

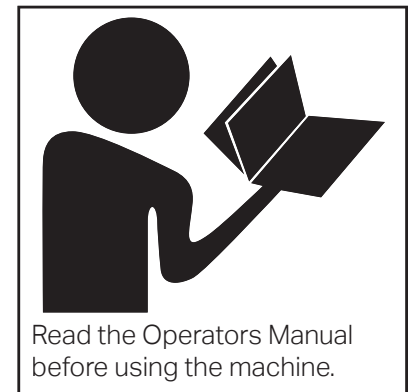
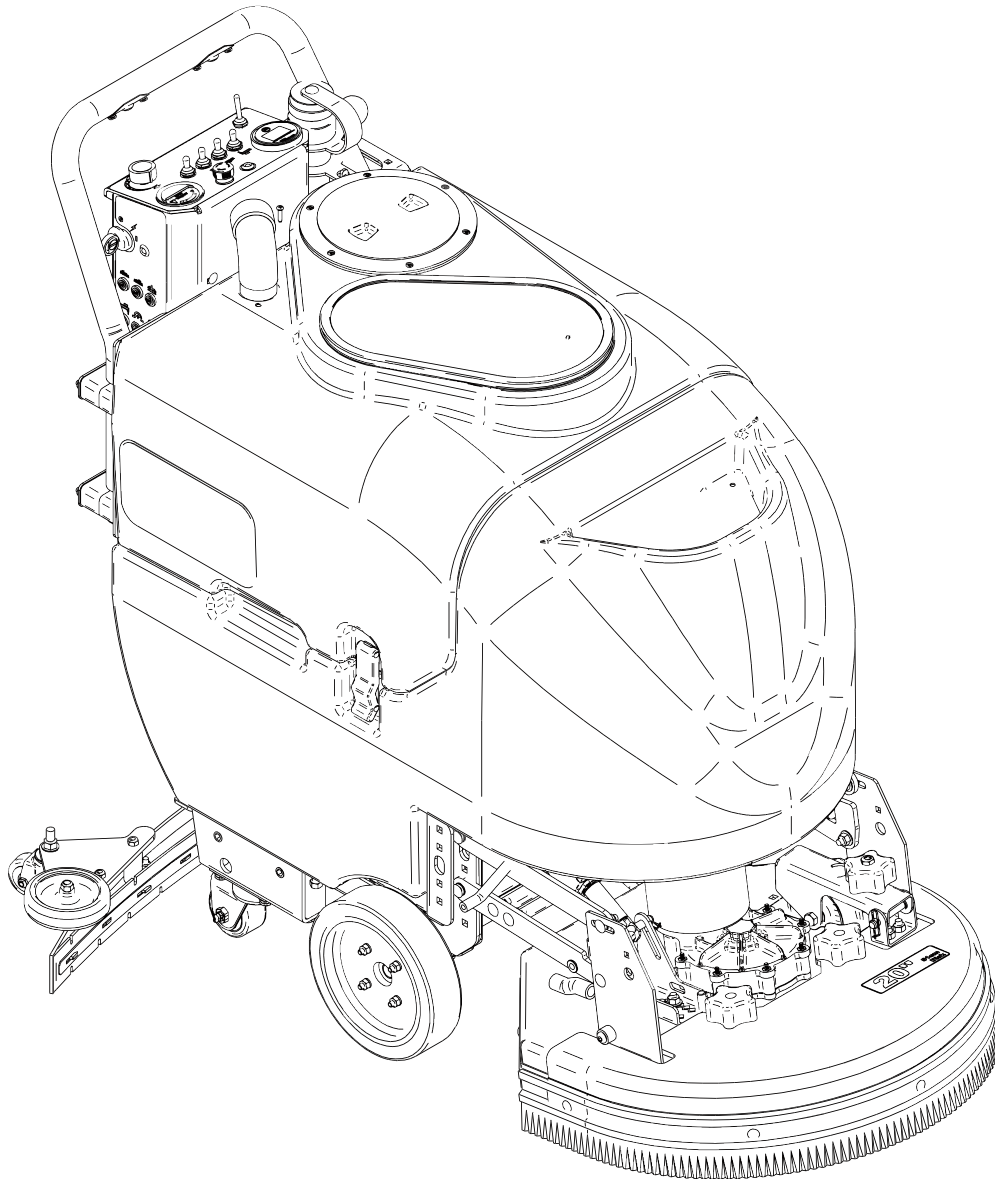


WD20
Walk Behind Scrubber

WD17
Walk Behind Scrubber

Operator Manual (EN)

Models:
17" & 20" Disk



INTRODUCTION

This manual is furnished with each new machine. This manual will allow the Operator to get the best performance out of your Bulldog Scrubber-Drier. Read this manual thoroughly before operating or servicing the machine.

This machine will provide excellent performance, but the best results will be obtained at the most minimum costs if:

- The machine is regularly maintained - per the Authorized Local Distributor.
- The machine is operated with reasonable care and caution.
- The machine is maintained with manufacturer supplied parts.

Locate Serial Number

The serial number of your machine is located on the lower half of the control panel of the machine.



AS OUR POLICY IS ONE OF CONSTANT IMPROVEMENT - ALL INFORMATION AND SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Intended use

The Bulldog W-17/20D walk-behind scrubber is intended for commercial applications with hard floor surfaces such as concrete, VCT, tile and grout, stone, ect. This machine is not designed to clean carpets or sand wooden surfaces. Use only OEM pads/brushes and commercially available floor cleaning detergents. Do not use this machine other than described in this Operator Manual.

Machine Data

Fill out while installing machine for future reference.

Model No. - _____

Serial No. - _____

Installation Date - _____

Uncrating Machine

Inspect machine for damage before unloading, if any damage has occurred report it to the carrier. Contact distributor or Bulldog for missing components.

Remove protective shipping frame then locate and unscrew the metal bracket connecting the machine to the pallet. Before removal the scrub head should be in the raised position. Using the supplied ramp carefully back the machine off the pallet.



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SAFETY

Important Safety Messages

You will see four kinds of safety reminders in this manual:

<p style="text-align: center;"> DANGER</p> <p>DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.</p>	<p style="text-align: center;"> WARNING</p> <p>WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.</p>
<p style="text-align: center;"> CAUTION</p> <p>CAUTION indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury or damage to this machine or nearby objects. CAUTION also can be used to alert against unsafe practices.</p>	<p style="text-align: center;">NOTICE</p> <p>NOTICE indicates information considered important, but not hazard-related. This safety message may be related to property damage or warranty warnings.</p>

Your safety, and that of others, is very important. Operating this machine safely is an important responsibility.

DO NOT OPERATE THIS MACHINE:

- Unless you are trained and authorized to do so by your RPS Authorized Local Distributor
- Unless you have read and understood this Operator's Manual
- On surfaces with greater than a 3° slope.
- Within 25' (8m) of Loading Docks

WHEN OPERATING THIS MACHINE:



- Remove loose objects from the floor that could be projected from the rotating Brushes
- Keep your hands and feet away from the rotating Brushes
- Do not operate this machine where flammable liquids, vapors, or dust are present
- Use caution when maneuvering

BEFORE LEAVING THE MACHINE:

- Drain "clean" Solution & "dirty" Recovery solution into APPROVED drains
- Park the machine on a level surface
- Turn the machine off & remove key

BEFORE SERVICING THE MACHINE:

- Disconnect the Batteries

<p style="text-align: center;"> DANGER</p> <p>Explosive hydrogen gas forms when Batteries are charging. An open flame or spark can cause this gas to explode. Serious personal injury or property damage could occur. Only charge the Batteries in this machine in a well ventilated area.</p>	<p style="text-align: center;"> DANGER</p> <p>Flammable materials can cause an explosion or fire. Do not use flammable materials in Tank or pick up.</p>
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⚠ WARNING

The Batteries in this machine produce hazardous voltage which can cause electrical shock, burns and/ or electrocution. Always disconnect Batteries before servicing this machine.

⚠ WARNING

When climbing or descending ramps, always drive machine forward. To avoid overturning the machine, Do not back down ramps. Do not drive across inclines. Do not turn while ascending or descending ramps. Overturning the machine can cause serious injury or death.

⚠ WARNING

Do not use water that exceeds 135°F / 57°C. If water is above said temperature, this will void the Tank Warranty.

⚠ WARNING

Do not park this machine on ramps or slopes. Always park this machine on a level, hard surface. Do not operate this machine outdoors or on uneven surfaces.

⚠ WARNING

The Batteries in this machine contain sulfuric acid, which causes burns to skin. If battery acid contacts clothing or skin, rinse the effected area with cold water immediately. If battery acid gets on your face or in your eyes, flush the area immediately with cold water and seek medical attention.

⚠ WARNING

To avoid electrical shock, do not operate this machine over electrical floor outlets.

⚠ CAUTION

To avoid damage to this machine, use only cleaning solutions and replacement parts recommended by the manufacturer.

⚠ CAUTION

Do not operate this machine if any parts have been damaged or removed.

⚠ WARNING

Dress safely. Do not wear rings or metal wrist watches when servicing this machine, as they can cause an electrical short circuit which can cause serious burns.

⚠ WARNING

Do not remove, paint over or destroy warning decals. If warning decals become damaged, call 1-262-681-3583 for free replacements.

⚠ WARNING

Dress safely. Do not wear a neck tie, scarf, or any loose or dangling clothing while operating this machine. Loose or dangling clothing or neck-wear can tangle in rotating parts, causing serious injury or death.

⚠ WARNING

Always turn off this machine before leaving it unattended. Do not allow untrained persons to operate this machine.

⚠ WARNING

NO RIDERS. Do not carry passengers on this machine. Do not use this machine as a stepladder or work platform.

⚠ WARNING

Understand the dynamic braking system before you operate the machine on ramps. Machine may coast.

⚠ WARNING

Before you service a Battery, always wear face protection, protective gloves and protective clothing. Battery acid or battery explosion can cause serious injuries.

⚠ CAUTION

Always use the automatic battery charger provided by the manufacturer of this machine to charge the Batteries of this machine. It is designed to charge the Batteries at the appropriate rate. If you must use a different charger, disconnect the Batteries before charging to avoid damage to the electronic speed controller.

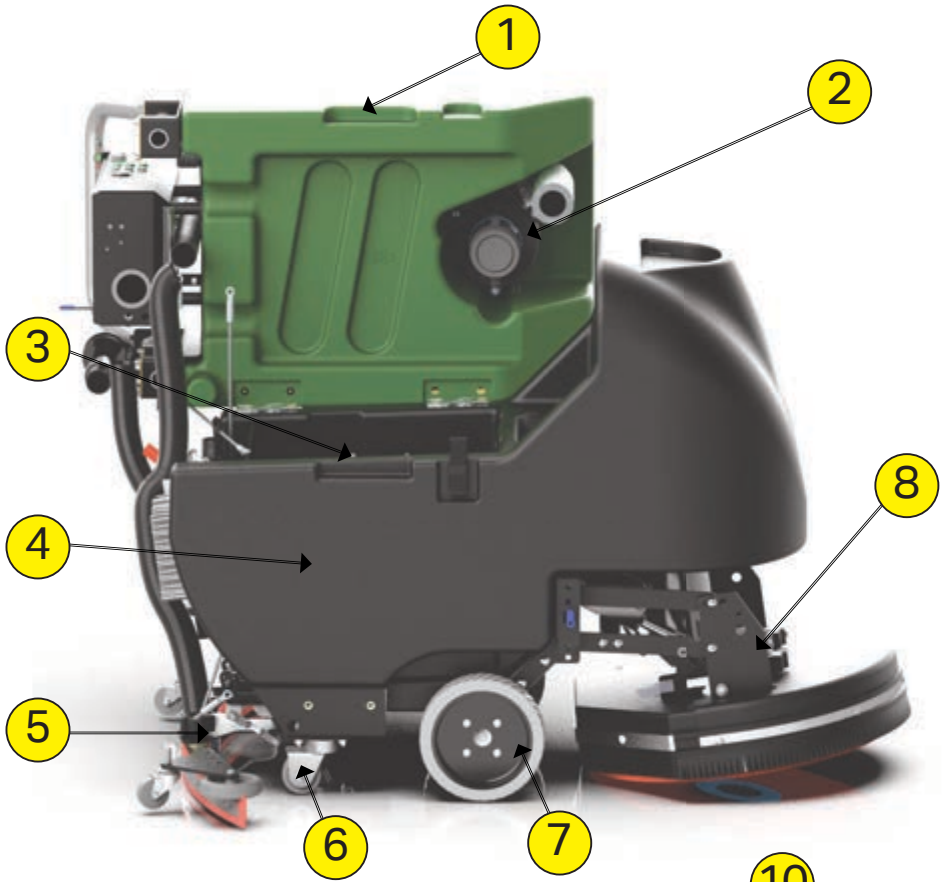
⚠ CAUTION

To avoid damage to the electronic control components of this machine, Do not store this machine outdoors. Do not pressure wash this machine.

OPERATION

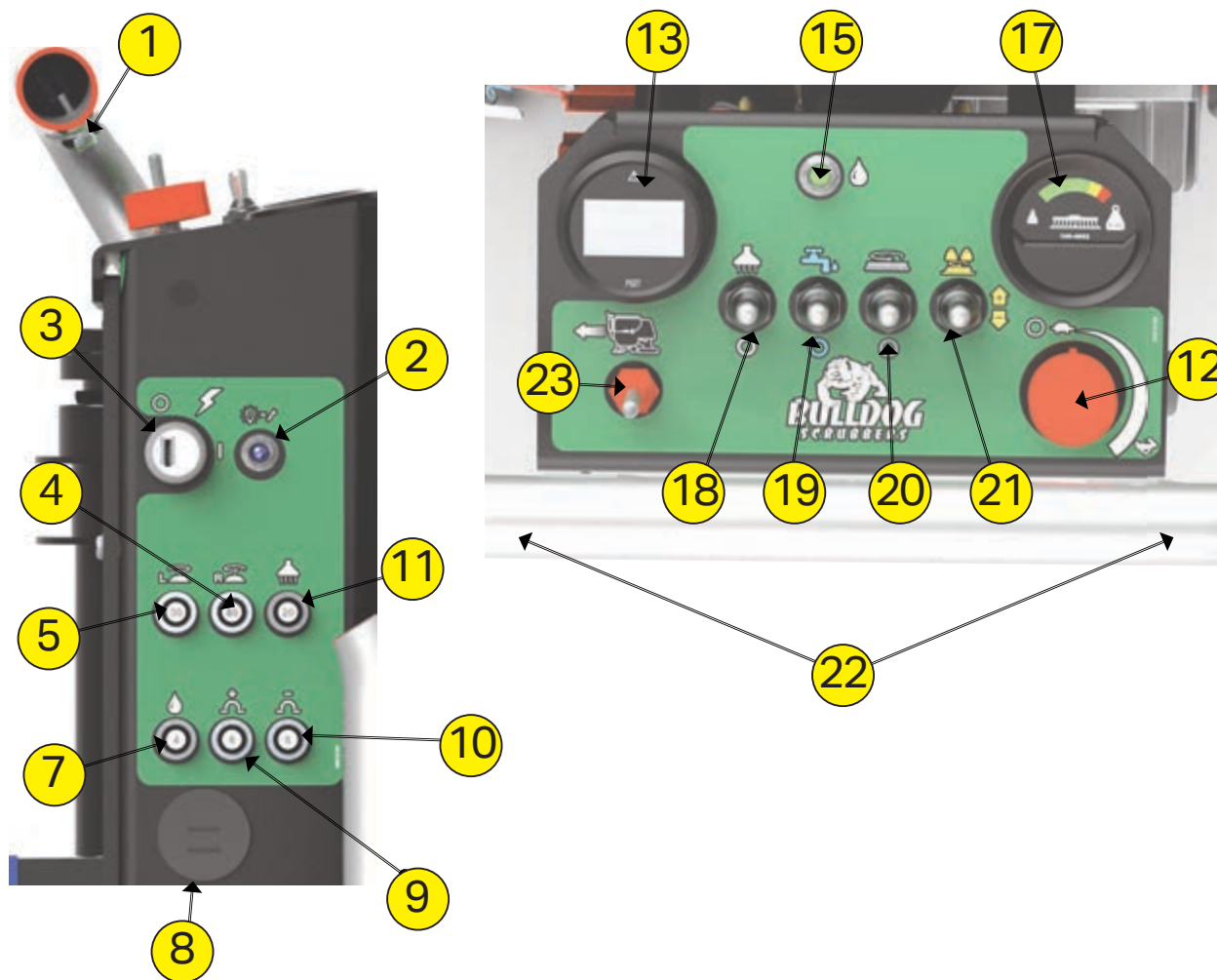
Machine Overview

1. Recovery Tank
2. Vac Motor
3. 2x 12VDC Batteries
4. Solution Tank
5. Squeegee
6. Rear Caster Wheel
7. Tire
8. Scrub Deck
9. Recovery Tank Clean Out
10. Foam Float Ball & White Filter
11. Solution Fill
12. Tank Latch
13. Charging Port
14. Recovery Drain Hose
15. Solution Sight Tube & Drain Hose
16. Squeegee Lever



