E5

Carpet Extractor



English EN

Operator Manual

Model 9004198-230V

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9003734
Rev. 01 (07-2016)

This manual is furnished with each new model. It provides necessary operation and maintenance instructions.

Read this manual completely and understand the machine before operating or servicing it.

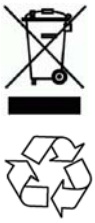
This machine will provide excellent service. However, the best results will be obtained at minimum costs if:

- The machine is operated with reasonable care.
- The machine is maintained regularly - per the machine maintenance instructions provided.
- The machine is maintained with manufacturer- supplied or equivalent parts.

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Parts and supplies may be ordered online, by phone, by fax or by mail.

UNCRATING MACHINE: Carefully check carton for signs of damage. Report damages at once to carrier.



PROTECT THE ENVIRONMENT

Please dispose of packaging materials and old machine components in an environmentally safe way according to local waste disposal regulations.

Always remember to recycle.

MACHINE DATA

Please fill out at time of installation for future reference.

Model No. - _____

Serial No. - _____

Machine Options - _____

Sales Rep. - _____

Sales Rep. phone no. - _____

Customer Number - _____

Installation Date - _____

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TENNANT N.V.
Industrielaan 6 5405 AB
P.O. Box 6 5400 AA Uden- The Netherlands

europe@tennantco.com
www.tennantco.com

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SAFETY PRECAUTIONS

This machine is intended for commercial use. It is designed exclusively to clean carpet and upholstery in an indoor environment and is not constructed for any other use. Use only manufacturer's recommended attachments.

All operators must read, understand and practice the following safety precautions.

The following warning alert symbol and the "FOR SAFETY" heading are used throughout this manual as indicated in their description:

⚠ WARNING: To warn of hazards or unsafe practices which could result in severe personal injury or death.

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

The following safety precautions signal potentially dangerous conditions to the operator or equipment.

⚠ WARNING: Fire Or Explosion Hazard

- **Do Not Use or Pick Up Flammable Materials**
- **Only Use Commercially Available Floor Cleaners intended for machine application.**
- **Do Not Use Near Flammable Liquids, Vapors Or Combustible Dusts.**

This machine is not equipped with explosion proof motors. The electric motors will spark upon start up and during operation which could cause a flash fire or explosion if machine is used in an area where flammable vapors/liquids or combustible dusts are present.

⚠ WARNING: Electrical Hazard

- **Do Not Operate With Damaged Power Cord.**
- **Do Not Modify Power Cord Plug.**
- **Unplug Power Cord Before Servicing Machine.**

If the power cord is damaged or broken, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.

⚠ WARNING: Spinning Brush. Keep Hands Away. Unplug Power Cord Before Servicing Machine.

⚠ WARNING: Electrical Shock Hazard. Do Not Use Outdoors. Do Not Expose To Rain. Store Indoors.

FOR SAFETY:

1. **Do not operate machine:**
   - **Unless trained and authorized.**
   - **Unless operator manual is read and understood.**
   - **In an area where flammable vapors/liquids or combustible dusts are present.**
   - **Unless power cord is properly grounded. Only use the manufacturer- supplied power cord which is designed exclusively for this machine. Do not use additional extension cords.**
   - **Outdoors.**
   - **If not in proper operating condition.**
   - **In standing water.**
2. **Before operating machine:**
   - **Make sure all safety devices are in place and operate properly.**
   - **Place wet floor signs as needed.**
3. **When operating machine:**
   - **Do not run machine over power cord.**
   - **Do not pull machine by plug or power cord.**
   - **Do not pull power cord around sharp edges or corners.**
   - **Do not unplug by pulling on power cord.**
   - **Do not stretch power cord.**
   - **Do not handle plug with wet hands.**
   - **Keep power cord away from heated surfaces.**
   - **Report machine damage or faulty operation immediately.**
   - **Do not allow children to play on or around machine.**
   - **If foam or liquid begins to leak from machine, immediately shut off machine.**
4. **Before leaving or servicing machine:**
   - **Turn off machine.**
   - **Unplug power cord from wall outlet.**
5. **When servicing machine:**
   - **Unplug power cord from wall outlet.**
   - **Avoid moving parts. Do not wear loose jackets, shirts, or sleeves.**
   - **Do not power spray or hose off machine. Electrical malfunction may occur.**
   - **Use manufacturer- supplied or approved replacement parts.**
   - **All repairs must be performed by a qualified service person.**
   - **Do not modify the machine from its original design.**
6. **When transporting machine:**
   - **Unplug power cord from wall outlet.**
   - **Get assistance when lifting machine.**
   - **Do not wheel up or down stairs.**
   - **Use tie- down straps to secure machine to truck or trailer.**

GROUNDING INSTRUCTIONS

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

⚠ 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 machine. If it will not fit the outlet, have a proper outlet installed by a qualified electrician.

