

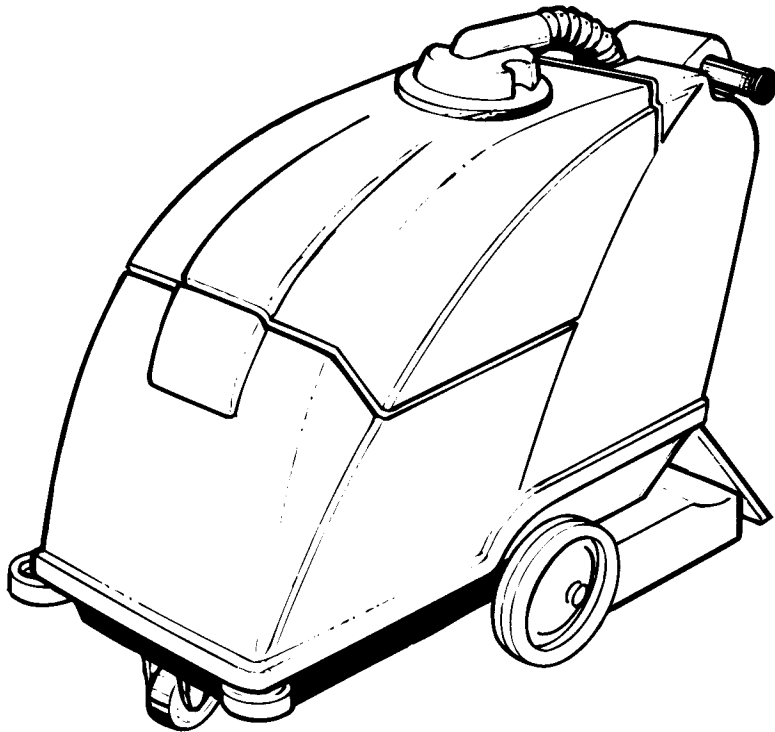


FalconTM 2800 Plus

Automatic Carpet Extractor

Model No.:
608352
609260

Operator and Parts Manual



NOBLES
12875 RANSOM STREET
HOLLAND MI 49424 U.S.A.

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607210
Rev. 00 (02-00)

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.

When ordering replacement parts, use the Parts Lists in this manual. 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 Service Center or Distributor.

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.- _____

Install. Date - _____

Serial No.- _____

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SAFETY PRECAUTIONS

This machine is intended for commercial use. It is suited to clean carpet and upholstery in an indoor environment and is not constructed for any other use. Use only recommended accessory tools and cleaning solutions.

The following safety alert symbols 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.

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

FOR SAFETY:

1. Do not operate machine:
 - Unless trained and authorized.
 - Unless operator manual is read and understood.
 - In flammable or explosive areas unless designed for use in those areas.
 - 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.
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.
 - Go slow on inclines and slippery surfaces.
 - Use care when reversing machine.
 - Report machine damage or faulty operation immediately.
 - Do not carry riders on machine.

- Follow mixing and handling instructions on chemical containers.

4. Before leaving or servicing machine:

- Stop on level surface.
- 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.
- Block machine tires before jacking up.
- Use hoist or jack of adequate capacity to lift machine.
- Use manufacturer supplied or approved replacement parts.

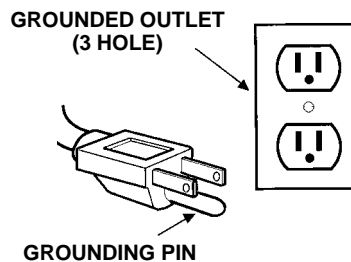
⚠ WARNING: Hazardous Voltage. Shock or electrocution can result. Unplug machine before servicing.

⚠ WARNING: Flammable materials can cause an explosion or fire. Do not use flammable materials in tank(s).

⚠ WARNING: Flammable materials or reactive metals can cause an explosion or fire. Do not pick up.

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

SETUP AND OPERATION

MACHINE INSTALLATION

ATTENTION: To prevent damage to machine when uncrating, do not attempt to drive or roll off skid. Carefully lift machine with assistance or use a ramp.

Your new machine requires very little setup.

1. Place recovery dome on top of solution tank and secure with two thumbscrews.
2. Insert black vacuum hose into dome opening.
3. Install spray wand into opening on right side of tank, next to control housing (Figure 1).



FIG. 1

TRANSPORTING MACHINE

Your machine will glide easily across floor by pushing machine forward (without power). To pull machine backwards, pull the reverse release lever backwards (arrow A) and to the right to latch (arrow B). Be certain brush is raised before transporting. To raise brush, pull brush lever backwards (arrow C) until it latches (Figure 2).

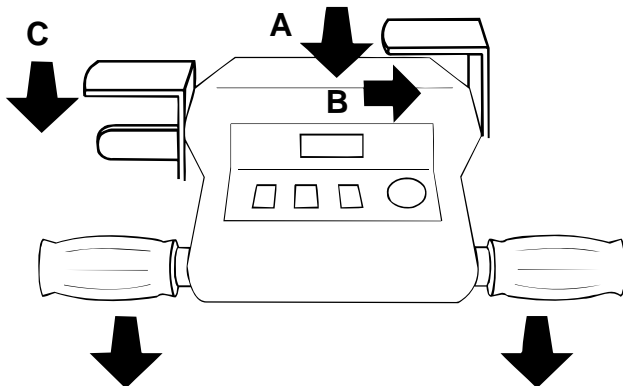


FIG. 2

FILLING SOLUTION TANK

Open fill port door at front of machine and fill with 106 liters (28 gal) of hot water, 60°C (140°F) maximum, and add liquid cleaning solution to proper dilution ratio (Figure 3).

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

⚠ WARNING: Flammable materials can cause an explosion or fire. Do not use flammable materials in tank(s).

ATTENTION: If using powdered cleaning chemicals, mix prior to adding. Wait until completely dissolved before pouring into solution tank.

ATTENTION: Always use separate buckets to fill and empty machine. Dirty water in solution tank will clog solution pump system.



FIG. 3

ADJUSTING CONTROL GRIP HEIGHT

Adjust control grip height to a comfortable operating height (three settings). To adjust, squeeze two levers under console together to raise or lower control grip (Figure 4).



FIG. 4

CONNECTING MACHINE TO POWER SOURCE

1. Connect equipped extension cord to short pigtail cord on machine (For 220V models plug directly into wall outlet).
2. Plug extension cord into a grounded power outlet (Figure 5).

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.

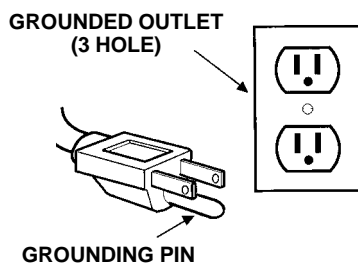


FIG. 5

3. Attach belt clip to power cord and to your belt (Figure 6).



FIG. 6

CLEANING CARPET

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

1. Turn on main power switch.
2. Select cleaning mode. Position cleaning mode switch towards "INTERIM CLEANING" or "RESTORATIVE CLEANING" (Figure 7).



FIG. 7

RESTORATIVE CLEANING: Use this mode to restore heavily soiled carpet areas. This mode disperses 3.8 liters (1 gal) per minute allowing for longer dry time. The restorative cleaning mode must be performed on a regular basis in order for the interim cleaning mode to be effective.

INTERIM CLEANING: Use this mode for routine light cleaning. This mode disperses 2.6 liters (0.7 gal) per minute. The interim cleaning mode will be ineffective if the restorative cleaning mode is not performed on a regular basis.

3. Turn vacuum switch on.
4. Lower brush by depressing thumb latch and moving lever forward.(Figure 8).



FIG. 8

5. Turn pump switch on.

NOTE: Pump and brush are activated by the control grips.

OPERATION

6. To begin cleaning, rotate control grips forward and adjust speed control knob according to specific cleaning mode (Figure 9):

RESTORATIVE CLEANING:
15 M (50 ft.) per minute.

INTERIM CLEANING:
30 M (100 ft.) per minute.



FIG. 9

7. Observe brush pressure meter while cleaning, it should read in the "Best Cleaning Results" range (See ADJUSTING BRUSH HEIGHT).
 8. Watch level of foam build-up in recovery tank. If excessive foam appears, pour a quality defoamer chemical into recovery tank.
- ATTENTION: Do not allow foam to enter float shut-off screen. Foam will not cause screen to shut off. Damage caused by foam is not covered by warranty.**
9. Turn pump switch off just before stopping to vacuum up excess water.
 10. Check remaining solution in solution tank when cleaning. To check, look at clear gallon marker hose at rear of machine. Each mark on hose equals 22L (5 gal) of solution (Figure 10).



FIG. 10

11. To pull machine backwards, engage reverse lever.

OPERATING PRESpray WAND

While cleaning, prespray traffic areas and spots using built-in prespray wand. To activate wand, turn on main power and pump switches. Remove wand from holder, unlock trigger and spray where needed (Figure 11).



FIG. 11

ADJUSTING BRUSH HEIGHT

1. Lower brush.
2. Rotate speed control knob to slowest setting.
3. Turn main power switch on.
4. Rotate control grips forward and hold them.
5. While reading brush pressure meter, turn brush height knob until meter reads in the "Best Cleaning Results" range (Figure 12).



FIG. 12

CIRCUIT BREAKERS

The machine is equipped with two circuit breakers located on control housing at rear of machine.

1. Brush motor is protected by a 1.5 amp circuit breaker. If breaker should trip, adjust brush height or remove any obstruction in brush. Reset breaker button.

FOR SAFETY: When leaving or servicing machine, turn off machine and unplug from wall outlet.

2. Drive motor is protected by a 2.5 amp circuit breaker. If breaker trips, drive motor has been overstressed or there is an electrical short. Push circuit breaker button to reset or contact service center.

UPHOLSTERY TOOL SETUP AND OPERATION (OPTION)

Machine cleans most synthetic upholstery. Fabrics such as 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 on furniture by manufacturer for further instructions. Use extra caution with furniture that has been reupholstered. Any material under new upholstery may bleed and discolor new fabric.

