



***FAST
CLEAN***

OWNER'S MANUAL



SS WSC21

**Battery Powered Automatic
Walk-behind Scrubber**

FAST CLEAN, INC.

210 Southwest Ave. Tallmadge OH 44278

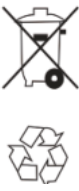
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Before operation or use of this machine, please carefully read this manual.

When ordering the replacement parts, please refer to the spare and accessory parts manual attached to the machine. Before matching parts or accessories, please first determine your machine model and serial number. You can order parts and accessories from any authorized service center or dealer. This machine can provide excellent service. Please follow the instructions in the manual.

- Follow manufacturer’s instructions for operating the machine.
- Perform maintenance according to the maintenance instructions provided in the operation manual.
- Use the OE or same-grade parts for maintenance.

	<p>Please dispose of old machine components such as packaging material, battery, etc. and toxic liquid such as antifreeze and oil according to your local regulations on waste disposal and environmental safety.</p>
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Machine Information (Please fill in for future reference.)

Model number-

Machine number-

Machine option-

Sales representative-

Tel. of sales representative-

Customer ID-

Installation date-

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Precautions

This machine is intended for indoor hard floors only. Please use the suggested scrubbing pads and brushes as well as the manufacturer recommended cleaning chemicals suitable for this machine.

All operators should read, understand, and observe the following safety precautions and guidelines in this manual.

Warning! Fire or explosion hazard:

The battery releases hydrogen. Please keep away from spark or open fire. The battery compartment should be kept open when charging.

Do not use flammable liquid in the machine. Do not operate the machine where there are flammable liquids, vapors or dust.

This machine is not equipped with an explosion-proof motor. If it is used where there is flammable vapor, liquid or dust, the electric motor may generate a spark while starting the machine. This may cause flash fire or explosion.

This machine is not recommended for vacuuming up flammable materials, reactive metals, or corrosive liquids.

Warning! To avoid injury, turn off the power before performing routine maintenance on the machine. We also recommend disconnecting the battery wiring before performing any electrical maintenance.

Basic Safety Instructions

1. Before starting the machine please ensure that all safety guards are in place and operating correctly.
2. Proceed slowly when operating on a slope or slippery surface, or when turning the machine.
3. Please discontinue use and have machine serviced if it is damaged or not operating properly.
4. Follow the chemical manufacturer's mixing ratio and instructions.
5. Do not leave machine unattended without first turning off the power.

6. Do not allow children on or around the machine.

7. Please wear anti-skid shoes.

Maintenance Instructions

All maintenance should be carried out by trained, qualified personnel.

Do not change the original design of the machine without consulting the manufacturer.

Use replacement parts provided or recognized by the manufacturer or local dealer.

Turn off machine and disconnect battery wiring before performing maintenance. Avoid moving parts. Do not wear loose clothing that may catch in the machine.

If performing maintenance on batteries, wear appropriate safety gear such as gloves, apron and safety glasses.

Avoid contact with battery acid as it is extremely corrosive. Wash immediately with soap and water if you come in contact with battery acid.

We do not recommend using pressure washer or steam cleaner to clean the machine.

Instructions for Transporting the Machine

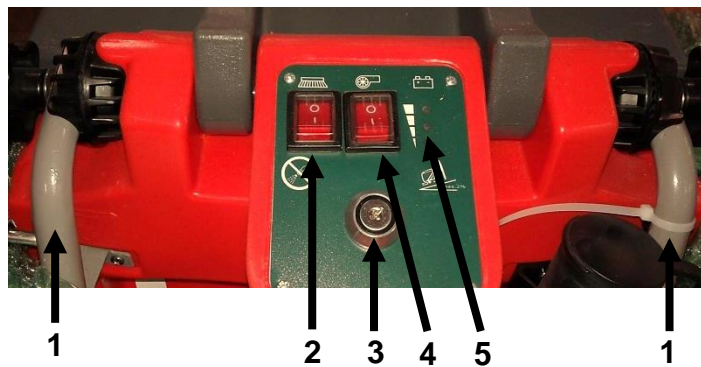
1. Please turn off the power before moving the machine.
2. Lift the brush head to the transport position.
3. Use a ramp when loading or unloading the machine.
4. Lean the front of the machine closely against the front part of the truck or trailer in order to brace for tie down.
5. When the machine is in place, lower the brush head, and make sure the key is in the off position.
6. Place blocks behind the wheels to keep the machine from sliding.
7. Use a rope or strap to tie the top of the machine in order to keep it from shifting during transportation.
8. For safety: when transporting the machine, we recommend using a ramp when loading or unloading the machine from truck or trailer.