SAFETY LABELS

The safety labels appear on the machine in the locations indicated. Replace labels if they are missing or become damaged or illegible.



FOR SAFETY: Read Manual before Operating Machine



⚠ WARNING: Spinning brush. Keep hands away. Unplug power cord before servicing machine.

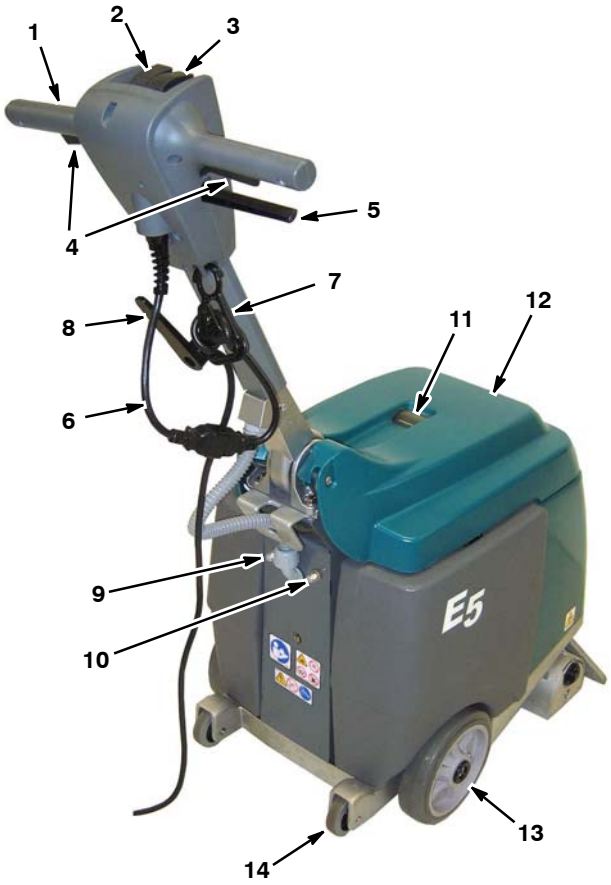


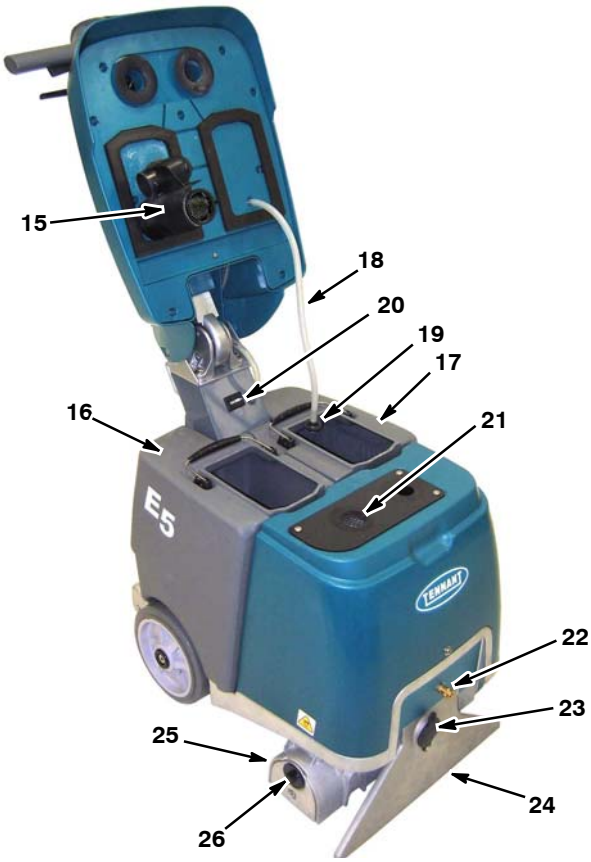
⚠ WARNING: Electrical Hazard. Do not use with damaged cord. Unplug cord before servicing.



