

EXPRESS 12 GALLON MULTI SURFACE CLEANER

OPERATOR AND PARTS MANUAL

Model 100-041-016



SAVE THESE
INSTRUCTIONS



IMPORTANT SAFETY INSTRUCTIONS



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

READ ALL INSTRUCTIONS BEFORE USING THE EXPRESS

U.S. Products
11015 47th Avenue West, Mukilteo, Washington 98275

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GENERAL INFORMATION

U. S. Products' Express 12 Gallon (46 Litres) Multi Surface floor cleaning system combines rotary cleaning with a water injection/vacuum extraction system so that you can professionally clean carpets or scrub hard floors with one self-contained unit.



This machine, which can clean either forward or backward, also features:

- five injection spray jets (star assembly)
- five cast, stainless steel vacuum extraction heads (star assembly)
- quiet operation
- self propelled power assist
- non-corroding, rotomolded tanks for superior durability
- removable solution and recovery tanks for easy maintenance
- 15" (38 cm) wide cleaning path for increased productivity
- rear casters for greater maneuverability
- non-marking wheels, 10" (25 cm) rubber tread
- three-switch up-front control for easy operation

To switch from cleaning carpet with the Express to cleaning ceramic tile, marble, vinyl or cement floors, replace the rotary carpet cleaning head with the optional auto scrub brush kit or optional auto scrub pad kit. Both come with a squeegee attachment.

This Express 12 Gallon Multi Surface Cleaner can provide excellent service if it is:

- operated with reasonable care
- maintained regularly – per the maintenance instructions provided
- serviced with manufacturer supplied or equivalent parts

This Operator and Parts Manual provides necessary operation and maintenance instructions as well as Assembly and Parts Lists. Please read this manual completely and understand the machine before operating or servicing it.

Refer to the Assembly and Parts Lists, starting on page 37 in this manual, to order parts. Before ordering parts or supplies, be sure to have your machine serial number. Parts and supplies may be ordered by phone or mail from any authorized parts and service center or distributor.

It is imperative that no section of this document be overlooked when operating and maintaining the Express Multi Surface Cleaner. Please read the contents to familiarize yourself with the operation of your Express Multi Surface Cleaner, paying special attention to all **Warnings and Cautions**.

CONTACT INFORMATION

If you have any questions regarding the operation, maintenance or repair of this machine, refer to the following information and contact the appropriate U.S. Products department.

<u>Hours</u>	<u>Telephone Numbers</u>	<u>E-mail Addresses</u>
Monday-Friday	(425) 775-7275 Support	Tech Support: techsupport@usproducts.com
7:00 a.m. to 5:00 p.m.	(425) 775-7276 Parts	Parts Support: csorders@usproducts.com
Pacific Time	FAX (425) 771-7156 - Parts (800) 426-4225 - Support	

When calling or contacting us, be sure to reference the serial number and date of purchase.

FOR YOUR REFERENCE

Model: Express 12 Gallon Multi Surface Cleaner

Serial Number: _____

Install Date: _____

WARNINGS, CAUTIONS AND NOTICES

The following symbols are used throughout this manual.

⚠ WARNING

U. S. Products uses this WARNING symbol throughout this document to warn of possible injury or death.

CAUTION

This CAUTION symbol is used to warn of possible equipment damage.

NOTICE

This NOTICE symbol indicates that federal or state regulatory laws may apply, and also emphasizes supplemental information.

All operators must read, understand and heed the following Warnings and Cautions:

⚠ WARNING

Always unplug the machine before servicing. Failure to follow this warning can result to shock or electrocution.

⚠ WARNING

Do not use flammable materials or dry cleaning solvents in the Express. Dry cleaning solvents and flammable materials can cause an explosion or fire, resulting in serious injury or death.

⚠ WARNING

Do not use the machine for extraction of flammable materials or reactive metals. Doing so can cause an explosion or fire, resulting in serious injury or death.

⚠ WARNING

Do not allow bodily contact with hot solutions of 190° F (88° C) or higher. Failure to follow this warning can lead to physical injury or death. Use a thermometer to gauge temperature.

⚠ WARNING

Be careful when handling contents of the solution hoses which may be under pressure even after pump is off. Failure to follow this warning can lead to physical injury or death.

⚠ WARNING

Do not operate the machine:

- Unless trained and authorized to do so
- Unless Operator Manual is read and understood
- In flammable or explosive areas
- With damaged cord or plug
- If not in proper operating conditions
- Unless cord is properly grounded
- In outdoor areas - U. S. Products's Express Multi Surface Cleaner is designed for a commercial, indoor environment only
- In standing water
- With the use of an extension cord

Failure to follow these warnings can lead to physical injury or death.

⚠ WARNING

Before operating the machine, make sure all safety devices are in place and that the operator is capable of operating the devices properly. Failure to follow this warning can lead to physical injury or death.

⚠ WARNING

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 plugs with wet hands
- Keep cord away from heated surfaces
- Report machine damage or faulty operation immediately
- Follow mixing and handling instructions on chemical containers
- Connect hoses before turning on pump
- Be sure chemicals are safe and non-toxic

Failure to follow these warnings can lead to physical injury or death

⚠ WARNING

Before leaving or servicing machine:

- Turn off machine
- Unplug cord from wall outlet

Failure to follow these warnings can lead to physical injury or death.

⚠ WARNING

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
- Use only recommended cleaning solutions and accessory tools with this machine

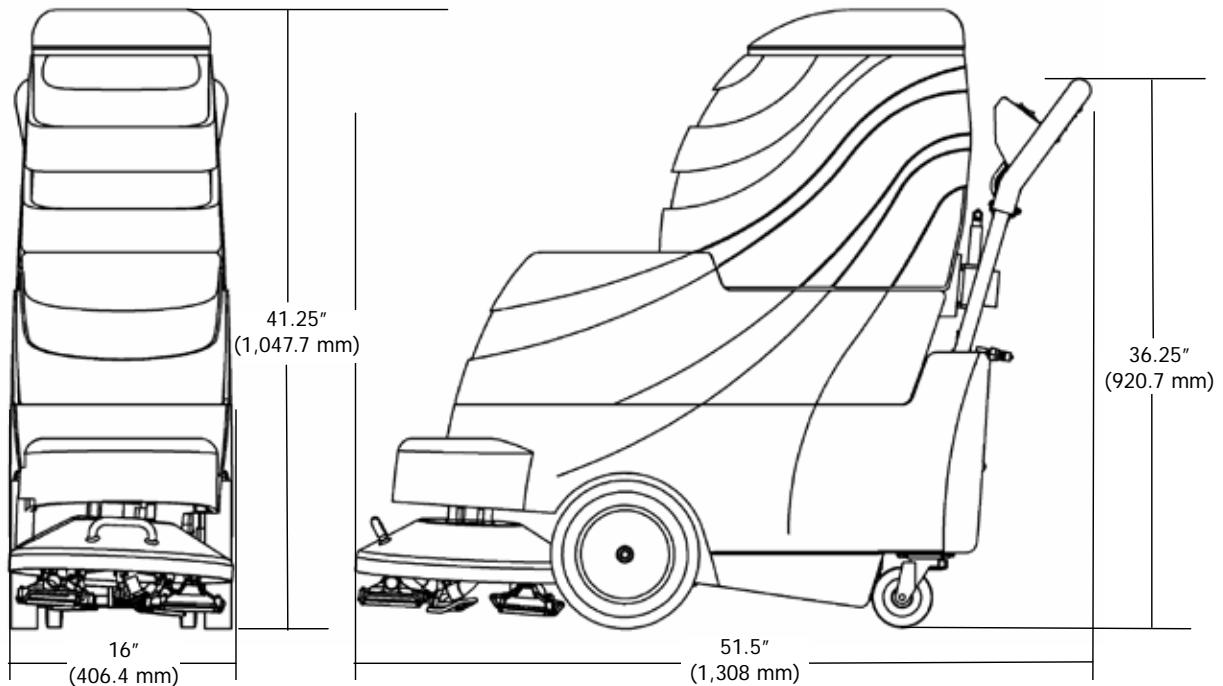
Failure to follow these warnings can lead to physical injury or death.

CAUTION

Before starting the machine, install the vent plug in the gear case vent hole. Failure to do so will damage gear case seal.

MACHINE SPECIFICATIONS

Length	51.5" (1,308 mm)
Width	16" (406.4 mm)
Height	41.25" (1,047.7 mm)
Weight	157 lbs (71.2 kg)
Solution Tank Capacity	12 gal (46 litres)
Recovery Tank Capacity	12 gal (46 litres)
Solution Pump	120 V, 60 psi (4.13 bar), 0.7 Amps
Vacuum Motor – 2 x 2 Stage	@120 V, 8 Amps, 960 Watts; Combined 197 cfm (5.58 m ³ m)
Sealed Waterlift	107" (2,718 mm)
Head Speed	130 rpm
Head Motor	120 V 1/2 Hp, 5.6 Amps, 672 Watts
Total Power Consumption	120 V, 19.5 Amps, 2,340 Watts
Power Cord	1 @ 50 ft (15.2 m) 3/12
Decibel Rating 10 ft (3 m) from Machine on Carpet	< 74 db(A)



STANDARD MACHINE COMPONENTS

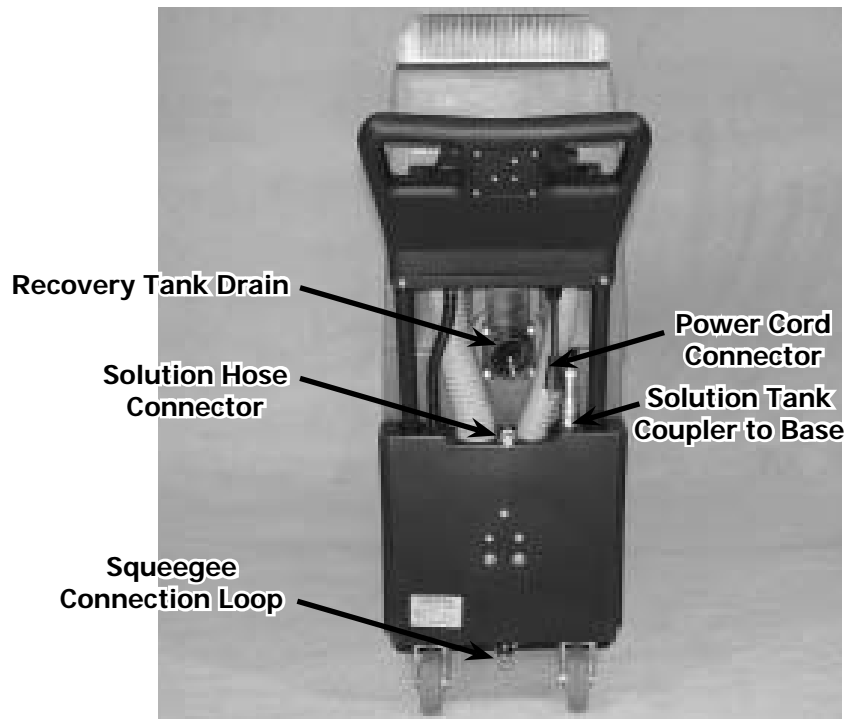


Figure 1. Standard Machine Components

OPTIONS AND ACCESSORIES

The following table shows options and accessories available with the Express Multi Surface Cleaner:

Part No.	Description
000-079-110	Kit, Squeegee Brush Msc Scrubber with Brush Assembly
000-079-112	Kit, Squeegee Pad Msc
190-041-023	Pad Drive, Holder with Clamp And Jet
190-041-022	Brush Assembly with Hub
000-079-114	Kit, Squeegee Msc Retro

GROUNDING INSTRUCTIONS

The Express 12 Gallon Multi Surface Cleaner 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 which has an equipment-grounding connector and grounding pin (see Figure 2). The connector must be plugged into an appropriate outlet which is properly installed in accordance with all local codes and ordinances.

