



Electronic Service Manuals

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You may contact Michco through the following methods:

Phone (517) 484-9312 or (800) 331-3339

2011 N. High St. -- Lansing, Michigan -- 48906

Fax: (517) 484-9836

Email: CustServe@Michco.com

Web site: www.Michco.Com

Parts Web site: www.FloorMachineParts.Com

Order Parts on Line at:

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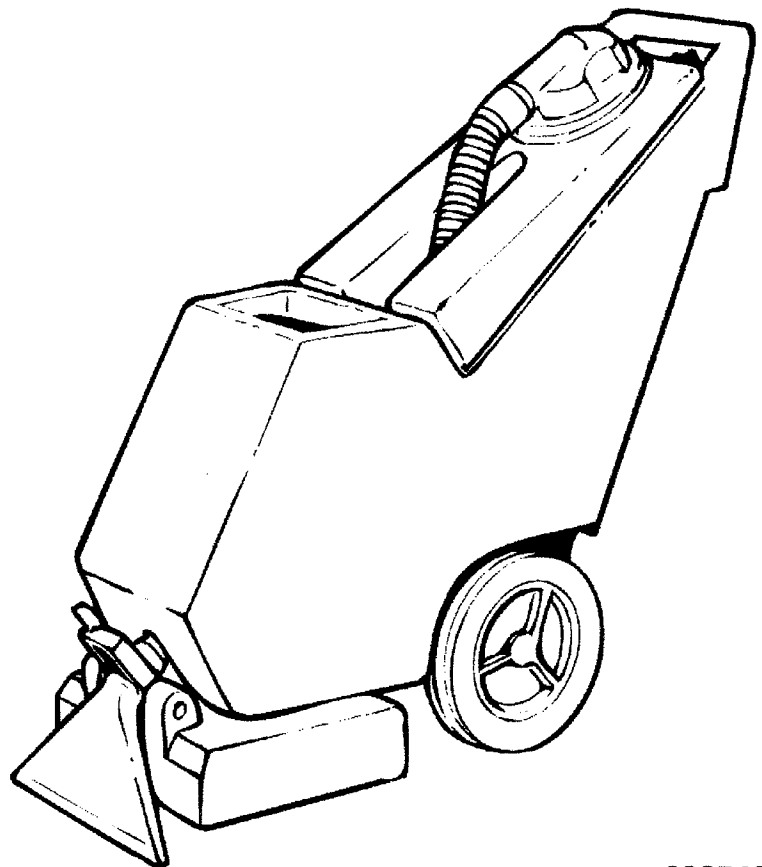


Power Eagle™ 716

Self-Contained Carpet Extractor

Model No.:
608543

Operator and Parts Manual



608548
Rev. 02 (08-05)

OPERATION

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.

Use the illustrated Parts Lists to order parts. Before ordering parts or supplies, be sure to have your machine model number and serial number handy. 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 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.- _____

Install. Date - _____

Serial No.- _____



PROTECT THE ENVIRONMENT

Please dispose of packaging materials, old machine components such as batteries, hazardous fluids such as antifreeze and oil, in a safe environmentally way according to your 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.nobles.com

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OPERATION

SAFETY PRECAUTIONS

This machine is intended for commercial use. It is designed exclusively 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, electrical shock, fire or explosion.

 **WARNING:** Fire Or Explosion Hazard:

- **Never 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.

- **Do Not Pick Up Flammable Materials Or Reactive Metals.**

 **WARNING:** Electrical Hazard. 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:** Spinning Brush. Keep Hands Away. Turn Off Power Before Working On Machine.

 **WARNING:** Electrical Shock Hazard. 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:

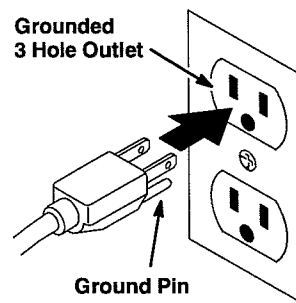
- Unplug cord from wall outlet.
- Avoid moving parts. Do not wear loose jackets, shirts, or sleeves.
- Use manufacturer supplied or approved replacement parts.
- All repairs must be performed by a qualified service person.
- Do not modify the machine from its original design.

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

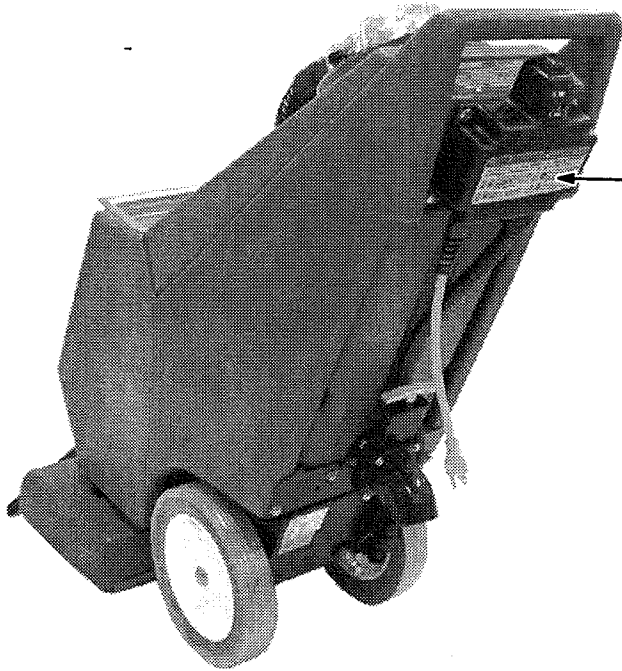
Machine must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electrical current to reduce the risk of electrical shock. This machine is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be plugged into 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.



OPERATION

SAFETY LABELS

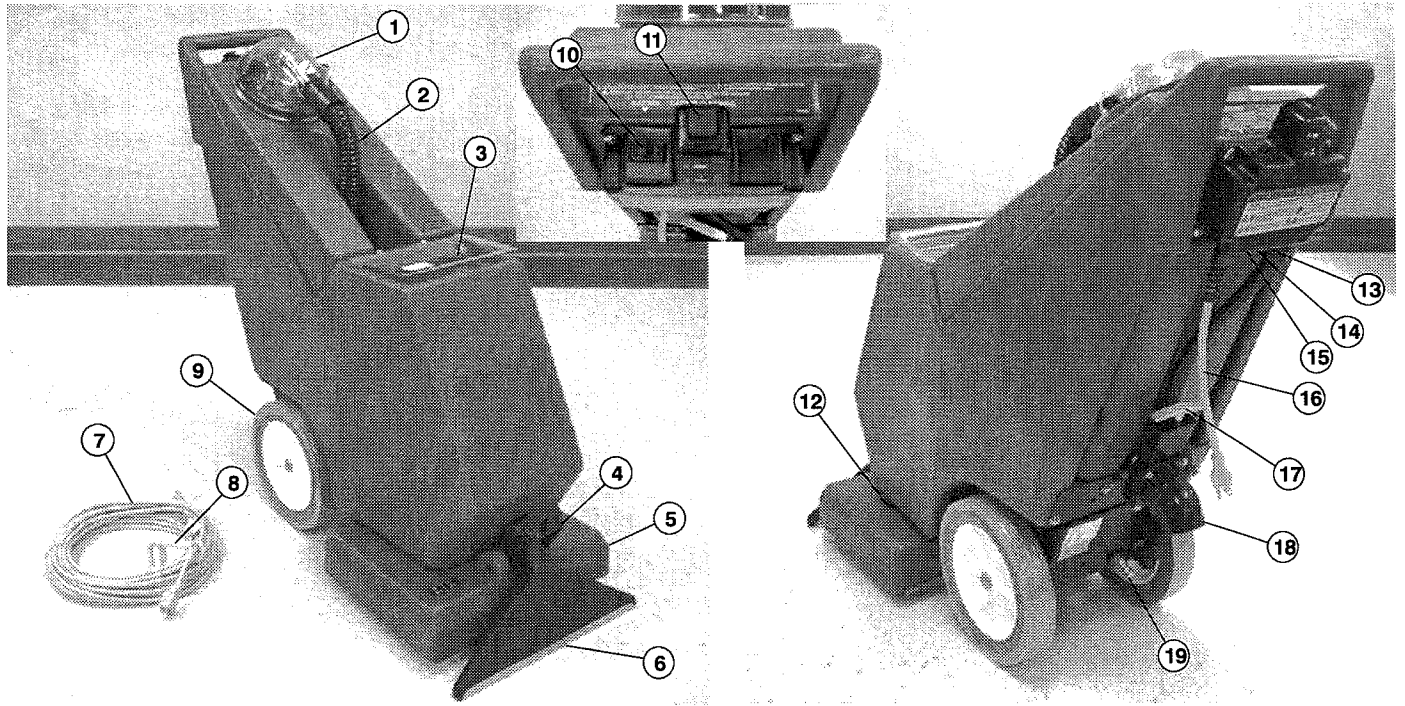
The safety label appears on the machine in the location indicated. Replace label if it is missing or becomes damaged or illegible.



WARNING LABEL - Located on back of control console.



MACHINE COMPONENTS



- | | |
|---|--|
| <ul style="list-style-type: none"> 1. Recovery Tank Dome 2. Pick-up Vacuum Hose 3. Solution Tank Dust Cover 4. Brush Height Adjustment Knob 5. Brush Housing 6. Vacuum Pick-up Head 7. Extension Power Cord 8. Cord Strain-Relief Clip (Belt) 9. 254 mm (10 in) Stair Climbing Wheels 10. Master Switch (Vacuum and Pump) | <ul style="list-style-type: none"> 11. Carpet Cleaning Button (Brush) 12. Spray Bar 13. Pump Circuitbreaker 14. Brush Circuitbreaker 15. Vacuum Circuitbreaker 16. Power Cord Pigtail 17. Drain Valve T-Handle 18. Recovery Tank Drain Spout 19. Accessory Tool Solution Hose Quick Coupler |
|---|--|

OPERATION

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 operation.
2. Fill solution tank with 30.8L (7 gal) of hot water, 60°C (140°F) maximum (Figure 1).

NOTE: The water must **not** be hotter than 60°C (140°F) or tank damage may occur.

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

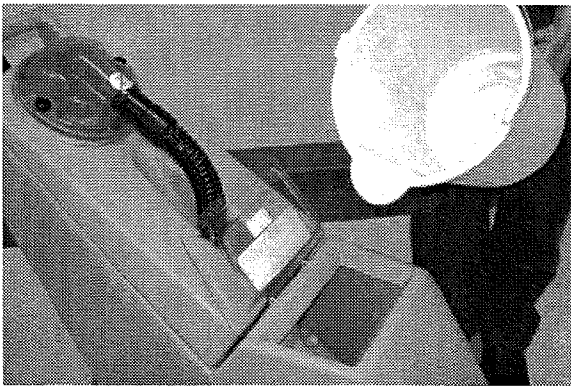


FIG. 1

⚠ WARNING: Fire or Explosion Hazard. Never Use Flammable Liquids.

3. Add a recommended cleaning solution. Follow bottle's mixing instructions.

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

ATTENTION: If using powdered cleaning chemicals, mix prior to adding.

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

4. Close lid after filling.

MACHINE OPERATION

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

⚠ WARNING: Fire Or Explosion Hazard. Never Use Flammable Liquids Or Operate Machine in Or Near Flammable Liquids, Vapors Or Combustible Dusts.

