

MACHINE DATA LOG/OVERVIEW

MODEL _____

DATE OF PURCHASE _____

SERIAL NUMBER _____

SALES REPRESENTATIVE # _____

DEALER NAME _____

OPERATIONS GUIDE NUMBER _____

PUBLISHED _____

YOUR DEALER

Name: _____

Address: _____

Phone Number: _____

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HOW TO USE THIS MANUAL

This manual contains the following sections:

- HOW TO USE THIS MANUAL
- SAFETY
- OPERATIONS
- MAINTENANCE
- PARTS LIST

The HOW TO USE THIS MANUAL section will tell you how to find important information for ordering correct repair parts.

Parts may be ordered from authorized dealers. When placing an order for parts, the machine model and machine serial number are important. Refer to the MACHINE DATA box which is filled out during the installation of your machine. The MACHINE DATA box is located on the inside of the front cover of this manual.

MODEL _____
DATE OF PURCHASE _____
SERIAL NUMBER _____
SALES REPRESENTATIVE # _____
DEALER NAME _____
OPERATIONS GUIDE NUMBER _____
PUBLISHED _____

The model and serial number of your machine is on the bottom back-end of the machine.

The SAFETY section contains important information regarding hazard or unsafe practices of the machine. Levels of hazards is identified that could result in product or personal injury, or severe injury resulting in death.

The OPERATIONS section is to familiarize the operator with the operation and function of the machine.

The MAINTENANCE section contains preventive maintenance to keep the machine and its components in good working condition. They are listed in this general order:

- Periodic
- Daily/Regular
- Troubleshooting

The PARTS LIST section contains assembled parts illustrations and corresponding parts list. The parts lists include a number of columns of information:

- **REF** – column refers to the reference number on the parts illustration.
- **PART NO.** – column lists the part number for the part.
- **PRV NO.** - reference number.
- **QTY** – column lists the quantity of the part used in that area of the machine.
- **DESCRIPTION** – column is a brief description of the part.
- **SERIAL NO. FROM** – column indicates the first machine the part number is applicable to. When the machine design has changed, this column will indicate serial number of applicable machine. The main illustration shows the most current design of the machine. The boxed illustrations show older designs. If column has an asterisk (*), call manufacturer for serial number.
- **NOTES** – column for information not noted by the other columns.

NOTE: If a service or option kit is installed on your machine, be sure to keep the KIT INSTRUCTIONS which came with the kit. It contains replacement parts numbers needed for ordering future parts.

NOTE: The number on the lower left corner of the front cover is the part number for this manual.

IMPORTANT SAFETY INSTRUCTIONS
When using an electrical appliance, basic precaution must always be followed, including the following:

READ ALL INSTRUCTIONS BEFORE USING THIS MACHINE.

This machine is for commercial use.



WARNING:

To reduce the risk of fire, electric shock, or injury:

Connect to a **properly grounded outlet**. See Grounding Instructions.

Do not leave the machine unattended. Unplug machine from outlet when not in use and before maintenance or service.

Use only indoors. Do not use outdoors or expose to rain.

Do not allow machine to be used as a toy. **Close attention** is necessary when used by or near children.

Use only as described in this manual. Use only manufacturer's recommended components and attachments.

Do not use damaged electrical cord or plug. Follow all instructions in this manual concerning grounding the machine. If the machine is **not working properly**, has been dropped, damaged, left outdoors, or dropped into water, return it to an authorized service center.

Do not pull or carry machine by electrical cord, use as a handle, close a door on cord, or pull cord around sharp edges or corners.

Do not run machine over cord. **Keep** cord away from heated surfaces.

Do not unplug machine by pulling on cord. To unplug, grasp the electrical plug, not the electrical cord.

Do not handle the electrical plug or machine with wet hands.

Do not operate the machine with any openings blocked. Keep openings free of debris that may reduce airflow.

This machine is intended for cleaning carpet only.

Do not vacuum anything that is burning or smoking, such as cigarettes, matches, or hot ashes.

This machine is not suitable for picking up health endangering dust.

Turn off all controls before unplugging.

Machine can cause a fire when operating near flammable vapors or materials. Do not operate this machine near flammable fluids, dust or vapors.

This machine is suitable for commercial use, for example in hotels, schools, hospitals, factories, shops and offices for more than normal housekeeping purposes.

Maintenance and repairs must be done by qualified personnel.

If foam or liquid comes out of machine, switch off immediately.

SAVE THESE INSTRUCTIONS

HAZARD INTENSITY LEVEL

The following symbols are used throughout this guide as indicated in their descriptions:

HAZARD INTENSITY LEVEL

There are three levels of hazard intensity identified by signal words -**WARNING** and **CAUTION** and **FOR SAFETY**. The level of hazard intensity is determined by the following definitions:

⚠ WARNING

WARNING - Hazards or unsafe practices which COULD result in severe personal injury or death.

⚠ CAUTION

CAUTION - Hazards or unsafe practices which could result in minor personal injury or product or property damage.

FOR SAFETY: To Identify actions which must be followed for safe operation of equipment.

Report machine damage or faulty operation immediately. Do not use the machine if it is not in proper operating condition. Following is information that signals some potentially dangerous conditions to the operator or the equipment. Read this information carefully. Know when these conditions can exist. Locate all safety devices on the machine. Please take the necessary steps to train the machine operating personnel.

FOR SAFETY:

DO NOT OPERATE MACHINE:

Unless Trained and Authorized.

Unless Operation Guide is Read and understood.

In Flammable or Explosive areas.

In areas with possible falling objects.

WHEN SERVICING MACHINE:

Avoid moving parts. Do not wear loose clothing; jackets, shirts, or sleeves when working on the machine. Use manufacturer approved replacement parts.

GROUNDING INSTRUCTIONS

THIS PRODUCT IS FOR COMMERCIAL USE ONLY.

ELECTRICAL:

In the USA this machine operates on a standard 15 amp 115V, 60 hz, A.C. power circuit . The amp, hertz, and voltage are listed on the data label found on each machine. Using voltages above or below those indicated on the data label will cause serious damage to the motors.

GROUNDING INSTRUCTIONS:

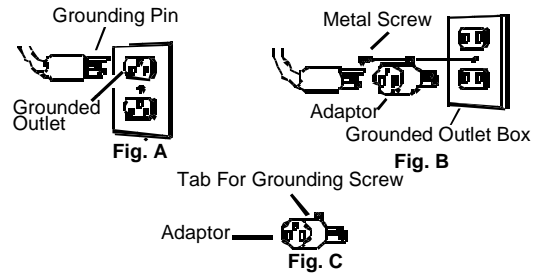
This appliance must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be inserted into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

This appliance is for use on a nominal 115-volt circuit, and has a grounded plug that looks like the plug in "Fig. A". A temporary adaptor that looks like the adaptor in "Fig. C" may be used to connect this plug to a 2-pole receptacle as shown in "Fig. B", if a properly grounded outlet is not available. The temporary adaptor should be used only until a properly grounded outlet (Fig. A) can be installed by a qualified electrician. The green colored rigid ear, lug, or the like extending from the adaptor must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adaptor is used, it must be held in place by a metal screw.

WARNING:

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the appliance - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

PROPER GROUNDING



NOTE: In Canada, the use of a temporary adaptor is not permitted by the Canadian Electrical Code

TECHNICAL SPECIFICATIONS

POWER TYPE

ELECTRICAL: 115 V, 15 A, 60 HZ

ELECTRIC VACUUM MOTOR: (1) –3 stage, 1 hp, 99 cfm (2.80 cubic meters/min.) Waterlift –117" (297cm)

BRUSH: (1) 15" (38.1 cm.)