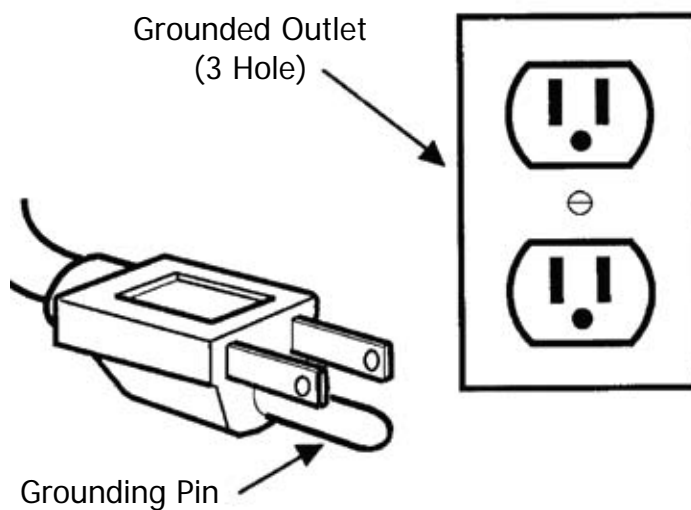


Figure 2. Illustration of Grounded Outlet and Cord Connector's Grounding Pin

⚠ WARNING

Do NOT remove the grounding pin; serious personal injury or death can result in doing so. If the grounding pin is missing, replace the connector before use.

MACHINE SETUP

The Express Multi Surface Cleaner is shipped almost fully assembled. Before you set it up for operation, carefully check the shipping carton for signs of damage. Report damages at once to the carrier.

CAUTION

Before starting the machine, remove the solution tank and replace the shipping plug (P/N 000-106-001) with the vent plug (P/N 000-106-014), shipped with your machine (see Figure 3). Failure to install the vent plug will damage the gear case seal.



Figure 3. Replace Shipping Plug with Vent Plug

Set up the Express by following these steps:

1. Ensure all three control switches are in the OFF position (see Figure 4).
2. Attach the cleaning head assembly that is appropriate for the surface to be cleaned

NOTICE

Before installing the cleaning head, refer to page 24 for lubrication instructions.



Figure 4. Ensure All Switches are in the OFF Position

3. Turn the cleaning head counterclockwise when installing it. Note that the spindle has a left-hand thread (see Figure 5).
4. With a clean bucket or hose, fill the solution tank with 12 gallons (46 litres) of hot water, 140° F (60° C) maximum.

WARNING

Do not use flammable materials in the tanks. Flammable materials can cause an explosion or fire which can cause serious injury or death.



Figure 5. Turn the Cleaning Head Counterclockwise when Installing

5. Add a recommended cleaning chemical.

⚠ WARNING

Follow mixing and handling instructions on chemical containers. Failure to properly handle chemicals can result in serious injury or death.

CAUTION

If you are using powdered cleaning chemicals, mix them prior to adding the chemicals to the solution tank.

6. Depress the lever behind the large right wheel (Figure 6) and lower the cleaning head.

NOTICE

When transporting the machine, raise the cleaning head by lifting the handle in front of the head.

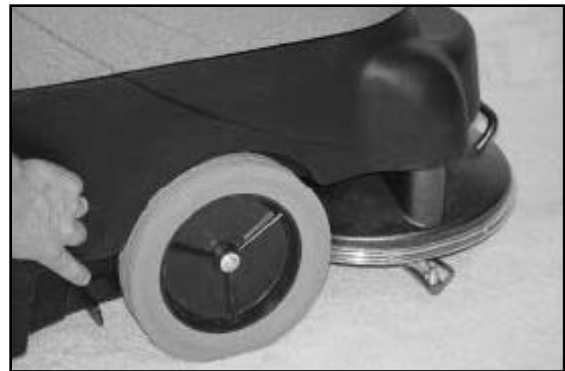


Figure 6. Depress Lever Behind Right Wheel

NOTICE

Prespraying carpet prior to cleaning will enhance the overall cleaning results.

7. Connect the machine's power cord to a grounded wall outlet (see Figure 2).

⚠ WARNING

Do not operate the machine unless the power cord is properly grounded. Failure to heed this warning can result in serious injury or death.

⚠ WARNING

Do not operate the Express with the use of an extension cord other than the one supplied with the machine. Failure to heed this warning can result in serious injury or death.

8. Secure the recovery tank lid in place (see Figure 1).

MACHINE OPERATION

⚠ WARNING

Do not operate the Express unless you have read this manual and fully understand its contents. Failure to properly setup and operate the Express can result in serious injury or death.

CAUTION

Before starting the machine, replace the shipping plug (P/N 000-106-001) with the vent plug (P/N 000-106-014), shipped with your machine. Failure to install the vent plug will damage the gear case seal (see Figure 3).

CLEANING WITH THE ROTARY POWER HEAD

1. Activate the vacuum switch in either the "Single Vac" or the "Dual Vac" position.
2. Position the "Power Head" switch to ON. The "Power Head" switch causes the rotary head to turn (see Figure 7).
3. For solution output, activate either the "Continuous Spray" switch or squeeze the solution trigger (see Figure 8).

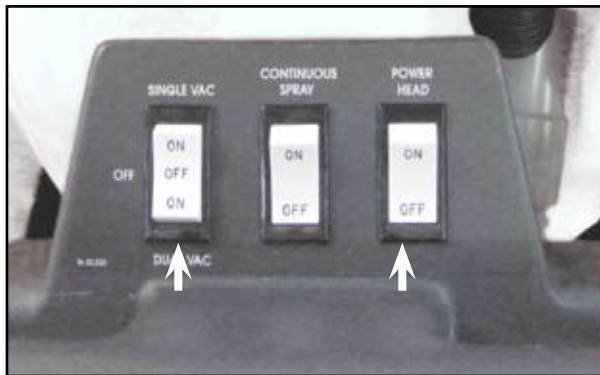


Figure 7. Activate Vacuum Switch and then Power Head Switch

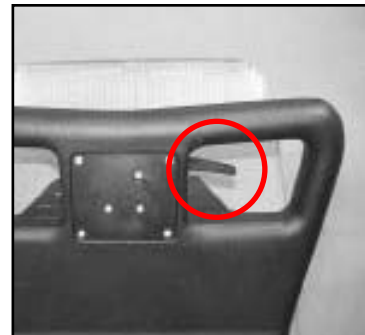


Figure 8. Location of Solution Trigger

Maneuverability

The Express' ease of handling is a direct result of the rotary extractor head. Its natural cleaning motion provides the "drive" for the unit. The slightest push or pull against the handle causes the rotating head to produce a pulling force in the forward direction or a pushing force in the backward direction.

Moving the handle causes the rotary head to tilt and to apply a slight pressure on either the left side or the right side of the cleaning head. If the tilt angle is too steep, the vacuum

seal to the carpet breaks which will adversely affect solution recovery.

To increase or decrease the angle, adjust the knob under the machine (see Figure 9). Turning the knob clockwise increases the amount of tilt.

The large tires in the front and swivel casters in the rear of the Express allow the machine to easily pivot and glide in and out of tight places.



Figure 9. Location of Tilt Adjustment Knob

Cleaning Pattern

To achieve maximum cleaning results, move the Express back-and-forth while overlapping preceding passes by 25 to 50 percent (see Figure 10).

For more soiled areas, lessen the speed of the cleaning passes. This allows the machine more time to work.

After cleaning an area approximately 6 ft (2 m) square, release the solution trigger or turn off the "Continuous Spray" switch, and make vacuum-only "dry passes" over the area just cleaned. This will assure maximum water removal and a faster drying time.

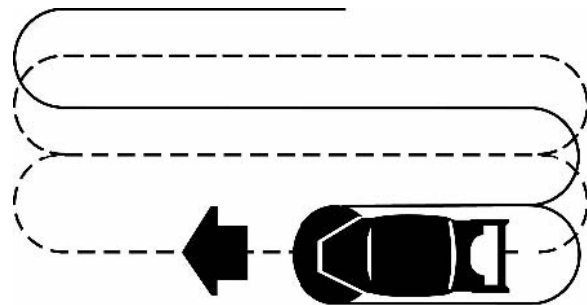


Figure 10. Overlap Preceding Passes

While Operating

1. Periodically check for excessive foam buildup in recovery tank. Use a recommended foam control solution to prevent vacuum motor damage.

WARNING

Flammable materials or reactive metals can cause an explosion or fire. Do not pick up these materials with the Express; doing so can result in serious injury or death.

2. To clean heavily soiled areas, repeat the cleaning path from a different direction.
3. Empty the recovery tank each time water is added to the solution tank.

CLEANING CARPETS WITH WAND/TOOL

1. Vacuum the carpet and remove other debris with standard vacuum.
2. Inspect the power cord for damage.
3. Attach the solution hose to the quick disconnect at the back of the machine.
4. Disconnect vacuum hose from right side of recovery tank and attach the vacuum hose in its place (see Figure 11).
5. Activate the vacuum switch by positioning it either in the "Single Vac" or "Dual Vac" position (see Figure 12).
6. Activate the pump by turning on the "Continuous Spray" switch (see Figure 12).



Figure 11. Attach Solution and Vacuum Hoses

⚠ WARNING

Do not activate the "Power Head" switch when using a wand or accessory tool. Serious personal injury can result.

7. Squeeze the valve trigger on the wand/tool while moving the wand/tool in short forward and backward strokes (see Figure 13).
8. Overlap each path by 2" (50 mm).



