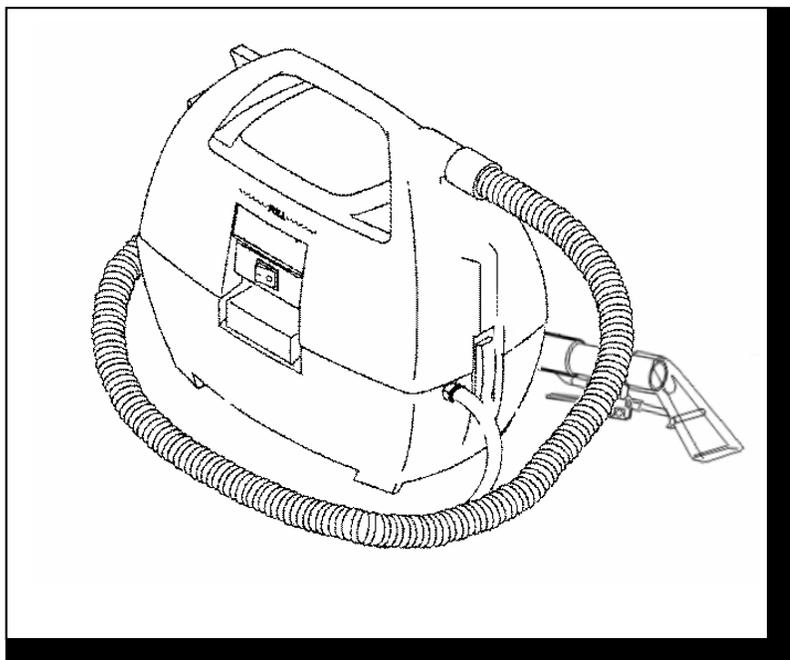


MINI-EXTRACTOR



Operating Instructions



120V MODELS ONLY

E

86221950 04/27/07

PRV NO. 980238

MACHINE DATA LOG/OVERVIEW

MODEL _____
DATE OF PURCHASE _____
SERIAL NUMBER _____
SALES REPRESENTATIVE # _____
DEALER NAME _____
OPERATIONS GUIDE NUMBER _____
PUBLISHED _____

YOUR DEALER	
Name:	_____
Address:	_____
Phone Number:	_____

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HOW TO USE THIS MANUAL

This manual contains the following sections:

- HOW TO USE THIS MANUAL
- SAFETY
- OPERATIONS
- MAINTENANCE
- PARTS LIST

The HOW TO USE THIS MANUAL section will tell you how to find important information for ordering correct repair parts.

Parts may be ordered from authorized dealers. When placing an order for parts, the machine model and machine serial number are important. Refer to the MACHINE DATA box which is filled out during the installation of your machine. The MACHINE DATA box is located on the inside of the front cover of this manual.

MODEL _____
DATE OF PURCHASE _____
SERIAL NUMBER _____
SALES REPRESENTATIVE # _____
DEALER NAME _____
OPERATIONS GUIDE NUMBER _____
PUBLISHED _____

The model and serial number of your machine is on the back underside of machine.

The SAFETY section contains important information regarding hazard or unsafe practices of the machine. Levels of hazards is identified that could result in product or personal injury, or severe injury resulting in death.

The OPERATIONS section is to familiarize the operator with the operation and function of the machine.

The MAINTENANCE section contains preventive maintenance to keep the machine and its components in good working condition.

The PARTS LIST section contains assembled parts illustrations and corresponding parts list. The parts lists include a number of columns of information:

- **REF** – column refers to the reference number on the parts illustration.
- **PART NO.** – column lists the part number for the part.
- **PRV NO.** – reference number.
- **QTY** – column lists the quantity of the part used in that area of the machine.
- **DESCRIPTION** – column is a brief description of the part.
- **SERIAL NO. FROM** – column indicates the first machine the part number is applicable to. When the machine design has changed, this column will indicate serial number of applicable machine. The main illustration shows the most current design of the machine. The boxed illustrations show older designs. If column has an asterisk (*), call manufacturer for serial number.
- **NOTES** – column for information not noted by the other columns.

NOTE: If a service or option kit is installed on your machine, be sure to keep the KIT INSTRUCTIONS which came with the kit. It contains replacement parts numbers needed for ordering future parts.

NOTE: The number on the lower left corner of the front cover is the part number for this manual.

IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic precaution must always be followed, including the following:

READ ALL INSTRUCTIONS BEFORE USING THIS MACHINE.



WARNING:

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

Use only indoors. Do not use outdoors or expose to rain.

Use only as described in this manual. Use only manufacturer's recommended components and attachments.

If the machine is **not working properly**, has been dropped, damaged, left outdoors, or dropped into water, return it to an authorized service center.

Do not operate the machine with any openings blocked. Keep openings free of debris that may reduce airflow.

This machine **is not** suitable for picking up hazardous dust.

Machine can cause a fire when operating near flammable vapors or materials. Do not operate this machine near flammable fluids, dust or vapors.

During operation, attention shall be paid to other persons, especially children.

When leaving unattended, secure against unintentional movement.

The machine shall only be operated by instructed and authorized persons.

When leaving unattended, switch off or lock the main power switch to prevent unauthorized use.

Do not handle the plug or machine with wet hands.

Do not unplug machine by pulling on cord. To unplug, grasp the plug, not the cord.

Do not use with damaged cord or plug. Follow all instructions in this manual concerning grounding the machine.

Do not pull or carry by cord, use cord as a handle, close a door on cord, or pull cord around sharp edges or corners.

Do not pull/run machine over cord. **Keep** cord away from heated surfaces.

Connect to a **properly** grounded outlet. See Grounding Instructions.

SAVE THESE INSTRUCTIONS

HAZARD INTENSITY LEVEL

The following symbols are used throughout this guide as indicated in their descriptions:

HAZARD INTENSITY LEVEL

There are three levels of hazard intensity identified by signal words -**WARNING** and **CAUTION** and **FOR SAFETY**. The level of hazard intensity is determined by the following definitions:



WARNING - Hazards or unsafe practices which COULD result in severe personal injury or death.



