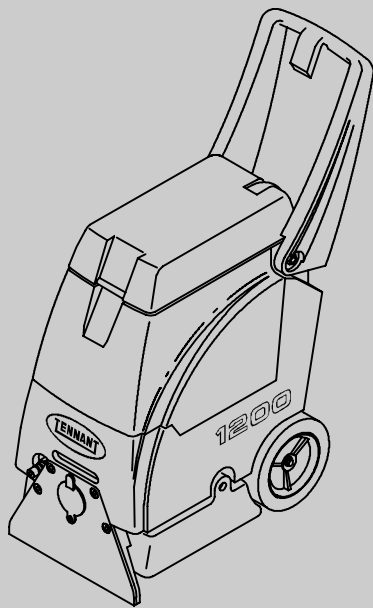




# 1200

Operator Manual **EN**



Model Part No.:  
**M611461**



[www.tennantco.com](http://www.tennantco.com)

611427  
Rev. 01 (12-2005)



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

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

Use the illustrated Parts Lists to order parts. Before ordering parts or supplies, be sure to have your machine model number and serial number handy. Parts and supplies may be ordered by phone or mail from any authorized parts and service center, distributor or from any of the manufacturer's subsidiaries.

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 maintenance instructions provided.
- The machine is maintained with manufacturer supplied or equivalent parts.

**MACHINE DATA**

Please fill out at time of installation for future reference.

Model No.- \_\_\_\_\_


Install. Date - \_\_\_\_\_

Serial No.- \_\_\_\_\_

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<b>EN</b>	<b>EC DECLARATION OF CONFORMITY FOR MACHINERY</b> (Directive 89//392/EEC,Annex II, sub A)	
<b>TENNANT N.V.</b> Address: Industrielaan 6 5405 AB P.O. Box 6 5400 AA Uden-The Netherlands Uden/Netherlands, 03-02-98		
		model: <b>1200</b> nr.: 611461 - is in conformity with the provisions of the Machinery Directive ( Directive 89/392/EEC), as amended, and with national implementing legislation; - is in conformity with the provisions of the following other EEC directives: - the following ( parts/clauses of) harmonized standards have been applied: EN 292-1, EN 292-2, EN 294, EN 349, EN 563, EN 60204-1, EN 60335-1 ... - the following (parts/clauses of) national technical standards and specifications have been used: NA
 Stephan Martens - Technical Support Engineer		

## SAFETY PRECAUTIONS

This machine is intended for commercial use. It is designed to clean carpet and upholstery in an indoor environment and is not constructed for any other use. Use only recommended cleaning solutions and accessory tools.

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

The following safety alert symbols 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 information signals potentially dangerous conditions to the operator or equipment:

### FOR SAFETY:

1. **Do not operate machine:**
  - Unless trained and authorized.
  - Unless operator manual is read and understood.
  - In flammable or explosive areas.
  - Unless cord is properly grounded.
  - With damaged cord or plug.
  - If not in proper operating condition.
  - In outdoor areas.
  - In standing water.
  - With the use of additional extension cords. Only use manufacturer's extension cord equipped with machine which has proper capacity and is grounded.
2. **Before operating machine:**
  - Make sure all safety devices are in place and operate properly.
3. **When using machine:**
  - Do not run machine over cord.
  - Do not pull machine by plug or cord.
  - Do not pull cord around sharp edges or corners.
  - Do not unplug by pulling on cord.
  - Do not stretch cord.
  - Do not handle plug with wet hands.
  - Keep cord away from heated surfaces.
  - Report machine damage or faulty operation immediately.
  - Follow mixing and handling instructions on chemical containers.
4. **Before leaving or servicing machine:**
  - Turn off machine.
  - Unplug cord from wall outlet.
5. **When servicing machine:**
  - Unplug cord from wall outlet.
  - Avoid moving parts. Do not wear loose jackets, shirts, or sleeves.
  - Use manufacturer supplied or approved replacement parts.

