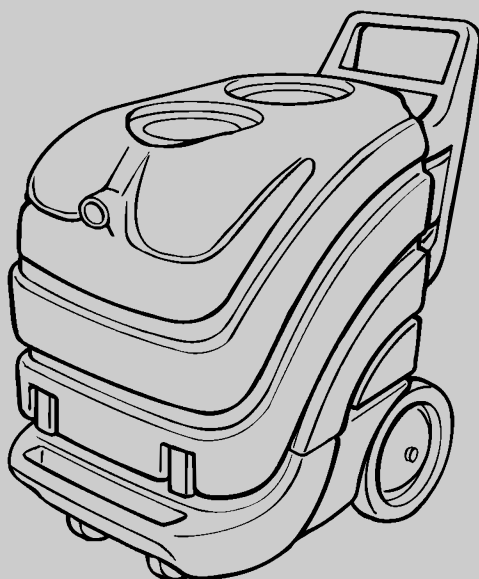




1180

Carpet Extractor with Heat

Operator and Parts Manual



Model Part No.:
607677 - 120V
607678 - 120V Pac

608787
Rev. 03 (11-2009)



This manual is furnished with each new model. It provides necessary operation and maintenance instructions and an illustrated parts list.

Read this manual completely and understand the machine before operating or servicing it.

When ordering replacement parts, use the illustrated parts lists section in this manual. Before ordering parts or supplies, be sure to have your machine model number and serial number available. Parts and supplies may be ordered by phone or mail from any authorized parts and service center, distributor or from any of the manufacturer's subsidiaries.

This machine will provide excellent service. However, the best results will be obtained at minimum costs if:

- The machine is operated with reasonable care.
- The machine is maintained regularly - per the machine maintenance instructions provided.
- The machine is maintained with manufacturer supplied or equivalent parts.

MACHINE DATA

Please fill out at time of installation for future reference.

Model No. - _____

Serial No. - _____

Machine Options - _____

Sales Rep. - _____

Sales Rep. phone no. - _____

Customer Number - _____

Installation Date - _____



PROTECT THE ENVIRONMENT

Please dispose of packaging materials, old machine components such as batteries, hazardous fluids, including antifreeze and oil, in an environmentally safe way according to local waste disposal regulations.



Always remember to recycle.

TENNANT Company
PO Box 1452
Minneapolis, MN 55440
Phone: (800) 553-8033 or (763) 513-2850
www.tennantco.com

Specifications and parts are subject to change without notice.

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OPERATION

SAFETY PRECAUTIONS

This machine is intended for commercial use. It is designed to clean carpet and upholstery in an indoor environment and is not constructed for any other use. Use only recommended accessory tools and commercially available carpet cleaners intended for machine application.

All operators must read, understand and practice the following safety precautions.

The following warning alert symbol and the "FOR SAFETY" heading are used throughout this manual as indicated in their description:

 **WARNING:** To warn of hazards or unsafe practices which could result in severe personal injury or death.

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

Failure to follow these warnings may result in: personal injury, electrocution, electrical shock, fire or explosion.

 **WARNING:** Do Not Use Flammable Liquids Or Operate Machine In Or Near Flammable Liquids, Vapors Or Combustible Dusts.

This machine is not equipped with explosion proof motors. The electric motors will spark upon start up and during operation which could cause a flash fire or explosion if machine is used in an area where flammable vapors/liquids or combustible dusts are present.

 **WARNING:** Do Not Pick Up Flammable Materials Or Reactive Metals.

 **WARNING:** Do Not Operate With Damaged Power Cord. Do Not Modify Plug. Unplug power Cord Before Servicing Machine.

If the supply cord is damaged or broken, it must be replaced by the manufacturer or it's service agent or a similarly qualified person in order to avoid a hazard.

 **WARNING:** Do Not Use Outdoors. Do Not Expose To Rain. Store Indoors.

The following information signals potentially dangerous conditions to the operator or equipment:

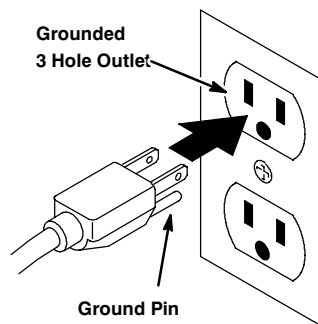
FOR SAFETY:

1. Do not operate machine:
 - With flammable liquids or near flammable vapors as an explosion or flash fire may occur.
 - Unless trained and authorized.
 - Unless operator manual is read and understood.
 - Unless cord is properly grounded.
 - With damaged cord or plug.
 - If not in proper operating condition.
 - In outdoor areas.
 - In standing water.
 - With the use of additional extension cords. Only use manufacturer's extension cord equipped with machine which has proper capacity and is grounded.
2. Before operating machine:
 - Make sure all safety devices are in place and operate properly.
 - Place wet floor signs as needed.
3. 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 plug with wet hands.
 - Keep cord away from heated surfaces.
 - Report machine damage or faulty operation immediately.
 - Follow mixing and handling instructions on chemical containers
 - Never allow children to play on or around.
4. Before leaving or servicing machine:
 - Turn off machine.
 - Unplug cord from wall outlet.

5. 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.
 - All repairs must be performed by a qualified service person.
 - Do not modify the machine from its original design.
6. When transporting machine:
 - Get assistance when lifting machine.
 - Unplug cord from wall outlet.
 - Use tie-down straps to secure machine to truck or trailer.

GROUNDING INSTRUCTIONS

Machine 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 having an equipment-grounding conductor and grounding plug. The plug must be plugged into an appropriate outlet that is properly installed in accordance with all local codes and ordinances. Do not remove ground pin; if missing, replace plug before use.



SAFETY LABEL

The safety label appears on the machine in the location indicated. Replace label if it becomes damaged or illegible.

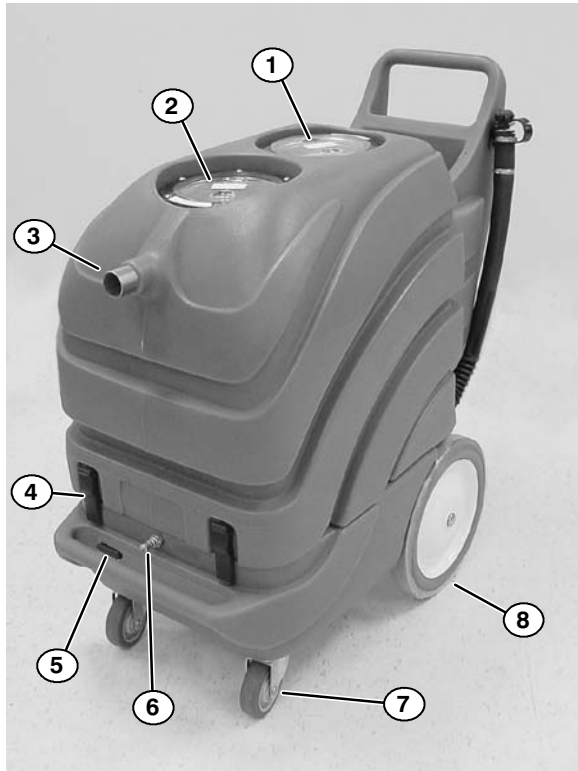


WARNING LABEL -
Located on back side of machine.

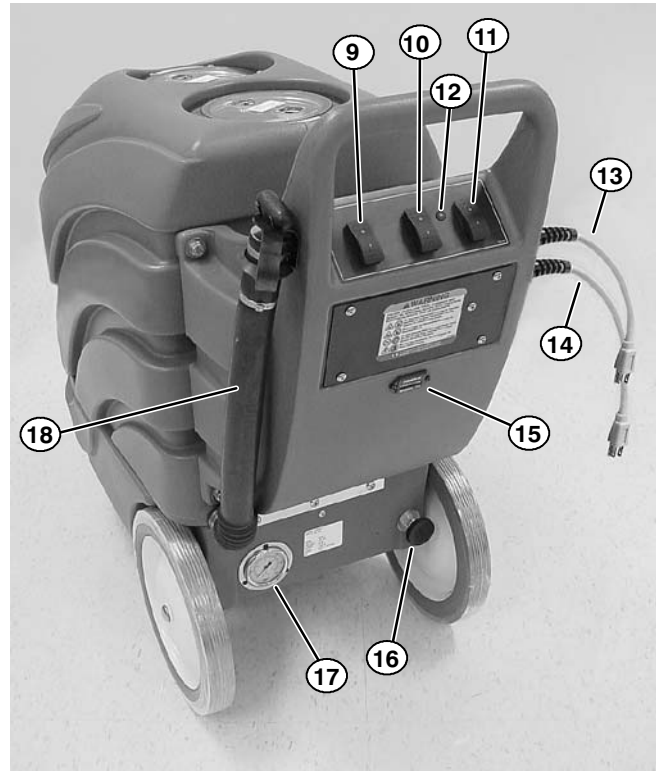
⚠ WARNING	
EXPLOSION, FIRE AND SHOCK HAZARD. AVOID INJURY. • Do Not Use or Pick Up Flammable Materials. • Do Not Use Near Flammable Liquids, Vapors or Combustible Dusts. • Do Not Operate With Damaged Power Cord. Do Not Modify Plug. Unplug Power Cord Before Servicing Machine. • Do Not Use Outdoors. Do Not Expose to Rain. Store Indoors.	
⚠ AVERTISSEMENT	
RISQUE D'EXPLOSION, D'INCENDIE ET DE DÉCHARGE. ÉVITEZ LES BLESSURES. • N'utilisez Pas ou Ne Ramassez Pas de Matériaux Inflammables. • N'utilisez Pas Près de Liquides, Vapeurs ou Poussières Inflammables. • N'utilisez Pas la Machine Avec un Cordon d'Alimentation Endommagé. Ne Modifiez Pas la Prise. Débranchez le Cordon d'Alimentation Avant d'Entretien la Machine. • N'utilisez Pas en Extérieur. N'Exposez Pas à la Pluie. Entrez à l'Intérieur.	
⚠ ADVERTENCIA	
PELIGRO DE EXPLOSIÓN, FUEGO, DESCARGA EVITE LESIONES. • No Use Ó Recoja Materiales Flammables. • No Use Cerca De Líquidos Flammables, Vapores Ó Materiales Combustibles. • No Use Con Cable De Corriente Dañado. No Altere El Enchufe. Desconecte Cable De Corriente Antes Del Mantenimiento. • No Use Al Aire Libre. No Exponga A La Lluvia. Guarde Bajo Techo.	
1026384	

OPERATION

MACHINE COMPONENTS



1. Recovery Tank
2. Solution Tank
3. Accessory Tool Vacuum Hose Hookup
4. Latches
5. Preheat/Clean Knob
6. Accessory Tool Solution Hose Quick Coupler
7. Casters
8. 305mm (12 in.) Stair Climbing Wheels



9. Vacuum ON/OFF Switch
10. Pump ON/OFF Switch
11. Heater ON/OFF Switch
12. Separate Circuit Indicator Light
13. Power Cord - Main
14. Power Cord - Heater
15. Hour Meter
16. Pressure Control Valve
17. Pressure Gauge
18. Recovery Tank Drain Hose

MACHINE SETUP

1. Carefully check carton for signs of damage. Report damages at once to carrier. The machine is shipped fully assembled and is ready for use.
2. Unscrew and remove solution tank lid. Using a hose or bucket, fill tank with 57L (15 gal) of hot water, 60°C (140°F) maximum (Figure 1).