Figure 12. Activate Vacuum Switch and then "Continuous Spray" Switch

⚠ WARNING

Do not extract flammable materials or reactive metals; doing so can cause an explosion or fire, resulting in serious injury or death.

9. Periodically check for excessive foam



Figure 13. Move Wand/Tool Forward and Backward

buildup in the recovery tank. Use a recommended foam control solution to prevent vacuum motor damage.

CAUTION

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

10. Empty the recovery tank each time water is added to the solution tank.

CLEANING WITH ACCESSORY TOOLS

1. Attach the solution and vacuum hoses as described on page 15 of this manual.
2. Connect the accessory tool and operate as normal (see Figure 14). Remember it is only necessary to turn on the vacuum switch because activating it also turns on the solution pump



Figure 14. Connect Accessory Tool

NOTICE

Before cleaning upholstery, always check the cleaning instructions from the manufacturer.

3. After cleaning, relieve the water pressure from the tool before disconnecting the hose by turning the switches off and squeezing the trigger for 5 seconds.

DRAINING TANKS

RECOVERY TANK

1. Turn the machine off.
2. Insert the supplied 45° elbow in the drain valve. Place a bucket below it and slowly pull up on the handle (see Figure 15).
3. Rinse the tank with clean water and empty it at the end of the day.

⚠ WARNING

Remove all water from the machine before trying to lift it. If you do not remove the water, serious bodily injury can result.



Figure 15. Draining Recovery Tank

SOLUTION TANK

1. Connect the 3-ft (0.9-m) utility hose to the quick disconnect at the back of the machine.
2. Turn on the vacuum switch to pump the water out or attach a vacuum hose and evacuate the water with the vacuum motor running (see Figure 16).



Figure 16. Draining Solution Tank

FREEZE PROTECTION

NOTICE

Freeze protection requires the optional accessory hose package and empty out nozzle.

1. After draining the solution tank as described in step 1 of the previous section (Draining Solution Tank, page 19), attach the vacuum hose as if preparing to clean with a wand.
2. Attach the 3-ft (0.9-m) long utility hose to the quick disconnect at the back of the machine.
3. Place one end of the utility hose in one end of the vacuum hose and seal the hose with your hand (see Figure 17).
4. Turn on the vacuum (which also turns on the pump) and press the spray switch for 30 seconds. This will fill the pump and hoses with air and prevent freezing.

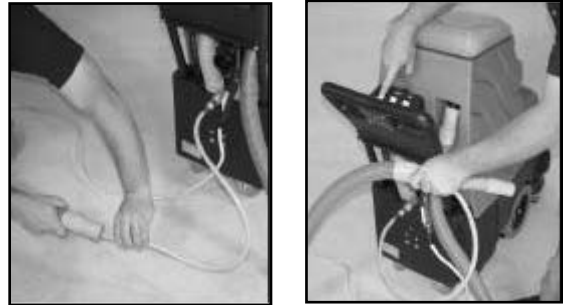


Figure 17. Place End of Utility Hose in Vacuum Hose

MACHINE MAINTENANCE

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

WARNING

When servicing the machine, unplug the cord from the wall outlet. Failure to do so can result in injury or death caused by electrical shock.

DAILY MAINTENANCE (EVERY 4 HOURS OF OPERATION)

1. Empty and rinse out the recovery tank thoroughly.
2. Remove the float shut-off screen from the recovery tank and clean (see Figure 19).
3. When the solution tank is empty, remove and clean the solution filter screen located at the end of the hose inside the solution tank.

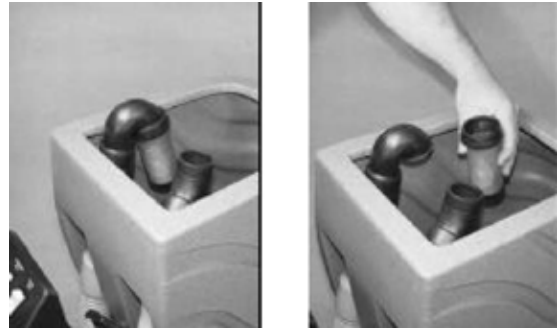


Figure 19. Remove Screen and Clean

NOTICE

When replacing the solution filter screen, be certain the filter screen lies in the recessed pocket at bottom of the tank. This will assure that all the solution is accessed from the tank the next time the machine is powered on.

4. Wipe the power cord and check for damage; replace if necessary. Coil the cord neatly after use.
5. Clean the exterior of the machine with an all-purpose cleaner and damp cloth.
6. Remove any accumulated debris on the gear box shaft and inside the threaded portion of the hub (see Figure 18).

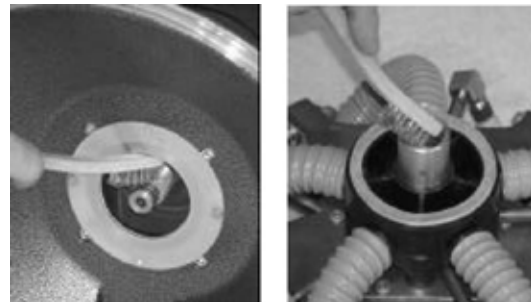


Figure 18. Remove Debris on Gear Box Shaft and Inside Threaded Portion of Hub

CAUTION

An accumulation of debris around the gear box shaft, if not removed, may damage the gear box oil seal resulting in loss of oil in the gear box. If the gear box is operated without oil, severe damage may occur. (Repairing the Express requires removing the cleaning head, described in the Repair Guide Section of this manual, starting on page 27.)

7. Check the spray on the jets for even flow. A jet that sprays unevenly or dribbles needs to be cleaned (see Figure 20).

WARNING

Do NOT spray the high pressure solution in your face or eyes. Bodily injury can result if you do.

8. Twist the jet out. Turn it over. Blow out any obstructions and re-install the jet.

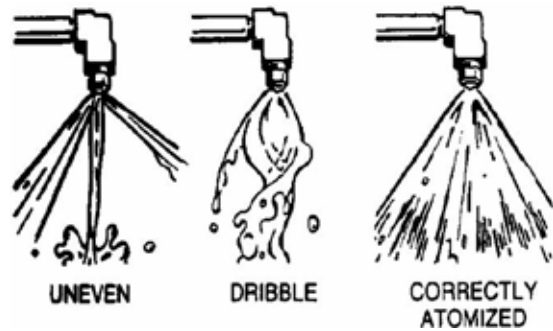


Figure 20. Check Jet Spray for Even Flow

CAUTION

Never use a sharp solid object to dislodge an obstruction as this will damage the spray jet.

9. Rinse the head assembly and the cowling with fresh water to remove debris.

CAUTION

Lay machine on its right side when cleaning. If it positioned on the left side, oil will drain out of the gear box.

10. Coat the motor shaft with TKX® All-Purpose Lube or a similar lubricant before re-installing the cleaning head. Apply the lubricant to the O-ring. Locate the head onto the shaft, making sure the threads are aligned properly, and rotate the head counterclockwise (see Figure 21).

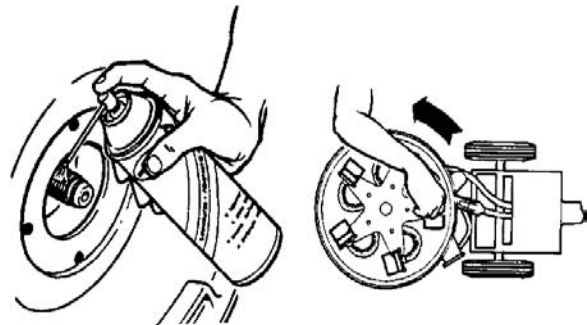


Figure 21. Lubricate Shaft and O-Ring; Rotate Head Counterclockwise

WEEKLY MAINTENANCE (EVERY 20 HOURS OF OPERATION)

1. Inspect vacuum hoses for holes and loose cuffs.

CAUTION

When using the machine, follow mixing and handling instructions on chemical containers.

2. Inspect the cord and cord grip for damage. Replace the cord and/or cord grip immediately if damaged.
3. Lubricate the metal shaft on the recovery tank drain with TKX® All-Purpose Lube or a similar lubricant.
4. Run a vinegar solution of 50% vinegar and 50% water through the system. Let the solution sit for 15 minutes then rinse with fresh water.

MONTHLY MAINTENANCE (EVERY 80 HOURS OF OPERATION)

1. Check the oil level in the gear box on a monthly basis. Change the oil yearly.

NOTICE

It is very important to maintain the proper oil level. To check the oil level, remove the vent plug and look into the gear box. Turn the "star" head assembly until the inspection hole in the gear can be seen.

2. Set the machine so the head is sitting flat. The oil level should go up to but not past the middle of the gear.
3. If oil needs to be added, use quality 80 - 90 weight gear oil (see Figure 22).

NOTICE

When checking the oil level in the gear box, use a toothpick as a dipstick. The oil level should measure 3/8" (9.5 mm) deep.

4. Remove and rinse the filter screen from the flow control solenoid valve.

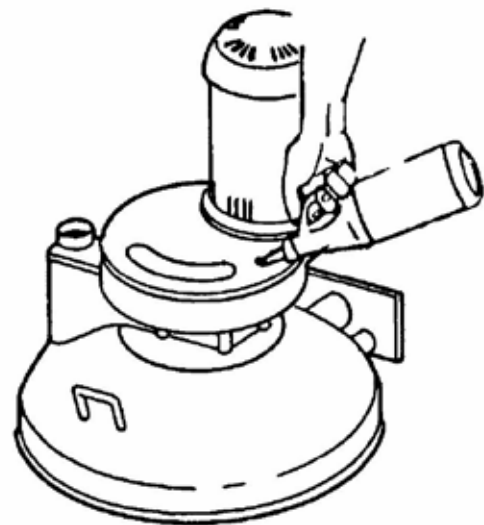


Figure 22. Use Quality 80 - 90 Weight Gear Oil

5. Change the felt seal (see Figure 23). This is recommended after every 10 hours of use. (For step-by-step instructions on removing the cleaning head and seal, refer to the Repair Guide section of this manual, starting on page 27.) Always keep a spare felt seal soaking in 30 weight oil.

Immersing the felt seal in oil lets it expand like a sponge and provide sufficient seal for a good vacuum. Place the used seal back in the oil bath to rejuvenate.

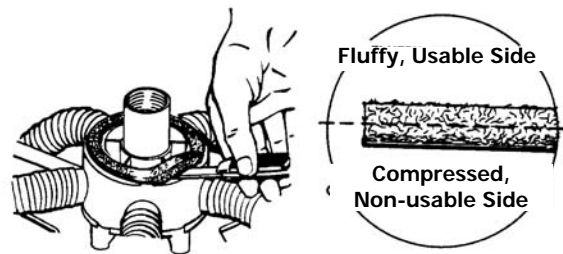


Figure 23. Carefully Pry Seal Up and Lift Out

NOTICE

An ideal container in which to soak the spare felt seal is an empty, clean tuna can. It is the right size and shape, and does not require a large amount of oil.