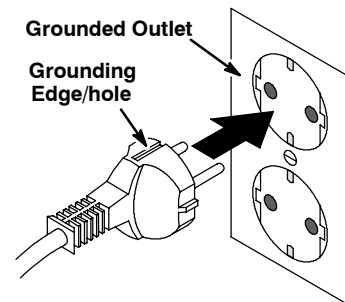
**⚠ WARNING: Hazardous Voltage. Shock or electrocution can result. Always unplug machine before servicing.**

**⚠ WARNING: Flammable materials can cause an explosion or fire. Do not use flammable materials in tank(s).**

**⚠ WARNING: Flammable materials or reactive metals can cause an explosion or fire. Do not pick up.**

## GROUNDING INSTRUCTIONS

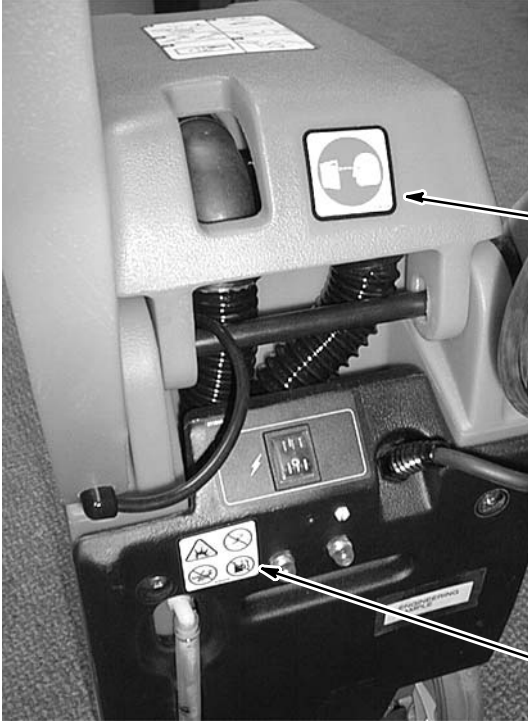
Machine must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electrical current to reduce the risk of electrical shock. This machine is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be plugged into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



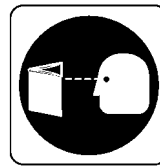
(230V/240V)

## SAFETY LABELS

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



**FOR SAFETY LABEL -**  
Located on cover.



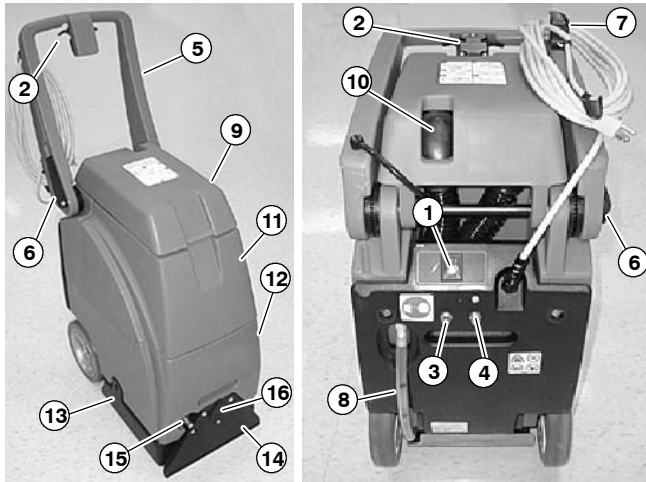
**FOR SAFETY:**  
**Read manual**  
**before operating**  
**machine.**



**FLAMMABLE MATERIALS/  
SPILLS LABEL -** Located near  
solution tank fill port and on recovery  
tank lid.

**⚠ WARNING: Flammable materials can cause an explosion or fire. Do not use flammable materials in tank(s). Flammable materials or reactive metals can cause explosion or fire. Do not pick up.**