ATTENTION: Use different buckets to fill and drain machine to prevent solution system clogs.



FIG. 1

⚠ WARNING: Do Not Use Flammable Liquids Or Operate Machine In Or Near Flammable Liquids, Vapors Or Combustible Dusts.

3. Add a recommended cleaning solution to the proper dilution ratio.

FOR SAFETY: When using machine, follow mixing and handling instructions on chemical containers.

ATTENTION: If using powdered cleaning chemicals, mix chemical with water prior to adding to the tank.

NOTE: If desired, water alone achieves excellent cleaning results.

4. Replace solution tank lid after filling.
5. Connect two 7.6m (25 ft) extension power cords into machine.
6. Plug each extension cord into separate grounded circuits. Circuit indicator lamp (green) will light when cords are on separate circuits (Figure 2).

ATTENTION: When plugging extension cords into receptacles be certain to use separate circuits. This will prevent a circuit overload. Do not activate heater if green indicator does not light.

FOR SAFETY: Do not operate machine unless cords are properly grounded.

FOR SAFETY: Do not operate machine with the use of additional extension cords. Only use manufacturer's extension cord equipped with machine which has proper capacity and is grounded.



FIG. 2

7. Prime solution pump:
 - a. Connect bleeder hose onto solution hose quick coupler located at front of extractor.
 - b. Submerge other end of bleeder hose back into solution tank (Figure 3).
 - c. Open rear pressure control valve completely (turn knob counterclockwise) then turn pump switch on. As pump runs, air bubbles should dissipate in solution (Figure 3).
 - d. Close pressure control valve completely by turning knob clockwise and allow pump to continue running.
 - e. Now attach accessory tool. If properly primed, pressure should read 200-220 psi.

NOTE: Whenever extractor runs out of solution while operating, you must always prime pump before operating.



FIG. 3

OPERATION

- Preheat solution. To maintain or to increase solution temperature before operating extractor, rotate PREHEAT/CLEAN knob to PREHEAT (Figure 4). Activate pump and heater switches. Solution temperature will rise approximately 0.55°C (1°F) per minute with a full solution tank. Maximum achievable solution temperature is approximately 66°C (150°F).

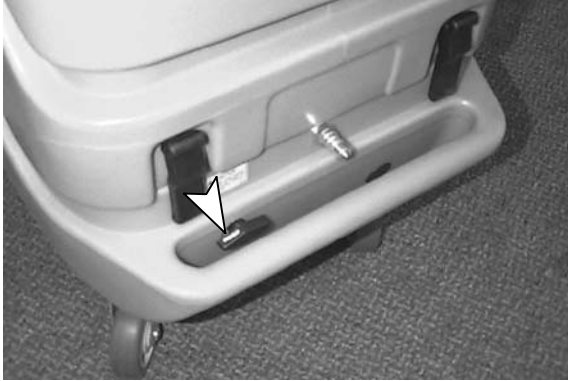


FIG. 4

- Attach vacuum and solution hoses to front of machine, then to floor or hand tool (Figure 5).



FIG. 5

- After preheating the solution, turn the pump and heater switches off momentarily. Then turn the PREHEAT/CLEAN knob to the CLEAN position. After turning the knob, turn the pump and heater switches back on again. **IMPORTANT:** The pump switch must always be turned off when turning the PREHEAT/CLEAN knob to prevent machine damage (Figure 6). While operating, the CLEAN mode will increase the preheated solution temperature an additional 11°C (20°F) at the spray tips. *Example: Preheated solution temperature of 66°C (150°F) will increase to a maximum temperature of approximately 77°C (170°F).*

ATTENTION: DO NOT switch from PREHEAT to CLEAN mode when pump switch is activated, pump and gauge damage may occur (not covered by warranty). Always turn pump switch off before turning preheat/clean knob.

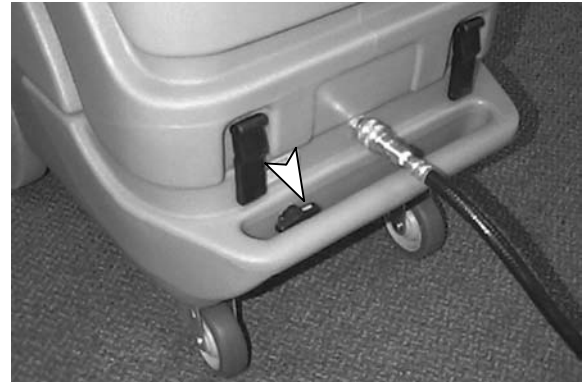


FIG. 6

NOTE: In order to get optimum water heat at spray tips while operating, keep preheat/clean knob in CLEAN mode. Cleaning in PREHEAT mode will not harm machine, this will only prevent optimum water heat at spray tips.

OPERATING FLOOR TOOL

FOR SAFETY: Do not operate machine unless operator manual is read and understood.

NOTE: Vacuum carpet before cleaning.

- Activate vacuum, pump and heater switches.

NOTE: Be certain that circuit indicator light is on to verify that two separate circuits are being used.

- Place floor tool so bottom of glide plate or stainless steel shoes are parallel to floor. Squeeze trigger and apply downward pressure on floor tool head and slowly pull tool backwards using both hands. Release trigger 150mm (6 in) from end of stroke (Figure 7).

⚠ WARNING: Do Not Pick Up Flammable Materials Or Reactive Metals.



FIG. 7

3. Push floor tool forward over same path with trigger released when returning for next stroke. Continue this pull and push method with a slight overlap of each stroke.

NOTE: For heavily soiled areas, repeat stroke or change angle of stroke.

4. Check for excessive foam buildup in recovery tank. Use a recommended foam control solution to prevent vacuum motor damage.

ATTENTION: Excessive foam buildup will not activate the float shut-off screen. Vacuum motor damage may result.

5. When finished cleaning, turn off switches and drain recovery tank (See DRAINING RECOVERY TANK).
6. After cleaning, relieve water pressure from floor tool before disconnecting hose. Squeeze trigger for five seconds after turning off the machine

OPERATING HAND TOOL

Optional accessory tool is required.

FOR SAFETY: Do not operate machine unless operator manual is read and understood.

NOTE: This machine cleans most synthetic upholstery very well. Fabrics like Herculon and synthetic velvets will clean with excellent results. Extraction is not recommended for most cottons, silks, wools or natural fiber velvets. Check cleaning instructions sewn in furniture by manufacturer for further instructions. Extra caution should be taken with furniture that has been re-upholstered. Any material under new upholstery may bleed and discolor new fabric.

NOTE: Vacuum upholstery before cleaning.

1. **TEST FABRIC FOR COLORFASTNESS:** Pour a small amount of cleaning solution on a white cloth. Hold damp portion of cloth against an area of upholstery which is hidden from view. Hold it there for 60 seconds. If no color transfers to cloth, it should be safe to clean. However, always use your best judgement.

ATTENTION: Be certain the circuit indicator light is on to verify that two separate circuits are being used.

2. Activate vacuum, pump and heater switches.
3. Adjust pressure valve knob to read 30 psi on pressure gauge (Figure 8).



FIG. 8

4. Place hand tool on fabric and squeeze trigger while applying pressure on fabric and slowly pull tool backwards. Be careful not to over wet upholstery. Repeat stroke without spray to get fabric as dry as possible. Overlap cleaning strokes to avoid streaking (Figure 9).



FIG. 9

⚠ WARNING: Do Not Pick Up Flammable Materials Or Reactive Metals.

ATTENTION: Do not allow water or foam to enter float shut-off screen in recovery tank.

5. When finished cleaning, turn off switches and drain recovery tank (See DRAINING RECOVERY TANK).
6. After cleaning, relieve water pressure from accessory tool before disconnecting hose. Squeeze trigger for five seconds after turning off the machine.

OPERATION

DRAINING TANKS

FOR SAFETY: Before leaving or servicing machine, unplug power cords from wall outlets.

ATTENTION: Use different buckets to fill and drain machine to prevent solution system clogs.

DRAINING RECOVERY TANK

NOTE: When solution tank becomes empty, recovery tank must be drained.

1. Turn switches off and unplug power cords.
2. Remove drain hose from holder, position hose over floor drain and twist off knob to drain (Figure 10).



FIG. 10

3. Replace knob tightly before cleaning again.
 4. After final draining, remove recovery tank lid and rinse both tank and float shut-off screen thoroughly to prevent odor buildup (Figure 13).
-

DRAINING SOLUTION TANK

1. To drain remaining solution from solution tank, disconnect solution hose and attach bleeder hose (bleeder hose supplied with machine) (Figure 11).

ATTENTION: Relieve water pressure from accessory tool before disconnecting hose. Squeeze trigger for five seconds after turning off the main power switch.

2. Activate pump switch. Pump solution into an empty bucket (Figure 11).



FIG. 11

3. Rinse solution tank with clean water to prevent odor buildup. Run vacuum motor for 30 seconds to discharge any moisture. Store extractor with covers off to promote air circulation.
-

MACHINE MAINTENANCE

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

FOR SAFETY: When servicing machine, unplug cords from wall outlets.

For ease of servicing, machine tank is hinged to pivot away from chassis to allow access to inner components. Make sure tanks are empty before opening. To open machine for servicing, follow these steps:

- a. Unplug machine.
- b. Unlatch front two latches.
- c. Lift tank upward, away from chassis (Figure 12).



FIG. 12

DAILY MAINTENANCE (Every 4 Hours of Use)

1. Clean machine with a non-abrasive, nonsolvent cleaner.
2. Drain and rinse tanks thoroughly.
3. Remove any lint buildup from float shut-off screen (Figure 13).



FIG. 13

4. Remove and rinse solution tank screen (Figure 14).



FIG. 14

5. Inspect power cords for damage. Replace if damaged. Coil cords neatly after each use.
6. Remove any lodged debris from floor tool.
7. Check spray pattern for clogged spray tips.

WEEKLY MAINTENANCE (Every 20 Hours of Use)

1. Check floor tool for loose shoes. If loose, tap back in place with rubber mallet.
2. Inspect vacuum hose for holes and loose cuffs.

MONTHLY MAINTENANCE (Every 80 Hours of Use)

1. Inspect cord grips for damage. Replace if damaged. Coil cords neatly after each use.
2. Inspect tank for cracks.
3. Lubricate casters with a water resistant grease.
4. Remove spray tips from floor and hand tools and soak in an acetic acid solution.

NOTE: Do not use pins, paper clips, etc., to unplug spray tips. This will damage spray tips.

5. Flush pump system. Use acetic acid solution to dissolve normal alkaline chemical buildup. Follow these steps:

FOR SAFETY: When using machine, follow mixing and handling instructions on chemical containers.

- a. Premix .5L (16 oz) of an acetic acid solution with 7.5L (2 gal) of hot water 60°C (140°F) and pour into solution tank.
 - b. Place a bucket under spray tips to catch spray.
 - c. Turn on pump switch.
 - d. Squeeze trigger on tool for 30 seconds.
 - e. Allow solution to remain in system for up to 6 hours in above freezing temperatures.
 - f. Later, spray out acetic acid solution into a drain. Then run 11.4L (3 gal) of clean water through system to flush out impurities.
6. Grease pump: Solution pump must be greased every 40 hours of operation or monthly, whichever comes first. Refer to hour meter located below handle of machine to help you determine when greasing is necessary. Each new machine is supplied with a grease gun (grease gun part number 190022).
 - a. To grease pump, release latches on front of machine and lift tank to access pump.
 - b. Remove safety cover from pump by pinching tabs and pulling straight off. You will also need to remove black 1-inch plug from front of chassis (Figure 15).



