

# DYNAMO & TRIUMPH 440

## SELF-CONTAINED CARPET EXTRACTOR

### INTRODUCTION

### OPERATING & MAINTENANCE INSTRUCTIONS

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#### 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:

*Pacific Steamex, 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. Pacific Steamex 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

This carpet extractor is a fully self-contained, portable system.

This machine has a 60 psi solution pump and a one (1) jet spraying system to apply solution to the carpet.

A 10 inch rotating brush is driven by a cogged belt system at approximately 1000 RPM's. 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 stainless steel vacuum shoe for better extraction.

The two-stage vacuum motor is capable of 80 inches of water lift. It extracts virtually all of the dirty solution from the carpet fibers, which dramatically reduces drying time.

This is a very "user friendly" machine. It includes a retractable hose to fill the 3 gallon solution tank from almost any faucet. The 3.5 gallon recovery tank easily lifts off to dispose of the dirty water. This machine is easy to handle and store because of its' compact size: 10.75" wide X 22.75" long X 26" high, with the handle folded down.

## 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 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.

**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.

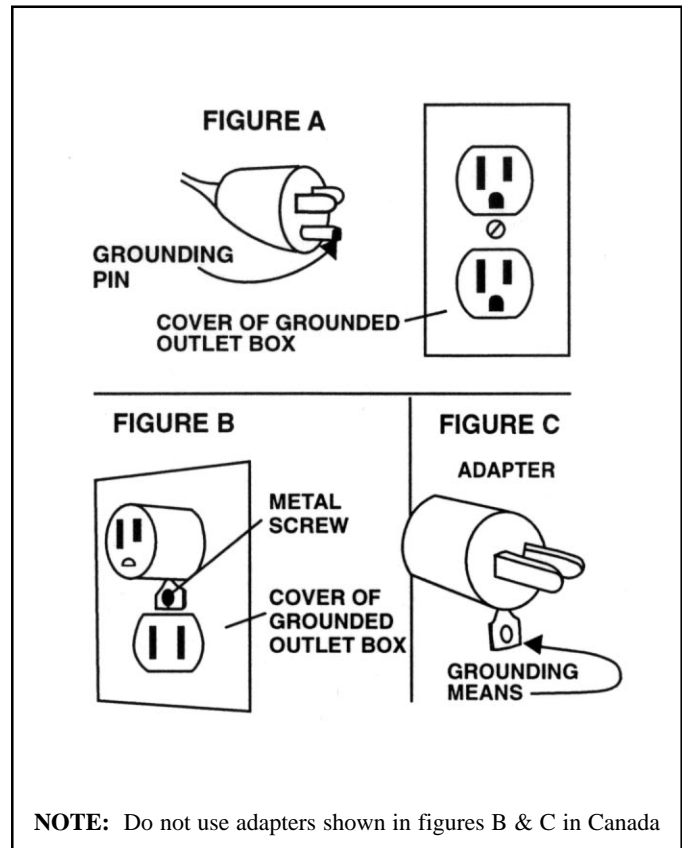
This machine is for use on a nominal 120-volt circuit, and has a grounded plug that looks like the plug illustrated in figure A. A temporary adapter that looks like the adapter illustrated in figures B and C may be used to connect this plug to a 2-pole receptacle as shown in figure B if a properly grounded 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 14/3 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

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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.
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**

# OPERATING PROCEDURES

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**WARNING!** For the safe operation of this machine follow the instructions given in this booklet and the training given by your supervisor. Failure to do so can result in personal injury and/or damage to machine and property!

**DO NOT OPERATE MACHINE IN AN EXPLOSIVE ENVIRONMENT!**

**NEVER USE THIS MACHINE TO PICK UP VOLATILE OR EXPLOSIVE MATERIALS!**

The model shown in this manual is intended for commercial use.

## PREPARATION

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1. Check **power cord, plug** and **strain relief** for worn or damaged insulation. Repair or replace if necessary.
2. Inspect the **vacuum shoe** and **brush** by tilting the machine backwards.
  - a) **Vacuum Shoe:** 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.