PRE-OPERATION

1. Vacuum carpet to remove particles and other debris.
2. Inspect power cord for damage.

⚠ WARNING: Electrical Hazard. 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.

3. Plug power cord into a grounded wall outlet (Figure 2).

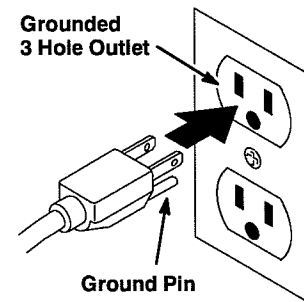


FIG. 2

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.

CLEANING CARPETS

1. Turn on Master switch (Figure 3).

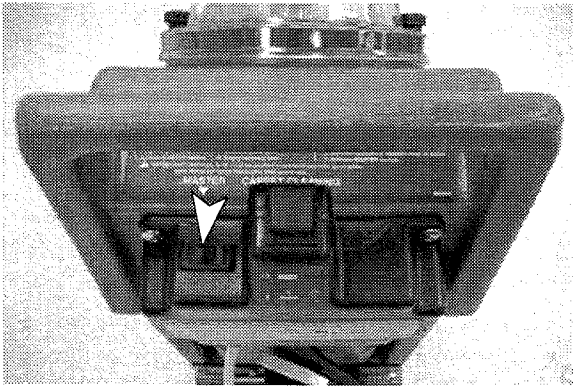


FIG. 3

2. Press and hold in Carpet Cleaning button. Pull machine towards you, 1219 mm (4 ft) at a time. For best cleaning results, lift machine handle slightly while pulling backward. This transfers weight of machine to the pickup head for best water recovery (Figure 4).

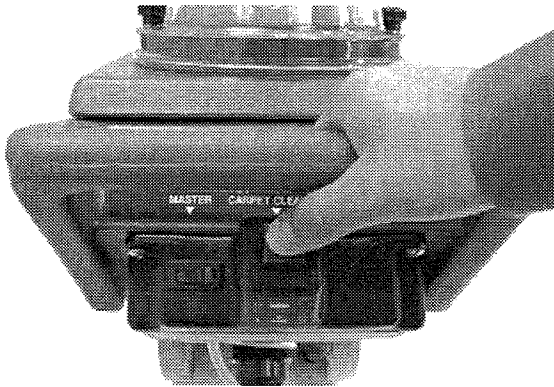


FIG. 4

3. At end of path, release Carpet Cleaning button, pull machine towards you another 305 mm (1 ft) to vacuum excess spray. Push down on handle and move to next area to be cleaned. Overlap each path by 50 mm (2 in).

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

WHILE OPERATING

1. If necessary, adjust brush height to accommodate type of carpet (See ADJUSTING BRUSH HEIGHT).
2. Work away from wall outlet and power cord to prevent cord damage.
3. Check for excessive foam buildup in recovery tank. Use a recommended foam control solution to prevent motor damage (Figure 5).

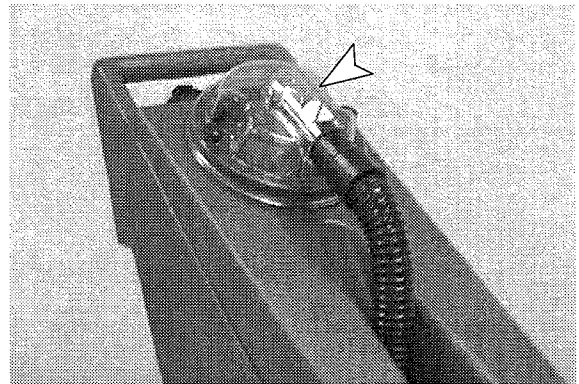


FIG. 5

ATTENTION: Do not allow foam to enter vacuum screen. Damage to vacuum will result. This damage is not covered by warranty.

4. If brush or vacuum motor should stop, circuit breaker may have tripped. Turn off machine, unplug power cord and check for any obstructions. Let motor cool and manually reset circuit breaker button, located on bottom of switchbox (Figure 6).

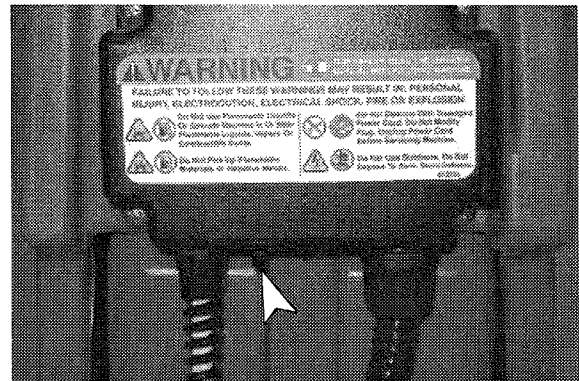


FIG. 6

⚠ WARNING: Electrical Hazard. Unplug power Cord Before Servicing Machine.

⚠ WARNING: Spinning Brush. Keep Hands Away. Turn Off Power Before Working On Machine.

OPERATION

5. After cleaning, perform the daily maintenance procedure.

NOTE: Allow one hour for carpet to dry. Use air movers to reduce drying time.

OPERATING ACCESSORY TOOLS (OPTIONAL)

1. Disconnect vacuum hose from recovery dome and connect accessory vacuum hose (Figure 7).
2. Connect accessory solution hose to quick coupler, located at rear of machine (Figure 7).



FIG. 7

3. Attach desired accessory tool to hoses.
4. Turn on Master switch.
5. Begin operating accessory tool (Figure 8).

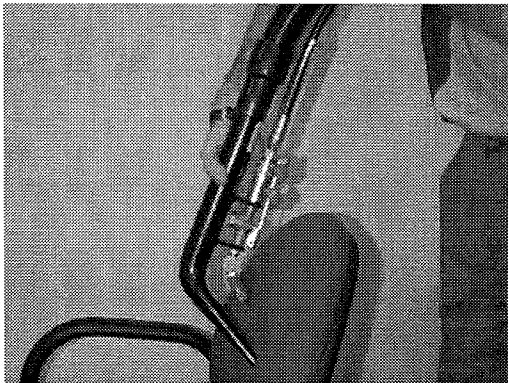


FIG. 8

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

NOTE: When cleaning upholstery, always check cleaning instructions sewn in furniture by manufacturer.

6. After operating accessory tool, relieve water pressure from tool before disconnecting hose. Squeeze trigger for five seconds after turning off switches.

ADJUSTING BRUSH HEIGHT

1. Turn off machine and unplug power cord from wall outlet.

⚠ WARNING: Electrical Hazard. Unplug power Cord Before Servicing Machine.

⚠ WARNING: Spinning Brush. Keep Hands Away. Turn Off Power Before Working On Machine.

2. Adjust brush to proper height. Turn height adjustment knob until bristles slightly touch carpet, then turn knob another half turn. Turn knob clockwise to raise and counterclockwise to lower (Figure 9).

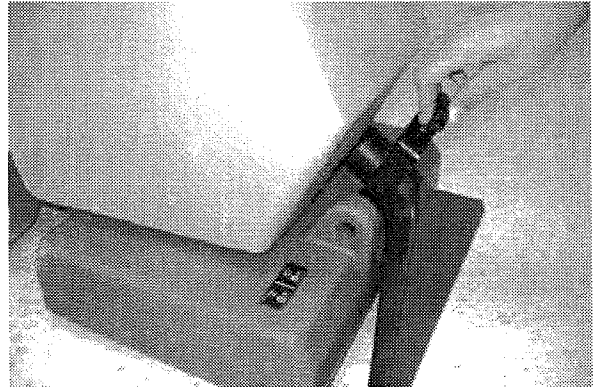


FIG. 9

DRAINING TANKS

⚠ WARNING: Electrical Hazard. Unplug power Cord Before Servicing Machine.

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

DRAINING RECOVERY TANK

1. When solution tank runs dry, recovery tank *must* be emptied. To empty recovery tank, turn off machine and position a discharge bucket under drain valve down spout.

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

2. Pull valve T-handle to empty dirty water (Figure 10).

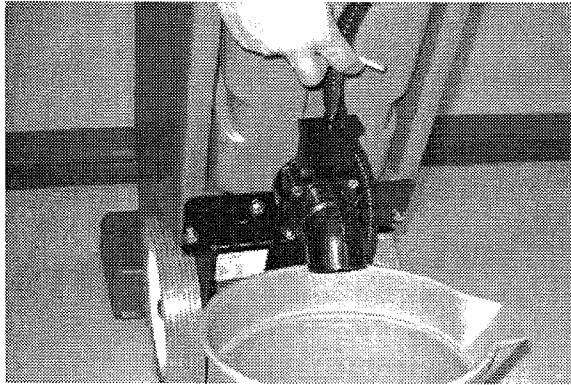


FIG. 10

3. Close valve before continuing operation.

DRAINING LEFTOVER CLEANING SOLUTION

1. When finished cleaning, use clean-out hose to vacuum remaining water from solution tank. Attach one end to recovery dome. Turn on Master switch and use other end to vacuum water (Figure 11).

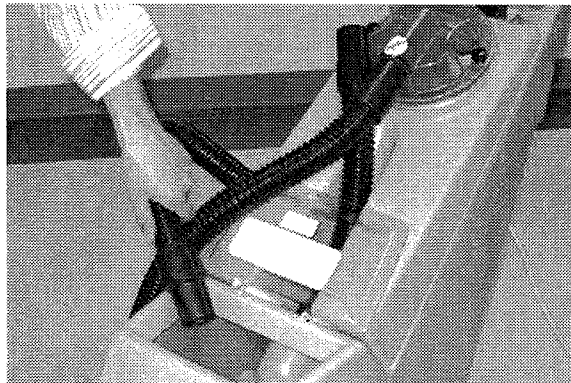


FIG. 11

MACHINE MAINTENANCE

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

⚠ WARNING: Electrical Hazard. Unplug power Cord Before Servicing Machine.

Contact an Authorized Service Center for machine repairs.

FOR SAFETY: When servicing machine, all repairs must be performed by a qualified service person.

DAILY MAINTENANCE (After Every Use)

1. Drain and rinse out tanks thoroughly (See Draining Tanks).
2. Rinse out recovery tank and recovery dome thoroughly after every use.
3. Remove vacuum screen and clean (Figure 12).

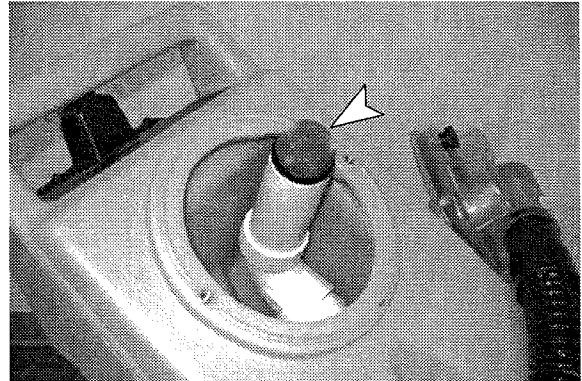


FIG. 12

4. Remove and rinse off the two tank screens located in the bottom of the solution tank.
5. Remove any entangled carpet fibers and debris in brush.
6. Remove any clogged debris in vacuum head.
7. Check power cord for damage, replace if necessary. Coil cord neatly after each use.