FIG. 15

OPERATION

- c. Insert grease gun through plug hole (front of chassis) and onto grease fitting, pump plunger at most 1 to 2 times. Gun only pumps grease at last 19mm (0.75 in) of plunger travel. Be sure to push plunger all the way down! Do this slowly to allow grease to enter bearing (Figure 16).

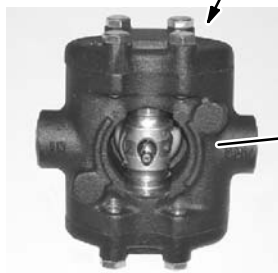
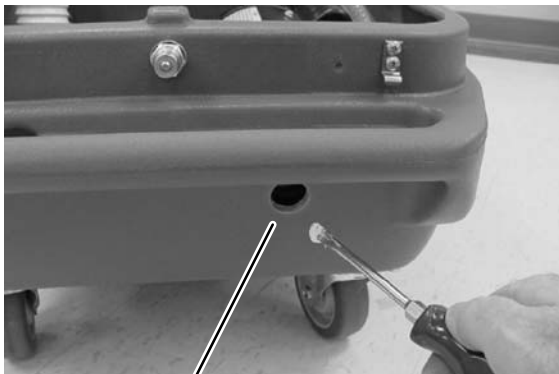
ATTENTION: Overgreasing pump will damage seals.

ATTENTION: Do not use an air powered or hand lever grease gun, they will damage pump.

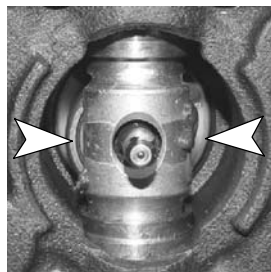


FIG. 16

- d. With a screwdriver, apply a generous dab of grease to outer diameter of cam bearing at top and bottom where bearing contacts connecting rod (Figure 17).



Front View of Pump



Apply Grease to These Two Bearing Surfaces

FIG. 17

- e. Replace grease cover and black plug.
- f. Check pump periodically and scrape out (do not wash out) any excess grease from pump cavity.

QUARTERLY MAINTENANCE (Every 250 Hours of Use)

Inspect motors for carbon brush wear. Replace brushes when worn to a length of 10mm (0.38 in.) or less. Contact an Authorized Service Center for carbon brush inspection.

ATTENTION: Contact an Authorized Service Center for machine repairs. Machine repairs performed by other than an authorized person will void the warranty.

STORING MACHINE

1. Before storing machine, be certain to flush out tanks and drain machine of all water.
2. Store machine in a dry area in the upright position.
3. Remove clear lids to promote air circulation.

⚠ WARNING: Do Not Use Outdoors. Do Not Expose To Rain. Store Indoors.

ATTENTION: If storing machine in freezing temperatures, be sure that machine and solution system are completely drained and dry.

RECOMMENDED STOCK ITEMS

Refer to Parts List section for recommended stock items. Stock Items are clearly identified with a bullet preceding the parts description. See example below:

Ref.	Part No.	Description	Qty.
1	701103	ASM.,STANDPIPE	1
2	180618	●FLOAT, SHUTOFF	1
3	230187	NIPPLE	1
4	101714	●GASKET	1
5	210240	NUT, FLANGED	1

TROUBLE SHOOTING

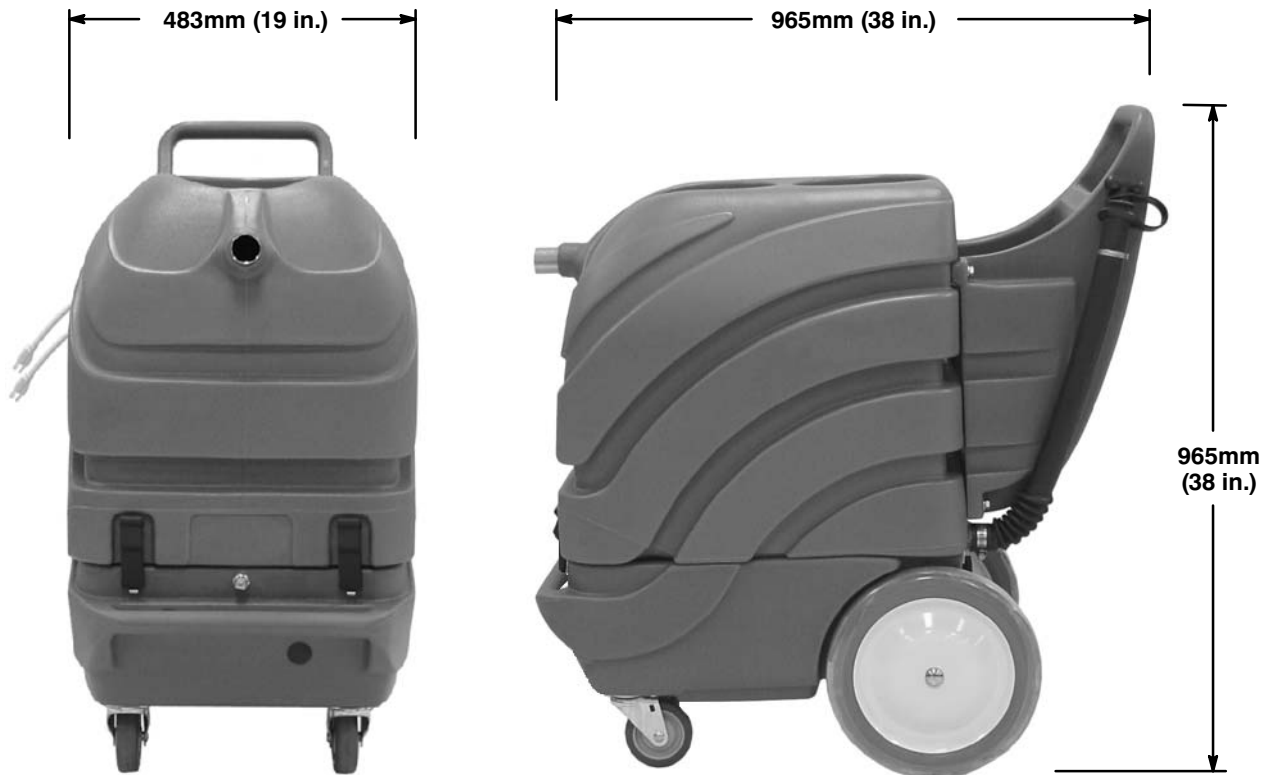
PROBLEM	CAUSE	SOLUTION
Uneven or no spray from tips.	Dirty or plugged spray tips.	Clean or replace tips.
	Improper spray tip size or spray angle.	Replace with proper tips. Also check alignment of spray tips so all tips spray in a straight line.
	Worn spray tips.	Replace spray tips.
	Pump switch off.	Turn the pump switch on.
	Solution hose not connected.	Make sure solution hose is connected.
Leaking floor tool.	Quick coupler on floor tool faulty.	Replace quick coupler.
	Flow control valve leaking.	Contact Service Center.
	Hose split or fittings loose.	Replace hose and tighten fittings.
	Solution hose connection not fully engaged.	Reconnect quick coupler.
	Pressure control valve stem worn.	Contact Service Center.
Solution pump will not operate.	Fuse blown or circuit breaker tripped in building.	Replace fuse or reset breaker in building.
	Faulty pump switch.	Contact Service Center.
	Loose wiring to solution pump.	Contact Service Center.
	Faulty solution pump motor.	Contact Service Center.
	Thermal overload activated - motor is too hot and will automatically shut down until cool.	Let motor cool and check what caused overheat.
	Solution pump bearing freezes up, caused by not greasing.	Contact Service Center.
Poor or no vacuum suction.	Fuse blown or circuit breaker tripped in building.	Replace fuse or reset breaker in building.
	Faulty vacuum switch.	Contact Service Center.
	Drain hose plug open or loose.	Plug drain hose and tighten knob.
	Lint is clogging float shut-off screen.	Remove recovery cover and clean lint off screen.
	Air is leaking around clear cover lids.	Tighten tank lids.
	Vacuum hose is loose.	Push hose firmly onto recovery tool and onto front of extractor.
	Holes in vacuum hose or hose cuffs loose on the hose.	Replace hose or thread cuffs securely onto hose.
	Faulty vacuum motor.	Contact Service Center.
	Faulty vacuum gasket.	Replace gasket.
	Float shut-off screen activated.	Turn off vacuum, empty tank.
Water not heating.	Thermostat failed.	Contact Service Center.
	Loose wires to heater.	Contact Service Center.
	Limit Thermostat breaker tripped.	Reset Limit Thermostat.
	Limit Thermostat breaker has failed.	Contact Service Center.

