



TC88 & TC88-100

CARPET EXTRACTOR

Parts Manual

INTRODUCTION

OPERATING & MAINTENANCE INSTRUCTIONS

READ THIS BOOK

This operator's book has important information for the use and safe operation of this machine. Read this book carefully before starting the machine. Keep this book and tell all operators to read the book. If you do not follow the instructions, you can cause an injury or damage equipment, furniture or buildings.

For new books write to:

*Thoro-Matic Inc.
2259 S. Sheridan
Muskegon, MI 49442-6252*

Carefully inspect all components to ensure that there is no concealed freight damage. If such damage is discovered, file a "CONCEALED DAMAGE REPORT" immediately with the delivering carrier.

The contents of this manual are based on the latest product information available at the time of publication. **Thoro-Matic** reserves the right to make changes or improvements to its machines without notice.

FOR YOUR CONVENIENCE, RECORD THE FOLLOWING IMPORTANT INFORMATION:

MODEL _____

SERIAL NUMBER _____

PART NUMBER _____

DATE PURCHASED _____

INTRODUCTION

The **SELF CONTAINED EXTRACTOR** is a fully self-contained, portable carpet extractor system and is intended for commercial use. A wand with external vacuum and solution hoses are not necessary with your machine, but available.

The **SELF CONTAINED EXTRACTOR** has a 60psi (TC88) or 100 psi (TC88-100) solution pump and a three (3) jet spraying system located on the bottom side of the machine to apply solution to the carpet.

A rotating brush (15") is driven by a cogged belt system. This brush provides a very aggressive agitation of the solution into the carpet fibers to loosen ground-in dirt. The chevron pattern of the brush bristles channels the dirty water to the center of the epoxy-coated, steel vacuum head for better extraction.

The heavy duty three-stage vacuum motor is capable of 117 inches of water lift. Your SELF CONTAINED EXTRACTOR extracts virtually all of the dirty solution from the carpet fibers, which dramatically reduces drying time.

The SELF CONTAINED EXTRACTOR is very "user friendly" machines. All controls are located at the top of the handle grips, literally at your fingertips. The recovery tank drain valve is located high enough for the recovered solution to be drained into a five (5) gallon bucket or bathroom toilet.

The SELF CONTAINED EXTRACTOR is balanced on large 10" diameter wheels for ease of operation and transporting. The machines can be rotated 360° with relative ease, even when filled with solution.

The location of the wheel axle and the large diameter wheels allows for easy transporting up and down steps when empty. It is not recommended these machines be transported up or down steps while containing any liquid in either the solution or recovery tanks.

Grounding Instructions

This machine 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 machine is equipped with a cord having an equipment-grounding conductor and ground-ing plug. The plug must be inserted into an appropriate outlet that is properly installed and grounded 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.

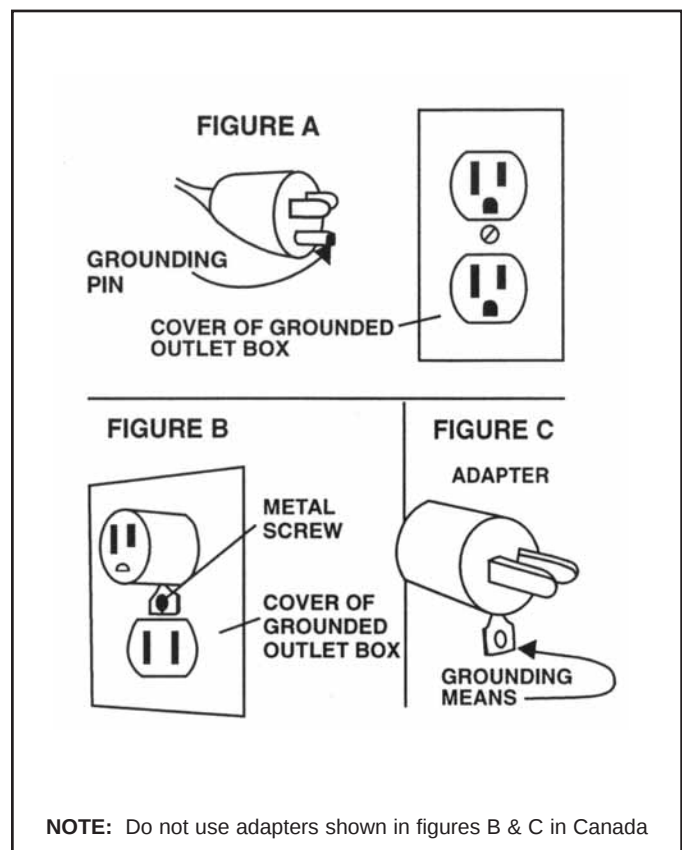
This machine is for use on a nominal 120-volt circuit, and has a grounded plug that looks like the plug illustrated in figure A. A temporary adapter that looks like the adapter illustrated in figures B and C may be used to connect this plug to a 2-pole receptacle as shown in figure B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet (figure A) can be installed by a qualified electrician. The green colored rigid ear, lug, or the like extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adapter is used, it must be held in place by a metal screw.

