

COMPACT 17/20

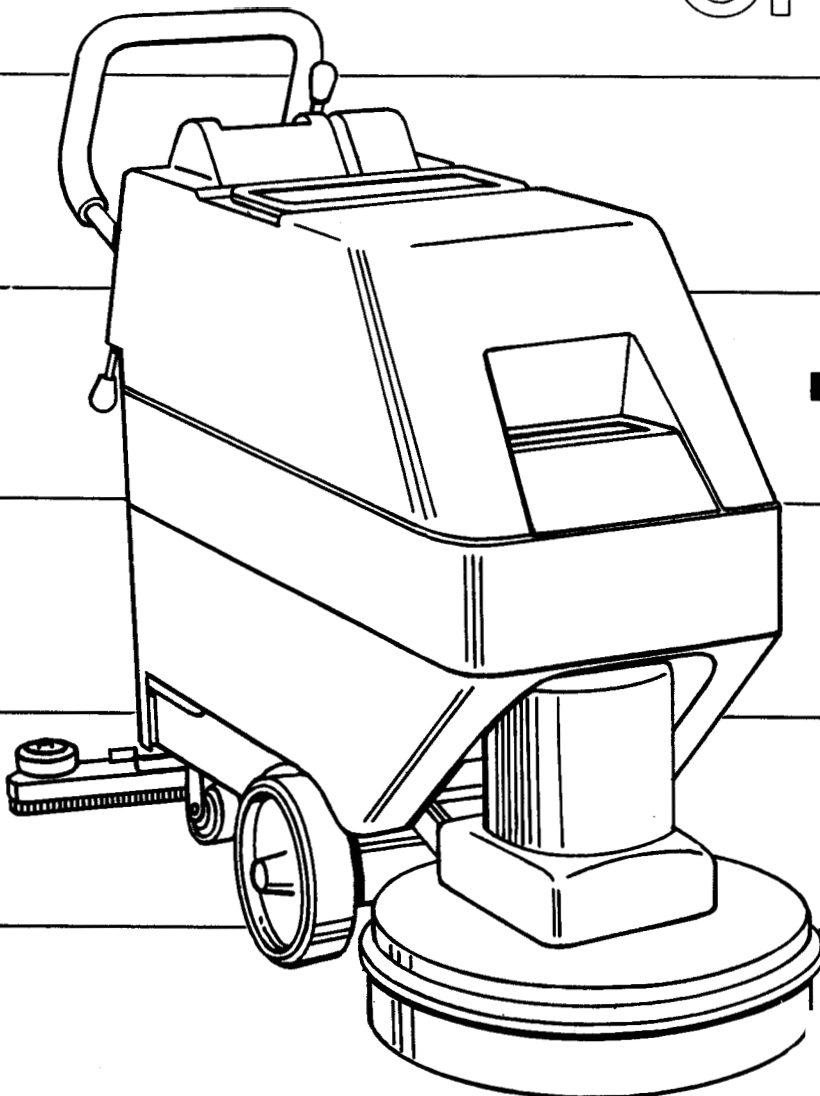


INSTRUCTION MANUAL

■ OPERATION

■ CARE

■ SERVICE



**Models:
PTC17 & PTC17 PK
PTC20 & PTC20 PK**

**Battery Powered
Floor Scrubber**



INDUSTRIES, INC., 1351 W. Stanford Ave., Englewood, CO 80110 USA • 303/782-1800 • FAX 303/782-0817



Operator Safety Instructions



WARNING:

Read the instruction manual before operating this machine.

Operate this machine only from the rear of machine.

Use caution when operating the machine on a ramp or incline. Do not turn or leave this machine unattended on a ramp or incline.

Machine can cause an explosion when operated near flammable vapors and materials.

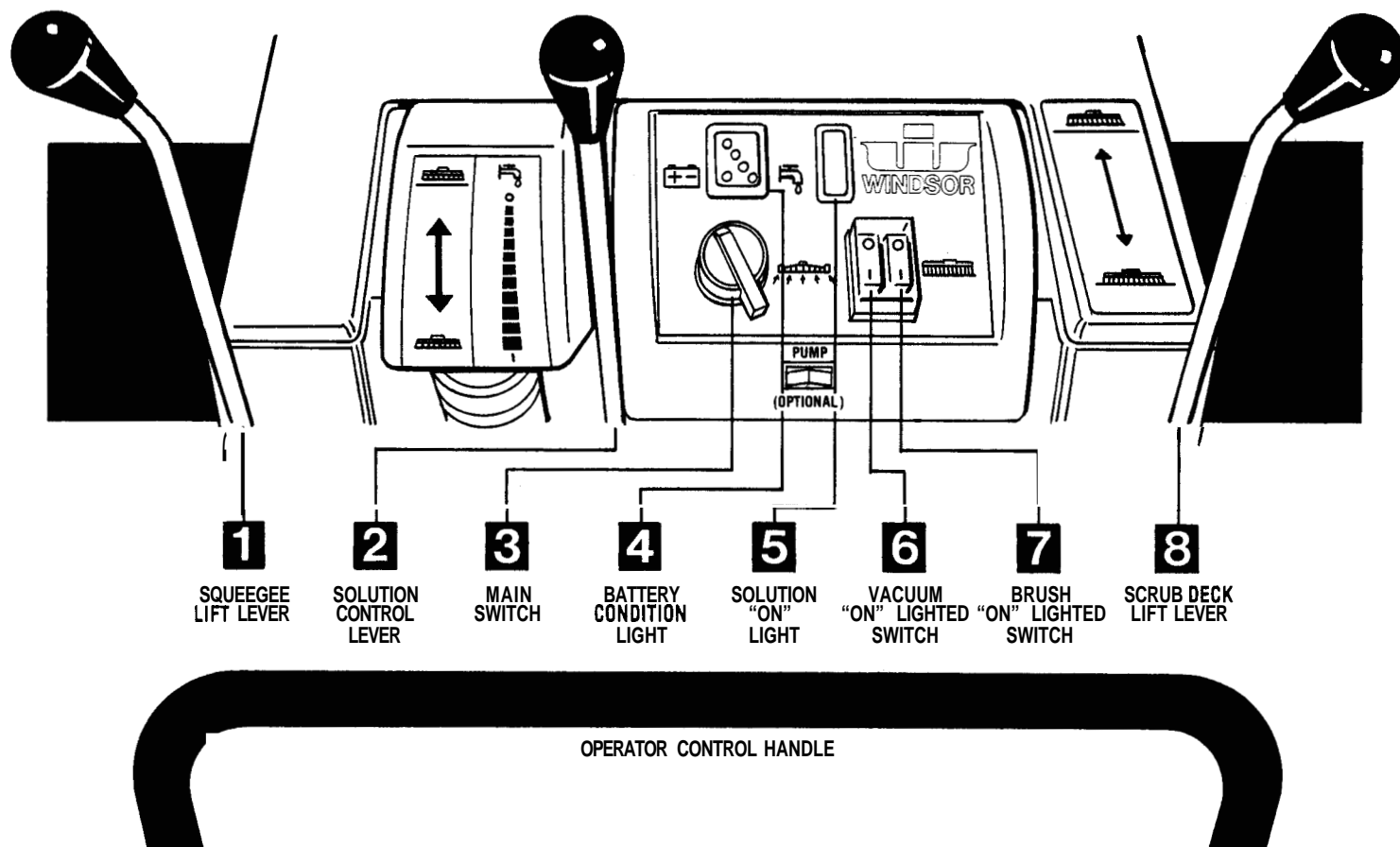
Store machine inside. Keep the electrical components of the machine dry.

Lead acid batteries generate gases which can cause an explosion. Keep sparks and flames away from the batteries. Charge the batteries only in a well ventilated area.

Wear eye protection when working near batteries. Do not put any type of metal objects across the battery terminals or on top of the batteries.

Maintenance and repairs must be done by qualified personnel only. Maintain adjustments on machine as per specifications noted in the service manual.

Make sure all warning and caution labels are legible and properly attached to the machine.



