
TigerDuo57

Two-in-One

RIDE-ON SWEEPER & SCRUBBER

User Manual



The picture is for reference only, please refer to the actual product

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1. Preface

Dear User:

Thank you for choosing Crystal Floor Cleaning Machines.

Note: This manual applies only to **TigerDuo57, TWO IN ONE RIDE-ON SWEEPER & SCRUBBER**.

To help you become familiar with your machine, please read this manual carefully before using it for the first time. In this manual you will find helpful tips about the sweeper & scrubber that will allow you to fully understand its technical features and enjoy efficient, reliable cleaning performance.

This User Manual also explains the terms and conditions of product quality assurance and after-sales service responsibilities between our company and you, the user. Please read it thoroughly before operating the machine. It also includes important maintenance information that directly affects operating safety, traffic safety, and the service life of the equipment.

All information in this manual is accurate at the time of printing. Because we continuously improve our products to adapt to different user applications, we reserve the right to make changes to design, features, or specifications without prior notice.

We sincerely wish you a pleasant and productive experience with your machine.

2. Statement of Instructions

Important Notes:

1. Our company takes full responsibility for the revision and interpretation of this Owner's Manual and reserves the right to issue separate notices for any product improvements made after this manual is printed. Some illustrations in this manual are schematic and for reference only. If there is any difference between the illustrations and the actual machine, **the actual machine shall prevail**.

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2. Please keep this manual with the machine so you can refer to it whenever needed. This User Manual is an important part of the documentation that comes with the equipment. If the machine develops a malfunction during use, please refer to the maintenance section and contact our company. **Do not disassemble or modify the machine without authorization.** You shall bear any unforeseeable consequences caused by your unauthorized operations.
 3. If replacement parts are needed, qualified matching parts produced by our company must be used. The use of parts from other manufacturers is prohibited. Otherwise, the machine will not be covered by our warranty, and you will be responsible for any resulting consequences.
 4. If you have any questions while reading this manual, please contact us. We will be happy to provide more detailed explanations. We also welcome any valuable feedback or suggestions.

3. Handling This Equipment



Note:

At the end of its service life, this machine contains materials that can be recycled or recovered. Please comply with your local regulations and contact your local recycling or waste management company for more details.

3.1. Symbols in the Instruction Manual



Dangerous!

This indicates a situation that can cause serious injury or death to the operator.



High Voltage Warning!

This indicates the presence of high voltage that may cause electric shock or other injury.



Be careful!

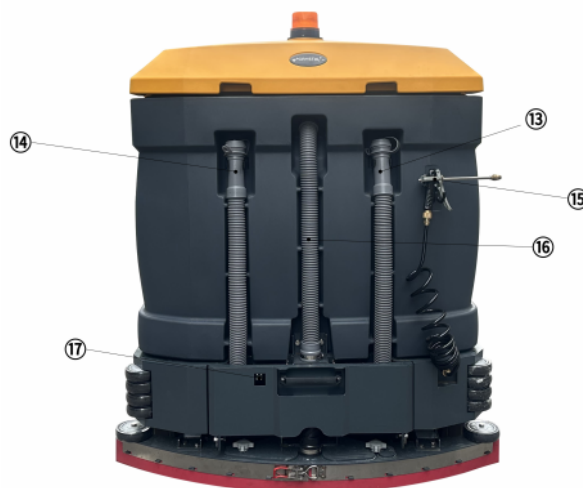
This indicates important safety information, precautions, or helpful operating notes. Pay special attention to the sections marked with this symbol.



Attention:

The operator must read this manual carefully before using the machine.