SOLUTION PUMP: Diaphragm style, internal bypass

SOLUTION CAPACITY: 7 gallons (26.5ltr)

RECOVERY CAPACITY: 7 gallons (26.5ltr)

BRUSH SPEED: 1000 rpm

GENERAL DIMENSIONS/WEIGHT

Vacuum shoe: 17" (43.18 cm) cast aluminum with spring loaded down pressure

WHEELS: (2) 10" dia. (25 cm) wheels by 2"

WEIGHT: 92lbs. (42kg)

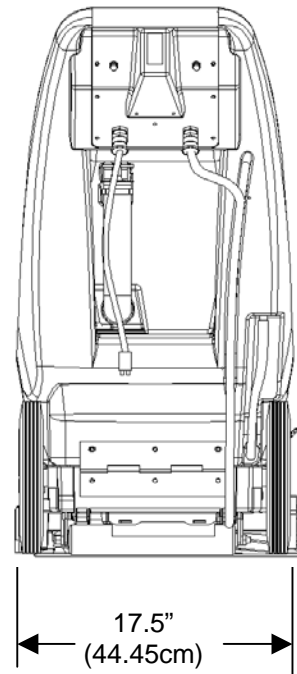
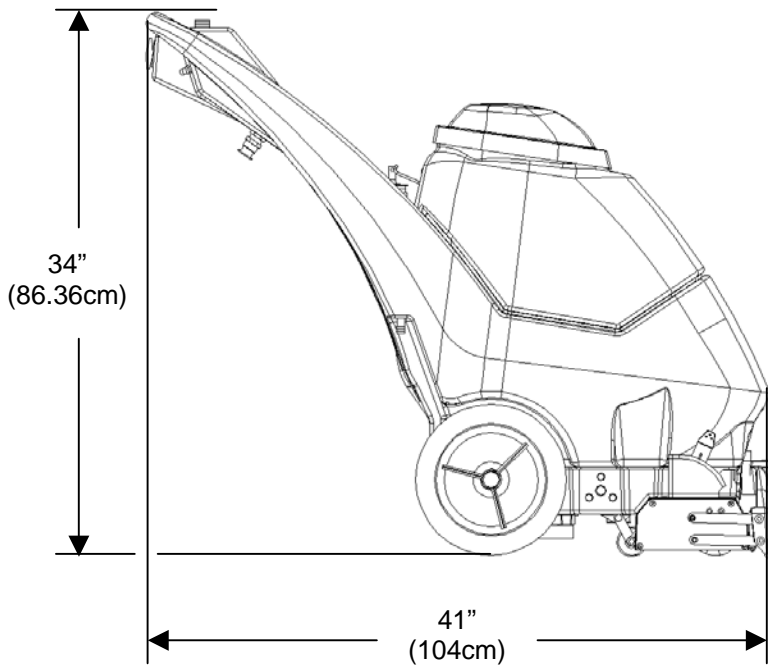
LENGTH: 41" (104 cm)

HEIGHT: 34" (86.36 cm)

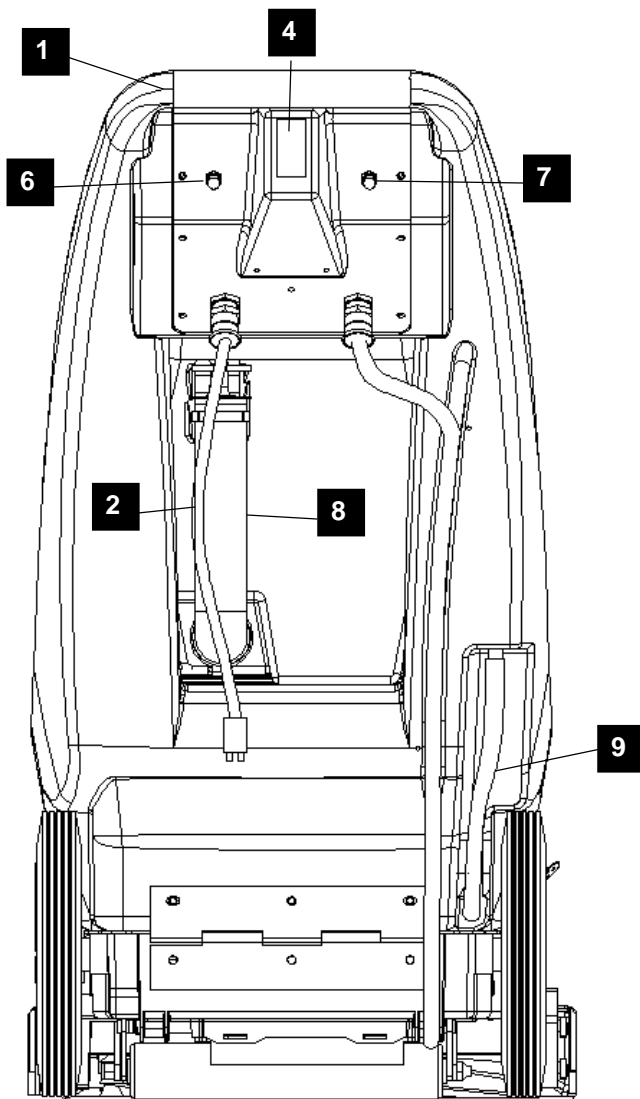
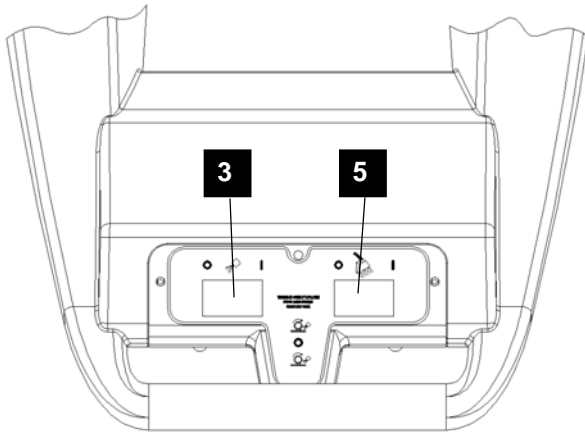
WIDTH: 17.5" (44.45 cm)

SOLUTION SPRAY: 2 quick change jets.

POWER CABLE: 50' (12.7 m) (14 gauge)



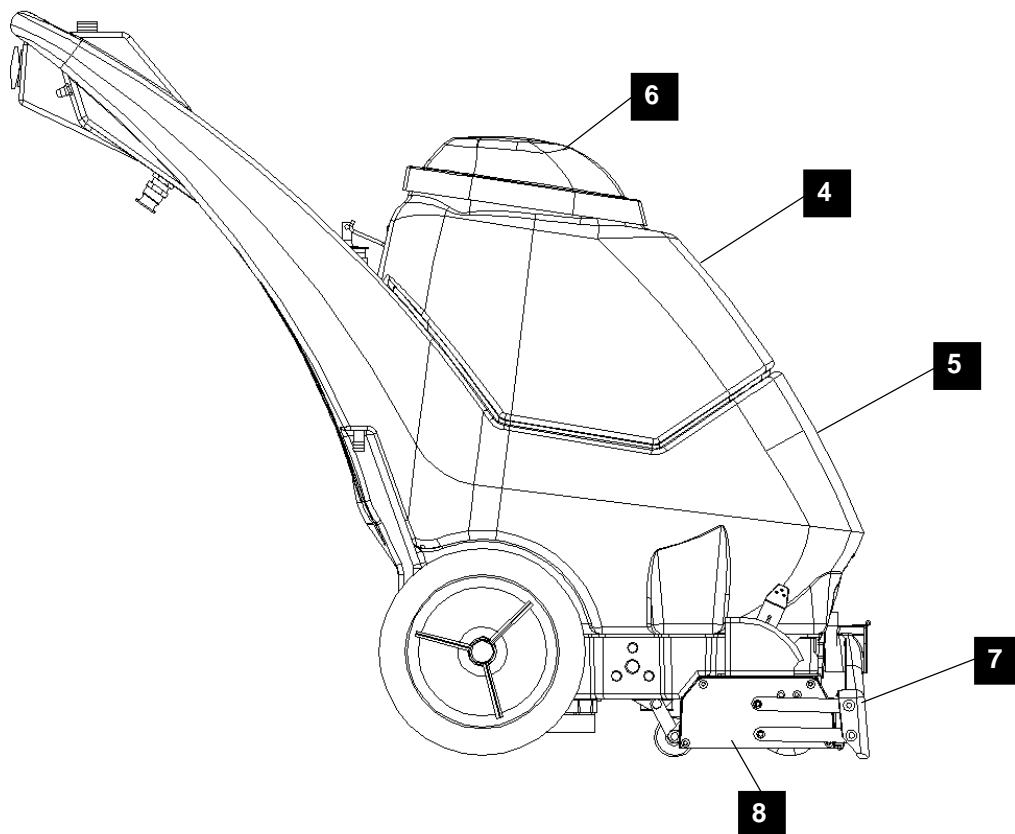
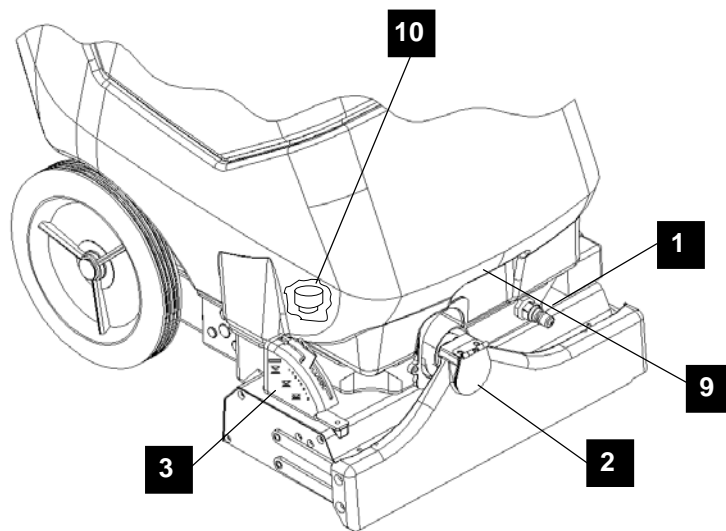
CONTROLS/COMPONENT LOCATIONS



