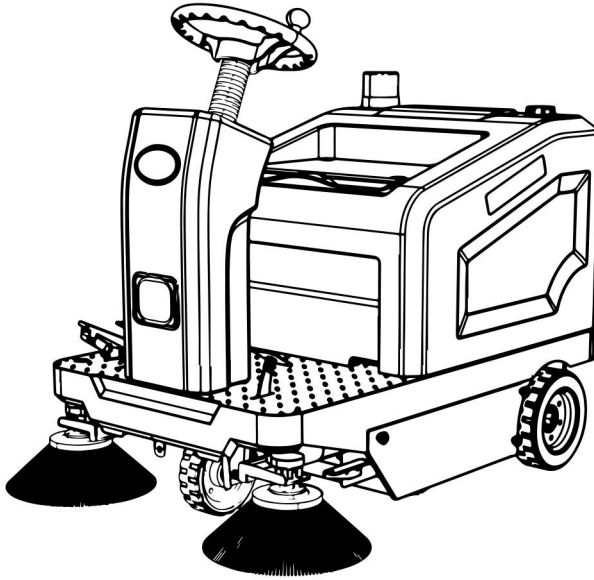
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Technical parameters

Category	Parameter	Category	Parameter
Cleaning width (In)	40	Suction motor (Hp)	0.48
Trash bin capacity (Gal)	16	Main brush motor (Hp)	0.67
Battery capacity (V/Ah)	12V/67Ah*4	Net weight (lb.)	634
Traction motor (Hp)	0.87	Gross weight (lb.)	807
Side brush motor (Hp)	0.12*2	Package dimensions (In)	61 * 37.8 * 46.46

Chapter 1 General description

1.1 Contents and purposes

- Potential risks concerning the use of the machine are listed in the following sections. Since most accidents take place when safety rules are ignored, it is necessary that you read them carefully and take precautions before getting started. The best guarantee against any accident is a careful and cautious user, which might be better than other precautions available. When using the machine, pay special attention to the people in the working area, especially children.

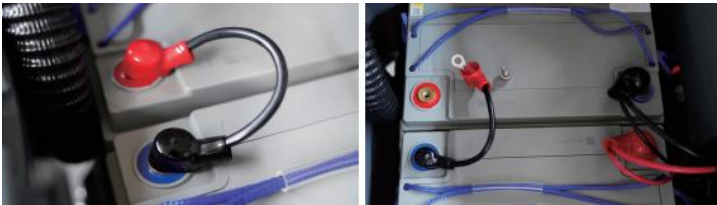
1.2 General instructions

- Before any maintenance and repair, turn off the power and remove the key from the general switch.
- The machine can only be operated by qualified personnel. Children and disabled people are strictly forbidden to use it.
- Keep the battery away from sparks, flames and smoke.
- Do **NOT** use the machine in places with dangerous, flammable or explosive gas, liquids or water vapor.
- The machine can be used to clean regular garbage. It must **NOT** be used to clean silk ropes, belts, high-temperature sundries, accumulated water, or flammable, toxic and harmful materials, so as to avoid entanglement and burning of the brushes.
- Keep loose clothing, hair, fingers and other parts of your body away from the air vent and any moving part of the machine.
- Turn off the power when you are not using the machine.
- Do **NOT** use the machine in slopes with an inclination greater than 15 degrees.
- Do **NOT** smoke when charging the battery.
- An area can be swept a couple times back and forth if there is too much trash.
The machine should be stored at a temperature between 32°F and 104°F.
- The temperature of the working area should be between 32°F and 104°F, and the humidity should be between 30% and 95%.
- Do **NOT** use the machine as a means of transportation.
- When the machine is not moving, stop the brushes from turning to avoid damage.
- In the event of a fire, use a **POWDER** extinguisher rather than water.
- Please perform regular maintenance to keep your machine function

- If you need to replace some wearable parts, you can purchase them from the original manufacturer or an authorized distributor.