Machine Diagram



1. Steering (Brush Propelled)
2. Control Panel
3. Recovery Tank Drain Hose (on back)
4. Squeegee Raise/Lower Lever
5. Vac Hose (on back)
6. Brush Head Lift/Lower Pedal
7. Battery Charge Port (on back)
8. Squeegee Assembly
9. Wheels
10. Adjustable Solution Flow Lever (on back)
11. Recovery Tank Lid
12. Solution Tank Fill Port (inside)
13. Battery Compartment & Lock Nuts (lift\ recovery tank)
14. Brush Head

Control Panel Operations



1. Forward/Reverse (Manual)
2. Brush On/Off
3. Power On/Off (Key switch)
4. Vac On/Off
5. Battery Power Indicator

Machine Unpackaging

1. After receiving, please inspect whether there is damage to the packing crate of the machine. If there is, please immediately notify carrier.

2. Check the freight list. If there is any omission, please contact the distributor. Your crate should contain:

- Two 12V wet, maintenance-free batteries - standard
- One 24V/15A battery charger - standard
- One set of battery cables - standard
- One squeegee - standard
- One scrub brush - standard
- One pad driver - standard
- (Optional) Other accessories - additionally purchased

3. Before unpackaging the machine, please remove cardboard box and loosen or cut the straps that fasten the machine to the pallet. With at least one other person, carefully unload the machine from the pallet.

Note: Please install the batteries after unloading the machine from the pallet. (See following).

Do not drive the machine directly off the pallet without using a ramp.

Battery Installation & Instructions

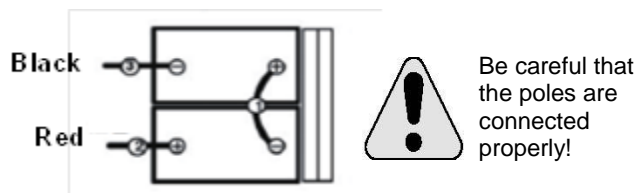
Warning: Fire or explosion hazard. The batteries release hydrogen. Please keep away from spark or open flame. The battery compartment should be kept open when charging.

For safety: Please wear appropriate protective gear: safety glasses, apron and gloves when performing battery maintenance or wiring. Avoid contact with battery acid.

Place the machine on the level ground and take out the start key.

Lift up the recovery tank to access the battery compartment. (Make sure the recovery tank is clean and dry first).

Place batteries into the battery compartment and connect the battery wiring according to the diagram on next page:



Note: Place batteries carefully into compartment in order to avoid damage to the battery and the machine.

Before connecting the batteries, please inspect whether the electrodes and terminals are clean. Use terminal cleaning fluid and wire brush as required.

Paint a thin layer of metal-free lubricating oil or protective spray on the connected wiring to avoid battery corrosion.

After the batteries are installed, please check the power gauge. If all lights are lit, batteries are ready for use. If not, batteries need to be recharged.

Battery Power Gauge

The battery power gauge will display the power level of the battery. When the batteries are fully charged, all indicator lights will be on. As the machine runs and power is drawn from the batteries, the indicator lights will go out. In order to prolong the life of the batteries, do not let the batteries run completely down.