3. Check the **inlet filter** in the opening of the fresh water/solution tank for damage or debris. Holes in the screen can allow contaminants to enter the pump resulting in costly repairs. A clogged screen will reduce pump performance and may cause permanent damage.
4. Remove the clear dome on top of the recovery tank.
  - a) Inspect for damage to the **dome** 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 filter screen** in the standpipe should be clean of debris, securely in place and checked periodically for any damage, replace if necessary.

Return the cover to its original position.

## OPERATION

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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** with **non-foaming** carpet concentrate per the dilution instructions for 3 gallons and connect the Power Fill faucet adapter to your faucet. Hot water is recommended, but not required. Do not use water hotter than 60°C (140°F). Or, using a clean bucket, mix 3 to 3-1/2 gallons of hot water with concentrate. Then pour the mixture into the solution tank. **DO NOT OVERFILL.**
3. Ensure the hose coupling on the rear of the machine is connected.
4. 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 poor performance or damage to your machine.
5. After the machine is filled with solution, **connect the power cord plug to a 115 volt grounded wall socket.** See Grounding Instructions.
6. The **vacuum and pump switches** are located on top of the machine.
  - a) **Turn the vacuum switch on** to start the vacuum motor.
  - b) **The pump switch is for use with the accessory tools ONLY. SEE "OPERATING WITH ACCESSORY TOOLS".**
7. **Pull backward during operation. DO NOT ATTEMPT TO OPERATE IN A FORWARD DIRECTION. Position yourself behind the machine, grasp the handle and depress the red switch on the handle.** This switch activates the brush drive motor and the pump to spray cleaning solution. Walk slowly backward and continue to depress the red switch to perform the cleaning process.
8. **Release the red switch approximately 6 inches before completing each pass.** The spray jet is 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.

9. **Tilt the machine back on the rear wheels and walk forward** to position the machine along side the previous pass (slightly overlapping).
10. 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. **Do not allow foam to rise into or near the clear dome.** Use defoamer or empty and flush the recovery tank.
11. To **empty the recovery tank**, remove the dome assembly and lift the tank off. Dispose of the recovered water properly. Ensure the intake filter screen in the standpipe is securely in place and clean of any debris after disposal.
12. **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. The recovery tank must be emptied whenever adding to the solution tank.
13. To **empty the solution tank**: Disconnect the vacuum hose cuffs at the rear of the machine (Items 60 & 21). Then connect the power fill adapter to the vacuum hose leading to the dome and turn the vacuum switch on.

## OPERATING WITH ACCESSORY TOOLS

1. To connect the accessory tool, first disconnect the hose coupling at the rear of the machine. Then connect the hose from the accessory tool.
2. Next, pull the cuffs apart on the vacuum hose at the rear of the machine. Then connect the accessory tool vacuum hose to the vacuum hose which is attached to the dome assembly.
3. Turn the vacuum and accessory pump switches on. Solution will be dispensed while the accessory tool trigger is depressed.

## SERVICING

This 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.

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

### **After Each Use:**

1. Clean the dome top, gasket and recovery tank with fresh, clean water. Do not reinstall the dome until the next use, this will allow the recovery tank to dry out.
2. Lift the intake filter screen out of the standpipe, clean with fresh water and dry, then reinstall.
3. Flush the solution tank and inlet screen with clean water.
4. The handle may be folded down for storage. Simply loosen the knob on it and fold down.
5. Store your machine in a dry, protected area. Do not expose this machine to rain, standing water or freezing temperatures.