OPERATION

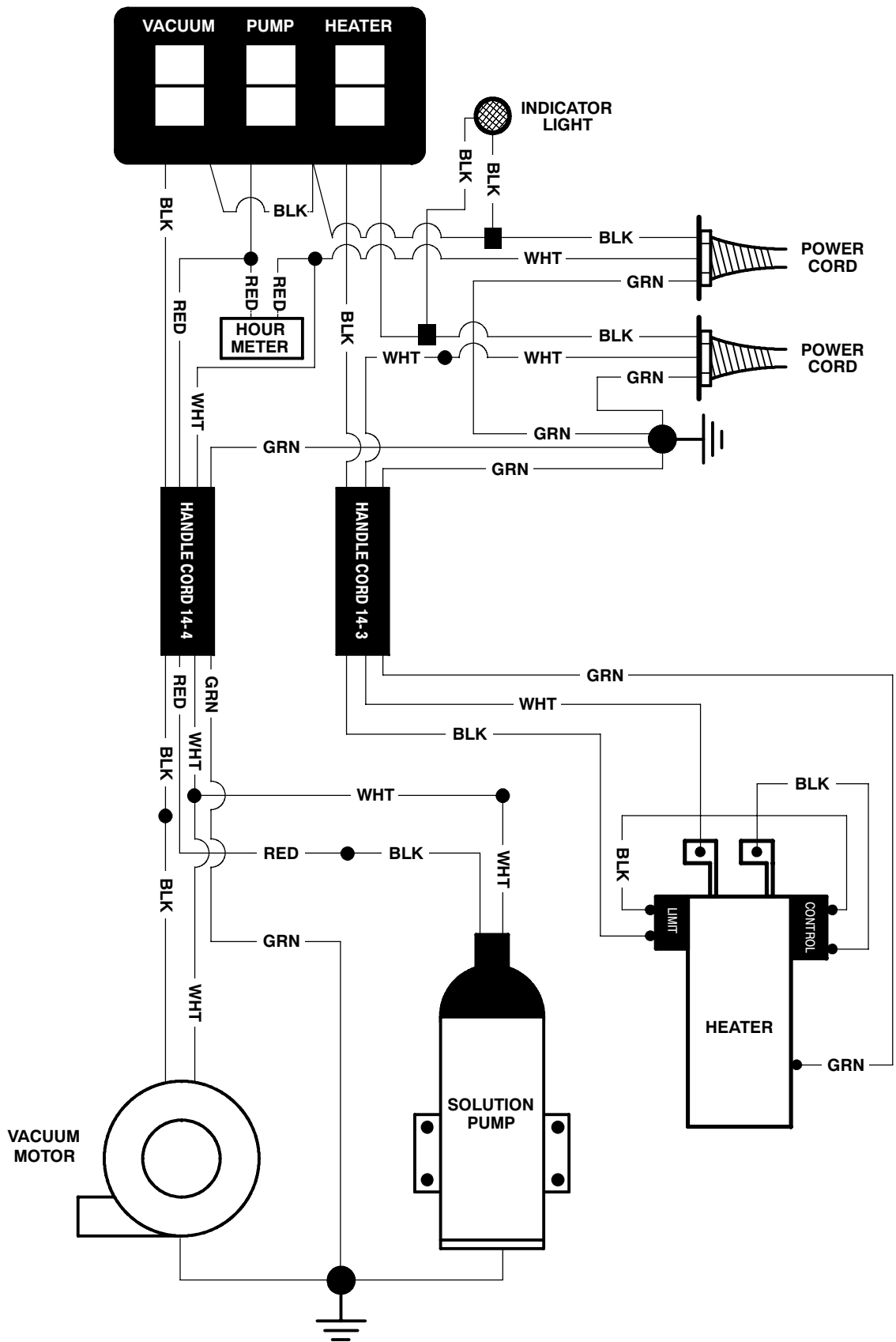
SPECIFICATIONS

MODEL	1180
LENGTH	965mm (38 in.)
WIDTH	483mm (19 in.)
HEIGHT	965mm (38 in.)
WEIGHT	65.7 kg (145 lb.)
SOLUTION TANK CAPACITY	56.7L (15 gal.)
RECOVERY TANK CAPACITY	71.9L (19 gal.)
SOLUTION PUMP	5 A, 120V, 9.0L per min. (2.4 gpm) 0-17.22 bar (0-220 psi)
VACUUM MOTOR	10 A, 2.5 hp. 120V, 1200 watts
HEATER	14A, 120V, 1700 watts, 77°C (170°F) max. temp.
SEALED WATER LIFT	340.3 cm (134 in.)
DECIBEL RATING AT OPERATOR'S EAR, INDOORS ON CARPET	81dB(A)

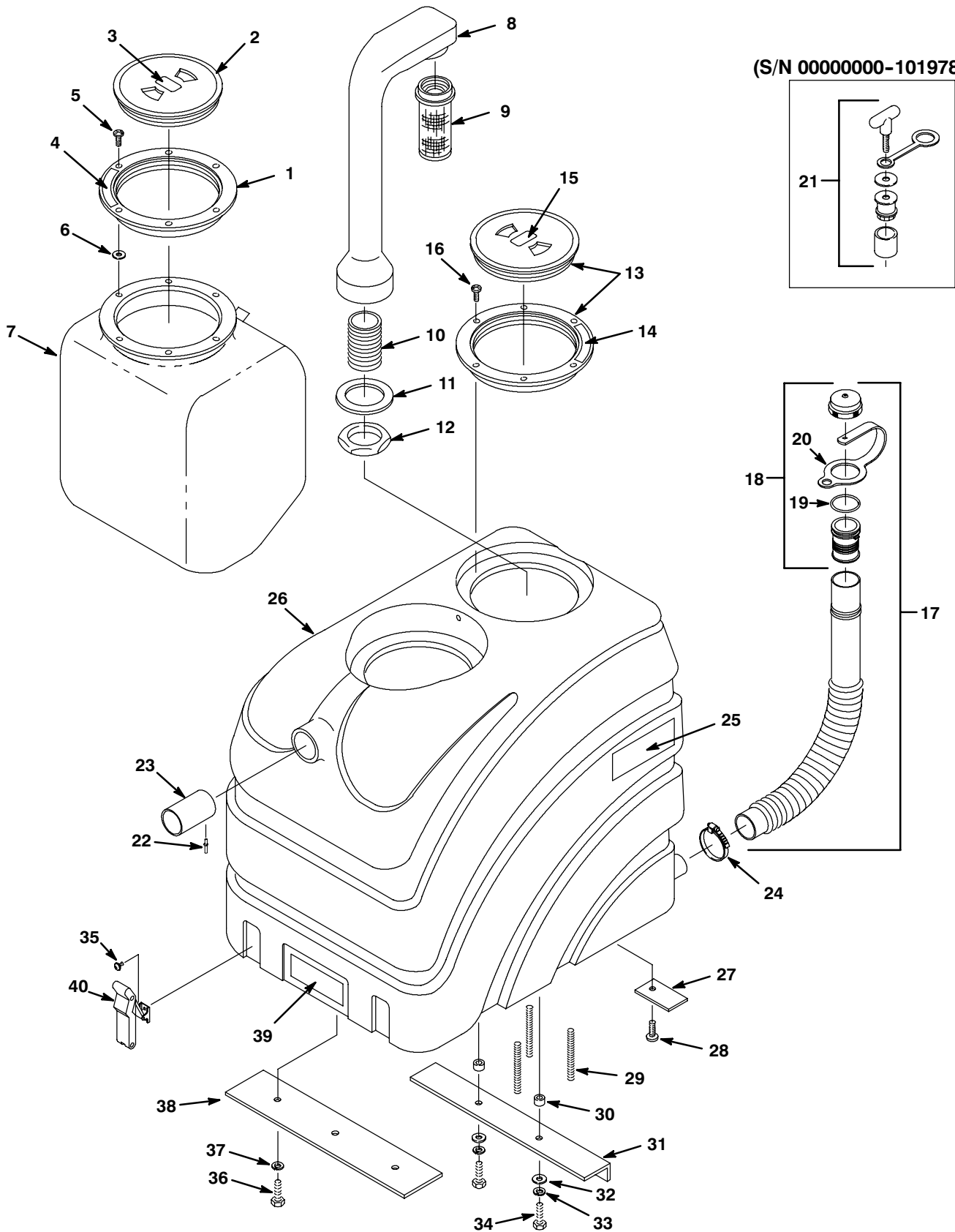
MACHINE DIMENSIONS



120V Wiring



UPPER HOUSING GROUP



(S/N 0000000-10197851)

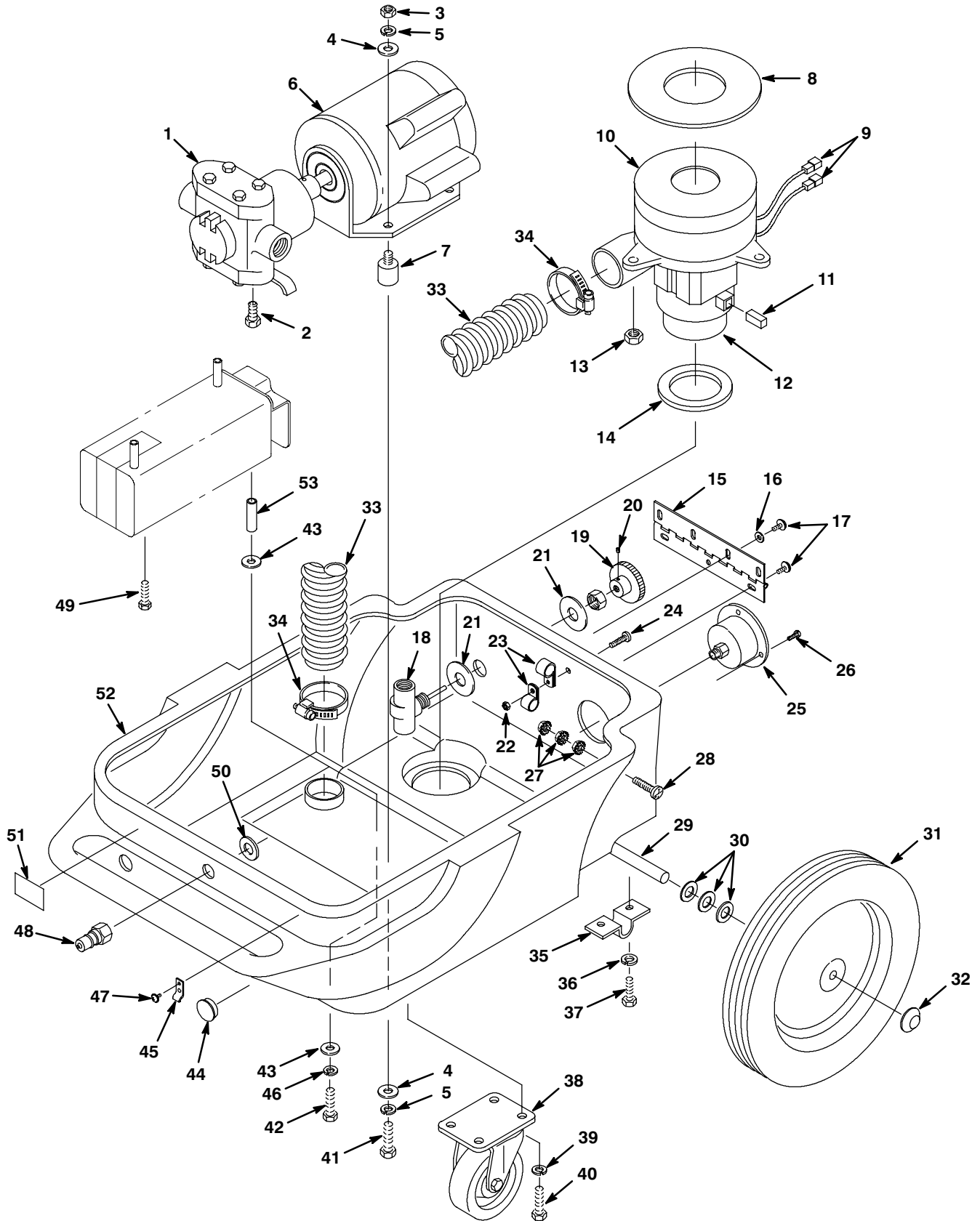
UPPER HOUSING GROUP

REF	PART #	DESCRIPTION	QTY.
▽	100103	COVER, ASSY. CLEAR LID W/ COUNTERSUNK HOLES	1
▲ 1	100109	LID, OUTER RING	1
▲ 2	100105	●LID, CENTER ONLY CLEAR	1
3	120190	DECAL, USE BLEEDER HOSE	1
4	120907	LABEL, IMPORTANT-ALWAYS...	1
5	140900	SCREW, TRS 10-24X0.75 PHL	6
6	140000	WASHER, 0.28B FLAT	6
7	602783	BLADDER	1
8	602448	STANDPIPE W/NIPPLE	1
9	180613	●FLOAT, SHUT-OFF (1) BALL	1
10	606088	FITTING 1-1/2 NIPPLE	1
11	101714	GASKET, WASTE AIR CHAMBER	1
12	210240	NUT, FLANGED 1-1/2 FPT	1
13	100102	●CLEAR LID W/STANDARD HOLE	1
14	120907	LABEL, IMPORTANT-ALWAYS...	1
15	120906	LABEL, IMPORTANT-DRAIN...	1
16	140825	SCREW, #6X1/2 PANPHL	6
▽ 17	1007072	●HOSE, DRAIN ASSEMBLY 20.80"	1
▲▽18	1008639	●CAP, DRAIN ASSY	1
▲▲19	1008637	●O RING, 1.48" ID, 1.76" OD	1
▲▲20	1019563	●STRAP, DRAIN CAP	1
21	190965	HOSE KIT, DRAIN COMPLETE [OLD STYLE]	1
22	140713	RIVET, POP 3/16 X .575	1
23	230905	TUBE, INLET	1

