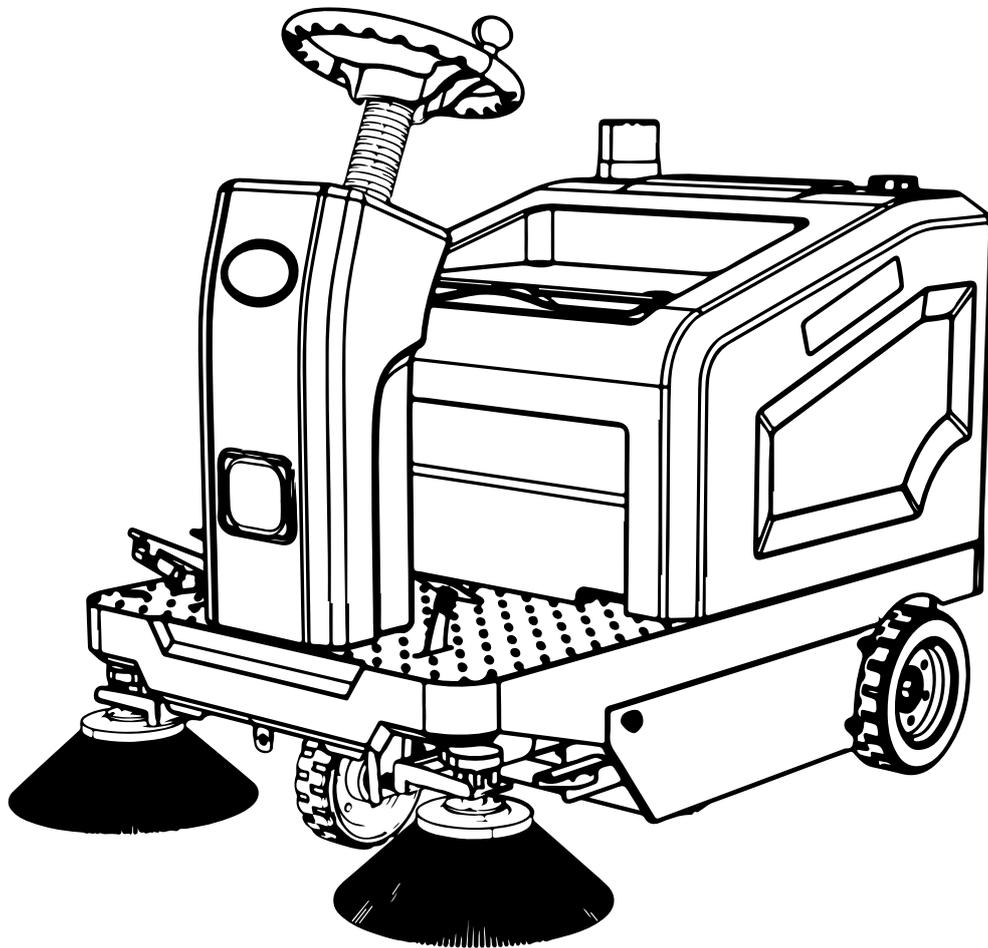


# Ride-on Sweeper Operation Instruction

SR45/60W



12/2023

It is strictly prohibited to use this equipment without reading this manual.

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# Chapter 1 User instructions

## 1.1 Notice

This manual provides necessary machine operation and maintenance instructions. Please carefully read this manual before operating or using the machine. Please operate the machine carefully and maintain the machine regularly according to the maintenance instructions provided in the operation manual.

 Use original manufactured or equivalent grade parts for repairs.

 Do not use flammable liquids; do not operate the machine near or in a place with flammable liquids, gases, or combustible dusts. are present.

 This machine is not equipped with an explosion-proof motor. If used in a place with flammable gases, liquids or combustible dust, the electric motor will generate sparks during startup and operation, which may cause a flash fire or explosion.

 Do not pick up flammable materials or reactive metals.

 The battery releases hydrogen gas. Keep it away from sparks or open fire sources. Keep the battery compartment open during charging.