⚠ WARNING: Fire or Explosion Hazard. Do not use flammable liquids. Do not pick flammable liquids

MACHINE COMPONENTS





1. Adjustable Control Handle
2. Main Power On/Off Switch
3. Cleaning Mode Switch
4. Start Triggers
5. Handle Adjustment Lever
6. 15 m Power Cord
7. Power Cord Strain Relief Clip
8. Power Cord Hook
9. 7.5A Machine Circuit Breaker Button
10. 2.5A Brush Circuit Breaker Button
11. Recovery Window
12. Tank Cover
13. Main Wheels
14. Curb Climbing/Tilt Wheels
15. Vacuum Shut- Off Float
16. Recovery Tank
17. Solution Tank
18. Solution Hose
19. Solution Hose Screen
20. Hour meter
21. Vacuum intake Screen
22. Accessory Tool Solution Hose Coupler
23. Accessory Tool Vacuum Hose Port
24. Vacuum Shoe
25. Brush Base
26. Brush Idler Plate Locking Knob

SWITCH SYMBOLS

I Power On	Brush	Vacuum
O Power Off	Solution	Accessory Tool

MACHINE SETUP

INSTALLING BRUSH

FOR SAFETY: Before installing brush, turn off machine and unplug power cord from wall outlet.

1. Remove the brush idler plate from the brush base. Turn the idler plate locking knob counter- clockwise to remove (Figure 1).
2. Connect the slotted end of the brush to the drive hub (Figure 2).



FIG. 1

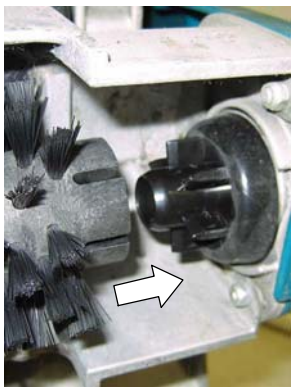


FIG. 2

3. Connect the idler plate to the brush and reinstall the idler plate. Make sure the idler plate hooks engage the brush base and that the locking knob is secure (Figure 3).





FIG. 3

NOTE: *If storing the machine for an extended period, remove the brush to prevent a flat spot.*

FILLING SOLUTION TANK

1. Lift the cover and remove the solution tank from the machine (Figure 4).
2. Fill the solution tank with 19 L of clean water (50°C maximum temperature) (Figure 5). Partially fill if unable to lift a full tank.

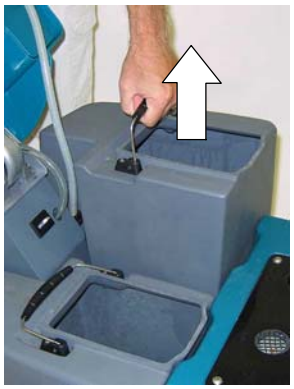


FIG. 4



FIG. 5

ATTENTION: Do not use the recovery tank to fill the solution tank. Dirt from the recovery tank may cause damage to the solution pump.

⚠ WARNING: Fire Or Explosion Hazard, Do Not Use or Pick Up Flammable Materials.

3. Submerge the solution hose screen into the solution tank and close the cover (Figure 6).



FIG. 6

CONNECTING POWER CORD

1. Plug the supplied power cord into the machine and attach the power cord to the strain relief clip as shown (Figure 7).

FOR SAFETY: Do not operate machine unless power cord is properly grounded. Only use the manufacturer- supplied power cord which is designed exclusively for this machine. Do not use additional extension cords.

2. Plug the power cord into a properly grounded wall outlet (Figure 8).



FIG. 7

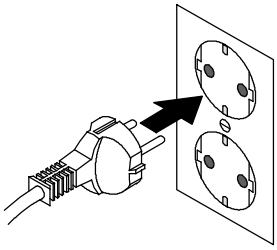


FIG. 8

WARNING: Electrical Hazard, Do Not Operate With Damaged Power Cord.

If the power cord is damaged or broken, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.

3. Wrap the power cord around the handle and cord hook when storing machine. To remove power cord, turn the cord hook upward (Figure 9).



FIG. 9

MACHINE OPERATION

FOR SAFETY: Do not operate machine unless operator manual is read and understood.