REF	PART #	DESCRIPTION	QTY.
24	11531	CLAMP, HOSE, WORMDRIVE, 1.06-2.00D, .56W	1
25	608112	LABEL [TENNANT 1180]	2
26	607686	TANK, RECVY, RM-TL, TRIMMED (TEAL)	1
27	230845	PLATE, CORD CLAMP	1
28	140834	SCREW, .25-20X0.62 FLTPHL	1
29	140258	SCREW, 1/4-20X4-1/4 STUD	3
30	140134	SLEEVE, .376ODX.253IDX.28LG	2
31	230846	BRACKET, TANK SUPPORT	1
32	140000	WASHER, 0.28B FLAT	2
33	140016	WASHER, 0.25 LOCK	2
34	24672	SCREW, .25-20X0.75 HXHDCP	2
35	609980	SCREW, #8-32X3/8 TRSPHL SEMS	4
36	140259	SCREW, .25-20X0.62 HXHDCP	3
37	140016	WASHER, 0.25 LOCK	3
38	230946	BRACKET, TANK BRACE FRONT	1
39	120210	LABEL, LOGO, 04.75L, WHITE [TENNANT]	1
40	140932	●LATCH, RUBBER, W/ KEEPER	2

- ▽ ASSEMBLY
- ▲ INCLUDED IN ASSEMBLY
- RECOMMENDED STOCK ITEM

LOWER HOUSING GROUP



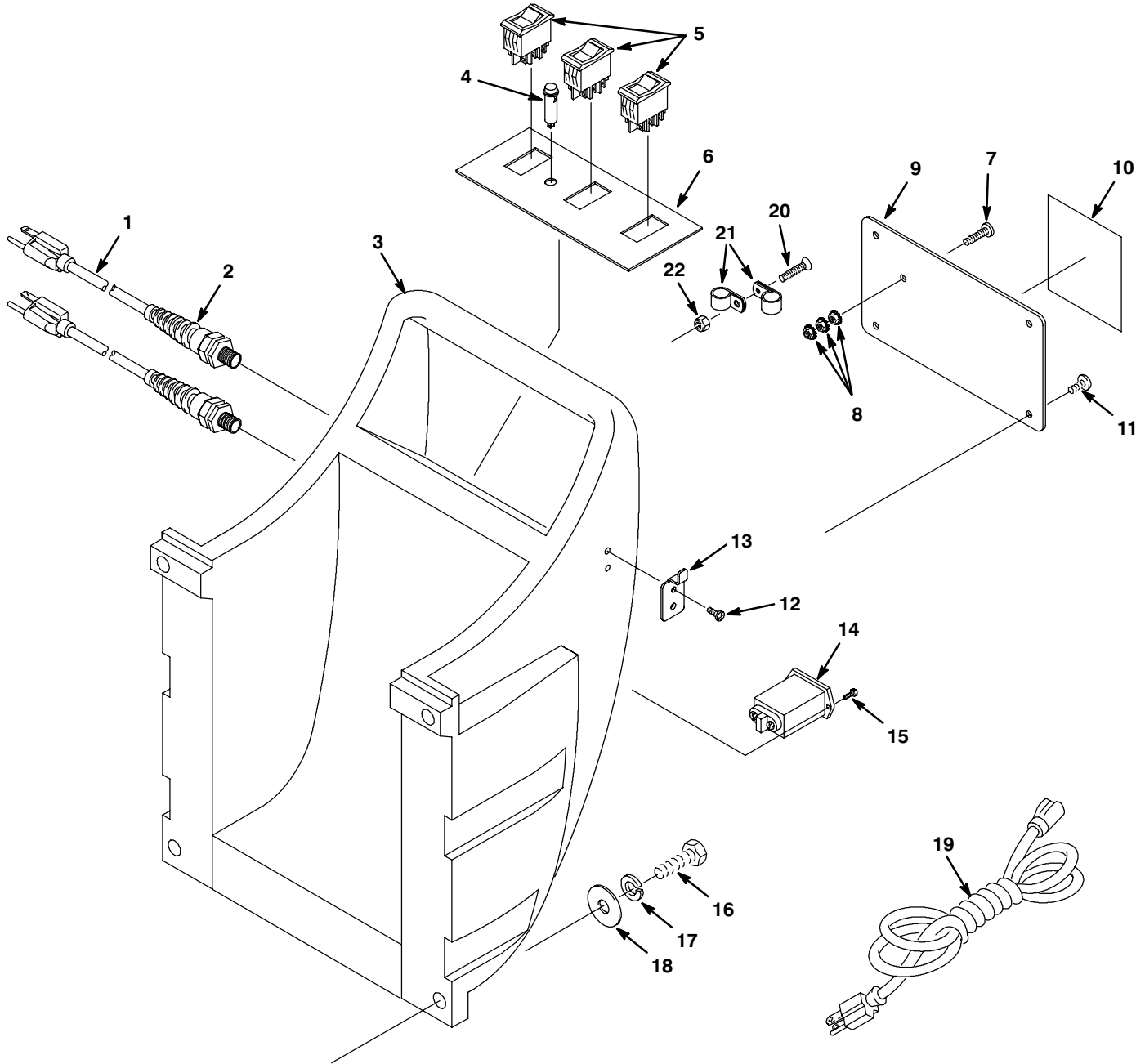
LOWER HOUSING GROUP

REF	PART #	DESCRIPTION	QTY.
1	9000579	●KIT, PUMP, TWIN PISTON (180100)	1
2	140823	SCREW, #10-24X5/8 TRSPHL	2
3	140506	NUT, 5/16-18 HEX	4
4	140027	WASHER, 0.31 FLAT	8
5	140015	WASHER, 0.31 SPLIT LOCK	8
6	130450	●MOTOR, PUMP DRIVE 1/3 HP	1
7	130031	MOUNT, MOTOR 1-1/4"	4
8	100118	●GASKET, VAC MOTOR 1/4 X 5.7D	1
9	130096	TERMINAL, ML DSCNT	2
▽ 10	130996	●MOTOR, VACUUM, 5.7INCH 3-STAGE	1
▲ 11	602741	●BRUSH, CARBON 2/PK	1
▲ 12	603042	●COVER, HSNQ, VACUUM, F/130996	1
13	41169	NUT, 1/4-20 NYLOCK	3
14	102567	●GASKET, VAC MOTOR INTAKE	1
15	230390	HINGE, TANK	1
16	140000	WASHER, 0.28B FLAT	4
17	140885	SCREW, .25-20X.50 TRSPHL	7
▽ 18	210108	VALVE, PRESSURE CONTROL	1
▲ 19	210023	KNOB, NEEDLE VALVE	1
20	140894	SCREW, SCST CPPT 10-32X1/4	1
21	605385	WASHER, FLAT .687 ID X 1.50 OD	2
22	140552	NUT, #10-24 NYLCK	1
23	140328	CLAMP, CABLE 3/8	2
24	140196	SCREW, #10-24X1 TRSPHL	1
25	606659	●GAUGE, PRESSURE 0-600 PSI	1
26	140825	SCREW, #6X1/2 PANPHL	3
27	140519	NUT, #10-24 KEP	3

REF	PART #	DESCRIPTION	QTY.
28	140196	SCREW, #10-24X1 TRSPHL	1
29	608906	AXLE, 1/2 DIA. X 18.352	1
30	140008	WASHER, 1/2 FLAT	6
31	103009	●WHEEL, 12" X 1.75 WHITE/GRAY	2
32	103019	CAP, HUB, WHEEL	2
33	160629	●HOSE, 2" X 28" WHITE	1
34	140308	CLAMP, HOSE 1-5/16 TO 2-1/4	2
35	230746	BRACKET, AXLE, OFFSET	2
36	140016	WASHER, 0.25 LOCK	4
37	140259	SCREW, .25-20X0.62 HXHDCP	4
38	103065	●CASTER, 4" SWIVEL	2
39	140016	WASHER, 0.25 LOCK	8
40	140259	SCREW, .25-20X0.62 HXHDCP	8
41	02991	SCREW, .31-18X0.75 HXHDCP	4
42	140869	SCREW, #10-24X1.75 PANPHL	2
43	140011	WASHER, 0.21B FLAT	4
44	130284	PLUG, DOME 1.00" BLACK	1
45	140932	KEEPER (PART OF LATCH)	2
46	069762005	WASHER, #10 LOCK	2
47	609980	SCREW, #8-32X3/8 TRSPHL SEMS	4
48	150933	●FITTING, QDC/04PM, SER 60	1
49	140823	SCREW, #10-24X5/8 TRSPHL	2
50	140058	WASHER, .543X.875X.062 WAND	1
51	120123	DECAL, CAUTION PRESSURE	1
52	607683	CHASSIS, HI PRESS, RM-TL, TRIMMED (TEAL)	1
53	140918	SPACER, .20X.31X1.00	2