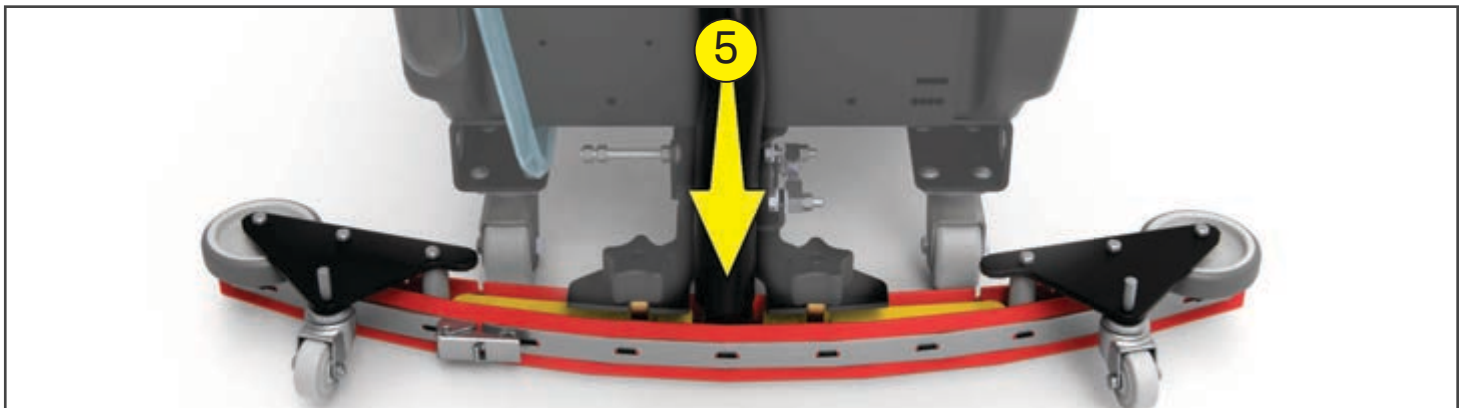
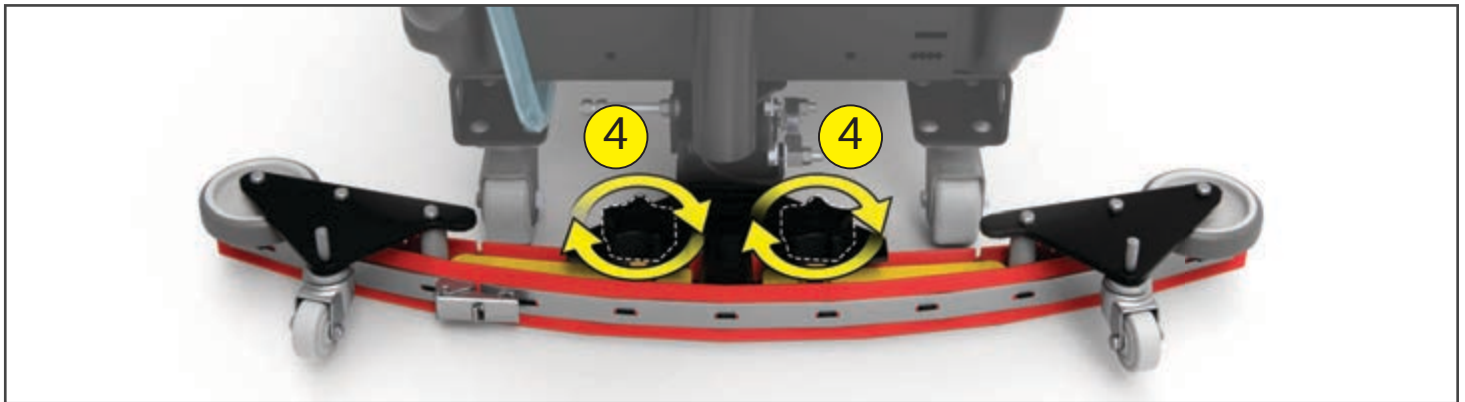
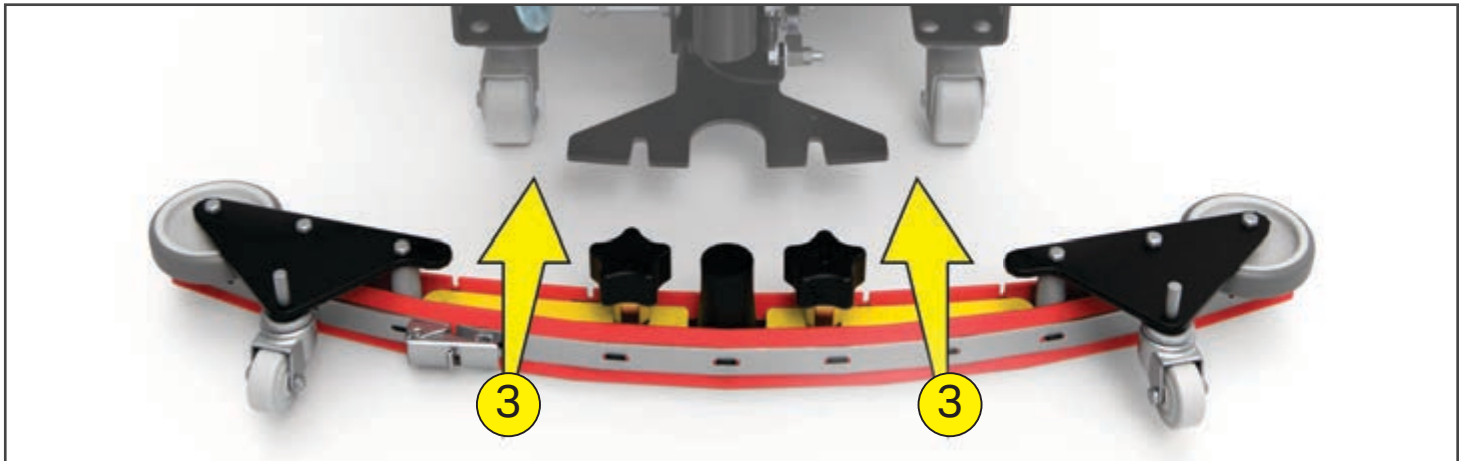
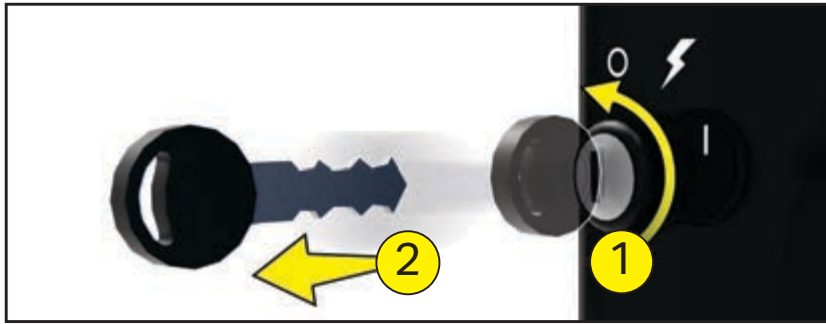
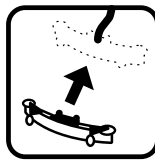
Central Command Overview

1. Drive Switch
2. Status Indicator Light
3. Key Switch
4. Right Brush Circuit Breaker
5. Left Brush Circuit Breaker
7. Solution Valve Circuit Breaker
8. USB Port (Optional)
9. Positive BUSS Circuit Breaker (+ vdc)
10. Negative BUSS Circuit Breaker (- vdc)
11. Vac Circuit Breaker
12. Speed Control Knob
13. Battery Gauge/Hour Meter
15. Solution Indicator Light
17. Brush Pressure Gauge
18. Vac Switch On (I) / Off (O)
19. Solution Switch On (I) / Off (O)
20. Deck Switch Up (I) / Down (O)
21. Down Pressure Toggle Switch (Optional)
22. Drive Switch LH/RH Side
23. Reverse Switch



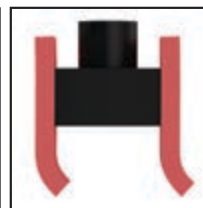
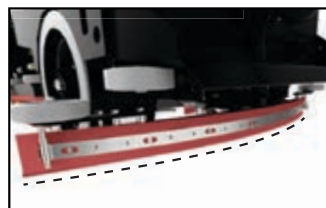
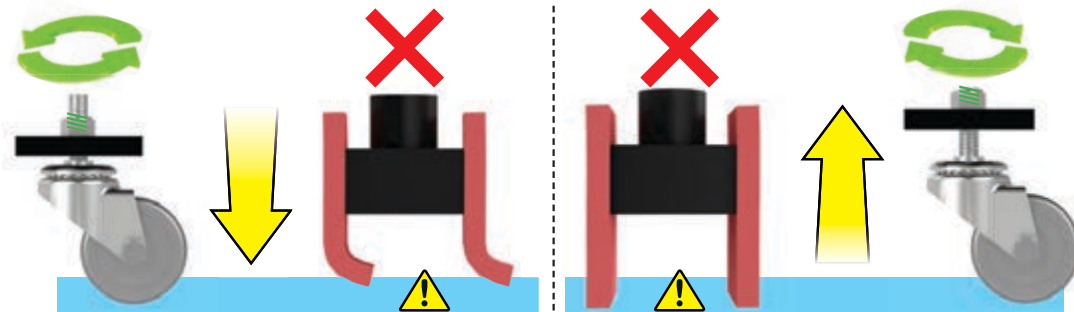
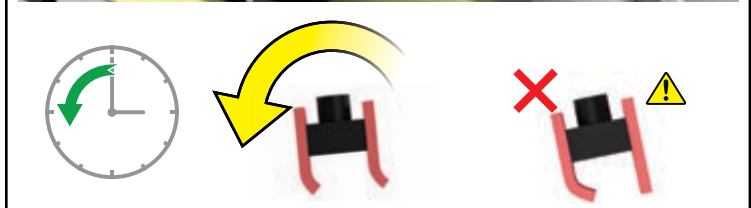
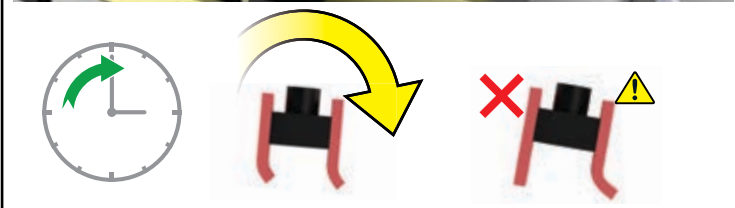
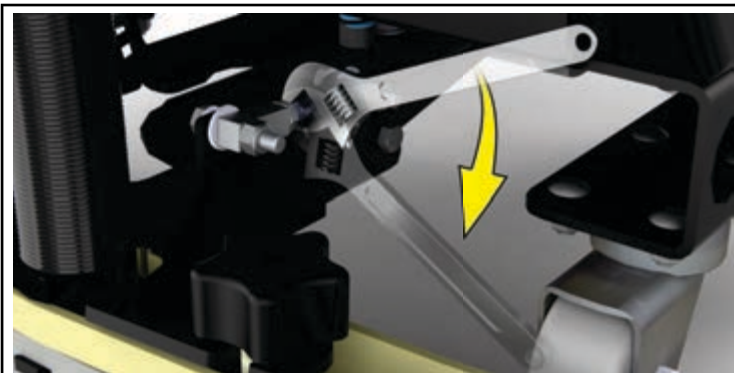
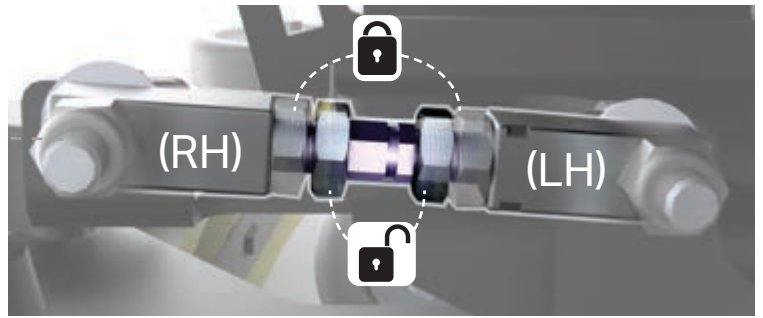
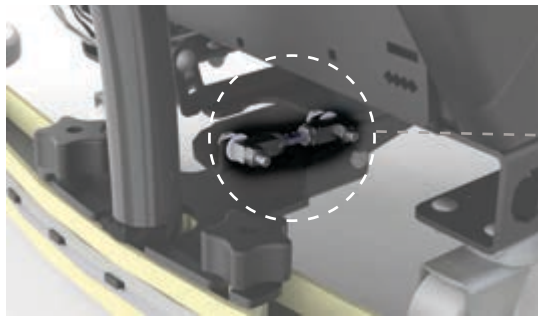
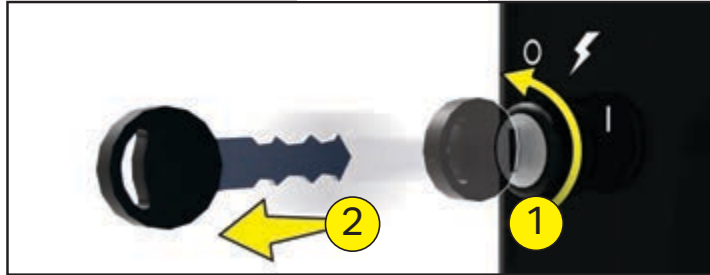
OPERATION

Squeegee Installation



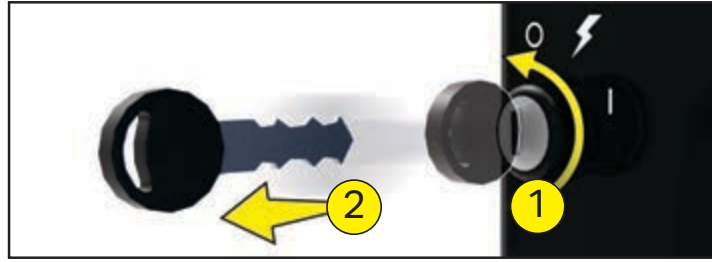
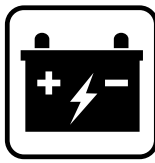
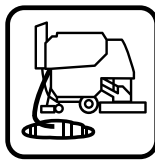