 **Warning: Risk of electric shock. Please disconnect the battery wiring before repairing.**

 **Warning: During rotating brush operation, keep your hands away. Please turn off the power before repairing.**

## 1.2 Warning

 This sweeper can only be used on a hard floor. If it is used for other purposes beyond the instructions in this manual, our company will not be responsible for any losses and liability caused thereby.

 When this sweeper is operating, avoid getting long fiber substances such as ropes, corrosive chemicals, high-temperature debris, etc. in. Otherwise, the brushes may be damaged or cause other safety accidents.

 This sweeper is suitable for working in dirty areas such as hard floors with various kinds of dirt.

 Any form of modification may affect its performance, lifespan, and even safety, and may violate regulations. Damage caused by modification does not fall within the warranty scope.

 When the sweeper is powered on, do not put, or bring any part of your body into the rotating parts to avoid harm caused by the rotation of the machine.

 The machine must be parked on flat ground and avoid parking on slopes, otherwise it may cause other safety accidents.

 Before opening the hood to install accessories, or perform maintenance or inspection, you must first disconnect the power supply of the sweeper.

⚠ The battery should be placed in a well-ventilated place when charging. If the battery is insufficient, charge it in time.

⚠ When you finish cleaning, remove the key, and keep it properly to avoid being operated by unauthorized personnel.

⚠ When the machine is shut down, the main brush and side brush should all be raised, which can extend the service life of consumable parts and maintain the machine.

⚠ Do not flush the machine directly with a water gun or high-pressure water gun.

⚠ It is strictly prohibited to use this machine in dust workshops and flammable and explosive places.

⚠ The machine must be stored and operated within a temperature range of 0°C to +40°C (32°F to 104°F).

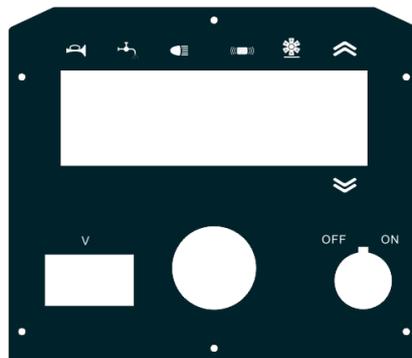
## Chapter 2 Technical parameters and machine functions

### 2.1 Technical parameters

Item	Specification	Item	Specification
Length	1300mm	Cleaning width	1000mm
Width	1000mm	Driving speed	0-10 Km/h
Height	980mm	Anti-skid control	Yes
Power unit	48V/67Ah	Continuous running hours	3-4h
Main brush motor power	500W	Maximum climbing ability	15%
Side brush motor power	90W*2	Total power	1780W
Vacuum motor power	360W	Noise level	< 70Db
Driving motor power	650W	Charging time	8-10h
Spray power	60W	Weight	267 Kg
Trash can capacity	60L		

### 2.2 Control panel

s



### 2.2.1 Power key switch

Turn to the ON position to connect the vehicle power; and turn to the OFF position to disconnect the vehicle power.

### 2.2.2 Sweeping switch.

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.

### 2.2.3 Power display

The power display device can display the current battery voltage. When it is lower than 44V, there will be a broadcast: The battery is insufficient, please charge it in time.

### 2.2.4 Horn switch

The horn switch is a reset button. If you press it once, the horn will sound once.

### 2.2.5 Headlight switch

The headlight button is a self-locking button. Click once to turn on the headlight; click one more time to turn it off.

### 2.2.6 Spray switch

The spray button is a self-locking button. Click once to turn on the spray; click one more time to turn it off.

### 2.2.7 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.

### 2.2.8 Reverse switch

When the machine requires human assistance to reverse, the switch should be moved to the reverse gear.

### 2.2.9 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.

### 2.2.10 Turning light introduction.

(1) The turning left signal switch is a self-locking one. When the sweeper turns left, press it once to turn the light on, and when the sweeper completes its turning, press it again to turn the light off.

(2) The turning right signal switch is a self-locking one. When the sweeper turns right, press it once to turn the light on, and when the sweeper completes its turning, press it again to turn the light off.