1.3 Safety requirements for batteries

- The battery must **NOT** be in a low voltage state; charge the battery **as soon as possible** when the voltage is below **43.2 V**;
- To avoid electric leakage, keep the battery dry and clean;
- Do **NOT** put metallic objects (such as tools) on the battery to prevent it from being short-circuited and burned;
- The charging room should be well ventilated;
- When the key is in the “ON” position, do NOT install or remove the battery;
- Before installing or removing the battery, disconnect first the negative wire (-) and then the positive wire (+). When rewiring, pay special attention to the positive and negative terminals of the battery, as wrong connection would probably damage electrical components;
- Avoid direct contact between the positive and the negative electrodes, because it would cause a large current short circuit, high heat or even a fire.



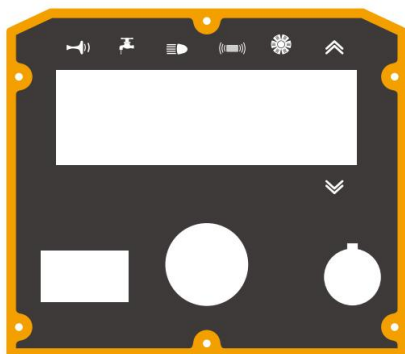
1.4 General safety requirements

- In addition to what is mentioned in this manual, the general safety requirements must also be observed. Even if you have used a similar product before, we recommend that you read this manual carefully so that you can save much time as well as take precautions to protect the machine and yourself. It is vital that you become familiar with all the accessories and components before turning on the machine. Read our instructions carefully so that you will not be confused when you get started.

Chapter 2 Operating the machine

2.1 Buttons and pedals of the machine

2.1.1 Key controlling buttons of the machine



The sweeping switch has 3 gears:

Front gear: The main brush motor, side brush motor, vacuum motor and push rod motor will be started simultaneously, and the main brush and side brush will automatically be lowered to start cleaning.

Middle gear (Debug gear): The main brush motor, side brush motor, and vacuum will stop rotating, and the main brush and side brush will not be raised. The height of the main brush and side brush can be adjusted.

Reset gear: The push rod motor will be lifted, and the main brush and side brush will be raised.

Forward Reverse has 3 gears:

Forward gear: Step on the accelerator pedal to drive the sweeper forward.

Middle gear (Pause gear): Stop the sweeper from working.

Reverse gear: Step on the accelerator pedal to drive the sweeper backward.

Dust vibration switch

The dust vibration switch is a self-locking one. When the sweeper operation is completed, turn the cleaning switch to the reset position and click once to turn on the dust vibration motor; click one more time to turn off the dust vibration motor.

Sprinkler valve: before turning on the sprinkler, make sure that the sprinkler valve is open; when the sprinkler is turned off, close the valve to prevent splashes/leaking.

- ① Accelerating pedal
- ② Brake pedal
- ③ Front baffle lifting pedal
(step on this pedal when you need to pick up large garbage)



2.1.2 Adding water to the water tank

- Before using the machine, add clean water to the clean water tank. Pay attention to the water quality so that the waterway will not be blocked.

2.2 Operating the machine

2.2.1 Before the operation

- Before getting started, make sure that no doors or covers are open and the garbage can is correctly closed. If the machine does not work after being transported, go over chapter 4 in this manual to find out the problem.

2.2.2 Power display

- Insert the key in the steering wheel console and turn the start switch clockwise to the "ON" position. The current voltage of the battery will be displayed in three seconds. If the voltage is lower than 43.2 V, charge the battery first.

2.2.3 Starting the machine

- Be seated on the driver's seat.
- Step on the brake pedal and turn the start key to the "ON" position.
- Move the machine to the work area using the steering wheel & pressing the accelerating pedal. Push the forward/backward toggle forward and the machine will move forward. Pull the toggle backward and the machine will

move backward.

- The moving speed can be adjusted from 0 to the maximum value by pressing the accelerator pedal.
- Press the sweeping button to start work, and use the steering wheel, accelerator pedal and forward/backward toggle to move the machine.
- The garbage can must be closed during the sweeping work.
- The sweeper applies automatic and one-button operation. When the sweeping button is turned on, all motors (including the main brush motor, side brush motor, and ventilator motor) will automatically start, and the main brush and side brushes will automatically descend.