Squeegee Adjustment

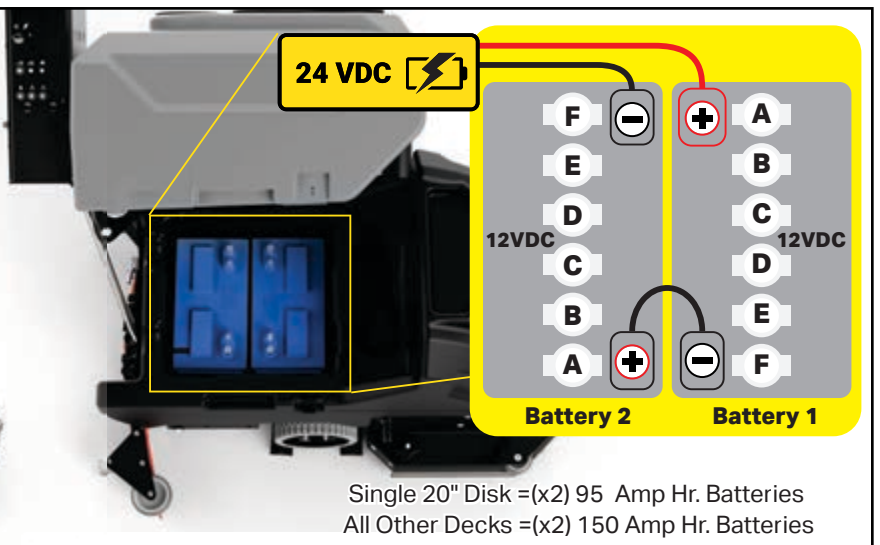


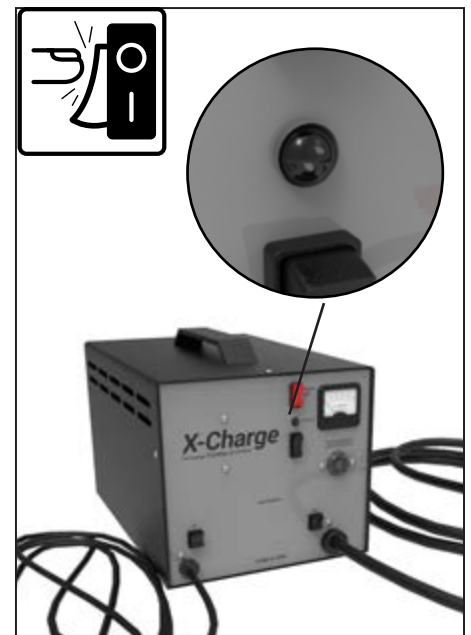
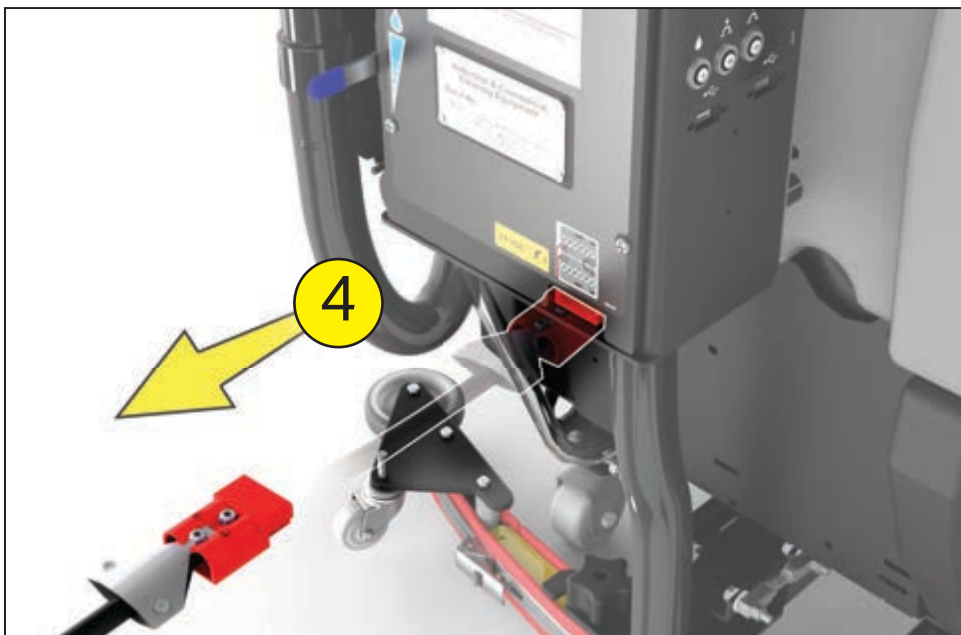
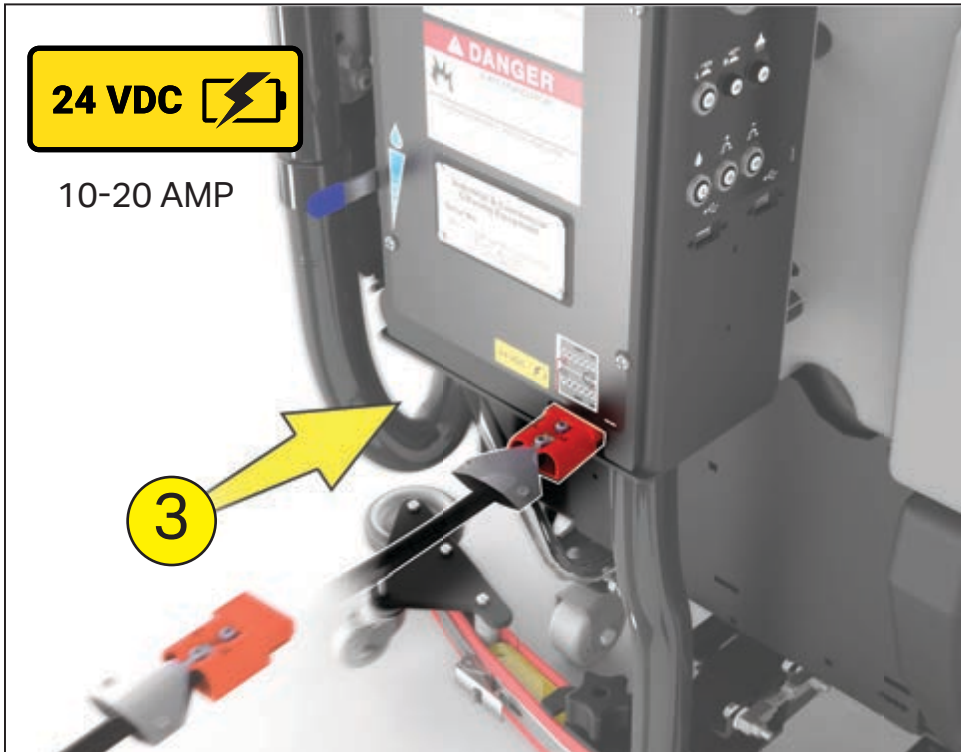
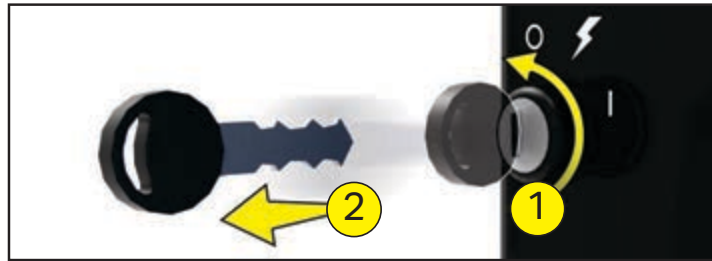
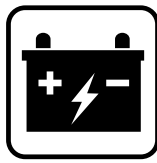
OPERATION

Battery Setup



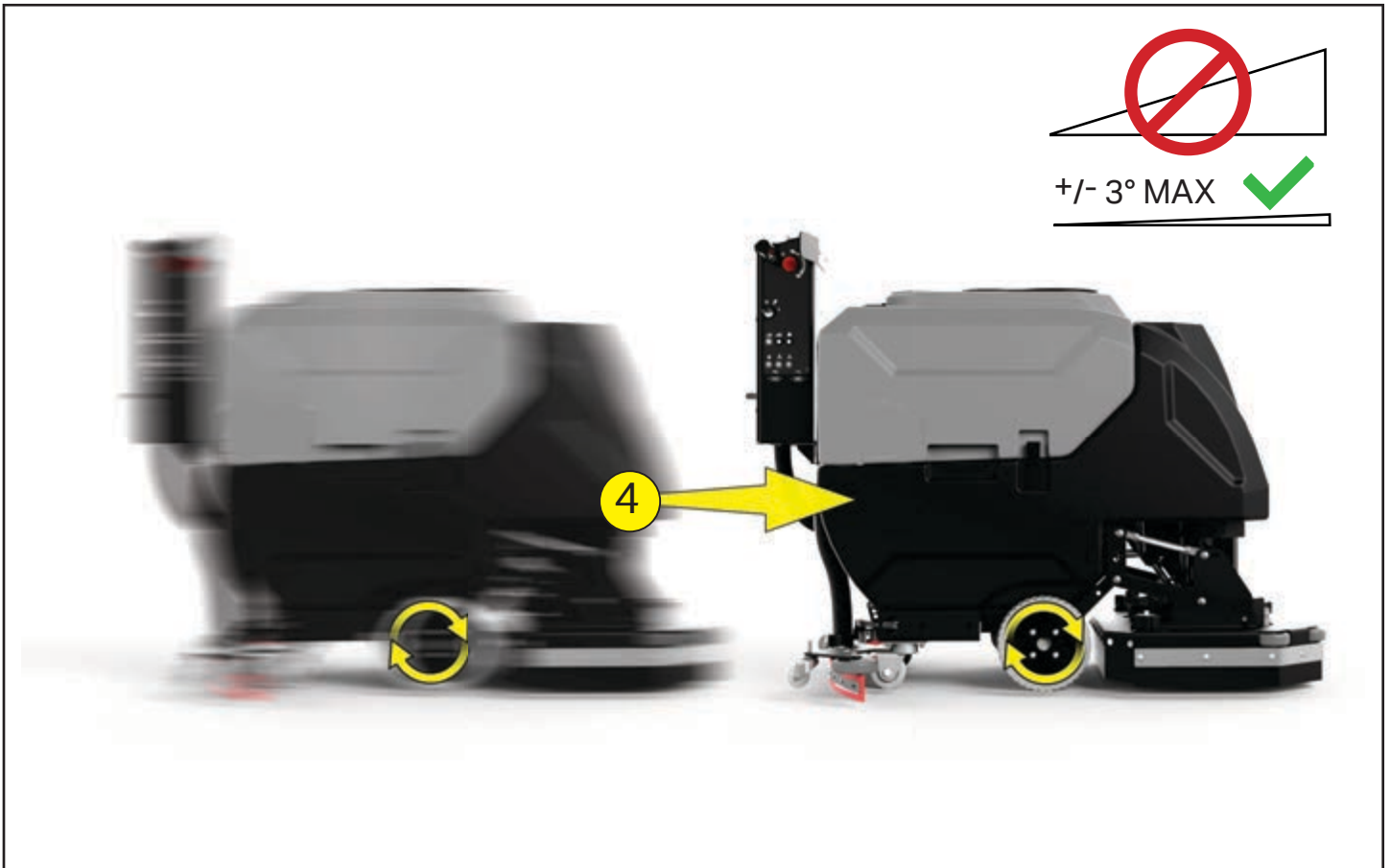
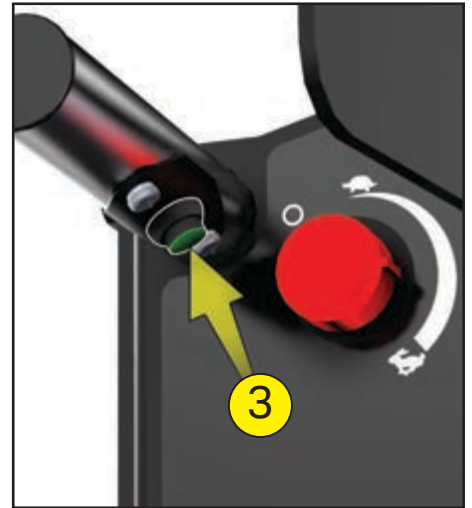
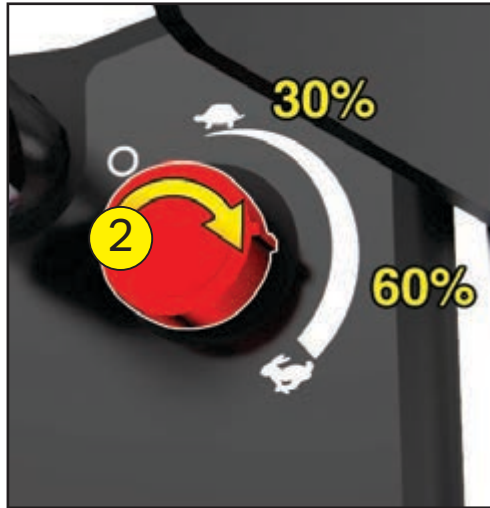
Machine On Level Ground

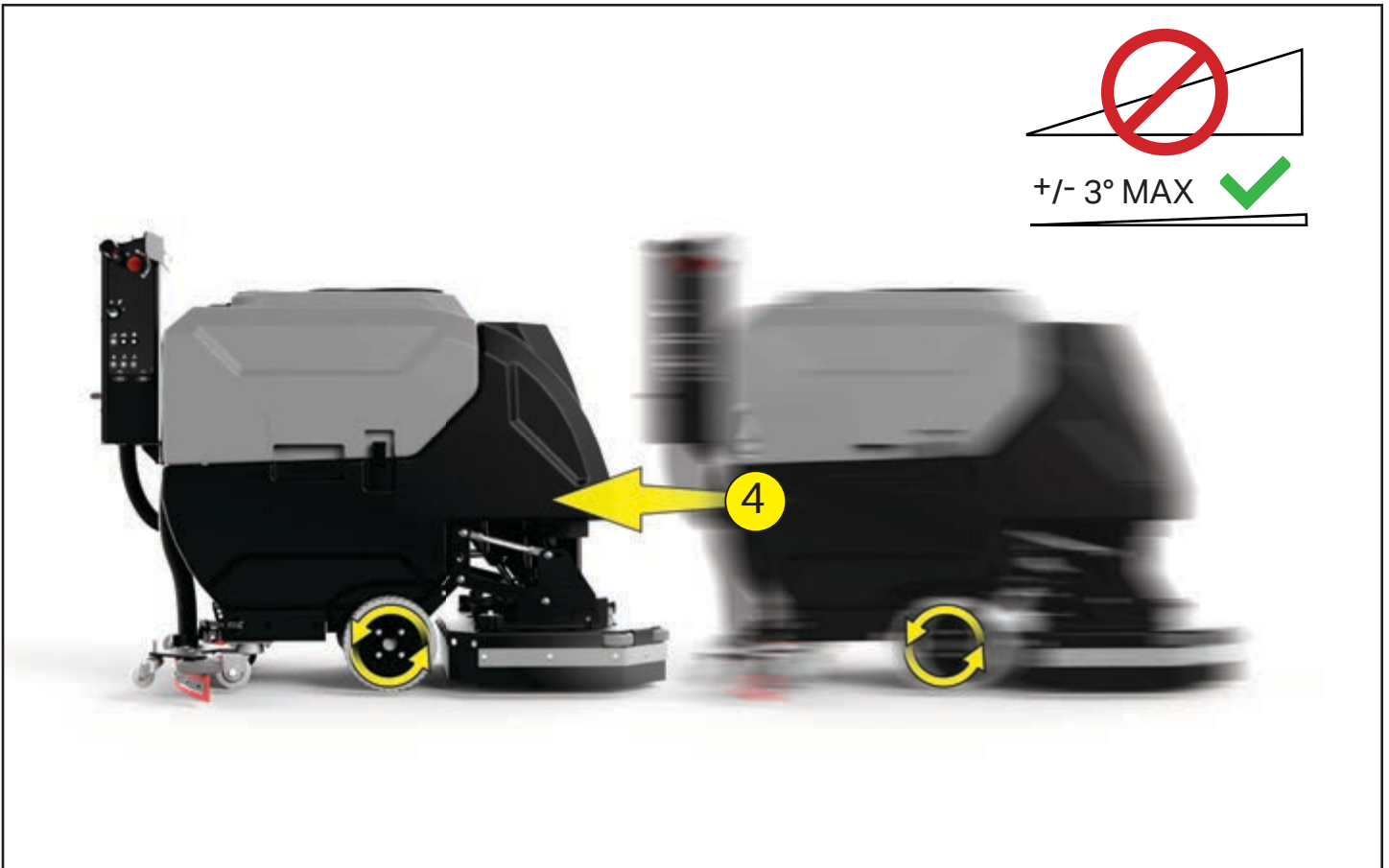
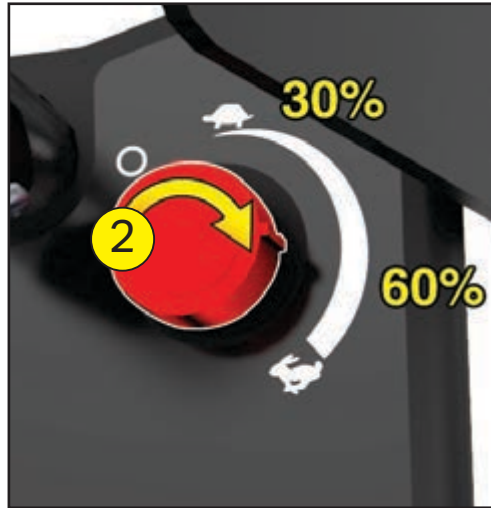