4. Equipment Overview



1. Control Panel

3. Seat

5. Warning Light

7. Battery Compartment

9. Main Wheel

11. Side Brushes

13 & 14. Waste Water Drain Hoses

16. Suction Hose

2. Steering Wheel

4. Clean Water Tank Inlet

6. Waste Water Tank

8. Clean Water Tank

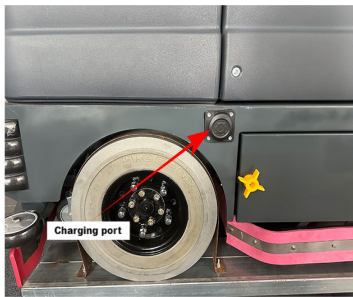
10. Anti-Collision Wheel

12. LED Lights

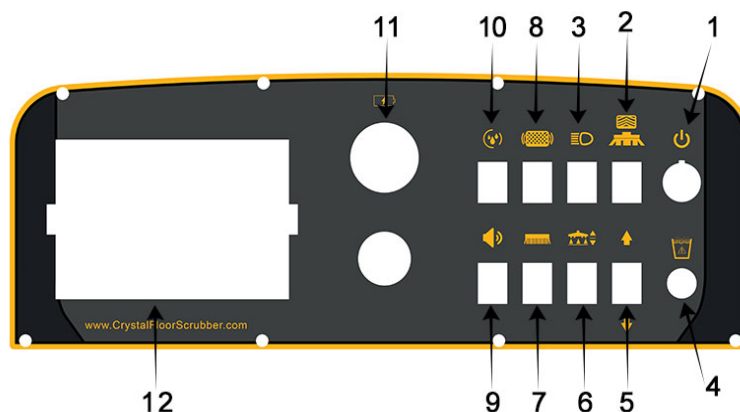
15. High-Pressure Water Gun

17. Rearview Camera

4.1. Charging Port/Power Switch

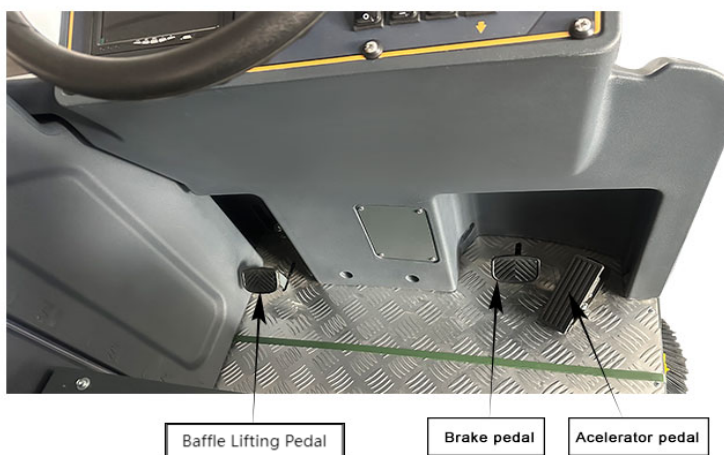


4.2. Control Panel



1. Keyswitch
2. Sweeping Function (3 modes): a. press this forward to lower the main brush & side brushes and start the sweeping operation, b. press it backward to lift up the brushes and stop sweeping, c. in between the above a & b, there is an O neutral mode to keep the brushes lowered to make height adjustment when needed.
3. LED light: press to turn on the light
4. Sewage level light: If the indicator light is off, the recovery (sewage) tank is not full. If the indicator light is on, the tank has reached full capacity.
5. Gear: Press forward to move forward or press backward to move backward.
6. Suction (3 modes): a. push the squeegee button forward to lower the squeegee and begin suction, b. press the button backward to raise the squeegee and stop suction, c. in between the above a & b, there is an O neutral mode to keep the squeegee assembly lowered to adjust its height when needed.
7. Scrubbing Function (3 modes): a. press this forward to lower the brushes and brushes will start rotating, b. press it backward to raise the brushes and stop scrubbing, c. in between the above a & b, there is an O neutral mode to keep the squeegee assembly lowered to adjust its height when needed.
8. Dust Shaking: Press the button forward to start the vibration; release the button to stop the vibration.
9. Horn
10. Water Spray/Water Gun: Press this forward to release the water; press it backward to stop the water flow.
11. Battery Gauge: Display the current battery charge level.
12. Rear-View Image: The rear-view camera image is automatically displayed when the machine's power is turned on.

