



SAFETY OPERATION & MAINTENANCE MANUAL X-405 CARPET EXTRACTOR

This unit is intended for commercial use.



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READ AND FOLLOW ALL
INSTRUCTIONS, WARNINGS AND CAUTIONS
BEFORE USING THIS EXTRACTOR

READ ALL INSTRUCTIONS BEFORE OPERATING

This extractor will afford you many years of trouble-free operating satisfaction, provided it is given proper care. All parts have passed rigid quality control standards prior to their being assembled to produce the finished product.

Prior to packaging, this extractor was again inspected for assurance of flawless assembly.

The manufacturer takes no responsibility for damages caused to property or persons due to improper use of the extractor.

Operating instructions must always be available for the operator. This extractor may only be operated by persons who have been fully trained and authorized to use it.

All information and specifications printed in this manual are current at the time of printing. However, because of our policy of continual product improvement, we reserve the right to make changes at any time without notice.

Carefully check the shipping carton for signs of damage. Remove the machine from the carton, if the machine is damaged, notify the carrier immediately and request an inspection. Only a visual examination will reveal damage that may have occurred.

Be sure to keep the carton, packing inserts, packing list and carrier's receipt until the inspector has verified your claim. Our liability ceases when the shipment is picked up by the carrier. We will furnish any information needed to expedite the claim process.

Check carton contents to ensure all accessories are included which are listed as follows:

- 1) 1 $\frac{1}{2}$ x 15 Ft Solution/Recovery Hose
- 2) 5 Ft Stainless Steel Wand and 12" Nozzle w/2 Spray Jets

SAVE THESE INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS



WARNING:

When using this extractor, basic precautions should always be followed, including the following:

1) DO NOT leave extractor when plugged in. Unplug from the outlet when not in use and before servicing.

2) To avoid electric shock, **DO NOT** expose to rain. Store indoors.

3) This is **NOT** a toy. Close attention is necessary when used around or near children. **DO NOT** permit small children to crawl on damp carpet.

4) Use only as described in this manual. Use only manufacturer's recommended attachments and accessories.

5) DO NOT use with damaged cord or plug. If extractor is not working as it should, because it has been dropped, damaged, left outdoors, or dropped into water, contact an authorized service center or the factory.

6) DO NOT unplug by pulling on cord. To unplug, grasp the plug, not the cord.

7) DO NOT pull or carry by the cord **DO NOT** use cord as a handle or close a door on cord or pull cord around sharp edges or corners. **DO NOT** run unit over cord. Keep cord away from heated surfaces.

8) DO NOT handle plug or extractor with wet hands.

9) Store extractor indoors in a dry area. **DO NOT** expose to freezing temperatures.

10) DO NOT use extractor for dry vacuuming. This extractor is not fitted with a fine dust filter.

11) Turn **OFF** all controls before unplugging.

12) DO NOT use to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.

13) DO NOT use where anesthetics or oxygen are used.

14) DO NOT use an extension cord unless absolutely necessary. If an extension cord is used, then wire size must be #12 gauge or larger and should not exceed 50 feet in length. Use only a (3) conductor grounded extension cord to ensure "**GROUNDING**" protection.

15) Replace damaged or worn parts immediately with genuine original equipment parts to maintain safety and to protect your limited warranty.

16) DO NOT run pump dry. When solution tank is empty, turn pump off.

17) DO NOT use outdoors, in standing water, or on wet surfaces.

This extractor must be connected to a properly grounded outlet only. (See Grounding Instructions)

MAINTENANCE OF THE EXTRACTOR

Due to the design, construction and quality of materials, this extractor requires a minimum of maintenance. The following tips are provided to increase the service life of the extractor.

NOTE: Disconnect the power cord from the outlet before doing any work on the extractor.

After Each Use:

1. Drain the recovery tank after each use.
2. Remove all soil and debris from the recovery tank.
3. Flush out the recovery tank with clean water.

4. Check and clean in-line filter located in the motor housing.

End of Day:

Pour 2 gallons of clean hot water in the solution tank. Turn the pump **ON** and flush the entire system for about a minute to prevent alkaline build-up.