OPERATION

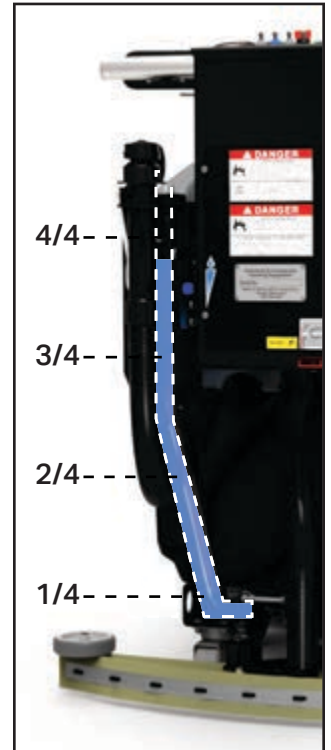
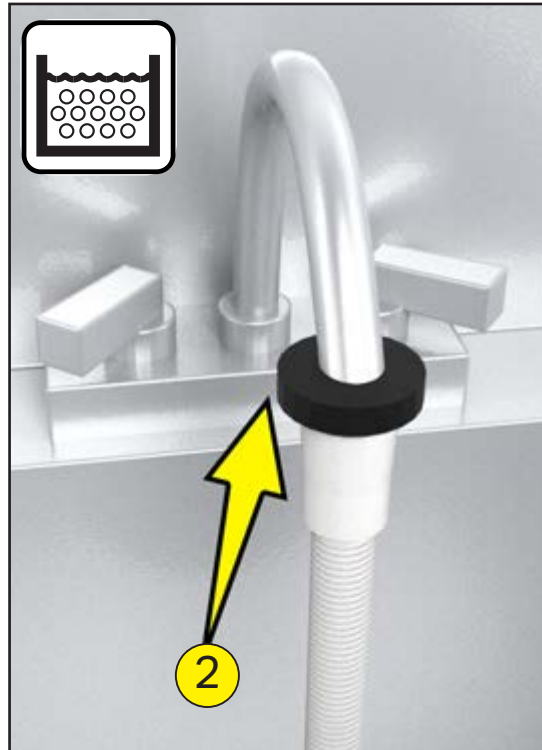
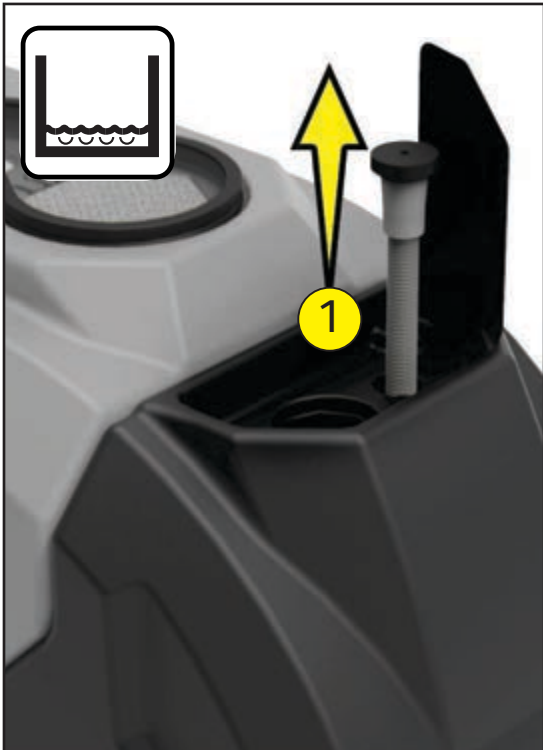
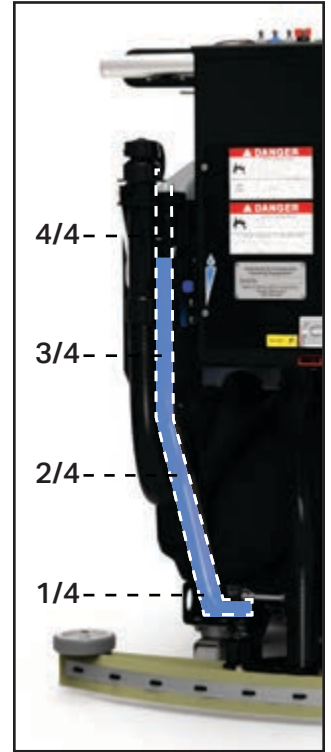
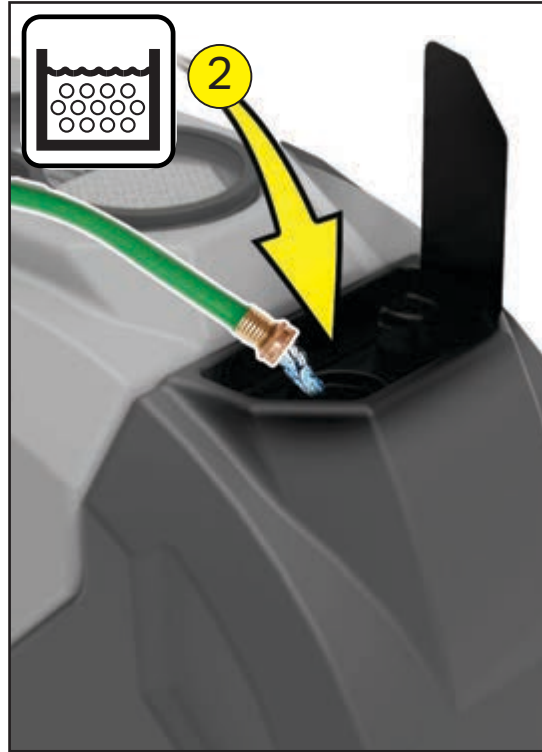
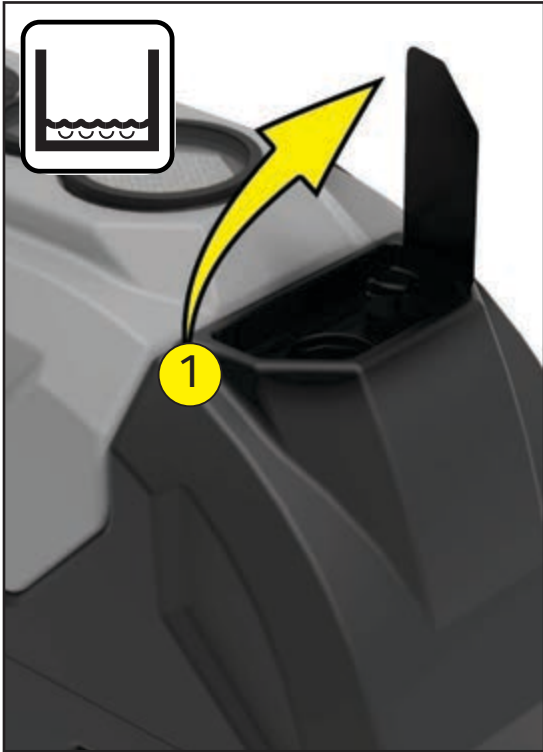
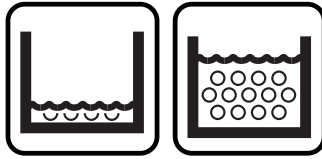
Forward Drive

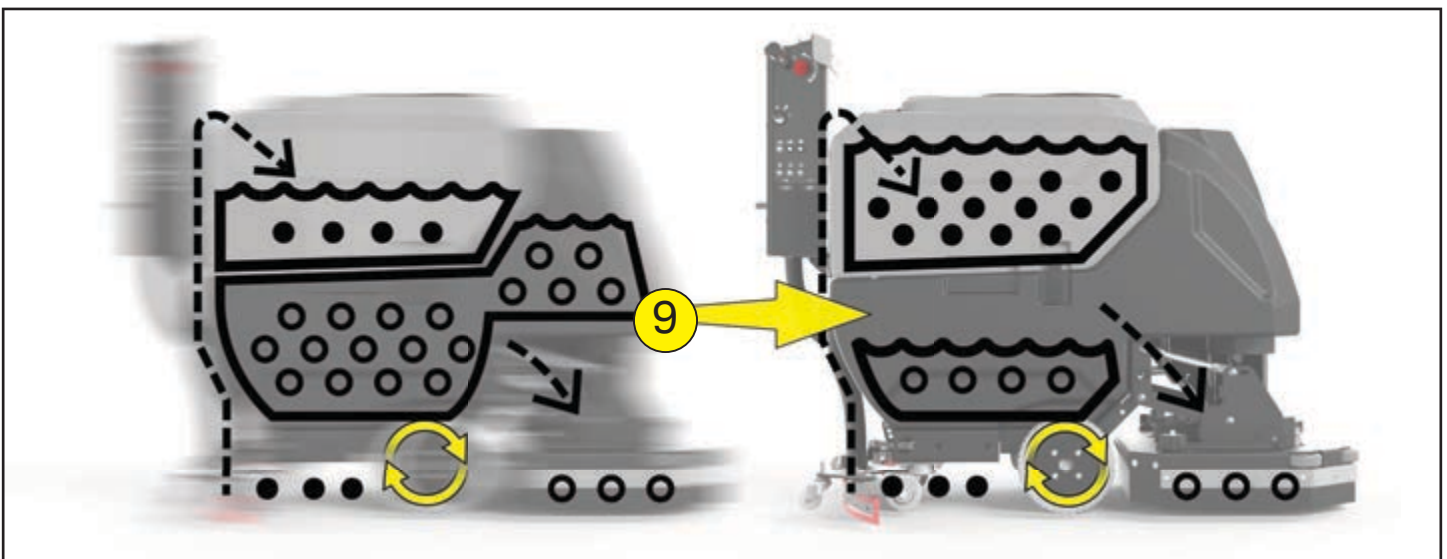
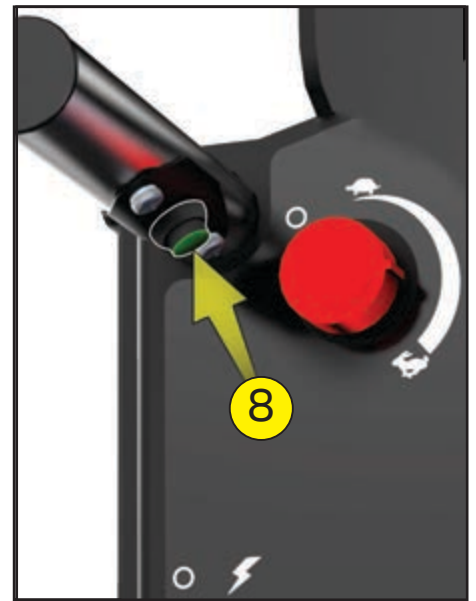
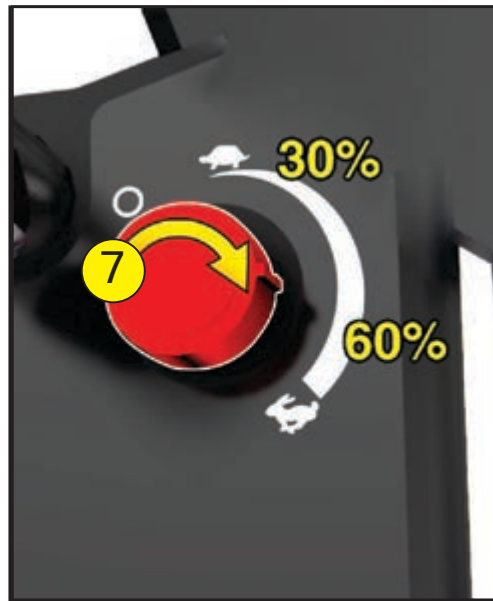
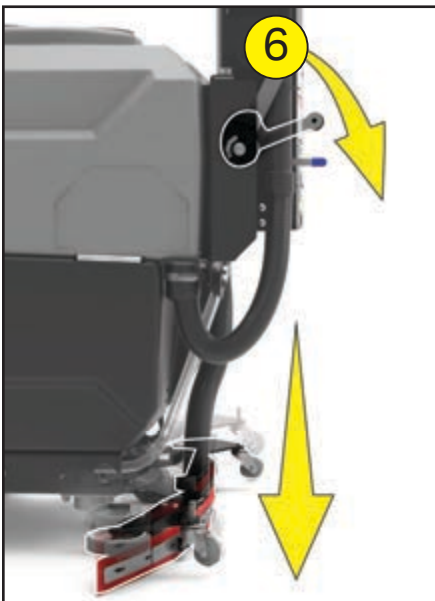
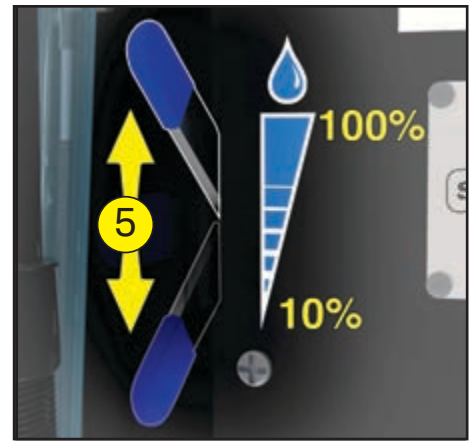
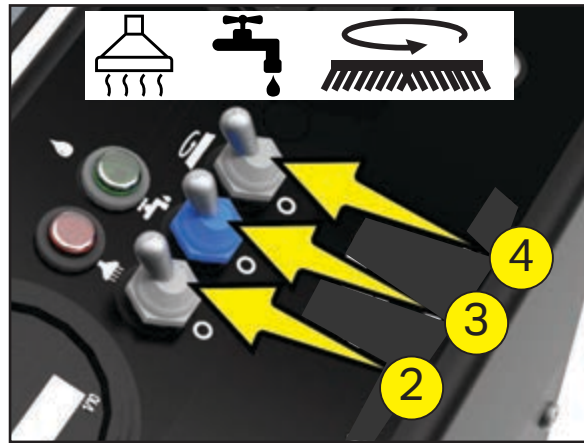