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

8. Inspect spray pattern for plugging. If plugged, remove spray tips and soak in acetic acid solution for up to six hours. Do not use pointed objects to unplug tips, damage will occur.

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

9. Clean machine with a nonabrasive, nonsolvent cleaner.

ATTENTION: Do not power spray or hose off machine. Electrical component damage may result.

OPERATION

MONTHLY MAINTENANCE (Every 80 Hours of Use)

1. Flush pump system with an acetic acid solution to dissolve normal alkaline chemical buildup. Follow instructions below:

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

- a. Premix .5 L (16 oz) of an acetic acid solution with 7.5 L (2 gal) of hot water, 60° C (140° F) maximum, and pour into solution tank.

NOTE: The water must **not** be hotter than 60° C (140° F) or tank damage may occur.

NOTE: If filling with a bucket be certain that bucket is clean. This will prevent possible solution line clogs.

- b. Turn on Vacuum/Pump switch.
 - c. Position brush/vacuum head over floor drain and operate machine for one minute.
 - d. Turn off machine and allow remaining solution to break down alkaline buildup overnight.
 - e. Next day, spray out remaining solution and flush system with 11 L (3 gal) of clean water.
2. Lubricate wheels with a water resistant oil.
 3. Inspect machine for water leaks.
 4. Inspect machine for loose screws.

SERVICING MACHINE:

For ease of servicing, the machine's tanks are hinged to pivot away from metal chassis to allow access to inner components.

ATTENTION: Make sure tanks are empty before opening.

1. Remove two rear hex-head screws, located under chassis rear wheels.
2. Remove two allen head screws.
3. Remove two remaining hex-head screws located at front of chassis.
4. Lift tanks upward, away from chassis. The vacuum tool will pivot upward with tanks.

STORING MACHINE

1. Before storing machine, be certain to flush tanks and drain machine of all water.
2. Store machine in a dry area in the upright position with brush raised off floor.
3. Remove recovery dome to promote air circulation.

ATTENTION: If storing machine in freezing temperatures, be sure that machine, pump and spraying system are completely drained and dry. Damage due to freezing temperatures is not covered by warranty.

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

RECOMMENDED STOCK ITEMS

Refer to the Parts List Manual 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	701102	ADM. STANDPIPE	1
2	180010	•FLGRT. SHUTOFF	1
3	200107	NIPPLE	1
4	101714	•GASKET	1
5	210240	•RPT. FLANGED	1

TROUBLE SHOOTING

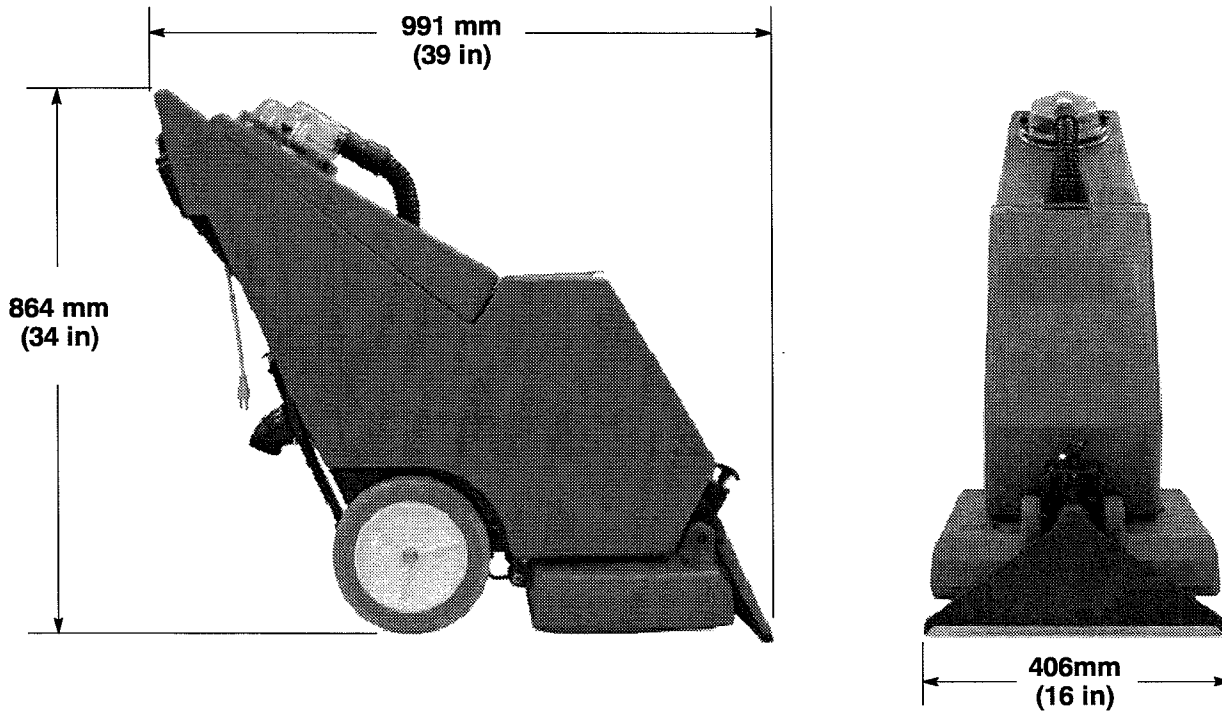
PROBLEM	CAUSE	SOLUTION
Machine does not operate.	Faulty switches or wiring.	Contact Service Center.
	Faulty power cord.	Contact Service Center.
	Building circuit breaker tripped.	Reset breaker.
Solution pump does not operate.	Overheated pump.	Determine cause and wait 20 minutes for pump to cool. Reset breaker.
	Faulty solution pump.	Contact Service Center.
	Faulty solenoid.	Contact Service Center.
	Faulty switch.	Contact Service Center.
	Loose or broken wiring.	Contact Service Center.
Vacuum motor does not operate.	Vacuum motor thermal overload tripped.	Check air flow for obstruction, wait 20 minutes for motor to cool.
	Vacuum motor circuit breaker tripped.	Reset breaker.
	Loose or broken wiring.	Contact Service Center.
	Faulty Master switch.	Contact Service Center.
	Defective vacuum motor.	Contact Service Center.
	Worn carbon brushes.	Replace brushes or call for service.
Brush motor does not operate.	Brush motor circuit breaker tripped.	Remove brush obstruction OR readjust brush height. Reset brush breaker button at bottom of switch box.
	Carpet Cleaning Switch not pushed.	Push Carpet Cleaning Switch.
	Faulty brush motor.	Contact Service Center.
	Loose or broken brush belt.	Contact Service Center.
	Faulty switch or wiring.	Contact Service Center.
Poor pick up.	Open drain valve.	Close valve.
	Clogged standpipe screen in recovery tank.	Remove recovery dome and clean lint off screen.
	Air leakage around recovery dome.	Tighten recovery dome knobs or replace gaskets.
	Loose vacuum hose connections.	Secure connections.
	Defective vacuum hose.	Replace hose.
	Loose vacuum hose cuffs.	Secure cuffs to hose.
	Pulling machine too fast.	Slow down cleaning process.
Uneven or no spray.	Dirty or 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.
	Plugged solution tank filter.	Clean filter.
Drain valve leaks.	Drain valve gaskets worn.	Replace gaskets.
	Lint or dirt in drain valve.	Clean valve.

OPERATION

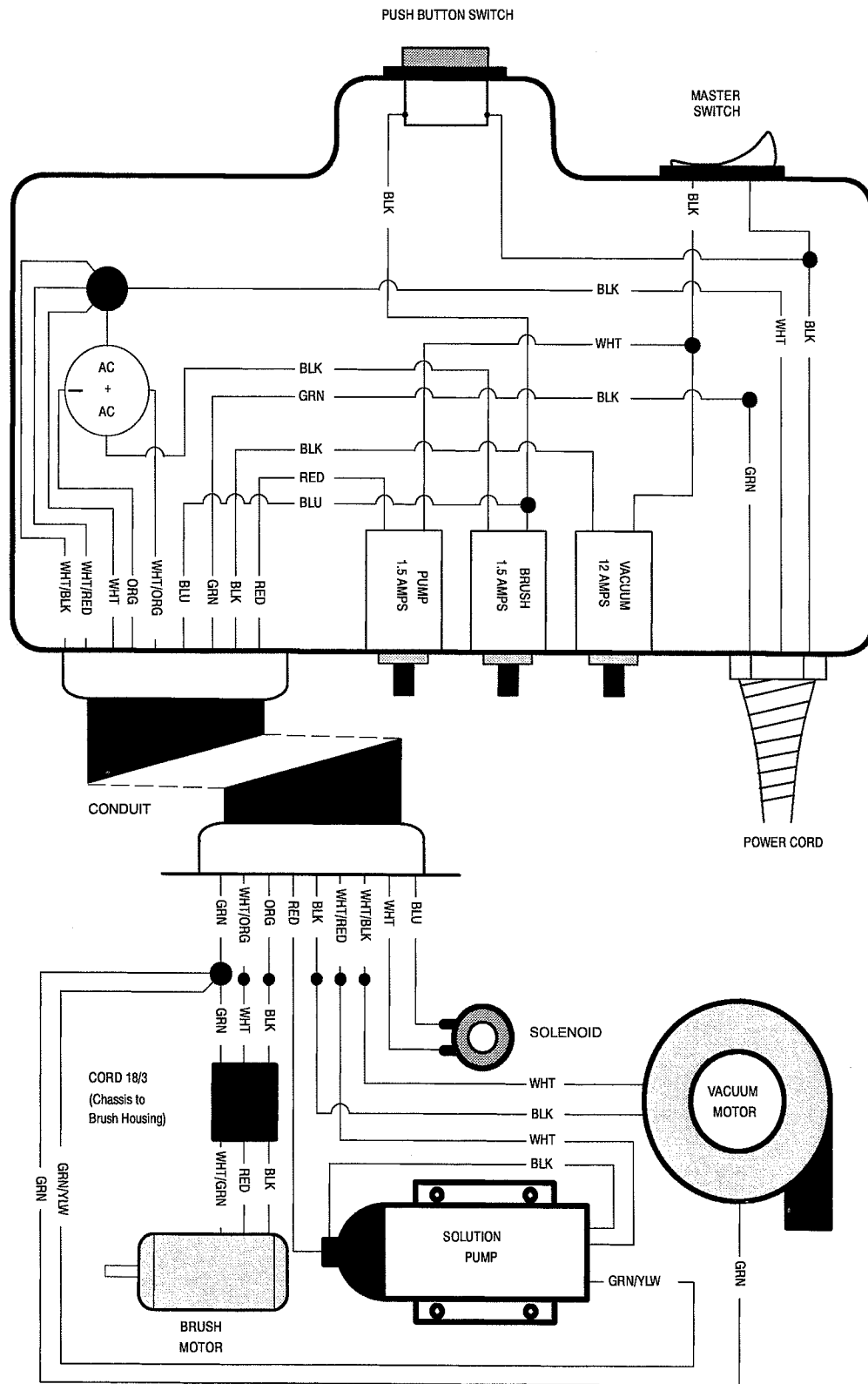
SPECIFICATIONS

Model	Power Eagle™ 716
LENGTH	991 mm (39 in)
WIDTH	406 mm (16 in)
HEIGHT	864 mm (34 in)
WEIGHT	39 Kg (86lb)
SOLUTION TANK CAPACITY	31L (7 gal)
RECOVERY TANK CAPACITY	31L (7 gal)
CLEANING PATH WIDTH	406 mm (16 in)
MAXIMUM CLEANING RATE	186 m ² (2,000 sq. ft) per hour
BRUSH MOTOR	120V, .1hp,1A, 120W, 1800 rpm
BRUSH SPEED	1200 rpm
SOLUTION PUMP	120V, 6.9bar (100psi), 1A
VACUUM MOTOR	120V, 1.66 hp, 10.3A, 1236W, 3 stage
SEALED WATER LIFT	2972 mm (117 in)
TOTAL POWER CONSUMPTION	120V, 12.7A, 1524W
DECIBEL RATING AT OPERATOR'S EAR, INDOORS ON CARPET	>70dB(A)