- ▽ ASSEMBLY
- ▲ INCLUDED IN ASSEMBLY
- RECOMMENDED STOCK ITEM

HANDLE GROUP



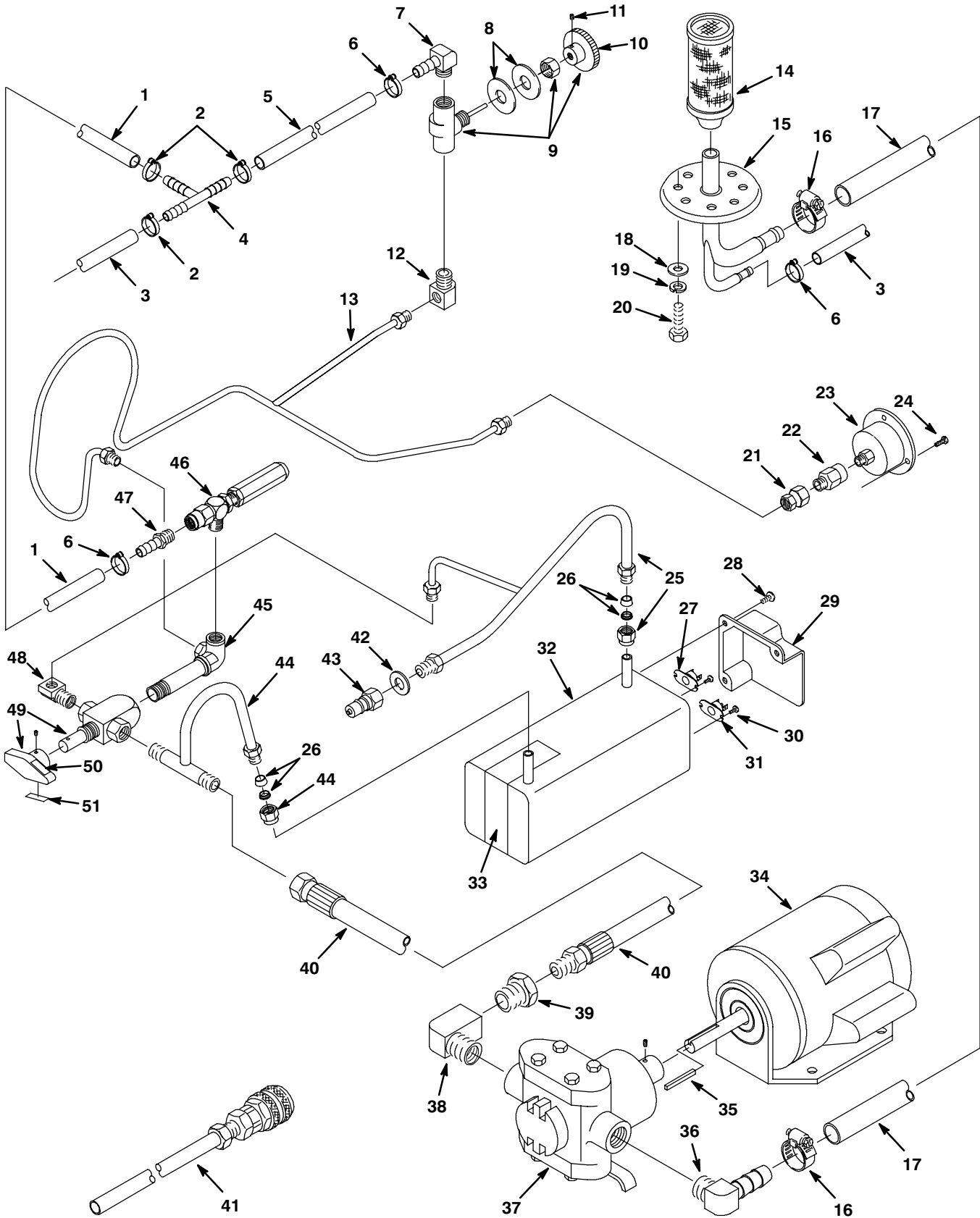
HANDLE GROUP

REF	PART #	DESCRIPTION	QTY.
1	130227	●CORD, 14/3 X 20" YELLOW	2
2	130166	●CORD GRIP, NYLON/BLK W/NUT	2
3	607688	HANDLE, RM-TL, TRIMMED [1500HP] (TEAL)	1
4	130691	●LIGHT, INDICATOR - GREEN	1
5	608605	●SWITCH, ROCKER, 250VAC 10A	3
6	120189	DECAL, DASH	1
7	140900	SCREW, TRS 10-24X0.75 PHL	1
8	140519	NUT, #10-24 KEP	3
▽ 9	614121	ASSEMBLY, PLATE W/ LABEL	1
▲ 10	1026384	LABEL, WARNING [EXPL,FIRE,SHK EN/FR/ES]	1

REF	PART #	DESCRIPTION	QTY.
11	140197	SCREW, #10-24X0.38 TRSPHL, SEM	4
12	140825	SCREW, #6X1/2 PANPHL	2
13	1006890	BRACKET, DRAIN HOSE HANGER	1
14	1026236	●METER, HOUR - RECTANGULAR	1
15	140825	SCREW, #6X1/2 PANPHL	2
16	140231	SCREW, .38-16X1.50 HXHDCP	4
17	140017	WASHER, 3/8 LOCK	4
18	140028	WASHER, 0.42B 1.00D FLAT	4
19	130694	●CORD, EXT 14/3X25' YELLOW	2
20	15858.12	SCREW, #10-24X3/4 FLTPHL	1
21	140328	CLAMP, CABLE 3/8	2
22	140552	NUT, #10-24 NYLOCK	1

- ▽ ASSEMBLY
- ▲ INCLUDED IN ASSEMBLY
- RECOMMENDED STOCK ITEM

PLUMBING GROUP



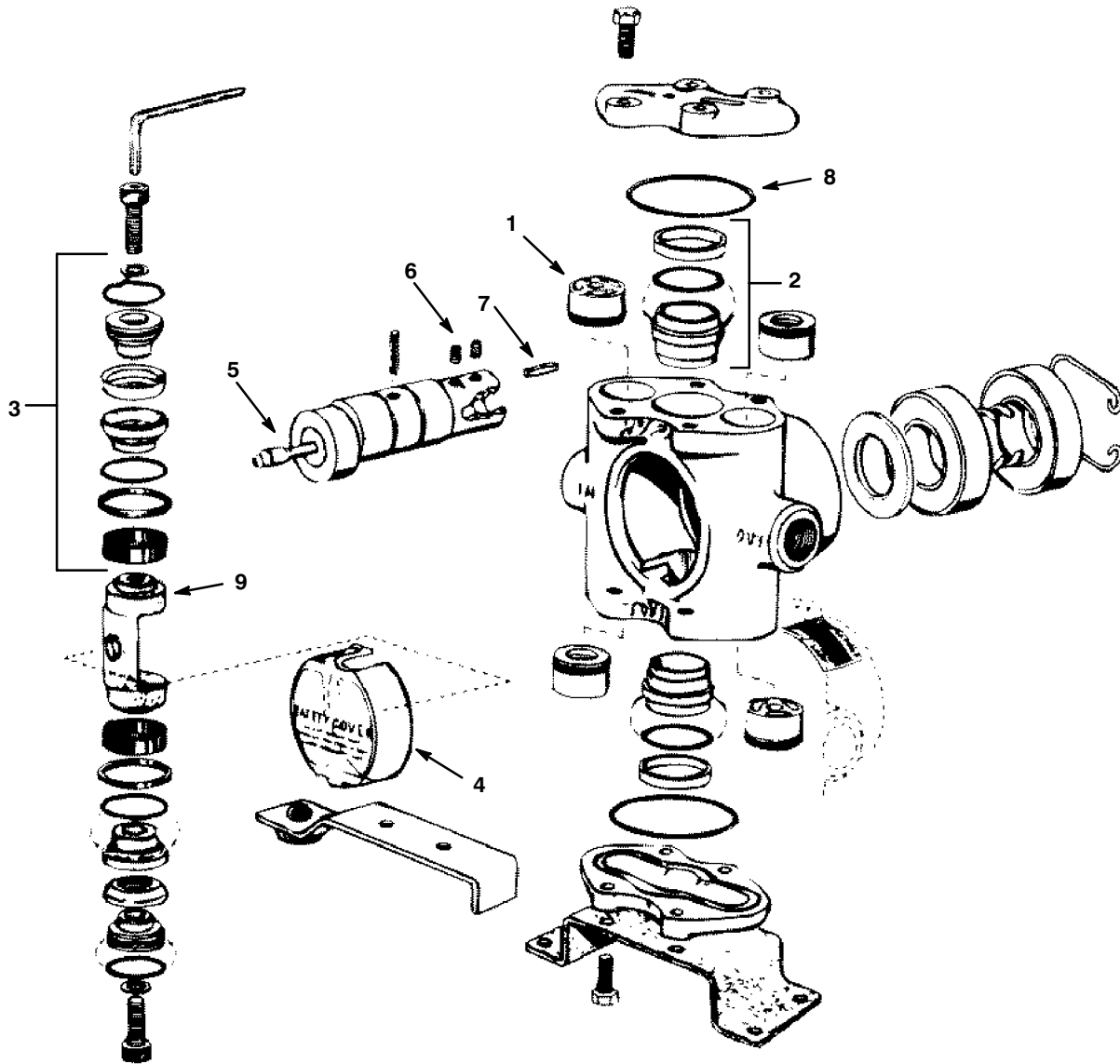
PLUMBING GROUP

REF	PART #	DESCRIPTION	QTY.
1	606359	HOSE, 1/4ID X 8" GRAY L.P.	1
2	140325	CLAMP, HOSE, EAR 1/2"	3
3	606161	HOSE, 1/4 X 36" GRAY L.P.	1
4	150713	FITTING, 1/4H TEE, BARB	1
5	606244	HOSE, 1/4IDX16" LP	1
6	140325	CLAMP, HOSE, EAR 1/2"	3
7	150418	FITTING, 1/4MX1/4H BARB 90	1
8	605385	WASHER, FLAT .687 ID X 1.50 OD	2
▽ 9	210108	●VALVE, PRESS CNTRL W/NUT	1
▲ 10	210023	●KNOB, NEEDLE VALVE	1
▲ 11	140894	●SCREW, SCST CPPT #10-32X1/4	1
12	606987	FITTING, E90, PM04/IF04	1
13	606666	ASM, PRESSURE GAUGE TUBE	1
14	603186	●SCREEN, FILTER, 60 MESH	1
15	600452	PLATE, BLADDER ASM	1
16	54333	CLAMP, HOSE WORM, 0.31-0.88D.	2
17	603051	HOSE, 29" LONG REINFORCED	1
18	140000	WASHER, 0.28B FLAT	4
19	140016	WASHER, 0.25 LOCK	4
20	24672	SCREW, .25-20X0.75 HXHDCP	4
21	606665	FITTING, GAUGE ADAPTER	1
22	606660	●FITTING, 1/4"NPT GAUGE SNUBBER	1
23	606659	●GAUGE, PRESSURE 0-600 PSI	1
24	140825	SCREW, #6X1/2 PANPHL	3
25	606663	ASM, HEATER OUTLET TUBE	1
26	600546	FERRULE S/S FOR #600545	2
27	130692	CONTROL, THERMOSTAT	1

REF	PART #	DESCRIPTION	QTY.
28	140197	SCREW, #10-24X0.38 TRSPHL, SEM	3
29	101288	COVER, HEATER	1
30	6032.6	SCREW, #8-32X0.38 PANPHL	4
31	130693	LIMIT, THERMOSTAT	1
▽ 32	180440	●HEATER ASSY, 120V, 1700W COMPLETE	1
▲	102566	INSULATOR, HEATER	1
33	102568	STRAP, NYLON W/ ADHESIVE	1
34	130450	●MOTOR, .33HP, PUMP DRIVE	1
35	190310	●PUMP, SHAFT KEY 5300 SERIES	1
36	150431	FITTING, 1/2MX1/2H ELBOW 90	1
37	9000579	●KIT, PUMP, TWIN PISTON (180100)	1
38	150405	FITTING, 1/2MX1/2F ELB STRT90	1
39	150101	FITTING, 1/2MX1/4F BUSHING	1
40	160140	●HOSE, PULSE 36"	1
41	700141	●HOSE, SOLUTION BLEEDER	1
42	140058	WASHER, .543X.875X.062 WAND	1
43	150933	●FITTING, QDC/04PM, SER 60	1
44	606664	ASM, HEATER INLET TUBE	1
45	606662	ASM, PRESSURE RELIEF MANIFOLD	1
46	210211	VALVE, PRESSURE RELIEF	1
47	150525	FITTING, STR, PM02/BM04	1
48	606987	FITTING, E90, PM04/IF04	1
49	210043	●VALVE, BALL 3-WAY 04PF/04PF/04PF	1
50	120198	DECAL, CLEAN - VALVE KNOB	1
51	120199	DECAL, PREHEAT - VALVE KNOB	1