## MACHINE COMPONENTS



1. Main Power ON/OFF Switch
2. Brush/Solution Triggers
3. Pump Reset Button
4. Brush Reset Button
5. Folding Handle
6. Folding Handle Lock Lever
7. Power Cord Hooks
8. Solution Tank Drain Hose with Solution Level Markers
9. Recovery Tank Cover
10. Recovery Sight Window
11. Recovery Tank
12. Solution tank
13. Floating Brush Base
14. Pick-Up Head
15. Accessory Tool Solution Hose Coupler
16. Accessory Tool Vacuum Hose Port

## MACHINE SETUP

1. Carefully check carton for signs of damage. Report damages at once to carrier. The machine is shipped fully assembled and is ready for use.
2. Adjust handle from transport position. To adjust, pull handle lock lever outward and lift handle to desired operating height, re-lock lever (Figure 1).



FIG. 1

3. Hinge open cover and remove recovery tank from machine. Make sure the float shut-off screen and solution tank strainer are in place before use (Figure 2)



FIG. 2

4. Using a clean bucket or hose, fill solution tank with 15 L (4 gal) of hot water, 60°C (140°F) maximum (Figure 3). Observe solution tank hose at rear of machine when filling. The hose indicates the amount of water in solution tank (Figure 3).

**ATTENTION: Do not use recovery tank to fill solution tank. Residual dirt or debris could cause damage to solution pump.**

**⚠ WARNING: Flammable materials can cause an explosion or fire. Do not use flammable materials in tank(s).**



FIG. 3

5. Add a recommended cleaning chemical.

**FOR SAFETY: When using machine, follow mixing and handling instructions on chemical containers.**

**ATTENTION: If using powdered cleaning chemicals, mix prior to adding.**

**NOTE: If desired, water alone achieves excellent cleaning results.**

6. Replace recovery tank and close cover after filling.

7. Plug machine's power cord into a grounded wall outlet (Figure 4).

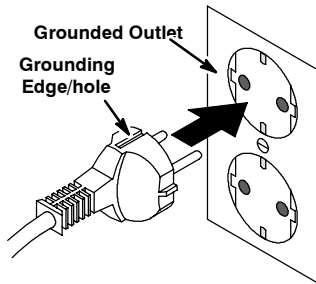


FIG. 4

**FOR SAFETY: Do not operate machine with the use of additional extension cords. Only use manufacturer's extension cord equipped with machine which has proper capacity and is grounded.**

**FOR SAFETY: Do not operate machine unless cord is properly grounded.**

## MACHINE OPERATION

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

### PRE-OPERATION

1. Vacuum carpet and remove other debris.
2. Perform MACHINE SETUP procedures.
3. Inspect power cord for damage.

### CLEANING CARPETS

1. Turn main power switch on (Figure 5).



FIG. 5

2. To begin cleaning carpets, pull triggers and slowly pull machine backwards (Figure 6).

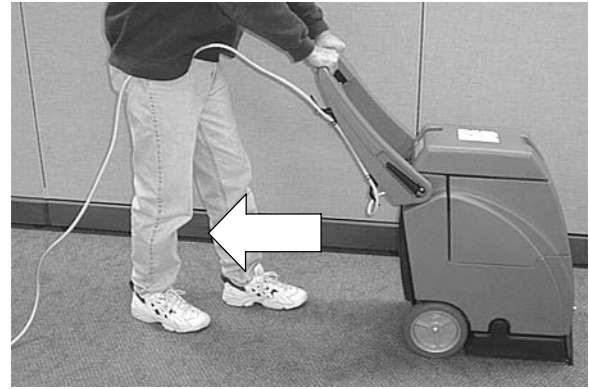


FIG. 6

3. Release triggers at end of path and continue to pull machine to pick up excess solution.
4. Tip machine back on wheels and push machine forward to begin next path.