4.3. Pedal



5. Preparation/Safety Check



Caution!

Verify that the squeegee assembly, the scrubbing pads/brushes are correctly installed, and the recovery tank lid is closed.

If the machine has been transported, inspect all components to ensure nothing has shifted during transit.

5.1. Adding Water



Water inlet



Caution!

When filling the clean-water tank, avoid overfilling. Use only clean water free of particles, sediment, or other contaminants.

5.2. Driving Mode



Caution!

Prior to moving the machine, make sure all brushes/pads and squeegee assembly are all raised. Insert the key and turn it to the ON position (turn to the light position to turn on the LED headlights if needed).

Set the forward/reverse switch to the forward position and press the accelerator pedal to move the machine forward.

5.3. Floor Scrubbing Mode



Caution:

Remove any plastic tape, wrapping material, or similar debris from the floor before scrubbing the floor.

Press the scrubbing & suction buttons forward; the brushes and squeegee will be lowered automatically and start the scrubbing & suction mode.

Set the forward/reverse switch to the forward position and press the accelerator pedal to begin cleaning.

For heavily soiled floors, add an appropriate cleaning agent in the clean water tank or reduce the machine's travel speed to improve cleaning effectiveness. Make sure to add defoam in the recovery tank if any cleaning solution is used to protect your vacuum motor.

After completing the task, press the brush and suction buttons backward; the brushes and squeegee will automatically raise and stop working.

Inspect the recovery (sewage) tank regularly, drain it promptly, and thoroughly clean the tank after each operation.

This machine can cross obstacles under 2 inches in height safely. Prior to driving over an obstacle, stop the cleaning mode by raising the squeegee assembly and all the brushes.

5.4. Sweeping Mode



Caution:

Press the sweeping button forward to lower and engage the main brush & side brushes. After sweeping is completed, press the sweeping button backward; the main and side brushes will automatically be lifted up and stop turning.

Set the forward/reverse switch to the forward position and press the accelerator pedal to move forward.

For larger debris, step on the left baffle pedal and proceed at low speed toward the debris. The main brush will sweep larger items into the trash bin.

In dusty or harsh environments, periodically stop sweeping and activate the dust shaking function by pressing the dust-vibration button. Please engage dust shaking function every 10~15 minutes. Monitor the trash bin regularly and empty it as needed.

This machine can get over obstacles under 2 inches in height safely. Prior to driving over an obstacle, make sure all brushes and squeegee assembly are raised.

5.5. Discharging Dirty Water



Caution !

1. Release the pedal and stop the machine.
2. Pull out the machine's rear drain hose.
3. Lower the hose toward the ground level (lower than the sewage tank) and remove the hose cap.
4. After the wastewater has been discharged, rinse the interior of the recovery tank thoroughly using a water gun.
5. When cleaning is complete, reinstall the hose cap and secure the hose with the clamp.

5.6. Shutting Down the Equipment



Caution !

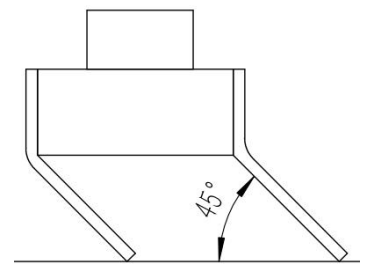
After completing the work and before leaving the machine, perform the following steps:

1. Press the buttons to raise the pads/brushes and squeegee assembly.
2. Empty and clean the recovery (dirty water) tank.
3. Remove the key from the power switch.

5.7. Inspection and Adjustment of Additional Components

Check the angle between the squeegee and the floor; an angle of approximately 45° provides optimal performance.

1. Verify the squeegee-to-floor angle as follows:
 - Position the machine on a level surface.
 - Press the squeegee/suction button to lower the squeegee.
 - The operator should slowly push the equipment forward.
 - Visually assess the pressure angle between the rubber and the floor.
2. When the rubber is worn and cannot be adjusted to the ideal angle, replace the rubber set for optimal cleaning effect.