- 1** SQUEEGEE
LIFT LEVER
- 2** SOLUTION
CONTROL
LEVER
- 3** MAIN
SWITCH
- 4** BATTERY
CONDITION
LIGHT
- 5** SOLUTION
"ON"
LIGHT
- 6** VACUUM
"ON" LIGHTED
SWITCH
- 7** BRUSH
"ON" LIGHTED
SWITCH
- 8** SCRUB DECK
LIFT LEVER

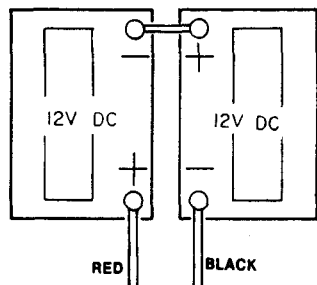
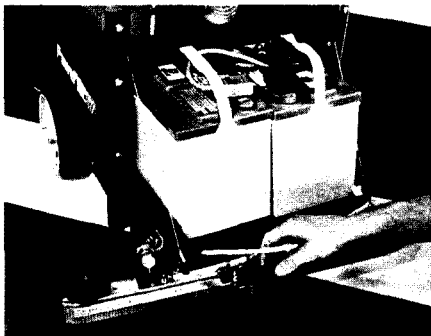
OPERATOR CONTROL HANDLE

1. Raises and lowers squeegee assembly.
2. Controls flow of cleaning solution to floor.
3. Controls electric power to all switched components.
4. Indicates charge condition of batteries.
5. Light "ON" indicates solution valve is open.
6. Switches on vacuum motor.
7. Switches on brush drive motor.
8. Raises and lowers scrub deck assembly.

MACHINE PREPARATION

BATTERIES

1. Install batteries and connect battery cables as shown.



WARNING: Provide proper ventilation, leave door open when charging batteries.

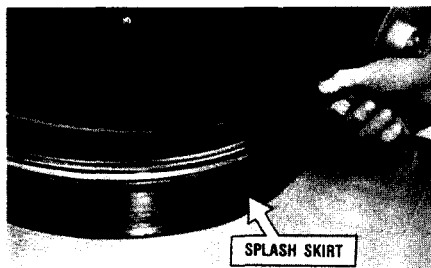
2. Charge the batteries before using the machine. (See Battery Charging Procedure)

BRUSH/DRIVE PAD ASSEMBLY

1. Raise scrub deck assembly by raising control lever to store position.
2. Reach under scrub deck and rotate drive plate until a lug hole is visible through scrub deck sight hole.



3. Position brush/pad driver under plate and lift up to engage brush lugs in plate. A quick counterclockwise motion will lock brush/pad driver in position.
4. Lower scrub deck by pulling control lever rearward. Adjust splash skirt to floor.



CLEANING SOLUTION

1. Fill machine with hot water and add cleaning chemical at the proportion noted on the container.

CAUTION: Always use a low sudsing cleaning chemical designed for use in automatic hard surface floor scrubbers.

CAUTION: To avoid possible distortion of polyethylene solution/recovery tanks. DO NOT USE WATER TEMPERATURE THAT EXCEEDS 150°F (65°C).

CHEMICALS

The internal parts of the pump used in the scrubber (on models equipped with auxiliary pump) are suitable for use with most cleaning chemicals. But it is susceptible to chemical attack from some cleaning substances, such as hydrocarbon solvents and chlorinated bleaches. These noncompatible materials are not of the type normally used for cleaning.

SUITABLE CHEMICALS

Alkalis
Clorox ii Bleach^{*}
Detergents
Hydroxides
Oxygen Bleaches
Soaps
Sta-Puf Fabric Softener^{*}
Vinegar
White Monday Bleach^{*}

^{*}Registered Trademark

NONCOMPATIBLE CHEMICALS

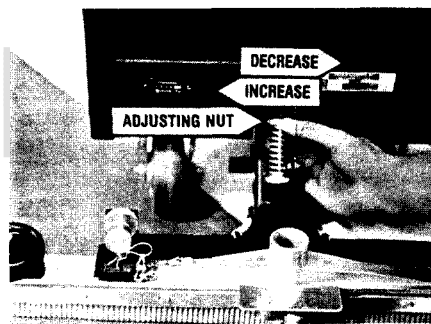
Aldehydes
Aromatic Hydrocarbons
Butyls
Carbon Tetrachloride
Clorox^{*}
Chlorinated Bleaches
Chlorinated Hydrocarbons
Lysol^{*}
Methyls (MEK)
Perchlorethylene (perc)
Phenols
Trichlorethylene
D-Limonene

OPERATING THE MACHINE

1. Adjust the operator control handle to a comfortable position.
2. Switch on main power switch.
3. Release solution. Pull solution control lever rearward. **NOTE** The amount of solution can be regulated during operation depending on the type of floor and the traverse speed of the machine.
4. Switch on brush drive motor.
5. Switch on vacuum motor.
6. Lower scrub deck. Pull deck lift lever rearward.

CAUTION: DO not leave brush running on floor while machine is stationary.

7. Lower squeegee. Pull squeegee lift lever rearward. **NOTE** Use adjusting knob to change pressure on squeegee.



8. Push machine forward to begin cleaning. Forward motion is assisted by the scrubbing action of the brush/pad driver.

OPERATING MACHINE WITH ACCESSORY TOOL

The HFT floor tool for wet pick-up can be used on models equipped with the auxiliary pump kit option. (**NOTE:** Factory installed option only.)

1. Remove vac hose from squeegee and connect to accessory vac hose, using metal hose coupler.
2. Connect solution hose from accessory tool to solution outlet nipple located at lower right hand corner of rear panel.
3. Check solution tank for cleaning solution and make sure dome is in place.
4. Switch on main power switch.
5. Switch on auxiliary pump and vacuum switches.

WARNING: Do not switch on brush motor when operating machine with accessory tools.

REGULAR MAINTENANCE BEFORE STARTING WORK PERIOD

1. Disconnect battery charger. **NOTE** Disconnect the "AC" power cord from the wall receptacle before removing the "DC" charger plug from machine.
2. Check water level in batteries. Add distilled water as needed.
3. Attach brush or drive pad to drive plate.
4. Check vac hose connection at squeegee shoe.
5. Check squeegee blades for wear.
6. Fill machine with hot water and add cleaning chemical at the proportions noted on the container. **NOTE** Use a low sudsing cleaner designed for use in automatic hard surface floor scrubbers.

BEFORE STORING MACHINE AT THE END OF WORK PERIOD:

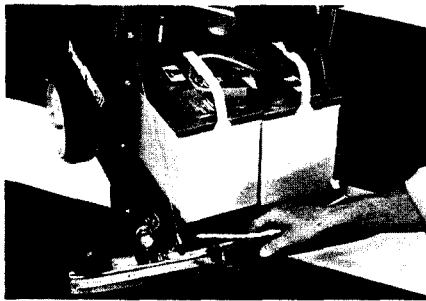
1. Drain both solution and recovery tanks and rinse clean.
2. Remove dome, lift out float assembly to allow recovery tank to air dry.
3. Remove brush or drive pad from drive plate and store upside down or hang on wall.
4. Wipe down exterior of machine with damp cloth.
5. Raise squeegee assembly to "store" position.
6. Charge batteries. (See Battery Charging Procedure)

BATTERIES — CHARGING AND MAINTENANCE

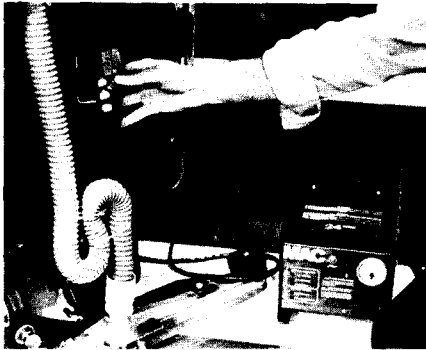
BATTERY CHARGING PROCEDURE

WARNING: Lead acid batteries generate gases which can cause an explosion. Keep sparks and flames away from batteries. **NO SMOKING.** Always wear eye protection when working near batteries. Charge the batteries only in a well ventilated area.

1. Set the charger on a flat level surface.
2. Open battery compartment door. Leave door open during charging cycle.



3. Connect the "DC" charger plug to the connector on the machine. NOTE A safety override switch is activated when the "DC charge plug is connected. This prevents all panel circuits on the machine from accidentally being switched on during charging cycle.



4. Connect charger "AC" plug to properly grounded outlet that has correct voltage for the charger.
5. The charger supplied by Windsor is totally automatic and shuts off when the batteries are fully charged.

NOTE: Refer to the charger manual for detailed charging information.

6. After charging check electrolyte level of the batteries. Add distilled water to the level as shown in diagram.

1/4" FROM
BOTTOM
OF TUBE

BATTERY MAINTENANCE

1. Keep tops of batteries clean and dry. Use a damp cloth with a weak solution of baking soda or ammonia and water. Use a clean dry cloth to wipe battery tops dry after cleaning.
2. If corrosion (white deposits) appears on the battery terminals and cable clamps, remove and clean. Use a battery terminal and connector cleaning tool.

BATTERY TERMINAL CLEANER



Windsor Part #02101

3. Keep the battery electrolyte at the correct level — approximately 1/4" below bottom of filler tube of each cell. Distilled water should be added, as needed, AFTER charging cycle.

WARNING: Do not allow electrolyte level to drop below the tops of the plates.

SERVICING THE COMPACT SCRUBBER

CAUTION: Before making any adjustments or repairs to the machine. . .