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

EXTENSION CORDS

Use only three-wire 12/3 or larger gauge approved extension cords that have three-prong grounding type plugs and three-pole receptacles that accept the appliance's plug. Replace or repair any damaged cords or plugs.

When servicing, refer to authorized person only. Use only identical replacement parts.



IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic precautions should always be followed, including the following:

READ ALL INSTRUCTIONS BEFORE USING THIS MACHINE

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

1. You must have training in the operation of this machine before using it.
2. Machines can cause an explosion when near flammable materials and vapors. Do not use this machine with or near fuels, grain dust, solvents, thinners, or other flammable materials.
3. Do not operate this machine unless it is completely assembled.
4. Do not use this unit for dry pick-up of dust or debris; Do not pick up anything that is burning or smoking, such as cigarettes, matches or hot ashes.
5. To prevent electric shock, always remove the electrical plug from the electrical outlet before doing any repairs or maintenance to this machine.
6. To prevent injury, always remove the electrical plug from the electrical outlet before leaving the machine.
7. Maintenance and repairs must be done by authorized personnel only.
8. Do not immerse. To reduce the risk of electrical shock, use only on carpet moistened by the cleaning process. Protect the machine from rain. Keep the machine in a dry building. Always clean the machine with a clean dry cloth.
9. Always use a three-wire electrical system connected to the electrical ground. For maximum protection against electrical shock, use a circuit that is protected by a ground fault circuit interrupter. Consult your electrical contractor.
10. To prevent damage to the power cord, do not move this machine over the power cord. Always lift the power cord over the machine. Do not pull or carry cord, use cord as a handle, close a door on cord, or pull cord around sharp edges or corners. Keep cord away from heated surfaces.
11. Make sure all switches are turned off before plugging or unplugging it power cord into/from a wall receptacle.
12. Do not use water that is hotter than 60°C (140°F).
13. To prevent damage to the solution system components do not store in freezing temperatures without proper maintenance.
14. Do not allow to be used as a toy. Close attention is necessary when used near children.
15. Do not use with damaged cord or plug. If the machine is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, return it to a service center.
16. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
17. Do not handle the plug or machine with wet hands.
18. Do not put any object into openings. Do not use with any opening blocked. Keep free of dust, lint, hair and anything that may reduce the airflow.
19. Keep hair, loose clothing, fingers and all parts of body away from openings and moving parts.
20. Use extra care when cleaning on stairs.

SAVE THESE INSTRUCTIONS

PREPARATION AND TRANSPORTATION

PRESTART-UP CHECKS

The SELF CONTAINED EXTRACTOR is very simple and easy to operate. Very little maintenance and service are required to keep your machine in top operating condition.

The following procedures are recommended to maintain the high level of performance expected from your machine. They are also intended to identify potential safety hazards and problems which could reduce the service life of the machine.