6. After placing the refreshed, oil-soaked felt seal in the hub, coat the surface of the hub with 30 weight oil. Lightly oil the inner hub threads before re-attaching the cleaning head to the machine (see Figure 24).
7. Lubricate the wheels with water-resistant oil.
8. Inspect the machine for water leaks and loose hardware. Tighten as needed.

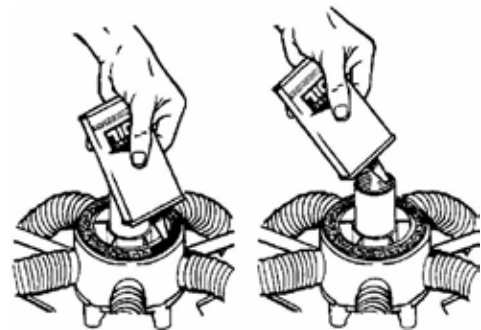


Figure 24. Lightly Oil Inner Hub Threads Before Re-Attaching Cleaning Head

QUARTERLY MAINTENANCE (EVERY 250 HOURS OF OPERATION)

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

REPAIR GUIDE

⚠ WARNING

When servicing the machine, unplug the cord from the wall outlet. Failure to do so can result in injury or death caused by electrical shock.

REMOVAL OF CLEANING HEAD

1. Unscrew the star head assembly in the same direction it turns during operation. (This is clockwise when looking from the underside).

CAUTION

Lay the Express on its right side when servicing it. If it is positioned on the left side, oil will drain out of the gear box.

2. Once the star head assembly is loosened, spin it off by hand. If the cleaning head is difficult to remove, use a $\frac{3}{4}$ " socket wrench on the exposed center nut.

REPLACING THE FELT SEAL

A worn or "dried out" felt will not form a proper vacuum seal. This will impair the extraction capabilities of the unit.

1. Remove the cleaning star head assembly.
2. Make sure the felt is saturated with oil to ensure a proper seal.
3. Remove and reverse the seal so that the "new" face is against the hub.

NOTICE

Alternating sides will temporarily extend the life of the felt. However, the seal may need to be replaced.

4. Re-install the star head assembly.

NOTICE

When re-installing the star head assembly, the felt should compress against the seal plate during the last quarter rotation of the head. If the felt does not fit snugly against the plate, the seal may need to be replaced.

STORING MACHINE

1. Before storing the machine, rinse and drain the tanks of all water.
2. Store the Express in a dry area in the upright position.
3. Open the recovery tank lid to promote air circulation.
4. If storing the Express in a cold climate, freeze protect the machine as directed on page 21 of this manual.

CAUTION

Do not expose the Express to precipitation. Store the machine indoors.

CAUTION

If storing the machine in freezing temperatures, be sure that the Express and its solution system are completely drained and dry.

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Machine does not operate.	Faulty switches or wiring.	Contact Service Center.
	Faulty power cord.	Contact Service Center.
	Building circuit breaker tripped.	Reset Breaker.
Solution pump does not operate.	Faulty switch or wiring.	Contact Service Center.
	Vacuum switch not turned on.	Activate vacuum switch
	Pump not primed.	Follow freeze protection procedure if all else fails.
	Faulty solution pump motor.	Contact Service Center.
	Faulty pump head.	Contact Service Center.
	Trigger on wand not pulled.	Pull solution trigger.
	Quick couplers not fully engaged.	Connect quick couplers.
Vacuum motor does not operate.	Loose or broken wiring.	Contact Service Center.
	Faulty vacuum switch.	Contact Service Center.
	Defective vacuum motor.	Contact Service Center.
	Worn carbon brushes.	Contact Service Center.
Poor solution pick-up.	Recovery tank drain valve open.	Close valve.
	Defective recovery tank lid gasket.	Replace gasket.
	Clogged float shut-off screen.	Remove recovery tank lid and clean screen.
	Loose vacuum hose connections.	Secure cuffs to hose.
	Defective vacuum hose.	Replace hose.
Uneven or no spray.	Plugged spray tips.	Clean or replace tips.
	Improper spray tip size or spray angle.	Replace with proper tips.
	Worn spray tips.	Replace spray tips.
	Solution tank low or empty.	Refill solution tank.
	Faulty solution pump.	Contact Service Center.