After Repeated Use:

Spray Nozzles: Remove and clean the spray nozzles of any debris or build-up. Replace when necessary.

Solution Tank: After 4 to 6 uses, inspect the solution tank for cracks and abrasions.

Solution Lines and Fittings: Flush extractor at least once a month with a

solution of one part water to three parts white vinegar in order to neutralize the alkaline residue left by the cleaning solution. Lubricate all quick disconnect fitting with WD-40 or similar lubricant.

Vacuum Motor: Carbon brushes should be replaced after operating 750 hours or when the carbon brushes are worn down to $\frac{3}{8}$ " in length. Replace both carbon brushes at the same time.

Pump System: After 4 to 6 uses, flush with clean water, including the all hoses and wand.

CAUTION: DO NOT leave water in tank over night or store extractor with water in tanks.



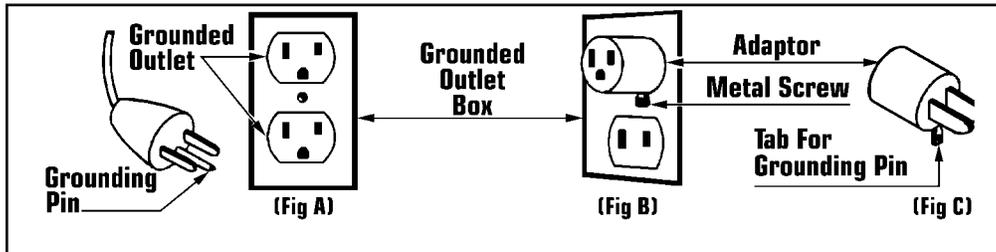
DANGER:

Improper use of the grounding plug can result in a risk of electric shock.

GROUNDING INSTRUCTIONS

Electrical equipment must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electrical current to reduce the risk of electric shock. This extractor 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.

If repair or replacement of the cord or plug is necessary, DO NOT connect the grounded wire to either flat blade terminal. The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.



GROUNDING METHODS

This extractor is for use on a nominal 120 volt circuit, and has a grounded plug that looks like the plug illustrated-rated in (Fig A). A temporary adaptor that looks like the adaptor illustrated in (Fig B & 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 color 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 (Fig C).



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

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

IMPORTANT PROCEDURES BEFORE CLEANING

1) Remove furniture from the area. Large pieces can be moved to opposite end of the room from where you start cleaning.

2) Thoroughly vacuum carpet making sure all dirt and loose debris is removed.

3) Before plugging power cord into grounded outlet all switches must be in the **OFF** position.

4) Add the cleaning chemicals and clean water to the solution tank, following the chemical manufactures directions. When using a bucket to fill the tank always use a clean bucket.

5) Monitor the foam level and add defoamer to recovery side if necessary.

6) Connect the solution hose to the quick disconnect coupling and insert vacuum hose in to the plug-in sleeve. Push other end of the vacuum hose onto wand and connect other end of the solution hose to quick disconnect on wand.

NOTE: Carpets that have been previously shampooed may have a heavy build-up of old shampoo residue which may cause excessive foaming in recovery tank. Monitor the recovery tank for foam buildup. If this occurs add a defoamer chemical to the recovery tank to protect the vacuum motor form damage.

CHECK CARPET BEFORE CLEANING

In order to avoid damage to the carpet during the cleaning operation check for the following:

1) Carpet is secured with adhesive that is water resistant.

2) Carpet is glued down completely, not partially

3) Carpet does not have a backing that is sensitive to water (*Jute or Jute Blends*).

4) Test carpet to see if it is color-fast.

CARE OF THE EXTRACTOR

This extractor is designed to be safe when used to perform cleaning functions as specified. Should damage occur to electrical parts, the unit should **NOT** be used until the damage is repaired by the manufacturer or authorized service center. This will avoid further damage to the unit or injury to the user.

These instructions are for your protections and information **PLEASE READ CAREFULLY!** Failure to follow the precautions or instructions could result injury or damage to the user and/or extractor.