CAUTION - Hazards or unsafe practices which could result in minor personal injury or product or property damage.

FOR SAFETY: To Identify actions which must be followed for safe operation of equipment.

Report machine damage or faulty operation immediately. Do not use the machine if it is not in proper operating condition. Following is information that signals some potentially dangerous conditions to the operator or the equipment. Read this information carefully. Know when these conditions can exist. Locate all safety devices on the machine. Please take the necessary steps to train the machine operating personnel.

FOR SAFETY:

DO NOT OPERATE MACHINE:

Unless Trained and Authorized.

Unless Operation Guide is Read and understood.

In Flammable or Explosive areas.

In areas with possible falling objects.

WHEN SERVICING MACHINE:

Avoid moving parts. Do not wear loose clothing; jackets, shirts, or sleeves when working on the machine. Use manufacturer approved replacement parts.

GROUNDING INSTRUCTIONS

THIS PRODUCT IS FOR COMMERCIAL USE ONLY.

ELECTRICAL:

In the USA this machine operates on a standard 15 amp 115V, 60 hz, A.C. power circuit. The amp, hertz, and voltage are listed on the data label found on each machine. Using voltages above or below those indicated on the data label will cause serious damage to the motors.

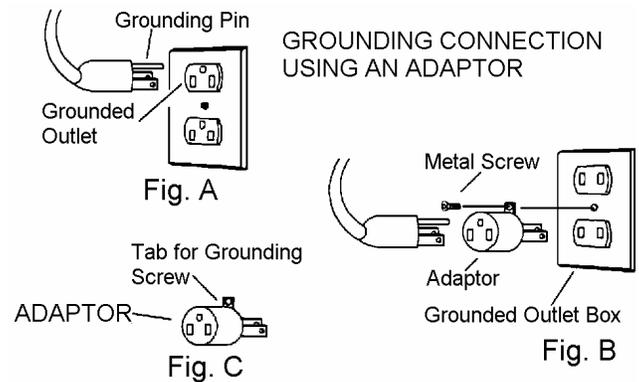
EXTENSION CORDS:

If an extension cord is used, the wire size must be at least one size larger than the power cord on the machine, and must be limited to 50 feet (15.5m) in length.

GROUNDING INSTRUCTIONS:

This appliance 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 appliance 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.

This appliance is for use on a nominal 120-volt circuit, and has a grounded plug that looks like the plug in "Fig. A". A temporary adaptor that looks like the adaptor in "Fig. 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 colored 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.



Note: Adaptors are not allowed in Canada.

⚠ 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 appliance - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

MACHINE OPERATIONS

SET UP AND OPERATION

1. Upon removing your new mini-extractor from the box, loosen the latch at back end of the machine that secures the recovery tank to the solution tank. Remove the recovery tank from the solution tank.
2. Pour clean, hot water to the indicated fill line of the solution tank. **To avoid possible tank distortion, water temperature must not exceed 140 F (60C).**
3. Add a non-foaming cleaning solution concentrate, for use in hot water extractors at the proportions noted on the container (See list below), into solution tank.
4. Place the recovery tank back onto the solution tank and refasten the latch.
5. Plug the power cord into grounded outlet (See GROUNDING INSTRUCTIONS).
6. Connect the vacuum and cleaning tool hoses to the extractor. This unit is equipped with an 1/8" male quick connect for solution hose attachment and a 1" ID vacuum hose hookup. Insure that the female solution hose coupler is securely locked onto the male coupler on the extractor.
7. Turn switch ON. This switch operates both the vacuum motor and the water pump. **NOTE: The pump is an oscillating pump and should not be run dry for extended periods of time. This may cause damage to your pump, therefore voiding your warranty.**
8. Squeeze the solution lever on the cleaning tool to spray cleaning solution and place the vacuum head on the surface to be cleaned. Normally, chemical is applied on the **push** stroke while vacuuming is done on the **pull** stroke. For heavily soiled carpets the hand tool may be used in the scrubbing manner, applying chemical in both the push and pull stroke.
ALWAYS FINISH UP AN AREA WITH A VACUUM PULL STROKE.
9. When cleaning, be sure to monitor the level of recovered solution in the recovery tank. When the solution reaches the FULL mark, shut off the extractor, loosen the latches and empty the recovery tank.
NOTE: Dispose of waste in a proper manner which would not violate any Local, State or Federal law.

CAUTION

Operating vacuum with solution above the FULL mark could draw water directly into the vac motor. This will cause damage to the motor, therefore voiding your warranty.

CAUTION

ALWAYS TEST UPHOLSTERY/CARPET FOR COLOR FASTNESS IN AN INCONSPICUOUS PLACE. Also, to avoid

prolonged drying times, do not spray too much solution in any one area.

WARNING

Always use defoamer if foaming occurs. Foam will suspend large particles which may damage vacuum as well as allow liquid into the vacuum motor without activating the float shutoff.

WARNING

To prevent possible disease hazard, before attempting to clean bodily fluids spills, you must kill any viruses, germs or bacteria present in the bodily fluid.

SUITABLE CHEMICALS	INCOMPATIBLE CHEMICALS
Alkalis	Aldehydes
Clorox II Bleach*	Aromatic Hydrocarbons
Defoaming Agents	Butyls
Detergents	Carbon Tetrachloride
Hydroxides	Clorox*
Oxygen Bleaches	Chlorinated Bleaches
Soaps	Chlorinated Hydrocarbons
Sta-Puf Fabric Softener*	D-Limonene
Vinegar	Lysol*
	Methyls (MEK)
	Perchloroethylene perc)
	Phenols
	Trichloroethylene

*Registered Trademark

WARNING

Before making any adjustments or performing any maintenance to your machine, disconnect the power cord from the electrical source.