### WHILE OPERATING

1. Overlap each path by 50 mm (2 in).

**⚠ WARNING: Flammable materials or reactive metals can cause an explosion or fire. Do not pick up.**

2. Work away from wall outlet and power cord to prevent cord damage.
3. Periodically check for excessive foam buildup in recovery tank. Use a recommended foam control solution to prevent vacuum motor damage.

**ATTENTION: Excessive foam buildup will not activate the float shut-off screen.**

4. If brush stops, the circuit breaker may have been tripped. Unplug power cord, check brush for obstruction. Push brush reset button to resume (Figure 7).



FIG. 7

5. To clean heavily soiled areas, repeat cleaning path from different direction.
6. Observe recovery site window, when recovery appears to stop, drain recovery tank (See DRAINING TANKS).

## CLEANING WITH ACCESSORY TOOLS

1. Connect accessory tool hoses to solution hose coupler and vacuum hose port located at front of machine (Figure 8).

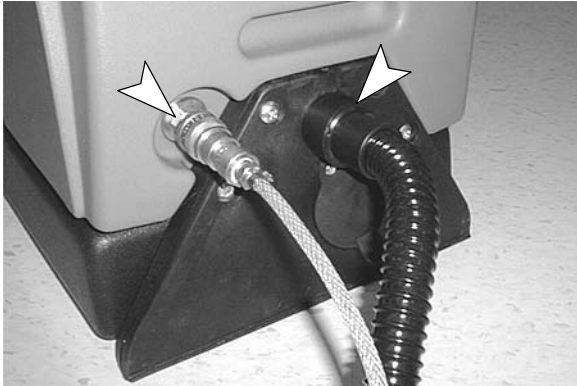


FIG. 8

2. Turn main power switch on (Figure 9).

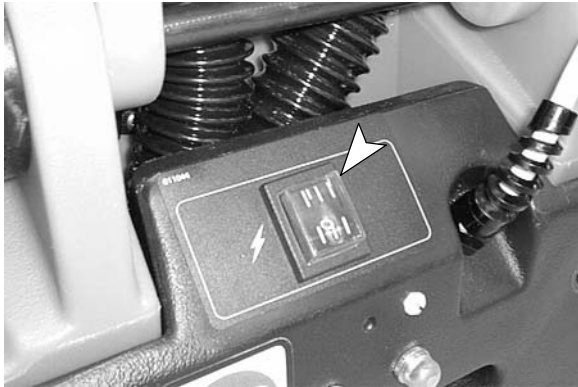


FIG. 9

3. Operate accessory tools as normal (Figure 10).

**NOTE:** When cleaning upholstery, always check cleaning instructions sewn in furniture by manufacturer.



FIG. 10

4. After cleaning, relieve water pressure from tool before disconnecting hose. Squeeze trigger for five seconds after turning main power switch off.

## DRAINING TANKS

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

### DRAINING RECOVERY TANK

1. Turn machine off and unplug power cord.
2. Hinge open cover, lift recovery tank out and empty (Figure 11).



FIG. 11

**NOTE:** Make sure to rinse out recovery tank before refilling solution tank.

### DRAINING SOLUTION TANK

1. Pull solution tank drain hose off of hose barb at rear of machine and empty remaining solution (Figure 12).



FIG. 12

2. Replace drain hose.

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## MACHINE MAINTENANCE

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To keep machine in good working condition, simply follow machine's daily, weekly and monthly maintenance procedures.