PRE- OPERATION

1. Inspect power cord for damage.
2. Vacuum the carpet and remove debris from area.
3. Using a pump- up sprayer, spray the carpet with an approved pre-treatment detergent (Figure 10).

   Contact your dealer for recommended cleaning detergents.



FIG. 10

WARNING: Fire Or Explosion Hazard. Do Not Use Flammable Materials. Only Use Commercially Available Floor Cleaners intended for machine application.

CLEANING CARPETS

WARNING: Fire or Explosion Hazard, Do Not Use or Pick Up Flammable Materials.

1. Pull the handle adjustment lever and adjust the handle to a comfortable operating height (Figure 11). Release the lever to lock the position.



FIG. 11

2. Press the main power switch to the on (I) position (Figure 12).
3. Press the cleaning mode switch towards the vacuum/brush/solution mode (Figure 13).



FIG. 12



FIG. 13

4. To begin cleaning, pull the start triggers and slowly pull the machine backwards in a straight path (Figure 14).
5. Release the triggers at the end of the path and continue to pull the machine to pick up the excess solution.





FIG. 14

6. Tip the machine back to the rear tilt wheels (1) and push the machine forward to the beginning of the next path (2) (Figure 15). Overlap each path by 50 mm.

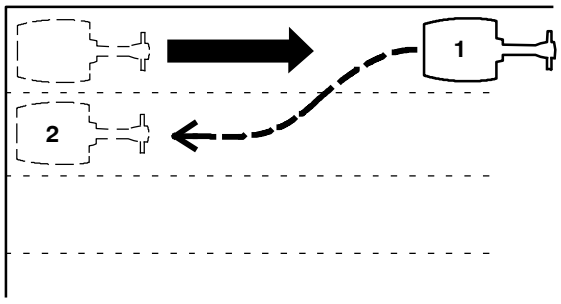


FIG. 15

FOR SAFETY: When operating machine, do not run machine over power cord.

7. View the water pickup from the recovery window (Figure 16). When the water pickup stops, unplug the power cord and empty the recovery tank.

   The machine is equipped with a vacuum shut- off float that will automatically stop the water pickup when the recovery tank reaches the full point. A sudden change in vacuum motor sound will occur.



FIG. 16

ATTENTION: Check for excessive foam in the recovery tank. Empty tank if excessive. Foam may not activate the shut- off float which may result in vacuum motor damage.

FOR SAFETY: When operating machine, if foam or liquid begins to leak from machine, immediately shut off machine.

8. For heavily soiled areas, press the cleaning mode switch towards the brush mode or the brush/solution mode (Figure 17). This allows you to operate only the brush or the brush with solution as needed.

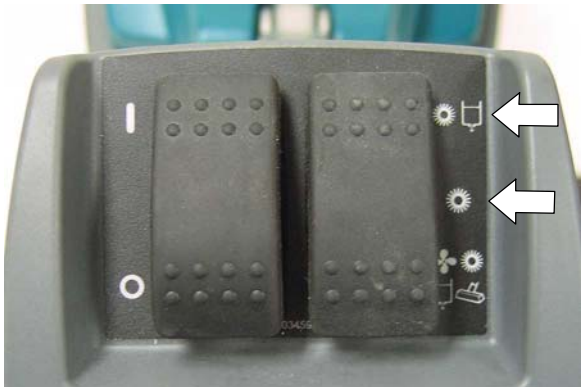


FIG. 17

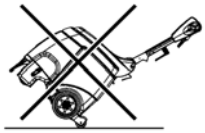
9. The brush circuit breaker will trip if the brush is obstructed. To reset the circuit breaker, unplug the power cord, remove the obstruction and reset the 2.5 amp circuit breaker button (Figure 18). If the circuit breaker does not reset immediately, allow the motor to cool.

FOR SAFETY: Before removing obstruction from brush unplug power cord from wall outlet.



FIG. 18

10. When transporting machine, roll the machine on both the main and rear tilt wheels.



FOR SAFETY: When transporting machine, do not wheel up or down stairs.

CLEANING WITH ACCESSORY TOOLS (Option)

1. Connect the accessory tool hoses to solution hose coupler and vacuum hose port located at the front of the machine (Figure 19).