SHUT DOWN AND STORAGE

1. Turn Switch OFF. Empty recovery tank completely and rinse several times to remove any dirt or debris that may be left behind.
2. Tip the solution tank over a sink to drain any unused cleaning solution and rinse with clean water to remove any suds left behind by the cleaning chemicals. **NOTE: Dispose of waste in a proper manner which would not violate any Local, State or Federal law**
3. Run a small amount of clean water through pump if chemicals were used. This will help insure the life of your pump.
4. Check the spray jet on the cleaning tool for full spray pattern and inspect vac head for any obstructions. Also make sure to clean the filter cap attached to portal cover of any debris that may have been trapped during cleaning.
5. Remove as much moisture from system before storing in cold climates. Excess water may freeze during storage and crack internal components, causing damage to the unit.

DAILY MAINTENANCE:

Follow same procedure for Shut Down and Storage.

PERIODIC MAINTENANCE:

1. Twice a month, flush a white vinegar solution (one quart vinegar to two gallons water) or anti-browning solution (mixed as directed) through the extractor. This will prevent build-up of alkaline residue in the system.
2. If spray jet becomes clogged, remove the spray tip, wash it thoroughly, and blow dry. *NOTE: DO NOT USE PINS, WIRE, ETC. TO CLEAN NOZZLE AS THIS COULD DESTROY THE SPRAY PATTERN.*
3. Apply silicone lubricant to solution nipple.
4. Periodically inspect all hoses, electrical cable and connections on your machine. Frayed or cracked hoses should be repaired or replaced to eliminate vacuum or solution pressure loss. If the cable insulation on the power cord is broken or frayed, repair or replace immediately. Don't take chances with electrical fire or shock.

WARNING:

Only qualified maintenance personnel are to perform the following repairs.

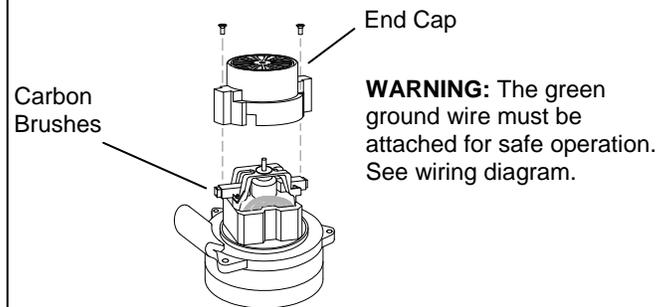
SOLUTION PUMP REPLACEMENT:

1. Turn off all switches and unplug the machine.
2. Unlatch and remove recovery tank.
3. Unfasten screws holding vacuum motor housing to solution tank.
4. Unfasten screws holding pump plate to bottom of solution tank.
5. Remove solution hoses from fittings on pump.
6. Remove pump from brackets and remove fittings and grounding wire.
7. Reverse process to install new replacement pump.

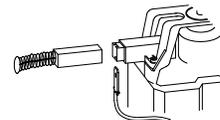
VACUUM MOTOR REPLACEMENT:

1. Turn off all switches and unplug machine.
2. Unlatch and remove recovery tank.
3. Unfasten screws holding vacuum motor retainer to vacuum motor housing
4. Lift vacuum motor from vacuum motor housing. Locate the vacuum motor wires and disconnect at the connector.
5. Remove vacuum motor.
6. Reverse process to install vacuum motor replacement.

Vacuum Motor Carbon Brushes Replacement

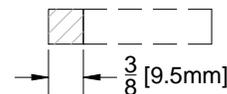


If armature commutator is grooved, extremely pitted or not concentric, the motor will need to be replaced or sent to a qualified service center.



Important:

These brushes wear quicker as the length shortens due to increased heat. Spring inside brush housing will damage motor if brushes are allowed to wear away completely.



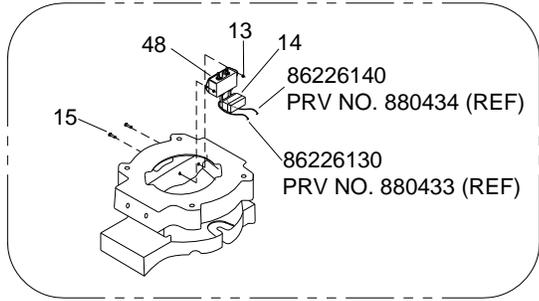
Periodically check the length of the carbon brushes. Replace both carbon brushes when either is less than 3/8" (9.5mm) long.