FREEZING TEMPERATURE PRE-CAUTIONS

If it becomes necessary to store or transport the unit where temperatures could drop below 40° F, the pump, solution hose and valve on the tools must be protected from freezing with a solution of automotive radiator antifreeze.

1) Mix 1/2 gallon of water and 1/2 gallon of antifreeze and follow the priming instructions in the Set-Up and Operation Sections page 5.

2) Vacuum excess mixture out of solution tank into the recovery tank and dispose of the anti-freeze mixture.

The antifreeze **MUST** be flushed out of the pump and vacuum system thoroughly with clean water before use, otherwise, the carpet may be damaged. Dispose of antifreeze properly.

3) To prevent damage, allow extractor to reach room temperature before using.

SET-UP & OPERATING PROCEDURES

Attach Cleaning Tool:

- 1) Connect vacuum hose to the vacuum intake and the extraction wand.
- 2) Connect the solution hose to the unit and the wand. Pull the sleeve on the coupler and insert the male quick disconnect plug on the hose. The sleeve should **'CLICK'** and retract back indicating a positive seal.

Filling Solution Tank:

- 1) Fill solution tank with hot tap water (not to exceed 140° F).
- 2) Pour cleaning solution in tank following the directions on the bottle's label for best results.

It is recommended that you use a low foaming chemical or a defoamer to eliminate foam build-up in the recovery tank and damage to the vacuum motor. If moisture does enter the vacuum motor it is necessary to use WD-40 on the motor.

Electrical:

Plug extractor into a dedicated 120 volt, 15 AMP circuit. Never remove ground prong from the plug.

If circuit breaker trips during operation:

- A) Turn **OFF** the extractor.
- B) Reset the breaker.
- C) Plug electrical cord into a different outlet and resume cleaning.

- 1) Position extractor where you are going to start cleaning.

- 2) Switch **ON** the vacuum and pump green switches located on the front of the extractor.



To start cleaning:

- 3) Position the wand at a comfortable position in front of you.
- 4) Squeeze the carpet tool trigger while slowly pulling it towards you. Apply a slight downward pressure on the wand grip to maximize extraction.
- 5) Hold nozzle steadily against the carpet, spraying solution and recovering the dirty solution immediately.
- 4) Before completing each path, shut **OFF** the solution supply and vacuum up the last of the solution sprayed on. This will also reduce the drying time of the carpet.
- 5) The next cleaning path should overlap the previous on by 2¹/₂" to 3¹/₂".
- 6) When the width of the spray pattern starts getting smaller, the solution tanks need to be refilled. Turn **OFF** vacuum and pump switches.

- 7) Empty the dirty solution from the recovery tank into a bucket by pulling **UP** on the drain valve handle. Make sure to close the valve after draining the tank.

When job is completed:

- 6) Vacuum out the remaining cleaning solution into the recovery tank.
- 7) Empty the recovery tank and rinse out dirt and debris from the tank.

Heavily Soiled Carpet:

Repeat the cleaning process a second time, where possible in a crosswise direction. Allow the carpet to totally dry before starting the second cleaning.