Caution !

If the squeegee rubber does not maintain an angle close to 45° against the floor, suction efficiency will be reduced and components may overheat, the overall service life of the machine might be shortened. Always perform the above checks carefully and operate the machine only under the specified conditions.

6. General Safety Instructions



Dangerous!

- ※ Before performing any maintenance or repair work, turn off the power and remove the key from the main power switch.
- ※ This machine must only be operated by trained professional personnel. Children, persons with disabilities, and untrained individuals are strictly prohibited from driving or operating this machine.
- ※ Keep the battery away from sparks, open flames, and any source of ignition.
- ※ Please keep loose clothing, hair, and any other body parts away from the machine's air vents and moving parts. Do not wear loose accessories or jewelry that could get caught in moving parts while operating the machine.
- ※ Do not use the machine in areas where there is a risk of fire or explosion, such as places with flammable or explosive gases, liquids, or vapors.
- ※ Charge the batteries in a well-ventilated area, and keep the charger and battery away from open flames or heat sources. Ensure the DC plug and socket are connected firmly and securely. Loose connection might cause fire and damage by creating high resistance, leading to overheating, arcing, and sparks. Replace the plug or socket if damaged. Do not smoke while charging the battery. Do not leave the charger plug inserted in the socket unattended for more than 12 hours; this will shorten the battery life.
- ※ Recharge as soon as the batteries are in low-voltage mode to avoid shortening of battery life.
- ※ This machine is intended only for cleaning floors and collecting general dry debris. Any use that does not follow the instructions in this manual releases our company from responsibility for resulting damage or injury.
- ※ The machine is designed to pick up normal dry debris and dust. Do not attempt to pick up wire ropes, belts, burning or high-temperature materials, large amounts of liquid, flammable substances, corrosive or toxic materials. Doing so may cause entanglement, damage or burning of the main brush and side brushes, and may prevent the machine from working properly.
- ※ Never operate the machine when you are tired or under the influence of alcohol, drugs, or medication that impairs your judgment. Do not exceed the recommended operating speed which is 3 miles per hour.
- ※ Ensure the recovery tank is emptied regularly to maintain suction performance. Dust shaking should be performed every 10-15 minutes to achieve the best cleaning effect.

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- ※ There is a risk of tipping over when driving on steep slopes or making sharp turns at high speed. Always drive slowly and carefully on inclines and when turning.
 - ※ After completing the operation, remove the key immediately to prevent unauthorized use of the machine.
 - ※ Do not operate the machine outdoors in rain or wet conditions.
 - ※ Do not use the machine as a means of transportation for people or goods.
 - ※ Do not clean the machine with flowing or pressurized water. Moisture intrusion may damage electrical components. Avoid the use of corrosive or abrasive cleaners, which can cause premature wear or deterioration of machine surfaces.
 - ※ Do not keep the brushes spinning in one area on the floor; doing so can harm the surface and reduce brush lifespan.
 - ※ In the event of a fire, use a dry-powder fire extinguisher to extinguish the flames.
 - ※ Do not alter the machine, and perform regular maintenance to achieve an ideal cleaning effect.
 - ※ Store the machine indoors on a stable & flat surface in a clean & dry area that is free of humidity and flammable gas, vapor or liquid. If the machine will not be used for a longer period of time, unlink the batteries or charge them at least every other week to avoid deep discharging.

6.1. Unbox Steps

1. Open the machine's outer packaging box and stretch film.
2. The machine's two rear wheels are secured to the pallet using pressure strips.
3. Loosen the screws on the pressure strips and remove the pressure strips.
4. Link the batteries, turn on the power, set the moving direction to forward, and gently step on the accelerator. Carefully and slowly drive the machine forward, away from the pallet.
5. Keep the pallet and the packaging box for future transportation needs.