1. **Main Handle.** Used to pull and maneuver machine.
2. **Electrical Cord.**
3. **Pump Switch.** Turns on pump and enables spray.
4. **Brush/Spray switch.** Turns on brush motor and activates electro-valve to dispense solution to floor through jets. Intermittent, off, and continuous settings.
5. **Vacuum Motor Switch.** Turns on vacuum motor
6. **Brush Motor Circuit Breaker.** 6 amp. Breaker protecting brush motor.
7. **Vacuum Motor Circuit Breaker.** 15 amp. Breaker protecting vacuum motor.
8. **Recovery Dump Hose.** Facilitates draining dirty cleaning solution.
9. **Solution Dump Hose.** Facilitates draining excess cleaning solution from solution tank.

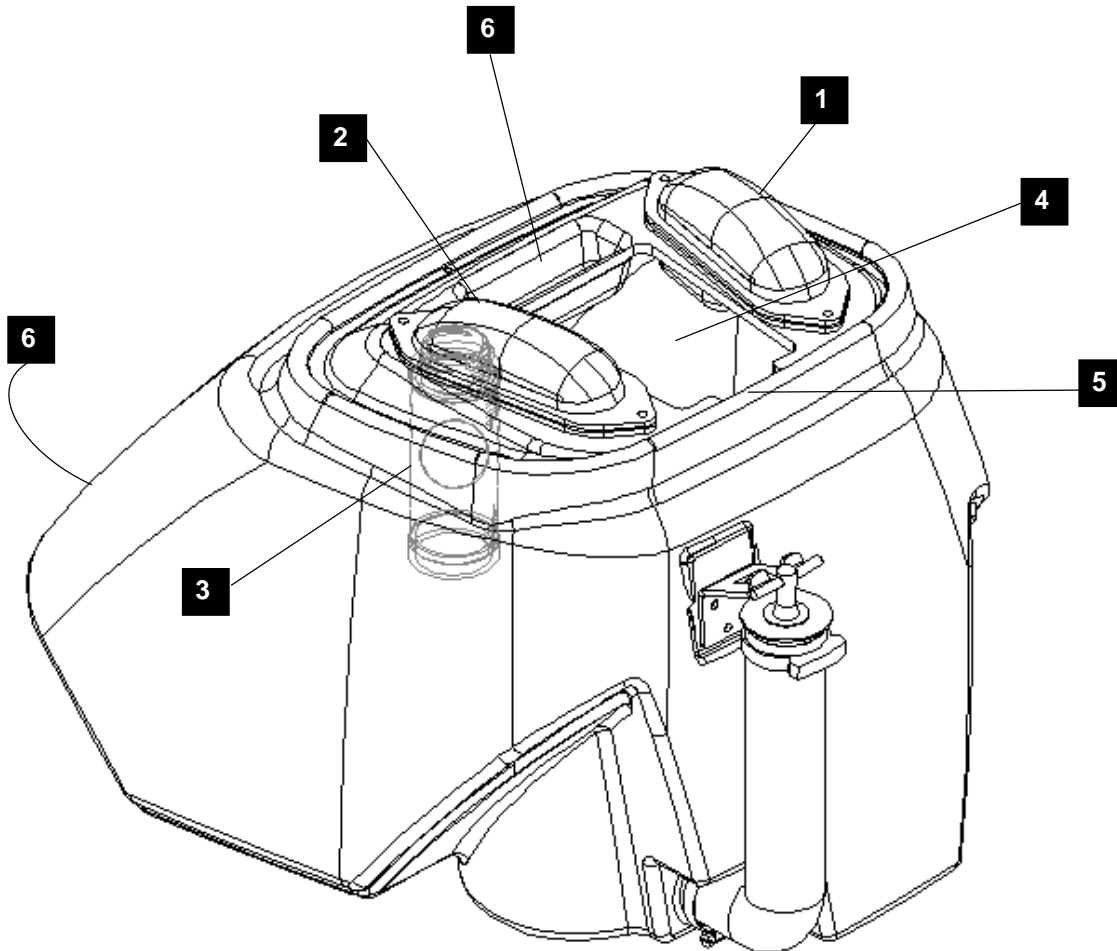
CONTROLS/COMPONENT LOCATIONS

1. **Solution Accessory Tool Hookup.** Used for various auxiliary cleaning tools.
2. **Vacuum Hose Door.** Used to connect various auxiliary 1 ½ inch cleaning tool vacuum hoses.
3. **Brush Height Adjustment.** Used to regulate brush height from storage position to various carpet heights.
4. **Recovery Tank.** Used to collect dirty cleaning solution.
5. **Solution Tank.** Used to hold cleaning solution.
6. **Recovery Tank Dome.**
7. **Vacuum Shoe.**
8. **Brush Housing.**
9. **Front Lifting Handle.**
10. **Cleaning Solution Filter.**

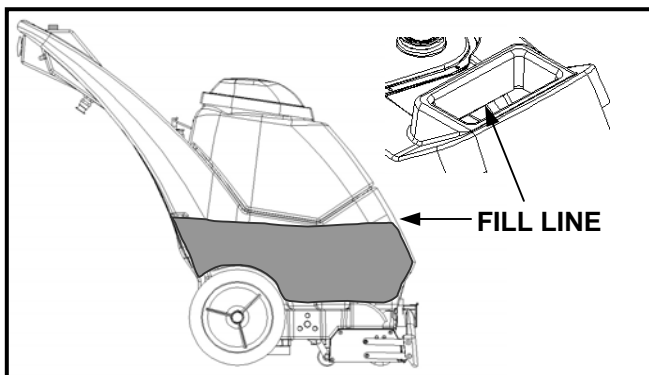
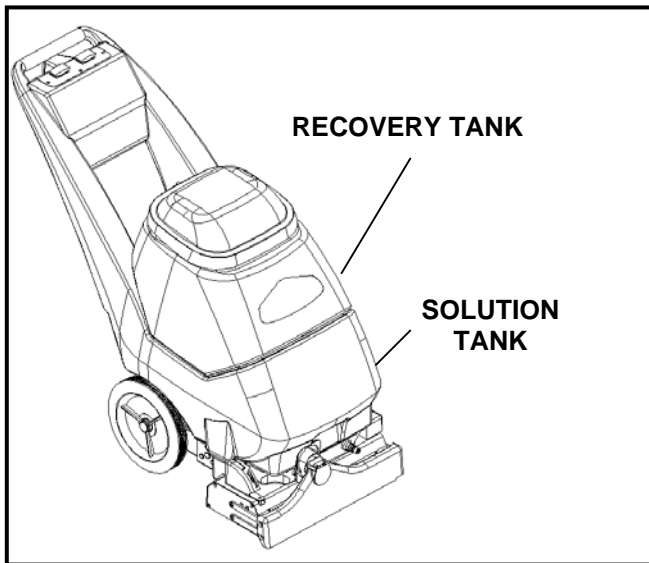


CONTROLS/COMPONENT LOCATIONS

1. Solution Intake Cover.
2. Vacuum Intake Cover.
3. Float Shut-Off.
4. Clean-Out Opening.
5. Pour Spout.
6. Lift Handle.