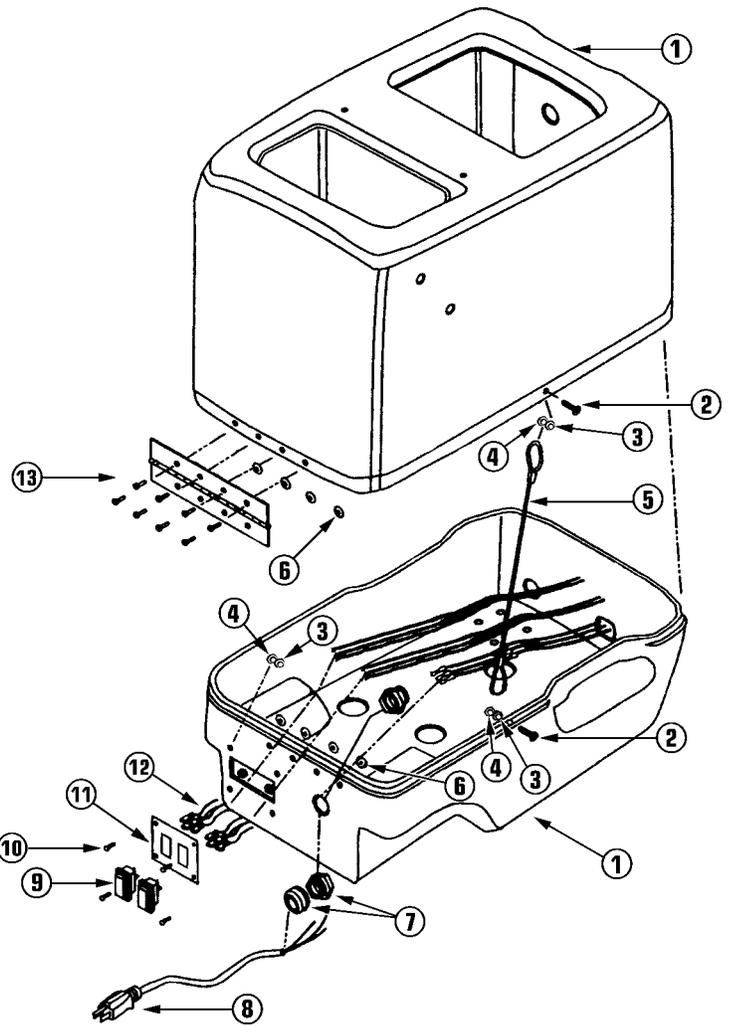
Confined Areas:

Use the upholstery tool to clean stairs, upholstery, in corners, under obstacles and edges, etc.

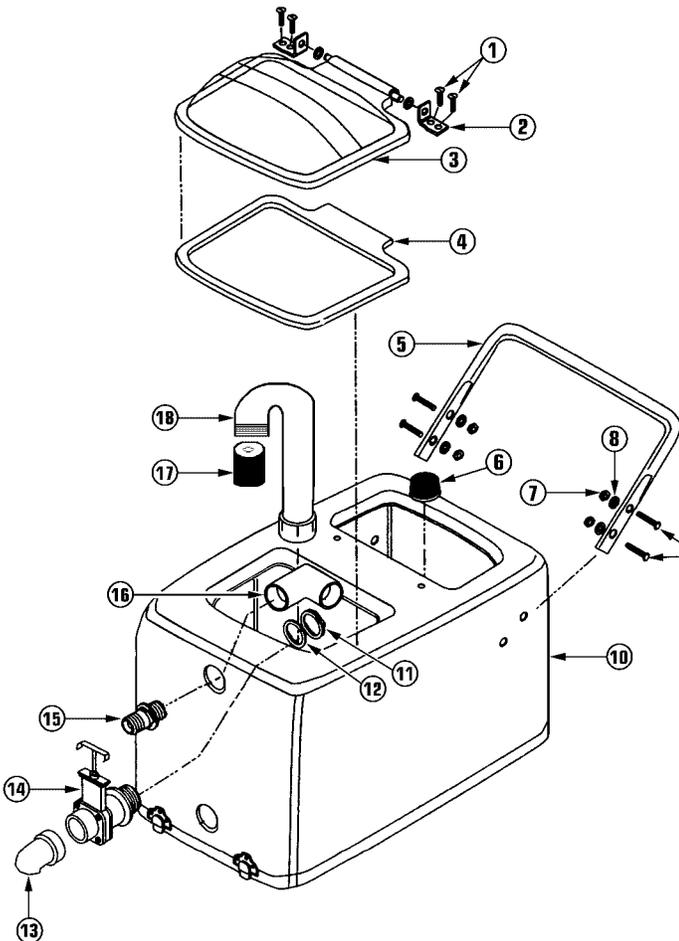
OPERATING INSTRUCTIONS

Tank Bottom Parts List and Drawing

Ref No	Part Description	Qty	Part No
1	Upper And Lower Housing	1	440396
2	Bolt	2	205532
3	Lock Washer	6	210218
4	Lock Nut	6	210153
5	Lanyard	1	209929
6	Rivet Back Up Washer	8	440515
7	Cord Retainer	1	445843
8	25" 12 x 3 Yellow Cord	1	445606
9	Green Rocker Switch	2	445231
10	Nut	4	210625
11	Switch Plate	1	444871
12	Receptical	2	211176
13	Body Hinge	1	440167