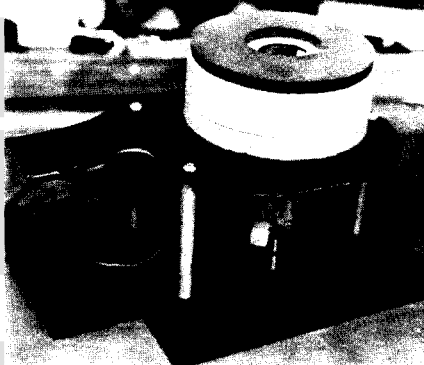
1. Only qualified maintenance personnel are to perform repairs.
2. Make sure battery charger is disconnected.
3. Make sure all switches are "OFF".
4. Remove batteries as required or disconnect main battery leads from batteries when making repairs to electrical system.
5. Refer to wiring diagram when replacing electrical parts or repairing electrical system.

VACUUM MOTOR

1. Disconnect battery leads and remove batteries from compartment.
2. Remove (6) screws holding vac motor/plate assembly to recovery tank.



3. Disconnect vac motor lead from connector and lift out vac motor/plate assembly.



4. Check motor brushes. When worn to 3/8" replace both brushes.



PUMP ASSEMBLY

(On models equipped with auxiliary pump)

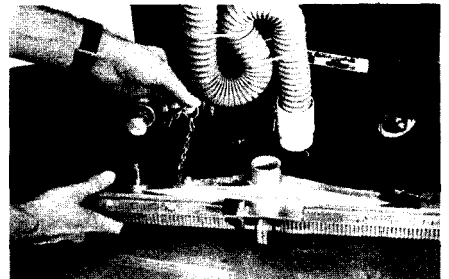
1. Remove batteries and squeegee assembly. Lay machine on side.
2. Disconnect pump motor leads. Remove (4) screws holding pump to chassis. Disconnect sulation hoses from pump head and lift out pump. Refer to pump drawing for replacement parts.

CAUTION: When replacing hose bars on pump head—DO NOT OVERTIGHTEN—as this could crack intake and exhaust ports in pump head.

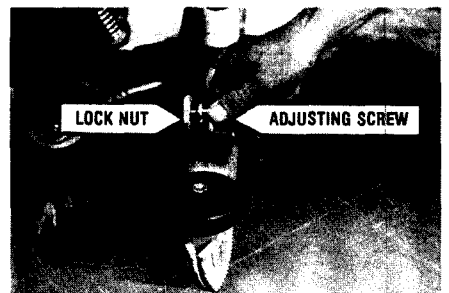
SQUEEGEE ASSEMBLY

To remove squeegee assembly. .

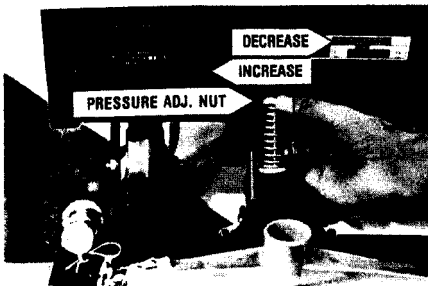
1. Raise squeegee lift arm to store position.
2. Remove vac hose from squeegee.
3. Pull retaining pin from locator stud. Push down and slide squeegee to the right to disengage right hand stud from drag arm.



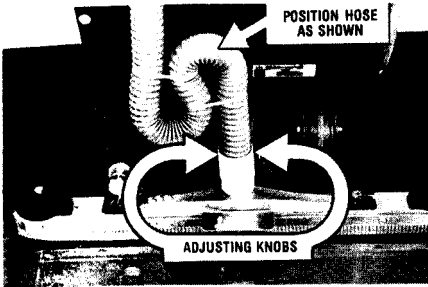
4. When installing or replacing squeegee blades make sure the smooth side of the blade is next to the squeegee casting.
5. The angle of the squeegee can be changed with the adjusting screw. Turn screw clockwise to tilt squeegee forward and counterclockwise to tilt rearward. Tighten lock nut after making adjustment.



6. Down pressure can be increased or decreased with the adjusting nut.

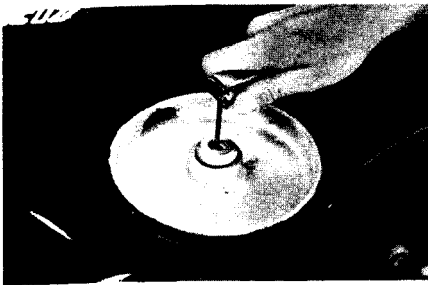


7. Squeegee tracking can be controlled by adjusting tension of squeegee springs. **NOTE:** Position recovery hose as shown before making adjustments.



WHEELS/CASTERS

1. Use allen wrench to remove wheel retaining screw.

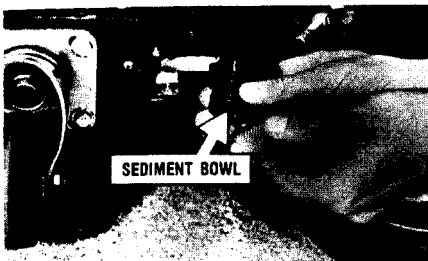


2. Use arbor press to replace bearings as required. Use grease gun to lubricate bearings through zerk fitting on wheel hub and caster axle.



SOLUTION STRAINER

1. An inline solution strainer is located under chassis behind left wheel. Remove sediment bowl and screen periodically and rinse clean with hot water.



SCRUB DECK / BRUSH MOTOR

1. Remove (4) screws holding motor shroud.



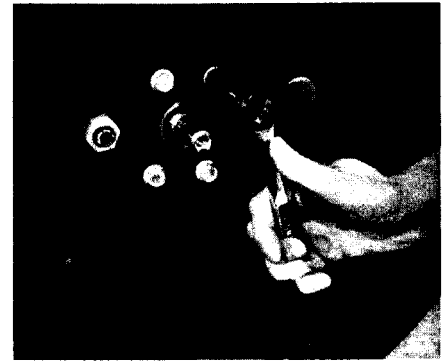
2. Remove batteries and squeegee assembly. Lay machine on side.

3. Remove center screw holding drive plate. Slide drive plate off motor shaft.



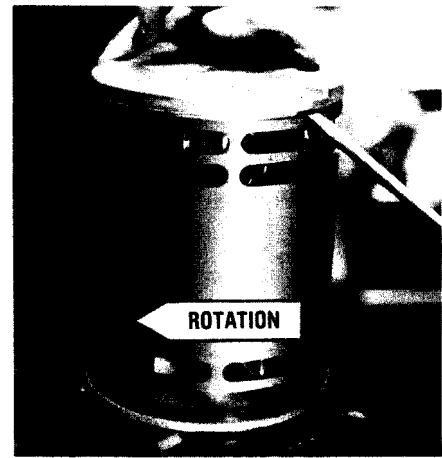
4. Disconnect motor leads from terminal block.

5. Remove (4) screws holding brush motor to scrub deck.



Brush Motor

6. Remove (2) motor thru-bolts and lift off end bell. Replace brushes when worn to 3/8 inch.



Limited Warranty: Windsor Industries warrants that the Windsor machine covered by this warranty is free from defects in workmanship and materials under the following terms:

6 YEARS: On Rotationally Molded Polyethylene Tanks.

3 YEARS: On Traverse Drive Motors, Gear Units, AC Induction Polisher Motors, all Metal Chassis and Metal Frames.

1 YEAR: On all other parts which are not specifically referenced herein, plus an extra year (2 years total) on Rectified DC Polisher Motors and Scrubber Brush Motors.