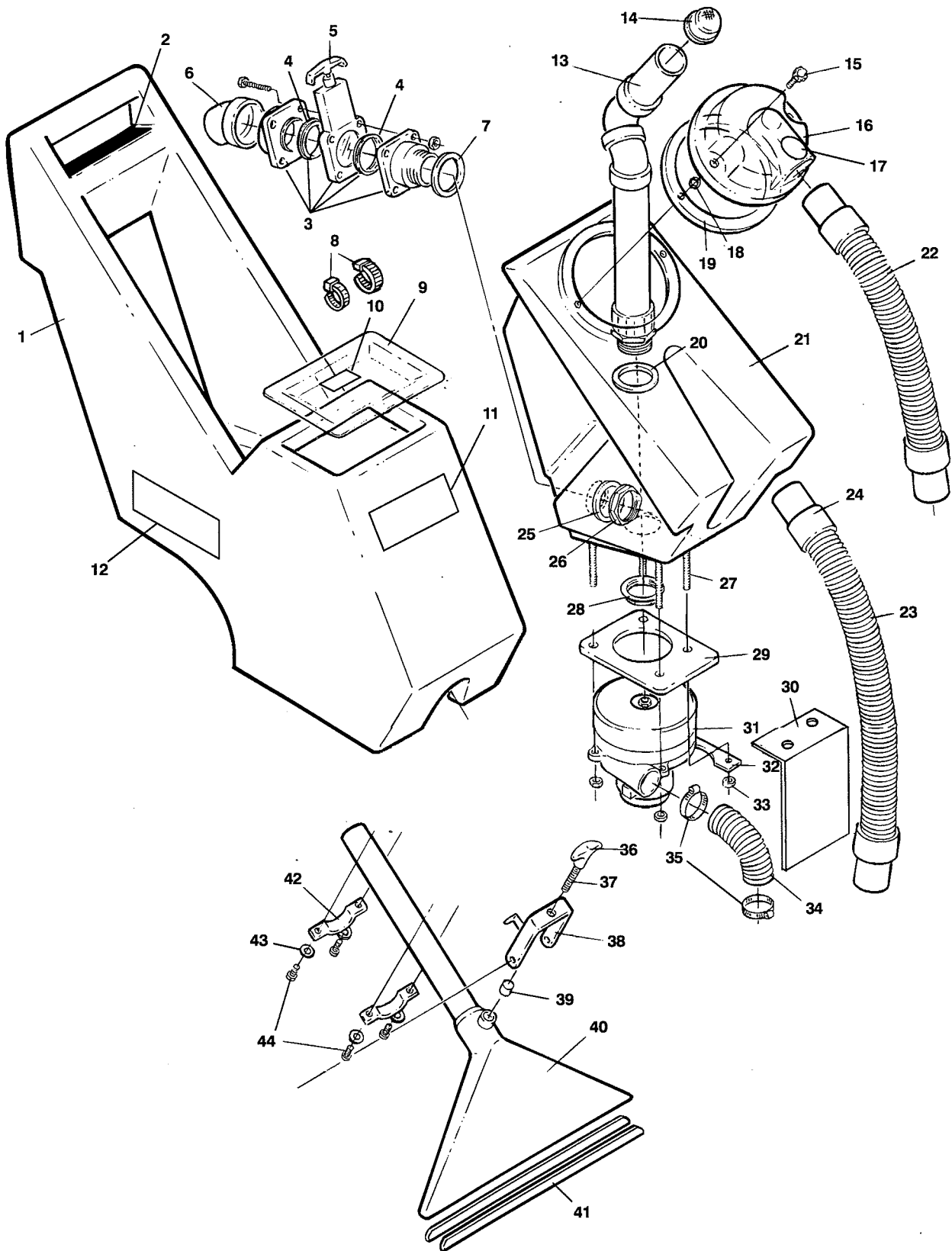
MACHINE DIMENSIONS



120V WIRING DIAGRAM



TANK GROUP



TANK GROUP

REF	PART #	DESCRIPTION	QTY.
1	608544	TANK, SOLUTION, GREEN	1
2	602505	LABEL, INSTRUCTIONS	1
▽ 3	210231	●VALVE, WATER, GATE, 24PM W/ HANDLE	1
▲ 4	210239	●SEAL, GATE DRAIN VALVE	2
▲ 5	210237	●HANDLE, METAL - DRAIN VALVE	1
6	210232	DOWNSPOUT, DRAIN VALVE	1
7	210234	●GASKET, DRAIN VALVE	1
8	130040	TIE, CABLE, NYL 6.0L, .12W	2
9	230500	COVER, DUST	1
10	120906	LABEL, IMPORTANT - DRAIN	1
11	608185	LABEL, LOGO NOBLES 171 X 32 WHT	1
12	608471	LABEL, POWER EAGLE 716	2
13	700144	STANDPIPE ASSEMBLY	1
14	180612	●SCREEN, STANDPIPE	1
15	240217	●KNOB, RECOVERY DOME	2
16	100112	DOME, RECOVERY	1
17	120399	LABEL, DO NOT ALLOW FOAM	1
18	140037	WASHER, FLAT, 0.22B 0.44D .03	2
19	100042	GASKET, RECOVERY DOME	1
20	230159	●O-RING, STANDPIPE	1
21	608546	TANK, RECOVERY, GREEN	1
22	160421	HOSE, VACUUM, 1.5D X 19L, 2-CUFFS	1
▽ 23	160424	●HOSE, VACUUM 1.5D X 36L, 2-CUFFS (CLEANOUT)	1
▲ 24	160430	●HOSE CUFF, 1-1/2 X 1-1/2	2

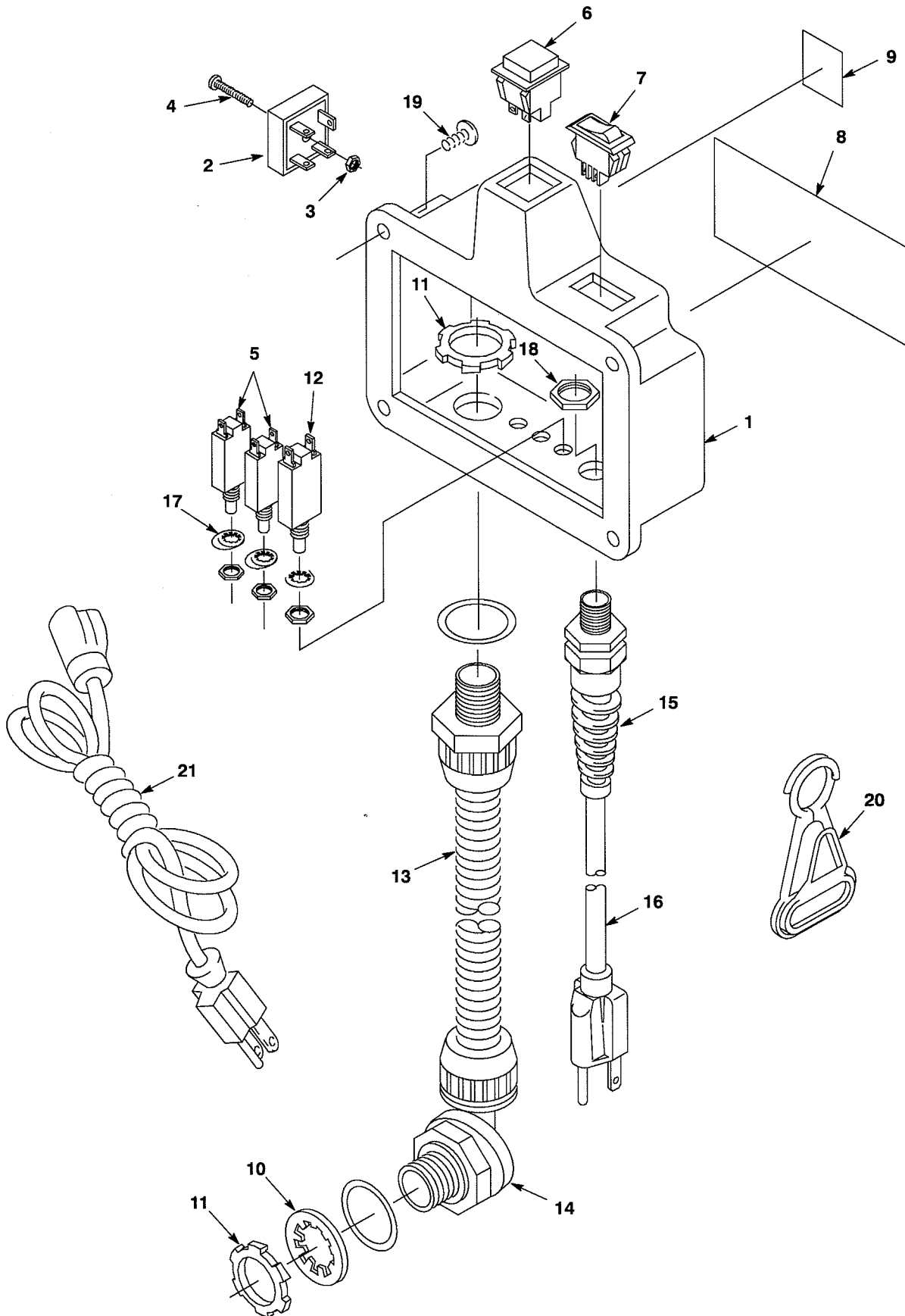
▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

● RECOMMENDED STOCK ITEMS

REF	PART #	DESCRIPTION	QTY.
25	101714	GASKET, WASTE CHAMBER	1
26	210240	NUT, HEX, FLNG 1-1/2 FPT METAL	1
27	140227	SCREW, STUD, 1/4-20 X 5 ZINC	4
28	210240	NUT, HEX, FLNG 1-1/2 FPT METAL	1
29	100037	GASKET, VACUUM MOTOR	1
30	230503	SHIELD, VACUUM MOTOR	1
▽ 31	130416	●FAN, VACUUM, 5.7D 3S 120V	1
▲	190160	●CARBON BRUSH (2/PK)	2
32	230237	BRACKET, SUPPORT	1
33	41169	NUT, HEX, LOCK, .25-20, NL, SS	4
34	1022164	HOSE, EXHAUST, 2.0"ID, 26"LG	1
35	140308	CLAMP, HOSE	2
36	240194	●KNOB, HEIGHT ADJUSTMENT	1
37	230382	STUD, HEIGHT ADJUSTMENT	1
38	230638.BK	BRACKET, HEIGHT ADJUSTMENT	1
39	140919	SPACER, NYLON	1
40	200450.BK	TOOL, FLOOR, 16" BLACK	1
41	200956	●SHOE, 16" FLOOR TOOL	2
42	140313	CLAMP, FLOOR TOOL	2
43	140016	WASHER, LOCK 1/4"	4
44	140554	SCREW, HEX CAP 1/4-20 X 3/4	4