TROUBLESHOOTING

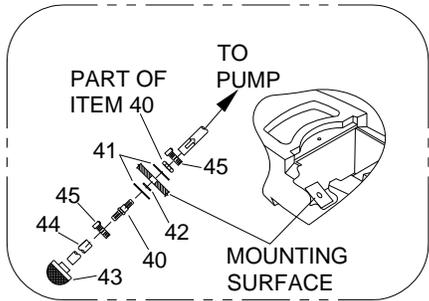
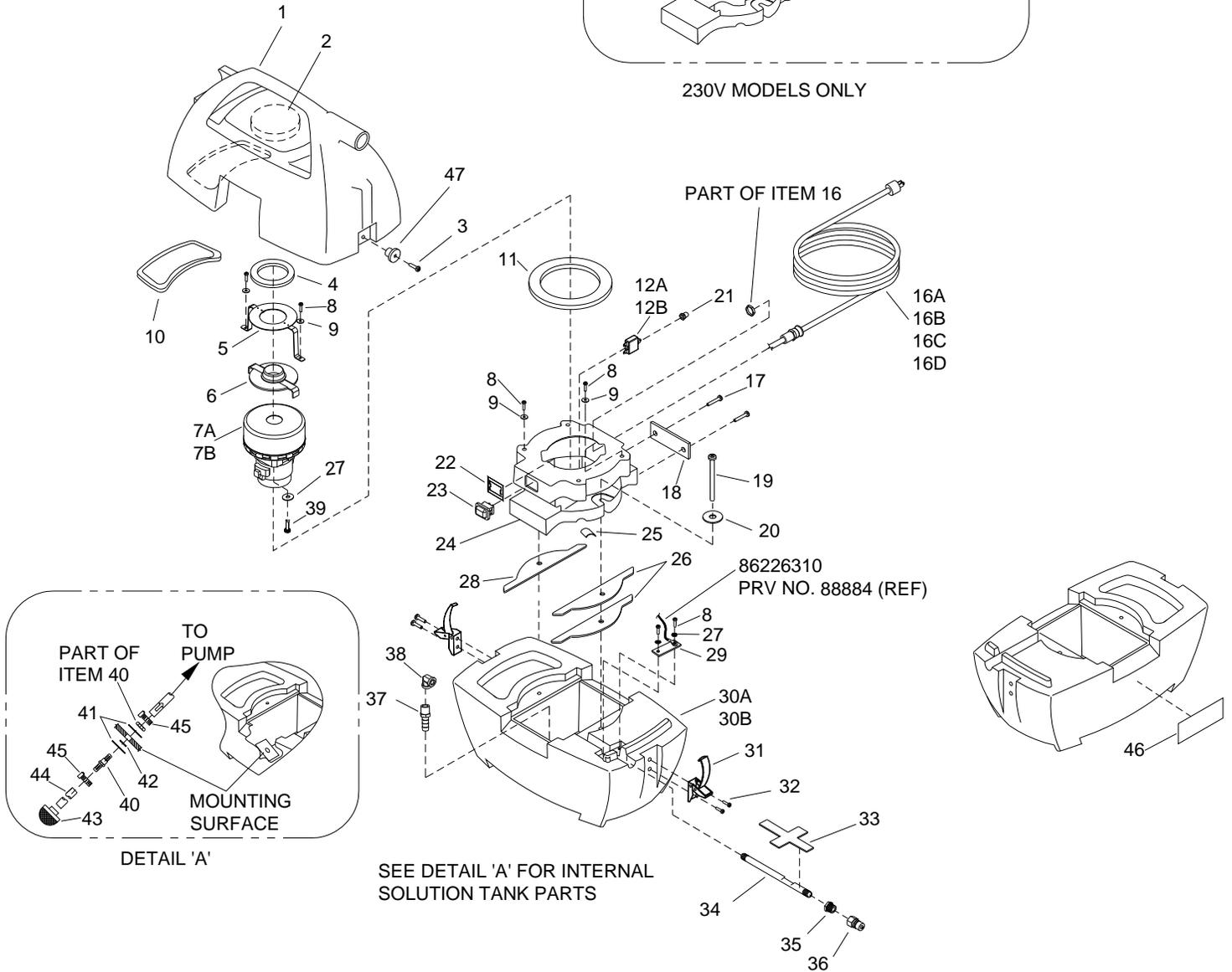
TROUBLESHOOTING

PROBLEM.	CAUSE	SOLUTION
Little or no solution flow	Clogged spray jet on cleaning tool	Remove and clean jets
	Faulty pump	Check and replace pump.
	Incorrectly attached solution hose	Ensure solution hose coupler is securely attached to the coupler on the solution tank.
Loss of vacuum/ Solution recovery	Incorrectly attached vac hose	Ensure vac hose is pushed completely onto the recovery tank inlet.
	Obstruction in cleaning tool	Inspect for and remove any debris.
	Recovery tank is not securely mounted on the solution tank.	Tighten latch on either end of the machine.

EXTRACTOR GROUP



230V MODELS ONLY



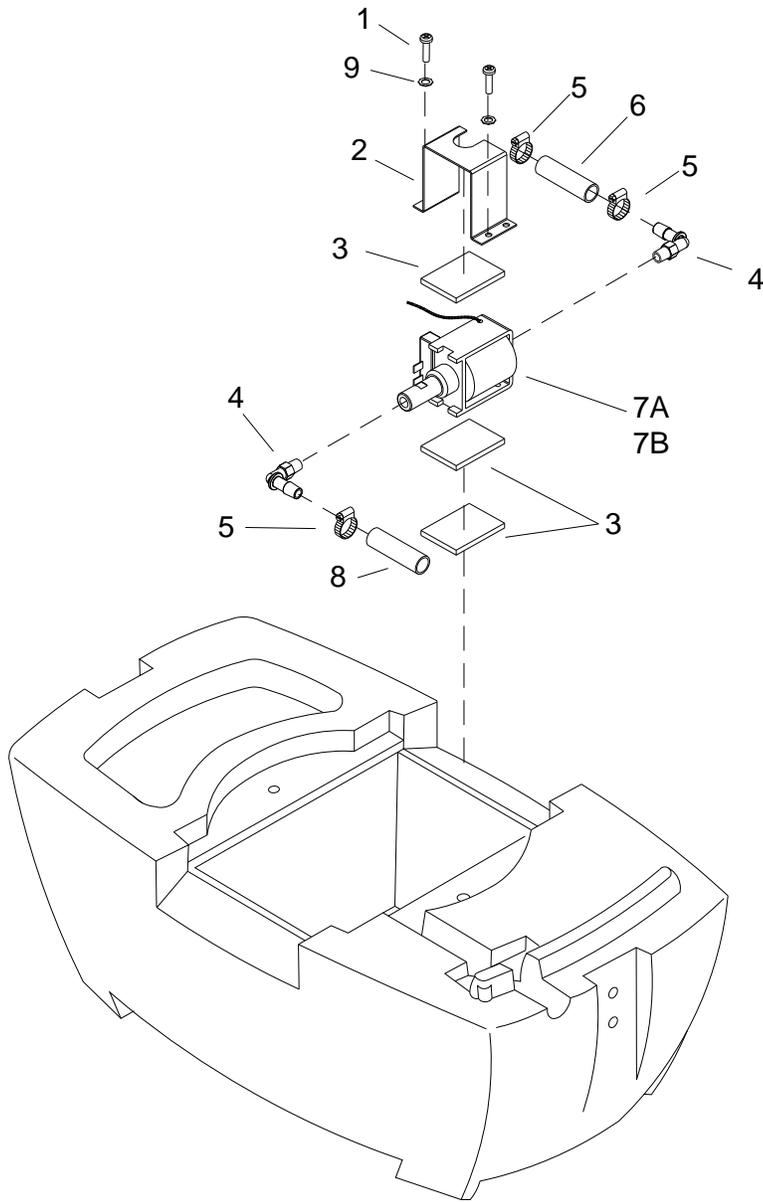
DETAIL 'A'