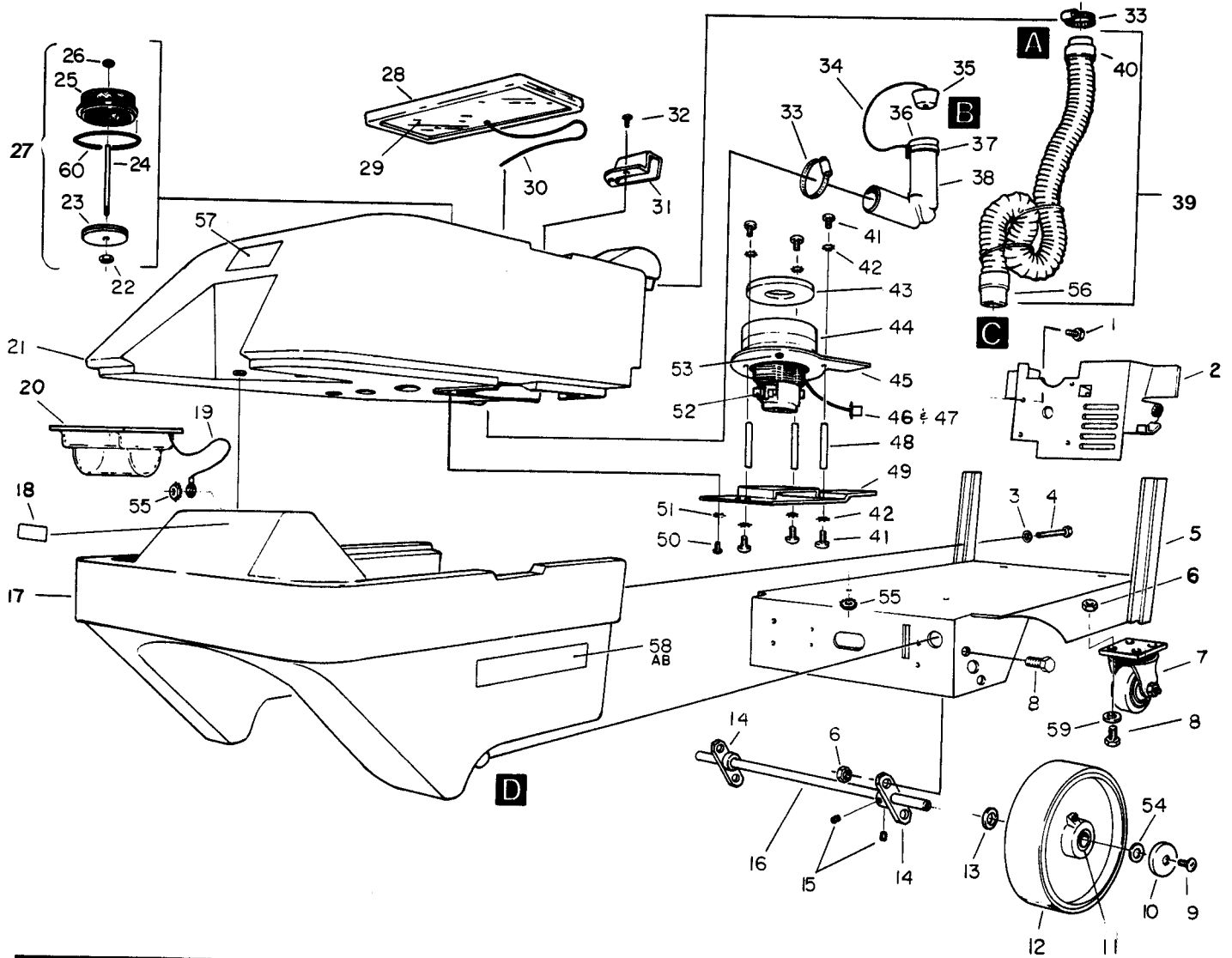
The warranty period shall commence at the date of FIRST PURCHASE BY THE END USER FROM AN AUTHORIZED WINDSOR DISTRIBUTOR and applies to defective parts only, not to failure caused by abuse or normal wear.

Windsor will, at its option, repair or replace without charge, except for normal transportation costs, parts that fail under normal use and service when operated and maintained in accordance with the Owners Instruction Manual and the Preventive Maintenance Guide where applicable. This warranty shall apply to defects in material and workmanship only and does not apply to: a) transportation damages, b) alterations by unauthorized persons, c) misuse or abuse (including use of incompatible or corrosive chemicals or overloading of capacity), d) failure caused by lack of proper maintenance and cleaning, e) batteries and chargers which are warranted by the original manufacturer for one year, and f) normal wear on items such as belts, brushes, bearings, capacitors, carbon brushes, clutches, cords, filters, finishes, gaskets, hoses, pulleys, relays, rectifiers, and switches.

The warranty is in lieu of all warranties, expressed or Implied, and releases Windsor from all other obligations and liabilities. It is applicable only in the U.S.A., Canada, Australia, and New Zealand. Windsor Industries is not responsible for costs of repairs performed by persons other than those specifically authorized by Windsor. This warranty does not apply to damage or loss of income due to malfunctioning of the machine. USE OF PARTS NOT APPROVED BY WINDSOR WILL VOID WARRANTY.

If a difficulty develops with this machine, contact either the Dealer from whom you purchased the product or write to:

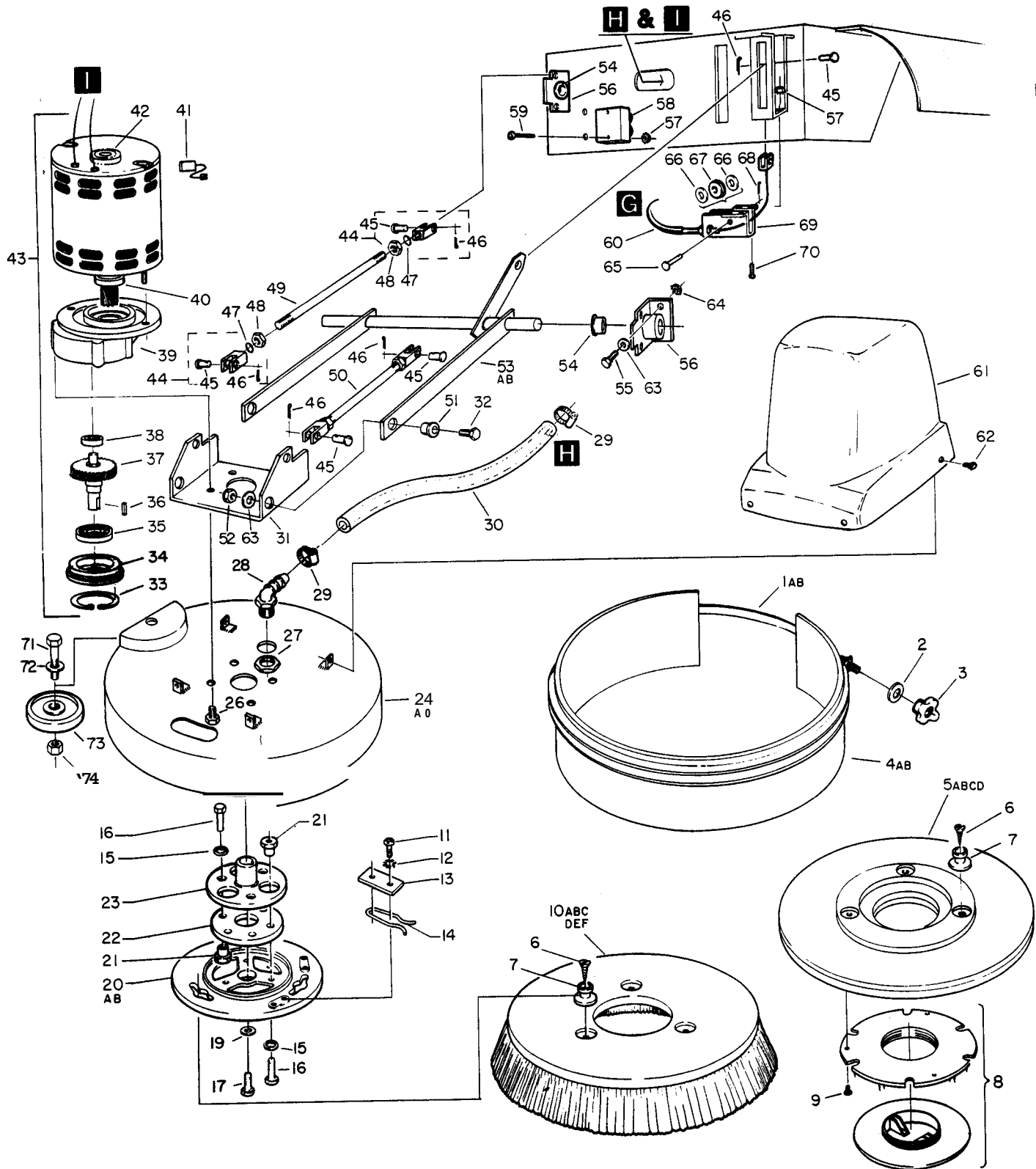
TANKS, VAC & FRAME



TANKS, VAC & FRAME

KEY	PART NO.	DESCRIPTION	KEY	PART NO.	DESCRIPTION	KEY	PART NO.	DESCRIPTION
1	70020	Scr, 1/4-20 x 1/2 HHMS	22	57047	Nut, 1/4-20 Ny-Lock	43	35011	Gasket, Vac Fan Seal
2	61181	Panel, Rear	23	73427	Float	44	53735	Vac Mtr, w/Conn, 24VDC 5.7
3	87090	Washer, 1/4 Flat	24	67227	Rod, Vac Float	45	62279	Plate, Vac Divider
4	70010	Scr, 1/4-20 x 1.5 HHCS	25	73423	Screen, Float	46	76004	Connector, 2-Pin M-Molex
5	34188	Frame, Main	26	27142	Cap Nut, 1/4"	47	76015	Terminal, Female Pin Molex
6	57119	Nut, 3/8-16 Lock	27	34190	Float Asm, Vac Shut-Off	48	73419	Spacer, Vac Motor
7	18027	Caster	28	35060	Gasket, Dome	49	62287	Plate, Vac Cover
8	70266	Scr, 3/8-16 x 1 HHCS	29	28040	Lid, Recovery Tank	50	70088	Scr, 10-32 x 1/2 PHMS
9	70327	Scr, 1/4-20 x 3/8 THMS	30	27417	Cord, 1/8 x 12"	51	87016	Washer, #10 Star
10	27266	Cap, Wheel Hub	31	29154	Deflector, Vac Intake	52	14696	Brush Set, Vac Motor
11	09010	Bearing, Caged Cup Needle	32	70233	Scr, #10 x 3/8 PH H-LO	53	70114	Scr, #10 x 3/4 Polyfast
12	89068	Wheel (With Item 11)	33	20046	Clamp, 2.25 Hose	54	87013	Washer, 1/4 Flat
13	73437	Spacer, Wheel Axle	34	27188	Cord, Drain Hose Plug	55	57105	Nut, 1/4-20 Hex w/Star
14	27408	Collar, Axle	35	66051	Plug, Drain Hose	56	27079	Cuff, 1.5" Wht Hose
15	70119	Set Scr, 1/4-20 x 3/8 KCP	36	40019	Hosebarb, 1.5 Double	57	50485	Label, Windsor Logo
16	03058	Axle, Wheel	37	20002	Clamp, 2" Nylon	58A	50518	Label, PTC17 "Compact"
17	75152	Tank, Solution	38	39037	Hose, 1.5 x 24" Drain	58B	50519	Label, PTC20 "Compact"
18	50363	Label, Solution Warning	39	39383	Hose Asm, Vac	59	87003	Washer, 3/8 ID x 7/8 OD
19	27416	Cord, Solution Lid	40	27282	Cuff, 1.5 Slip x 1.5 Hose	60	78224	Trim, Vac Screen
20	51138	Lid, Solution Tank	41	70085	Scr, 1/4-20 x 1/2 PHMS			
21	75153	Tank, Recovery	42	87025	Washer, 1/4 Star			

SCRUB DECK



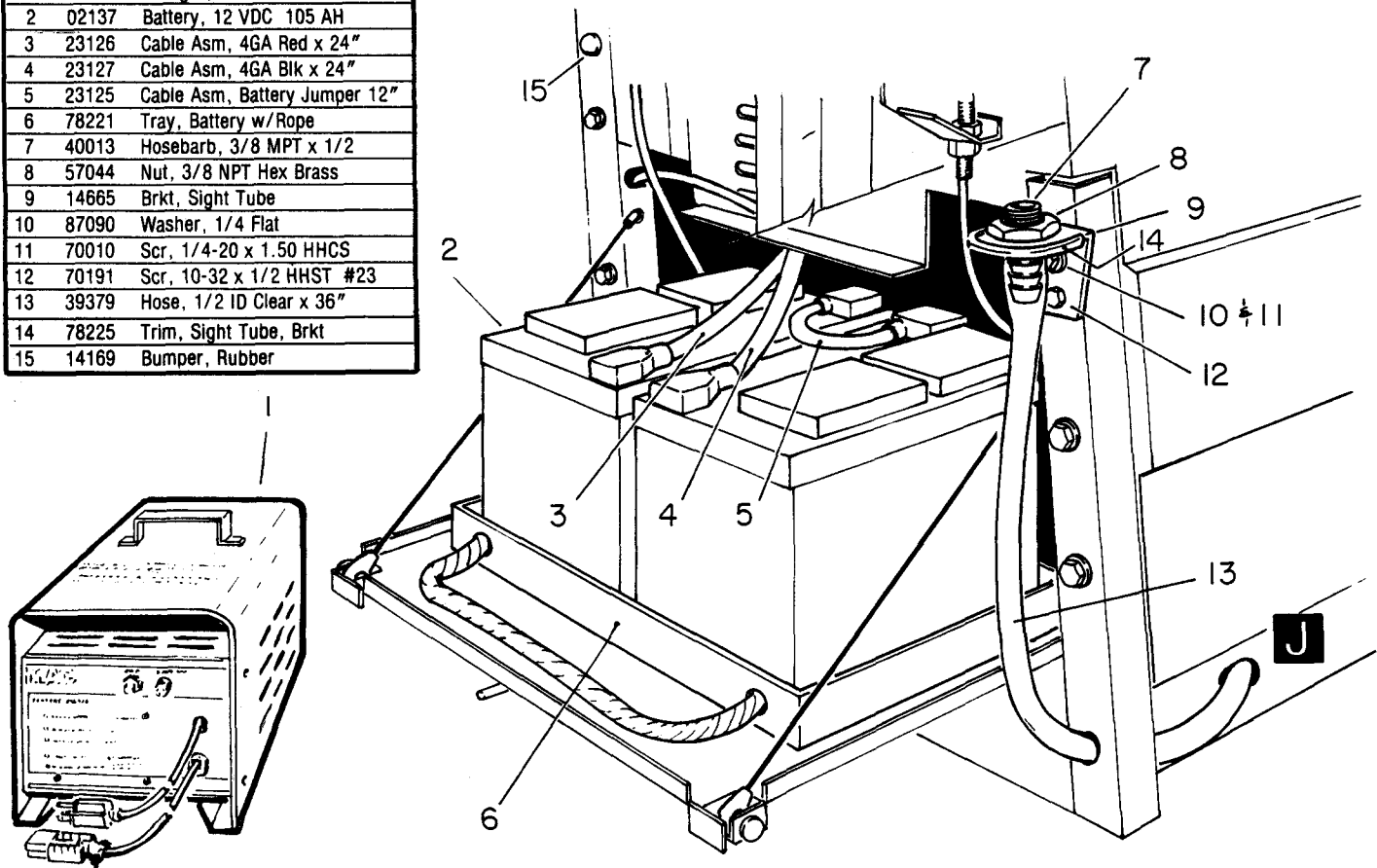
SCRUB DECK

KEY	PARTNO.	DESCRIPTION	KEY	PART NO.	DESCRIPTION	KEY	PARTNO.	DESCRIPTION
1A	73425	Strap Asm, PTC17 Bumper	20B	62327	Plate, Brush Drive Blk PTC20	49	51120	Linkage, Rod Secondary
1B	73465	Strap Asm, PTC20 Bumper	21	57137	Nut, 5/16-18 Shoulder	50	51122	Linkage Asm, Rod Secondary
2	87090	Washer, 1/4 ID x 3/4 Flat	22	27317	Coupling, Brush Drive	51	14493	Bushing, .25 ID x .37 OD Flange
3	48012	Knob, Adjustment	23	62141	Plate, Brush Driver	52	57047	Nut, 1/4-20 Nyl-Lock
4A	14676	Bumper, PTC17 Brush Shroud	24A	73422	Scrub Deck, PTC17	53A	67216	Rod Asm, PTC 17 Scrub Deck
4B	14571	Bumper, PTC20 Brush Shroud	24B	73463	Scrub Deck, PTC20	53B	67241	Rod Asm, PTC20 Scrub Deck
5A	02162	Pad Driver, 16" Ylw Pad Lock	26	70266	Scr, 3/8-16 x 1.0 HHCS	54	14664	Bushing, 5/8 ID Flange
5B	02156	Pad Driver Asm, 16" Weighted	27	57044	Nut, 3/8 NPT Hex Brass	55	70015	Scr, 1/4-20 x 3/4 HHMS
5C	02098	Pad Driver, 18" Blk Pad Lock	28	40027	Hosebarb, 3/8 MPT x 1/2 90°	56	27384	Collar, Scrub Deck
5D	02169	Pad Driver Asm, 18" Weighted	29	20042	Clamp, 3/8 Hose	57	57104	Nut, 10-32 w/Star Washer
6	70304	Scr, #14 x 1.25 FHWS	30	39381	Hose, 1/2 x 22" Clear Sol. Feed	58	14538	Terminal Block, 2 Pos.
7	51076	Lug, Brush Mtg	31	14663	Brkt, Scrub Deck Mtg	59	70092	Scr, 10-32 x 1.5 PHMS
8	41200	Synthetic Pad Lock	32	70018	Scr, 1/4-20 x 1 HHMS	60	27459	Cable, Scrub Deck
9	70233	Scr, #10 x 3/8 PH Hi-Lo	33	73404	Snap Ring, 3.12 Internal	61	27412	Motor Cover, Scrub Deck
10A	02115	Brush Asm, 16" Nylon	34	73430	Seat, Bearing	62	70351	Scr, 10-32 x 3/8 HHTF w/Star
10B	02116	Brush Asm, 16" Poly	35	09047	Bearing, Lower Gear Box	63	87013	Washer, 1/4 Flat
10C	02117	Brush Asm, 16" Malgrit	36	48040	Key, 1/4 Sq x 1.0	64	57105	Nut, 1/4-20 w/Star Washer
10D	02095	Brush Asm, 18" Nylon	37	36105	Gear, Brush Motor Drive	65	66133	Pin, 3/16 x 7/8 L Clevis
10E	02096	Brush Asm, 18" Poly	38	09046	Bearing, Upper Gear Box	66	87008	Washer, 1/4 ID x 1 1/4 OD
10F	02097	Brush Asm, 18" Malgrit	39	41182	Housing, Brush Motor Gear	67	64056	Pulley, Cable Roller
11	70088	Scr, 10-32 x 1/2 PHMS	40	09045	Bearing, Lower Brush Motor	68	66073	Pin, 1/16 x 3/4 Cotter
12	87016	Washer #10 Star	41	14695	Brush Set, Brush Motor	69	14732	Bracket, Cable Pulley
13	20068	Clamp, Brush Lug	42	09044	Bearing, Upper Brush Motor	70	70066	Scr, 10-32 x 3/4 PHMS
14	73354	Spring, Brush Locking	43	53556	Motor Asm, Brush	71	70368	Scr, 3/8-16 x 1 3/4 HHMS
15	87067	Washer, 5/16 Int Star	44	27277	Clevis, 5/16-24 Rod Kit	72	87003	Washer, 3/8 ID x 7/8 OD
16	70302	Scr, 5/16-18 x 1.0 HHCS	45	66116	Pin, 1/4 x 3/4 Clevis	73	89059	Wheel, Scrub Deck Bumper
17	70305	Scr, 5/16-18 x 3/4 HHCS	46	66121	Pin, 3/32 x 1/2 Cotter	74	57022	Nut, 3/8-16 Lock
19	87102	Washer, 5/16 ID x 1 1/4 Flat	47	87096	Washer, 5/16 Int Star			
20A	62304	Plate, Brush Drive Ylw PTC17	48	57117	Nut, 5/16-24 Hex			