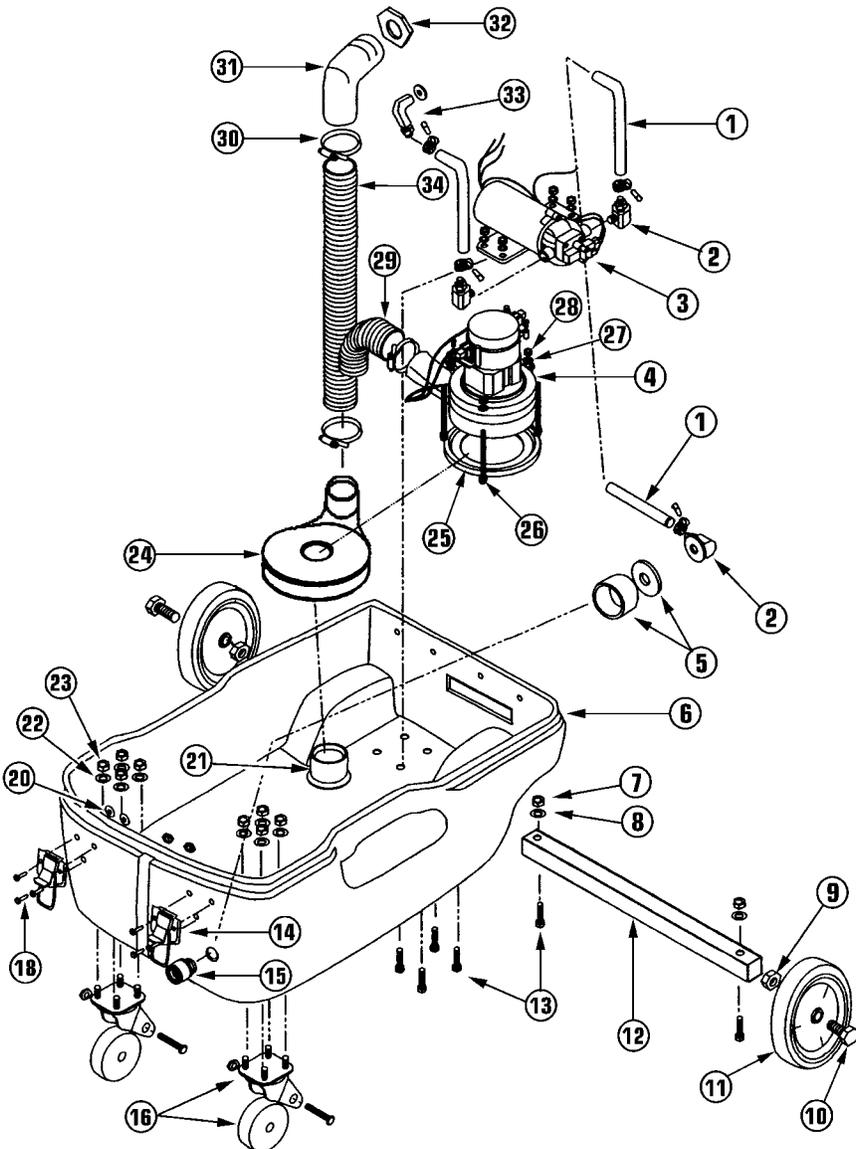


Tank Top Parts List and Drawing



Ref No	Part Description	Qty	Part No
1	SS Bracket Screw	4	441279
2	Lid Bracket	2	441163
3	Clear Lid With Rod	1	441066
4	Dome Gasket	1	441112
5	Stationary Handle	1	440310
6	Fresh Water Tank Screen Filter	1	443026
7	SS Nylok Nut	4	441007
8	SS Finder Washer	4	440981
9	SS 1/4" Screw	4	440671
10	Upper And Lower Housing	1	440396
11	Valve Gasket	1	441031
12	Valve Jam Nut	1	441058
13	Valve Down Spout	1	441023
14	Drain Valve	1	441015
15	Hose Adaptor 1 1/2" x Barb x NPT	1	440558
16	Inlet Elbow	1	440590
17	Float Screen	1	440647
18	Float Pipe	1	441570