SEE DETAIL 'A' FOR INTERNAL SOLUTION TANK PARTS

EXTRACTOR GROUP

REF	PART NO.	PRV NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES:
1	86225200	75211	1	TANK, RECOVERY		
2	86236520	34293	1	FOAM, 4.00 OD X 1.0 THICK		
3	86223730	70859	2	SCREW, 8-32 X 1/2 FHMS BLK PLTD		
4	86237440	35168	1	GASKET, 4.06 X 2.50 X .38		
5	86223440	67511	1	RETAINER, VAC MOTOR		
6	86217310	270102	1	COVER, VAC MOTOR		
7A	86258440	53137	1	VAC MOTOR, 120V 2ST LNP		
7B	86225500	53813	1	VAC MOTOR, 230V 2ST LNP		230V MACHINES ONLY
8	86274290	70162	6	SCR, 10-32 X 3/8 PPHMS SS		
9	86225770	87494	4	WASHER, M6 X 12.5 FLAT SS		
10	86237410	35160	1	GASKET, SPOTTER RECOVERY		
11	86237420	35161	1	GASKET, 4.0 X 5.5" X .25 PORON		
12A	86215670	140839	1	BREAKER, 8A VDE CIRCUIT		
12B	86215710	141046	1	BREAKER, 5A VDE CIRCUIT		
13	86010690	87068	2	WASHER, 1/8 RIVET BACKUP		
14	86261160	27952	1	CAPACITOR ASM, EMI SPOTTER		230V MACHINES ONLY
15	86136540	67481	3	RIVET, M4 X 14 MM		
16A	86217060	23722	1	CORD ASM, 14 X 3 25' YLW SPOTTER		U.S. MACHINE
16B	86217040	23720	1	CORD ASM, UK SPOTTER		UK MACHINE
16C	86217070	23723	1	CORD ASM, EURO SPOTTER		EUROPE MACHINE
16D	86217080	23724	1	CORD ASM, AUST SPOTTER		AUSTRALIA MACHINE
17	86136550	67483	2	RIVET, M3 X 12 MM		
18	86079650	62129	1	PLATE, DATA LABEL		
19	86275870	70556	2	SCREW, 1/4-20 X 1.5 PHMS PLTD		
20	86225760	87493	2	WASHER, M8 X 22 FLAT PLTD		
21	86002010	14942	1	BOOT, 3/8 CIRCUIT BREAKER		
22	86233510	27376	1	CLIP, SWITCH RETAINING		
23	86225110	72194	1	SWITCH, DPST 250V 16(4) SPLASH		
24	86219310	41278	1	HOUSING, VAC		
25	86237460	35173	1	GASKET, .31 x .75 x 1.98		
26	86237450	35172	2	GASKET, VAC HOUSING 3/16"		
27	86010640	87016	3	WASHER, #10 EXT. TOOTH LOCK		
28	86218030	35354	1	GASKET, VAC HOUSING 3/8"		
29	86068560	140037	1	BRACKET, NIPPLE		
30A	86225190	75210	1	TANK, SOLUTION		
30B	86225220	75459	1	TANK, SOLUTION SPOTTER GRAY		
31	86246180	51320	2	LATCH, PRESTO TANK		
32	86006520	70052	4	SCREW, 8-32 X 3/8 PPHMS SS		
33	86218160	35368	1	GASKET, GROUND WIRE		
34	86247740	56049	1	NIPPLE, 1/4 X 6.0 BRASS		
35	86227220	04066	1	ADPTR, 1/8 MPT X 1/4 FPT BRASS		
36	86200820	270-11A	1	NIPPLE, 1/8 FPT QD MALE BRASS		
37	86197580	40029	1	HOSEBARB, 1/4 MPT X 3/8		
38	86197370	31017	1	ELBOW, 1/4 FPT X 1/4 FPT		
39	86288450	70689	1	SCR, M4.8 X 10 HHTF TYPE B		
40	86258310	140070	1	BULKHEAD, UNION		
41	86279320	87136	2	WASHER, .52 ID X .875 OD		
42	86248090	59034	1	O-RING, .500 ID X .688 OD X .103		
43	86007700	73250	1	STRAINER, 80 MESH X 3/8 FPT		
44	86219010	39708	1	HOSE, 3/8 ID SGLBRD RBR X 5"		
45	86233150	20042	2	CLAMP, HOSE		
46	86220140	500895	1	LABEL, WARNING		
47	86241790	48074	2	KEEPER, PRESTO LATCH		
48	86236010	34290	1	FILTER, EMI 250V 6A 1.75MM		230V MACHINES ONLY