### **Periodically:**

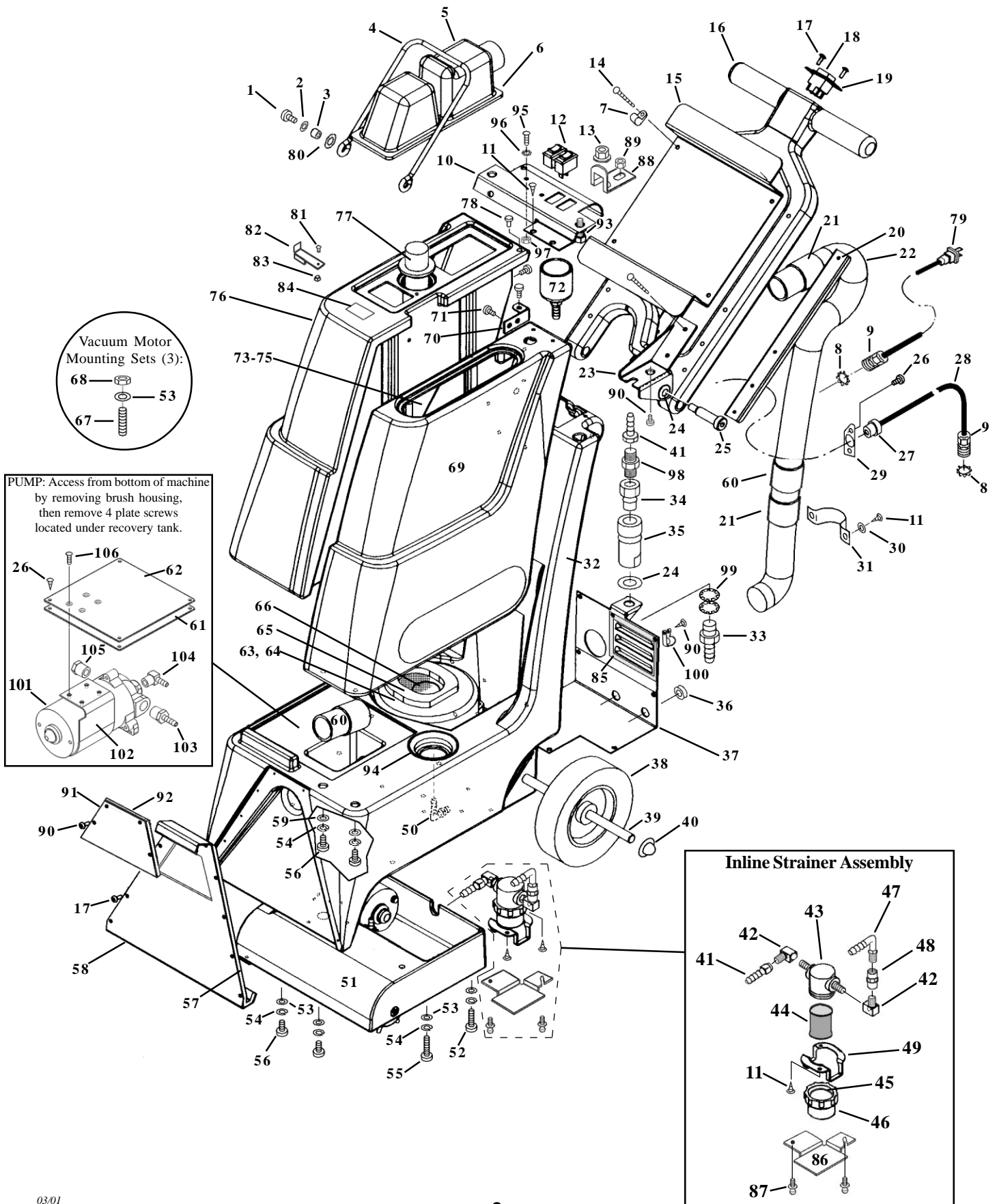
After continuous or repeated use, the following items will need cleaning.

1. **Jet:** Unplug the cord and empty the recovery and solution tanks. Tilt the machine backward. Remove the jet tip shown on page 8 and soak in vinegar until visible deposits are dissolved, then scrub with a soft bristle brush. **Note: Jet tip should be replaced once a year** because it tends to erode under extended use. This may cause overuse of solution and streaking.
2. The **inline strainer** located under the machine should also be cleaned periodically. The strainer condition can be viewed through its' clear cover, which is protected by the strainer guard. Remove the two screws on the guard then unscrew the cover. Lift the strainer out of the cover and clean with fresh water. A clogged strainer may prevent solution from flowing to the pump.
3. Clean the **vacuum head assembly** periodically. Remove the door (page 6, #91), then clean out any debris which may be trapped in the vacuum hose or the vacuum shoe.