6.2. Safety Instructions for Operation



Attention:

The TigerDuo57 is designed for industrial and commercial cleaning applications, exclusively for sweeping dry debris and scrubbing hard floors, such as concrete, epoxy floors, tiles, and similar surfaces. Any use beyond these intended functions is prohibited and voids the warranty.

Improper operation can cause injury, equipment damage, or hazardous conditions. Follow all safety instructions below.



Attention:

You can clean the floor with clean water. If the floor is greasy or sticky, you can add the appropriate amount of neutral, low foam or no foam solution to the clean water/solution tank while adding defoamer/anti-foam in the recovery tank, or the vacuum motor might be damaged.

When the sewage indicator is on/illuminates on the control panel, stop the machine and drain the sewage tank immediately. Failure to do so may cause overflow and damage suction motor and other parts.

After each use, empty and rinse the recovery tank thoroughly to prevent foam buildup, bacterial growth, and performance issues.

6.3. Safety Instructions for Driving



Attention:

Larger debris must be removed before operation; blockages at the squeegee inlet can reduce drying performance and may overload or burn out the suction motor. The operator is responsible for any damage resulting from improper use.



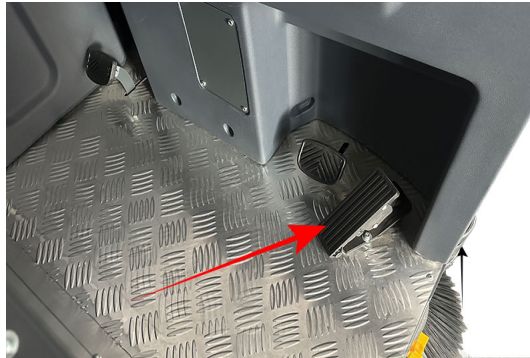
Attention:

When the machine is shut down or has a malfunction, it may be pushed or towed at a maximum speed of 2 MPH. At least one wire from the traction motor needs to be disconnected prior to moving/towing the machine (consult a technician if unsure).



Caution:

Before stepping on the accelerator pedal, always verify that the manual brake is fully released. If the manual brake is engaged when the accelerator pedal is pressed, the drive motor will be subjected to overload, resulting in motor burnout, severe brake pad wear, and possible damage to the rear wheel aluminum hub.



Any failures caused by improper operation are the responsibility of the operator and are not covered by the manufacturer.

6.4. Safety Instructions for Batteries

1. Avoid allowing the battery to reach a low-voltage state; charge it as soon as possible when it's lower than 67V.
2. Do not allow the positive and negative terminals to come into contact, which may result in a high-current short circuit, overheating, or fire.
3. Keep the battery clean and dry. Remove contaminants such as metal dust to prevent leakage.
4. Do not place metal objects (e.g., tools) on the battery to avoid short-circuit damage.
5. Dispose of and recycle batteries in accordance with local regulations.
6. Do not expose batteries to open flames during handling or transportation.
7. Charge the battery only in a well-ventilated & dry area, free of flammable chemical, gas, liquid or vapors.
8. Do not connect or disconnect the battery while the key switch is in the ON position.
9. When removing the battery, disconnect the negative (-) cable first, then the positive (+) cable. When reinstalling, ensure correct polarity to avoid electrical component damage.

7. Safety Instructions for Transportation the Machine

The machine is securely packaged on a custom pallet and may be transported using a forklift. The machine must be placed and transported on a single level only.

Machine Dimension (in) 105*51.2*63 in (l*w*ht)

Package Dimension (in) 110*58*72 in (l*w*ht)

8. Safety Instructions for Maintenance

All operation, maintenance, and repair work must be performed by qualified personnel.

Use only genuine parts supplied by our company. To purchase more parts or submit service requests, please visit our site CrystalFloorScrubber.com or contact us via email info@CrystalFloorScrubber.com or calls.

By performing regular maintenance, potential issues can be identified early, allowing the machine to remain in optimal working condition and operate at maximum efficiency.