ELECTRICAL DIAGRAMS

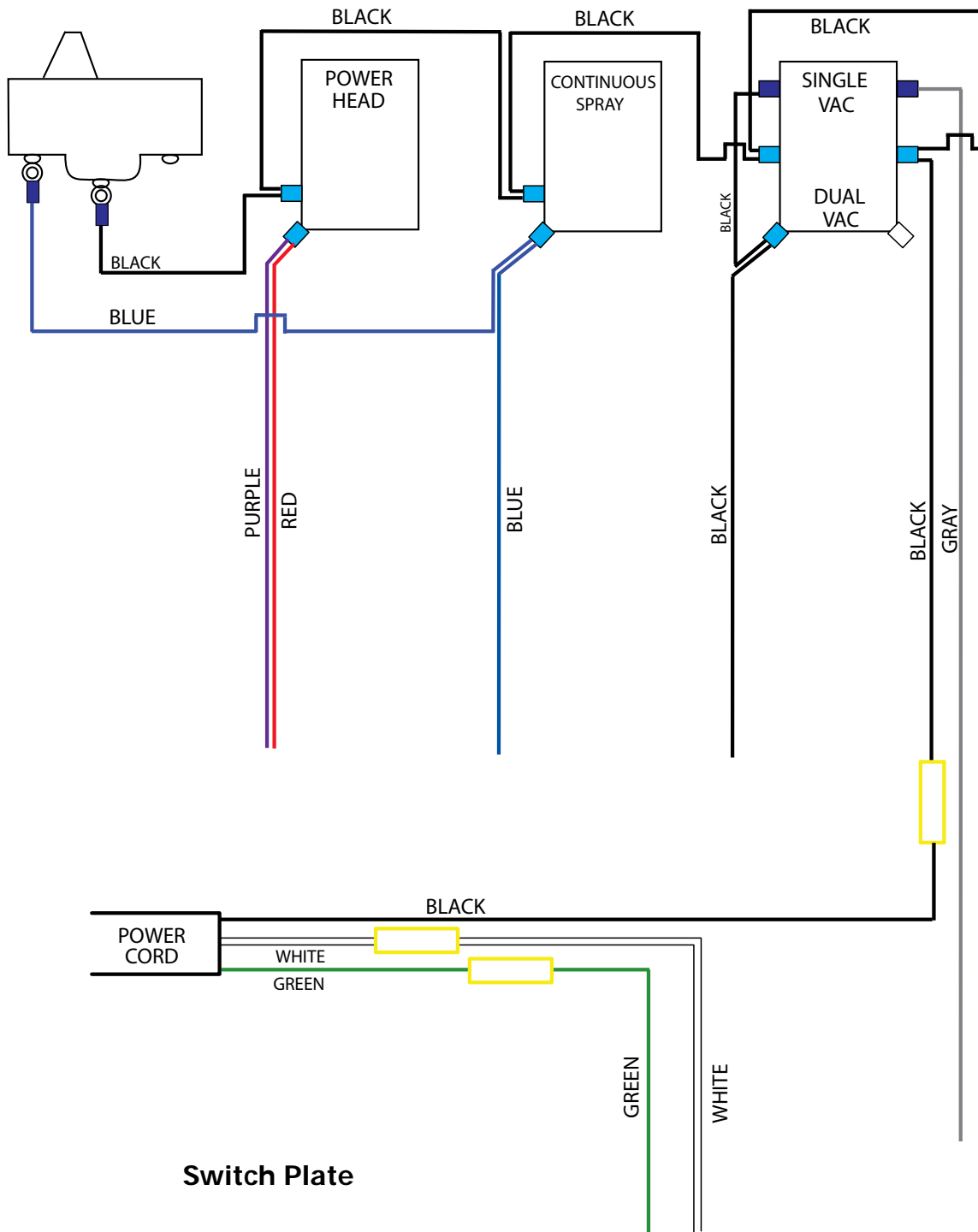


Figure 25. Electrical Diagram - View 1 of 3

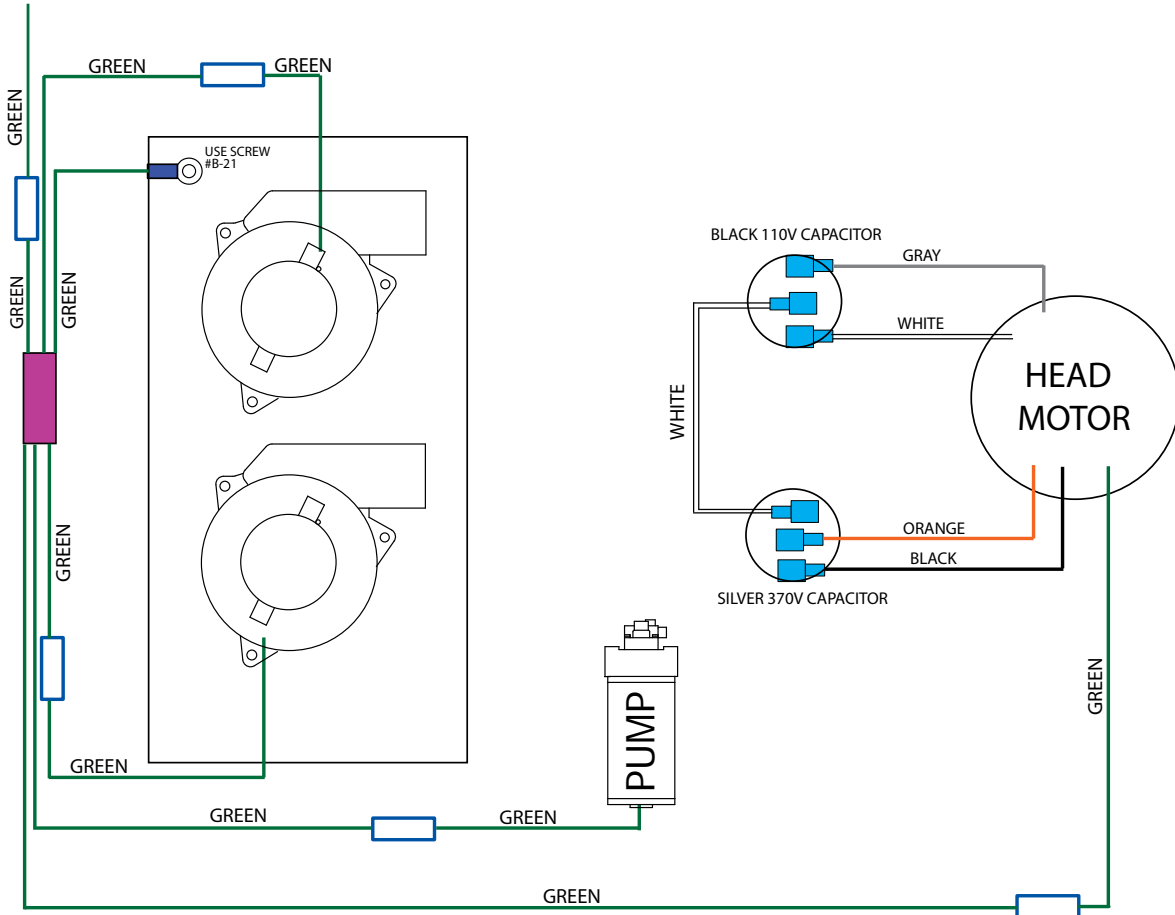


Figure 26. Electrical Diagram - View 2 of 3

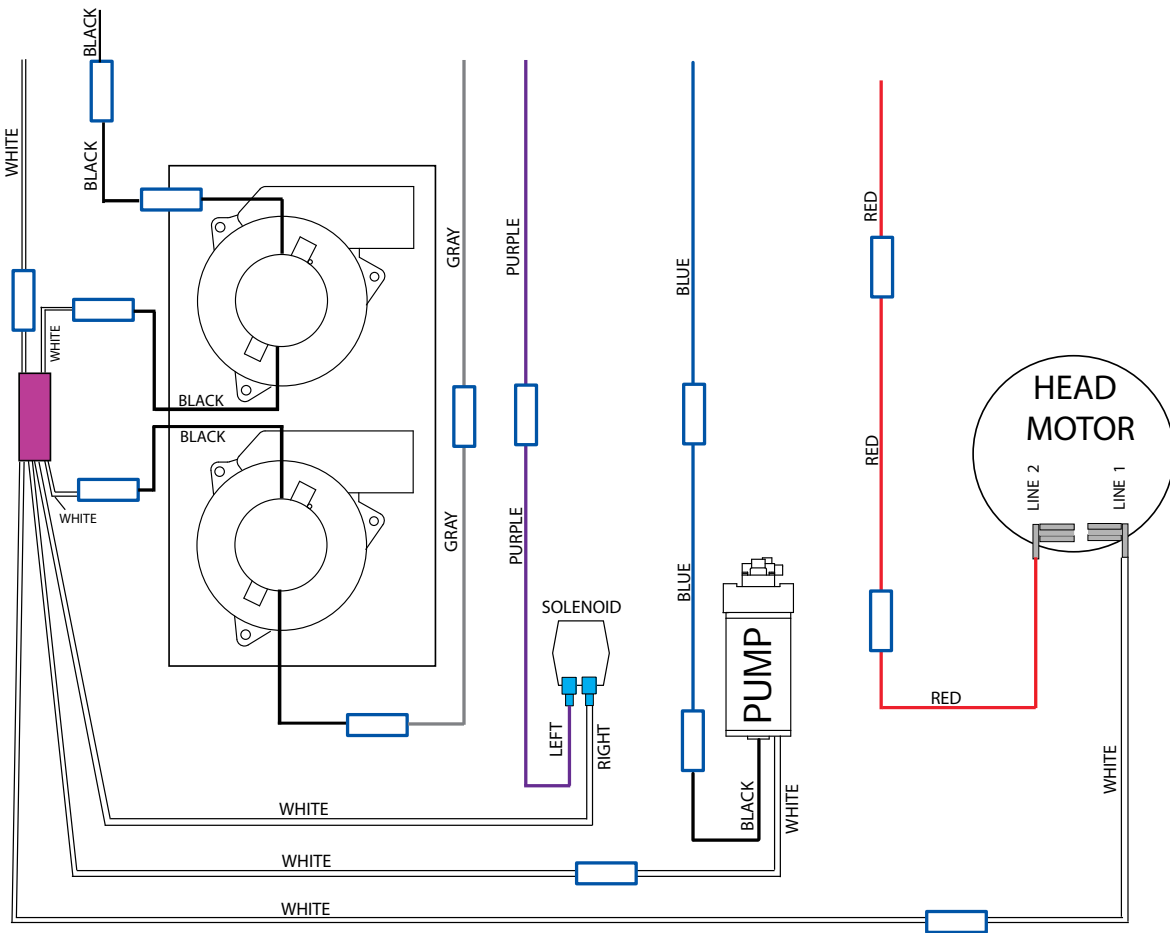


Figure 27. Electrical Diagram - View 3 of 3

ASSEMBLIES AND PARTS LISTS

The following major assemblies and parts lists are detailed in this section:

- Tank Group Assembly Parts List
- Base Group Assembly Parts List
- Rotary Head Assembly Parts List
- Pump Assembly Parts List

Table 1 provides top-level assembly part numbers for the Express.

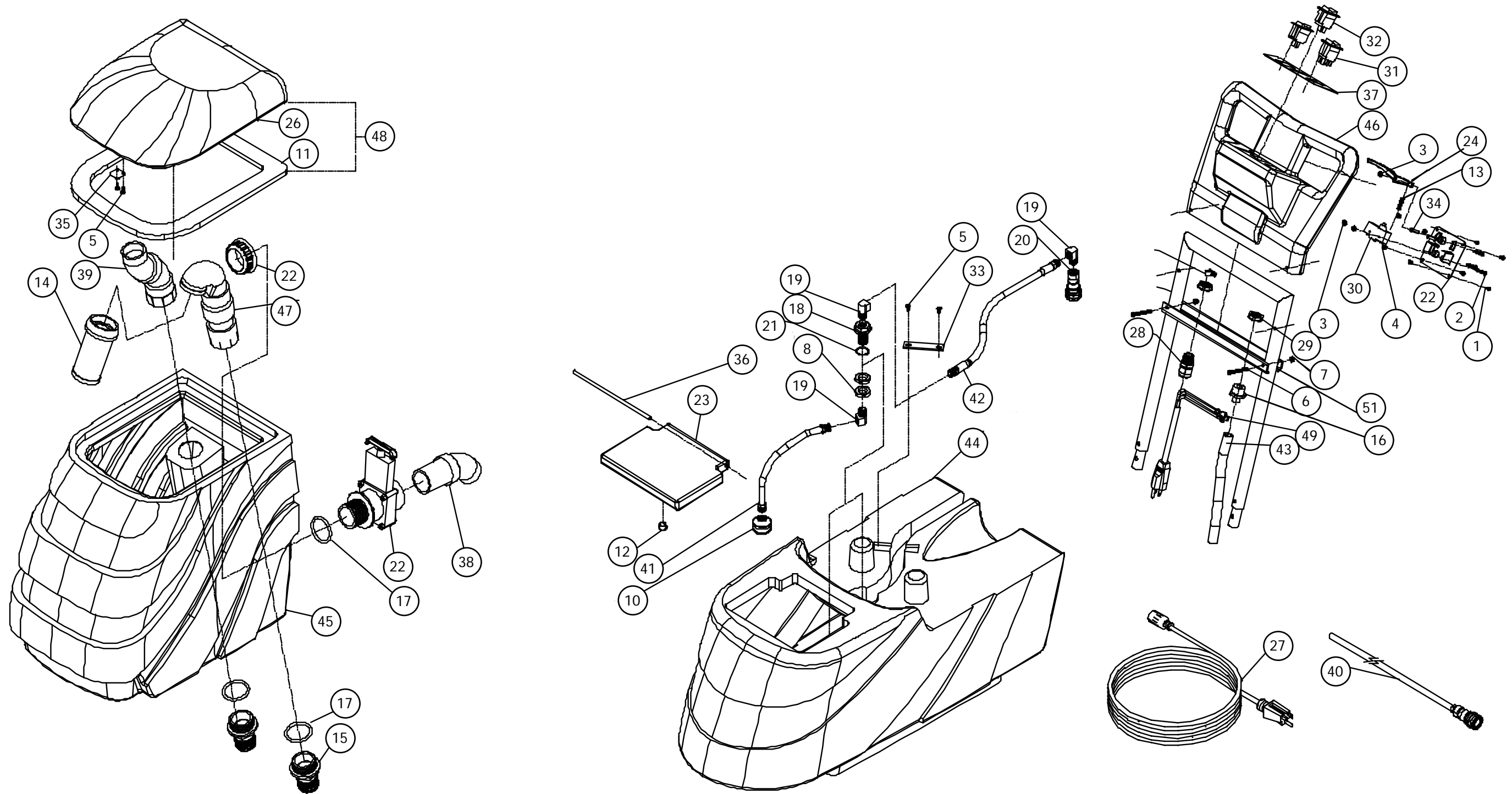
Table 1. Express Multi Surface Cleaner Assembly (P/N 100-041-016)

Part Number	Description	Qty
000-006-004	Base	1
000-061-014	Handle	1
000-159-089	Tank, Solution	1
000-159-090	Tank, Vacuum	1
190-041-011	Motor, 120 V 60 Hz	1

PARTS AND SUPPORT

Repairs, if required, should be performed by U. S. Products' service department which maintains an inventory of original replacement parts and accessories.