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

---

### DAILY MAINTENANCE (Every 4 Hours of Operation)

1. Empty and rinse out recovery tank thoroughly (Figure 13).



FIG. 13

2. Remove float shut-off screen from recovery tank cover and clean (Figure 14).



FIG. 14

3. Drain remaining water from solution tank (Figure 15).



FIG. 15

4. Clean solution tank fill port strainer.

5. Remove any entangled carpet fibers and debris from brush (Figure 16).



FIG. 16

6. Remove any debris lodged in pick up head (Figure 17).

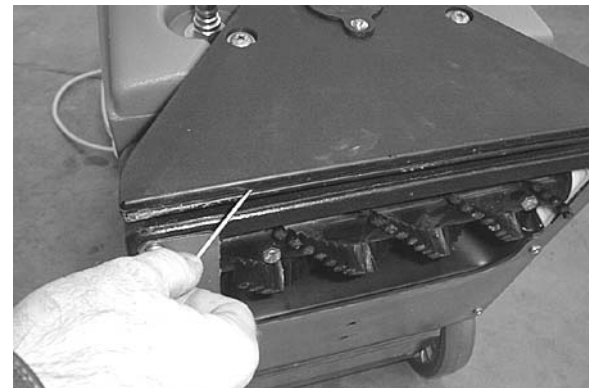


FIG. 17

7. Wipe off power cord and check for damage, replace if necessary. Coil cord neatly after use.
8. Clean machine with an all purpose cleaner and damp cloth (Figure 18).



FIG. 18

**WEEKLY MAINTENANCE**  
(Every 20 Hours of Operation)

1. Inspect vacuum hoses for holes and loose cuffs.
2. Inspect spray pattern for plugging. If plugged, remove spray tips and soak them in a recommended liquid neutralizer for up to six hours. To remove spray tip, twist spray tip body counter-clockwise. Do not use pointed objects to unplug tips, damage will occur (Figure 19).

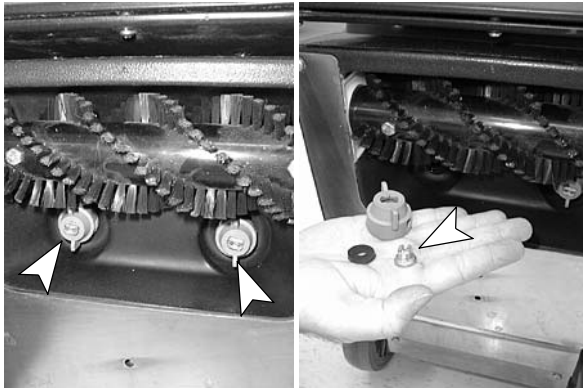


FIG. 19

**FOR SAFETY: When using machine, follow mixing and handling instructions on chemical containers.**

3. Inspect cord and cord grip for damage. Replace immediately if damaged.

**MONTHLY MAINTENANCE**  
(Every 80 Hours of Operation)

1. Flush solution system with a recommended liquid neutralizer to dissolve normal chemical buildup.
  - a. Pour 7.5L (2 gal) of hot water 60° C (140° F) into solution tank. Add a liquid neutralizer according to mixing instructions on bottle.

**NOTE:** Contact your chemical supplier for a recommended neutralizer liquid.

**FOR SAFETY: When using machine, follow mixing and handling instructions on chemical containers.**

- b. Position brush over floor drain and operate machine for one minute.
  - c. Then connect hand tool solution hose to machine and also over a floor drain operate tool for one minute.
  - d. Shut off machine and allow remaining solution to break down chemical buildup overnight.
  - e. Next day, spray out remaining solution and flush system with 11L (3 gal) of clean water.
2. Lubricate wheels with a water resistant oil.
3. Inspect machine for water leaks and loose hardware.

**QUARTERLY MAINTENANCE**  
(Every 250 Hours of Operation)

Check vacuum motor for carbon brush wear. Replace brushes if worn to a length of 10mm (0.38 in) or less.

Contact an Authorized Service Center for motor maintenance.

**STORING MACHINE**

1. Before storing machine, be certain to drain and rinse tanks of all water.
2. Store machine in a dry area in the upright position.
3. Open recovery tank cover to promote air circulation.