2.2.4 Stopping the machine

- Release the accelerator pedal to stop the machine.
- Press the stop button and all sweeping functions are stopped, and the main brush and side brushes are raised.
- Turn the key to the "OFF" position.
- Release the accelerator pedal to stop the machine.

2.3 Cautions during the operation

2.3.1 General instructions

- When the brushes are rolling, do **NOT** leave the machine in the same place for a long time, because this would leave unnecessary marks on the ground.
- If you need to remove large light garbage, you can lift the front baffle so that the garbage can be recycled into the garbage can. Note that when the front baffle is lifted, the suction efficiency of the machine will be reduced.
- In order for the machine to achieve its best cleaning effects, the filter screen should be vibrated regularly: stop the machine, press the dust-vibrator button to start the dust-vibrator motor and keep it operating for one minute.
- During the work, the filter screen should be vibrated every 30 minute on average (depending on the working area)
- The machine cannot collect garbage when the filter screen is blocked or the garbage can is full. Do NOT use the machine on the damp ground to prevent the filter screen from being damaged.
- The garbage can must be emptied every time after the work is finished.
- Please stop the machine after using it for two consecutive hours and let it cool down for about 15-20 minutes to prolong the life of your batteries, motors, and other electrical parts.

2.3.2 Empty the garbage can

- Release the pedal to stop the machine.
- Open the buckle of the garbage can.
- Pull the garbage can downward, drag it out and take out the garbage.
- Put the garbage can back in the machine and fasten the buckle.

2.3.3 Push the machine

- Please push the machine when it is turned off or in the event of a malfunction.
- Make sure that the speed is not greater than 3 mph.

2.3.4 Storage of the machine

- If the machine won't be used within 30 days, please disconnect the battery and store it in a clean and dry place. Batteries need to be charged every other week to avoid deep discharging which would result in battery failure.
- All brushes should be raised when sweeping is not taking place to prevent brush deformation and unnecessary friction.
- After cleaning, turn the cleaning switch to the reset position, press the dust vibration switch to shake off the dust on the filter, and then remove the garbage in the trash can.
- Do not park the sweeper on a slope.
- Turn off all functions and power before storing or charging the machine indoor.

Chapter 3 Regular inspection and replacement of damaged parts

3.1 Regular inspection

Items		Interval (h)				
		4	50	100	200	500
1	Battery power (see the meter on the control panel)	√				
2	Motor carbon brush (2000h service life generally)					√
3	Whether the main brush is entangled	√				
4	All the function buttons on the control panel			√		
5	Bristle wear (replace it when wear degree arrives 70%)		√		√	
6	Whether there are impurities in the filter		√	√		
7	Whether the nozzle joint is leaking water	√				
8	Whether the chain is loose		√			
9	Whether the battery wiring is loose		√			

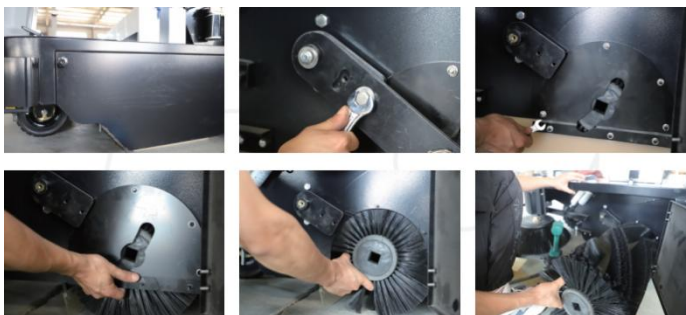
3.2 Replacement and installation of main brush

Step 1: Make sure the sweeper is turned off and stored on a flat surface before replacing any part.

Step 2: Open the right-side baffle of the machine and use an open-end wrench to remove the main brush rocker arm, sealing plate and mudguard bracket fixing nuts.

Step 3: Pull out the worn main brush and replace it with the new one. Install the sealing plate nuts first, then the mudguard bracket nuts, and finally the rocker arm nuts.

Step 4: Press the sweeping function, the main brush, side brush, vacuum motor, and push rod motor will start to work simultaneously; the main brush and side brush will be lowered automatically. Remove the right baffle, check the rotation status of the main brush & adjust the bolt on the rocker arm accordingly if needed before putting back the baffle and start cleaning.