Figure 28. Tank Group Assembly



Tank Group Assembly Parts List

Item	Current Part Number	Alternate Part Number(s)	Description	Qty
1	B-09.07	B-0907 --	6-32 X 3/8 PHXZinc	4
2	B-12.6	B-126 --	Screw, 6-32 X 1-1/4" Pan Hd Phillips	3
3	B-14.6	16 000-094-063	Nut, Nylon Lock - 6-32 Zinc Plated	3
4	B-14.9	B-149 --	Nut, 6-32 For Plastic	4
5	B-16.2	56003018 --	Screw, 8-32 X 3/8, Phn Ph S/S	4
6	B-17.85	2322 --	Screw, 8-32 X 2 PHXZinc	2
7	B-18.02	325 000-094-058	Nut, Nylon Lock - 8-32 S/S	2
8	B-49	B-49 --	Nut, Bulkhead 3/4-16 X.225	2
9	C-03-2	385 --	Hose Clamp 1/4 X 5/8 X 7/16 Wide, # 4	1
10	C-05.05	999 000-049-118	Filter, S/S Chemical	1
11	C-07.7	C-077 --	Gasket, Vac Lid	1
12	C-13.5	C-135 C-13-5	Plug, Hole Nylon .562	1
13	C-21.8	C-218 C-21-8	Spring, .025 O.D. X 0.90+	1
14	CMC-26	929B --	Ball Float, Vac Shut	1
15	CMC-35-5	907 --	Hose Barb, 1 1/2" X MPT	2
16	C-37	C-37 --	Insert, Tube, Straight	1
17	CMC-56	187B --	Washer, Rubber	3
18	D-01.8OR	-- --	Bulk Head, 1/4" Brass w/o-Ring	1
19	D-17	91 000-052-085	90 St Elbow 1/4" NPT	3
20	F-11	46 000-052-051	Quick Disconnect, Socket Female	2
21	G-03.19	-- --	O-Ring, Viton 2-020 Blkhd	1
22	CMG-15A/G-15A	G-15A --	Bulkhead, Drain Gate	1
23	J-48CLNMSTR	J-48C --	Lid, Solution Edge 2 Cm	1
24	J-801	J-801 --	Lever, Switch	1
25	J-802	J-802	Plate, Switch Lever Attach	1
26	J-803	J-803 000-041-021	Lid, Vac	1
27	CMK-09-6	2308 000-178-048	Cord 50' 12/3 Sjt Yellow w/Lock	1
28	K-16.96	K-1696 K-16-96	Retainer, Power Cord	1
29	K-16.97	K-1697 K-16-97	Nut, Nylon Bushing Rel.1/2	2
30	K-21.4	2305 --	Switch, Omron Momentary SPDT Switch	1
31	CMK-21-7W	2306 --	Switch, DPST Water Resistant	1

Tank Group Assembly Parts List (continued)

Item	Current Part Number	Alternate Part Number(s)	Description	Qty	
32	CMK-21W	2307	--	Switch, SPST Water Resistant	2
33	M-0859	M-0859	--	Bracket, Solution Hose Retainer	1
34	M-0862	M-0862	--	Pivot Pin, Switch Lever	1
35	M-0866	M-0866	--	Plate, Vac Lid Retainer	1
36	M-18.2	M-18-2		Hinge, Solution Lid Edge 2 8.125"	1
37	N-30.330	N-30330	N-30-330	Panel, Sw Vac Spray Pwrhd	1
38	SC-05.024	904	--	Elbow, 45st Vacuum Dump Drain Spout, 2" X 45 (Was 000-052-263)	1
39	SC-05.024A	--	--	Elbow, Vac Tank Assembly	1
40	SE-04/36	SE-04-36	--	Hose, 3/8" Rubber 36" w/QC	1
41	SE-04/8.5	--	--	Hose, 1/4 Tygon 8.5" 1/4MPTx1/4MPT	1
42	SE-06.7GRY/15.5	2300	--	Hose Assembly, 21" w/1/4 Ends	1
43	SE-08.2/9.25	SE-082	SE-08-2	Tubing, Liquid Tight	1
44	SJ-3602GRNGNT.01	S-SJ360	--	Drilled Tank, Sol	1
45	SJ-3604GRNGNT.01	V-SJ360	000-159-090	Drilled Tank, Vac	1
46	SJ-3605BLK.01	SJ-3605	--	Handle, Drlid Blk 3 Switch	1
47	CMSJ-43.25A	--	CMSJ-43-25A	Vac Filter Assembly,	1
48	CMSJ-803	SJ-803	--	Lid, Complete Vac w/Gasket	1
49	SK-09.86	2309	--	Cord, Pig Tail Comp Power Cord, 15" 12/3	1
50	SM-0851	SM-0851	--	Comp Upper Handle Assembly, Painted	1
51	SM-0857	M-0857	--	Comp Brkt Cord Mount, Painted	1

Figure 29. Base Group Assembly - View 1 of 2

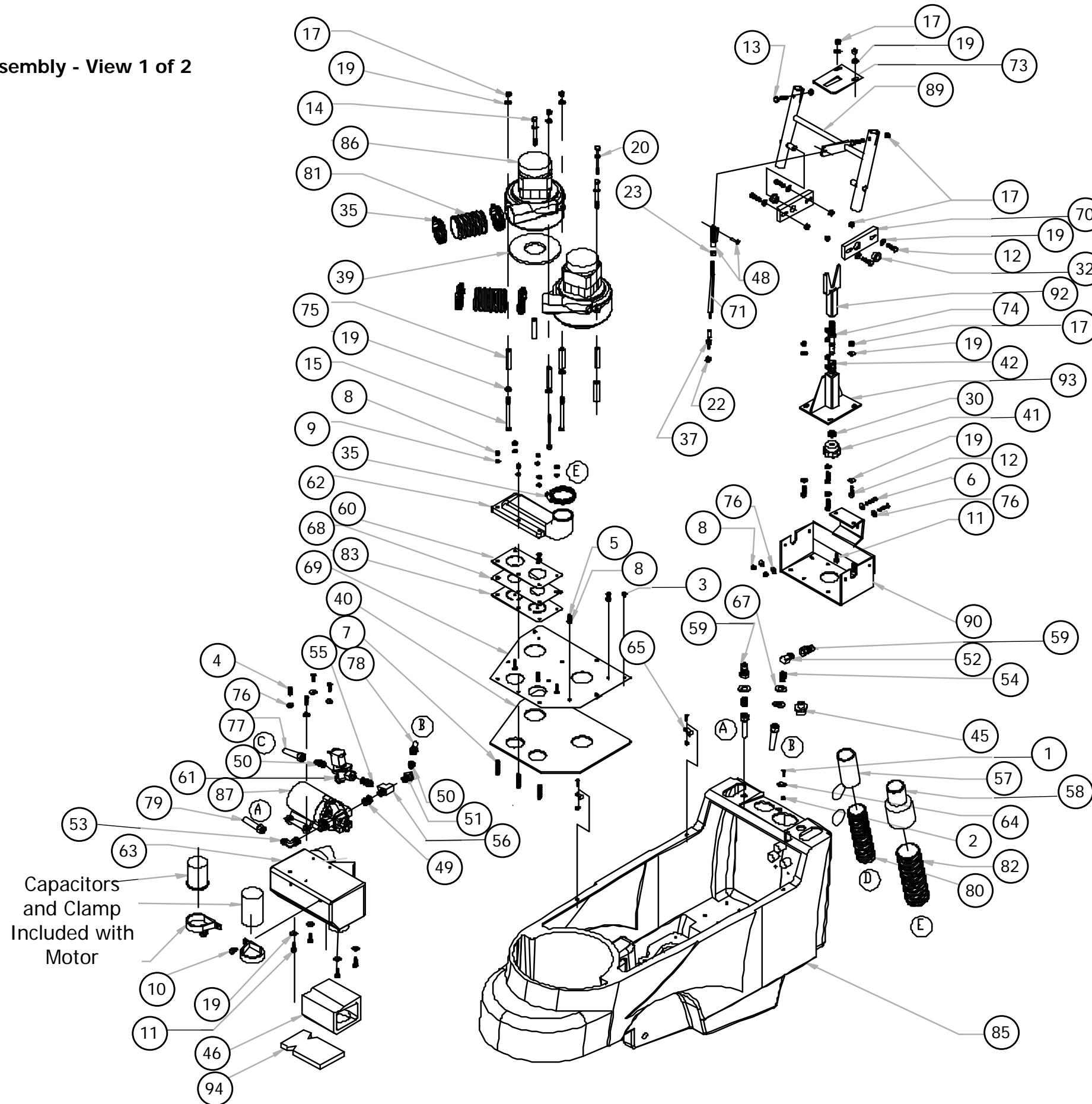
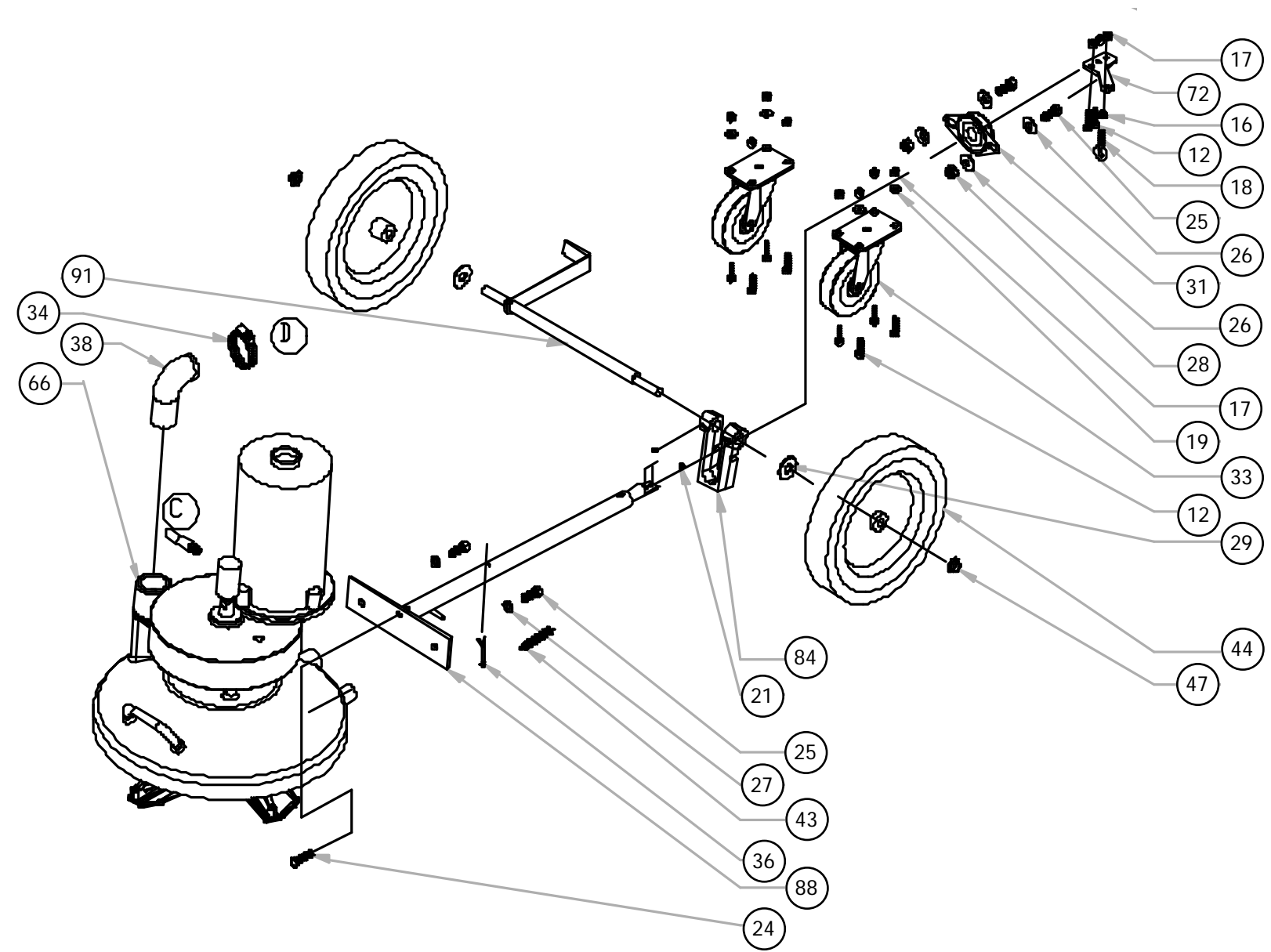