### AN AUTHORIZED SERVICE CENTER SHOULD PERFORM THE FOLLOWING PROCEDURES:

The cogged belt drive system rarely requires tightening. If the belt becomes loose from wear, it is time to replace it. Follow this procedure: Lay the machine down on its side. Remove the 4 bolts holding the brush housing assembly and position it next to the tank body (take care not to put undo stress on the solution hose coming from the strainer). Loosen the two motor bracket mounting screws. Slide the motor away from the brush to tighten the belt or toward the brush to remove. If you are replacing the belt it will be necessary to remove the brush assembly to install a new one. Remove the two axle shaft retaining screws located on either side of the brush housing. Loop belt over cog and reinstall brush. Unlike a "V" type belt, the cogged belt is run with basically zero deflection. To test the belt tension, hold the belt between your thumb and forefinger and twist to the side. It should turn approximately 90° with little effort. If it twists more than 90°, retighten the belt.

# Machine



## Machine Parts List

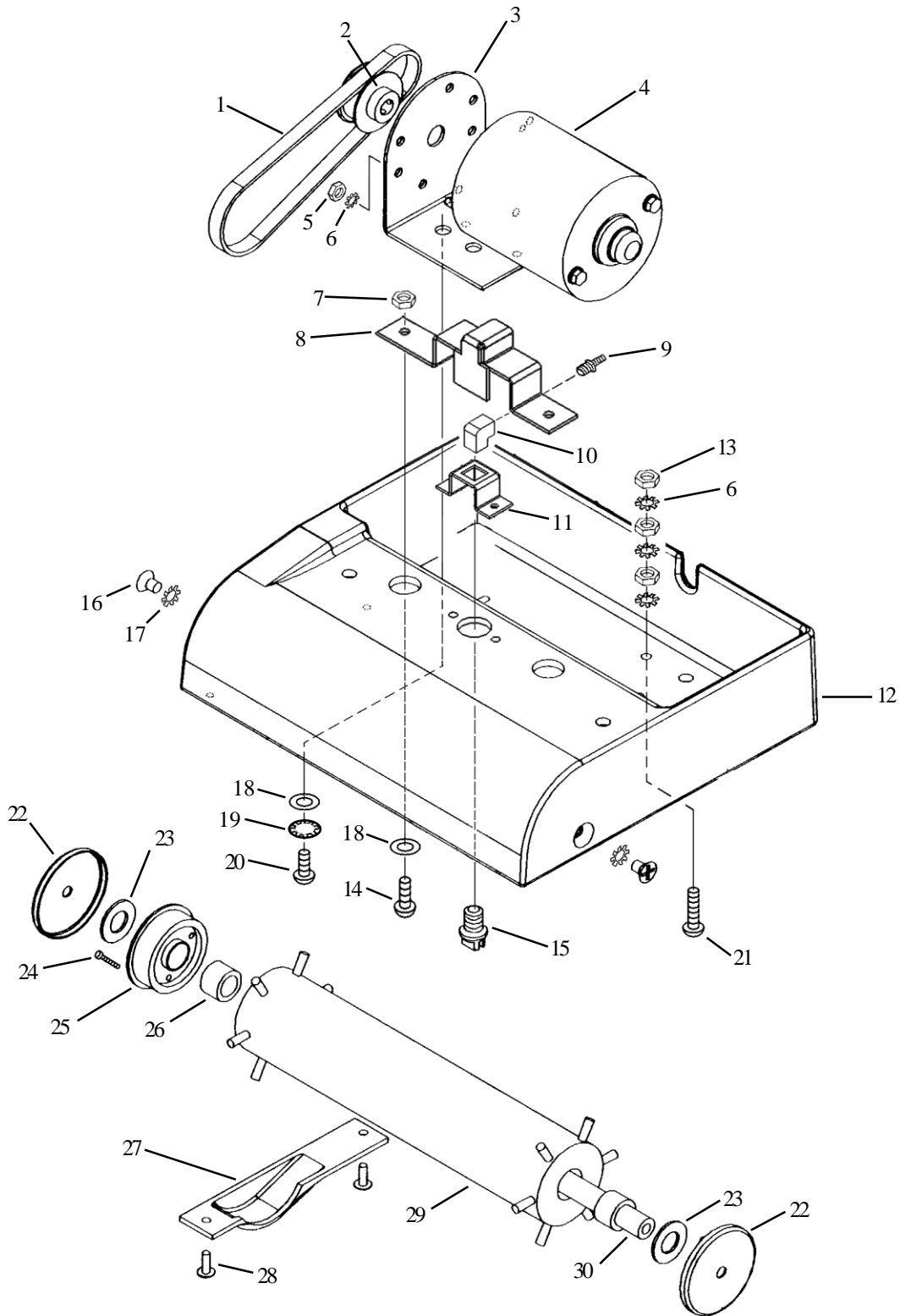
ITEM	PART NO.	DESCRIPTION	QTY.
1	962007	Screw	2
2	980004	Washer, 1/4 Flat	2
3	248201	Spacer, Tank Handle	2
4	243902	Handle, Recovery Tank	1
5	242701	Dome	1
6	243402	Gasket, Dome	1
7	612001	Clamp, Cable	2
8	920619	Nut, 1/2 Pipe Lock	1