Battery Charging

Note: To prolong the life of the batteries and ensure the optimum efficiency of the machine, the batteries should be charged after the machine has been used 30 minutes or more. Please do not let batteries run too low before recharging. Do not leave batteries unused for long periods of time, without recharging routinely, as they will slowly lose their charge even when not in use. The following charging instructions are specifically for the charger attached to this machine. Please be sure to use the charger of the following specification to avoid damaging batteries.

Charger specifications:

- Battery type – maintenance free wet batteries
- Output voltage - 24V
- Output current - 15A
- Intended for deep cycle battery charging

Charger lights indicate the following:

- Red: Battery or charger failure. Try replacing batteries or contact local service center for assistance.
- Yellow: Charging is completed.
- Green: Battery charging is in progress.

Proper ventilation is recommended in the area where batteries are being charged.

Warning! Fire or explosion hazard. The batteries release hydrogen. Please keep away from spark or open flame. Do not place tools, metal shavings or other metal instruments on batteries as this could cause an electrical arc.

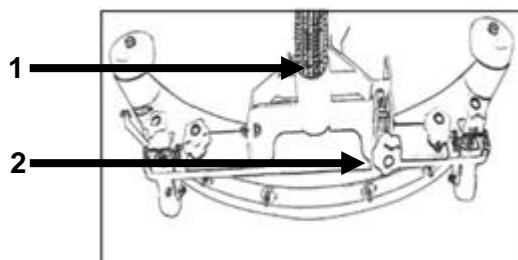
1. Stop and park the machine on level ground and turn off power with the key.
2. Before charging, check the electrolyte level in each battery (if batteries are not the standard maintenance-free type).
3. For safety: Please wear appropriate protective gear: safety glasses, apron and gloves when performing battery maintenance or wiring. Avoid contact with battery acid.
4. When charging, please open recovery/solution tank to facilitate ventilation.
5. Plug the AC (alternating current) power cord of the charger to the outlet/power source.
6. Plug the DC (direct current) power cord of the charger to the battery charging port at the rear of the machine.
7. The charger will automatically begin charging, and will automatically switch off when the batteries are fully charged.

Note: The machine will not operate while it is charging. While charging, please do not pull the DC cord out of the port at the back of the machine. If charging must be halted before it is complete, please unplug the AC power cord from power source first.

8. After the charging is completed, recheck the electrolyte level in the batteries (only if equipped with non-maintenance-free batteries).

Contact your local service center or authorized dealer if you have questions regarding battery maintenance or type of batteries to use with this machine. **Note:** maintenance-free gel batteries may be available with this model as a non-standard option. Contact your dealer for details.

Installation of Squeegee Assembly

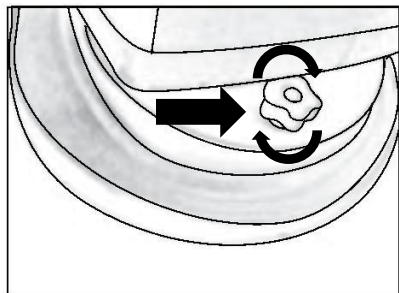


1. Connect vac hose into port.
2. Adjust squeegee pitch by turning knob.

Scrub Brush and Pad Driver Installation

1. Turn off machine with key switch. Remove key.
2. Lift brush plate 45° and rotate counterclockwise direction.
3. Remove scrub brush or pad driver.
4. Install new scrub brush or pad driver and rotate clockwise until it fits into place.
5. Rotate brush plate back into place.

Note: Turning the star knob on the brush head clockwise accelerates brush/pad speed. Turning the knob counterclockwise decelerates brush/pad speed. We recommend lowering the brush speed before the installation process and returning brush speed to normal afterward. Adjust knob until brush/pad operates at the desired speed/pitch.



Scrub Brush and Scrub Pad Recommendations

In order to ensure the optimum efficiency, please use the suggested type of brush or pad for the surface you are cleaning. Please read the following:

Soft nylon brush (white) – Recommended for use on coated floors to avoid abrading the surface.