**⚠ After cleaning, the main brush + side brush should be raised to prevent brush deformation and wear.**

**⚠ 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.**

 **After completing the work, all function switches of the machine should be reset.**

## Chapter 3 Checking items and operation

### 3.1 Checking items before operation

- (1) Check whether its appearance is clean. **Note: It is strictly prohibited to use this machine in flammable and explosive environments.**
- (2) Check whether the battery wiring is well contacted to prevent short circuit failure.
- (3) Use the key switch to turn on the machine and check whether the battery is sufficient. If the value is too low, please do not use the machine. Turn off the power immediately and charge the battery. Make sure the battery is fully charged before use.
- (4) Check whether there is water in the water tank and whether the nozzle is blocked.
- (5) Check the chain tightness: **Check whether the chain (under the seat) is loose every three months. If the chain is sagging or loose, please do not use the machine. Use a wrench to raise the ejector bolt under the driving axle immediately until the chain is tight.**

### 3.2 Operation steps

- (1) Lock the trash can latch.
- (2) Check the water level in the water tank. If the water is insufficient, add some water before starting work and close the water tank cover.
- (3) The spray button can be turned on to perform dust reduction operations if necessary based on the dryness of the ground.
- (4) Sit in the driver's seat and adjust the seat to an appropriate position.
- (5) Turn on the key switch to power the vehicle on.
- (6) Turn the cleaning switch to let the machine work, press the accelerator pedal, and sweep the floor while moving forward.
- (7) After the cleaning is completed, place the machine and charger in a well-ventilated area; turn off the key switch and charge the machine.

 **When using this sweeper to work, it is best to control the speed at 8km/h.**

 **When the whole machine is working, the main brush, side brush, vacuum motor, and push rod will be started simultaneously. The main brush and side brush will automatically be lowered, and then you can start cleaning. If you find that the machine cannot perform a thorough cleaning, please check whether the fuse of the vacuum motor is broken.**

### 3.3 Precautions during operation

(1) When working on slopes or slippery ground, please operate at low speed and do not work on slopes exceeding 5%.

(2) When the machine is working, do not keep it working on the same place for a long time to avoid damaging the ground and machine brushes.

(3) If the machine cannot perform satisfactory spray operation, please take out the filter screen for cleaning, and check whether there are any impurities in the water tank.

(4) If there are impurities in the water tank, please clean the water tank.

(5) During use, you should always observe the power display meter. When the voltage about 42V, while the driving motor can move, but the machine will stop cleaning. The machine must be charged at this time. **(Please predict this situation in advance)**

**⚠ When the battery voltage is about 42V for a long time, it will cause damage to the battery. If it cannot be charged in time, the positive electrode will lose activity, thus affecting the service life of the battery.**

**⚠ The rated operating time of the machine shall not exceed 2 consecutive hours. After 2 hours (please predict this situation in advance), the machine must be stopped for 15-20 minutes to extend the service life of the battery, motor and other electrical accessories.**

### 3.4 Precautions during non-operation

#### 3.4.1 Filter cleaning

After the cleaning work is completed, you need to clean the dust on the filter: lock the trash can, press the dust vibration button, and repeat 3-5 times for a cycle of 30 seconds.

#### 3.4.2 Battery charging

(1) Place the charger and machine near a well-ventilated area.

(2) Power off the machine.

(3) First plug the output terminal of the charger into the machine, then plug in the mains plug.

(4) The charger will automatically start charging. If the battery is fully charged, the charger will automatically power off to protect the battery and charger.

(5) After charging, unplug the mains plug first, and finally unplug the machine.

**⚠ When charging this machine, you must use the original charger.**

## Chapter 4 System introduction

### 4.1 Sweeping system.

#### 4.1.1 Components

The cleaning system consists of main brush, side brush, vacuum motor, push rod motor and spray system.

- ① **Main brush**: for cleaning the floor.
- ② **Side brush**: for collecting dust on both sides of the side brush toward the middle to facilitate cleaning by the main brush.
- ③ **Vacuum motor**: for adsorbing the fine dust swept by the main brush to the filter to suppress dust.
- ④ **Spray motor**: for reducing dust on the ground to avoid dust from spreading over during cleaning.
- ⑤ **Push rod motor**: for raising and lowering the main brush and side brush.