1. Vacuum fabric before cleaning.
2. Test fabric for color fastness. To test, pour a small amount of cleaning solution on a white cloth. Hold cloth against a hidden area of upholstery for 60 seconds. If no color transfers to cloth, it should be safe to clean. However, always clean at your own discretion.
3. Disconnect vacuum hose from recovery dome and replace with optional extension vacuum hose. Connect optional solution hose to quick disconnect located on top of tank. Then connect optional accessory tool to hoses (Figure 13).
4. Turn on main power, vacuum and pump switches.
5. To clean, place tool on upholstery, squeeze trigger and pull tool backwards (Figure 14).

⚠ WARNING: Flammable materials or reactive metals can cause an explosion or fire. Do not pick up.

6. Overlap strokes to avoid streaking. Use as little cleaning solution as possible. Avoid overwetting upholstery.



FIG. 13



FIG. 14

DRAINING TANKS

When finished cleaning, the recovery tank and solution tank should be drained and cleaned.

FOR SAFETY: Before leaving or servicing machine, turn off machine and unplug cord from wall outlet.

1. To drain recovery tank, push machine to a drain sink or floor drain and unhook drain hose from rear of machine. Unscrew T-handle from drain hose and drain tank (Figure 15).



FIG. 15

OPERATION

2. Remove recovery tank dome and rinse out tank. You can use the spray wand to rinse out recovery tank. Be careful not to spray water into standpipe screen (Figure 16).



FIG. 16

3. To drain solution tank, place machine over a drain sink or floor drain, pull clear gallon marker hose off hose barb and drain (Figure 17).



FIG. 17

MACHINE MAINTENANCE

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

⚠ WARNING: Hazardous voltage. Shock or electrocution can result. Always unplug machine before servicing.

DAILY MAINTENANCE (EVERY 4 HOURS OF USE)

1. Rinse recovery tank and recovery dome.
2. Remove float shut-off screen and clean. Screen is located in recovery tank (Figure 18).



FIG. 18

3. Drain solution tank. To drain, use clear drain hose at rear of machine.
4. Remove any carpet strands or other debris in brush.
5. Remove any clogging material lodged inside vacuum pick-up head.
6. Inspect pigtail cord, cord grip and detachable power cord for damage. Replace immediately if damaged.

WEEKLY MAINTENANCE (EVERY 20 HOURS OF USE)

1. Flush pump system with an acetic acid solution to dissolve alkaline chemical buildup. Follow instructions below:
 - a. Pour 1L (24 oz) of an acetic acid solution in solution tank with 13L (3 gal) warm water.

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

- b. Place machine over floor drain and engage reverse release lever.
- c. Operate pump for 2 to 3 minutes.

- d. Allow solution to remain in system overnight in above freezing temperatures.
 - e. Next day, drain solution tank and run 13L (3 gal) of clean water through system to flush out impurities.
2. Remove bowl filter located underneath machine at front and clean screen (Figure 19).



FIG. 19

MONTHLY MAINTENANCE (EVERY 80 HOURS USE)

1. Remove spray bar from machine by disconnecting quick coupler. Remove quick release spray tips from spray bar and soak spray tips in an acetic acid solution.
2. Lubricate wheels and caster with a water resistant oil.
3. Inspect machine for water leaks.
4. Inspect machine for loose screws.
5. Check tension of drive belt. Drive belt must be properly adjusted to eliminate any slippage (See ADJUSTING DRIVE BELT).

NOTE: Belt may slip if wet.

QUARTERLY MAINTENANCE (EVERY 250 HOURS OF USE)

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

⚠ WARNING: Hazardous Voltage. Shock or electrocution can result. Unplug machine before servicing.

ADJUSTING DRIVE BELT

FOR SAFETY: When servicing machine, unplug cord from wall outlet.

1. Carefully lay machine on its left side.
2. Loosen (4) bolts on drive motor (Figure 20).
3. Loosen locknut on belt tension bolt.
4. Turn belt tension bolt clockwise to tighten belt.
5. Retighten locknut on belt tension bolt. Do not overtighten belt; belt should flex 12.7 mm (0.50 in) at center. For proper adjustment, belt should represent diagram below.

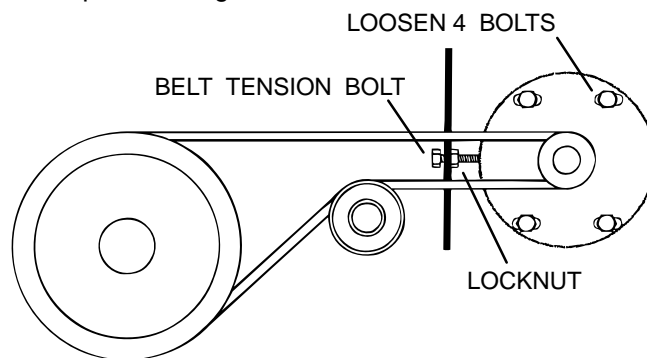


FIG. 20

OPERATION

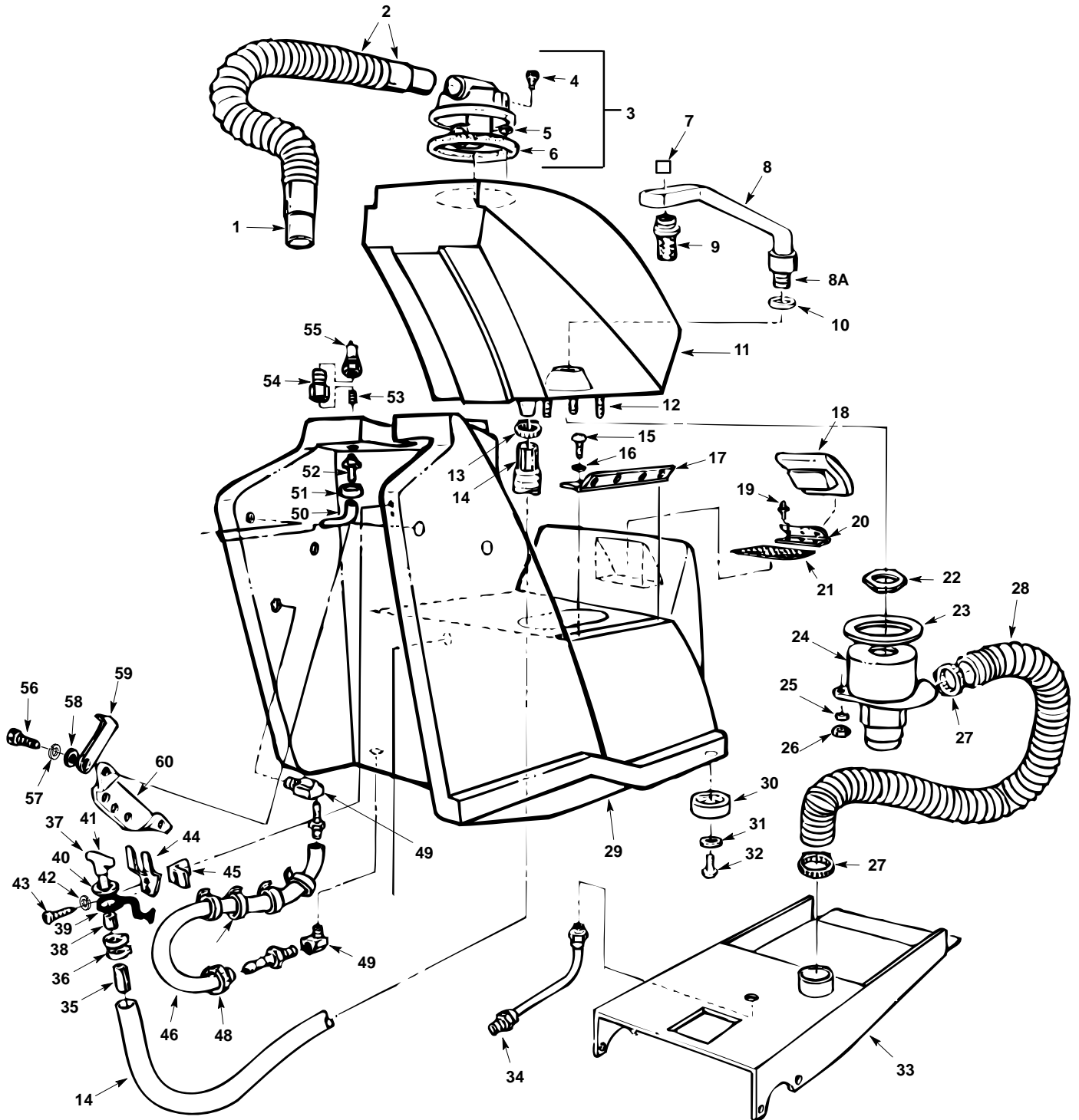
TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
Machine does not operate	Faulty main switch or wiring	Contact Service Center
	Faulty power cord	Contact Service Center
	Building circuit breaker tripped	Reset breaker and plug machine into a circuit which is not heavily loaded
Brush motor does not operate	1.5 amp brush circuit breaker tripped because brush adjusted too low, brush clogged or short in wiring	There are several reasons why this circuit breaker could trip: see Adjusting Brush Height, unplug power cord and remove clogging debris around brush, or Contact Service Center for short in wiring
	Pump switch faulty or not turned on	Turn on pump switch; replace if faulty
	Loose or broken wiring	Contact Service Center
	Faulty brush motor	Contact Service Center
Brush motor operates, but brush does not spin	Brush drive belt loose or broken	Loosen brush motor mount nuts and pivot motor until belt is tight; replace if broken
	Set screws for brush pulley or motor pulley are loose	Tighten set screws
Vacuum motor does not operate	Faulty vacuum switch	Contact Service Center
	Vacuum motor thermal overload tripped	Check air flow for obstruction and wait 20 minutes for motor to cool
	Faulty vacuum motor or wiring	Contact Service Center
Poor pick up	Recovery tank is full	Empty recovery tank
	Vacuum pick-up head clogged	Raise pick-up head and remove debris
	Vacuum hose has loose cuff or hole	Tighten hose cuff or replace hose
	Vacuum hose not inserted tightly in clear recovery dome	Push hose firmly into dome
	Recovery dome loose	Tighten two knobs on dome
Reverse release lever hard to engage	Belt tension too tight	Readjust belt tension (See ADJUSTING DRIVE BELT)
Prespray wand does not spray	Main power and pump switches not turned on	Turn on main power and pump switches
	Trigger locked on wand	Unlock trigger
	Spray tip on wand plugged	Remove spray tip and clean with an acetic acid solution
	Bowl filter screen plugged	See Weekly Maintenance
	Loose or broken wiring	Contact Service Center
	Faulty main power switch	Contact Service Center
	Faulty solution pump	Contact Service Center