CONTROL CONSOLE GROUP



CONTROL CONSOLE GROUP

REF	PART #	DESCRIPTION	QTY.
▽ 1	612273	SWITCHBOX ASM, 120V BLK	1
▲	611416	SWITCHBOX, SHALLOW RM-BLK ONLY	1
▲ 2	130304	●RECTIFIER, BRIDGE 600V 15AMP	1
▲ 3	140336	NUT, HEX, 10-24 NY	1
▲ 4	140335	SCREW, RND, 10-24 X 1 SLOT NY	1
▲ 5	578337000AM	●BREAKER, CIRCUIT, 1.5 AMP	2
▲ 6	130441AM	●SWITCH, PUSH MOMENTARY	1
▲ 7	130717	●SWITCH, ROCKER ON/OFF	1
▲ 8	613283	LABEL, WARNING AC WB SCRUB/ EXTR 6 X 2.125	1
▲ 9	603829	LABEL, INSTR CLEAN ON/OFF KEMA	1
10	140044	WASHER, 13/16 INT ZN	1
▲ 11	140504	NUT, LOCK CONDUIT 1/2 NPT	2

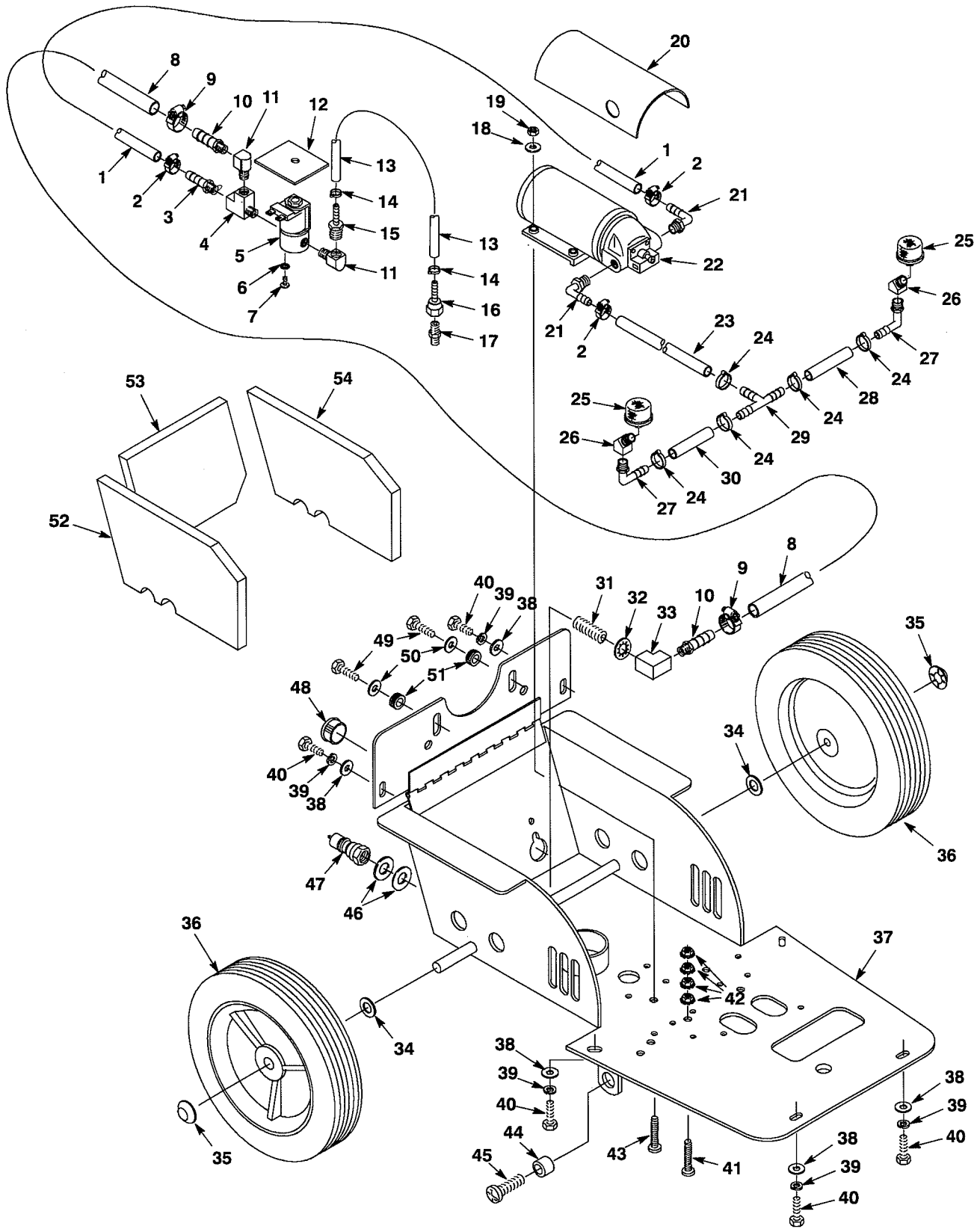
▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

● RECOMMENDED STOCK ITEMS

REF	PART #	DESCRIPTION	QTY.
▲ 12	130670AM	●BREAKER, CIRCUIT, 12 AMP	1
▲▽ 13	130977	●HARNESS, WIRING	1
▲ 14	130242	●FITTING, PLSTC, E90 PM08, FLEXCON	1
▲ 15	130166	●GRIP, STRAIN-RELIEF W/NUT	1
▲ 16	130237	CORD, ASSY 14/3 X 18" YELLOW	1
▲ 17	140022	WASHER, INT 3/8 SS	3
▲ 18	612922	NUT, HEX PG-11 CORDGRIP METAL	1
19	140889	SCREW, 1/4-20 X 3/4	4
20	130176	●CLIP, CORD STRAIN-RELIEF YELLOW (BELT)	1
21	130250	●CORD, POWER16/3 X 50FT EXT SJT YELLOW	1

CHASSIS GROUP



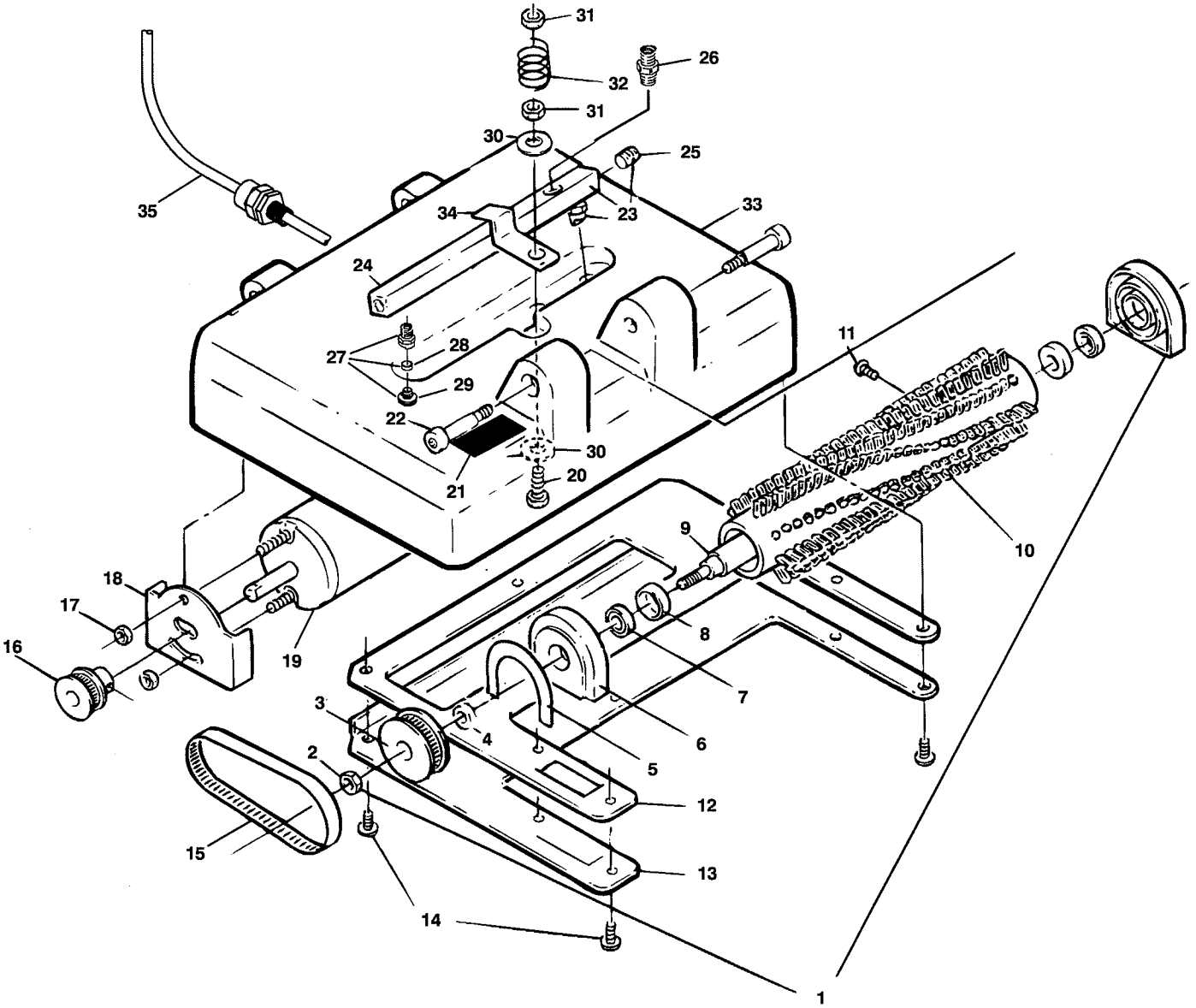
CHASSIS GROUP

REF	PART #	DESCRIPTION	QTY.
1	613481	HOSE, 3/8ID X 5/8OD X 11" LP GRAY (160207)	0.916 ft
	613508	HOSE GUARD 9.70" CLEAR (160210)	0.809 ft
2	54333	CLAMP, HOSE, WORMDRIVE 0.31-0.88D	3
3	150516	HOSE BARB, BRASS 1/4 MPT X 3/8	2
4	150709	FITTING, BRS TEE PM04/PF04/PF04	1
5	210033	●VALVE, SOLENOID, 120 VOLT, 60HZ	1
6	02938	WASHER, LOCK, INT, 08	2
7	140801	SCREW, 8-32 X 3/8	2
8	606162	HOSE, RBR, DBL, 0.50ID 0.75OD, RED CONTENDER (160220)	2.16 ft
	613507	HOSE GUARD 24.696" CLEAR (160209)	2.058 ft
9	630369	CLAMP, HOSE, WORMDRIVE, 0.50-1.10D .56W	2
10	150517	HOSE BARB, BRASS, 1/4MPTX1/2	2
11	27048	FITTING, BRS, E90, PM04/PF04	2
12	230509	●SHIELD, SOLENOID	1
13	613430	HOSE, BULK 0.25ID X 11" (160204)	0.916 ft
	614401	HOSE GUARD 9.70" CLEAR (160211)	0.809 ft
14	140325	CLAMP, EAR 1/4	2
15	150515	HOSE BARB, 1/4 MPT X 1/4 H	1
16	150526	HOSE BARB, BRASS 1/8 NPT X 1/4	1
17	150616	ADAPTER, BRASS 1/8 X 1/4, 37° TUBE	1
18	19066	WASHER, FLAT, #10	2
19	140519	NUT, KEP 10-24	2
20	230508	●SHIELD, PUMP	1
21	150412	ELBOW, 90° NYL 3/8 MPT X 3/8	2
22	180103	●PUMP, SOLTN, 120VAC 100PSI 06PF/06PF	1
23	613486	HOSE, 3/8ID X 5/8OD X 22.5" LP GRAY (160207)	1.66 ft
24	140301	CLAMP, PINCH	5