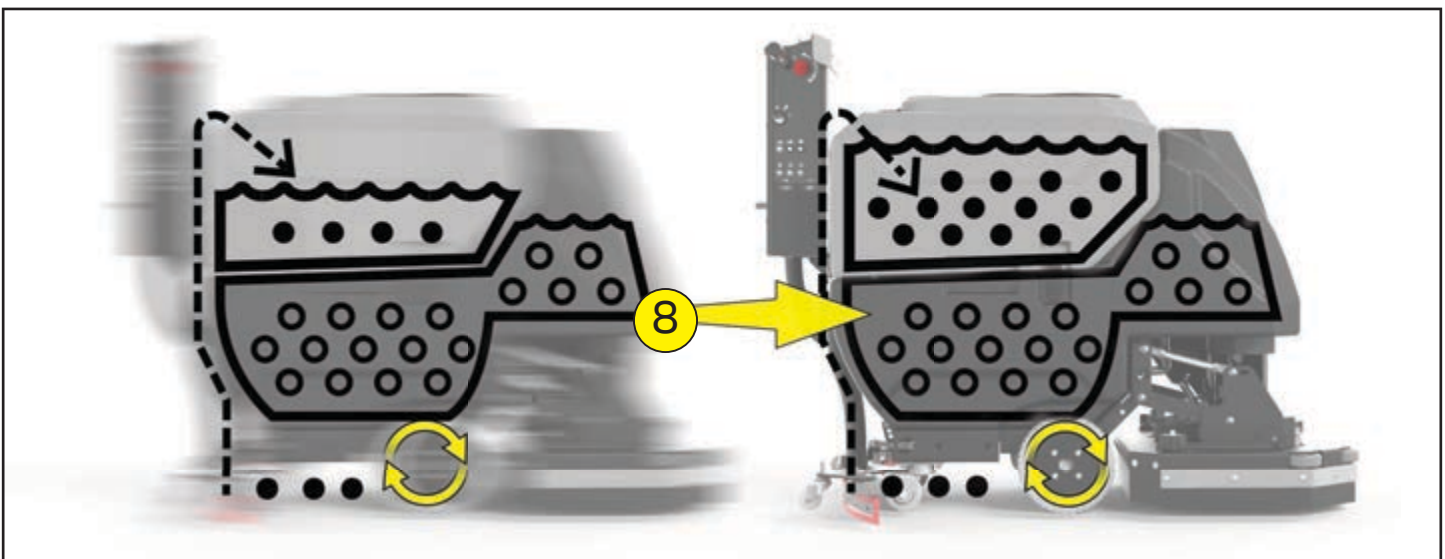
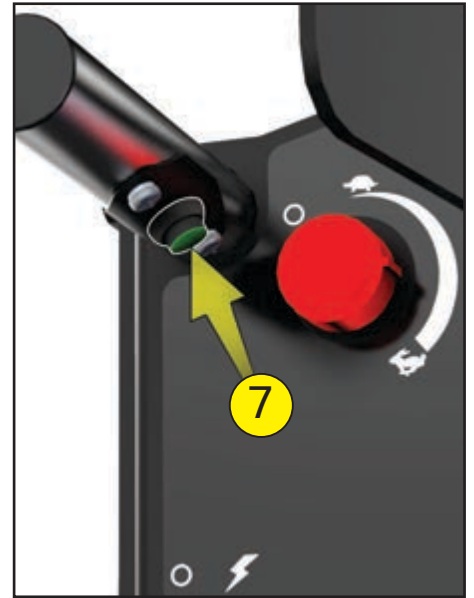
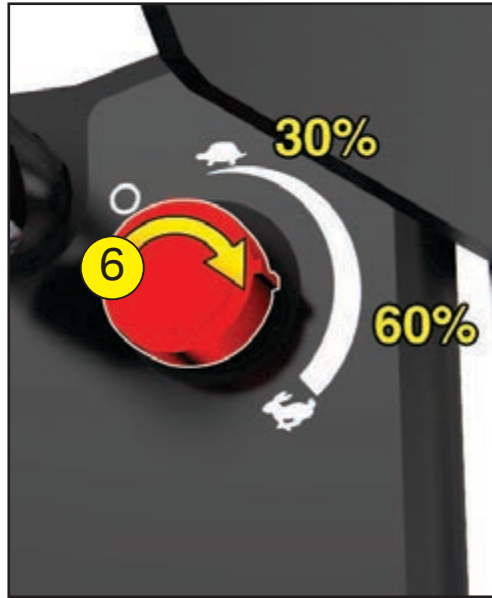
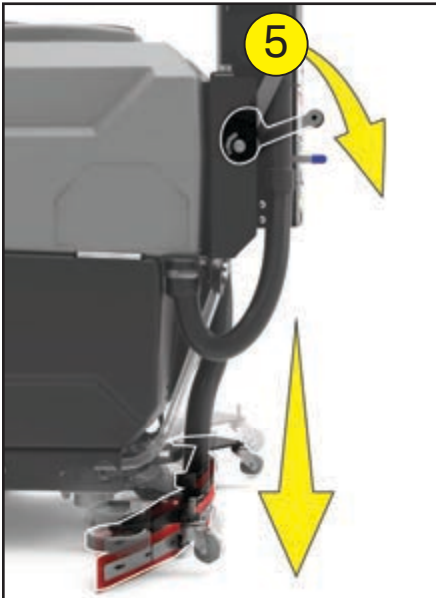
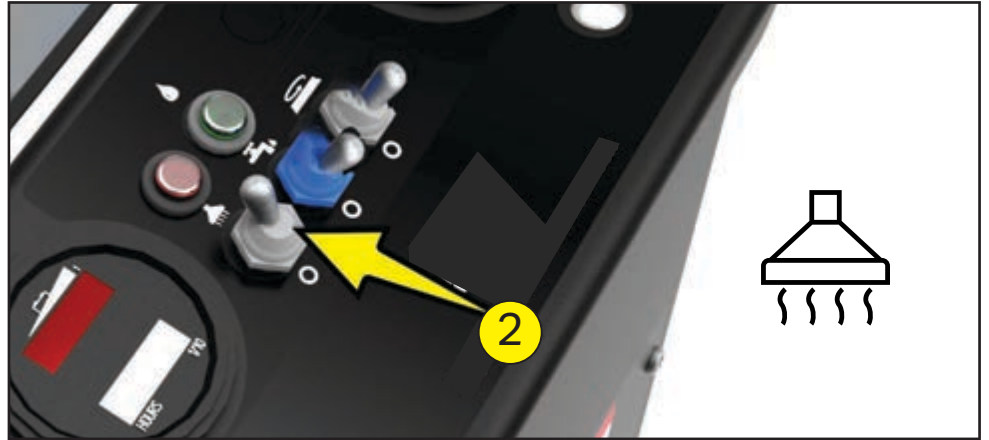
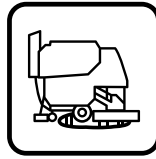


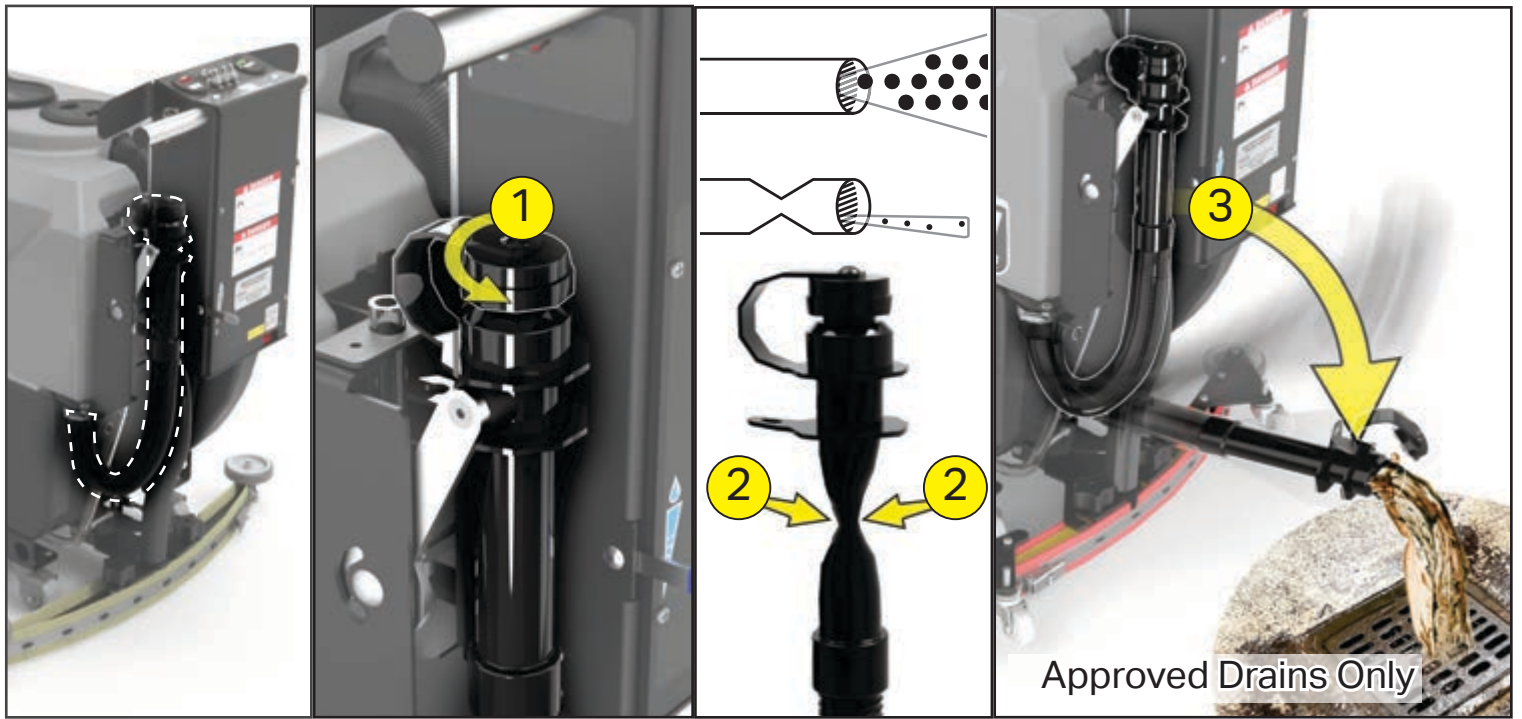
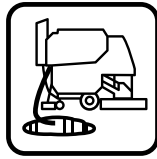
OPERATION

Fill Solution Tank



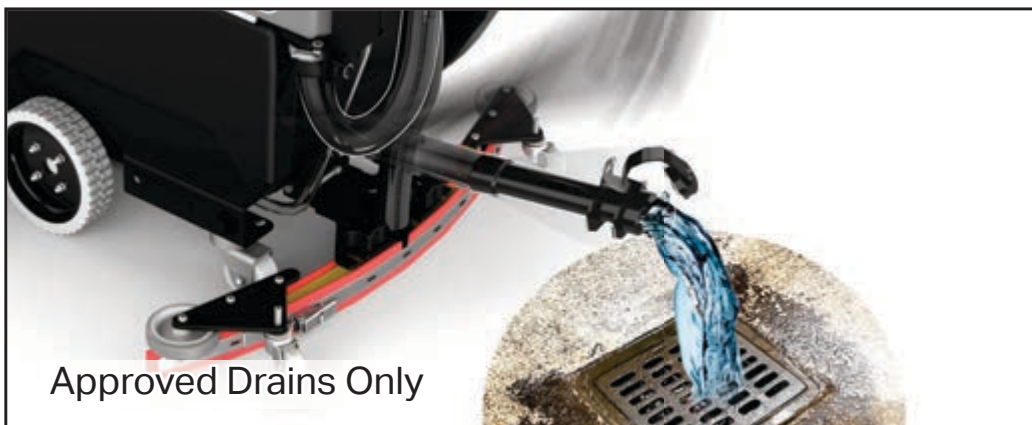
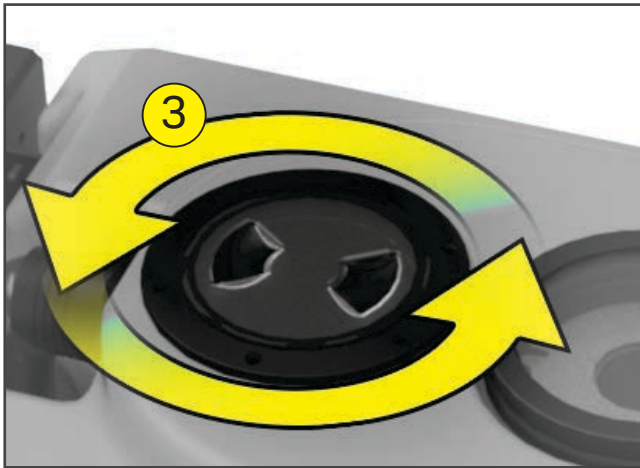
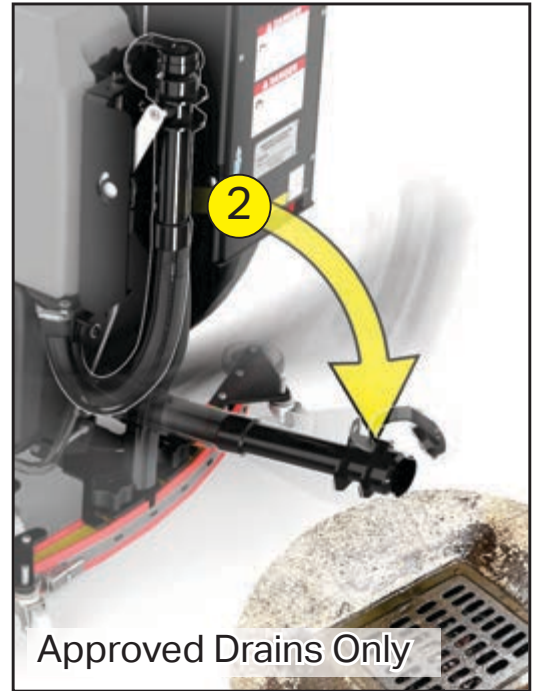
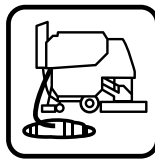


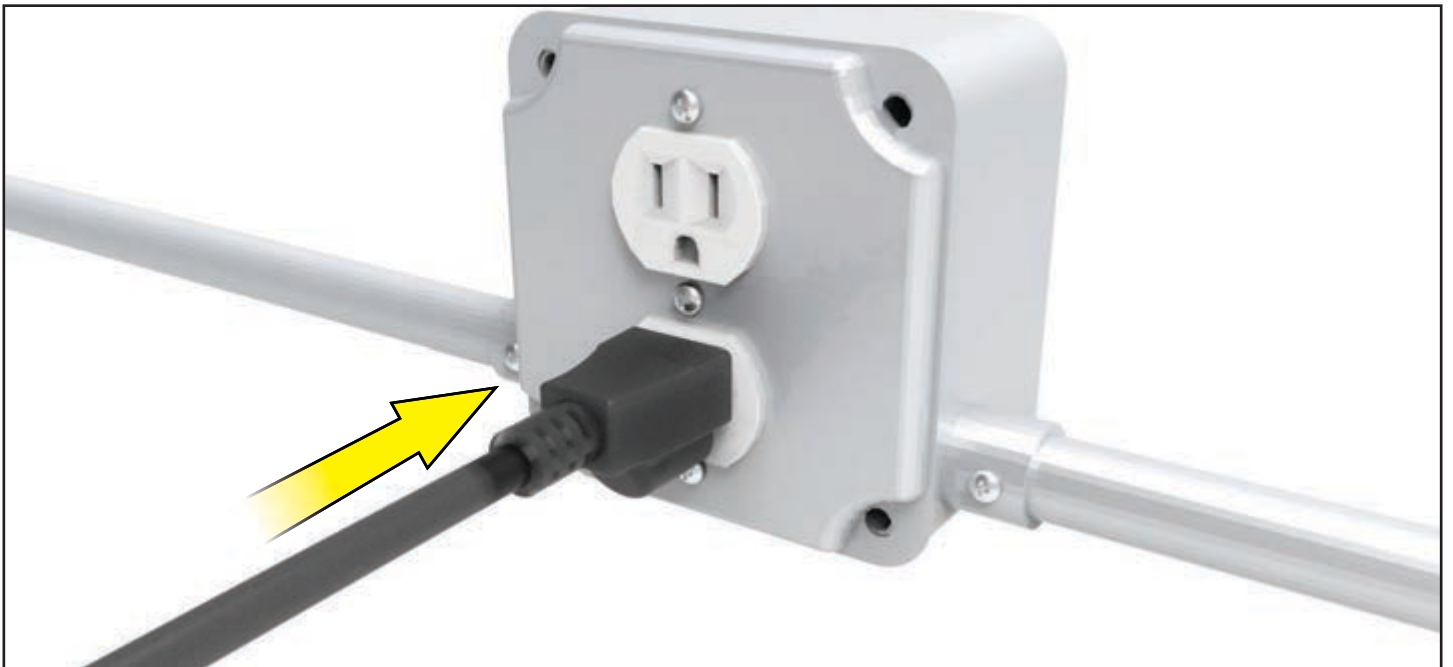
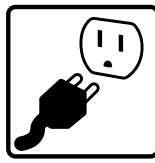