Timely maintenance not only improves performance but also significantly extends the service life of the machine. Consistent maintenance is essential for long-term reliability.

9. Towing the Machine



Caution !

Prior to pushing or towing the machine, make sure the manual brake is released, lift up all brushes & squeegee assembly, turn off the power, and disconnect one wire from the traction motor (consult a technician if unsure). Ensure the towing or pushing speed does not exceed 2 mph.

10. Storage



Caution !

- ※ Empty all water tanks prior to storing your machine.
- ※ The machine must be stored at temperatures between **32°F and 104°F**.
- ※ Operating temperature should also remain between **32°F and 104°F**.
- ※ Do not operate or park the machine in rain or severe weather conditions.

11. Maintenance

11. 1. General Instructions



Caution:

Before performing any maintenance, stop the machine and remove the key. Disconnect or remove the batteries when needed. Always read and follow the safety instructions in this manual carefully before performing maintenance work.

11. 2. Maintenance Schedule



Caution:

After the first 8 hours of operation, inspect the following:

1. Verify that all fasteners and connections are properly tightened.
2. Confirm that all visible components are intact and undamaged.

11. 3. Replacement of Consumable Parts

Main Scrubbing Brush Replacement

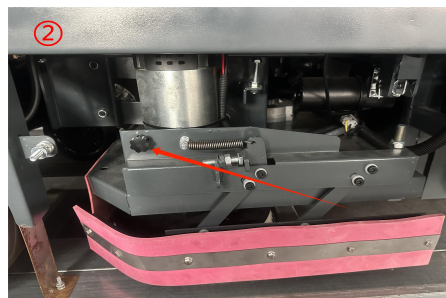
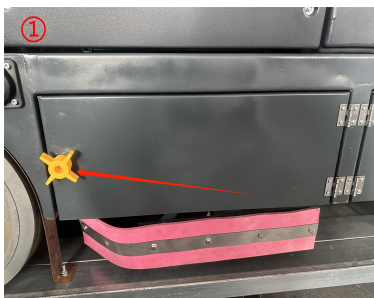


Caution !

Wear protective gloves when replacing the main scrubbing brushes to prevent injury.

Steps:

1. Before replacing the main brush, turn off the brush function, raise the brush, and turn off the power.
2. Loosen the yellow plastic knob and open the side door (see Figure 1).
Loosen the black plastic nut and open the side shield (see Figure 2).



3. Brush Installation and Removal:

①. Pinch the spring clip tightly with your thumb and index finger, and the brush will detach from the flange.



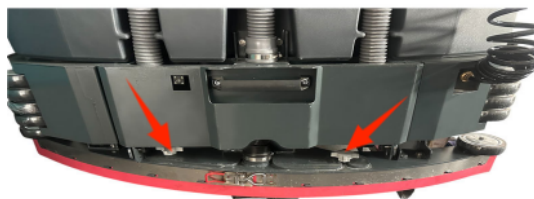
②. To install a new brush, pinch the spring clip tightly, align the center of the brush with the flange, push upward and release the spring clip, then check if the brush is securely installed.



Squeegee Replacement

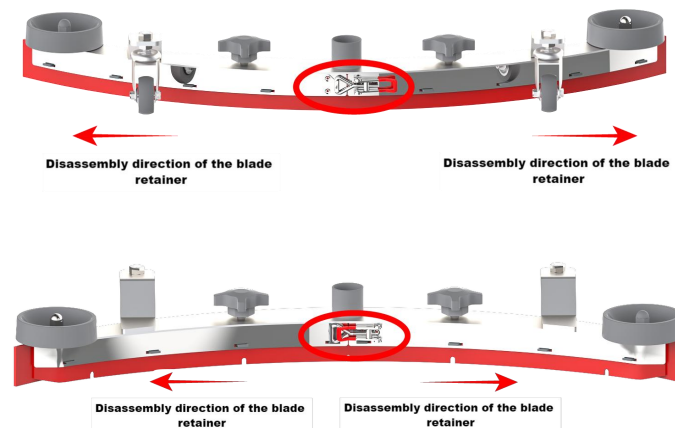
1. Squeegee Disassembly

● Unscrew and remove the center metal holder before pulling up the suction hose. Loosen the left and right plastic knobs shown then pull the squeegee assembly away from the machine.