3.3 Adjustment and replacement of the side brushes

The side brushes can sweep out garbage in dead corners so that the cleaning efficiency of the machine can be boosted.

3.3.1 Adjustment of the side brushes

Use the adjusting nuts on both sides to adjust the position of the side brushes.



3.3.2 Replacement of the side brushes

- Step 1: loosen the Allen screws of the side brushes;
- Step 2: remove the screws shown in the picture and take out the old brush(es);
- Install the new brush(es) by reversing the steps.

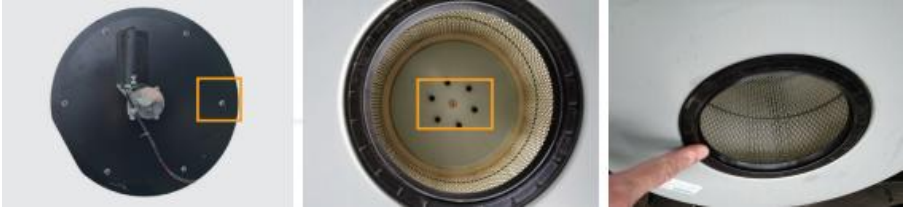


Note: use gloves to protect your hands from being hurt.

3.4 Replacement of the filter element

The filter is used to remove dust and small particles. When dust and high-density garbage such as leaves cannot be cleaned, the filter element needs to be replaced.

- Remove the nuts on the panel of the dust-vibrator motor and pull out the filter element.
- Remove the screws inside the filter element and replace the filter element.
- Apply lubricating oil to the seal of the new filter element.
- Install the filter element in the reverse order.



3.5 Adjustment of the height of the baffles

The main function of the baffles is to concentrate the suction force of the sweeper. If the side and the rear baffles are off the ground, garbage may be missed during the cleaning.

- Take out the garbage can.
- Check if the baffles are worn out or damaged. When the gap between the baffle and the floor is larger than 0.8 in or the crack is larger than 0.4 in, replace the corresponding baffle.
- Check whether the height difference between the baffles is less than 0.1 in. If it is not within this range, adjust the height of the corresponding baffle.

3.6 Replacement of the fuses

- When an electrical unit is overloaded or the current is too large, the corresponding fuse is blown automatically to protect the unit and the machine.



3.7 Removal and installation of the garbage can

- Make sure that the machine is powered-off.
- Open the buckle of the garbage can, pull the garbage can downward, drag it out and take out the garbage.
- Align the mouth of the empty garbage can with the sweeper, and slowly push it forward.
- Fasten the buckle.



3.8 Maintenance of the batteries

The sweeper is powered by four batteries of 12 V and the total system voltage is 48 V. Please follow the instructions below while dealing with the batteries.

- During the work, the battery voltage will gradually decrease; when the last bar of the voltmeter is flashing, please charge the batteries immediately.
- Before maintaining the batteries, please wear gloves to avoid direct contact with acid substances.
- Check regularly whether the battery cables are worn or loose, and replace them when necessary.
- The ends of the batteries should be kept clean, and there should be no dust on the battery surfaces, or the batteries may be burnt.

Alerts

- Charge the batteries right after using the machine when needed to keep them in good condition. Deep discharge is strictly prohibited, as it would reduce the capacity of the batteries and shorten their service life.
- When charging the batteries, begin by connecting the charger to the battery box and then plugging it into the mains. Once the batteries are fully charged, unplug the cable from the mains first, and then from the battery box.

3.9 Cleaning of the filter screen

- Remove the filter cover, take out the filter screen and wash it with clean water.



3.10 Cleaning of the filter element of the vibrator

- Open the board of the machine and remove the fixing nuts of the baffle, and take out the filter element.