FILLING OPERATIONS



FILLING THE CADET

NOTE: Use clean bucket of water to fill solution tank

Do not put defoamer, solvents, spotter or prespray chemicals in the solution tank.

Do not allow water to spill into vacuum motor inlet. Dry spillage from top of solution tank before replacing recovery tank.

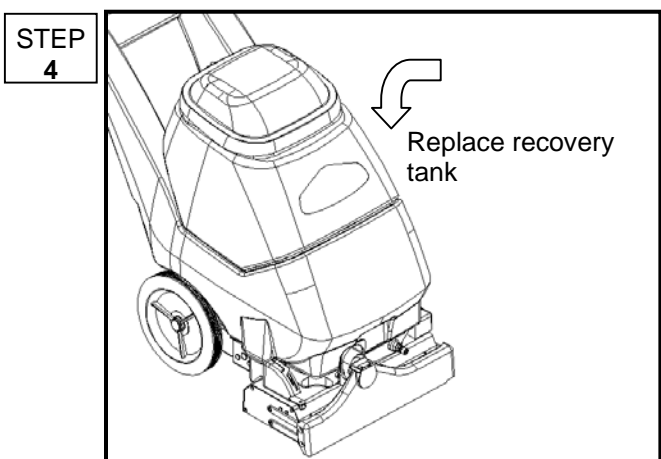
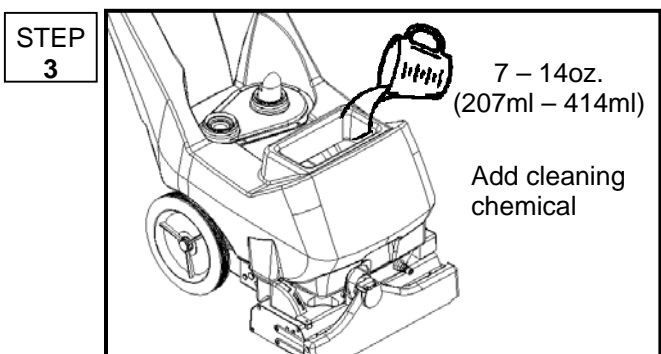
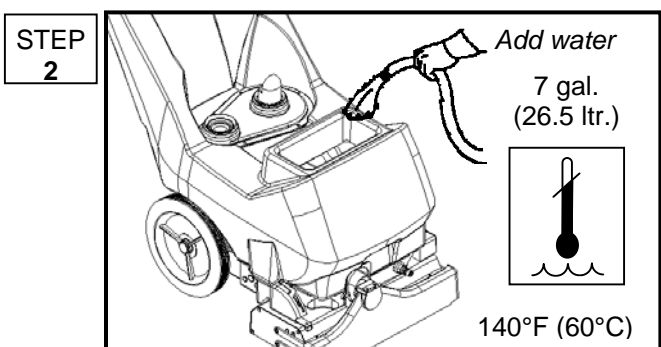
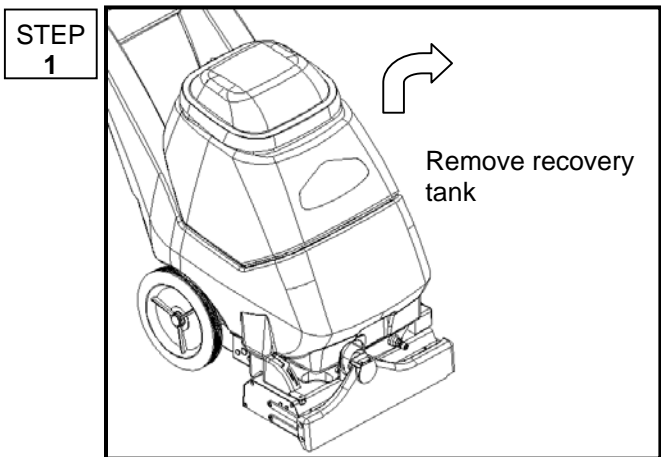
CHEMICALS

Suitable Chemicals

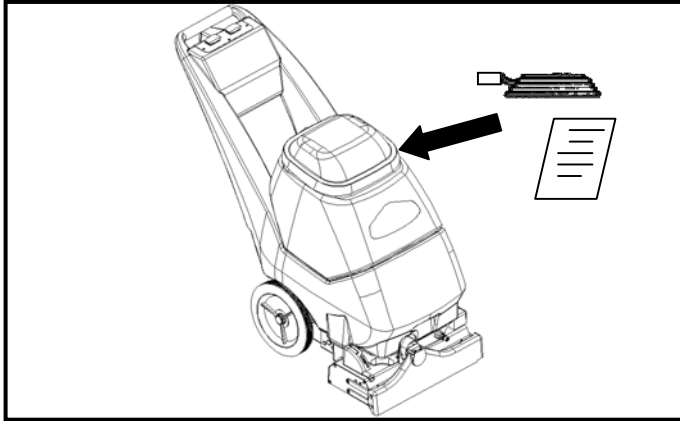
Alkalis
Detergents
Hydroxides
Soaps
Vinegar

Non-Compatible Chemicals

Aldehydes
Aromatic Hydrocarbons
SP Butyls
Carbon Tetrachloride
Clorox*
Chlorinated Bleaches
Chlorinated Hydrocarbons
Lysol*
Methyl Ethel Ketone (MEK)
Perchorethylene (perc)
Phenolics
Trichlorethylene
D-Limonene

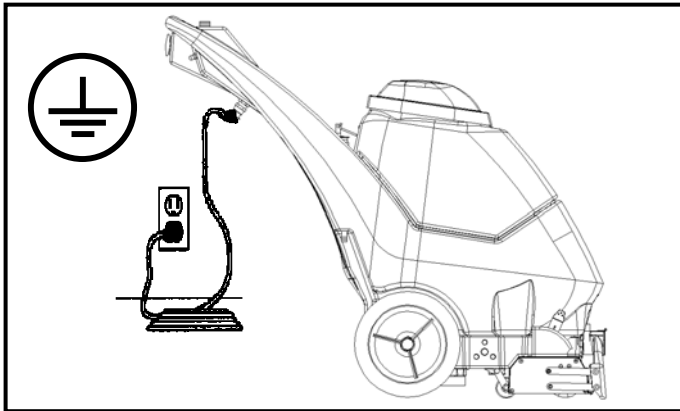


OPERATIONS



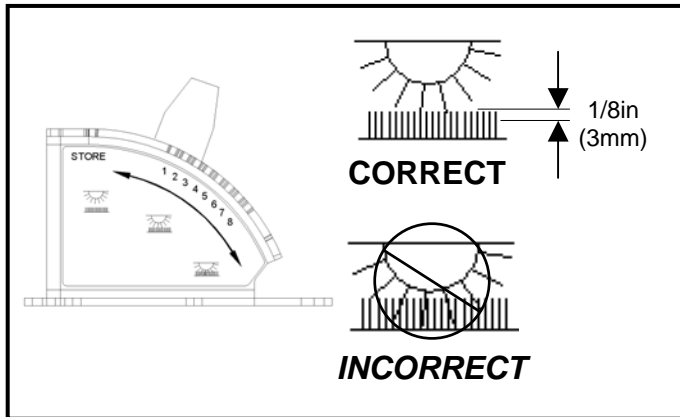
STEP
1

Remove electrical cord and literature from recovery tank. Fill solution tank (see filling operations, page3-5).