● RECOMMENDED STOCK ITEMS

REF	PART #	DESCRIPTION	QTY.
25	180628	●SCREEN, SOLUTION TANK	2
26	150403	ELBOW, 45°	2
27	150415	ELBOW, 90° NYL 1/4 MPT X 3/8	2
28	613474	HOSE, 3/8ID X 5/8OD X 3" LP GRAY (160207)	0.25 ft
29	160310	TEE, 3/8 HOSE BARB, NYLON	1
30	613472	HOSE, 3/8ID X 5/8OD X 2.244" LP GRAY (160207)	0.187 ft
31	150615	NIPPLE, BRASS 1/4" CLOSE	1
32	140029	WASHER, 9/16 INT SS	1
33	150401	ELBOW, 90° , 1/4FPTX1/4FPT	1
34	140008	WASHER, FLAT	2
35	103019	●CAP, HUB	2
36	103025	●WHEEL, 10" X 1.75 GRAY	2
37	230301.BK	CHASSIS, HINGED, BLACK	1
38	140000	WASHER, FLAT 0.28B 0.62D .04	6
39	140016	WASHER, LOCK 0.25 SS	6
40	01696	SCREW, HEX .25-20 X 0.50	6
41	140196	SCREW, TRS, 10-24 X 1.0 PHL	1
42	140519	NUT, KEP 10-24	4
43	140804	SCREW, 10-24 X 1	2
44	140914	SPACER, NYLON .375IDX.5X.25	2
45	140898	SCREW, 3/8-16 X 3/4	2
46	140034	WASHER, .5 FLAT USS BLK	2
47	150933	●PLUG, QCK CPLR SER. 60 FPT	1
48	130161	PLUG, DOME .875D, BLACK	1
49	140554	SCREW, HEX 1/4-20 X 3/4	2
50	140010	WASHER, FLAT 1/4" SAE	2
51	180131	GROMMET, RUBBER	2
52	102520	TUFCOTE, EMBOSSED FOAM 1/2" (RT SIDE)	1
53	102522	TUFCOTE, EMBOSSED FOAM 1/2" (BACK SIDE)	1
54	102521	TUFCOTE, EMBOSSED FOAM 1/2" (LT SIDE)	1

BRUSH GROUP



BRUSH GROUP

REF	PART #	DESCRIPTION	QTY.
▽ 1	700212	●BRUSH ASM, 16" COMPLETE	1
▲ 2	140548	NUT, FINJAM 5/16	1
▲ 3	230505	PULLEY, BRUSH W/ SCREW	1
▲ 4	230363	SPACER, BRUSH, .625OD X .328ID X .125	1
▲ 5	100005	●GASKET, BEARING BLOCK	1
▲ 6	230261	BLOCK, BEARING	2
▲ 7	140125	●BEARING, BRUSH	2
▲ 8	100049	●SEAL, BRUSH BEARING	2
▲ 9	230257	SHAFT, BRUSH, (16")	1
▲ 10	240004	●BRUSH, CYLINDER, (16")	1
▲ 11	24672	SCREW, HEX, .25-20 X 0.75, SS	4
12	100006	GASKET, BASE PLATE	1
13	611917	PLATE, BASE, 16"	1
14	140197	SCREW, TRS #10-24 X 0.38, PHL	10
15	230507	●BELT, BRUSH DRIVE	1
16	230506	PULLEY, DRIVE	1
17	140518	NUT, KEP 10-32	2
18	230366	PLATE, MOTOR MOUNT	1

REF	PART #	DESCRIPTION	QTY.
19	1019015	●MOTOR, ELE, 115VDC, .125 HP	1
20	140233	SCREW, HEX CAP 3/8-16 X 1-3/4	1
21	120617	LABEL, HEIGHT ADJUSTMENT	1
22	140564	BOLT, SHOULDER 3/8 X 3/4	2
▽ 23	701107	●SPRAYBAR 16" COMPL.	1
▲ 24	230267	SPRAYBAR MANIFOLD, 16"	1
▲ 25	150208	PLUG, BRASS HEX HEAD 1/8	3
▲ 26	150616	FITTING, 1/8 NPT X 1/4	1
▲▽ 27	201010	●NOZZLE, 1/8" BRS, NO SCREEN	4
▲ 28	201015	●SEAL, SPRAY NOZZLE (201010)	4
▲ 29	201012	●FITTING, BRS TIP, 8002 (201010)	4
30	140028	WASHER, FLAT, 0.42B 1.00D .05	2
31	59156	NUT, HEX, LOCK, .38-16 NL, SS	2
32	140407	SPRING, .845 OD	1
33	100818	BASE, 16" P. BRUSH RM-BLK /CO	1
34	230264.BK	CLAMP, SPRAYBAR MANIFOLD	1
35	130662	CORD, 18/3X24", BLACK SJTO	1

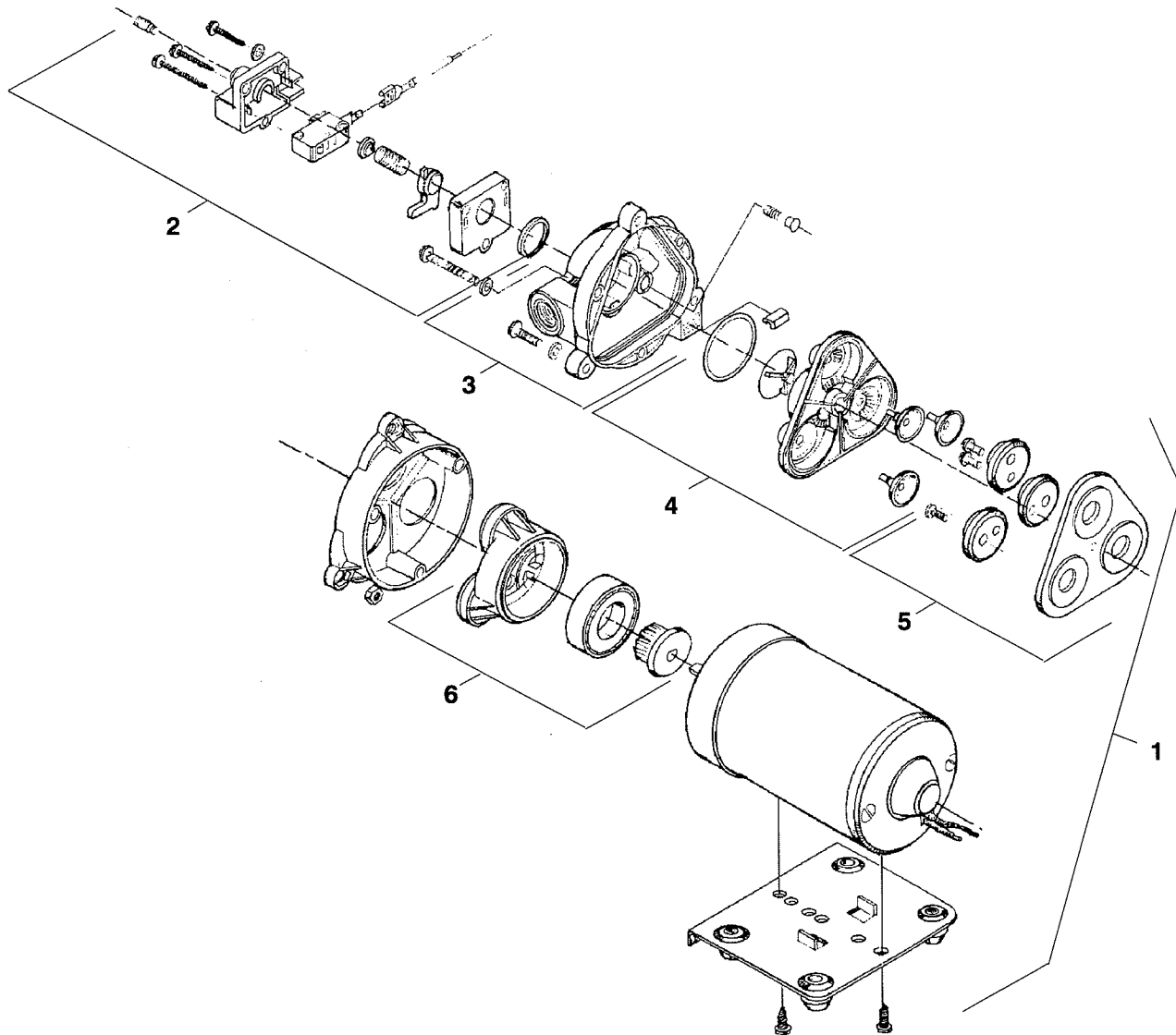
▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

● RECOMMENDED STOCK ITEMS

PARTS LIST

PUMP BREAKDOWN



REF	PART #	DESCRIPTION	QTY.
▽ 1	180103	●PUMP, 100 PSI 120V (COMPLETE)	1
▲ 2	190129	●KIT, PUMP PRESSURE SWITCH	1
	190172	●KIT, PUMP PRS SWITCH (VITON)	1
	190134	●KIT, PUMP DIAPHRAGM ONLY	1
▲ 3	190128	●KIT, PUMP UPPER HOUSING	1
	190124	●KIT, PUMP CHECK VALVE ONLY	1

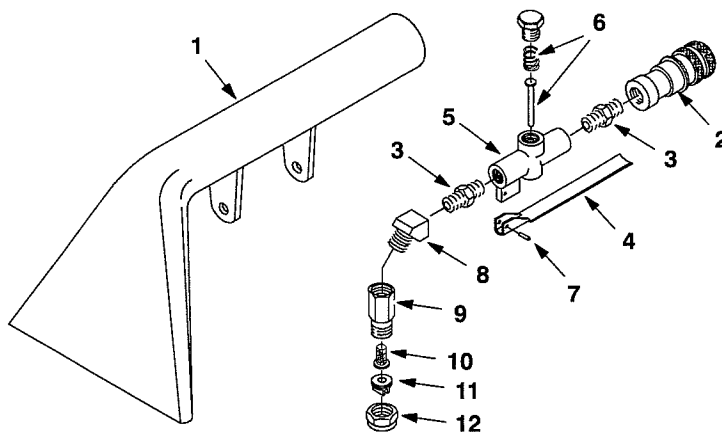
REF	PART #	DESCRIPTION	QTY.
▲ 4	190171	●KIT, PUMP VALVE (VITON)	1
▲ 5	190131	●KIT, PUMP SERVICE	1
▲ 6	190130	●KIT, PUMP LOWER HOUSING	1

▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

● RECOMMENDED STOCK ITEMS

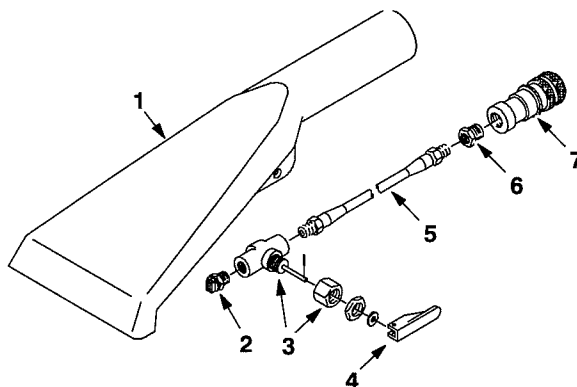
127 mm (5 in) HAND TOOL



REF	PART #	DESCRIPTION	QTY.	
▽	200505	●ASM., HAND TOOL 5" SERIES 60	1	
▲	1	200431.BK	TOOL, HAND BLACK	1
▲	2	150913	FITTING, BRS QDC PF04 SER60	1
▲	3	150606	FITTING, BRS STR PF04 HEX NIP	2
▲	4	200905	LEVER, K-VALVE W/PIN	1
▲	5	210210	●VALVE, FLOW CONTROL 04PF	1
▲	6	190600	KIT, K-VALVE REPAIR	1

REF	PART #	DESCRIPTION	QTY.	
▲	7	140609	PIN, ROLL 0.187D X 0.56L	1
▲	8	150403	FITTING, BRS E45 PF04/PF04	1
▲	9	200992	FITTING, BRS STR PF02 SWIVEL	1
▲	10	200996	FILTER, SCREEN 100MESH	1
▲	11	200965	●FITTING, BRS TIP, 8002 T-JET	1
▲	12	200994	CAP, NOZZLE SPRAY (8002)	1

76 mm (3 in) CREVICE TOOL



REF	PART #	DESCRIPTION	QTY.	
▽	200517	●TOOL, CREVICE LP/HP SER 60	1	
▲	1	200436.BK	TOOL, CREVICE BLACK	1
▲	2	200975	●FITTING, BRS TIP #5002 1/8V-JET	1
▲	3	210014	●VALVE, TOGGLE 02PF W/NUT	1

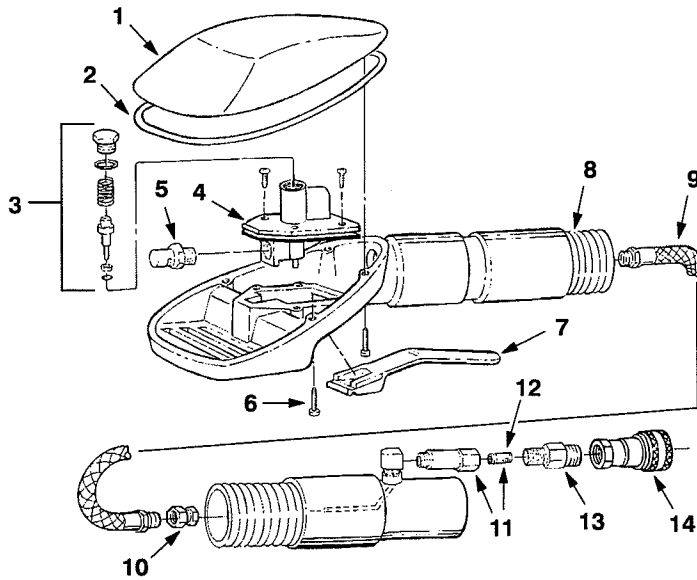
REF	PART #	DESCRIPTION	QTY.	
▲	4	210020	POSITIONER, VALVE HANDLE	1
▲	5	160106	HOSE, SOLUTION CREVICE TOOL	1
▲	6	150100	FITTING, BRS STR PF04/PF02	1
▲	7	150913	FITTING, BRS QDC PF04 SER 60	1

▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

● RECOMMENDED STOCK ITEMS

LOW PRESSURE UPHOLSTERY TOOL



REF	PART #	DESCRIPTION	QTY.
▽	200540	●TOOL, UPHOLSTERY LP SER 60	1
▲ 1	200845	COVER, UPHOLSTERY TOOL	1
▲ 2	200843	GASKET, COVER	1
▲ 3	190631	●KIT, SERVICE LP UPHOLSTERY	1
▲ 4	210226	●VALVE, WATER/SOL 120VAC LP	1
▲ 5	200991	●FITTING, SS TIP 1/8K-JET	1
▲ 6	200838	SCREW, #06-32 X 0.75	4
▲ 7	200840	TRIGGER, UPHOLSTERY TOOL	1

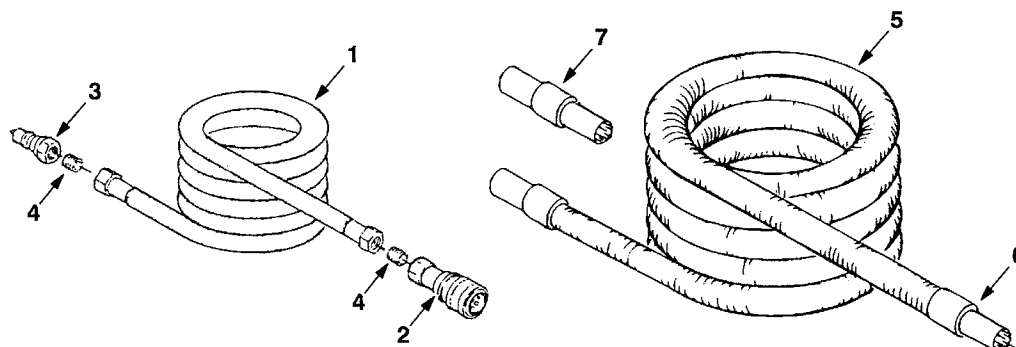
REF	PART #	DESCRIPTION	QTY.
▲ 8	200844	●HOSE, VAC UPHOLSTERY TOOL W/O CUFFS	1
▲ 9	200837	●HOSE, UPHOLSTERY TOOL	1
▲ 10	200848	FITTING, BRASS (3 PCS)	1
▲ 11	200842	FILTER, INLINE COMPLETE	1
▲ 12	200841	SCREEN ONLY, INLINE FILTER	1
▲ 13	150606	FITTING, BRS STR PF04 HEX NIP	1
▲ 14	150913	●FITTING , BRS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

▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

● RECOMMENDED STOCK ITEMS

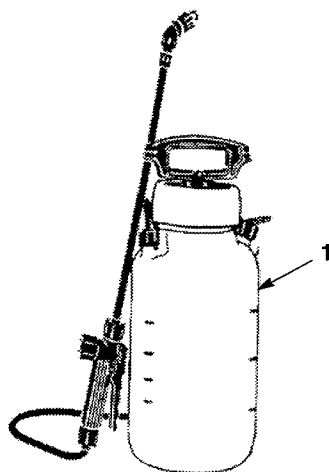
SOLUTION AND VACUUM HOSES



REF	PART #	DESCRIPTION	QTY.
▽ 1	160185	HOSE, SOLUTION 4.6M (15')	1
	160186	HOSE, SOLUTION 7.6M (25')	1
	160187	HOSE, SOLUTION 15.2M (50')	1
▲ 2	150913	●FITTING, BRS QDC PF04 SER 60	1
▲ 3	150933	FITTING, BRS QDC PM04 SER 60	1
▲ 4	150615	FITTING, BRS STR PM04 CLOSE	2

REF	PART #	DESCRIPTION	QTY.
▽ 5	160400	HOSE, VACUUM 4.6M (15')	1
	160401	HOSE, VACUUM 7.6M (25')	1
	160402	HOSE, VACUUM 15.2M (50')	1
▲ 6	160430	●CUFF, HOSE 1.5 X 1.5 BLACK	2
7	160451	●CONNECTOR, VAC HOSE 38MM (1.5IN)	1
N/S	220040	●BAG, HOSE NYLON MESH W/DRAWSTRING	1