Figure 30. Base Group Assembly - View 2 of 2



Base Group Assembly Parts List

Item	Current Part Number	Alternate Part Number(s)	Description	Qty
1	B-11.2	--	6-32 X 3/4 FHSS 100 Deg	3
2	B-14.6	16	000-094-063 Nut, 6-32 Hex Zinc Nylock	3
3	B-21	B-21	-- 10-32 X 5/16 PHXSS	1
4	B-24	2339	-- 10-32 X 3/4 PHXSS	4
5	B-24.1	2340	-- 10-32 X 3/4 PHXZinc	3
6	B-26.1	197	-- 10-32 X 1 1/4 PHXZinc	2
7	B-26.7	MR-3	-- 10-32 X 1 1/2 PHXZinc	3
8	B-28.03	17	-- Nut, 10-32 Nylock Zinc	11
9	B-29.1	--	B-29-1 Washer,#10 S/S	6
10	B-31.5	1097	-- 1/4-20 X 1/2 Hex Cp	2
11	B-32	2326	-- 1/4-20 X 3/4 Hex Hd Cp	6
12	B-33	4	000-143-002 1/4-20 X 1 Hex Hd Cp	18
13	B-33.08	1080	-- 1/4-20 X 1 1/2 Hex Hd Zinc	2
14	B-33.38	2324	-- 1/4-20 X 3 Hex Hd Cp	3
15	B-33.4	2336	000-143-502 1/4-20 X 3 3/4 Hex Cp	3
16	B-36	8	000-094-008 Nut 1/4-20 Hex Cp	1
17	B-36.01	--	-- Nut 1/4-20 Nylock Zinc	26
18	B-36.3	2341	-- Eye Bolt, 1/4-20 X 2" Zinc	1
19	B-38.5	14	B-38-5 Washer, 1/4 Flat Cp	28
20	B-39.5	2325	-- Washer, 1/4 Int. Star	3
21	B-40	--	-- Set Screw 1/4-28 x 3/16 S/S	2
22	B-40.01	B-4001	B-40-01 Nut, 1/4-28 Nylock Zinc	1
23	B-40.02	B-4002	B-40-02 Nut, 1/4-28 Zinc	1
24	B-40.17	B-4017	000-143-014 5/16-18 X 1 1/4 Hex Hd S/S	1
25	B-40.85	--	-- 3/8-16 X 1 Hex Hd S/S	4
26	B-41.5	15	-- Washer, 3/8 Flat Zinc	4
27	B-41.7	258	000-174-021 Washer, 3/8 Lock Washer S/S	2
28	B-41.85	175	000-094-100 Nut, 3/8-16 Nylock S/S	2
29	B-42	B-42	000-174-012 Washer Flat 1/2 X 1-1/4 Zinc	2
30	B-42.9	B-429	-- Nut, 7/16-20 Jam Nut Zinc	1
31	C-01.03	C-01-03	-- Bearing, Ball 2-Bolt Flange 3/4" Bore	1
32	C-01.37	--	C-01-37 Bushing, Flanged Bronze.502I.D.x.875O.D.	2
33	CMC-02-4	905	-- Caster, 4" Swivel (Order 905)	2
34	C-03.2	--	C-03-2 Clamp, Hose 2" #24	1

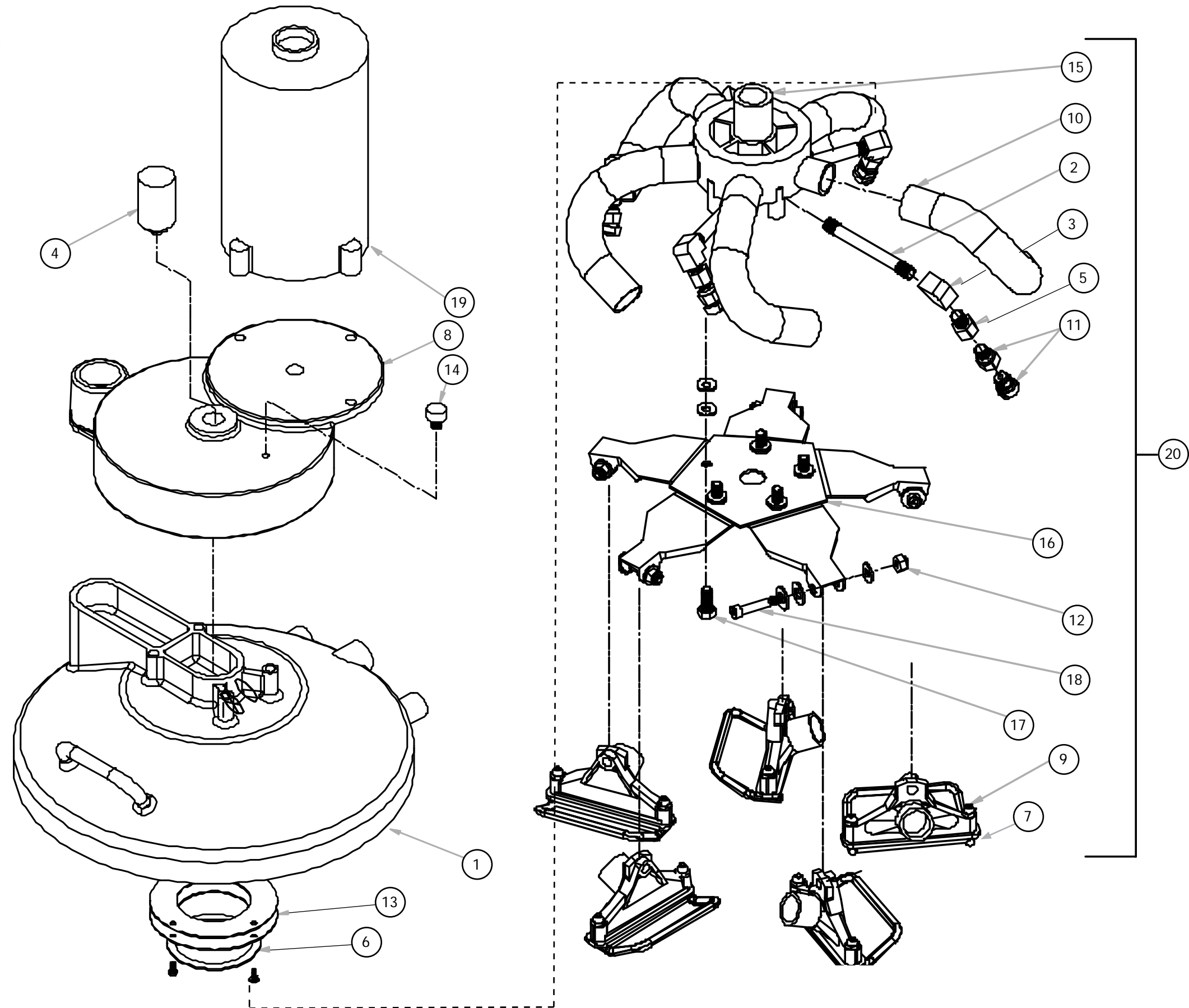
Base Group Assembly Parts List (continued)

Item	Current Part Number	Alternate Part Number(s)		Description	Qty
35	C-03.3	000-033-010	C-033-3	Clamp, Hose 2 1/4 #32	5
36	C-04.07	C-0407	C-04-07	Cotter, Pin 1/8 X 1.675" Steel	1
37	C-05.020	C-05-020	--	Ball Joint Assembly 1/4-28	1
38	C-05.0215	C-05-0215	--	Elbow, 90 1.5 X 1.5 S/S	1
39	CMC-06	C-06	--	Gasket, Blower/Arlon 1/4"	2
40	C-07.35	C-07-35	--	Gasket, Vac Seal Base	1
41	C-11.63	2314	--	Knob, Height Adjustment	1
42	C-21.7	C-217	C-21-7	Spring, .68 O.D. X 1.25h	1
43	C-21.9	C-219	C-21-9	Spring, .375 O.D. X 3" Tee Bar	1
44	CMC-23.8	C-238	C-23-8 or 000-177-019	Wheel 10" - 1/2" Bore	2
45	C-37	C-37	--	Insert, Tube Straight Conn 3/8"Nylon	1
46	C-51.5	C-515	--	Muffler, Foam	1
47	C-59	--	--	Pushnut Fastener, 1/2 Cap	2
48	C-97	C-97	000-085-010	Yoke End Linkage, 1/4-28 Steel	1
49	D-04	182	000-052-061	Bushing 3/8 X 1/4 NPT Br	1
50	D-07.01	2310	D-07-01	Coupler 1/4 NPT X -4 SAE	2
51	D-15.2	140	000-052-082	45 St Elbow 1/4 NPT	1
52	D-17	91	000-052-085	90 St Elbow 1/4" NPT	1
53	D-20.03	2312	D-20-03	Elbow 90 3/8NPT X -6 SAE	1
54	D-41	92	000-052-072	Nipple, 1/4 NPT Close Brass	2
55	D-43	300	--	Nipple, 1/4 Hex Brass	1
56	D-48.5	2311	D-48-5	Tee, Street 1/4 NPT Brass	1
57	E-14	--	--	Cuff, 1 1/2 Slip X 1 1/4 Hose	1
58	E-14.69	E-1469	--	Cuff, 1 1/2" Slip X 2" Wire Supp Hose	1
59	F-09	45	--	Q/C 1/4" Plug Br Shut Off	2
60	G-37	G-37	--	Valve, Vac Shut Off Dual	1
61	CMG-39	2313	--	Valve, Solenoid 120 V	1
62	J-46.6BLK	000-090-041	--	Manifold, Blwr Intake	1
63	J-47.6BLKMUF	--	--	Muffler & Pump Mount Blk	1
64	K-17.4	318	--	Clamp, Nylon Cable 1/4"	2
65	K-17.5	1091	--	Clamps, Nylon Cable 3/8	1
66	L-1600	L-1600	190-041-011	Head Assembly Complete 110 V (Order P/N 190-041-011)	1

Base Group Assembly Parts List (continued)