#### 4.1.2 Operation

The main brush and side brush of this sweeper adopt an automatic lifting and lowering motor control system.

When sweeping the floor, the push rod motor will automatically be lowered, and the main brush, side brush, and vacuum motor will start at the same time.

#### 4.1.3 Checking items and maintenance

Fault		Reason	Solution
1	Main brush noise	Loose fixing screws of rocker arm	Tighten the screws
2	Uneven side brushes	Wrong position of side brush fixing screws	Adjust the screws to make them even

#### 4.1.4 Maintenance

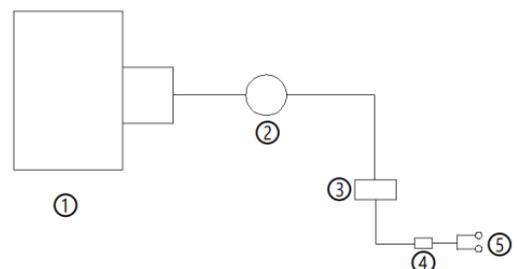
- (1) When the sweeper is stopped and not in use, the main brush and side brushes should be lifted up to avoid deformation of the bristles and affecting its cleaning performance.
- (2) When sweeping the floor, it is necessary to promptly remove the metal entanglements on the bristles to reduce the load on the main brush motor, avoid damaging the ground, and improve the overall working efficiency.
- (3) Avoid cleaning lime, cement and flammable objects.

### 4.2 Waterway system

The waterway system is composed of water tank, filter, water pump, one-way valve and nozzle.

#### 4.2.1 Waterway diagram.

- ① **Water tank**: for storing clean water.
- ② **Filter**: for removing impurities in the water system to avoid nozzle clogging.



③ **Water pump:** for providing power to the waterway system and prompting the nozzles to spray.

④ **One-way valve:** for closing the water line to prevent the nozzle from dripping.

⑤ **Nozzle:** for spraying water into mist.

#### 4.2.2 Operation

Step 1: Turn on the key switch to power on the machine.

Step 2: Press the spray button, the water pump will start to work. The nozzle will spray mist.

Step 3: Turn off the spray button, the water pump will stop working, and the spray will be turned off.

Step 4: When the water pump stops working, the one-way valve should be closed in time to prevent the nozzle from dripping.

#### 4.2.3 Checking and maintenance

Fault	Reason	Solution
Nozzle does not spray water	Filter clogging	Clean the filter
	Nozzle clogging	Clean the impurities inside the nozzle
Nozzle leaks water	Damaged joint	Replace the joint
	Joint leaking	Rewind the raw material tape
Poor spray performance	Bent water tube	Adjust the tube
	Nozzle clogging	Clean the impurities inside the nozzle

## Chapter 5 Regular maintenance and replacement

### 5.1 Regular checking

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 keys 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		√			

### 5.2 Replacement and installation of main brush

**Step 1:** Make sure that the machine is static.

**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:** Turn the cleaning button to the forward position: the main brush, side brush, vacuum motor, and push rod motor will start to work simultaneously; the main brush and side brush will be automatically lowered. Observe whether the rotation of the main brush is abnormal. If it is, you can use the bolt on the rocker arm to clean it. Adjust until the machine is not shaking. If it is not, close the right baffle and start cleaning.

### 5.3 Replacement and installation of side brush

**Step 1:** Make sure that the machine is static.

**Step 2:** Use an Allen wrench to loosen the bolts of the side brush, and press the side brush down with your hand. Then the side brush can be removed.

**Step 3:** Push up the flange keyway of the new side brush, buckle it on the motor, tighten the screws until the side brush will not fall off.

## 5.4 Removing and installation of trash can.

**Step 1:** Make sure that the machine is static.

**Step 2:** Release the lock of the trash can, pull it out, and dump the garbage.

**Step 3:** After dumping the garbage, align the mouth of the can with the correct position of the sweeper, then slowly push it forward to the bottom, and press the buckle downward to return it to its original position.