- ▽ ASSEMBLY
- ▲ INCLUDED IN ASSEMBLY
- RECOMMENDED STOCK ITEM

PUMP BREAKDOWN



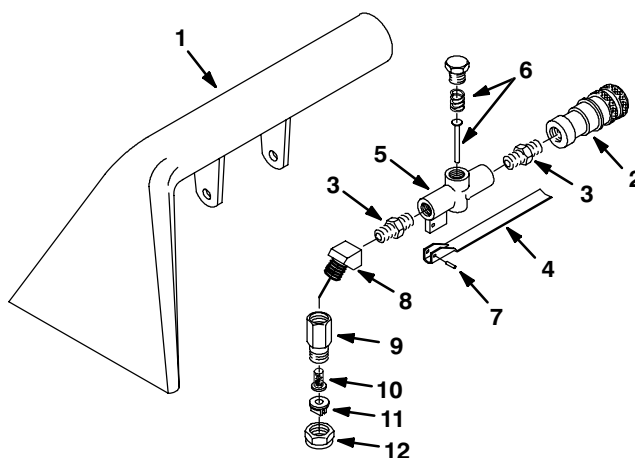
REF	PART #	DESCRIPTION	QTY.
▽	9000579	●KIT, PUMP, TWIN PISTON (180100)	1
▲ 1	190301	●KIT, VALVE	1
▲ 2	190302	●KIT, CYLINDER SLEEVE	1
▲ 3	190300	●KIT, CUP	1
▲ 4	190307	SAFETY COVER, PUMP	1
▲ 5	190305	GREASE FITTING, TWIN PISTON	1
▲ 6	190309	SET SCREWS, PUMP	2

REF	PART #	DESCRIPTION	QTY.
▲ 7	190310	●SHAFT KEY, PUMP	1
▲ 8	190303	●SEAL, O-RING, CYLINDER HEAD	1
▲ 9	190304	CONNECTING ROD, TWIN PISTON	1
▲ N/S	190316	●PULLER, VALVE SPRING RETAINER	1
▲ N/S	190317	●PULLER, VALVE, POPPET SEAT	1
N/S	190022	●GUN, GREASE (METAL)	1

▽ ASSEMBLY
 ▲ INCLUDED IN ASSEMBLY
 ● RECOMMENDED STOCK ITEM

N/S = NOT SHOWN

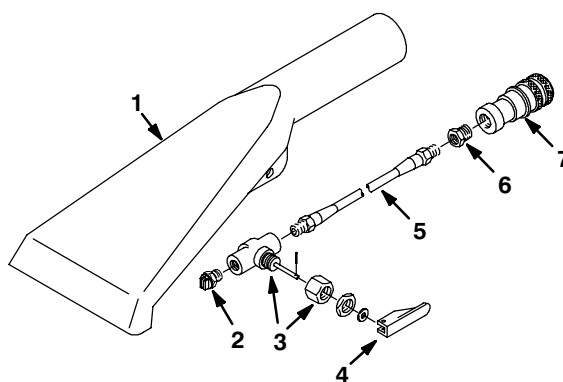
HAND TOOL, 5 IN / 127 MM



REF	PART #	DESCRIPTION	QTY.
▽	200505	●TOOL, HAND 127MM (5 IN.)	1
▲ 1	200431.BK	TOOL, HAND	1
▲ 2	150913	●FITTING, QDC PF04 FEM	1
▲ 3	150606	NIPPLE, HEX 1/4	2
▲ 4	200905	TRIGGER, HAND TOOL	1
▲ 5	210210	●VALVE, FLOW CONTROL	1
▲ 6	190600	VALVE PIN & SPRING	1

REF	PART #	DESCRIPTION	QTY.
▲ 7	140609	PIN, ROLL 3/16	1
▲ 8	150403	ELBOW, ST 1/4 45°	1
▲ 9	200992	BODY, SPRAY 1/4F	1
▲ 10	200996	SCREEN, SPRAY NOZZLE	1
▲ 11	200965	●TIP, SPRAY #8002	1
▲ 12	200994	CAP, SPRAY BODY	1

CREVICE TOOL, 3 IN / 76 MM

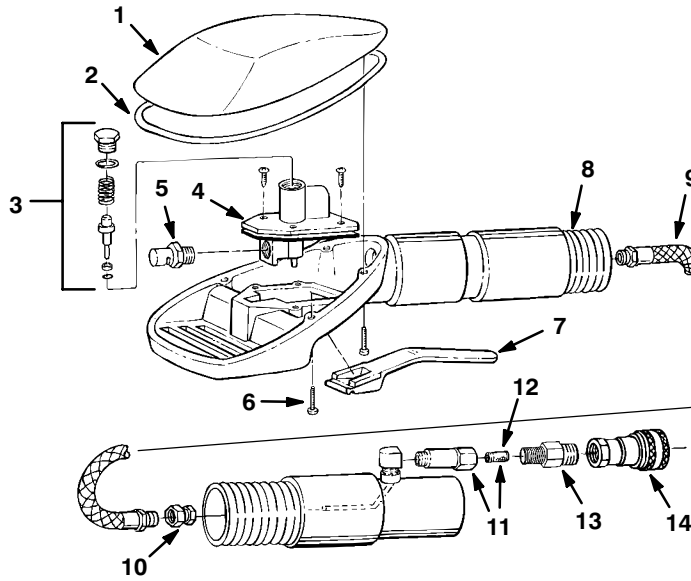


REF	PART #	DESCRIPTION	QTY.
▽	200517	●TOOL, CREVICE SERIES 60	1
▲ 1	200436.BK	TOOL, CREVICE	1
▲ 2	200975	●FITTING JET #5002	1
▲ 3	210014	●VALVE, TOGGLE W/NUT	1

REF	PART #	DESCRIPTION	QTY.
▲ 4	210020	POSITIONER, VALVE HANDLE	1
▲ 5	160106	HOSE, SOLUTION	1
▲ 6	150100	FITTING, 1/4MX1/8F BUSHING	1
▲ 7	150913	●FITTING, 1/4F, QD FML COUPLER	1

- ▽ ASSEMBLY
- ▲ INCLUDED IN ASSEMBLY
- RECOMMENDED STOCK ITEM

HAND TOOL, UPHOLSTERY, HIGH PRESSURE

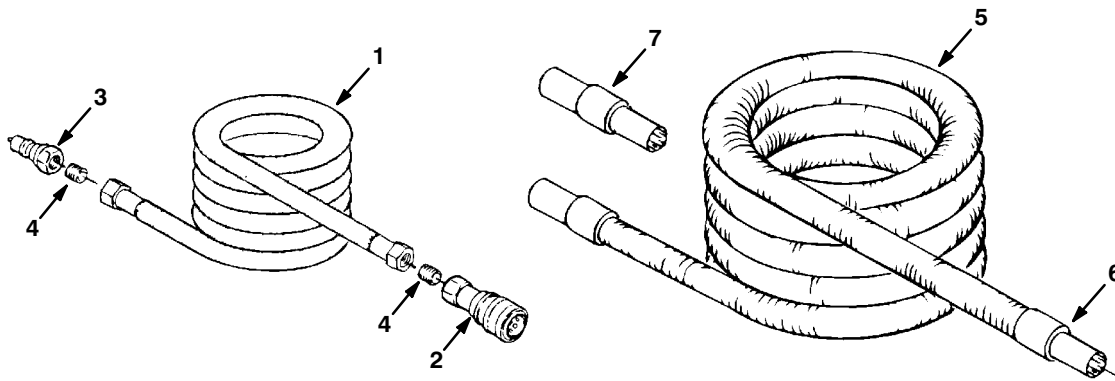


REF	PART #	DESCRIPTION	QTY.
▽	200545	●ASM., TOOL, UPHOLSTERY, SER 60	1
▲ 1	200845	COVER, UPHOLSTERY TOOL	1
▲ 2	200843	GASKET, COVER	1
▲ 3	190631	●KIT, SERVICE (VALVE ASM.)	1
▲ 4	210226	●VALVE, WATER/SOLUTION, LP	1
▲ 5	201016	●FITTING, JET, 1/8K	1
▲ 6	200838	SCREW, #6-32X0.75	4
▲ 7	200840	TRIGGER, UPHOLSTERY TOOL	1

REF	PART #	DESCRIPTION	QTY.
▲ 8	200844	●HOSE, VACUUM W/O CUFFS	1
▲ 9	200837	●HOSE, SOLUTION	1
▲ 10	200848	FITTING, BRS (3 PCS.)	1
▲ 11	200842	FILTER, INLINE, COMPLETE	1
▲ 12	200841	SCREEN ONLY, INLINE FILTER	1
▲ 13	150606	FITTING, BRS, STR, PM04 X 1.38 HX NIP.	1
▲ 14	150913	●FITTING, QDC PF04 SER 60	1

- ▽ ASSEMBLY
- ▲ INCLUDED IN ASSEMBLY
- RECOMMENDED STOCK ITEM

SOLUTION AND VACUUM HOSES GROUP

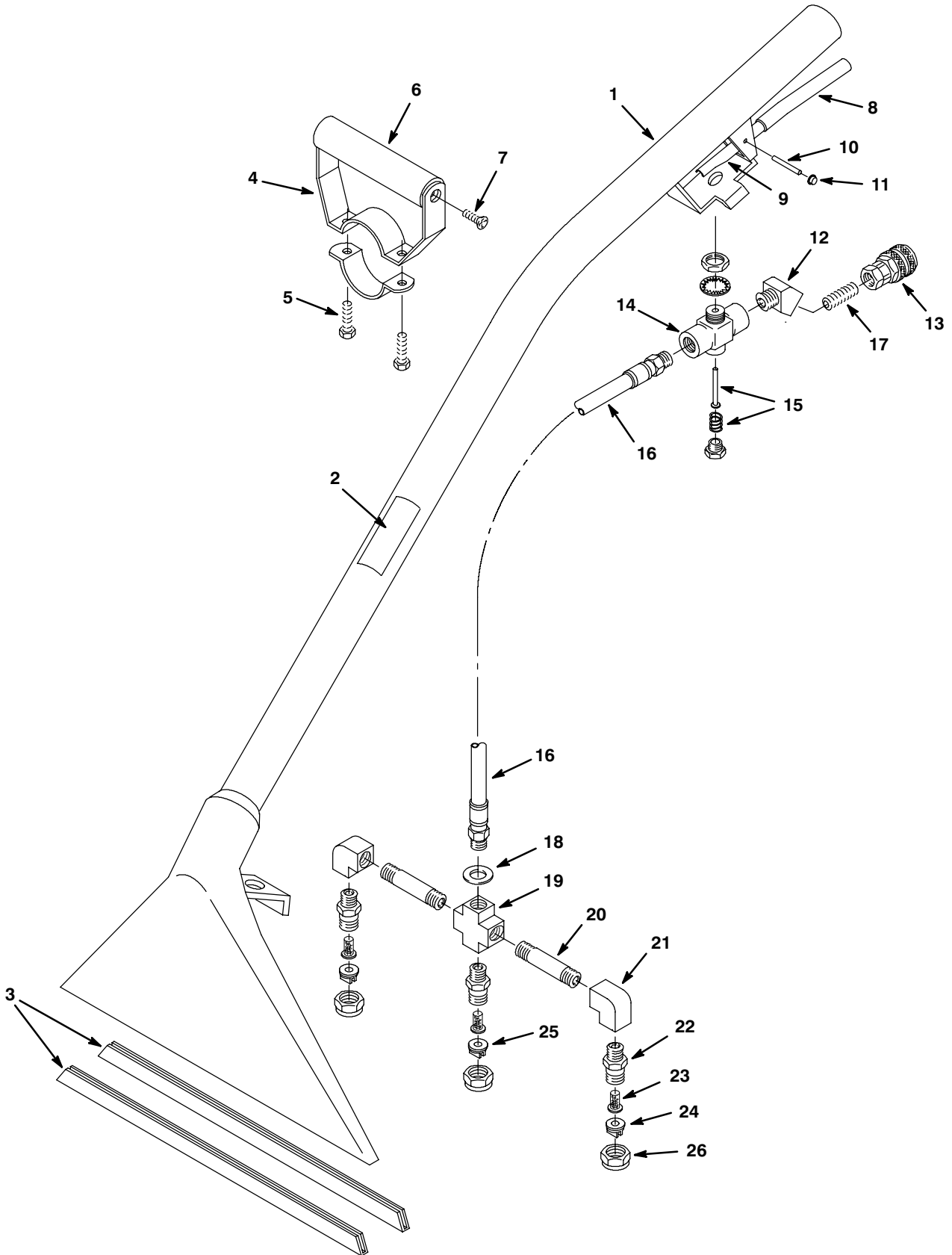


REF	PART #	DESCRIPTION	QTY.
▽ 1	160185	HOSE, SOLUTION 3/8X4.6M/15' (OPTIONAL)	1
	610792	HOSE, SOLUTION 1/4X7.6M/25' (STANDARD)	1
	160192	HOSE, SOLUTION 1/4X15.2M/50' (OPTIONAL)	1
▲ 2	150913	●FITTING, BRS, QDC, PF04, SER60	1
▲ 3	150933	FITTING, BRS, QDC, PM04, SER60	1
▲ 4	150615	FITTING, BRS, STR, PM04, CLOSE, T	2