Item	Current Part Number	Alternate Part Number(s)		Description	Qty
67	M-0295	--	--	Washer, 1.125O.D. X .562I.D.	3
68	M-0792.51	M-0792-51	--	Plate, Flapper Valve-Edge	1
69	M-0854	--	--	Plate Assembly, Vac Mnt Parallel	1
70	M-0856	--	--	Bushing Block, Handle	2
71	M-0858			Bar, Clevis Adjust	1
72	M-0863	--	--	Head Tilt Arm Plated	1
73	M-0864	--	--	Slip Plate-Adjust Wedge Support	1
74	M-0865	--	--	Adjust, Guide Bar Screw	1
75	M-31.17	M-31-17	--	Standoff, 5.7 Edge 2.260"	6
76	M-93	--	--	Washer, .219 X .625 18ga	8
77	SE-06.7GRY/20B	2301	--	Hose, 1/4 Sol 20" -4SAE X 1/8MPT	1
78	SE-06.7GRY/23	2302	--	Hose, 1/4 Sol 23" -4SAE X 1/4FPT	1
79	SE-06.7GRY/35	2303	--	Hose, 1/4 Sol 35" -6SAE X 1/4FPT	1
80	SE-10.05/52	SE-1005	SE-10-5 or 000-068-324	Hose, Vac 1.5" Flex 52"	1
81	SE-12.5/3	SE-125	SE-12-5 or 000-068-113	Hose, 2" Flex Exh 3" Long	2
82	SE-12.7/36	--	--	Hose, 2" Wire X 36"Long	1
83	SG-37	--	--	Valve, Dual Flpr Modi Edge	1
84	SJ-13.5	SJ-13-5	--	Comp, Drld & Panted Head Lift Lock Ex	1
85	SJ-3601BLKCM.01	--	--	Base, Drld 2xvac Par, 100 psi Blk Roto	1
86	CMSL-004	408	--	Blower, 2stg 120 V 5.7comp #116392-00	2
87	CMSL-24	2054	--	Pump, 60 psi 120 V	1
88	SM-0850	M-0850	--	Comp Lift Bar Assembly, Painted	1
89	SM-0852	M-0852	--	Comp Lower Handle Assembly, Painted	1
90	SM-0853	M-0853	--	Comp Brkt Lwr Handle Mnt, Painted	1
91	SM-0855	M-0855	--	Comp Axle Assembly, Painted	1
92	SM-0860	M-0860	--	Comp Adjust Bar Assembly, Painted	1
93	SM-0861	M-0861	--	Comp Adjust Guide Bar Assembly, Painted	1
94	SR-04/.30	SR-04-30	--	Foam, Muffler 5.5 X 3.25	1

Figure 31. Rotary Head Assembly



Rotary Head Assembly Parts List

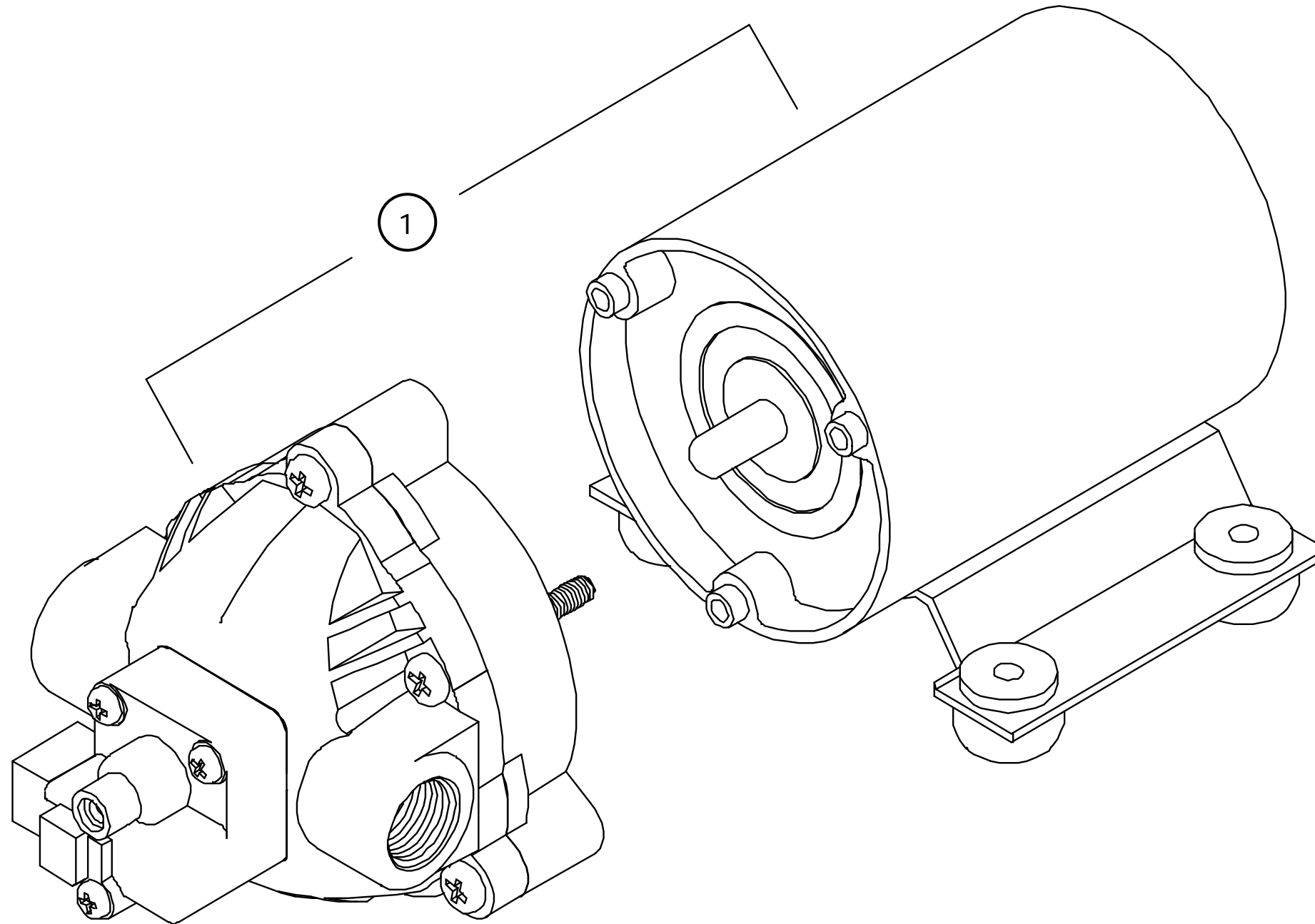
Item	Part Number	Description	Qty
1	000-006-009	Base, High Speed	1
2	000-052-080	Nipple, 1/8" X 4" Brass	5
3	000-052-089	Elbow, 1/8" Brass Female	5
4	000-052-294	Rotary Union, 1/8" NPT	1
5	000-052-427	Bushing, 1/8" MPT X 1/8" FPT	5
6	000-057-047	Gasket, Felt Hub	1
7	000-057-048	Gasket, Vacuum Head	1
8	000-059-001	Gear Box, Complete - Spur	1
9	000-064-012	Head, Skid Assembly	5
10	000-068-174	Hose, 1" I.D. Gray - Vacuum	5

Item	Part Number	Description	Qty
11	000-076-079	Jet, 110015 Quick Connect (Jet, O-Ring, Body)	5
12	000-094-009	Nut, 1/4-20 S/S Nylock	5
13	000-105-008	Plate, Cast Base - Seal	2
14	000-106-001	Plug, Gear Box *	1
15	000-107-0201	Hub, Double Thread Vacuum	1
16	000-107-089	Star, Stainless Steel Heat Treated	1
17	000-143-012	Screw, 5/16-18 X 3/4" S/S Hex Hd Cap Screw	5
18	000-143-162	Screw, 5/16" X 1", 1/4-20 S/S Stripper	5
19	604-052-013	Assembly, Electric Motor	1
20	604-053-003	Assembly, Vacuum Head	1

NOTICE

* Prior to operating the machine, replace the shipping plug (item 14, P/N 000-106-001) with the vented plug (P/N 000-106-014), shipped with your machine. See page 15 in this manual for more information.

Figure 32. Pump Assembly



Pump Assembly Parts List

Item	Current Part Number	Alternate Part Number(s)	Description	Qty
1	CMSL-24	2054	-- Pump, 60 psi 120 V	1

WARRANTY INFORMATION

If requesting warranty information, call or write U. S. Products:

Address:	11015 47th Avenue West,
	Mukilteo, WA 98275 USA
Phone:	800-257-7982
Fax	425-771-7156

and provide the following information:

- When and where the equipment in question was purchased.
- Model and serial number of machine.
- Part number and description of part.
- Description of failure or defect.

Upon receipt of the above information, a Returned Material Authorization (RMA) will be issued. All packages should be prepaid and clearly marked with the Returned Material Authorization number. If these conditions are not met, shipment will be refused.

After evaluation, the items will be repaired or replaced at our discretion.

If a failure or defect is the result of physical abuse, or if the warranty period has expired, repairs will be charged to the customer.

U. S. Products offers a lifetime warranty on our rotationally molded bodies, tanks and heater elements, and a 1 year warranty on all parts.

During this warranty period, U. S. Products will repair or replace, at our sole option, free of charge, any parts shown to be defective in either material or workmanship. Said parts must be returned with postage or freight pre-paid. Specific parts, such as switches, motors, pumps and fittings are also warranted for a period of 1 year from date of original purchase.

NOTICE

This warranty is for replacement of defective parts or workmanship only. IT DOES NOT PROVIDE FOR REPLACEMENT OF COMPLETE UNITS DUE TO DEFECTIVE PARTS. It does NOT cover normal wear items such as hoses, power cords, bumpers, carbon brushes, gaskets, etc., which require replacement as a result of ordinary usage. Also, failures caused by abuse, neglect, alterations or operation contrary to manufacturer's 'recommendations are not warranted.

Replacements parts are warranted only for the remainder of the original warranty period.

NOTICE

This warranty does not cover labor or other charges in connection with replacement parts. NO LOCAL SERVICE OR REPAIR CHARGES ARE ALLOWED UNLESS PRIOR AUTHORIZATION IS OBTAINED.

There are no other warranties, expressed or implied, made with respect to this equipment. The manufacturer assumes no responsibility for damages resulting from the use or misuse of this equipment.

REGISTRATION INFORMATION

Please complete and return the registration form below within 10 days of receiving your Express cleaning machine.

KEEP THIS COPY FOR YOUR RECORDS

WARRANTY REGISTRATION	Date Received
	Registered Owner(s)
	Address
	Phone Number
	Fax Number
	E-mail Address
	Machine Serial Number
	Purchased From (Distributor)

RETURN THIS COPY

WARRANTY REGISTRATION	Date Received
	Registered Owner(s)
	Address
	Phone Number
	Fax Number
	E-mail Address
	Machine Serial Number
	Purchased From (Distributor)

Please mail to: U. S. Products
 Warranty Registration
 11015 47th Avenue West
 Mukilteo, WA 98275 USA

 or fax to: 425-771-7156