FIG. 19

2. Fill the solution tank (See FILLING SOLUTION TANK on page 6).
3. Press the main power switch to the on (I) position (Figure 20). Press the cleaning mode switch towards the accessory tool mode (Figure 21).



FIG. 20



FIG. 21

4. Operate the accessory tool (Figure 22).

⚠ WARNING: Fire or Explosion Hazard, Do Not Use or Pick Up Flammable Materials.



FIG. 22

MACHINE MAINTENANCE

To keep the machine in good working condition, simply follow the machine's maintenance procedures.

FOR SAFETY: Before performing maintenance procedures turn off machine and unplug power cord from wall outlet.

ATTENTION: Contact an Authorized Service Center for machine repairs.

AFTER EACH USE

1. Wipe clean the power cord and inspect it for damage (Figure 23). Wrap power cord around handle and cord hook when not in use (Figure 24).

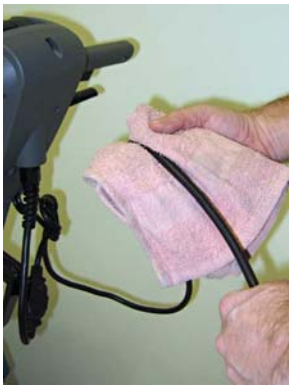


FIG. 23



FIG. 24

⚠ WARNING: Electrical Hazard, Do Not Operate With Damaged Power Cord.

If the power cord is damaged or broken, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.

2. Empty the recovery and solution tanks and thoroughly rinse with clean water (Figure 25).



FIG. 25

3. Clean the vacuum shut- off float (Figure 26) and the vacuum intake screen of any debris buildup (Figure 27).

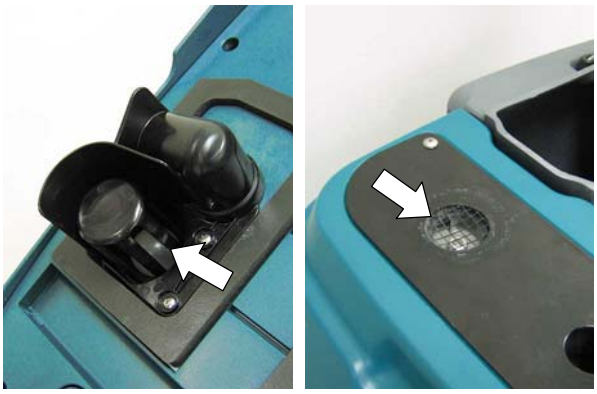


FIG. 26 FIG. 27

4. Clean the solution hose screen (Figure 28).



FIG. 28

5. Clean the brush of any debris, string, hair or carpet fibers (Figure 29). Clean the underside of the brush base (Figure 30).

FOR SAFETY: Before tipping machine back, unplug power cord from wall outlet.



FIG. 29 FIG. 30

6. Clean the vacuum shoe slot of any debris (Figure 31).

FOR SAFETY: Before tipping machine back, unplug power cord from wall outlet.

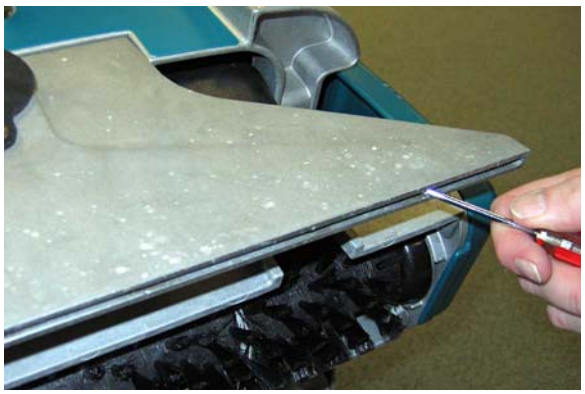


FIG. 31

7. Clean the machine with an all purpose cleaner and damp cloth (Figure 32).



FIG. 32

AFTER EVERY 100 HOURS OF USE

1. Flush the solution system with white vinegar to remove any chemical deposits. Pour 1/2 gal/2.2 L of white vinegar into the solution tank and operate the machine for 1- 2 minutes, then let vinegar sit for up to six hours. Rinse solution system with water.
2. Remove the spray tips and soak in white vinegar to prevent clogging. Do not use a pointed object to clean out spray tip, damage will occur (Figure 33).