9	248502	Strain Relief, Straight	2
10	246605	Plate, Control	1
11	W351D	Screw, 10-24 x 1/2 THP	11
12	911089	Switch, Rocker	2
13	920030	Flange Nut	1
14	962147	Screw, 10-32 x 1.75 PHP	8
15	240806	Bracket, Cord Wrap	1
16	243901	Handle, Black	1
17	W136D	Screw, #8 x 1/2 THP	10
18	3704	Switch, Momentary	1
19	206651	Plate, Switch	1
20	248505	Stiffener, Handle	2
21	242402	Cuff, Hose (to dome)	2
	962119	Screw, Hose to Dome	1
22	244108	Hose, 1.25x4'	1
23	247003	Pivot, Handle LH	1
	247004	Pivot, Handle RH	1
24	980612	Washer, Thrust	4
25	960033	Screw, 1/2x1-1/2 Shoulder	2
26	W136D1	Screw, #8 x 1/2 THP	2
27	508519	Strain Relief	1
28	908083	Cord Asm, Handle	1
29	246602	Plate, Strain Relief	1
30	W107D	Washer	4
31	248504	Strap, Hose	2
32	241307	Body (used with pump 247006)	1
33	S223P	Brass Barb, 1/4 to 1/4 MPT	1
34	203302	Quick Connect, 1/4 Male	1
35	203308	Quick Connect, 1/4 Female	1
36	243801	Grommet	2
37	242302	Cover, Rear	1
38	209771	Wheel, 6 x 1-1/2 Grey	2
39	240501	Axle, Wheel	1
40	S482P	Snap Axle Cap	2
41	243304	Fitting	2
42	242901	Elbow	2
43	241305	Body, Inline Strainer	1
44	248506	Strainer Screen, Inline	1
45	243405	Gasket, Inline Strainer	1
46	241501	Clear Cap, Inline Strainer	1
47	3771	Elbow	1
48	S613A	Coupling	1
49	240801	Bracket, Strainer	1
50	3771	Elbow, Under Sol'n Tank	1
51	244202	Housing, Brush	1
52	962152	Bolt, Tap 1/4-20 x 3-1/4	1
53	W104D	Washer, 1/4 Flat	7