TROUBLE SHOOTING –continued

PROBLEM	CAUSE	SOLUTION
No spray through spray tips	Main power switch is not turned on	Turn on main power switch
	Pump switch is not turned on	Turn on pump switch
	Control grips not rotated	Rotate control grips forward to start pump, brush and drive motors
	Bowl filter screen plugged	See Weekly Maintenance
	Spray tips plugged	See Monthly Maintenance
	Loose or broken wiring	Contact Service Center
	Faulty solenoid valve	Contact Service Center
	Faulty pump switch	Contact Service Center
	Faulty solution pump	Contact Service Center
Machine does not move when rotating control grips	Reverse release lever engaged	Disengage reverse release lever
	Drive belt loose	Tighten belt (See Maintenance)
	Drive belt worn	Replace belt (See Maintenance)
	Drive belt wet	Dry belt off
	Main power switch not turned on	Turn on main power switch
	Speed control knob turned to slowest setting	Turn speed control knob to desired setting
	2.5 amp circuit breaker tripped	Push breaker button to reset
	Loose or broken wiring	Contact Service Center
	Speed Control Board faulty or needs adjustment	Contact Service Center
	Faulty drive motor	Contact Service Center

SOLUTION TANK/RECOVERY TANK GROUP



SOLUTION TANK/RECOVERY TANK GROUP

REF	PART #	DESCRIPTION	QTY.
1	160486	CUFF, HOSE 1 1/2	1
2	160413	HOSE, VAC W/ONE CUFF	1
∇3	700683	ASM, DOME W/KNOBS	1
▲4	240217	KNOB, DOME	2
▲5	140037	WASHER	2
▲6	100042	GASKET, DOME	1
7	100029	GASKET, TUBE	1
8	100759	ASM, STANDPIPE	1
8A	230187	NIPPLE, 1-1/2 PVC	1
9	180613	FLOAT, SHUT-OFF	1
10	101714	GASKET	1
11	608844	TANK, RECOVERY GREEN	1
12	140238	STUD, 1/4-20X5	3
13	140307	CLAMP, HOSE	1
14	160414	HOSE, DRAIN	1
15	140885	SCREW, 1/4-20X1/2	9
16	140052	WASHER, LOCK 1/4"	9
17	230418	HINGE, TANK	1
18	608842	COVER, TANK GREEN	1
19	140706	RIVET, POP	9
20	230626	HINGE, COVER	1
21	230693	SCREEN, FILL	.14'
22	210240	NUT, FLANGED METAL	1
23	100038	GASKET, VAC MOTOR	1
24	130996	MOTOR, VAC 5.7/3 STG 120V	1
	600177	CARBON BRUSHES	1
	130403	MOTOR, VAC 5.7/3 STG 230V	1
	190158	CARBON BRUSHES	1
25	140000	WASHER, FLAT 1/4"	3
26	140501	NUT, LOCK	3
27	140308	CLAMP, HOSE	2
28	160487	HOSE, EXHAUST 2"	36"
29	608840	CHASSIS GREEN	1

REF	PART #	DESCRIPTION	QTY.
30	103037	WHEEL	2
31	140008	WASHER, FLAT 1/2"	2
32	140234	SCREW, 1/2-13 X 2-1/2	2
33	230400.BK	WELDMENT, CHASSIS	1
34	130290	CORD, ASM BASE 18/3 X 36"	1
35	140921	SLEEVE, DRAIN HOSE	1
36	140317	CLAMP, EAR 1-9/16"	2
∇37	701061	ASM., DRAIN HOSE STOPPER	1
▲38	140955	PLUG, DRAIN HOSE	1
▲39	230882	STRAP, DRAIN HOSE	1
▲40	140056	WASHER, FNDR	1
▲41	230831	KNOB, DRAIN HOSE	1
42	140042	WASHER, INT LOCK	2
43	140810	SCREW, 6-32 X 3/8	2
44	230696.BK	BRACKET, DRAIN HOSE HNGR BK	1
45	230296	BRACKET, HOSE HANGER CLIP	1
46	14894	TUBING, VINYL	1.83'
47	130040	WIRE TIE, NYLON	4
48	140306	CLAMP, HOSE	1
49	150425	ELBOW, 3/8M X 1/2H 90° NYLON	2
50	160207	HOSE, 3/8 LP GRAY - BULK	1.08'
51	140301	CLAMP, HOSE	1
52	150511	HOSE BARB, 1/4F X 3/8H	1
53	150615	NIPPLE, 1/4 CLOSE	1
54	150000	ADAPTER, 1/4F X 1/4M	1
55	150933	PLUG, QCK CPLR BRASS - SER 60	1
56	140223	SCREW, 5/16-18X3/4	2
57	140015	WASHER, LOCK 5/16	2
58	140027	WASHER, FLAT	2
59	230883	BRACKET, REVERSE LATCH	1
60	230661	PLATE, LOCK CONTROL RH	1

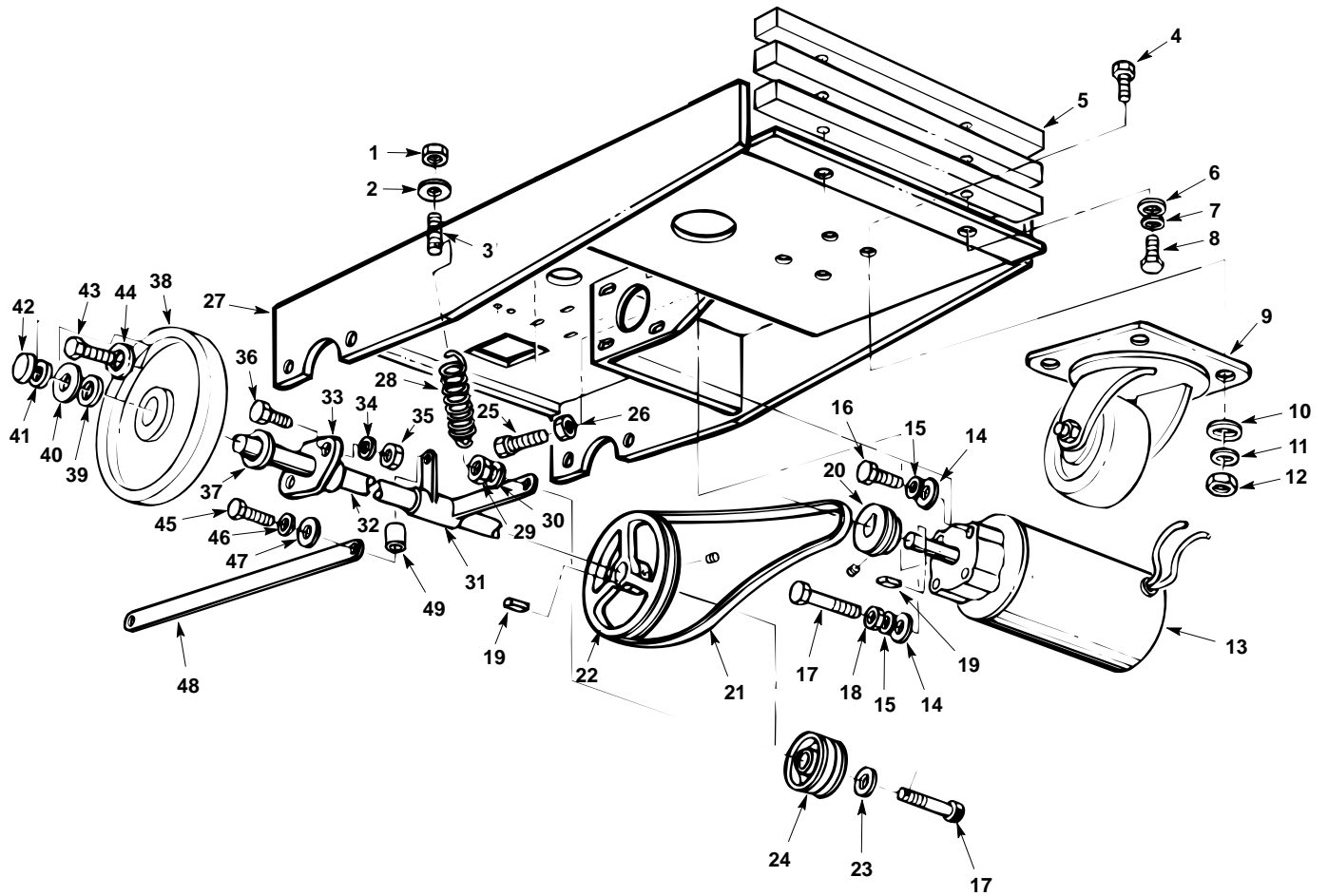
∇ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

DECAL LIST (NOT SHOWN)

REF	PART #	DESCRIPTION	QTY.
N/S	608469	DECAL, FALCON 2800 PLUS	2
N/S	120399	DECAL, DO NOT ALLOW FOAM	1
N/S	608185	DECAL, NOBLES LOGO	1