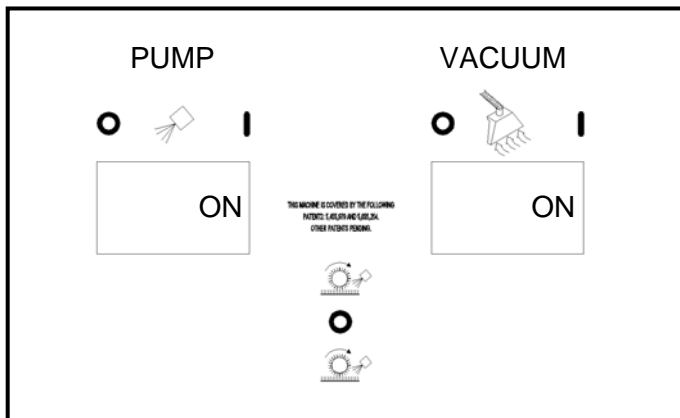
STEP
2

Plug cord into grounded outlet.
Note: Be sure dome is seated on recovery tank, and float shut-off is installed correctly.



STEP
3

Adjust brush to proper setting.
Note: For good operation the brush must skim the carpet. If circuit breaker trips raise brush to prevent damage to motor or carpet.



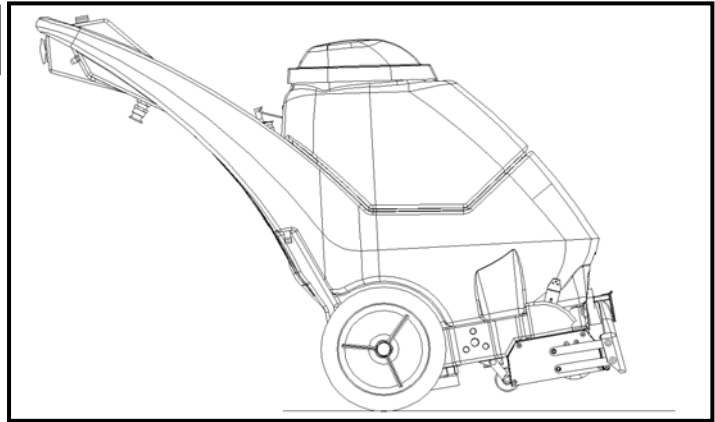
STEP
4

Turn on both Vacuum and Pump motor switches ("ON"="I").

OPERATIONS

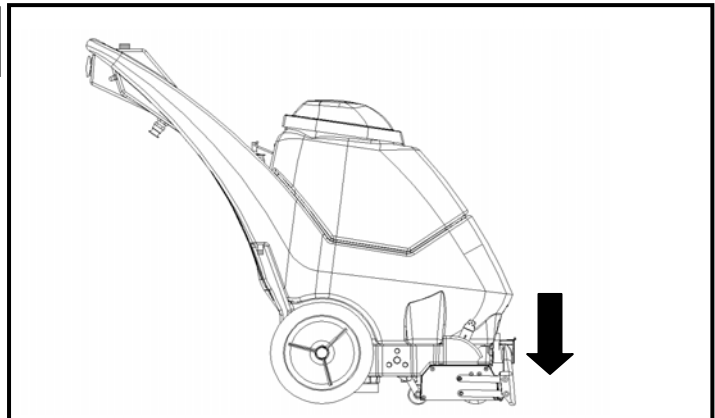
Tip machine back by main handle to move to starting point.

STEP
5



Lower machine to floor.

STEP
6

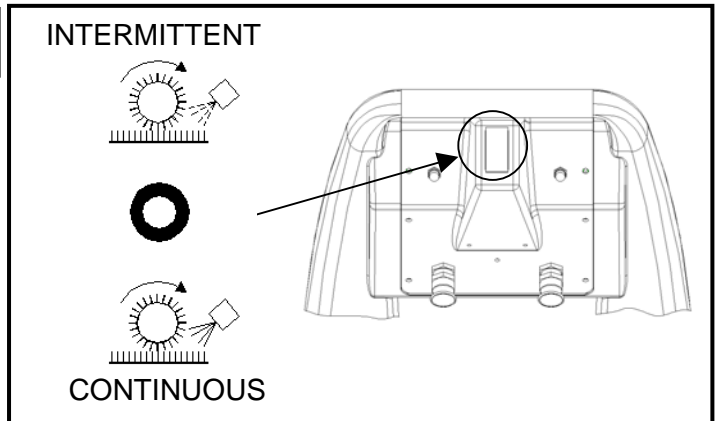


Select intermittent or continuous switch setting to turn on brush and start solution spray.

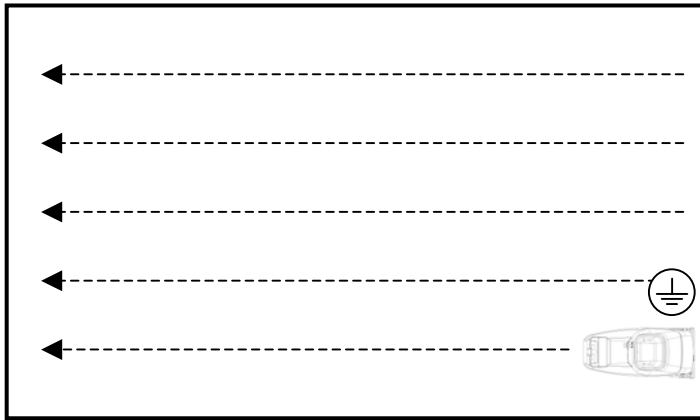
The intermittent setting requires the operator to hold the switch in the “on” position with the thumb, and is typically used in small areas where short cleaning passes are made.

The continuous setting allows the operator to set the switch in the “on” position with one touch, and is typically used in large areas where long cleaning passes are made.

STEP
7

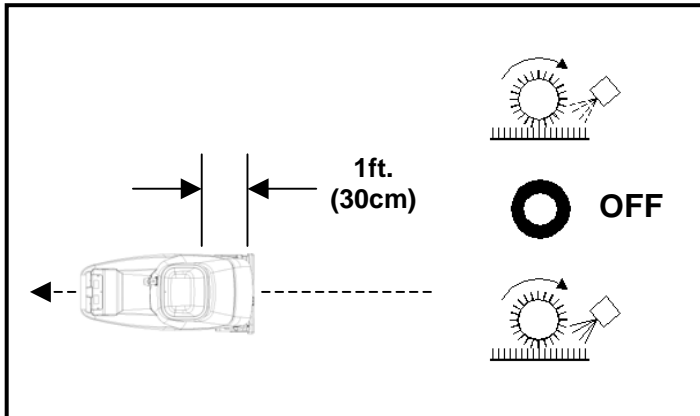


CLEANING PROCEDURE



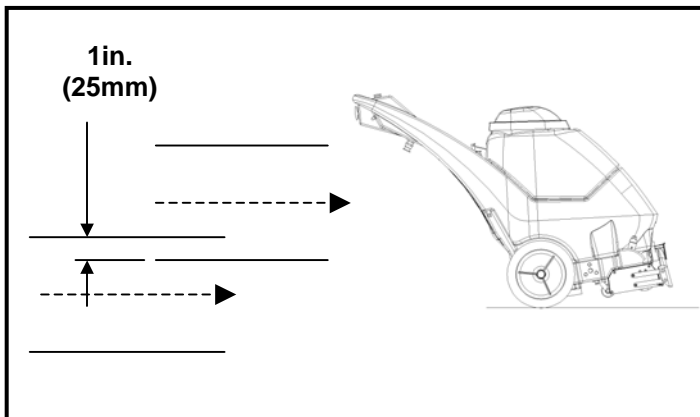
STEP
1

Start at wall closest to power outlet. Pull straight back without pushing down on handle.