Pump & Motor Parts List and Drawing



Ref No	Part Description	Qty	Part No	Ref No	Part Description	Qty	Part No
1	Pump-In-Line Hose	2	443212	18	Left Side Latch	1	442224
2	1/4 x NPT x 3/8 Barb 90° Fitting	2	443263	20	Rivet Back Up Washer	6	440515
3	60 PSI Pump	1	443271	21	Exhaust Flange	1	443565
4	2 Stage Vacuum Motor	2	442593	22	Lock Washer	8	210218
5	Q.D. Spacer And Washer	1	443859	23	Bolt	8	205532
6	Upper And Lower Housing	1	440396	24	Air Manifold Vacuum Duct	1	442232
7	Lock Nut	2	210145	25	Vacuum Gasket	1	442631
8	Lock Washer	2	210196	26	5" x 1/4 Carriage Bolt	3	442682
9	Wheel Nyllok Nut	2	444863	27	Flat Washer	3	442712
10	Wheel Bolt	2	444774	28	1/4 Keeps Nut	3	442739
11	8" Wheel	2	444057	29	2" x 8" Motor Hose	1	442003
12	Axle	1	205303	30	2" SS Clamp	4	442402
13	Bolt	6	205524	31	Exhaust Elbow (No Ring)	1	441694
14	Right Side Machine Latch	1	440175	32	Jam Nut	1	441791
15	Female Q.D. Brass Fitting	1	440604	33	Metal Elbow Fitting	1	207934
16	4" Wheel	2	445851	34	2" x 18" Motor Hose	1	442267

TROUBLE SHOOTING GUIDE



CAUTION:

Before working on the extractor disconnect power cord.

PROBLEM: Extractor does not run, no power.

Possible Cause

- 1) Fuse blown or circuit breaker tripped.
- 2) Faulty ON/OFF switches.
- 3) Loose wiring.
- 4) Faulty motor.
- 5) Defective power cord or damaged plug.
- 6) No power to pump.
- 7) Defective switch.

Possible Solution

- 1) Replace fuse with same rating or reset circuit breaker.
- 2) Replace switch or switches.
- 3) Trace and repair.
- 4) Replace motor.
- 5) Replace power cord or plug.
- 6) Check electrical system.
- 7) Replace rocker switch

PROBLEM: Loss of vacuum.

Possible Cause

- 1) Drain valve open.
- 2) Leaking around recovery lid.
- 3) Holes in vacuum hose or loose cuffs.
- 4) Defective vacuum motor.
- 5) Wand head or vacuum hose clogged.
- 6) Water coming out of vacuum exhaust.
- 7) Recovery tank full.
- 8) Lint accumulation on vacuum filter screen.

Possible Solution

- 1) Close drain valve.
- 2) Replace recovery lid gasket.
- 3) Replace hose or tighten cuffs.
- 4) Repair or replace vacuum motor.
- 5) Check and unclog
- 6) Use a low foaming detergent.
- 7) Drain dirty water out of recovery tank.
- 8) Clean filter screen. Replace if necessary.

PROBLEM: Streaking, uneven spray, or no spray from jets.

Possible Cause

- 1) Spray jets clogged.
- 2) Worn spray jets.
- 3) Faulty pump.
- 4) Solution tank empty.

Possible Solution

- 1) Unclog jets.
- 2) Replace spray jets.
- 3) Replace pump.
- 4) Flush out tank and refill.

PROBLEM: Pump not running properly

Possible Cause

- 1) Pump is pulsating.
- 2) Loose or kinked hose.

Possible Solution

- 1) Check for clogged jets and clean.
- 2) Check and replace hose if necessary.



WARNING

Service and repairs, should only be performed by an authorized service center.