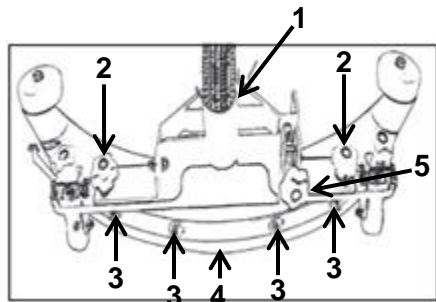
Polishing pad (white) – Recommended for maintaining highly smooth or polished floors.

Scrubbing pad (red) – Recommended for lightly scrubbing dirt without damaging the floor.

Grit scrub pad (black) - Recommended for aggressively removing heavy buildup or base or super-powerful scrubbing.

Please consult your local dealer if you have any questions.

Replacement of Squeegee



1. Park the machine on level ground, turn off power switch and take out the start key.
2. Lower squeegee assembly to operating position by pulling down the lever on the back side.
3. Disconnect the vac hose (1).
4. Unscrew the star handles (2).
5. Take out wing nuts (3).
6. Remove squeegee from bracket and flip over or replace with new squeegee if all edges are worn (4).
7. Replace wing nuts (3).
8. Screw in the vac hose assembly and tighten star handles (2).
9. Connect the vac hose to the port on squeegee assembly (1).
10. Examine the squeegee and adjust so that it fits the assembly and meets the floor properly
11. Squeegee assembly may rotate up to 5° in order to clean more efficiently. Turn the adjustment knob (5) in order to adjust pitch.

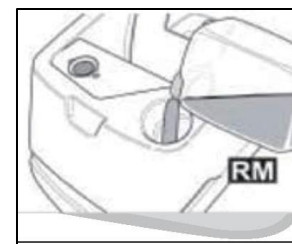
Checklist Before Running the Scrubber

- Check the battery power. Charge batteries if less than a full charge is indicated by the power gauge. New batteries take about 6 hours to charge.
- Check the condition of the scrub brush or pad. Replace if they are worn. (Pads may be flipped over and reused. Replace if they are worn on both sides.)
- Check the condition of the squeegee and reposition or replace if needed. (Squeegee edge should be square and meet the floor properly). Clean squeegee if needed.
- Check that the recovery tank is empty and that floating filter screen is clean. Replace if needed.
- Check the condition of the skirt around the scrub deck. Replace if worn.

Operating Instructions

Filling the Solution Tank

1. Open the recovery tank lid. Note the port on the right hand side of the front of the machine. This is where to pour cleaning detergent



and water for use in scrubbing.

2. Use only low foam detergents recommended by the manufacturer. Do not use harsh solvents or corrosive cleaning agents in the machine.
3. Do not use a higher concentration of cleaning chemical than what is recommended by the chemical manufacturer.
4. Do not use water or solution hotter than 140°F.

If you have any questions regarding chemicals or mixing ratio, consult chemical manufacturer instructions or your local dealer.

Starting the Machine

1. Switch the key of the main power supply to the ON position. (Note the power level gauge. If it does not indicate full charge, please charge the batteries before running the machine).
2. Pull down the squeegee lifting lever (in the middle on the back side) to lower the squeegee assembly to the ground.
3. Step on the brush head raise/lower pedal (on the back side, bottom right) to lower the brush head to the ground.
4. Turn on the solution control valve (on back side, top left) to dispense cleaning solution.
5. Turn on the brushes.
6. Turn on the vac motor.
7. Push the handlebars forward to drive forward and backward to drive backward. Amount of pressure determines drive speed.

Running the Machine

Warning: Fire or explosion hazard. Do not attempt to vac up flammable or corrosive liquids or dust, or reactive metals.

1. Overlap each cleaning pass by 3 inches.
2. Keep machine moving while scrubbing in order to avoid abrading floors.
3. If there are drag marks on the floor behind the squeegee, you may need to clean or replace the squeegee (if it is worn down) or turn off solution flow and run scrubber over the area again with vac turned on.
4. Do not operate the machine on any slope steeper than 2%.