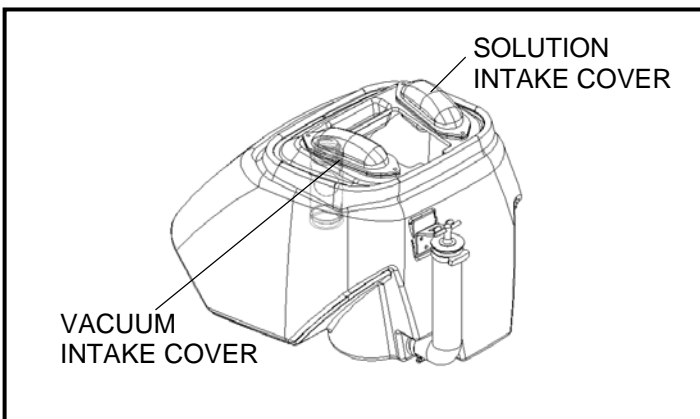
STEP
2

Release intermittent setting or turn off continuous setting on brush/spray switch approximately 1 foot before ending cleaning pass.



STEP
3

Push down on handle to raise vacuum shoe and brush before moving to the next cleaning pass. Overlap brush contact area approximately 1inch.



STEP
4

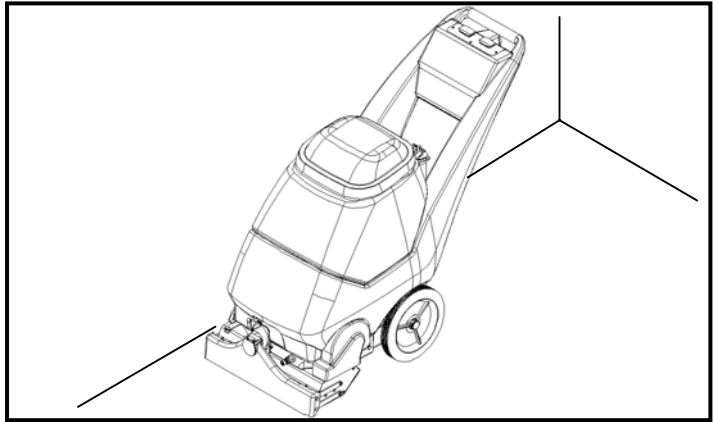
During operation, observe the following: The Cadet is equipped with clear internal covers to facilitate operator viewing of dirty solution and vacuum air flow.

During operation, observe the vacuum intake cover. Large amounts of water or foam entering the vacuum system can damage the vacuum motor. If you notice either condition, **shut down the machine immediately**. Empty recovery tank and/or add defoamer to recovery tank.

CLEANING PROCEDURE

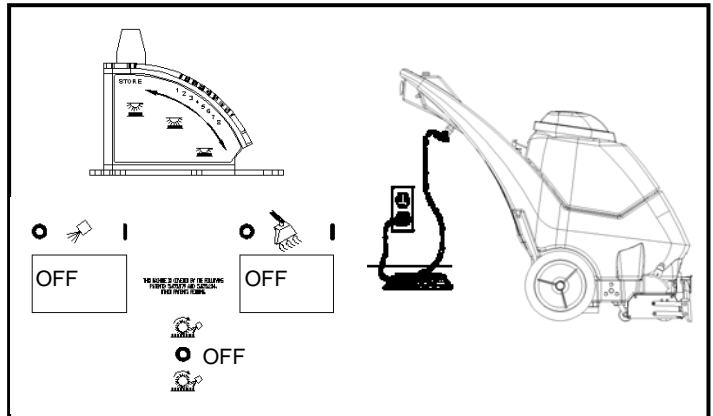
Use right side of machine for cleaning against walls.

STEP
5



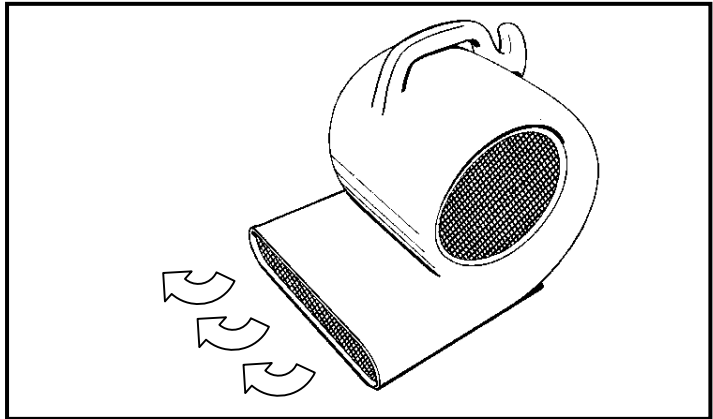
After cleaning, turn off all controls, return brush to storage position and carefully unplug machine.

STEP
6



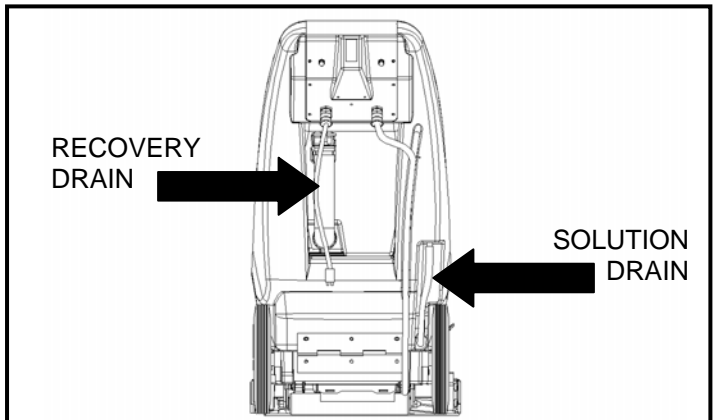
To speed drying, use a Windblower™ fan.

STEP
7

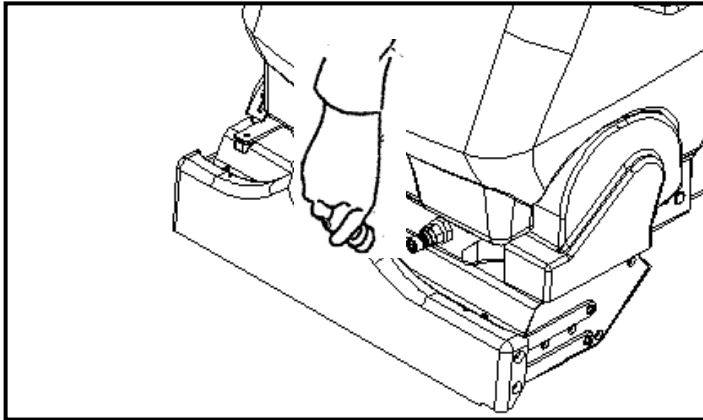


Empty recovery tank by releasing dump hose. Use a hose with cold water to clean out the recovery tank. Also drain solution tank after each use.

STEP
8



ACCESSORY TOOL USAGE

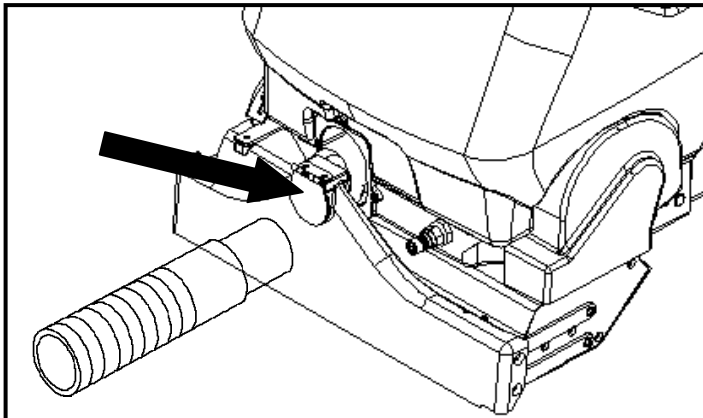


STEP
1

Use only one of the following acceptable accessory tools.