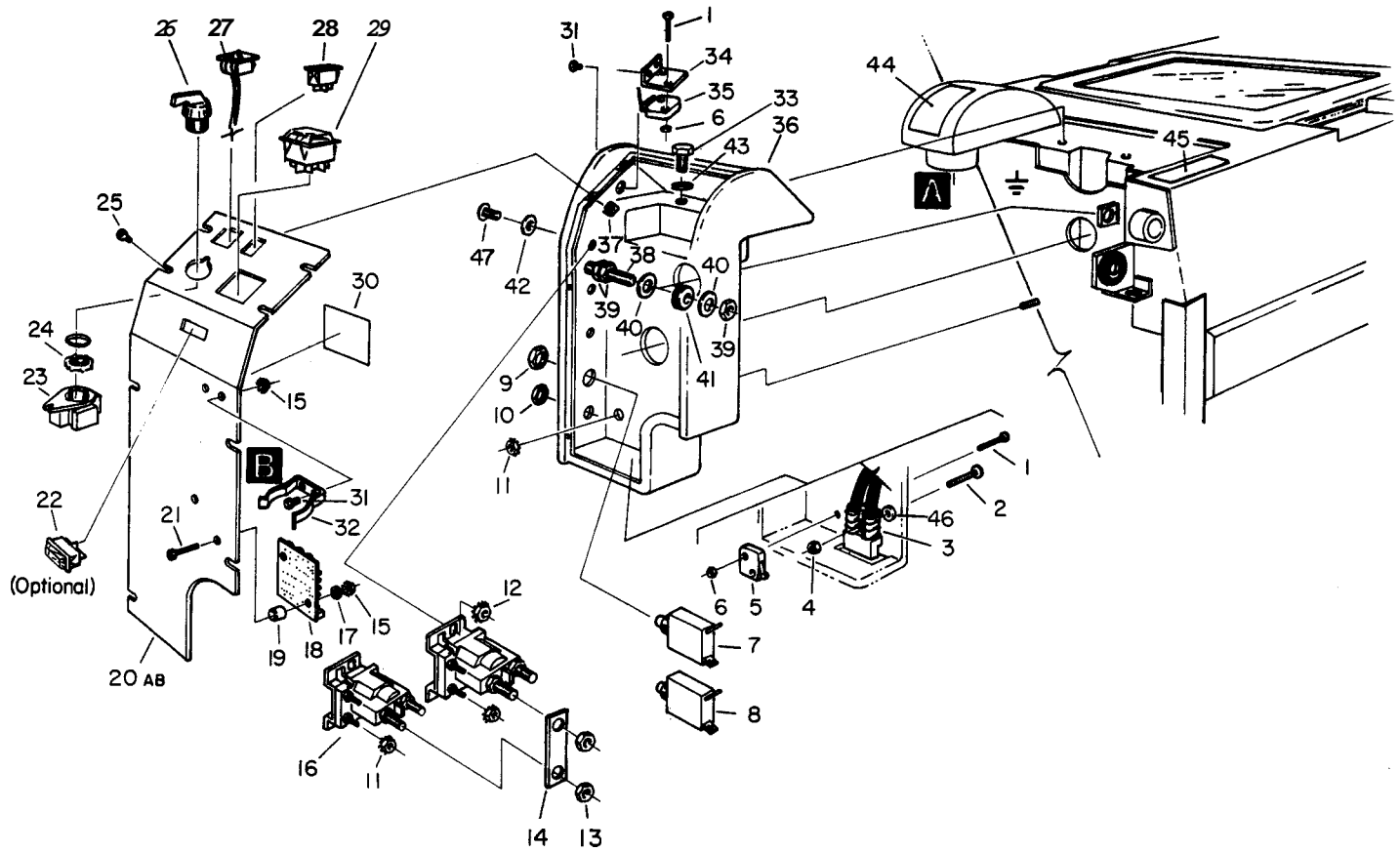
BATTERY COMPARTMENT

KEY	PARTNO.	DESCRIPTION
1	02135	Charger, 24 VDC 10 AMP
2	02137	Battery, 12 VDC 105 AH
3	23126	Cable Asm, 4GA Red x 24"
4	23127	Cable Asm, 4GA Blk x 24"
5	23125	Cable Asm, Battery Jumper 12"
6	78221	Tray, Battery w/Rope
7	40013	Hosebarb, 3/8 MPT x 1/2
8	57044	Nut, 3/8 NPT Hex Brass
9	14665	Brkt, Sight Tube
10	87090	Washer, 1/4 Flat
11	70010	Scr, 1/4-20 x 1.50 HHCS
12	70191	Scr, 10-32 x 1/2 HHST #23
13	39379	Hose, 1/2 ID Clear x 36"
14	78225	Trim, Sight Tube, Brkt
15	14169	Bumper, Rubber