READ BEFORE TRANSPORTING OR OPERATING YOUR MACHINE:

1. Check **power cord, plug** and **strain relief** for worn or damaged insulation. Repair or replace if necessary.
2. Make sure the **drain valve** is closed (T-Handle pushed down). If the valve is left open, the vacuum is dramatically reduced and any recovered solution will drain out.
3. The **lever** for the **spool valve** is located on the lower back panel of the machine near the left wheel. During normal operation as a self-contained extractor this lever is turned toward “**CARPET SPRAY**” (**vertical position**). It should be turned to the “**ACCESSORY TOOLS**” **position (horizontal)** when a wand or other tool is being used.
4. Inspect the **vacuum head** and **brush** by tilting the machine backwards, allowing it to balance on the wheels and drain valve spout.
 - a) **Vacuum Head:** Check for any damage. Burrs on the contact surface may snag carpet fibers. Gouges, scratches and chipped areas can reduce vacuum performance.
 - b) **Brush:** Inspect for damaged or missing bristles, replace if necessary.Return the machine to the upright position.
6. Check the **inlet strainer** for damage or debris. It is located at the bottom of the fresh water tank. Holes in the screen can allow contaminants to enter the pump resulting in costly repairs. A clogged strainer will reduce pump performance and may cause permanent damage.
7. Remove the clear dome plate on top of the recovery tank.
 - a) Inspect for damage to the **dome plate** and **gasket**. Dirt or debris on the gasket or sealing surface of the tank can cause a vacuum leak and reduce vacuum performance.
 - b) The **intake foam filter & screen** at the vacuum hose connection should be clean of debris and checked periodically for any damage, replace if necessary.
 - c) Ensure that the **intake filter** is in its proper position to prevent recovered water from entering the vacuum motor.

Return the cover to its original position on the recovery tank and connect the hoses. The suction hose that runs from the vacuum shoe to the dome connects to the right side and comes out of the rear of the machine on the right, lower side. The hose that runs from the vacuum motor to the dome that creates the suction connects to the left side of the dome.

YOUR MACHINE IS NOW READY FOR OPERATION.

TRANSPORTING

The SELF CONTAINED EXTRACTOR is equipped with large diameter (10”) wheels for balance and ease of transporting. It is designed to be tilted back on the wheels and pushed or pulled.

The large diameter of the wheels permits you to pull the machine up stairs in the same manner you would use a hand truck. **Never go up or down stairs with recovered water or solution in the tanks.** Always empty the machine completely before transporting up or down stairs or in a vehicle.

OPERATING PROCEDURES

The following procedures are intended to describe and detail proper operation of your machine. Failure to follow these recommended procedures can reduce the machine's performance and may result in damage to the machine.