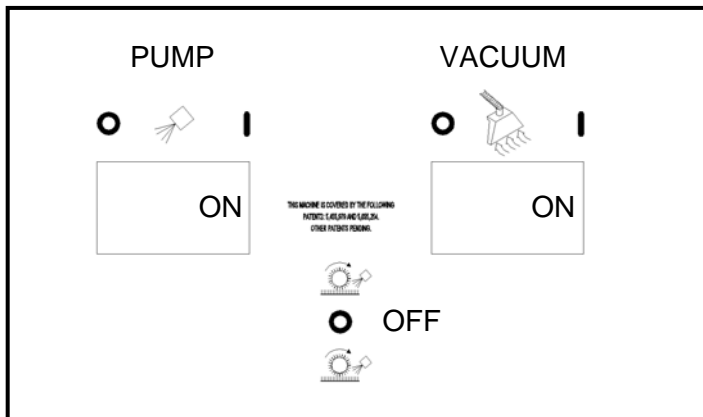
HT – 86000610 PRV NO. 89227
DDH – 8600060 PRV NO. 89226
DH – 86031540 PRV NO. 39504

Pull back collar and insert over machine mounted fitting, then release collar to lock into place.



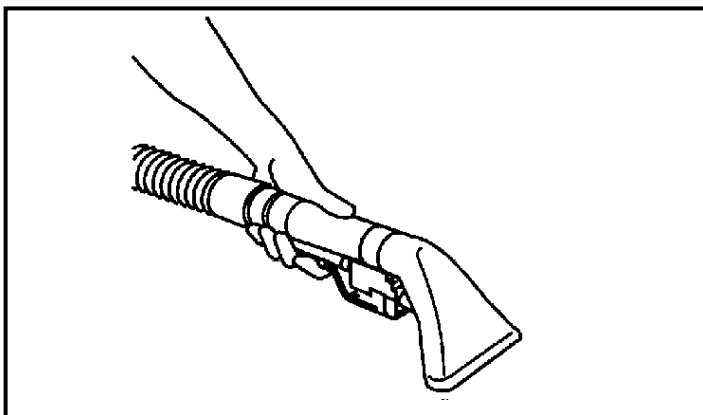
STEP
2

Lift door on front of vacuum shoe and insert 1 ½ inch hose cuff into hole.



STEP
3

Turn on Pump and Vacuum Switch. *Note: Be sure intermittent/continuous switch is in center (off) position and brush is in storage position.*



STEP
4

Squeeze handle on accessory tool to begin cleaning.

MAINTENANCE

SERVICE SCHEDULE

MAINTENANCE	DAILY	WEEKLY	QUARTERLY
Check machine for cord damage	*		
Check recovery dome and gasket for damage and cleanliness	*		
Check brush – should be clean with no lint or strings attached	*		
Inspect vac shoe for blockage; remove fibers with coat hanger, etc.	*		
Check hoses for wear, blockages, or damage	*		
Check handles, switches, and knobs for damage	*		
Check vac motor intake filter and clean	*		
Run one gallon of water through system	*		
Clean out recovery tank and check float valve to make sure it moves freely	*		
Clean out solution tank and remove and clean vacuum intake screen	*		
Clean outside of all tanks and check for damage	*		
Run vac motor for at least one minute to allow motor to dry	*		
Store with dome off tank to allow the tank to dry	*		
Check all bearings for noise		*	
Check all gaskets for wear and leakage		*	
Check vacuum intake screen for damage; replace if necessary		*	
Check pump pressure; observe spray pattern and check with gauge if necessary		*	
Check and clean solution screen		*	
Check belts for wear and replace as necessary		*	
Check brush for wear; ensure bristles are not damaged		*	
Check cables for fraying		*	
Check the spray bar (manifold) for damage; replace if broken or bent		*	
Check condition of vac shoe and frame for damage		*	
Check overall performance of machine		*	
Check vac motor carbon brushes			*

PERIODIC MAINTENANCE

Twice a month, flush a white vinegar solution (One quart vinegar to two gallons of water) or anti-browning solution (mixed as directed) through the extractor. This will prevent build-up of alkaline residue in the system. If spray jets become clogged, remove the spray tips, wash them thoroughly, and blow-dry.

NOTE: Do not use pins, wire, etc. to clean nozzles as this could destroy spray pattern.

Periodically inspect all hoses, electrical cables and connections on your machine. Frayed or cracked hoses should be repaired or replaced to eliminate vacuum or solution pressure loss. If the cable insulation is broken or frayed, repair or replace it immediately. Don't take chances with electrical fire or shock.

DAILY / REGULAR MAINTENANCE

Before making any adjustments or repairs to the machine, disconnect the power cord from electrical source.

1. Empty unused cleaning solution from the solution tank.
2. Inspect and clean filter screen in solution tank.
3. Flush pumping system with 4 or 7 liters of clean, hot water.
4. After each use, rinse tank with fresh water. Periodically inspect the recovery tank and decontaminate if necessary, using a Hospital Grade Virucide or a 1-10 bleach to water solution. Waste water should be disposed of properly.
5. Check for and remove any lint or debris around vac shoe.
6. Check spray jets for full spray pattern.

7. Remove lint and dirt build-up from brush and housing.
NOTE: Brush removal.
 - A. To remove brush, grab and pull brush out from end opposite drive belt (operator's right). Remove other end from brush driver.
 - B. To install brush, line up slots in brush core with pin in driver on drive belt side (operator's left) and push brush onto driver. Then snap bearing end (opposite end) of brush into retaining clip.
8. Check cooling air screen (located on frame behind left wheel) for lint or debris.
9. Check float and shut-off screen and clean as necessary.

NOTE: Always store machine with brush in "Store" position.

MAINTENANCE



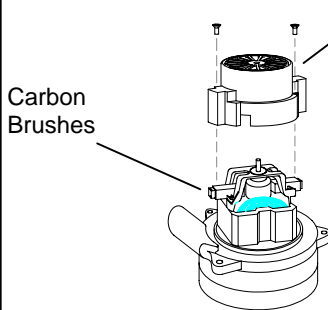
WARNING:

ONLY QUALIFIED
MAINTENANCE
PERSONNEL ARE TO
PERFORM THE FOLLOWING REPAIRS.

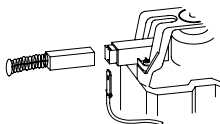
VACUUM MOTOR REPLACEMENT

1. Turn off all switches and unplug machine.
2. Remove recovery tank.
3. Remove the (2) screws that fasten the solution tank to the frame, and tilt tank back to expose the inside of the frame.
4. Locate the vacuum motor wires and disconnect at the connector. Close the solution tank.
5. Remove the (6) screws holding the vacuum motor cover (p/n 27809) to the solution tank.
6. Remove the vacuum motor.
7. Reverse process to install vacuum motor.

Vacuum Motor Carbon Brushes Replacement (Windsor)

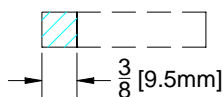


If armature commutator is grooved, extremely pitted or not concentric, the motor will need to be replaced or sent to a qualified service center.



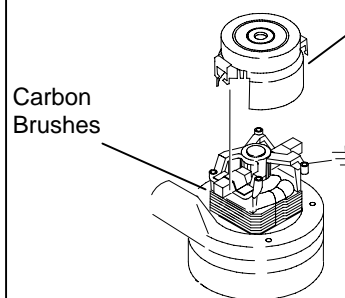
Important:

These brushes wear quicker as the length shortens due to increased heat. Spring inside brush housing will damage motor if brushes are allowed to wear away completely.



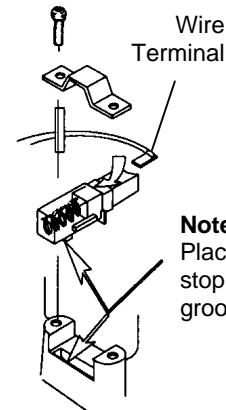
Periodically check the length of the carbon brushes. Replace both carbon brushes when either is less than 3/8" (9.5mm) long.

Vacuum Motor Carbon Brushes Replacement (Ametek)



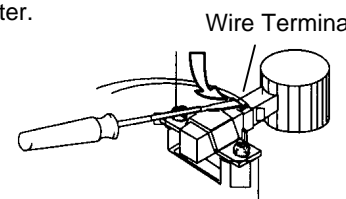
WARNING: The green ground wire must be attached for safe operation. See wiring diagram.

Note: When replacing carbon brushes loosen wire terminal **BEFORE** removing screws on bracket.