FOR SAFETY: When servicing machine, unplug power cord from wall outlet.

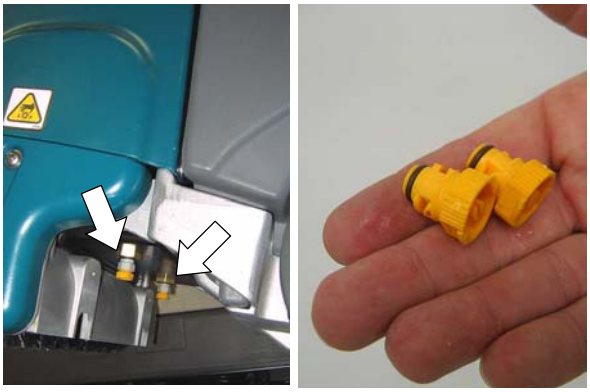


FIG. 33

BRUSH MOTOR MAINTENANCE

Contact an Authorized Service Center for carbon brush replacement.

Carbon Brush Replacement	Hours
Brush Motor	500

STORING MACHINE

Empty tanks and store the machine in a dry area in the upright position. Neatly wrap power cord around handle and cord hook. Remove the brush to prevent a flat spot.

If storing machine in freezing temperatures, purge solution system and pump from all water.

⚠ WARNING: Electrical Shock Hazard. Do Not Use Outdoors. Do Not Expose To Rain. Store Indoors.

RECOMMENDED STOCK ITEMS

Refer to the Parts List Manual for recommended stock items.

To view, print or download Parts manual online visit www.tennantco.com/manuals

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Machine does not operate.	Faulty power cord.	Replace power cord.
	Tripped circuit breaker.	Unplug power cord and determine cause. Reset 7.5 amp circuit breaker button. Contact Service Center if circuit breaker continues to trip.
Brush does not spin	Tripped circuit breaker.	Unplug power cord and inspect brush for obstruction. Reset 2.5 amp circuit breaker button.
	Broken brush belt.	Contact Service Center.
	Faulty brush motor or worn carbon brushes.	Contact Service Center.
Poor water pickup.	Loose accessory tool vacuum hose port cover located on vacuum shoe.	Check vacuum hose port cover.
	Clogged shut- off float.	Clean debris from shut- off float.
	Clogged vacuum intake screen.	Clean debris from intake screen.
	Clogged vacuum shoe.	Clean debris from vacuum shoe.
	Worn tank cover gaskets.	Replace gaskets.
	Clogged vacuum shoe hose.	Contact Service Center.
	Faulty vacuum motor.	Contact Service Center.
Uneven or no spray. *(Carpet Streaking)*	Incorrect cleaning mode.	Properly set cleaning mode switch.
	Clogged spray tips.	Clean or replace tips.
	Improper spray tip angle.	Adjust spray tip angle.
	Faulty spray tips.	Replace spray tips.
	Empty solution tank.	Refill solution tank.
	Clogged solution hose screen.	Clean debris from solution tank screen.
	Damaged solution hose.	Contact Service Center.
	Faulty solution pump.	Contact Service Center.

MACHINE SPECIFICATIONS

MODEL	E5
LENGTH	680 mm with handle folded
WIDTH	490 mm
HEIGHT	709 mm with handle folded
WEIGHT	46.3 kg
SOLUTION TANK CAPACITY	19 L
RECOVERY TANK CAPACITY	19 L
PRODUCTIVITY RATE - AVG.	88 m^2/hr
CLEANING PATH WIDTH	380 mm
BRUSH PRESSURE	11.3 kg
BRUSH MOTOR	230V, .3 kW, 1.6 A, 1200 brush rpm
VACUUM MOTOR	230V, .88 kW, 2- stage 5.7, 3.6 A
WATER LIFT- AIR FLOW	2184 mm
SOLUTION PUMP	230V, 0.081 kW, 0.35 A
SOLUTION FLOW RATE	2.7 L/min
VOLTAGE	230 AC
TOTAL POWER CONSUMPTION	5.4 A
POWER CORD LENGTH	15 m
DECIBEL RATING AT OPERATOR'S EAR, INDOORS	69 dBA
PROTECTION GRADE	IPX3
VIBRATIONS AT CONTROLS	<2.0 m/s^2

MACHINE DIMENSIONS