1. **Vacuum the area to be cleaned.** Your machine will do a more thorough job if the loose dirt and debris are removed before the extraction process begins.
2. **Fill the fresh water tank** (lower tank located at the front of the machine) with warm to hot water and low foaming carpet extraction chemical. Hot water is recommended, but not required. Do not use water hotter than 60°C (140°F). Mix in chemicals according to the chemical manufacturer's recommendations for an eight (8) gallon tank.
3. Use of an extension cord is not recommended. However, if one is necessary, use only a **14 gauge** or larger cord. Smaller or inferior cords are dangerous and may cause damage to your machine.
4. After the machine is filled with solution, **connect the power cord plug to a 115 volt grounded wall socket.** See Grounding Instructions.
5. **Turn the spool valve knob** (located on the back, left of the machine) **to the:**
 - a) **"Carpet Spray" (vertical) position** for routine carpet extraction as a self-contained unit, or
 - b) Turn it in the **"Accessory Tools" (horizontal)** position when using a wand or tool.
7. The **switch panel** is located on top of the handle and contains the following:
 - a) **Pump Switch:** Make sure in the Intermittent (Off) position for standard carpet extraction. This switch is only turned to the Continuous (On) position for either prespraying (for which you will tilt the machine backwards slightly and run the machine back and forth over the area to be treated. All other switches should be in the Off position for prespraying) or when using an upholstery tool or wand after the pump direction valve has been set to "Accessory Tools" setting and the solution hose for the tool has been connected to the quick disconnect at the rear of the machine.
 - b) **Turn the vacuum switch on** to start the vacuum motor.
 - c) **Turn the brush motor switch on** to start the brush motor.
8. **Pull backward during operation.** DO NOT ATTEMPT TO OPERATE IN A FORWARD DIRECTION. Position yourself behind the machine, grasp the handle and **press the black momentary switch button** near your thumbs when your hands are in the operating position. Pressing this black button activates the pump which will begin to spray out of the three jets located at the bottom of the machine near the vacuum shoe. Once you let up off this button, the pump will stop spraying. While button is pressed in, walk slowly backward to perform the cleaning process.
9. **Release the momentary switch button approximately 6 inches before completing each pass.** The spray jets are located behind the vacuum head making it necessary to pull the machine a few inches further to pick up the last amount of solution dispensed onto the carpet.
10. **Tilt the machine back on the rear wheels and walk forward** to position the machine along side the previous pass (slightly overlapping).
11. As dirty solution is recovered, some foaming may be noted. Excessive foaming can be counteracted with liquid defoamer applied according to the chemical manufacturing directions inside of the recovery tank. **Do not allow foam to rise into or near the dome.** Use defoamer or empty and flush the recovery tank.
12. **To drain the recovery tank,** place an empty bucket under the drain valve located on back of the machine. To open the drain valve pull the T-Handle up. Close the drain when the bucket is full or the recovery tank is empty. Dispose of the recovered water properly.
13. **If streaking occurs** after a period of operating time, this means the solution (fresh water) tank is near empty. Streaking is eliminated by adding more water and chemical solution to the tank.
14. **To drain the solution tank,** attach the small drain or "pump out" hose to the accessory quick connect on the back of the machine. Turn the spool valve lever to the "Accessory Tool" position. Place the open end of the hose into a bucket and turn on the pump switch to the "Continuous" (On) setting. When empty, turn off the pump switch and remove the hose from the quick connect. Also return the spool valve knob to the "Carpet Spray" position.
15. **After each use clean the dome, intake filter and gasket.** Do not reinstall the dome until the next use, this will allow the recovery tank to dry out.

TO USE A WAND OR UPHOLSTERY TOOL WITH HOSE SET:

1. Disconnect the machine suction (vacuum) hose from the right side (from operator's position) of the recovery tank dome plate and connect the vacuum hose of hand tool/wand set to that same port on the dome plate.
2. Connect the hand tool/wand set solution hose to the brass quick disconnect on the back, left of the machine.
3. Turn pump direction valve at the back left of the machine to "Accessory Tools" setting.
4. Turn pump switch on control panel to "Continuous" (On) setting then begin to use your wand or hand tool.

SERVICING

The SELF CONTAINED EXTRACTOR is designed and manufactured to provide years of trouble free service with a minimum of maintenance and service. The following recommendations are intended to assist the operator and Service Technician in performing routine maintenance.

Failure to follow these recommendations can result in damage to your machine and diminished performance.

Warning: Always unplug your machine before performing any service. Severe personal injury could result if the electrical power is not disconnected.

1. Always follow through with the recommended prestart-up checks found in the Preparation and Transportation section of this manual.
2. Store your machine in a dry, protected area. Do not expose this machine to rain, standing water or freezing temperatures.
3. We recommend a good, thorough cleaning after each use. Clean the dome top, intake filter screen and recovery tank with fresh, clean water. Flush the fresh water tank and strainer periodically with clean water.
4. After continuous or repeated use, the jet tips and strainer/check valves will need cleaning. Unplug the cord and empty the recovery and solution tanks. Tilt the machine backward allowing it to balance on the wheels and drain valve. Remove the jets and clean with white vinegar and a soft bristle brush. Remove the strainer/check valve and soak it in vinegar until visible deposits are dissolved, then scrub with a soft bristle brush.

Jet tips and strainer/check valves should be replaced once a year because they tend to erode under extended use. This can cause overuse of solution and possible streaking.