ITEM	PART NO.	DESCRIPTION	QTY.
54	980002	Washer, 1/4 Lock	9
55	962151	Screw, 1/4-20 x 4 HHCS SS	1
56	W189D	Screw, 1/4-20 x 3/4 HH SS	4
57	243403	Gasket, Vac Shoe	1
58	246606	Plate, Vac Shoe	1
59	W311D	Washer	4
60	242401	Cuff, Hose	2
61	243408	Gasket, Pump Plate	1
62	247005	Plate, Cover	1
63	245203	Vac Motor	1
64	603473	Gasket, Under Vac Mtr.	1
65	243401	Gasket, Vac Transfer	1
66	248503	Screen, Vac Intake	1
67	Screw, 248401	Stud, Threaded	3
68	920011	Nut, 1/4-20 Elastic Stop	3
69	248604	Solution Tank, Grey	1
70	240803	Bracket, Solution Tank	1
71	962006	Screw, 1/4-20x1/2 PHP	3
72	240202	Adaptor, Hose to Dome	1
	203359	Fitting, Hose Barb 3/8	2
73	243301	Filter Asm, Solution	1
74	200871	Brackets, Filter	2
75	W136D	Screw, #8 x 1/2 THP	4
76	248603	Recovery Tank, Grey	1
77	243307	Filter Asm., Standpipe	1
78	246701	Pin, Tank Locator	1
	920019	Nut, 1/4-20 Hex Jam	1
79	908059	Cord Asm.	1
80	980005	Washer, Wave	2
81	962154	Screw, 6-32x5/8 PHP	1
82	247201	Retainer, Filter	1
83	W144D	Nut, 6-32 Hex w/Nyloc	1
84	245109	Label, Warning	1
85	243406	Gasket, Exhaust	1
86	243602	Guard, Strainer	1
87	962153	Screw, 10-24x1/2 Wsh. Hd.	2
88	245113	Lock, Handle	2
89	920017	Nut	2
90	W350D	Screw 10-24x1/2 THP MS SS	10
91	242702	Door, Clean-Out	1
92	243407	Gasket	1
93	962022	Bolt	2
94	223470	Gasket	1
95	W343D	Screw, 10-24x1 PHP	2
96	980015	Washer #10 Ext. Tooth	2
97	W106D	Nut, 10-24 Hex S/S	2
98	249401	Valve, Check Inline	1
99	980035	Washer, Int. Tooth	2
100	242002	Clamp	1
101	247006	Pump, 60 psi	1
102	240810	Bracket, Pump Mounting	1
103	S535P	Brass Barb 1/4 to 3/8 MPT	1
104	242902	Elbow, 1/4 MPTx1/4 Barb 90	1
105	S804N	Plug, 3/8 Brass HH	1
106	962001	Screw, 10-24x1/4 FHP	4

Not Shown:	Hoses:	
244110	Hose, Strainer to Pump	0.75 ft.
244104	Hose, Pump to QC	1.92 ft.
244105	Hose, Tee to QC	2.75 ft.
244102	Hose, Tank to Strainer	1.17 ft.
244107	Hose, Adaptor Fill	5.5 ft.

Not Shown:	Labels:	
205171	Label, Push to Clean	1
245111	Label, Instructions	1
245112	Label, Defoamer	1