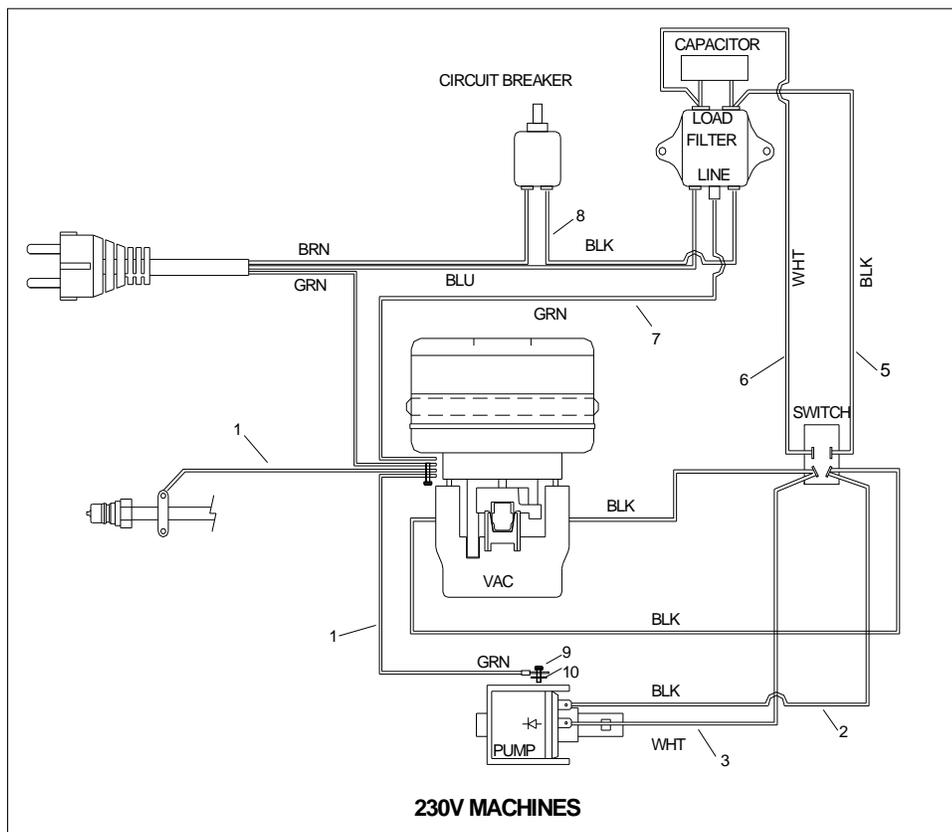
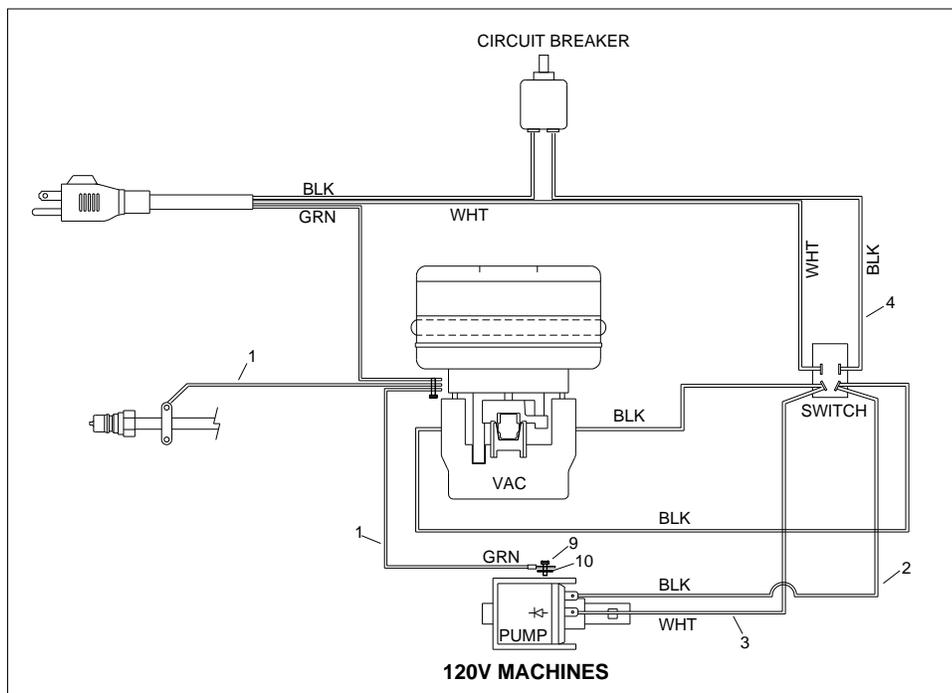
SOLUTION PUMP GROUP



SOLUTION PUMP GROUP

REF	PART NO.	PRV NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES:
1	86275710	70528	2	SCREW, 10-32 X 3/8 PPH EX-SEMS		
2	86068690	140172	1	BRACKET, SOLENOID PUMP		
3	86237530	35187	3	GASKET, TUBE SEAL		
4	86197590	40031	2	HOSEBARB, 1/8 MPT 3/8 90°		
5	86233150	20042	3	CLAMP, HOSE		
6	86240290	39714	1	HOSE, 3/8ID WIREBOUND X 2.6"		
7A	86201110	250-78	1	PUMP, 110/120V 60HZ FLOJET		
7B	86201120	250-78A	1	PUMP, 220/240V 50 HZ FLOJET		230V MACHINES ONLY
8	86281310	39326	1	HOSE, 3/8ID WIREBOUND X 8.8"		
9	86010640	87016	2	WASHER, #10 EXT. TOOTH LOCK		