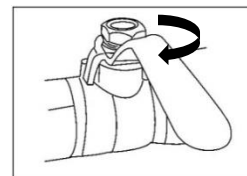
5. We strongly recommend using only low foam detergents in the scrubber. Consult your local dealer for details. If you are getting too much foam while cleaning, we recommend pouring a defoaming agent into the recovery tank. Also try using a lower concentration of cleaner.

Note: Do not let the foam enter the filter screen so as to avoid damage to vacuum motor. The foam may also damage the switch of the filter screen.

6. Use a double pass method for cleaning extremely dirty floors. Lift squeegee assembly for first pass. Deposit detergent and let sit for 3-5 min. Then lower the squeegee, turn on the vac, and run the second pass.
7. Keep an eye on the power consumption of the batteries. Normal run time for brand new batteries is about 4 hours.
8. Observe the liquid level through the liquid meter of the solution tank (if equipped). Normal consumption for 10 minutes of operation is about 1.3 gallons.
9. When the solution tank is empty, before refilling it, be sure to empty the recovery tank completely.
10. If the machine is to be left unattended, stop and place the machine on level ground. Switch off power and take out the key.
11. After running the machine, carry out daily maintenance procedures.

Daily Maintenance

1. Turn off solution flow with lever on top left of back side.
2. Turn off brushes and vac with switches on control panel.
3. Raise squeegee assembly with lifting lever on back side.
4. If solution tank is not completely empty, push machine to drainage area and open valve to allow solution tank to drain out (see picture).
5. Drain, flush, and clean recovery tank (see following section). Leave tank open and allow to air dry.
6. Clean squeegee and inspect for wear. If working edge is not square, reposition or replace as needed. (See "Installation and Replacement of Squeegee").
7. Wipe down with machine with cloth and multipurpose cleaner.
8. Check vac filter. Clean or replace if necessary.



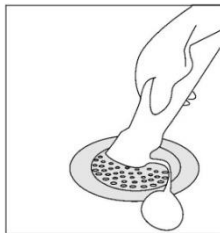
9. Rinse brushes or scrub pads. Replace if they are worn out.
10. Charge the batteries. To prolong the life of the batteries and ensure the optimum efficiency of the machine, the batteries should be charged if the machine has been run for more than 30 minutes.

Drainage of Recovery Tank

After each use, the recovery tank should be drained and cleaned. Filters and hoses should also be inspected for corrosion or blockage, and cleaned and replaced as needed.

Follow these steps for draining & cleaning the recovery tank:

1. Switch off machine with power key and take the machine to the drainage/maintenance area.
2. Unscrew (counterclockwise) the lid of the recovery tank drainage hose and take the hose down. Be sure hose will direct waste flow into drain or other designated waste disposal area.



3. Once the recovery tank has completely drained, open the lid of the recovery tank and rinse with clean water. Allow waste to continue to drain out of tank through the hose. If tank is especially dirty, scrub lightly with scrub brush and appropriate multipurpose cleaning agent. (Do not use harsh solvents, pressure washer, or steam to clean the interior of the recovery tank.) Consult manufacturer or local dealer if you have any questions.
4. Dismantle and flush the floating filter screen in the recovery tank. Dry and replace when finished. Inspect for corrosion and wear. Replace filter if necessary.
5. Allow all waste and rinse water to drain from recovery tank then leave open to air dry.

Monthly Maintenance (or after 80 hours of use)

In addition to daily maintenance, we recommend the following maintenance procedures to keep your machine in prime working condition.

Warning: Electric shock hazard. Disconnect the battery wiring before performing electrical maintenance on the machine.