# Brush Housing Assembly



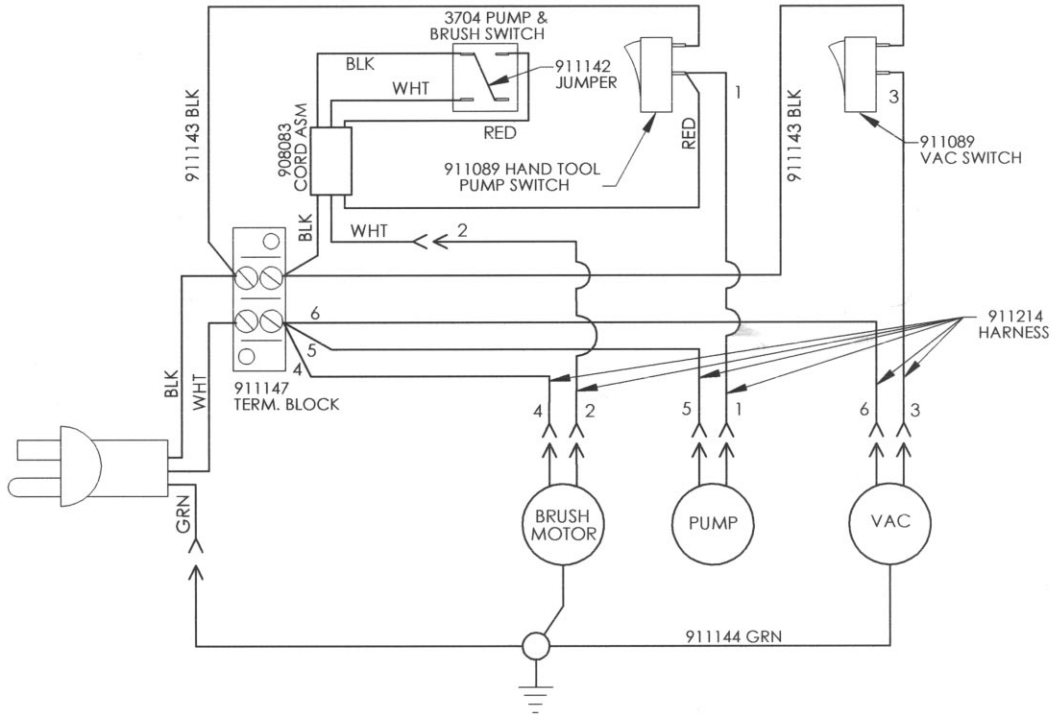


## Brush Housing Assembly Parts List

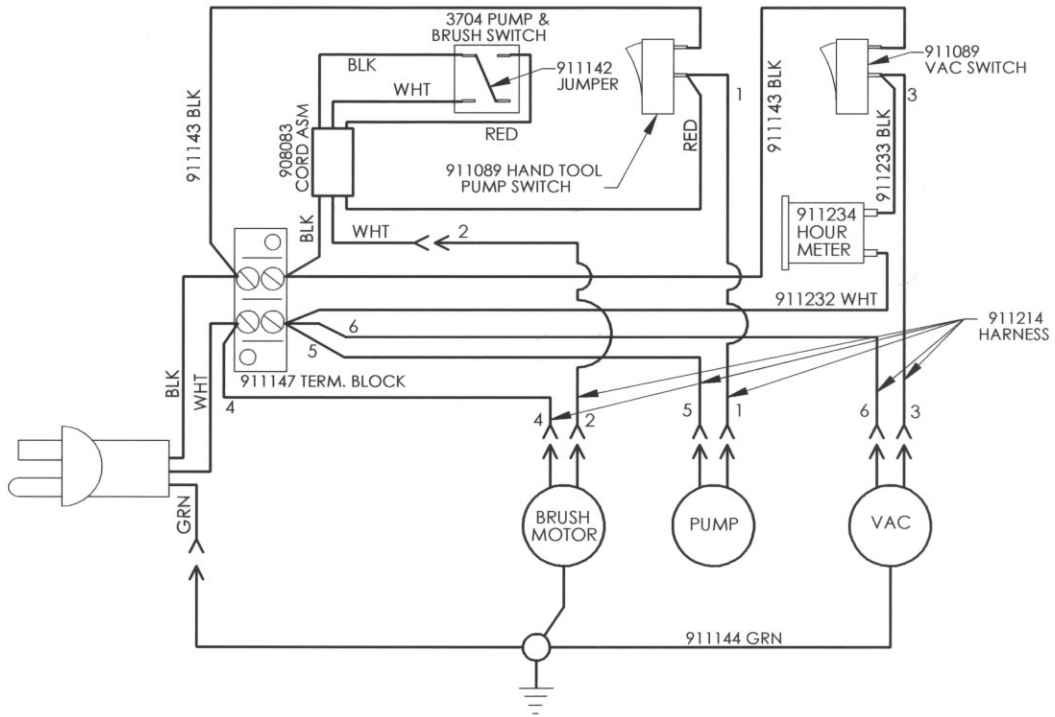
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	903009	Belt	1
2	246901	Pulley, Drive	1
3	240804	Bracket, Motor Mting	1
4	245202	Motor, Brush Drive	1
5	W329D	Nut, 10-32 Hex	2
6	980015	Washer, #10 Ext. Tooth	5
7	920017	Nut, 10-24 ESNA S/S	4
8	240812	Bracket, Top Single Jet	1
9	S296P	Brass Barb 1/4 to 1/8 MPT	1
10	243306	Fitting-Elbow 1/8	1
11	240811	Bracket, Bottom Single Jet	1
12	244202	Housing, Brush	1
13	W106D	Nut, 10-24 HEX S/S	3
14	W153D2	Screw, 10-24x3/4 PHP	4
15	244902	Jet-Spray 11004	1
16	W353D	Screw, 1/4-20x1/2 FHP	2
17	980032	Washer, 1/4 Flat Ext.	2
18	980075	Washer, 3/16 Fender	4
19	W124D	Washer-Lock,#10 Int.Tooth	2
20	962150	Screw, 10-24x1/2 HH SS	2
21	962113	Grounding Screw	1
22	213601	Guard, Brush	2
23	980612	Washer, Thrust	2
24	962062	Screw, Pan Hd.	3
25	3743	Cog, Brush	1
26	3677	Bearing, Rulon Sleeve	2
27	243601	Guard, Belt	1
28	W199D1	Screw, 8-32 x 1/2 THP	2
29	3731	Brush	1
30	217701	Shaft, Brush	1