DRIVE GROUP

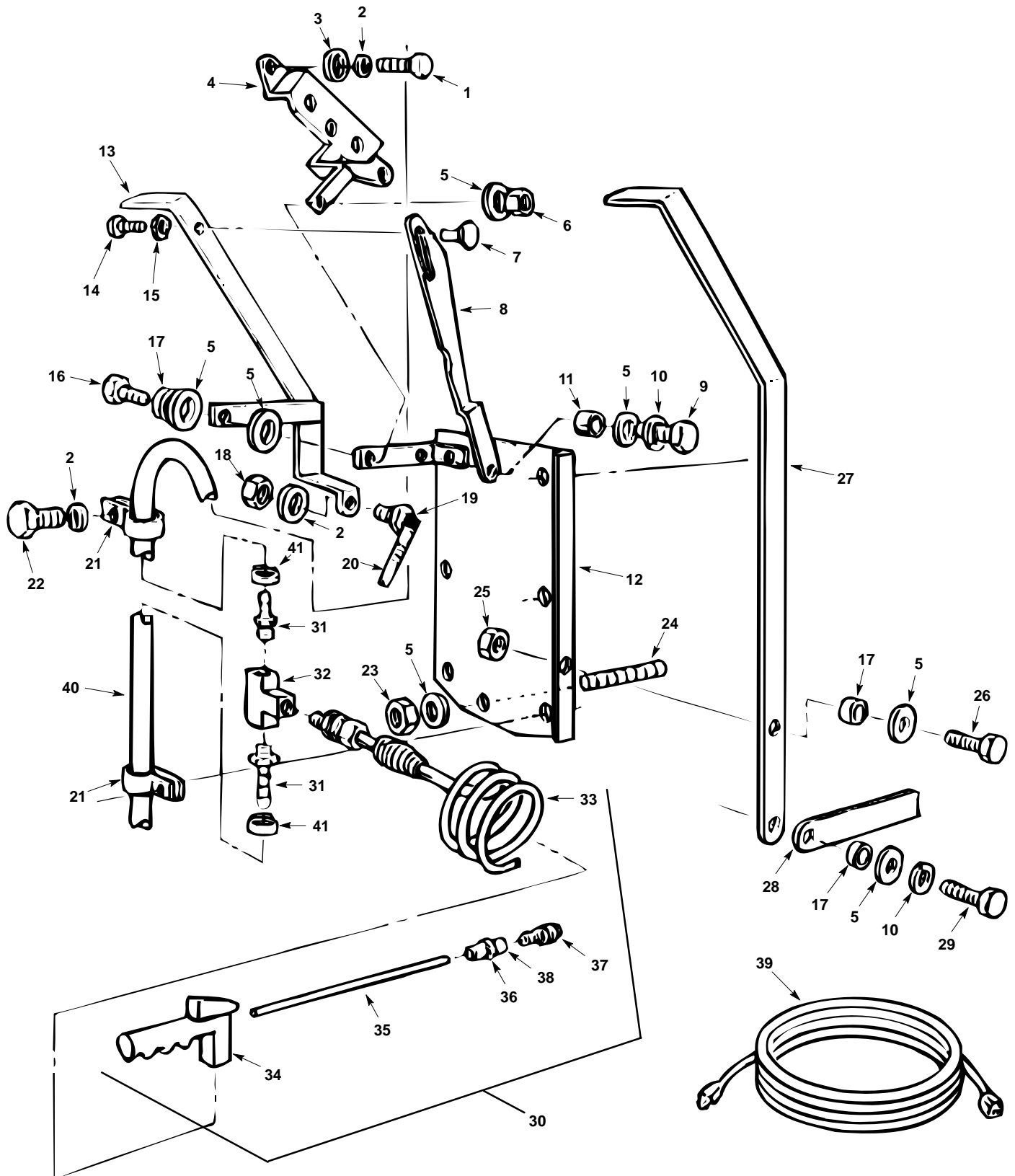


DRIVE GROUP

REF	PART #	DESCRIPTION	QTY.
1	140525	NUT, HEX 3/8-16	1
2	140028	WASHER, FLAT 3/8"	1
3	140342	STUD	1
4	140202	SCREW, 3/8-16X1	4
5	230462.BK	PLATE, COUNTER WEIGHT, BLACK	3
6	140028	WASHER, FLAT 3/8"	2
7	140017	WASHER, SPLITLOCK 3/8"	2
8	2949.30	SCREW, 3/8-16X3-3/4	2
9	103002	CASTER, 4" SWIVEL	1
10	140028	WASHER, FLAT 3/8"	4
11	140017	WASHER, SPLITLOCK 3/8"-S/S	4
12	140525	NUT, HEX 3/8-16	4
13	130463	MOTOR, GEAR 115V	1
	130469	MOTOR, GEAR 230V	1
14	140028	WASHER, FLAT 3/8"	4
15	140017	WASHER, SPLITLOCK	4
16	140201	SCREW, 3/8-16X3/4	3
17	140225	SCREW	2
18	140525	NUT, HEX 3/8-16	1
19	140632	KEY, 1/4 X 1"	2
20	230761	PULLEY, MOTOR	1
21	230763	BELT	1
22	230762	PULLEY, AXLE	1
23	140028	WASHER, FLAT 3/8"	1
24	230764	PULLEY, IDLER	1
25	140231	SCREW, 3/8 X 1-1/2	1

REF	PART #	DESCRIPTION	QTY.
26	140545	NUT, JAM 3/8-16	1
27	230400.BK	WELDMENT CHASSIS	1
28	140345	SPRING	1
29	140545	NUT, JAM 3/8	1
30	140017	WASHER, LOCK	1
31	230759.BK	BRACKET, IDLER PIVOT	1
32	230419	AXLE, DRIVE SHAFT	1
33	140128	BEARING, FLANGE	2
34	140017	WASHER, SPLIT LOCK 3/8"	4
35	140525	NUT, HEX 3/8-16-S/S	4
36	140232	SCREW, HXHDCP 3/8-16X1-1/4	4
37	140047	WASHER, OUTER WHEEL	2
38	700821	WHEEL, DRIVE RH	1
	700820	WHEEL, DRIVE LH	1
39	140047	WASHER, OUTER WHEEL	2
40	140055	WASHER, FLAT	2
41	140048	WASHER, 5/16" FOR 150210	2
42	150210	PLUG, CAP-BLACK	2
43	140223	SCREW, 5/16-18X3/4	2
44	140015	WASHER, SPLITLOCK 5/16	2
45	140201	SCREW, 3/8-16X3/4	2
46	140017	WASHER, LOCK 3/8	2
47	140028	WASHER, FLAT	2
48	230757.BK	LINK, BELT DRIVE	1
49	140136	BUSHING, 3/8 X 1/2	3

REAR PANEL GROUP



REAR PANEL GROUP

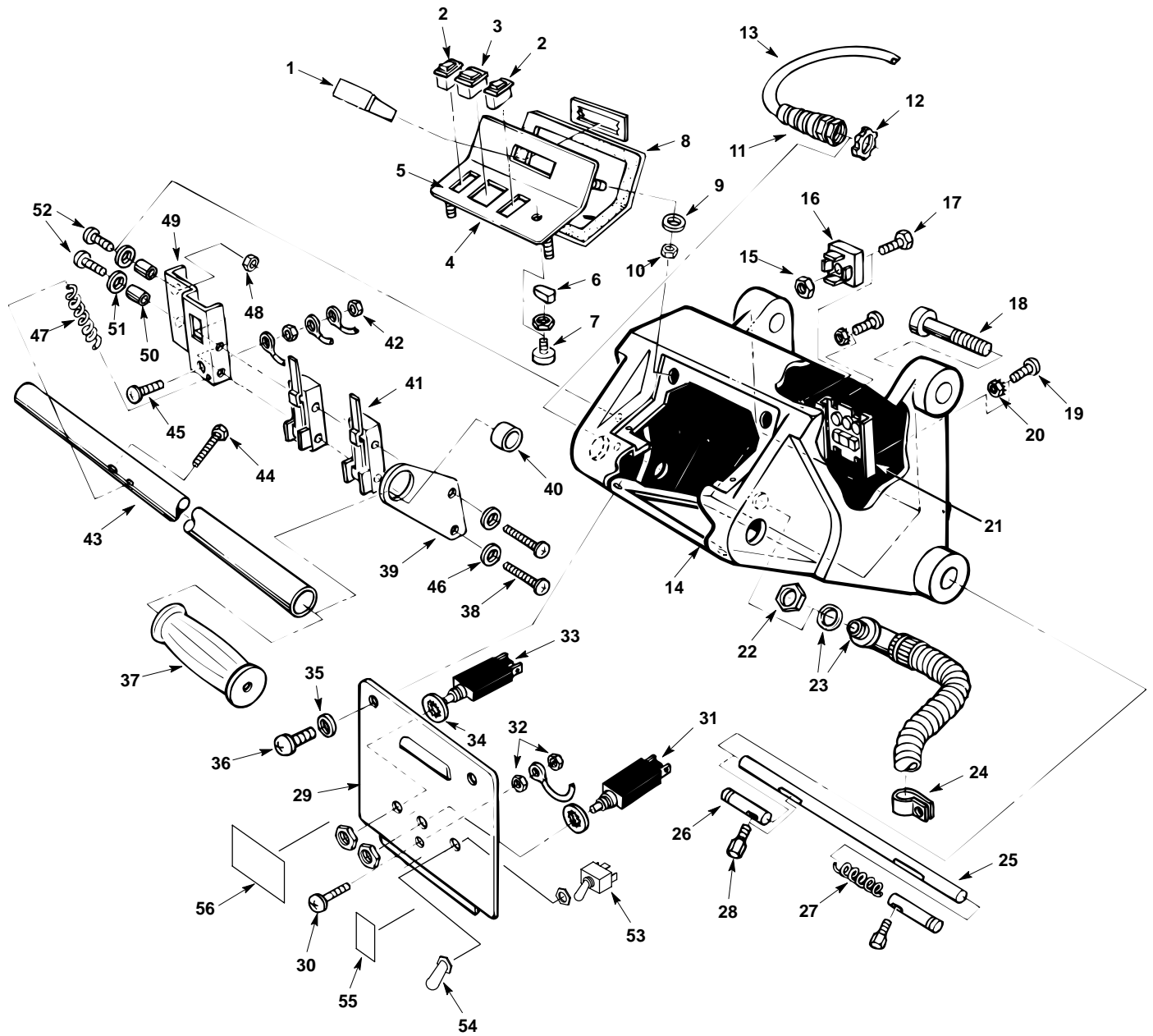
REF	PART #	DESCRIPTION	QTY.
1	140223	SCREW, HXHDCP 5/16-18X3/4	2
2	140015	WASHER, SPLITLOCK	2
3	140027	WASHER, FLAT 5/16"	2
4	230297	PLATE, LOCK CONTROL LH	1
5	140028	WASHER, FLAT 3/8"	1
6	140515	NUT, LOCK 3/8-16	1
7	230631	SPACER, SQUEEGEE LIFT	1
8	230659	LATCH, SQUEEGEE HANDLE	1
	200817	GRIP, RUBBER	1
9	140201	SCREW, 3/8-16X3/4	1
10	140017	WASHER, SPLIT LOCK 3/8"	1
11	140136	BUSHING, 3/8 ID X 1/2 OD X .260	1
12	230787.BK	WELDMENT, REAR PANEL, BLACK	1
13	230472.BK	HANDLE, LIFT LEVER	1
	200816	GRIP, HANDLE, RUBBER	1
14	140259	SCREW, HXHDCP 1/4-20X5/8	1
15	140016	WASHER, LOCK 1/4"	1
16	140232	SCREW, 3/8-16X1-1/4	1
17	140136	BUSHING, 3/8 ID X 1/2 OD X .260	1
18	140508	NUT, HEX 5/16-24-ZINC	1
19	140119	JOINT, BALL - LIFT ROD	2
20	230412	ROD, LIFT BRUSH	1