BATTERY COMPARTMENT

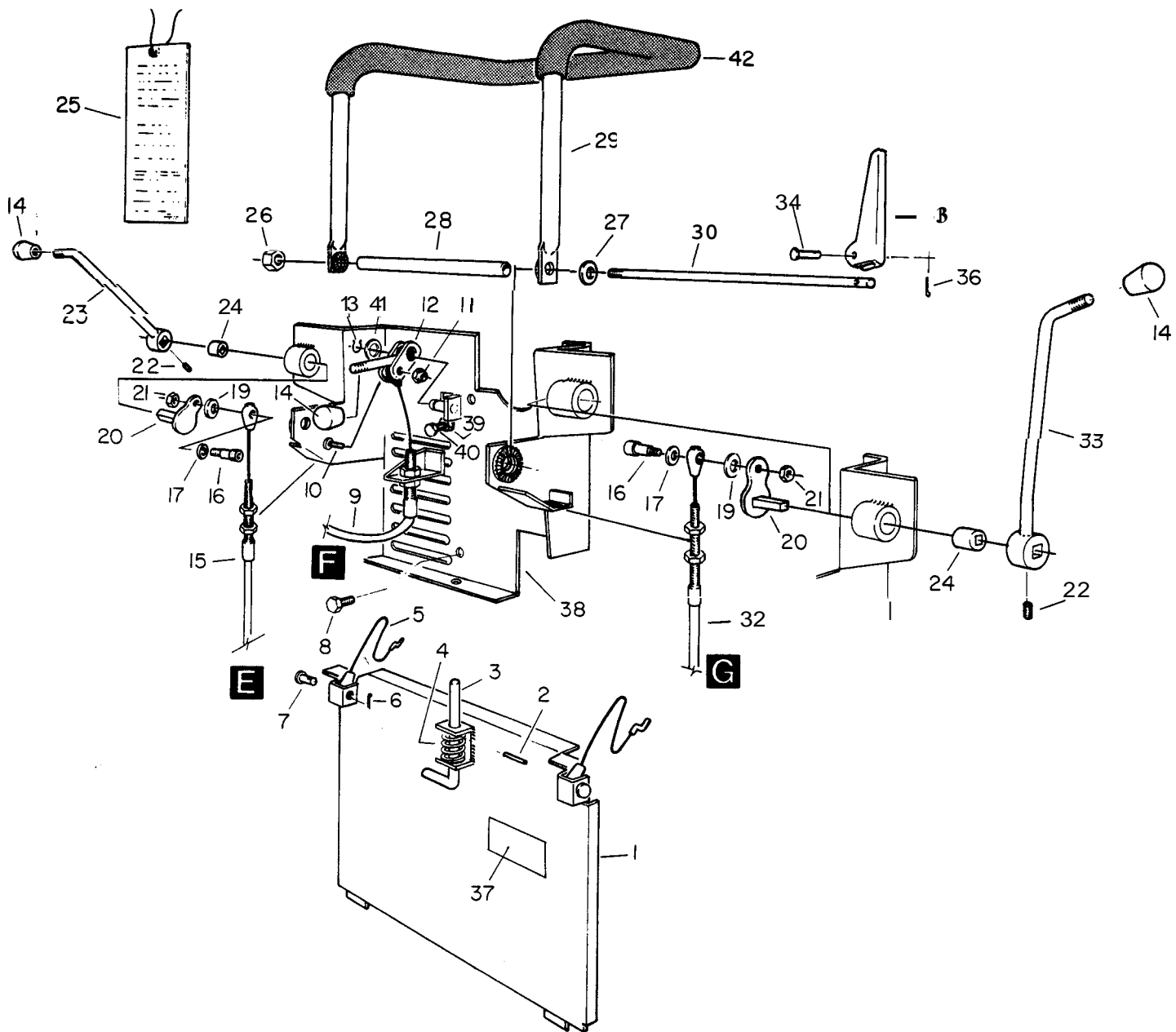


ELECTRICAL CONTROLS



ELECTRICAL CONTROLS		
KEY	PART NO.	DESCRIPTION
1	70245	Scr, 4-40 x 3/4 PHMS
2	70261	Scr, 6-32 x 1.0 PHMS
3	76065	Connector, 50 DCA
4	57012	Nut, 6-32 Hex
5	72053	Switch, 125 VDC SPST
6	57100	Nut, 4-40 Hex
7	14503	Breaker, 20A 50 VDC Circuit (Vac)
8	14688	Breaker, 35A 50 VDC Cir. (Br. Motor)
9	57017	Nut, 15/32 - 32 Panel
10	57109	Nut, 7/16-28 Panel
11	57104	Nut, 10-32 w/Star Washer
12	57105	Nut, 1/4-20 w/Star Washer
13	57117	Nut, 5/16-24 Hex
14	14693	Bussbar
15	57106	Nut, 8-32 w/Star Washer
16	67118	Relay, 24 VDC Start Solenoid
17	87107	Washer, #10 Flat Nylon
18	66106	P.C. Board, Battery Level
19	73215	Spacer, P.C. Board
20A	61184	Control Panel, w/o Pump Option
20B	61193	Control Panel, w/Pump Option
21	70248	Scr, 8-32 x 1.0 PHMS Blk Nylon
22	72081	Switch, 28 VDC SPST (Pump Option)
23	72050	Switch, Rotary Contact
24	57107	Nut, M22.5
25	70394	Scr, 6-32 x 1/2 THMS Blk
26	72051	Switch, Main Rotary
27	51066	Light, Battery Charge Level
28	51124	Light, 28 VDC Blue
29	72080	Switch, 28 VDC Dual SPST
30	50427	Label, Wiring Diagram
31	70052	Scr, 8-32 x 3/8 PHMS
32	27362	Clip, Drain Hose
33	70011	Scr, 1/4-20 x 5/8 HHMS
34	14689	Brkt, Micro Switch
35	72082	Switch, Solution Lever
36	61175	Panel, Control Enclosure
37	57157	Nut, 6-32 U-Tinnerman
38	70289	Stud, 5/16-18 x 2.12 Brass
39	57125	Nut, 5/16-18 Brass
40	87092	Washer, 5/16 Brass
41	36019	Grommet, 5/16 ID x 9/16 Groove
42	87029	Washer, 5/16 Flat
43	87090	Washer, 1/4 ID x 3/4 OD Flat
44	50487	Label, Squeegee/Solution
45	50486	Label, Scrub Deck
46	87013	Washer, 1/4 Flat
47	70415	Scr, 1/4-20 x 3/4 THMS