2. Front and Rear blade Removal and Replacement

● To replace the blade/rubber, unlatch the center latch circled in red below, remove the metal retainer plates and rubber by pulling them away from the assembly respectively. Then reverse the steps to put on new rubber/blade & metal retainers. Please note that the outside rubber is longer than the inside one. Please watch our unbox video on our product webpage for clearer instruction.



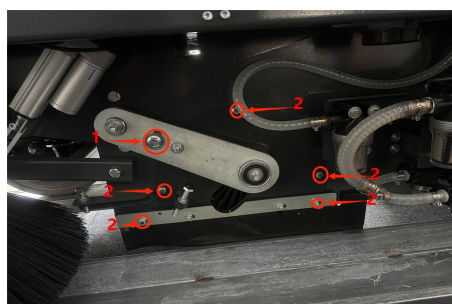
● When installing the blade, ensure that the lower edge rests evenly on a flat surface with no height variation. Tighten the blade retainer securely to achieve optimal suction performance during operation.

Main Sweeping Brush Replacement

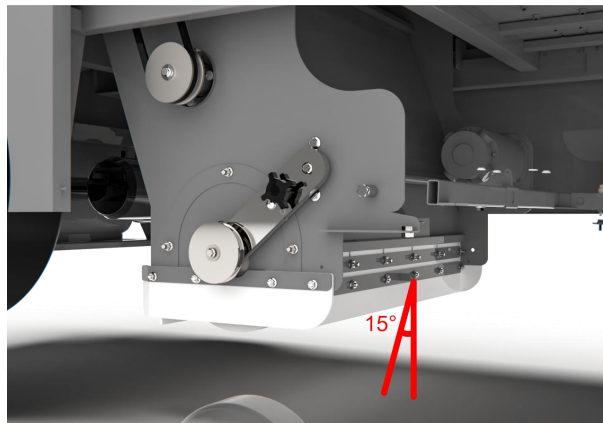


Wear protective gloves when replacing the main brush, as the bristles may cause cuts.

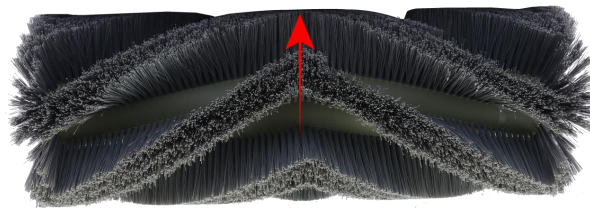
1. Unscrew the nut marked "1" to remove the main brush support rod, then unscrew the screw marked "2" to remove the left side panel.



2. After disassembly, remove the main brush.



1. The front bumper adjustment should tilt back 15°
2. Please note that during installation, the main brush must be lowered and Installed with the arrow shape bristles pointing towards the front of the vehicle.

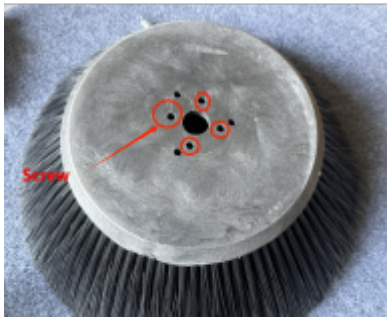


Caution !

The running direction of the main brush is shown in the figure, and the main brush should be installed correctly .