REF	PART #	DESCRIPTION	QTY.
21	140314	CLAMP, INSULATED 3/4"	3
22	140219	SCREW, 5/16-18X1	3
23	140525	NUT, HEX 3/8-16	1
24	230413	ROD, PRESSURE SPRING	1
25	140515	NUT, LOCK	1
26	140202	SCREW	1
27	230760.BK	HANDLE, REVERSE	1
28	230757.BK	LINK, BELT DRIVE	1
29	140201	SCREW	1
V30	700664	ASM, SPRAY GUN	1
▲31	150516	HOSE BARB	1
▲32	150706	TEE, 1/4 FPT	1
▲33	160132	HOSE, RECOIL 1/4 X 12' BLK	1
▲34	230986	GUN, SPRAY W/GRIP	1
▲35	230835	WAND, SPRAY GUN	18"
▲36	150307	COUPLING, 1/8F X 1/8F	1
▲37	201000	NOZZLE, 1/8 V-JET #80015	1
▲38	240212	GROMMET, TAPERED	1
39	130229	CORD, 14/3 X 75' YELLOW	1
40	160207	HOSE, 3/8 LP GRAY - BULK	1.08'
41	140301	CLAMP, HOSE	1

▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

CONTROL CONSOLE GROUP

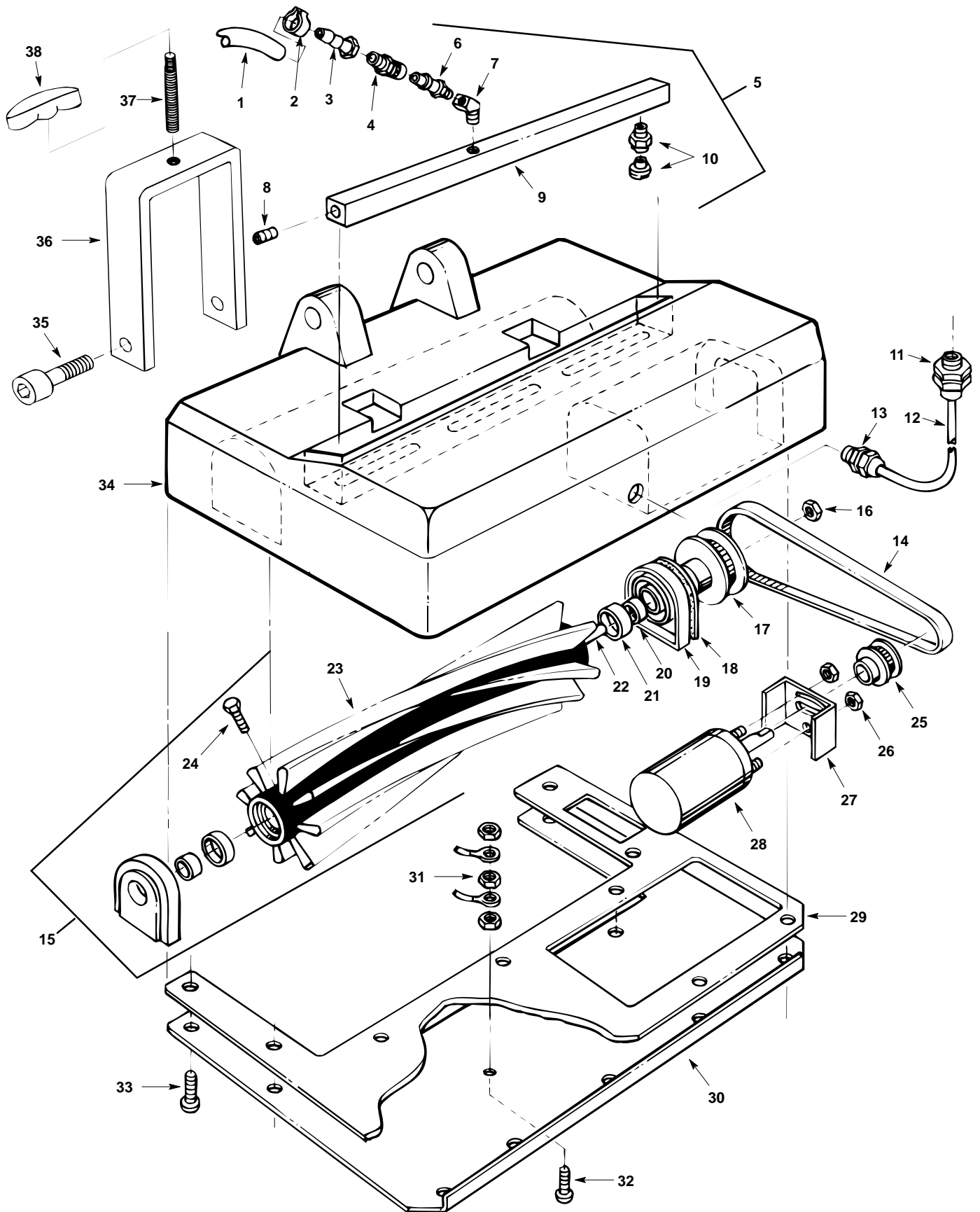


CONTROL CONSOLE GROUP

REF	PART #	DESCRIPTION	QTY.
1	130019	METER, AMP	1
2	130717	SWITCH, ROCKER ON/OFF	2
3	130647	SWITCH, ROCKER DPST	1
4	230465.BK	PANEL, CONTROL 120V BLK	1
5	120594	DECAL, DASH	1
6	130770	KNOB, SPEED CONTROL	1
7	130283	POTENTIOMETER	1
8	100057	GASKET, CONSOLE	1
9	140000	WASHER, FLAT, 1/4" BULK	2
10	140519	NUT, KEP 10-24 BULK	4
11	130167	GRIP, CORD	1
12	140504	NUT, CONDUIT LOCK 1/2"	1
13	130228	CORD, 14/3 X 34" YELLOW	1
14	608846	HOUSING, CONTROL GREEN	1
15	140336	NUT, HEX 10-24 NYLON	1
16	130304	RECTIFIER, MINIBRIDGE-600V	1
17	140335	SCREW, 10-24 X 1" NYLON	1
18	140241	BOLT, SHLDR 5/8X2	2
19	140890	SCREW, 10-24X1/2	2
20	140519	NUT, KEP 10-24	2
21	130379	BOARD, CONTROL W/POT. & KNOB	1
22	140504	NUT, CONDUIT LOCK 1/2"	1
23	608837	HARNESS, WIRING	1
24	140314	CLAMP, INSULATED 3/4" ID	1
25	230613	TUBE, HANDLE ADJUSTMENT	1
26	230648	PIN, HANDLE ADJUSTMENT LOCK	2
27	140415	SPRING, LOCK PIN	1
28	230649	PIN, HANDLE ADJUSTMENT	2

REF	PART #	DESCRIPTION	QTY.
29	608838	PLATE, CONTROL COVER	1
30	140900	SCREW, 10-24X3/4	1
31	130746	BREAKER, CIRCUIT 2.5 AMP	1
32	140519	NUT, KEP 10-24	2
33	578337000	BREAKER, CIRCUIT 1.5 AMP	1
34	140022	WASHER, INT LCK 3/8	2
35	140018	WASHER, INT LOCK #10	2
36	140887	SCREW, 10-24X3/8	2
37	200823	GRIP, HANDLE BLACK	2
38	140830	SCREW, 6-32X1-3/4	2
39	27098	BRACKET, SWITCH	1
40	27099	BUSHING	1
41	130729	SWITCH, ROLL THROTTLE	2
42	140519	NUT, KEP 10-24	2
43	230518	HANDLE, TUBE (A)	1
44	140222	SCREW, 5/16-18X2	1
45	140900	SCREW, 10-24X3/4	1
46	140019	WASHER, LOCK EXT #6	2
47	25648	SPRING	1
48	140501	NUT, LCK NYL 1/4	2
49	25671	MOUNT, SWITCH (A)	1
50	140143	SPACER, .257X.5X.562 NYLON	2
51	140000	WASHER, FLAT 1/4"	2
52	140846	SCREW, 1/4-20X1-1/2	2
53	130726	SWITCH TOGGLE	1
54	130990	BOOT, RUBBER SWITCH BLACK	1
55	607209	DECAL, FLOW CONTROL	1
56	120619	DECAL, "WARNING-EXTRACTORS"	1