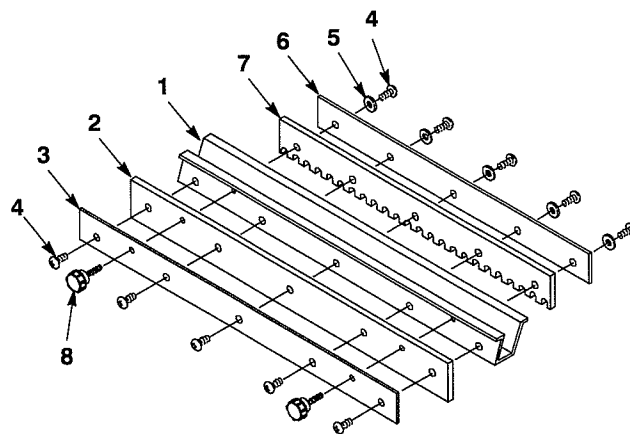
PUMP-UP CARPET SPRAYER



REF	PART #	DESCRIPTION	QTY.
1	605848	●SPRAYER 2GAL PUMP-UP HEAVY DUTY	1

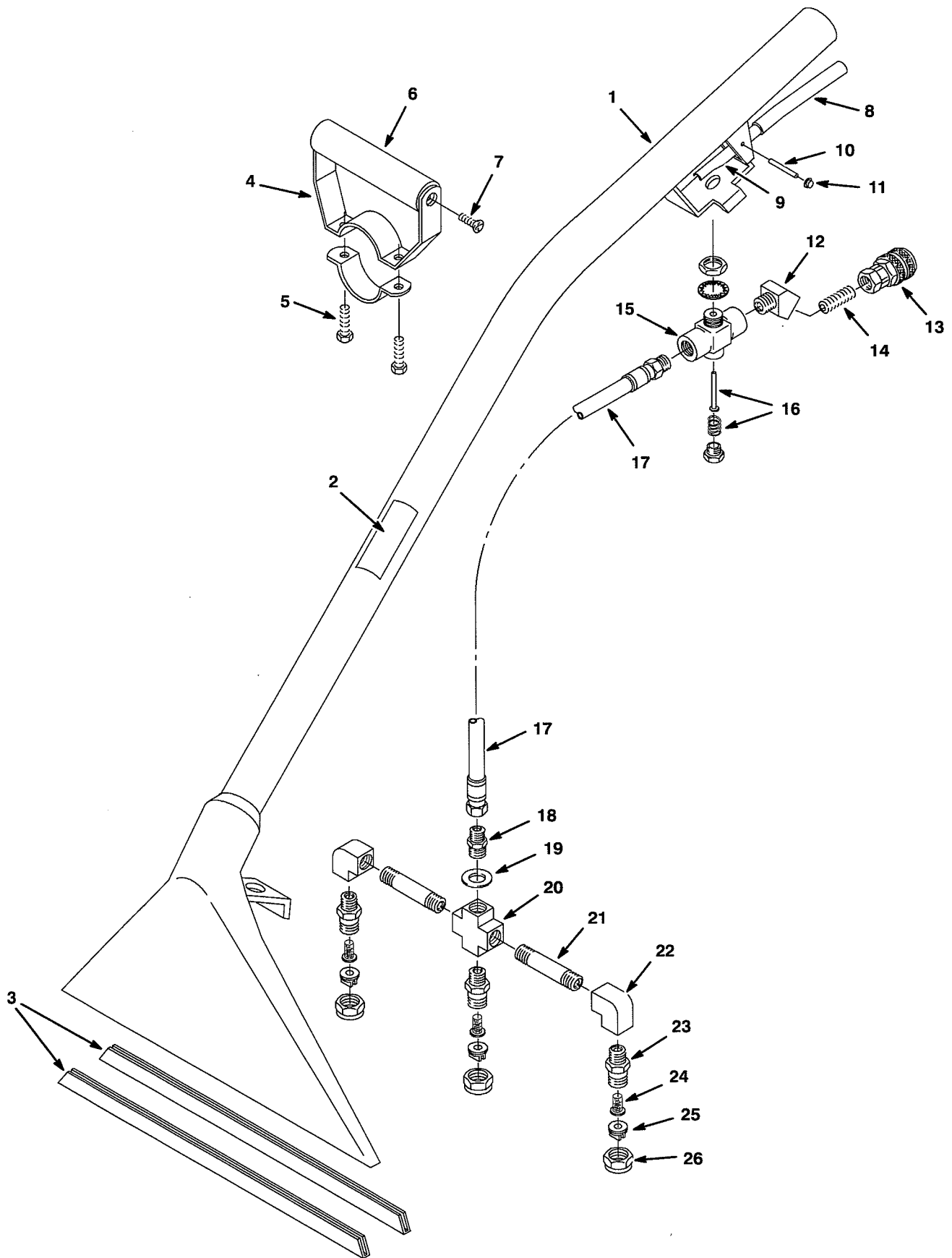
- ▽ ASSEMBLY
- ▲ INCLUDED IN ASSEMBLY
- RECOMMENDED STOCK ITEMS

HARD FLOOR SQUEEGEE ASSEMBLY



REF	PART #	DESCRIPTION	QTY.
▽	200170	●SQUEEGEE ASSY, COMPLETE	1
▲ 1	240056.BK	CHANNEL 15" SQUEEGEE	1
▲ 2	240059	●BLADE, SQGE, 15" GUM RUBBER	1
▲ 3	240054.BK	PLATE NUT 15" SQUEEGEE	1
▲ 4	140887	SCREW, PAN, #10-24 X 0.38, PHL	10
▲ 5	140011	WASHER, FLAT, 0.21B 0.45D .03	5
▲ 6	240055.BK	PLATE NUT 13" SQUEEGEE	1
▲ 7	240060	●BLADE, SQUE, 13" URETHANE	1
▲ 8	240217	●KNOB, RND, .25-20 BLK	2

FLOOR TOOL, LOW PRESSURE 330 mm (13 in)



FLOOR TOOL, LOW PRESSURE 330 mm (13 in)

REF	PART #	DESCRIPTION	QTY.
▽	600048	●TOOL, 330MM (13 IN) FLOOR LP SER 60	1
▲ 1	200403.BK	TOOL, FLOOR BLACK	1
▲ 2	120846	DECAL, LOW PRESSURE TOOL	1
▲ 3	200939	●SHOE, 330MM (13 IN) FLR TOOL	2
▲▽ 4	200927AM	●GRIP, HAND ADJ. COMPLETE	1
▲ 5	01697	SCREW, HEX .25-20 X 0.62	2
▲ 6	200912	●GRIP, HANDLE FOAM	1
▲ 7	140834	SCREW, FLT .25-20 X 0.62 PHL	2
▲ 8	200809	SLEEVE, HANDLE FLOOR TOOL	1
▲ 9	200902	HANDLE, IMPERIAL VALVE	1
▲ 10	140605	PIN, HANDLE IMPERIAL	1
▲ 11	140520	NUT, 1/4 PUSH BLK	2
▲ 12	150403	FITTING, BRS E45 PM04/PF04	1
▲ 13	150913	●FITTING, BRS QDC PF04 SER 60	1

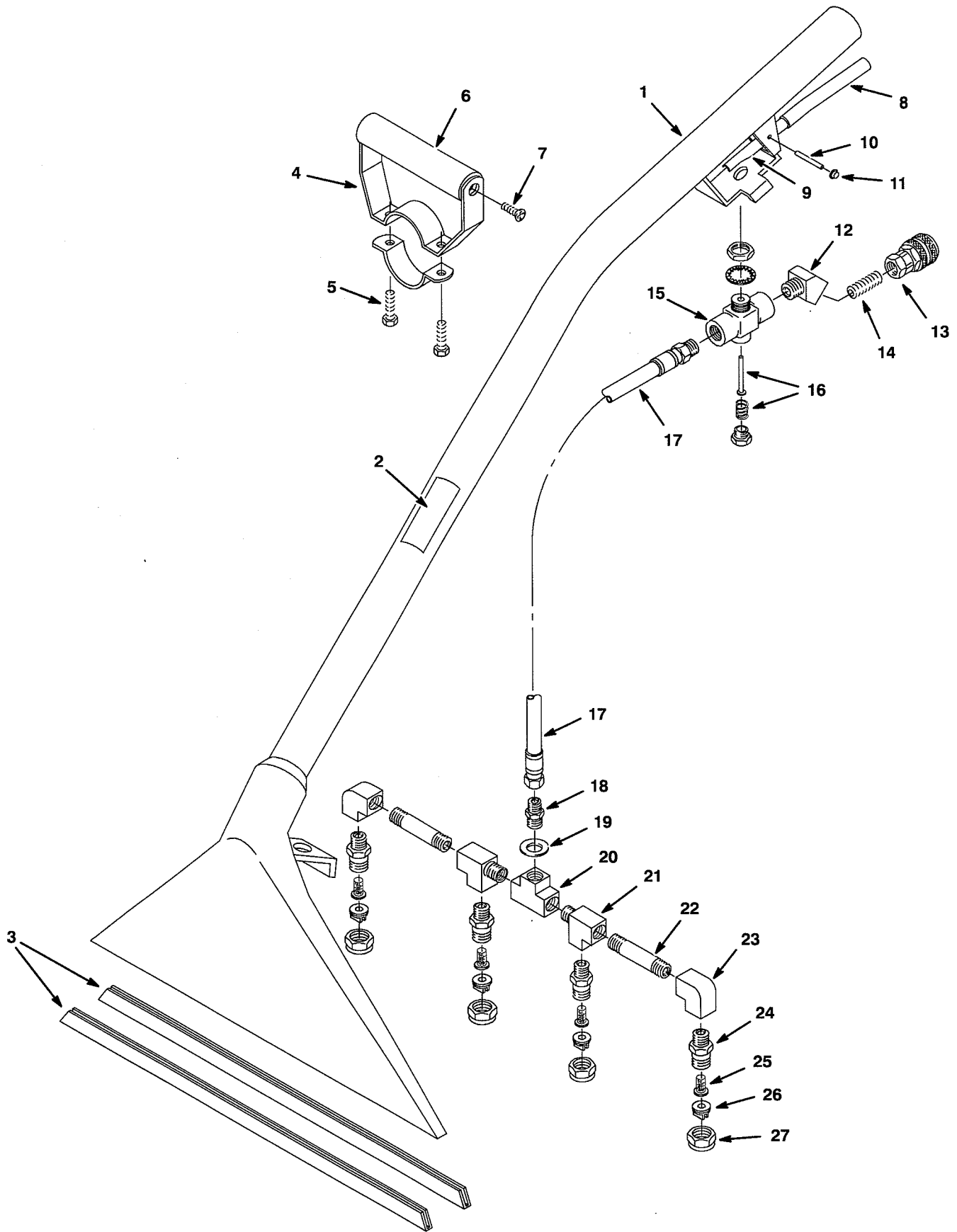
REF	PART #	DESCRIPTION	QTY.
▲ 14	150615	FITTING, BRS STR PM04 CLOSE	1
▲▽ 15	210150	●VALVE, FLOW CONTROL PF04	1
▲ 16	190603	●KIT, REPAIR IMPERIAL	1
▲ 17	160170	WAND, HOSE ASSEMBLY 46"	1
▲ 18	150606	FITTING, BRS STR PM04 HEX NIP	1
▲ 19	140058	WASHER, .54B X .88D X .06 WAND	1
▲▽	700062	ASM., SPRAYBAR WO/TIPS	1
▲ 20	150700	FITTING, BRS TEE PF04 CROSS	1
▲ 21	150600	FITTING, 1/4MX2" NIPPLE BRS	2
▲ 22	150401	FITTING, BRS E90 PF04/PF04	2
▲ 23	200993	SPRAY BODY, 1/4" MALE BRASS	3
▲ 24	200996	●FILTER, SCREEN 100 MESH	3
▲ 25	200964	●FITTING, TIP 11003 T-JET BRS	3
▲ 26	200994	●CAP, NOZZLE SPRAY (8002)	3

▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

● RECOMMENDED STOCK ITEMS

FLOOR TOOL, LOW PRESSURE 406 mm (16 in)



FLOOR TOOL, LOW PRESSURE 406 mm (16 in)

REF	PART #	DESCRIPTION	QTY.
▽	200503	●TOOL, 406MM (16 IN) FLOOR LP SER 60	1
▲ 1	200411.BK	TOOL, FLOOR 406MM (16 IN)	1
▲ 2	120846	DECAL, LOW PRESSURE TOOL	1
▲ 3	200956	●SHOE, 406MM (16 IN) FLR TOOL	2
▲▽ 4	200927AM	●GRIP, HAND ADJ. COMPLETE	1
▲ 5	01697	SCREW, HEX .25-20 X 0.62	2
▲ 6	200912	●GRIP, HANDLE FOAM	1
▲ 7	140834	SCREW, FLT .25-20 X 0.62 PHL	2
▲ 8	200809	SLEEVE, HANDLE FLOOR TOOL	1
▲ 9	200902	HANDLE, IMPERIAL VALVE	1
▲ 10	140605	PIN, HANDLE IMPERIAL	1
▲ 11	140520	NUT, 1/4 PUSH BLK	2
▲ 12	150403	FITTING, BRS E45 PM04/PF04	1
▲ 13	150913	●FITTING, BRS QDC PF04 SER 60	1
▲ 14	150615	FITTING, BRS STR PM04 CLOSE	1

REF	PART #	DESCRIPTION	QTY.
▲▽ 15	210150	●VALVE, FLOW CONTROL PF04	1
▲ 16	190603	●KIT, REPAIR IMPERIAL	1
▲ 17	160170	WAND, HOSE ASSEMBLY 46"	1
▲ 18	150606	FITTING, BRS STR PM04 HEX NIP	1
▲ 19	140058	WASHER, .54B X .88D X .06 WAND	1
▲▽	700656	ASM., SPRAYBAR 16" WO/TIPS	1
▲ 20	150706	FITTING, BRS TEE PF04	1
▲ 21	150709	FITTING, BRS TEE PM04/PF04/PF04	2
▲ 22	150600	FITTING, 1/4MX2" NIPPLE BRS	2
▲ 23	150401	FITTING, BRS E90 PF04/PF04	2
▲ 24	200993	SPRAY BODY, 1/4" MALE BRASS	4
▲ 25	200996	●FILTER, SCREEN 100 MESH	4
▲ 26	200964	●FITTING, TIP 11003 T-JET BRS	4
▲ 27	200994	CAP, NOZZLE SPRAY (8002)	4

▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

● RECOMMENDED STOCK ITEMS

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