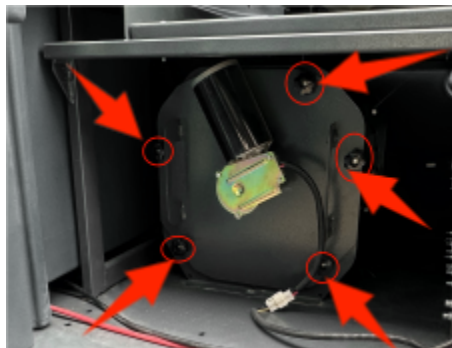
Side Brush Replacement

1. Removal and replacement of side brush



- Loosen the four screws inside the red circle in sequence, and rotate them to the left until the circular opening comes out to remove the side brush.
- Reverse the steps to install a new side brush, and then tighten all screws securely.

Filter Replacement



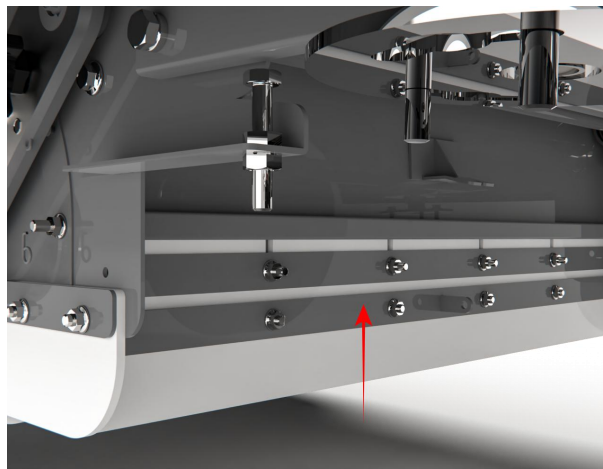
- Remove the screws indicated by the red arrows in sequence, then pull the filter outward firmly to remove it.



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- Before putting in a new filter, clean the related parts/area, then apply a thin, even coat of lubricating grease to moving parts like bearings, joints, or shafts, but wiping off excess to prevent dirt buildup, and always use the correct grease type for the application.

Front Baffle Replacement

- When replacing the front baffle, the main brush must be removed and the trash can must be pulled out.
- When replacing the front lifting gear, the brake teeth must be clamped to ensure that the vehicle does not slide.



- Remove the screws marked by the red arrows in sequence, and replace the baffle.



12. Warranty Description



Caution !

Cases not covered in the warranty:

1. Damage to the machine resulting from improper or non-compliant operation, unauthorized disassembly, improper handling, including impact, collision, or dropping.
2. Visible damage to the machine's surface or structure caused by improper operation.
3. Unauthorized disassembly, modification, or alteration not approved by the manufacturer.
4. Damage caused by weather conditions or force majeure events.
5. Wear of consumable parts (such as brush, squeegee blades/rubber, batteries.....etc.).
6. Motor and Charger failure due to water ingress or excessive moisture.
7. Damage caused by power-grid voltage spikes
8. Damage resulting from excessive pulling or strain on the input or output cables.
9. Incomplete battery charging caused by unauthorized extension or modification of the input or output cables.
10. Machines that are out of warranty or have accumulated more than **1,500 operating hours**.

13. Machine Specification

Category	Parameter	Category	Parameter
Cleaning Width (in)	57	Dust Bin Capacity (gal)	21
Scrubbing Width (in)	43	Squeegee Width (in)	53
Fresh Water Tank (gal)	106	Product Dimensions (in)	105×51.2×63 L*W*Ht
Sewage Tank (gal)	127	Side Brush Motor (HP)	0.13×2
Battery Capacity (V/AH)	72/200	Fan (HP)	0.13
Cleaning Efficiency (sq. ft./h)	118,407	Brush Disc Motor (HP)	0.74×4
Main Brush Motor (HP)	1.6	Squeegee Pusher (HP)	0.05
Dust Shaking Motor (HP)	0.13	Suction Motor (HP)	0.8×2
Brush Disc Pusher (HP)	0.07	Machine Net Weight (lbs)	2623.5
Drive Motor (HP)	4	Brush Pressure (lbs)	187.4
Machine with Package Weight (lbs)	3050	Package Dimension (in)	110×58×72 L*W*Ht