BRUSH HOUSING GROUP



BRUSH HOUSING GROUP

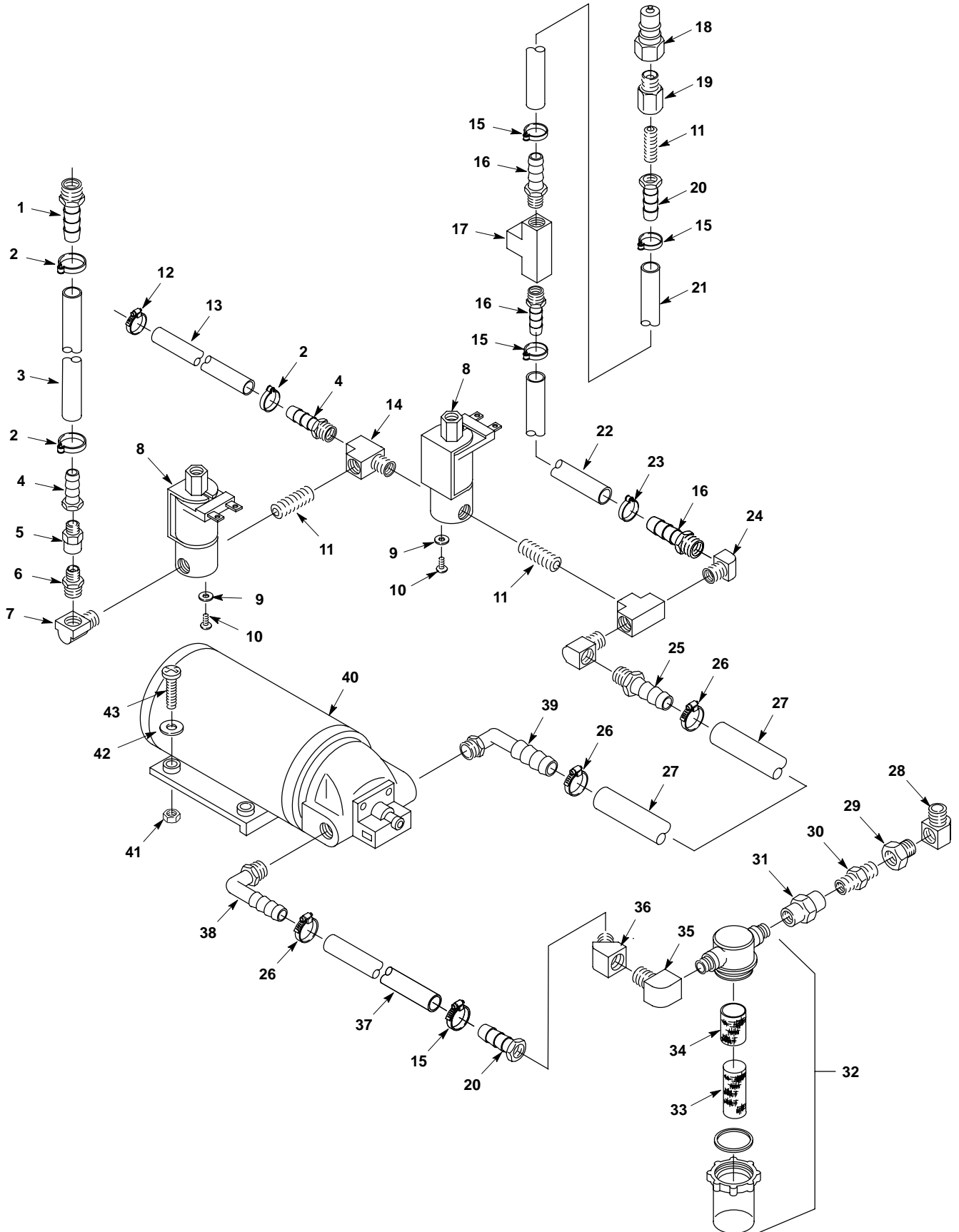
REF	PART #	DESCRIPTION	QTY.
1	160204	HOSE, 1/4" LP GRAY – BULK	1.29'
2	140325	CLAMP, EAR 1/4"	1
3	150520	HOSE BARB, 1/8F X 1/4H	1
4	150915	COUPLER, QCK 1/8 SER 5	1
∇5	700423	ASM SPRAYBAR	1
▲6	150921	PLUG, QCK CPLR SER 5	1
▲7	150422	ELBOW, STRT 1/8MX1/8F 45°	1
▲8	150208	PLUG, SCKT HD 1/8	2
▲9	230407	MANIFOLD, SPRAYBAR 22"	1
▲10	201011	NOZZLE, BRASS #80015	6
11	130181	CORD GRIP, 1/2N NYL BLK	1
12	130939	CORD, 18/3 BLACK – BULK	3'
13	130190	CORD GRIP, 3/8N NYL BLK	1
14	230409	BELT, TIMING 18.75"	1
∇15	700422	ASM, BRUSH 22"	1
▲16	140548	NUT, FINISHED JAM	1
▲17	230408	PULLEY, BRUSH	1
	140859	SET SCREW, PULLEY	1
▲18	100005	GASKET, BEARING BLOCK	1
▲19	230261	BLOCK, BEARING	2
▲20	140125	BEARING, BRUSH	2

REF	PART #	DESCRIPTION	QTY.
▲21	100049	SEAL, BRUSH BEARING	2
▲22	230406	SHAFT, BRUSH 22"	1
▲23	240063	BRUSH, CYLINDER 22"	1
▲24	140554	SCREW, 1/4–20X3/4	4
25	230410	PULLEY, MOTOR	1
26	140518	NUT, KEP 10–32	2
27	230411	BRACKET, BRUSH MOTOR	1
28	130471	MOTOR, BRUSH DRIVE 120 VOLT	1
	190150	BRUSH CARD FOR 130471	1
	130472	MOTOR, BRUSH DRIVE 230 VOLT	1
	190154	BRUSH CARD FOR 130472	1
29	100157	GASKET, BASE PLATE – 22"	1
30	230401.BK	PLATE, BASE 22"	1
31	140519	NUT, KEP 10–24	3
32	140900	SCREW, 10–24X3/4	1
33	140887	SCREW, 10–24X3/8	12
34	602780	BASE 22"	1
35	140564	BOLT, SHOULDER 3/8 X 3/4	2
36	230365.BK	BRACKET, HT ADJ, BLK	1
37	230479	STUD, HGT ADJ 3.5"	1
38	240194	KNOB, HEIGHT ADJ	1

∇ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

SOLUTION SYSTEM GROUP



SOLUTION SYSTEM GROUP

REF	PART #	DESCRIPTION	QTY.
1	150520	FITTING, 1/8FX1/4H BARB	1
2	140325	CLAMP, HOSE 1/2" EAR	3
3	609437	HOSE, 1/4ID X 13"	1
4	150515	FITTING, 1/4MX1/4H BARB	2
5	603517	VALVE, CHECK	1
6	150614	REDUCER, 1/4M X 1/8M	1
7	150406	FITTING, 1/4MX1/4F ELB 90	1
8	210033	VALVE, SOLENOID 120V 60 HZ	2
9	140023	WASHER, #8 INT	4
10	140801	SCREW, 8-32X3/8	4
11	150615	FITTING, 1/4M NIPL-CLOSE	3
12	140325	CLAMP HOSE 1/2" EAR	1
13	609435	HOSE, 1/4 L.P. X 14"	1
14	150709	FITTING, 1/4FX1/4FX1/4M	1
15	140301	CLAMP, HOSE 5/8OD EAR	4
16	150516	FITTING, 1/4MX3/8H BARB	3
17	150706	FITTING, 1/4F TEE	2
18	150933	FITTING, 1/4F QD PLUG BRS SER60	1
19	150000	ADAPTER, 1/4F X 1/4M	1
20	150511	FITTING, 1/4FX3/8H BARB	2
21	609432	HOSE, 3/8 ID X 13"	1
22	609433	HOSE, 3/8 ID X 32"	1

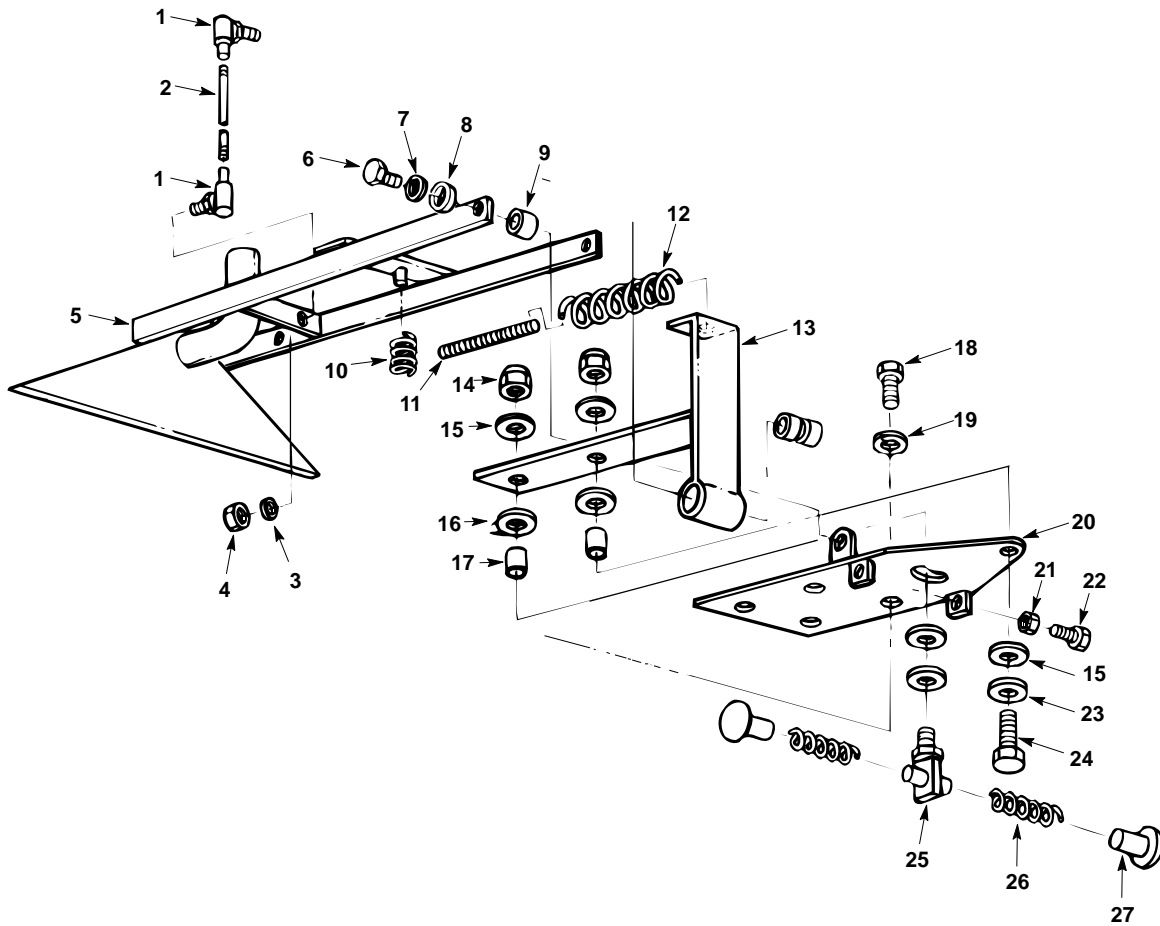
REF	PART #	DESCRIPTION	QTY.
23	140310	CLAMP, HOSE 5/16-7/8	1
24	150406	FITTING, 1/4MX1/4F ELB 90	2
25	150517	FITTING, 1/4MX1/2H BARB	1
26	630369	CLAMP, HOSE	3
27	609436	HOSE, 1/2 ID X 24"	1
28	150420	FITTING, 3/8MX3/8F ELB 90	1
29	150006	FITTING, 1/4FX3/8M BUSHNG	1
30	150600	FITTING, 1/4X2 NIPPLE	1
31	150302	FITTING, 1/4FX1/4F COUPLNG	1
V32	180619	FILTER, 1/4NPT CLR BOWL	1
▲33	180638	SLEEVE, FILTER	1
▲34	180632	FILTER, INLINE STRAINER	1
35	150406	FITTING, 1/4MX1/4F ELB 90	1
36	150400	FITTING, 1/4MX1/4F ELBOW 45	1
37	609434	HOSE, 3/8ID X 10.5	1
38	150412	FITTING, 3/8MX3/8H ELBOW 90	1
39	150425	FITTING, 3/8MX1/2H ELBOW 90	1
40	180103	PUMP, SOLUTION 100 PSI - 120V	1
41	140552	NUT, 10-24 NYLCK	2
42	140011	WASHER, 3/16 FLT	2
43	140899	SCREW, 10-24X1-1/4	2