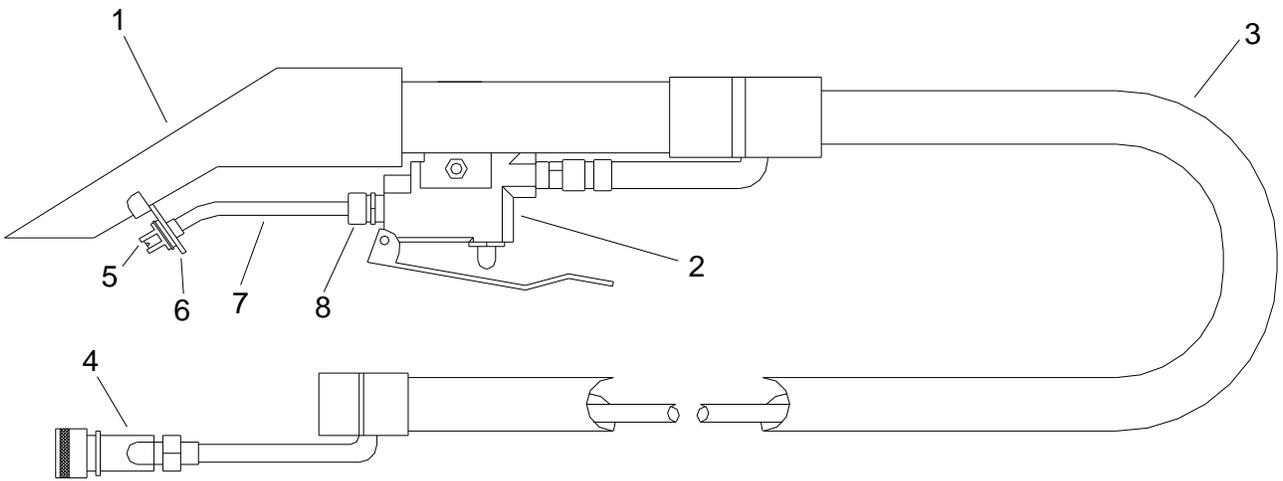
WIRING DIAGRAM



WIRING PARTS LIST

REF	PART NO.	PRV NO.	QTY	DESCRIPTION	SERIAL NO. FROM	NOTES:
1	86226310	88884	2	WIRE, 14" GRN/18 76008 X 76008		
2	86226100	880430	1	WIRE, 13" BLK/14 76050 X 76029		
3	86226110	880431	1	WIRE, 13" WHT/14 76050 X 76059		
4	86226120	880432	1	WIRE, 9" BLK/14 76029 X 76029		
5	86226130	880433	1	WIRE, 9" BLK/14 76050 X 76029		
6	86226140	880434	1	WIRE, 9" WHT/14 76050 X 76029		
7	86226160	880436	1	WIRE, 10" GRN/14 76022 X 76010		
8	86226150	880435	1	WIRE, 12" BLK/14 76029 X 76022		
9	86006770	70323	1	SCR, 10-32 X 1/4 PHTR PLTD		
10	86010640	87016	1	WASHER, #10 LOCK EXT STAR SS		

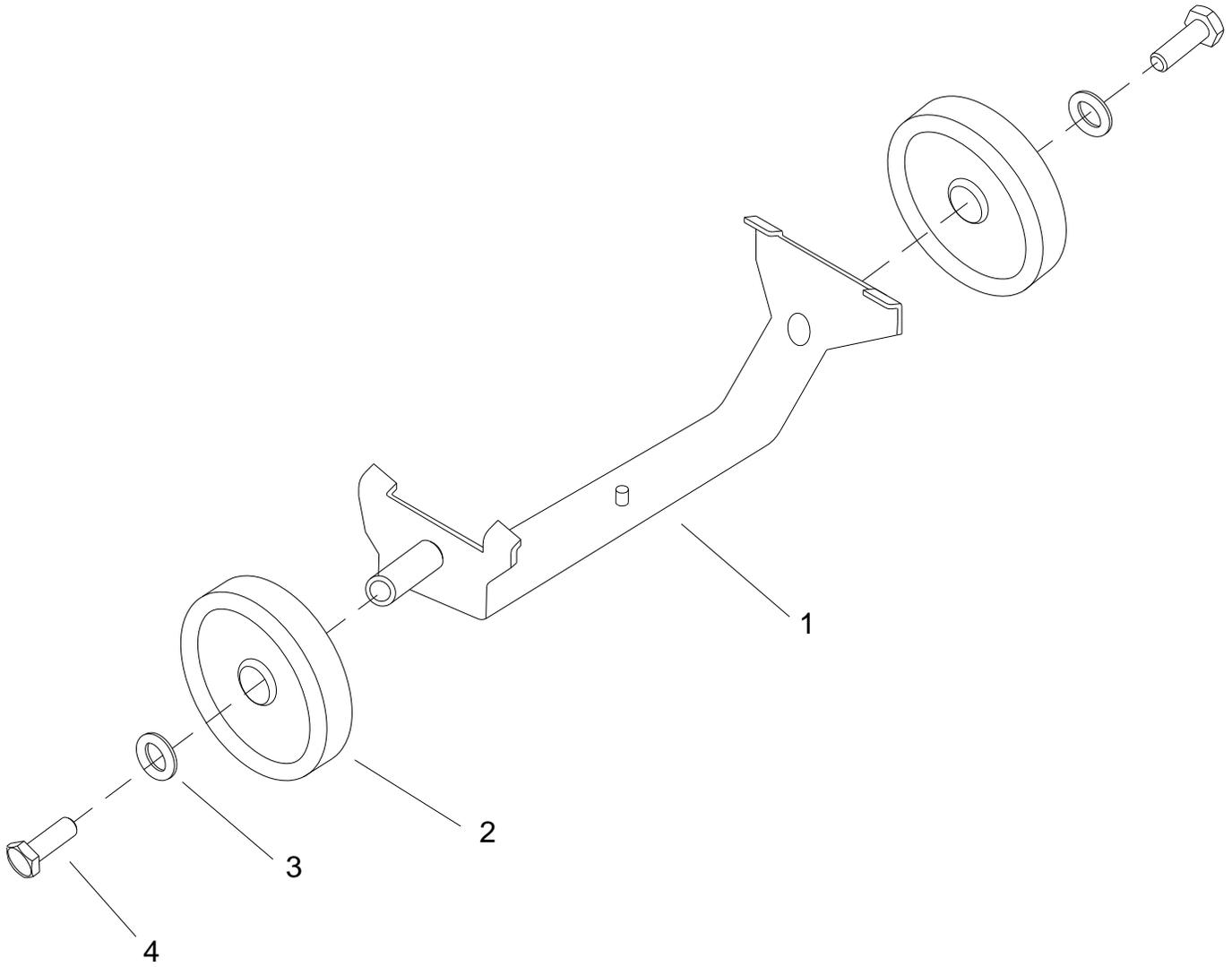
HAND TOOL



HAND TOOL

REF	PART NO.	PRV NO.	DESCRIPTION	SERIAL NO. FROM	NOTES:
1	86219340	41536	HOUSING, HANDTOOL SPOTTER OKA		
2	86225670	84200	VALVE ASM, SPOTTER OKA		
3	86219020	39712	HOSE ASM, VAC/SOLUTION OKA		
4	86200810	270-11	NIPPLE, 1/8 FPT QD FEM BRASS		
5	86219570	44100	JET, ASM W/O RING OKA		
6	86223100	629998	PLATE, RETAINER W/HARDWARE OKA		
7	86221910	54202	MANIFOLD, SPOTTER OKA		
8	86218000	34438	FTTG, 1/8MPT X 3/16 COMP OKA		
-	86218790	HTO	HAND TOOL, SPOTTER OKA		ENTIRE ASSEMBLY AS KIT