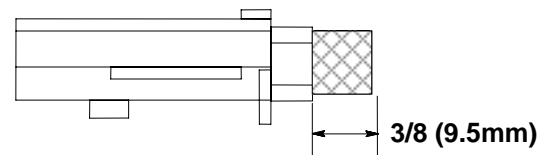
Note: Place stop in groove.

If armature commutator is grooved, extremely pitted or not concentric, the motor will need to be replaced or sent to a qualified service center.



Important:

These brushes wear quicker as the length shortens due to increased heat. Spring inside brush housing will damage motor if brushes are allowed to wear away completely.



Periodically check the length of the carbon brushes. Replace both carbon brushes when either is less than 3/8" (9.5mm) long.

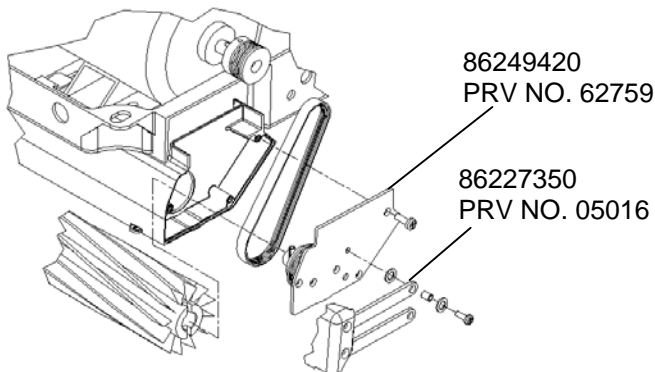


WARNING:

ONLY QUALIFIED
MAINTENANCE
PERSONNEL ARE
TO PERFORM THE FOLLOWING REPAIRS.

BELT REPLACEMENT

1. Turn off all switches and unplug machine.
2. Remove recovery tank and brush.
3. Remove the (2) screws that fasten the solution tank to the frame, and tilt tank back to expose the inside of the frame.
4. Loosen the (4) screws that hold the brush motor in place and slide motor forward to release tension in belt.
5. Remove the (2) screws that fasten the vacuum shoe links (p/n 05016) to the brush housing.
6. Remove the (3) screws that fasten the side plate (p/n 62759) to the brush housing to remove belt.
NOTE: All components associated with driving the brush will come out with the side plate.
7. Reverse process to install belt.



MAINTENANCE

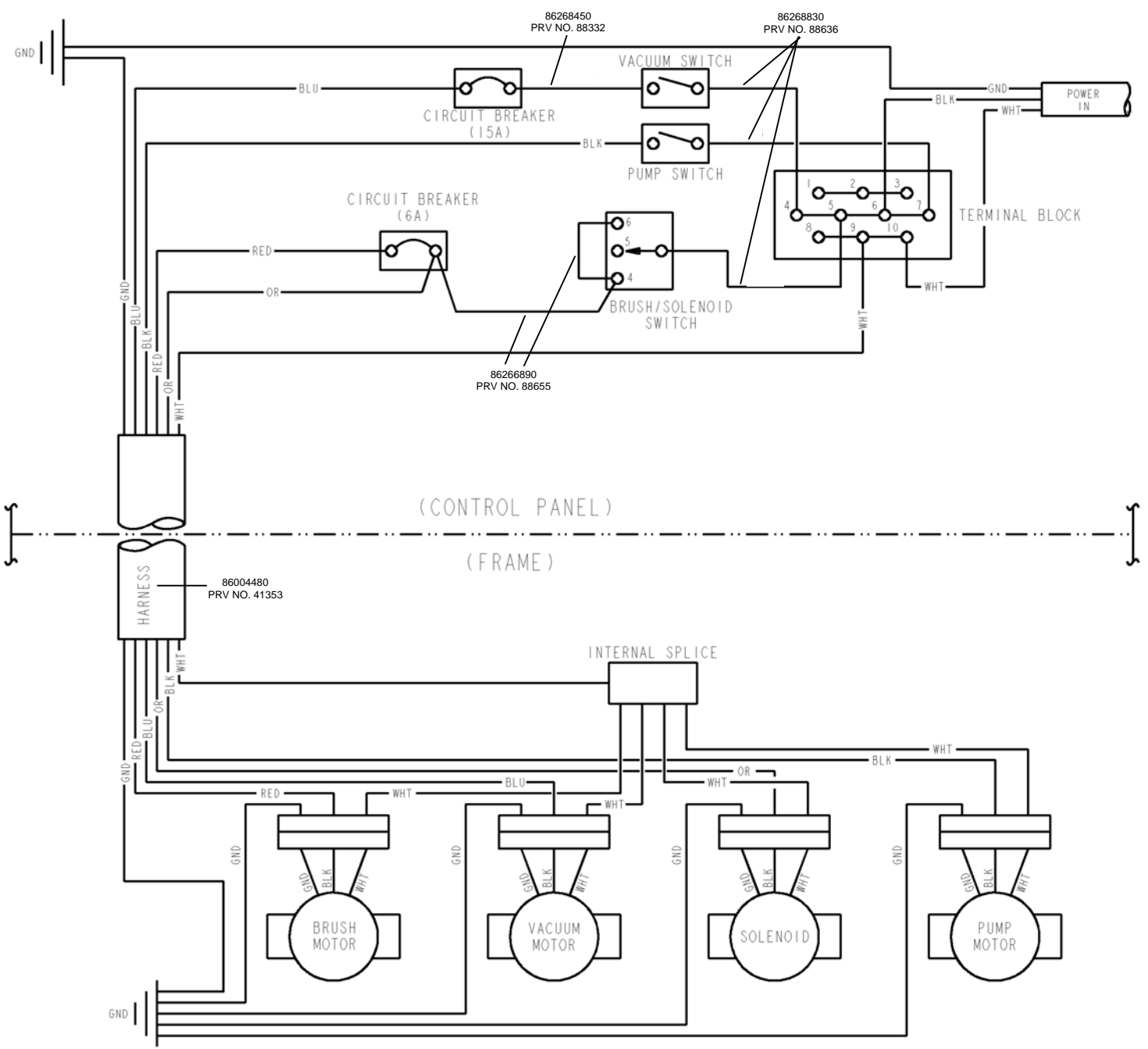


ONLY QUALIFIED MAINTENANCE PERSONNEL ARE TO PERFORM THE FOLLOWING REPAIRS.

SOLUTION PUMP REPLACEMENT

1. Turn off all switches and unplug the machine.
2. Remove recovery tank.
3. Remove the (2) screws that fasten the solution tank to the frame, and tilt tank back to expose the inside of the frame.
4. Remove solution hoses from fittings in pump.
5. Remove the (2) screws that fasten the pump to the frame.
6. Reverse process to install pump.

WIRING DIAGRAM



TROUBLESHOOTING CHART

PROBLEM	CAUSE	SOLUTION
No Power, Nothing Runs	Is the cord plugged in.	Plug in cord.
	Circuit breaker tripped in building.	Reset breaker.
	Faulty switch.	Call for service.
	Faulty power cord or pigtail.	Call for service.
Vacuum Motor Will Not Run	Vacuum circuit breaker tripped.	Reset breaker.
	.Faulty main vacuum switch.	Call for service.
	Loose wiring.	Call for service.
	Faulty vac motor.	Call for service.
Vacuum Motor Runs But Suction Is Poor	Debris lodged in vac shoe.	Remove debris from vac shoe.
	.Dome gasket defective or missing.	Replace as necessary.
	Vacuum hose cracked or hose cuff loose.	Replace or repair as necessary.
	Recovery tank full / float ball stuck in the up position.	Turn off vac motor. Drain and rinse recovery tank.
Poor Or No Water Flow (Carpet Is Streaky)	Main pump switch off.	Turn on.
	Jets clogged or missing.	Clean using a vinegar /water solution or replace.
	Solution filter clogged.	Drain solution tank and clean solution filter.
	Faulty solenoid.	Call for service.
Brush Does Not Spin	Brush switch off.	Turn on brush switch.
	Brush circuit breaker tripped.	Reset circuit breaker.
	Brush belt broken.	Replace as necessary.
	Faulty brush motor.	Call for service.

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