▽ ASSEMBLY

▲ INCLUDED IN ASSEMBLY

PARTS LIST

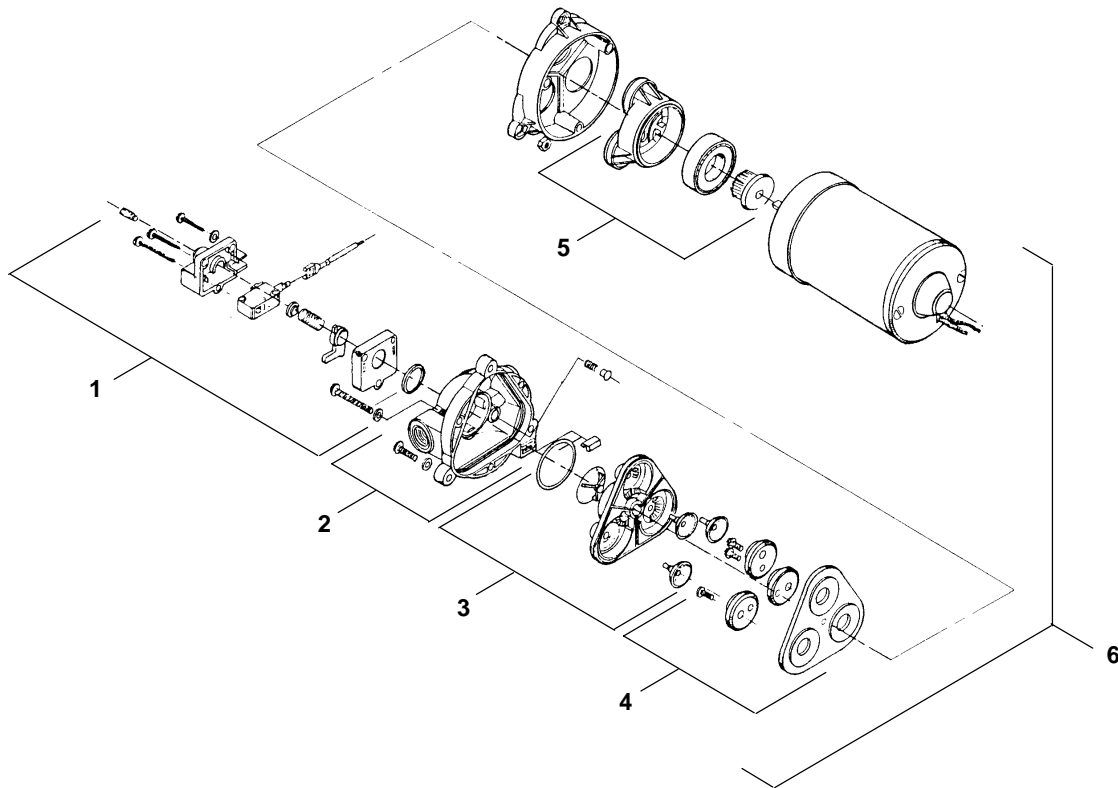
PICK-UP HEAD GROUP



REF	PART #	DESCRIPTION	QTY.
1	140119	JOINT, BALL – LIFT ROD	2
2	230412	ROD, LIFT BRUSH ASM	1
3	140015	WASHER, SPLIT LOCK 5/16	1
4	140508	NUT, HEX 5/16–24	1
5	604959	WELDMENT, PICK-UP TOOL, BLACK	1
6	140201	SCREW, 3/8–16X3/4	2
7	140017	WASHER, SPLITLOCK 3/8"	2
8	140028	WASHER, FLAT 3/8"	2
9	140136	BUSHING, 3/8 X 1/2	3
10	140407	SPRING	1
11	230413	ROD, PRESSURE SPRING	1
12	140423	SPRING, BRUSH PRESSURE	1
13	230404.BK	BRACKET, PIVOT BRUSH ASM	1
14	140516	NUT, LOCK-NYLON INSERT 1/2	4

REF	PART #	DESCRIPTION	QTY.
15	140008	WASHER, FLAT 1/2	2
16	140040	WASHER, POLY 1/2	2
17	140139	BUSHING	2
18	140223	SCREW, 5/16–18X3/4	4
19	140015	WASHER, SPLIT LOCK 5/16"	4
20	230405.BK	BRACKET, BRUSH MNT ASM.	1
21	140525	NUT, HEX 3/8–16	2
22	140233	SCREW, 3/8–16X1–3/4	2
23	140008	WASHER, FLAT 1/2"	2
24	140204	SCREW, 1/2–13X1–1/2	1
25	230463	BOLT, PIVOT SPRING	1
26	140337	SPRING, COMPRESSION RIVET	2
27	230464	PIN, PIVOT SPRING	2