OPERATION

Flushing Recovery Tank



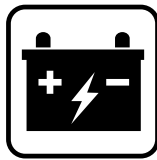


OPTIONS

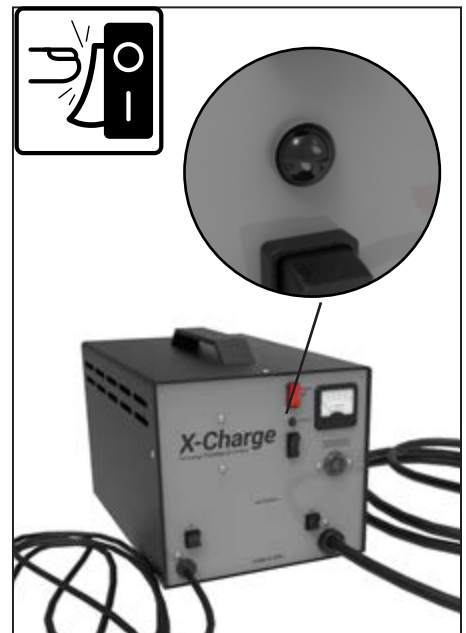
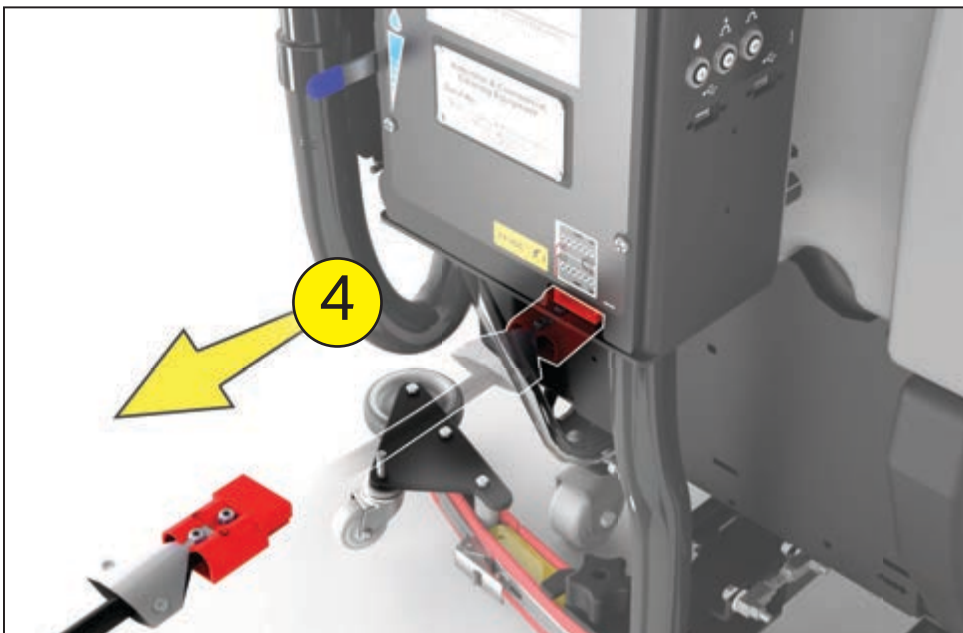
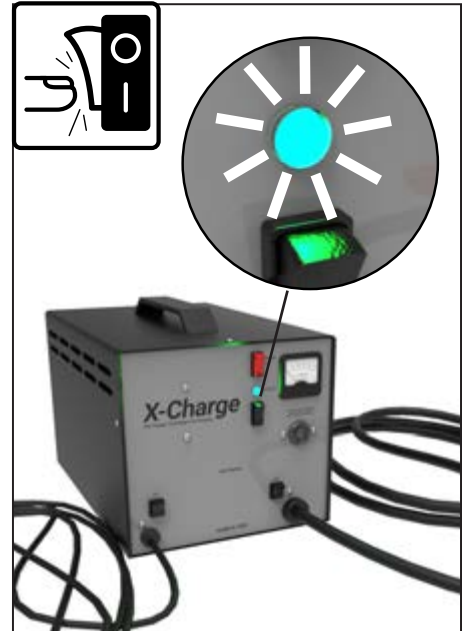
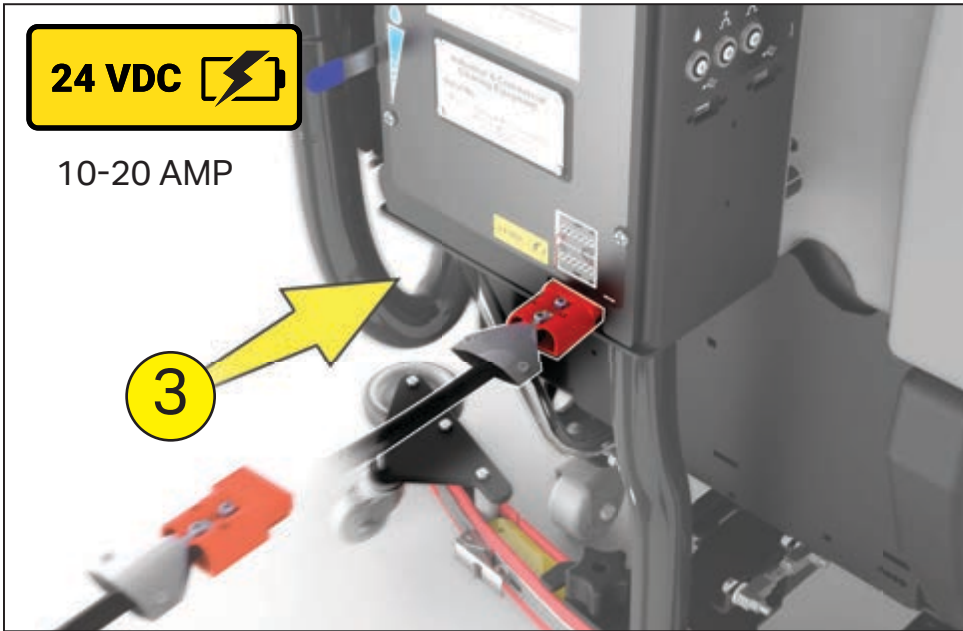
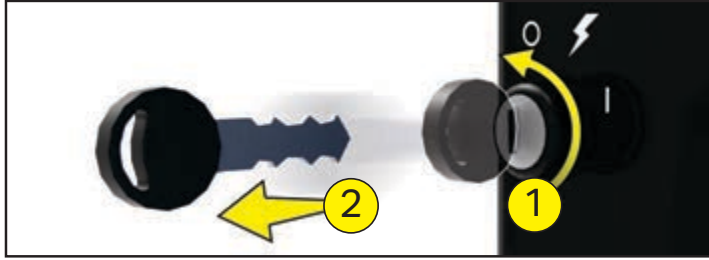


Brush Pressure +/-

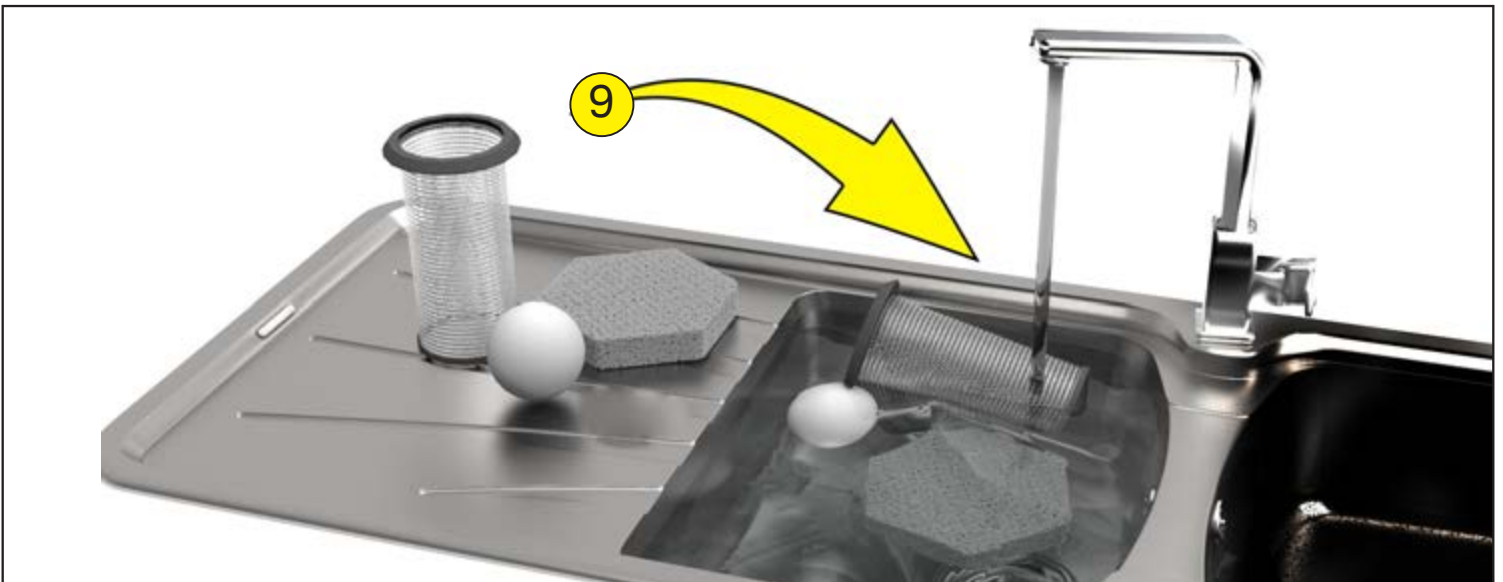
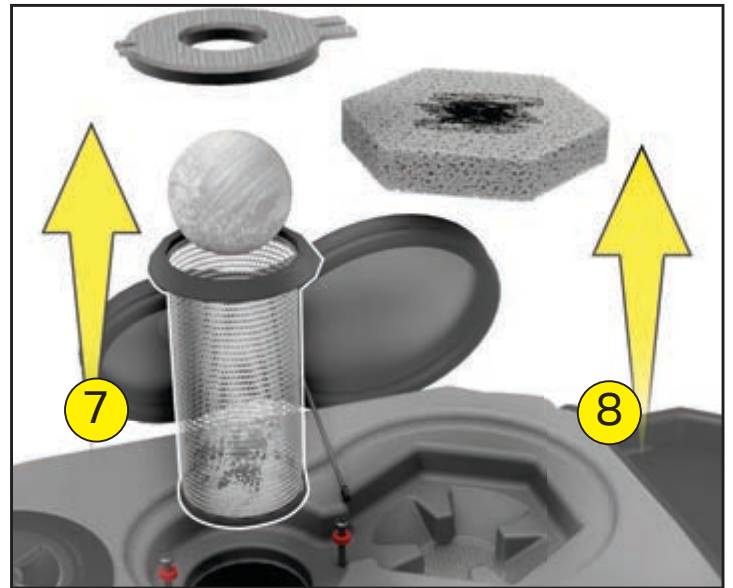
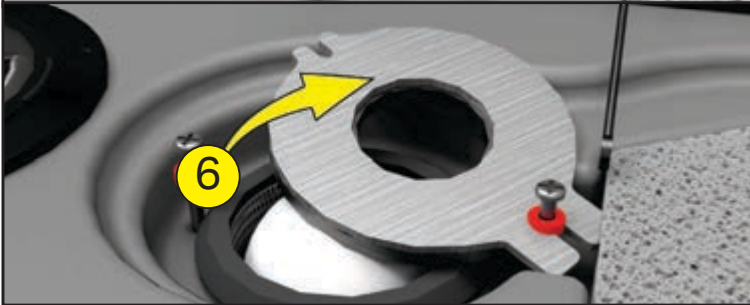
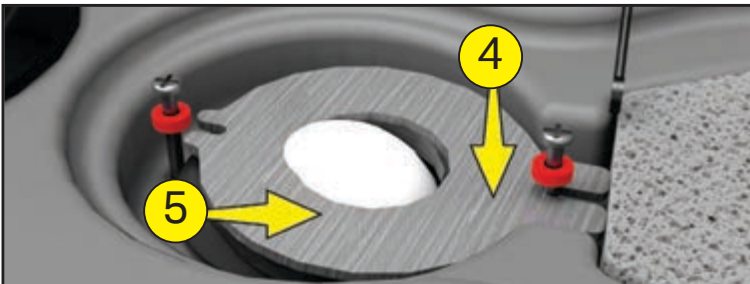
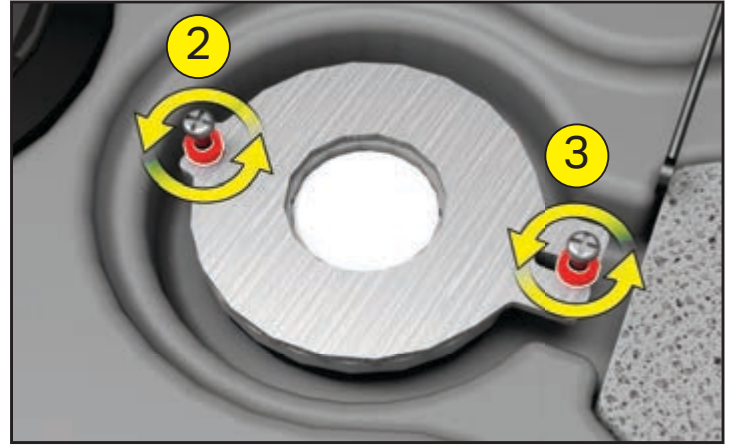
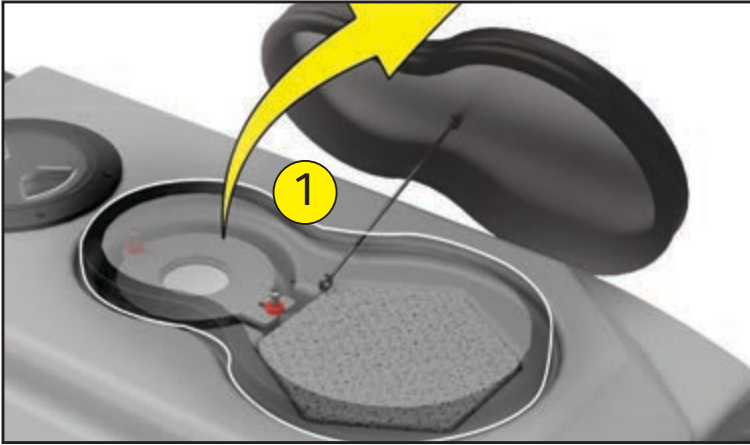
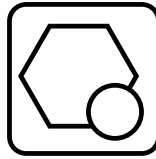