1. Remove the filter of the solution tank clean the filter screen. Ensure the solution tank is emptied before dismantling the filter.
2. Clean the top of the battery to prevent terminal corrosion. Check battery acidity level and perform battery maintenance if needed.
3. Inspect battery wiring and make sure it is in proper position and in good condition.
4. Check and clean the cover of the recovery tank and seals and replace if there is any damage.
5. Spray silica gel dry lubricant on all pivots and wheels, and coat with a layer of water-proof lubricating oil to ensure smooth operation.
6. Check the nuts and bolts on the machine and tighten if they are loose.
7. Check for leaks.

Quarterly Maintenance (or every 250 hours)

Examine the condition of the carbon brush of drive motor (if equipped), vac motor, and brush motor. When the abrasion length of the carbon brush is within 10mm (3/8 in), the carbon brush needs to be replaced. Please contact your local dealer or authorized service center.

Machine Storage

1. Please charge the batteries before storing the machine.
2. Drain, thoroughly clean, and air dry the recovery tank. (Storing the machine without cleaning the recovery tank may cause a buildup of harmful bacteria or odors.)
3. We recommend storing the machine indoors in a dry place.
4. Store with the brush head in raised position.
5. Leave the cover of the recovery tank open.
6. If the scrubber will be stored in a cold environment, please be sure to drain all liquids from the machine or use antifreeze.

Troubleshooting

The machine will not operate.	Batteries have no power.	Charge batteries.
	Batteries will not charge.	Replace batteries
	Battery wiring is not connected.	Check battery wiring for loose connection. Tighten if needed.
	Fuse has blown.	Replace the fuse.
Brush motor will not work, or brushes will not turn.	Brush head is raised.	Lower brush head.
	Something has entangled the brush head and prevented it from turning.	Check brushes and remove obstructions.
	Batteries have run down.	Charge batteries.
	Brush switch is faulty.	Please contact service center.
	Carbon brush on motor is worn out.	Please contact service center.
Vac motor will not work.	Squeegee is in raised position.	Lower the squeegee assembly.
	Batteries have run down.	Charge batteries.
	Vac motor fuse has blown.	Replace vac fuse.
	Vac motor or vac motor wiring has failed.	Please contact service center.
	Carbon brush on vac motor is worn out.	Please contact service center.
Machine is not vacuuming properly	Vac motor cover seal leaks.	Replace vac motor cover seal.
	Vac filter is clogged.	Clean or replace vac filter.
	Vac hose is clogged or hose leaks.	Clean or replace vac hose.
	Squeegee is worn or damaged.	Reposition or replace the squeegee.
	Solution flow valve is closed.	Open solution flow valve.
	The recovery tank is full.	Drain the recovery tank.
	Vac motor has failed.	Contact service center.
Little or no cleaning solution flows out of machine.	The solution tank filter or hose is blocked.	Inspect filter and hoses and clean them.
	Flow control is set too low.	Adjust flow control.
	Bolt on flow control knob is loose.	Tighten bolt on flow control knob.
Run time has shortened.	Batteries have worn out.	Replace batteries.
	Battery charger has failed.	Replace charger or contact service center.

Specifications

Specification	Unit	SS WSC21	Specification	Unit	SS WSC21
Voltage	V	24 (2 x 12)	Brush speed	rpm	185
Amperage	AH	100	Brush pressure	lb/in ²	3.2
Run Time	hours	4 (approx.)	Vac motor power	hp	.67
Cleaning width	in	21	Drive motor power	hp	-
Vacuuming width	in	30	Solution Tank Capacity	gal	13
Drive Speed	mph	2.5	Recovery Tank Capacity	gal	14.5
Cleaning efficiency	ft ² /h	22,600	Weight (w/batteries)	lb	428
Brush motor power	hp	.87	Machine Dimensions	in	46 x 21 x 42

Warranty Card

(please fill out and return to dealer)

Name _____ **Phone #** _____

Address _____

City _____ **State** _____ **Zip** _____

Purchase Date _____ **Invoice #** _____

Model # _____ **Serial #** _____

Local Dealer _____ **Local Dealer City/State** _____

Warranty provided with purchase invoice.