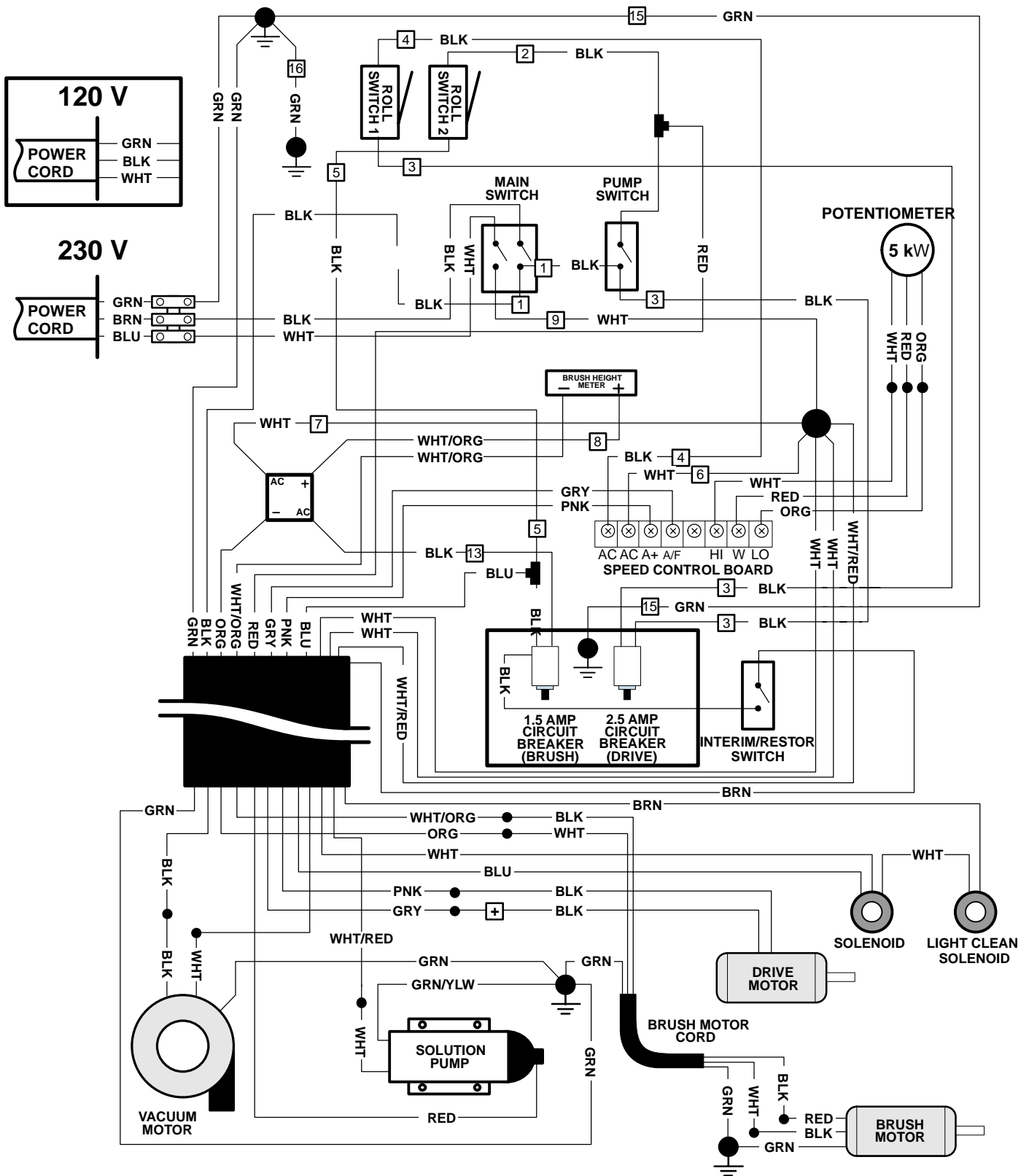
PUMP BREAKDOWN



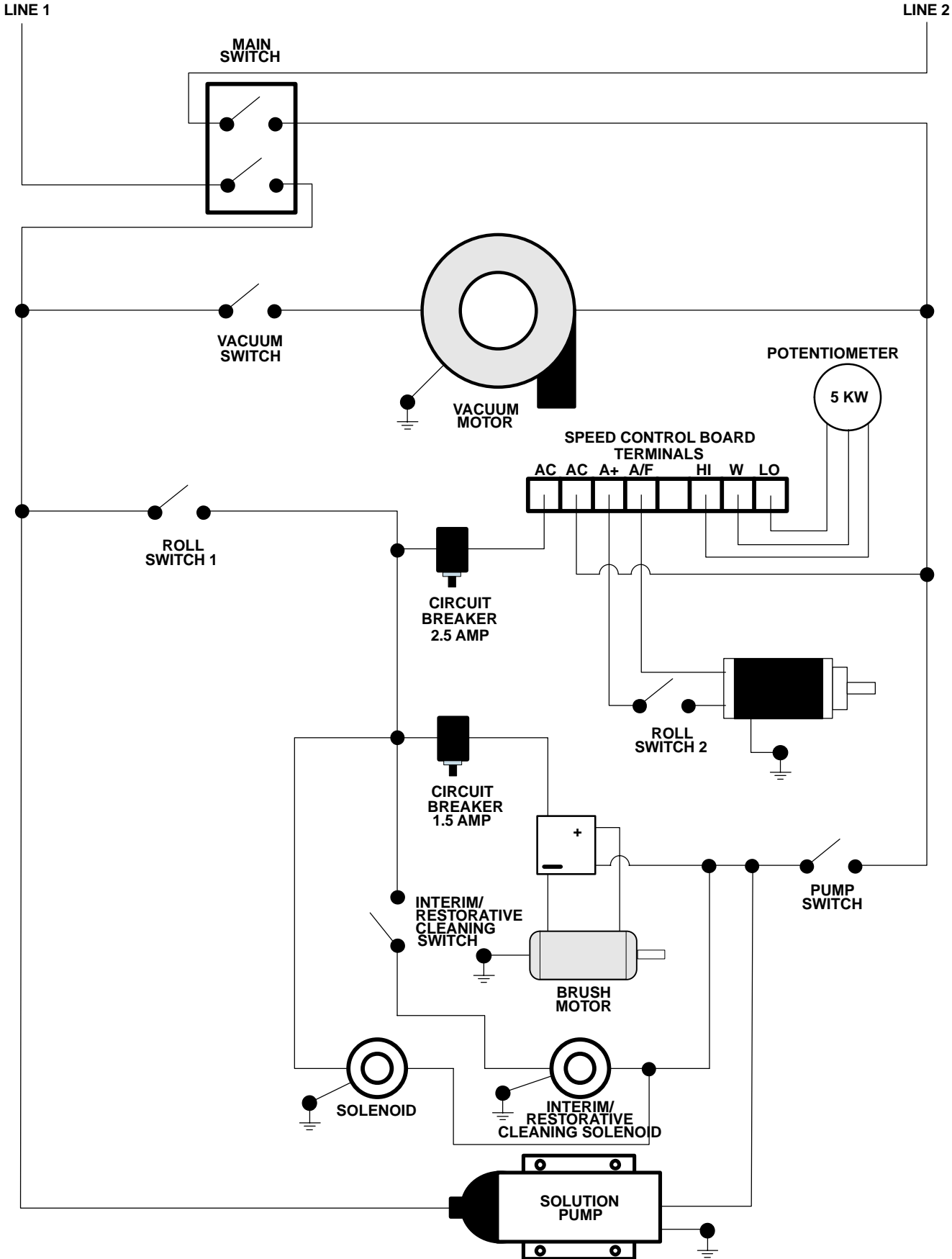
REF	PART #	DESCRIPTION	QTY.
1	190129	KIT, PRESSURE SWITCH	1
	190172	KIT, PRESSURE SWITCH (VITON)	1
	190134	KIT, DIAPHRAGM ONLY	1
2	190128	KIT, UPPER PUMP HOUSING	1
	190124	KIT, CHECK VALVE ONLY	1

REF	PART #	DESCRIPTION	QTY.
3	190171	KIT, VALVE (VITON)	1
4	190131	KIT, SERVICE	1
5	190130	KIT, LOWER PUMP HOUSING	1
6	180103	PUMP, 100 PSI 120V (COMPLETE)	1
	180109	PUMP, 100 PSI 220V (COMPLETE)	1

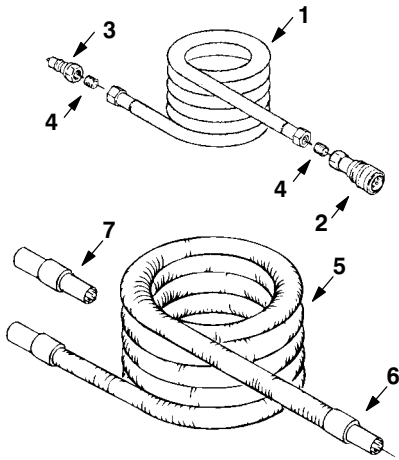
WIRE DIAGRAM



LADDER DIAGRAM



SOLUTION AND VACUUM HOSES

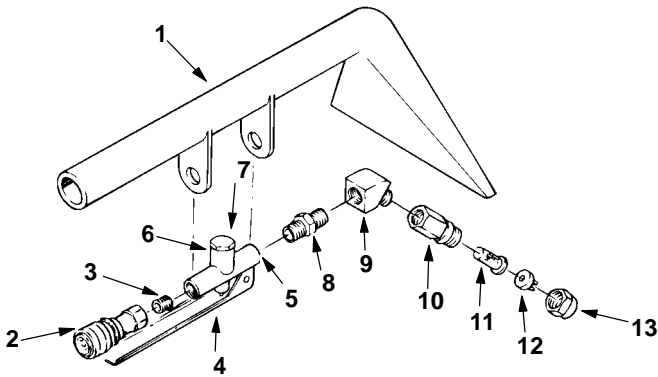


REF	PART #	DESCRIPTION	QTY.
▽1.	160186	HOSE, SOLUTION 25'	1
▲2.	150913	COUPLER, QUICK SER. 60	1
▲3.	150933	PLUG, QUICK COUPLER	1
▲4.	150615	NIPPLE	2
▽5.	160400	HOSE, VACUUM 15'	1
	160401	HOSE, VACUUM 25'	1
▲6.	160430	CUFF, HOSE 1-1/2"	2
7.	160451	CONNECTOR, VAC HOSE 1 1/2"	1

▽ Assembly

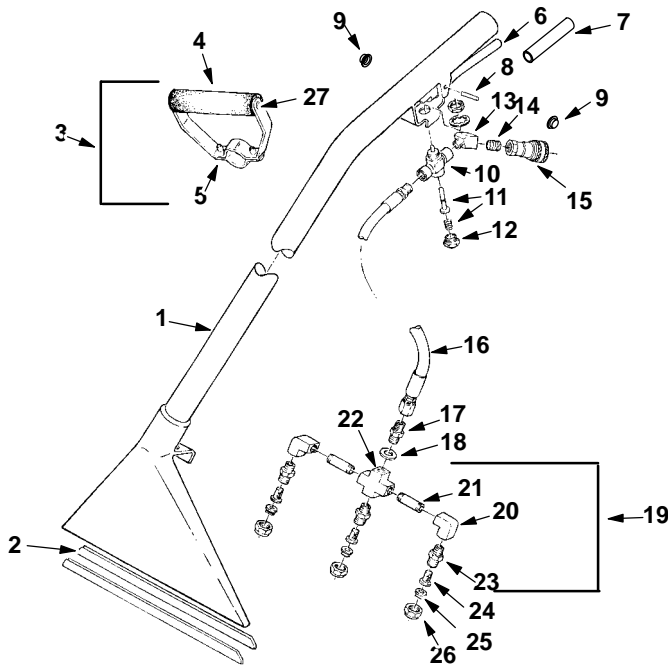
▲ Included in Assembly

127 mm (5 in) UPHOLSTERY TOOL



REF	PART #	DESCRIPTION	QTY.
	200505	TOOL, HAND 5" (COMPLETE)	1
1.	200431.BK	TOOL, HAND	1
2.	150913	COUPLER, QUICK, SER. 60	1
3.	150615	NIPPLE, CLOSE	1
4.	200905	LEVER, K-VALVE W/PIN	1
5.	210210	VALVE, FLOW CONTROL	1
6.	190600	VALVE PIN & SPRING (NOT SHOWN)	1
7.	210148	CAP, HEX, VALVE	1
8.	150606	NIPPLE, HEX 1/4"	1
9.	150403	ELBOW, ST 1/4" 45°	1
10.	200992	BODY, SPRAY 1/4"F	1
11.	200996	SCREEN, SPRAY BODY	1
12.	200965	TIP, BRASS #8002	1
13.	200994	CAP, SPRAY BODY	1

FLOOR TOOL



REF	PART #	DESCRIPTION	QTY.
	600048	TOOL, FLOOR 13" (COMPLETE)	1
1.	200403.BK	TOOL, FLOOR	1
2.	200939	SHOES, FLOOR TOOL	2
∇3.	200927	GRIP, ADJUSTABLE COMPLETE	1
▲4.	200910	FOAM, GRIP	1
▲5.	140210	SCREW, 1/4X3/4	2
6.	200902	HANDLE	1
7.	200809	SLEEVE, HANDLE	1
8.	140605	PIN, HANDLE	1
9.	140520	NUT, PUSH	2
∇10.	210150	VALVE, FLOW CONTROL	1
▲11.	190603	KIT, VALVE PIN & SPRING	1
▲12.	210148	CAP, HEX, VALVE	1
13.	150403	ELBOW, 1/4-45°	1
14.	150615	NIPPLE, CLOSE 1/4	1
15.	150913	COUPLER, QUICK SER. 60	1
16.	160170	HOSE ASSEMBLY	1
17.	160606	NIPPLE	1
18.	140058	WASHER	1
∇19.	700062	ASM., SPRAY BAR	1
▲20.	150401	ELBOW, 90° 1/4FX1/4F	2
▲21.	150600	NIPPLE	2
▲22.	150700	CROSS	1
▲23.	200993	SPRAY BODY	3
24.	200996	SCREEN, SPRAY BODY	3
25.	200964	TIP, SPRAY	3
26.	200994	CAP, SPRAY BODY	3
27.	140834	SCREW, 1/4-20 X 5/8	2

∇ Assembly

▲ Included in Assembly