## WIRING DIAGRAM



## WIRING DIAGRAM MACHINE WITH OPTIONAL HOUR METER



## WARRANTY POLICY

### PACIFIC STEAMEX INC. LIMITED WARRANTY

The **Pacific Steamex** Inc. Dynamo/Triumph 440 Carpet Extractor has been manufactured, tested and inspected in accordance with specific engineering requirements and is WARRANTED to be free from defects in workmanship and materials as follows:

Five (5) years parts, One (1) year labor – Polyethylene components.  
One (1) year parts and labor – All other components unless excluded below.

This warranty extends to the original user/purchaser and only when used, operated and maintained in accordance with **Pacific Steamex** Inc. Operating and Maintenance instructions.

This warranty does not apply to the following wear parts and accessories of the machine including:

Part Number	Part Name
908059	Cord Assembly
209771	Wheel
244902	Jet Tip
903009	Belt
3731	Brush
210905	Carbon Brush
243307	Filter Intake Screen, Standpipe
243301	Inlet Screen, Solution
248506	Strainer, Inline

Nor does it apply to damage or failure caused by improper use, abuse or neglect. Warranty credit or replacement of return parts including motors, pumps, etc., is subject to incoming inspection of those items.

To secure repair under this warranty, the following procedure should be taken:

- The inoperative machine or warranted parts must be delivered to the authorized dealer with shipping and delivery charges prepaid. If unable to locate the Dealer, you may contact **Pacific Steamex** Inc. at the address listed herein for the location of the nearest **Pacific Steamex** Inc. repair center or agent or for other instructions pertaining to your warranty difficulty.
- Upon compliance with the above warranty procedure, all warranted repairs would be completed at no additional charge or cost to the user.
- Only **Pacific Steamex** Inc. or its authorized dealers and agents may make no charge warranty repairs on this product. All others do so at their own risk.

This warranty limits **Pacific Steamex** Inc. liability to the repair of the product and/or warranted parts replacement and does not include incidental or consequential damages arising from the use of a **Pacific Steamex** Inc. machine whether defective or not.

This warranty is in lieu of all other expressed or implied warranties and is extended to the original purchaser/user.

**PACIFIC STEAMEX, INC.**  
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