Charge Batteries

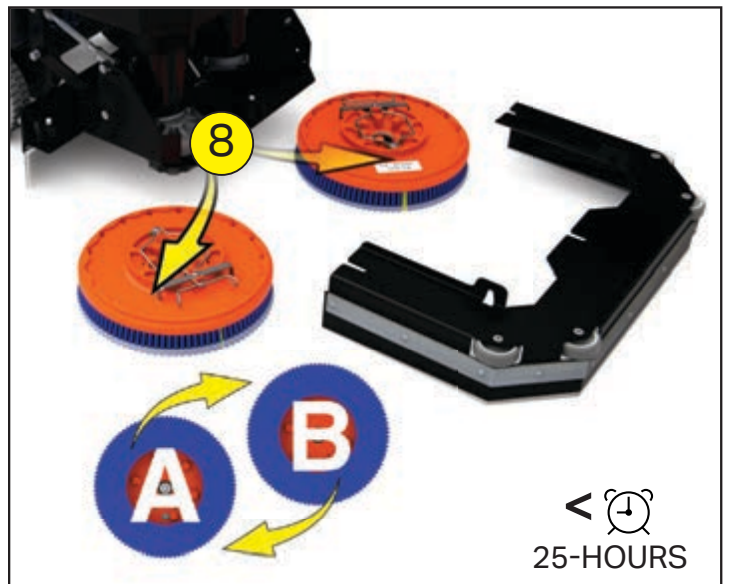
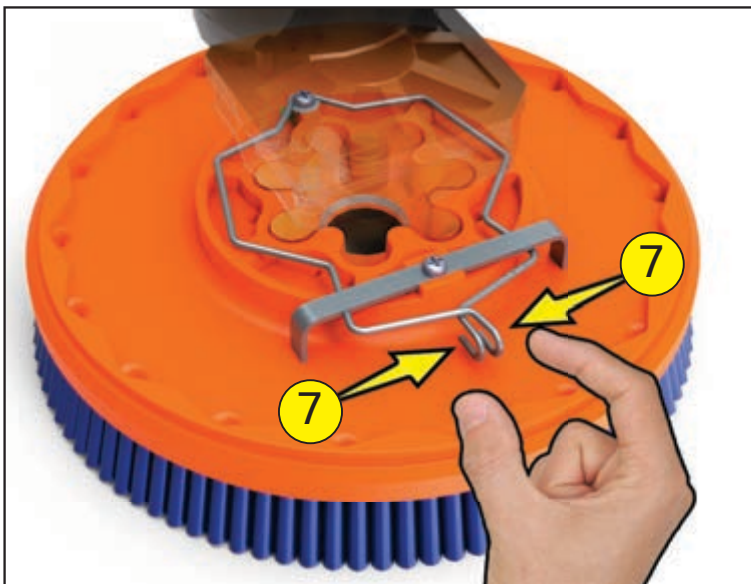
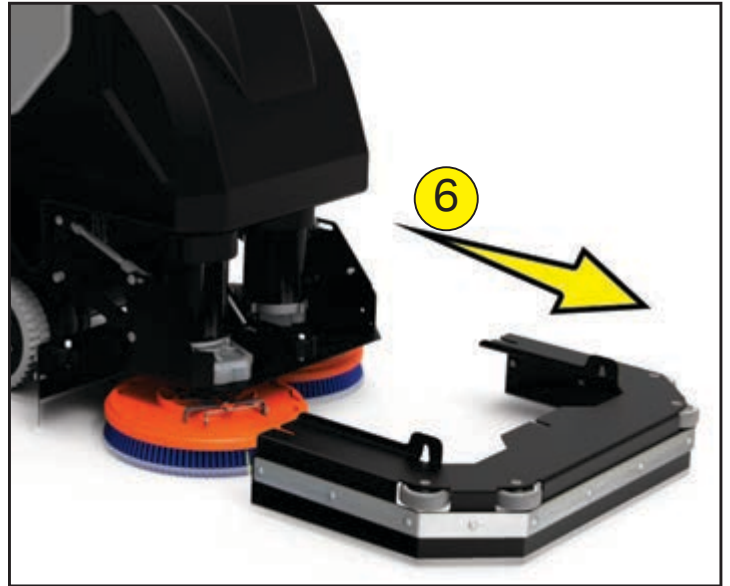
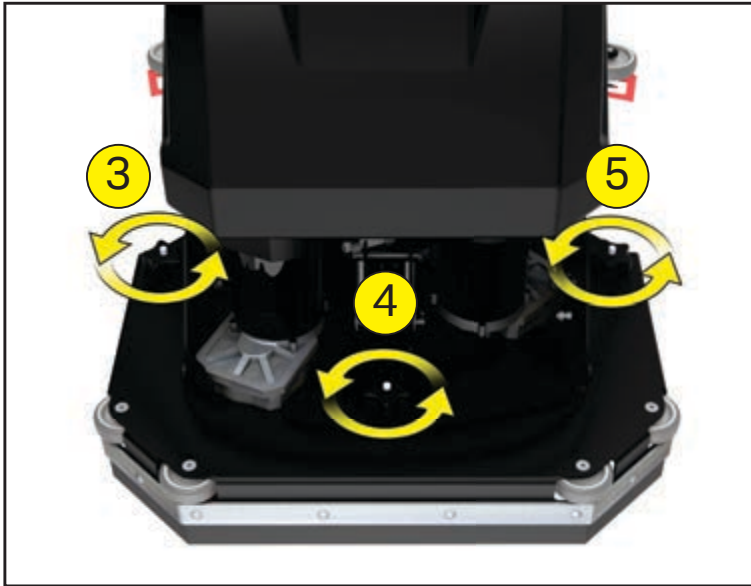
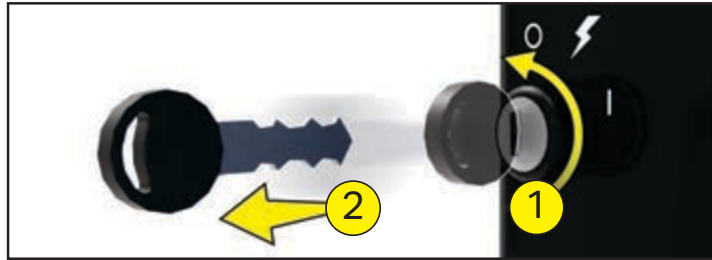


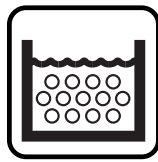
Clean White Filter/Screen



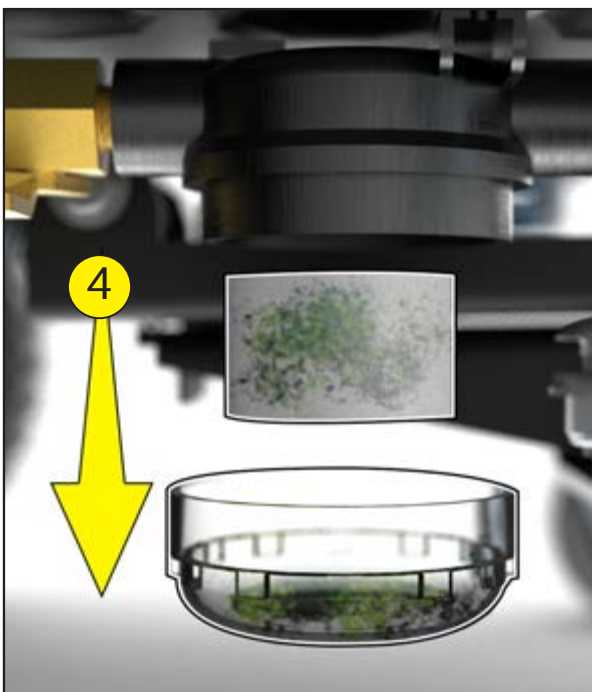
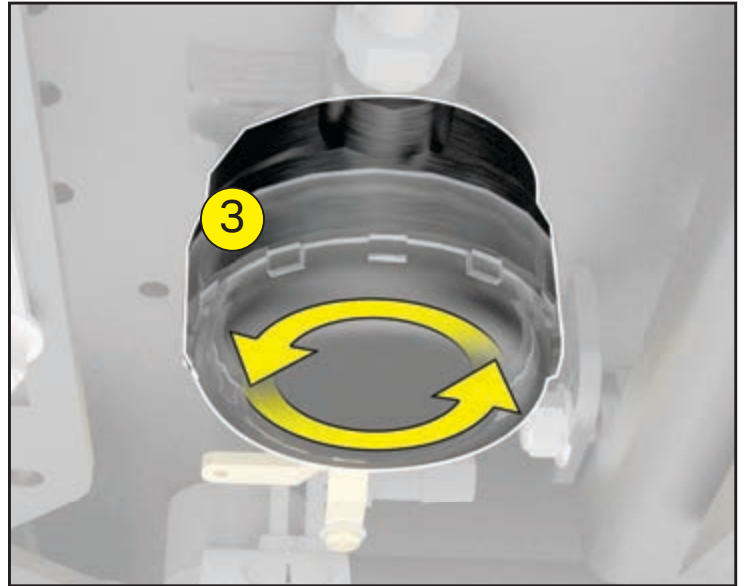
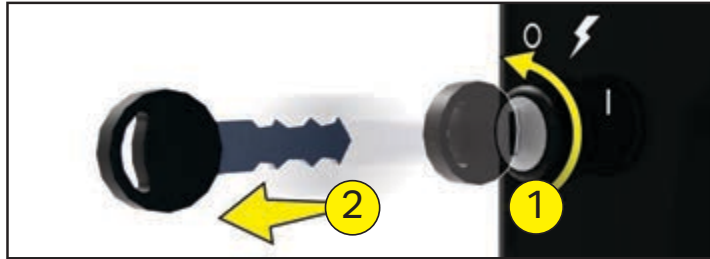


Rotate Disk Brushes





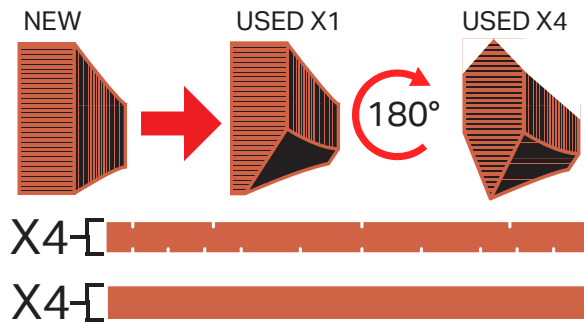
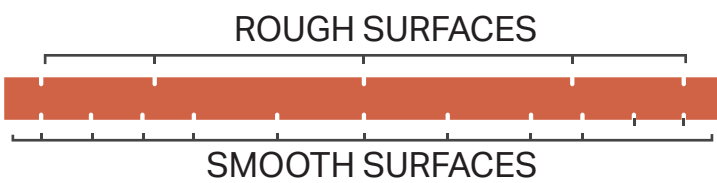
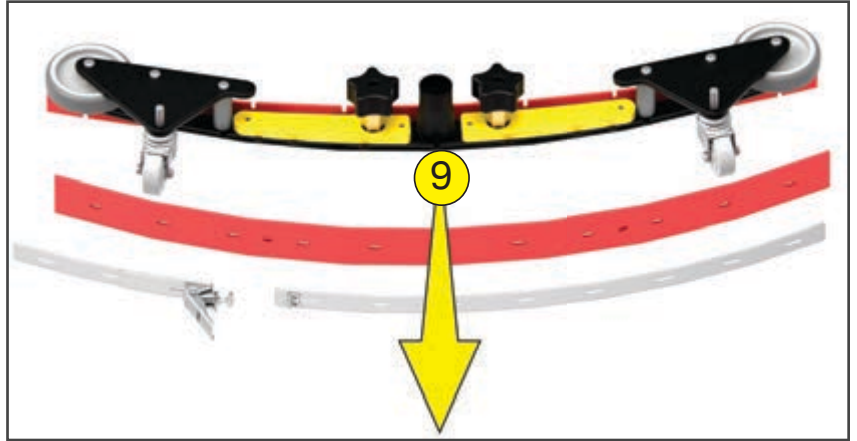
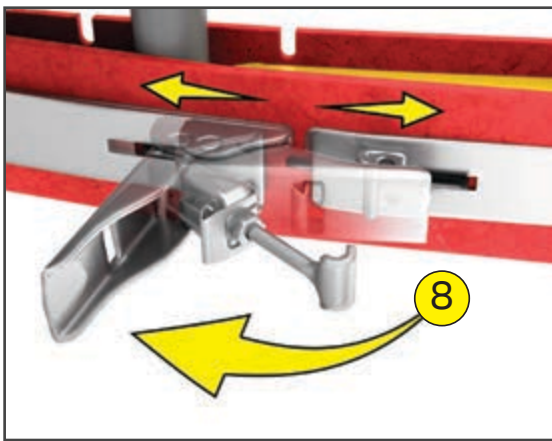
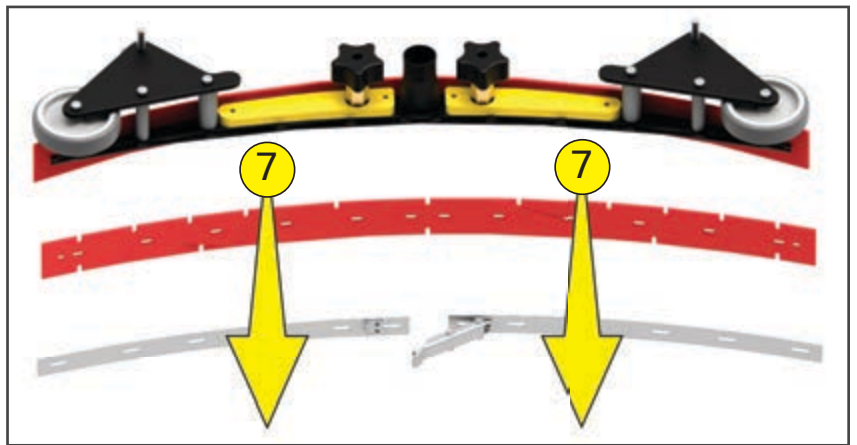
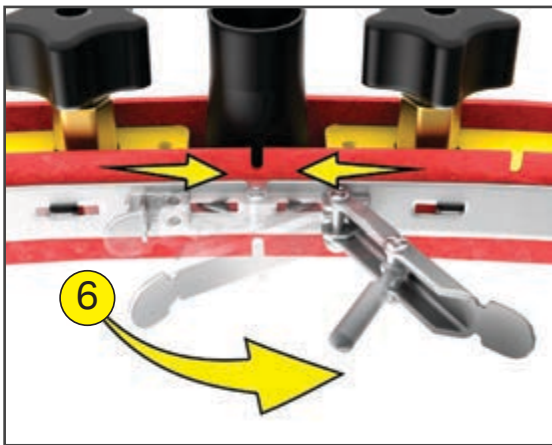
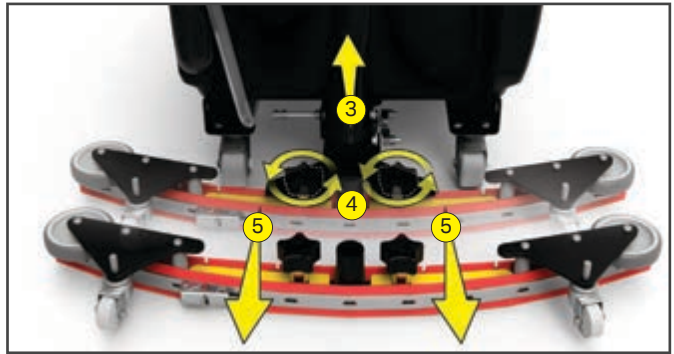
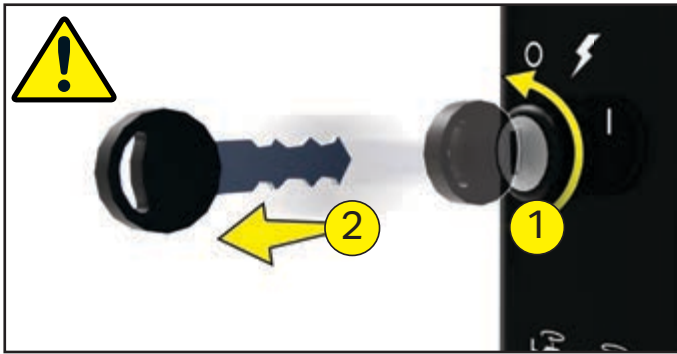
Clean Solution Filter

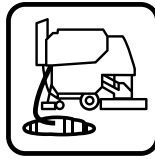




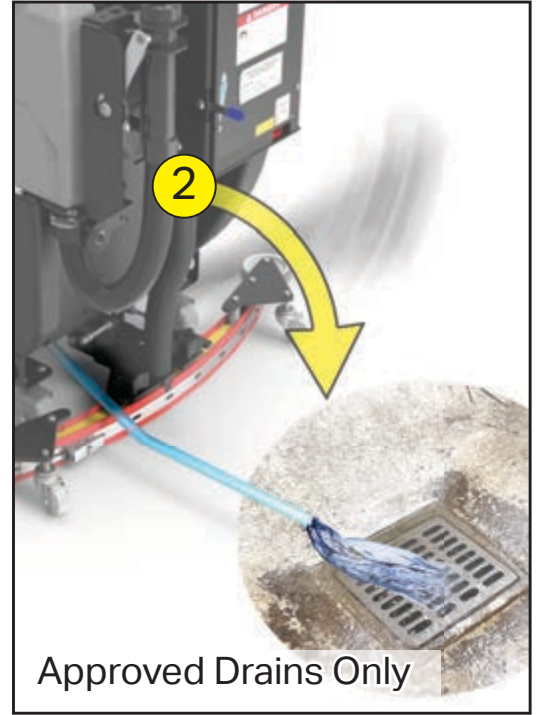
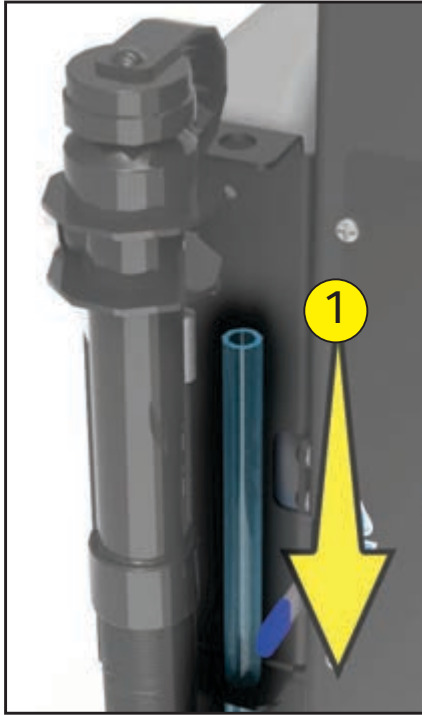
WEEKLY MAINTENANCE (<25 HRS)