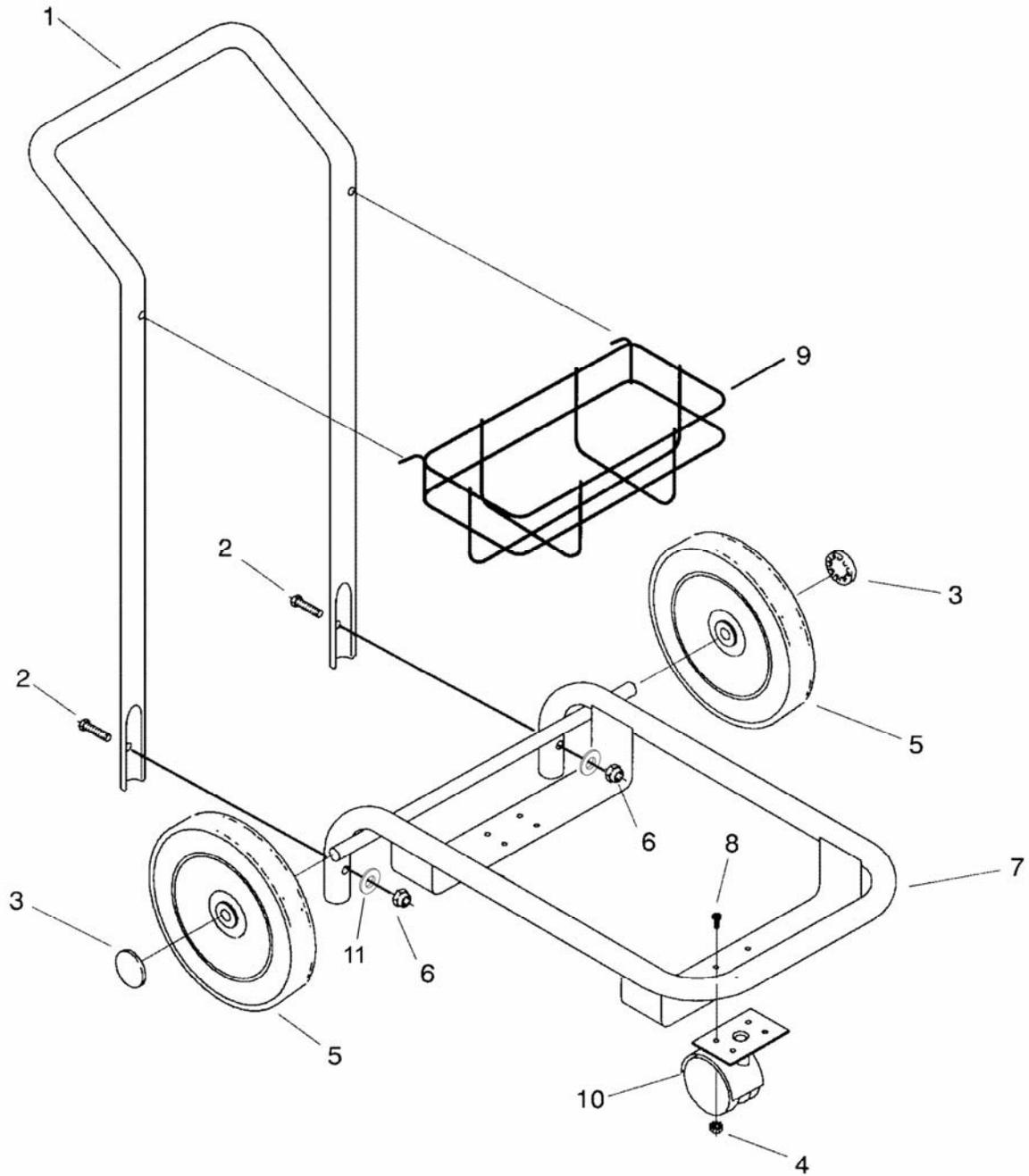
MINI CART



MINI CART

REF	PART NO.	PRV NO.	DESCRIPTION	SERIAL NO. FROM	NOTES:
1	86222950	62846	PLATE, WELDMENT		
2	86259770	89086	WHEEL, 5"D X 1" X .5" ID GRY		
3	86137280	87054	WASHER, M8 FLAT DIN125A PLT		
4	86136640	70262	SCR, M8 X 20 HHMS PLTD		
-	86222030	PMCT	MINI CART		ENTIRE ASSEMBLY AS KIT

CART



CART

REF	PART NO.	PRV NO.	DESCRIPTION	SERIAL NO. FROM	NOTES:
1	86089270	78310	TUBE, CART HANDLE		
2	86273740	70010	SCREW, 1/4-20 X 1.5 TAP PLTD.		
3	86271380	57196	NUT, 1/2 STAR LOCK PUSH-ON		
4	86005700	57104	NUT, 10-32 HEX W/ STAR WASHER		
5	86259970	89507	WHEEL, 8" GREY		
6	86005680	57047	NUT, 1/4-20 LOCK		
7	86092130	27637	CART BASE ASM, SPOTTER		
8	86006590	70088	SCREW, 10-32 X 1/2 PPHMS SS NP		
9	86228340	140088	BASKET, CART		
10	86232530	18010	CASTER, 2.5 DIA		
11	86010630	87013	WASHER, 1/4 ID X 5/8 OD SS		
-	86000030	PCT	SPOTTER CART		ENTIRE ASM AS KIT

SUGGESTED SPARE PARTS

REF	PART NO.	PRV NO.	DESCRIPTION	SERIAL NO. FROM	NOTES:
1	86225110	72194	SWITCH, DPST 250V 16(4) SPLASH		
2	86258440	53137	VAC MOTOR, 120V 2ST LNP		
3	86225500	53813	VAC MOTOR, 230V 2ST LNP		
4	86201110	250-78	PUMP, 110/120 60HZ FLOJET		
5	86201120	250-78A	PUMP, 220/240V 50HZ FLOJET		
6	86135320	140687	BRUSH SET, 120V VAC, WINDSOR		120V MOTOR ONLY
7	86135330	140688	BRUSH SET, 230V VAC, WINDSOR		230V MOTOR ONLY