**ATTENTION: Do not expose to rain. Store indoors.**

**ATTENTION: If storing machine in freezing temperatures, be sure that machine and solution system are completely drained and dry.**

**RECOMMENDED STOCK ITEMS**

Refer to Parts List section for recommended stock items. Stock Items are clearly identified with a bullet preceding the parts description. See example below:

Ref.	Part No.	Description	Qty.
1	701103	ASM., STANDPIPE	1
2	180613	•FLOAT, SHUTOFF	1
3	230197	NIPPLE	1
4	101714	•GASKET	1
5	210240	NUT, FLANGED	1

**TROUBLE SHOOTING**

<b>PROBLEM</b>	<b>CAUSE</b>	<b>SOLUTION</b>
Machine does not operate.	Faulty switches or wiring.	Contact Service Center.
	Faulty power cord.	Contact Service Center.
	Building circuit breaker tripped.	Reset breaker.
Brush motor does not operate.	Brush motor circuit breaker tripped.	Let motor cool and reset brush motor breaker button at rear of machine.
	Triggers not pulled.	Pull brush/solution triggers.
	Loose or broken brush belt.	Contact Service Center.
	Faulty trigger switch or wiring.	Contact Service Center.
	Faulty brush motor.	Contact Service Center.
Solution pump does not operate.	Solution pump circuit breaker tripped.	Let pump cool and reset pump breaker button at rear of machine.
	Triggers not pulled.	Pull brush/solution triggers.
	Faulty trigger switch or wiring.	Contact Service Center.
	Faulty solution pump motor.	Contact Service Center.
Vacuum motor does not operate.	Loose or broken wiring.	Contact Service Center.
	Faulty main power switch.	Contact Service Center.
	Defective vacuum motor.	Contact Service Center.
	Worn carbon brushes.	Contact Service Center.
Poor solution pick-up.	Defective recovery tank cover gasket.	Replace gasket.
	Clogged float shut-off screen.	Open recovery tank cover and clean lint off screen.
	Accessory tool vacuum hose port cover is loose or missing.	Check vacuum hose port cover.
	Loose vacuum hose connections.	Secure connections under cover.
	Defective vacuum hose.	Replace hose.
	Loose vacuum hose cuffs.	Secure cuffs to hose.
	Pulling machine too fast.	Slow down cleaning process.
Uneven or no spray.	Plugged spray tips.	Clean or replace tips.
	Improper spray tip size or spray angle.	Replace with proper tips.
	Clogged solenoid valve.	Contact Service Center.
	Worn spray tips.	Replace spray tips.
	Solution tank low or empty.	Refill solution tank.
	Faulty solution pump.	Contact Service Center.
	Pump needs priming.	Prime pump by pressing solution hose coupler tip located at front of machine.

## SPECIFICATIONS

<b>Model</b>	<b>TENNANT 1200</b>
LENGTH	533 mm (21 in) with handle folded
WIDTH	330 mm (13 in)
HEIGHT	749 mm (29.5 in) with handle folded
WEIGHT	27 Kg (60 lb)
SOLUTION TANK CAPACITY	15 L (4 gal)
RECOVERY TANK CAPACITY	15 L (4 gal)
CLEANING PATH WIDTH	273 mm (10.75 in)
MAXIMUM CLEANING RATE	130 m <sup>2</sup> (1,400 sq. ft.) per hour
BRUSH MOTOR	230VDC, 0 .1HP, .3A, 90W, 1800 rpm - no load
BRUSH SPEED	1038 rpm - no load
SOLUTION PUMP	230VAC, 4.5 bar (65psi), .25A, 4.5 LPM (1.2 GPM)
VACUUM MOTOR	230VAC, 1.4 HP, 4.7A, 1046W, 2 stage, 105 cfm
SEALED WATER LIFT	2514mm (99 in)
TOTAL POWER CONSUMPTION	230VAC, 5.3A, 1207 W
POWER CORD	15 M (50 ft.) 3X1.5MM <sup>2</sup> Type: H07RNF3G1.5MM <sup>2</sup>
DECIBEL RATING AT OPERATOR'S EAR, INDOORS ON CARPET	<72 dB(A)

## MACHINE DIMENSIONS