REF	PART #	DESCRIPTION	QTY.	
▽ 5	160400	HOSE, VACUUM 1-1/2X4.6M/15' (OPTIONAL)	1	
	160401	HOSE, VACUUM 1-1/2X7.6M/25' (STANDARD)	1	
	160402	HOSE, VACUUM 1-1/2X15.2M50' (OPTIONAL)	1	
▲ 6	160430	●CUFF, HOSE 1-1/2"	2	
	7	12694	●FITTING, PLSTC, STR BM24/BM24	1
N/S	220040	●BAG, HOSE W/DRAW STRING (OPTIONAL)	1	

- ▽ ASSEMBLY
 - ▲ INCLUDED IN ASSEMBLY
 - RECOMMENDED STOCK ITEM
- N/S = NOT SHOWN

WAND GROUP, HIGH PRESSURE, 13 IN / 330 MM



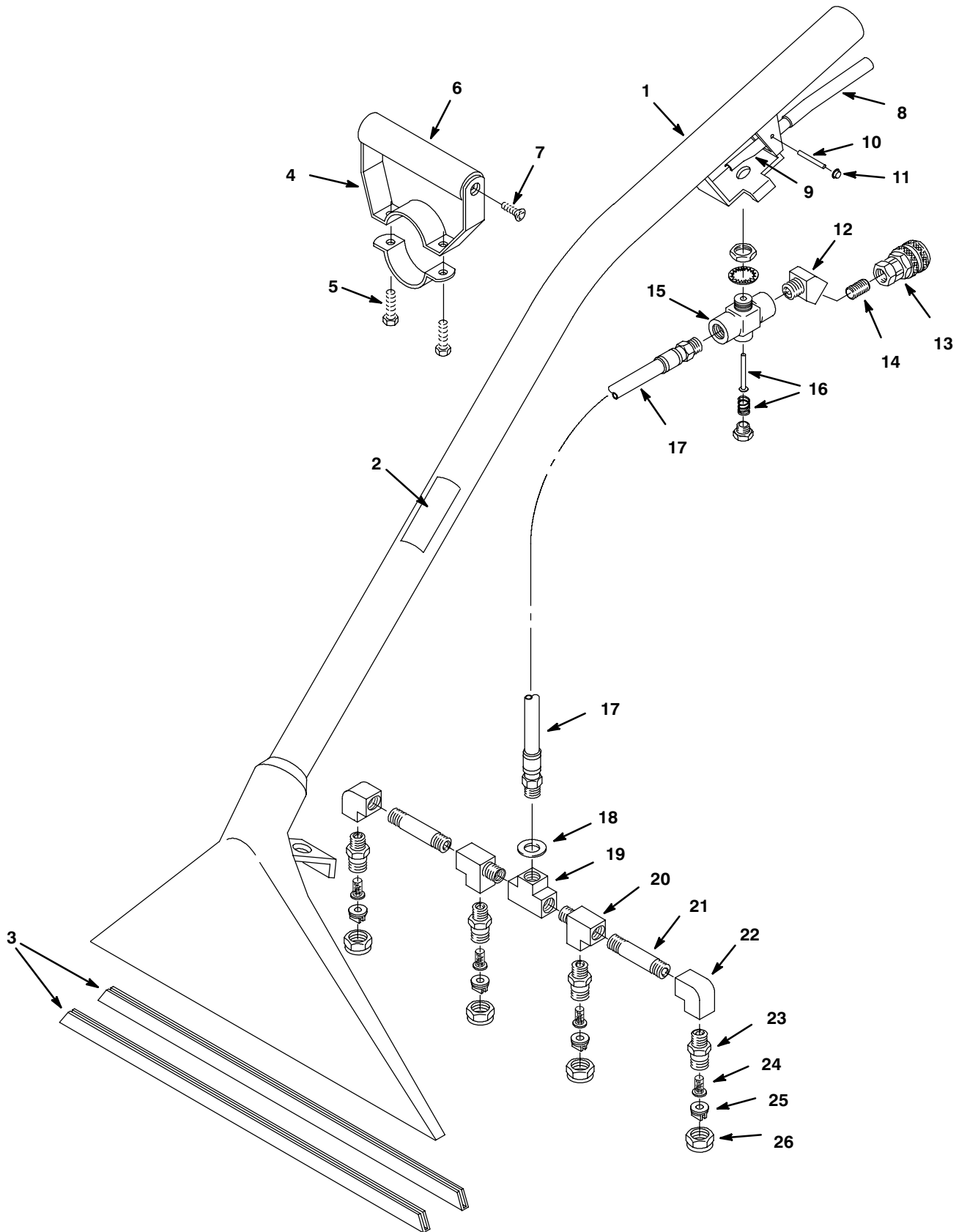
WAND GROUP, HIGH PRESSURE, 13 IN / 330 MM

REF	PART #	DESCRIPTION	QTY.
▽	600049	●ASM., FLOOR TOOL, 330MM (13IN.)	1
▲ 1	200403.BK	TOOL, FLOOR, BLACK	1
▲ 2	120845	DECAL, HIGH PRESSURE TOOL	1
▲ 3	200939	●SHOE, 330MM (13 IN.) FLR TOOL	2
▲▽ 4	200927	GRIP, HAND, ADJ. COMPLETE	1
▲▲ 5	01697	SCREW, HEX, .25-20X0.62, SS	2
▲▲ 6	200912	GRIP, HANDLE FOAM	1
▲▲ 7	140834	SCREW, 1/4-20X5/8 FLTPHL	2
▲ 8	200809	SLEEVE, HANDLE	1
▲ 9	200902	HANDLE, VALVE	1
▲ 10	140605	PIN, HANDLE	1
▲ 11	140520	NUT, 1/4 PUSH	2
▲ 12	150403	FITTING, E45 04PM/04PF	1
▲ 13	150913	●FITTING, QDC PF04 SER. 60	1
▲▽ 14	210150	●VALVE, FLOW CONTROL	1

REF	PART #	DESCRIPTION	QTY.
▲▲ 15	190603	●KIT, VALVE PIN AND SPRING	1
▲ 16	160175	WAND HOSE ASSEMBLY, 46-1/2	1
▲ 17	150615	FITTING, 04PM CLOSE	1
▲ 18	140058	WASHER, .543X.875X.062	1
▲▽	700062	ASM., SPRAY BAR, 12 IN. W/O TIPS	1
▲▲ 19	150700	CROSS, 1/4 FPTXFPTXFPTXFPT	1
▲▲ 20	150600	FITTING, 1/4MX2" NIPPLE	2
▲▲ 21	150401	FITTING, E90 04PF/04PF	2
▲▲ 22	200993	SPRAY BODY, 1/4 MALE	3
▲ 23	200996	●FILTER, SCREEN, 100 MESH	3
▲ 24	200986	●FITTING, TIP 9502	2
▲ 25	200988	●FITTING, TIP 11002	1
▲ 26	200994	●CAP, NOZZLE, SPRAY #8002	3
N/S	200170	SQUEEGEE ASSY, 380MM/15.0, COMPLT (FOR USE ON HARD FLOOR SURFACES)	1

- ▽ ASSEMBLY
- ▲ INCLUDED IN ASSEMBLY
- RECOMMENDED STOCK ITEM

WAND GROUP, HIGH PRESSURE, 16 IN / 406 MM



WAND GROUP, HIGH PRESSURE, 16 IN / 406 MM

REF	PART #	DESCRIPTION	QTY.
▽	200513	●ASM., FLOOR TOOL, 406MM (16 IN.)	1
▲ 1	200411.BK	TOOL, FLOOR, BLACK	1
▲ 2	120845	DECAL, HIGH PRESSURE TOOL	1
▲ 3	200956	●SHOE, 406MM (16 IN.) FLR TOOL	2
▲▽ 4	200927	GRIP, HAND, ADJ. COMPLETE	1
▲▲ 5	01697	SCREW, HEX, .25-20X0.62, SS	2
▲▲ 6	200912	GRIP, HANDLE FOAM	1
▲▲ 7	140834	SCREW, 1/4-20X5/8 FLTPHL	2
▲ 8	200809	SLEEVE, HANDLE	1
▲ 9	200902	HANDLE, VALVE	1
▲ 10	140605	PIN, HANDLE	1
▲ 11	140520	NUT, 1/4 PUSH	2
▲ 12	150403	FITTING, E45 04PM/04PF	1
▲ 13	150913	●FITTING, QDC PF04 SER. 60	1

REF	PART #	DESCRIPTION	QTY.
▲ 14	150615	FITTING, 04PM CLOSE	1
▲▽ 15	210150	●VALVE, FLOW CONTROL	1
▲▲ 16	190603	●KIT, VALVE PIN AND SPRING	1
▲ 17	160175	WAND HOSE ASSEMBLY, 46-1/2	1
▲ 18	140058	WASHER, .543X.875X.062	1
▲▽	700656	ASM., SPRAY BAR, 16 IN. W/O TIPS	1
▲▲ 19	150706	FITTING, 1/4F TEE	1
▲▲ 20	150709	FITTING, TEE, 04PM/04PF/04PF	2
▲▲ 21	150600	FITTING, 1/4MX2" NIPPLE	2
▲▲ 22	150401	FITTING, E90 04PF/04PF	2
▲▲ 23	200993	SPRAY BODY, 1/4 MALE	4
▲ 24	200996	●FILTER, SCREEN, 100 MESH	4
▲ 25	200985	●FITTING, TIP 95015	4
▲ 26	200994	●CAP, NOZZLE, SPRAY #8002	4

- ▽ ASSEMBLY
- ▲ INCLUDED IN ASSEMBLY
- RECOMMENDED STOCK ITEM