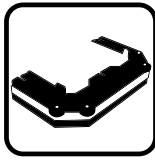
Squeegee Blade Replacement





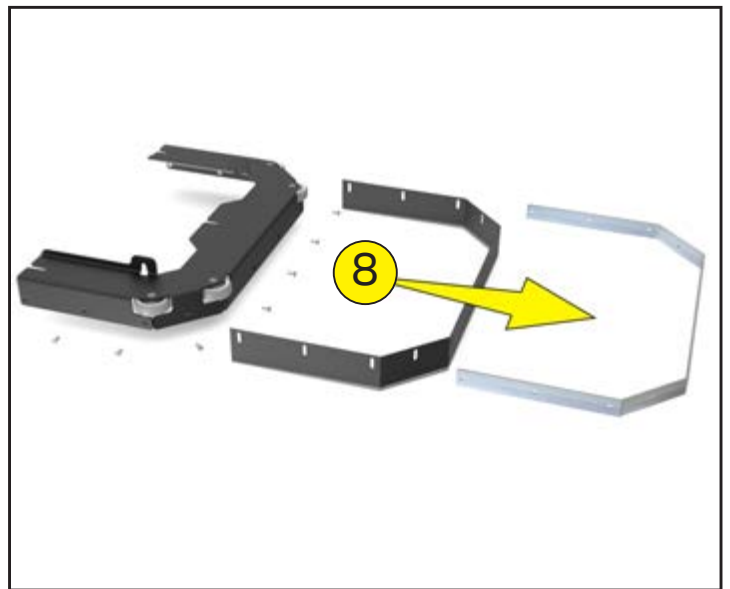
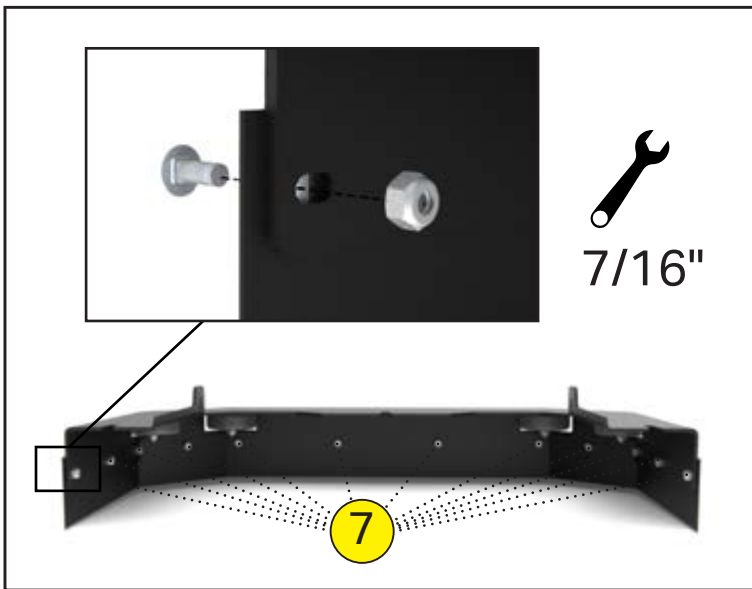
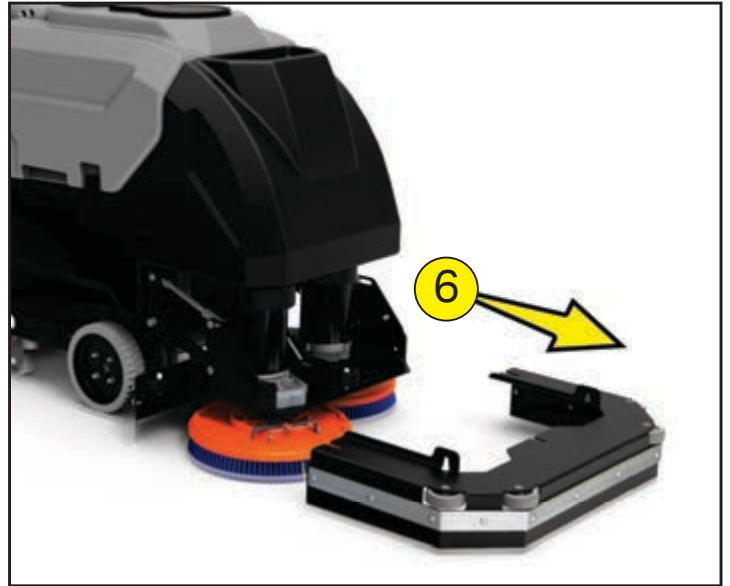
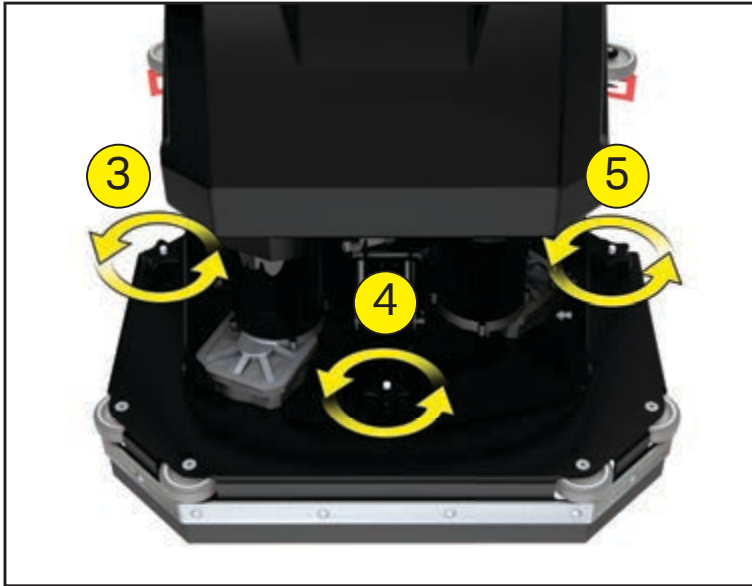
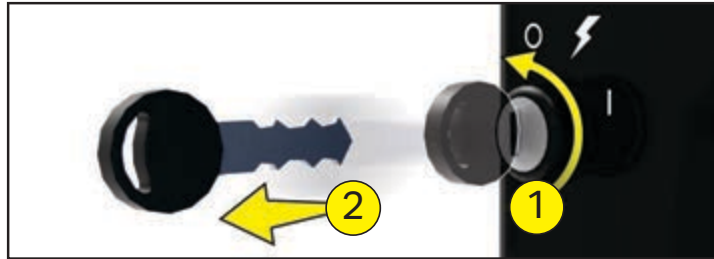
Drain Solution Tank





MONTHLY MAINTENANCE (<100 HRS)

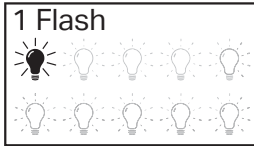
Deck Shroud Curtain Replacement



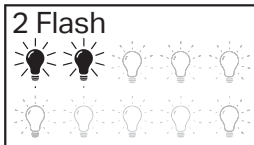
ERROR CODES

Status Light Guide

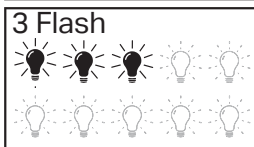
Below is a list of self-help actions. Try to use this list before you contact your service agent. Go to the number in the list which matches the number of indicator light flashes and follow the instructions.



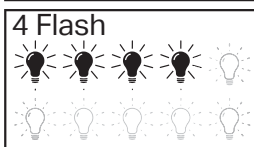
The battery needs charging, there is a bad connection to the battery or dependent on programming, may indicate that the battery lockout function is active and the controller is in a restricted mode of operation. Check the connections to the battery. If the connections are good, try charging the battery.



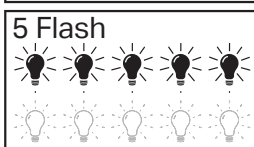
There is a bad connection to the motor. Check all connections between the motor and the controller.



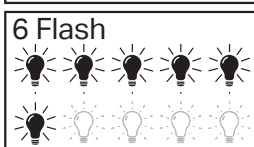
The motor has a short circuit to a battery connection. Contact your service agent.



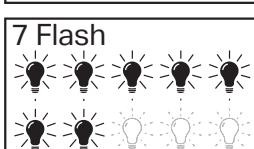
The battery charge level has fallen below the Battery Lockout Level and the controller is inhibiting certain machine functions. Charge the battery.



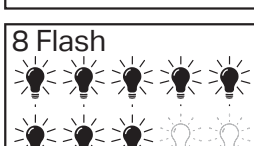
Not Used.



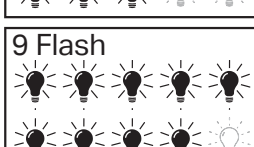
The controller is being inhibited from driving, this may be because the battery charger is connected.



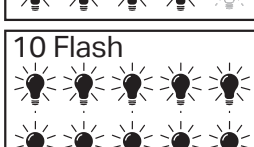
A throttle fault is indicated. Make sure that the throttle is in the rest position before switching on the machine.



A controller fault is indicated. Make sure that all connections are secure.



The parking brakes have a bad connection. Check the parking brake and motor connections. Make sure the controller connections are secure.



An excessive voltage has been applied to the controller. This is usually caused by a poor battery connection. Check the battery connections.

OTHER

Common Wear Parts

ROUND DISK BRUSHES:

NOTICE

The ## in Disk Column Denotes Desk Pad Size: 13", 14"

BRUSHES	DISK	LEVEL
Midi Grit	706-##C	Medium
Light Grit	706-##PS	Moderate
Nylon	706-##N	Light
Pad Driver	706-##D	
Pad Driver Pad Retainer	#40-433	
Pad Driver Spring Clip	#40-423	

ROUND DISK PADS:

NOTICE

The ## in Disk Column Denotes Desk Pad Size: 13", 14"

DISK PADS	DISK	LEVEL	COLOR
Super Black	##-422BB	Very High	Black
Black	##-422B	High	Black
Brown	##-422BR	High	Brown
Green	##-422G	Medium	Green
Blue	##-422BL	Moderate	Blue
Red	##-422R	Moderate	Red
White	##-422W	Light	White

SQUEEGEE BLADE KITS & COMPLETE SQUEEGEE ASSEMBLIES:

SQUEEGEE SIZE	17" DECK	20" DECK
31" Squeegee	Standard	Optional
33" Squeegee	Optional	Optional

SQUEEGEE SIZE	LINATEX BLADE KIT	GUM RUBBER BLADE KIT	URETHANE BLADE KIT	NANORADE BLADE KIT	COMPLETE SQUEEGEE ASSEMBLIES
31" Squeegee	231-770L	231-770G	231-770U	231-756N	231-7180
33" Squeegee	233-770L	233-770G	233-770U	233-756N	233-7180

SQUEEGEE MATERIAL:	USED FOR:
LINATEX	Provides best wear and tear resistance. Not designed for use with harsh chemicals.
URETHANE	Provides best resistance when dealing with harsh chemicals, oils, fuels, etc.
GUM	Provides best drying performance on rough/grouted floor types by sealing over irregularities. Short life.
NANORADE	Increased durability, optimal water pick up and reduced friction.

NOTICE

Squeegee blade kits include (1) Rear Blade, (1) Front Blade, and (2) Caster Wheels with hardware.

NOTICE

Squeegee Assemblies (complete) listed above all come with Linatex blades.

NOTICE

Size is denoted by label on top squeegee.

PM Sheet

CUSTOMER & MACHINE INFORMATION			
Customer:			Email:
Address:			Phone:
City:	State:	Zip:	Contact:
Serial #:	Model #:	Work Order #:	

NOTE: Start with Machine filled at least with ½ Tank of water. Turn ON Machine and Test Functionality of Machine

CHECK OPERATION & CONDITION OF	IN SPEC	REPAIR	PROBLEM
Key Switch			
Battery Gauge			
Deck Up / Down – Brush Switch			
Brush Pressure +/- Toggle (Optional)			
Vacuum Switch - ON / OFF			
Squeegee Lever - Up/Down			
Solution Switch - ON/OFF			
Solution Flow Lever +/-			
Green Drive Buttons - L & R			
Reverse Toggle Switch			
E-Stop (Optional)			

NOTE: Drain Solution & Recovery Tank fully. Rinse out Recovery Tank

CLEAN & INSPECT – SOLUTION TANK	IN SPEC	REPAIR	PROBLEM
Solution Fill Screen - Mesh			
Solution Fill Hose (Optional)			
Solution Inline Filter			
Vacuum Muffler Drain Hose			
Battery Drain Hose			

BRUSH CONDITION – SCRUB DECK			
Deck Curtains/Wipers	Good		Worn Needs Replacement
Brush Sockets: (2-Disk)/(4-Cylindrical)	Good		Worn Needs Replacement
Brush Drivers: (2-Disk)/(4-Cylindrical)	Good		Worn Needs Replacement
Scrub Brush Fiber Length	Brush 1 Length:	Brush 2 Length:	Rotated Brushes: Y / N

CLEAN & INSPECT – SCRUB DECK	IN SPEC	REPAIR	PROBLEM
Scrub Deck Linkage Pivot Points			
Scrub Deck Lift Actuator			
Scrub Deck Level (Orbital Only)			
Scrub Motor Wires			

CLEAN & INSPECT - SQUEEGEE	IN SPEC	REPAIR	PROBLEM
Remove and Wipe off Squeegee			
Check and Rotate Blades as Needed			
Caster Wheels and Height			
Pitch Adjust			
Check Pivot and Knobs			
Squeegee Vac Hose			

CLEAN & INSPECT – RECOVERY TANK	IN SPEC	REPAIR	PROBLEM
Recovery Tank Lid & Gasket			
Vacuum Float Ball Screen			
Vacuum Box White Filter			
2” Round Final Vac Screen			
Solution Site Tube			

CLEAN & INSPECT – DRIVE	IN SPEC	REPAIR	PROBLEM
Drive Wheels & Casters Condition			
Grease Caster Swivel			

Battery Chargers

Console / WET / Domestic Chargers:

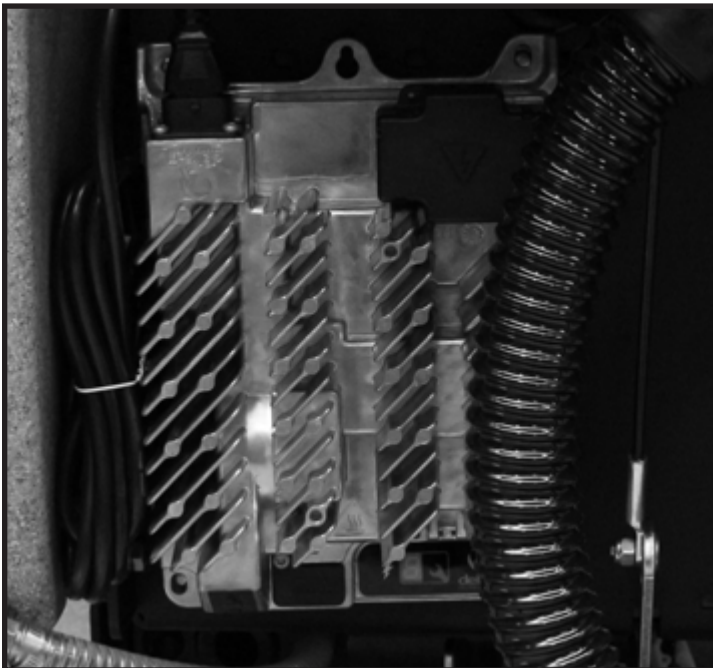


AC Power IN: 120VAC / 60Hz
DC Power OUT: 24VDC / 12A

Please refer to OEM Charger Operating Instructions for more information.



Onboard / AGM / International Chargers:



AC Power: 80-270VAC / 50-60Hz
DC Power OUT: 24VDC / 25A

Please refer to OEM Charger Operating Instructions for more information.