**⚠ When installing the trash can, its sealing strip should fit tightly with the machine body. If it does not, please loosen the lock and install it again.**

## 5.5 Battery maintenance

(1) The sweeper produced by our company is powered by four 12V lead-acid maintenance-free batteries in series, and the total system voltage is 48V.

(2) After the machine has been operating for a period of time, the battery power drops. When the battery indicator shows the last bar, it needs to be charged in time.

(3) When performing battery maintenance, please wear protective gloves to avoid contact with battery acidic substances;

(4) Check whether the battery cable is worn or loose, and replace if necessary;

(5) The battery terminals should be kept clean and dry, and should not be covered with debris or venue soil, which is extremely detrimental to the battery. In severe cases, the battery will be burned by ash.

**⚠ The correct charging method for lead-acid batteries: Plug in the battery plug first, then the mains plug; after full charge, disconnect the mains plug first, then the battery plug.**

**⚠ To ensure that the battery has a long service life, it should be charged in time after the machine operation. Deep discharge is strictly prohibited.**

**⚠ If the machine is not used for a long time, please fully charge the battery, disconnect the positive terminal of the battery to store it.**

**⚠ During the use of the battery, deep discharge will decrease the battery capacity, thereby shortening the service life.**

## 5.6 Cleaning of water valve filter

Unscrew the cap on the filter, pull out the filter mesh inside, and clean it with clean water.

## Chapter 6 Fault troubleshooting and maintenance

### 6.1 Fault troubleshooting

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"
Warning light	Fuse of key switch burned out	Replace the fuse

not working	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	Clogging from untimely cleaning of dust vibration box's filter element	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
	Loose lock buckle pf the trash can	Tighten the screws
Chain loosing	Loose ejector pin bolt under the driving axle	Raise the ejector pin until the chain is not loose
Loud noise of main brush when rotating	Loose fixing screws of rocker arm	Tighten the screws
Uneven side brushes	Wrong position of side brush fixing screws	Adjust the screws to make the side brushed even
Water not coming from nozzle	Filter clogging	Clean the filter
	Nozzle clogging	Clean the inside of the nozzle
Nozzle drizzling	Broken joint	Replace the joint
	Joint leaking water	Rewind the raw material tape
Poor spray performance	Bent water tube	Adjust the tube
	Nozzle clogging	Clean the inside of the nozzle

## 6.2 battery maintenance guidelines

6.2.1 This product uses a lead-acid maintenance-free battery, which has maintenance-free, maintenance-free, and automatic pressure relief functions; the usage principle is charge as you use, and recharge as soon as you use it. If not used for a long time, please disconnect the positive terminal of the battery, and store it.

6.2.2 Why is the life of lead-acid batteries short?

6.2.3 The battery is undercharged for a long time and does not charge for a long time after being discharged. During use, over-discharge often occurs. When charging, the standard charger is not used, resulting in overcharge. During use, the gap between the battery packs Differences in voltage result in a low voltage working state for a long time.

6.2.4 How to store the battery after use?

The battery is a sensitive product. If it is not used for a long time, it is best to take the battery out of the machine and put it in a dry place with normal temperature; because the battery is placed inside the machine and is not disconnected from the electrical appliances and circuit boards, it will cause the battery to form Continuous dimensional discharge.

6.2.5 What is over-discharge and what impact does it have on battery performance?

It refers to the phenomenon that the power stored in the battery continues to be discharged after reaching the minimum operating voltage. After the battery is over-discharged, the voltage drops significantly in a short period of time. Currently, the internal reaction system of the entire battery is disordered. If it is repeatedly over-discharged, the positive electrode will lose activity, which will affect the service life of the battery. Reduce battery usage time and extend battery charging time.



**Deep discharge is strictly prohibited.**



**After daily use of the battery, please recharge it in time. Regardless of the remaining power, the battery needs to be fully charged and stored.**

# Warranty Card

Name		Tell	
Postal address		Bill No.	
Purchase time		Number	
Product model		Date	
Replace accessories			
Fault description			