Chapter 4 Common problems and solutions

Fault	Reason	Solution
Main brush not working	Burnt main brush fuse	Replace the fuse
	Burnt main brush motor	Replace the motor
	Motor thermal overload protection	Wait 5-10 minutes for the motor to cool down and then reset it to start
	DC contactor burned out	Replace the DC contactor
Side brush not working	Burnt side brush fuse	Replace the fuse
	Burnt side brush motor	Replace the motor
	Motor thermal overload protection	Wait 5-10 minutes for the motor to cool down and then reset it to start
	DC contactor burned out	Replace the DC contactor
Vacuum motor not working	Burnt vacuum motor fuse	Replace the fuse
	Burnt vacuum motor	Replace the motor
	DC contactor burned out	Replace the DC contactor
	Motor thermal overload protection	Wait 5-10 minutes for the motor to cool down and then reset it to start
The main brush, side brush and suction motor not working at the same time	DC contactor burned out	Replace the DC contactor
	Motor thermal overload protection	Wait 5-10 minutes for the motor to cool down and then reset it to start
Water pump not working	Burnt water pump fuse	Replace the fuse
	Burnt water pump motor	Replace the motor
The water pump is working, but the spray performance is poor	Nozzle clogging	Clean the nozzle
	Filter clogging	Clean the filter
Warning light not working	Key switch not turning on	Turn the key switch from "OFF" to "ON"
	Fuse of key switch burned out	Replace the fuse
	Dead battery	Use a multimeter to measure whether the total battery voltage is 48V (42-52.8V)
	Key switch damaged	Replace the key switch
Moving failure	Controller damaged	Replace the controller (Broadcast controller failure)

	Accelerators pedal damaged	Replace the accelerator pedal (Broadcast steering wheel error)
	Walking motor damaged	Replace the walking motor (Broadcast Hall error)
The whole machine does not work, the key switch makes a sound	Walking motor damaged	Use a multimeter to measure whether the total battery voltage is 48V (42-52.8V)
	Main DC contactor burned out	Replace the main DC contactor
The whole machine does not work	Key switch damaged	Replace the key switch
	Dead battery	Use a multimeter to measure whether the total battery voltage is 48V (42-52.8V)
	Main DC contactor burned out	Replace the main DC contactor
Poor cleaning performance	Filter element got clogged	After each operation, the dust on the filter element must be cleaned
	Broken sealing strip of the trash can	Replace the sealing strip
	Broken front baffle	Replace the baffle
	Entangled main brush	Remove the entanglements
	Trash can buckle got loose	Tighten the screws
Chain loosing	Loose ejector pin bolt under the driving axle	Raise the ejector pin to tighten the chain

Chapter 5 Maintenance

Regular maintenance is needed to keep the machine in its best condition, as well as to extend its service life and ensure the operator's safety. The time interval of maintenance varies under different circumstances. Please contact a professional if you need more information or suggestions.

Prior to performing any maintenance, make sure that the machine is turned off and the key is removed.

5.1 Operating conditions

- Temperature: 14°F ~ 104°F
- Relative humidity: 30% and 95%
- No electricity-conductive and explosive gases or dust are presented
- No corrosive gases or vapor are presented
- This machine can be used in outdoor or outdoor settings but needs to be stored indoor.

5.2 Maintenance timetable

Items	Upon receiving	Every 10 h	Every 50 h	Every 100 h	Every 200 h	Every 500 h
Height of the brush plates						
Are the brush plates entangled?						
Belt of the main brush						
Dust suction motor and filter element						
Baffles						
Dust-vibrator motor						
Are all nuts and screws tightened?						
Degree of wear of the brake						
Degree of wear of the brushes						
Are all the driving chains tightened?						

Chapter 6 After-sale services

6.1 General description

- One-year warranty will be honored on the non-wearable parts. Users can easily purchase the wearable parts (e.g. side brush, main brush, sealing strip and etc.) on our website.
- The delivery receipt and purchase invoice are certificates for warranty and must be kept properly.

6.2 Cases not covered in the warranty

- The operator fails to perform maintenance according to the instruction manual, resulting in damage or failure.
- The surface and/or the structure of the machine are obviously damaged due to improper operation.
- Disassembly or modification not approved by the original manufacturer.
- Damage due to weather or force majeure.
- The warranty is expired or the machine has been used for more than 1,500 hours.

Warranty Card

Property of:		Tel:	
Address:		Model:	
Date of purchase:		Delivery date:	
Accessories to be replaced:			
Notes:			