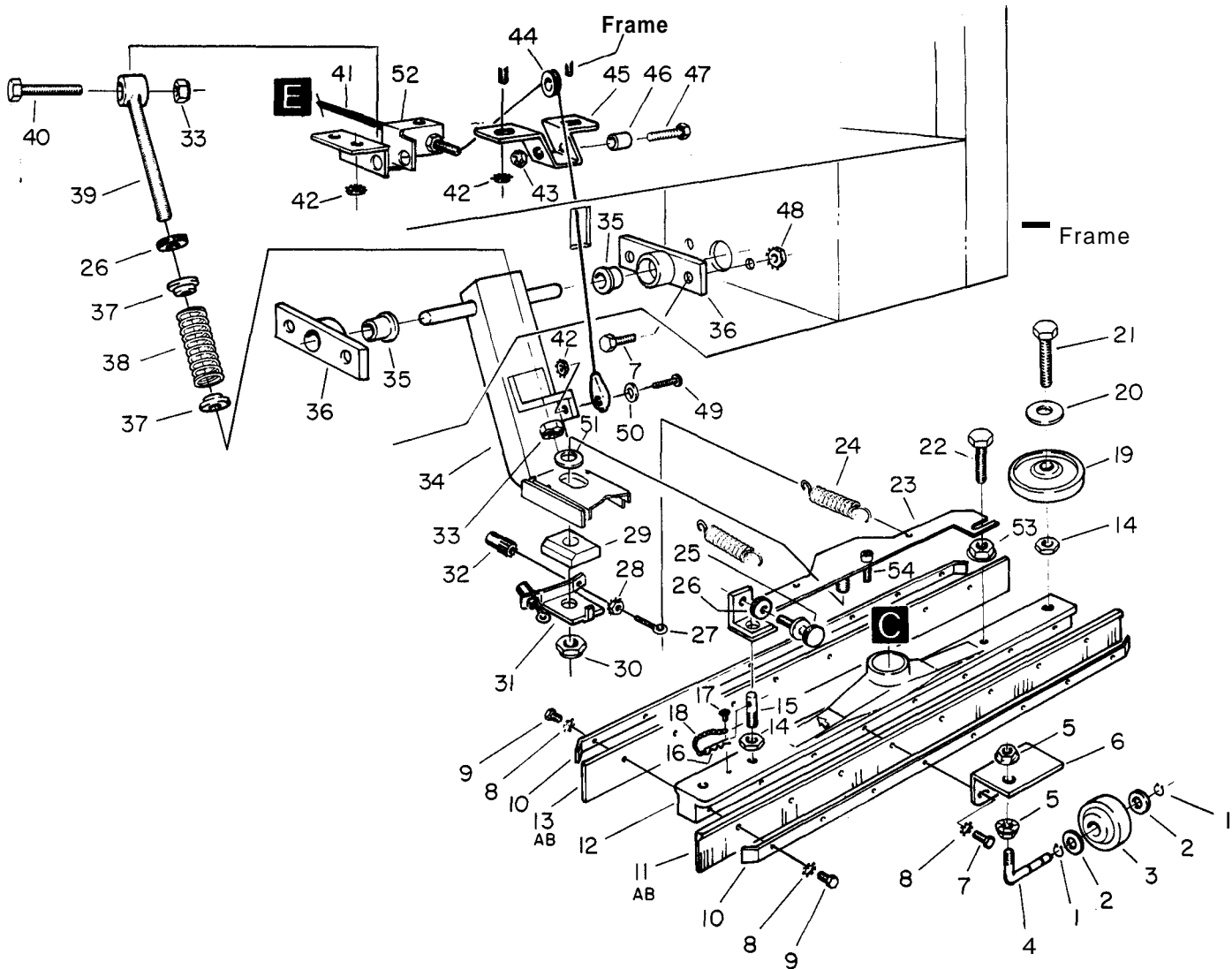
MECHANICAL CONTROLS



MECHANICAL CONTROLS

KEY	PART NO.	DESCRIPTION	KEY	PART NO.	DESCRIPTION	KEY	PART NO.	DESCRIPTION
1	29151	Door, Battery Compartment	15	27460	Cable, Squeegee	30	67224	Rod, Handle Adjust
2	66068	Pin, 1/8 x 5/8 Roll	16	70298	Shoulder Bolt, 5/16 OD x 3/8 L	31	51142	Lever, Handle Clamp
3	67226	Rod, Battery Door Lock	17	87029	Washer, 5/16 Flat	32	27459	Cable, Scrub Deck
4	73236	Spring, 1.12 Compression	19	87030	Washer, 3/8 x 3/4 Nylon	33	67228	Rod, Scrub Deck Lift
5	27413	Cable, Battery Compartment Door	20	66144	Pivot, Cable	34	66133	Pin, 3/16 x .88 L Clevis
6	66121	Pin, 3/32 x 1/2 Cotter	21	57006	Nut, 1/4-20 Hex	35	87018	Washer, #10 Flat
7	66116	Pin, 1/4 x 3/4 Clevis	22	70119	Set Scr, 1/4-20 x 3/8 KCP	36	66073	Pin, 1/16 Dia x 3/4 L Cotter
8	70020	Scr, 1/4-20 x 1/2 HHMS	23	67221	Rod, Main Lever	37	50477	Label, Charger Warning
9	27401	Cable, Solution	24	14679	Bushing, Lever Pivot	38	61181	Panel, Rear
10	70025	Scr, 10-32 x 3/4 HHMS	25	50473	Card, Instruction	39	57105	Nut, 1/4-20 Hex w/Star
11	57030	Nut, 10-32 Ny-Lock	26	57032	Nut, 3/8-16 Serrated Flange	40	70018	Scr, 1/4-20 x 1 HHCS
12	51125	Lever, Solution	27	87080	Washer, 1/2" Flat	41	87003	Washer, 5/16 Flat
13	67138	Ring, 3/8 Ext Snap	28	78220	Tube, Handle Adj	42	36059	Grip, MX Handle
14	48030	Knob, Handle	29	38169	Handle, w/Foam Grip			

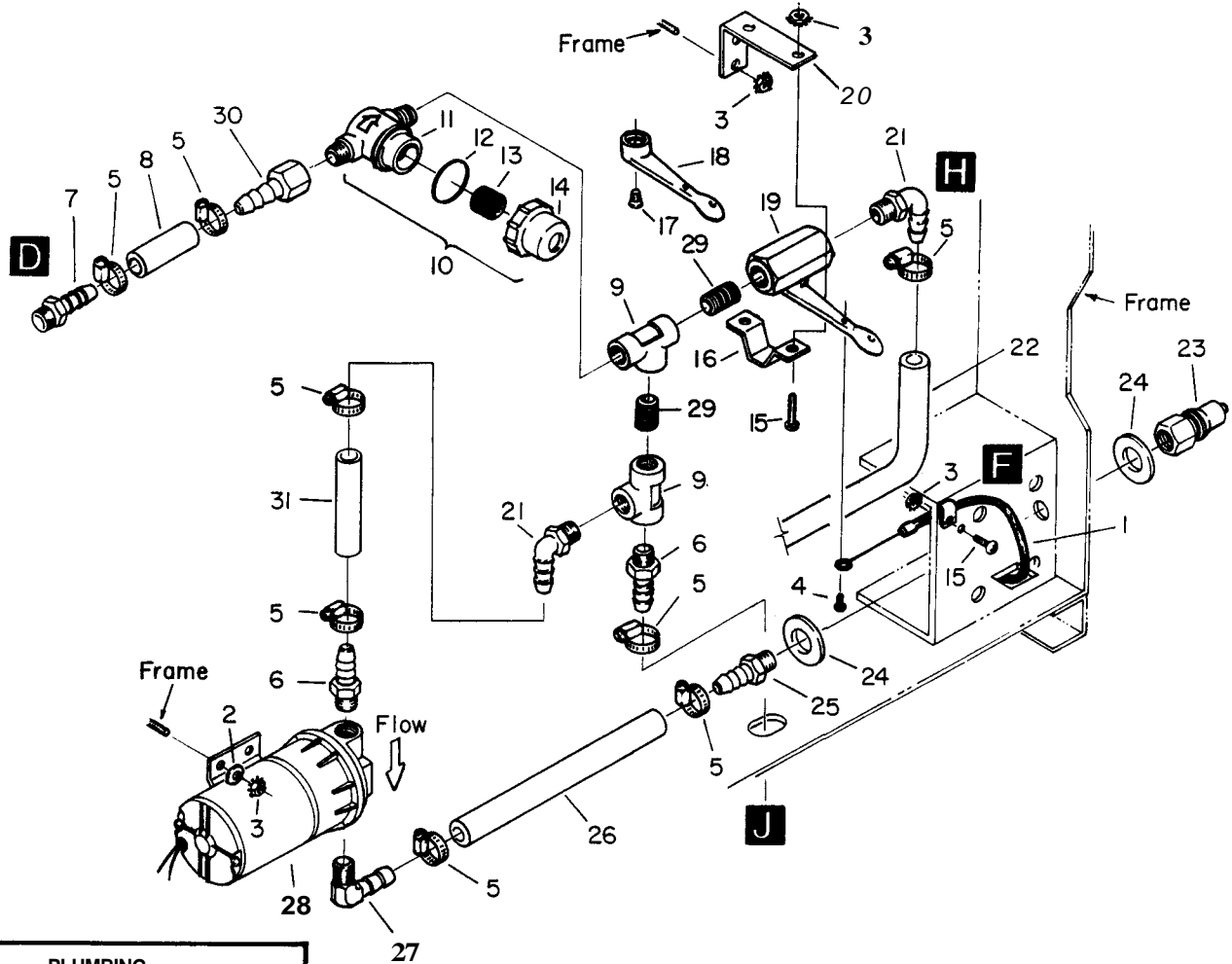
SQUEEGEE & SQUEEGEE LIFT MECHANISM



SQUEEGEE & SQUEEGEE LIFT MECHANISM

KEY	PART NO.	DESCRIPTION	KEY	PART NO.	DESCRIPTION	KEY	PART NO.	DESCRIPTION
1	67103	Ring, 5/16 Ext Snap	18	27295	Chain	37	27423	Cap, Spring Retainer
2	87029	Washer, 5/16 Flat	19	89059	Wheel, Squeegee Bumper	38	73439	Spring, Squeegee Compression
3	89058	Wheel, Squeegee Roller	20	87003	Washer, 3/8 ID x 7/8 Flat	39	67212	Rod, Squeegee Spring
4	66108	Pln, Squeegee Wheel	21	70368	Scr, 3/8-16 x 1.75 HHMS	40	70259	Scr, 5/16-18 x 1.75 HHCS
5	57112	Nut, 5/16-18 Flange	22	70266	Scr, 3/8-16 x 1.0 HHCS	41	27460	Cable, Squeegee
6	14482	Brkt, Squeegee Wheel	23	71090	Support, Squeegee	42	57104	Nut, 10-32 w/Star Washer
7	70011	Scr, 1/4-20 x 5/8 HHMS	24	73426	Spring, Squeegee	43	57047	Nut, 1/4-20 Ny-Lock
8	87025	Washer, 1/4 Star	25	48032	Knob, Squeegee Camber Adj	44	64034	Pulley, Cable
9	70020	Scr, 1/4-20 x 1/2 HHMS	26	57124	Nut, Camber Lock	45	14685	Brkt, Cable Roller
10	67217	Retainer, Squeegee	27	70263	Eyebolt, 8-32 x 1	46	73206	Spacer, .259 ID x 1/2
11A	73416	Squeegee Blade, Rear	28	57008	Nut, 8-32 Hex	47	70018	Scr, 1/4-20 x 1 HHMS
11B	02165	Squeegee Blade, Urethane	29	14681	Block, Squeegee Slide	48	57105	Nut, 1/4-20 w/Star Washer
12	73428	Squeegee Shoe	30	57153	Nut, 1/2-13 Lock (Thin)	49	70066	Scr, 10-32 x 3/4 PHMS
13A	73415	Squeegee Blade, Front	31	62294	Plate, Spring	50	87018	Washer, #10 x 9/16 Flat
13B	02165	Squeegee Blade, Urethane	32	48031	Knob, Adj	51	87031	Washer, .530ID x 1.500D Tflon
14	57085	Nut, 3/8-16 Hex Jam	33	57113	Nut, 5/16-18 Hex	52	54111	Mount, Squeegee Spring
15	14483	Bolt, Squeegee Stud	34	34185	Frame, Squeegee	53	57032	Nut, 3/8-16 Serrated Flange
16	66092	Pin, Hair Spring Cotter	35	14664	Bushing, 5/8 Flange	54	70265	Scr, 1/4-20 x 3/4 SHCS
17	70098	Scr, 8-32 x 3/8 PHST	36	27382	Collar, Squeegee			

AUXILIARY PUMP MODEL

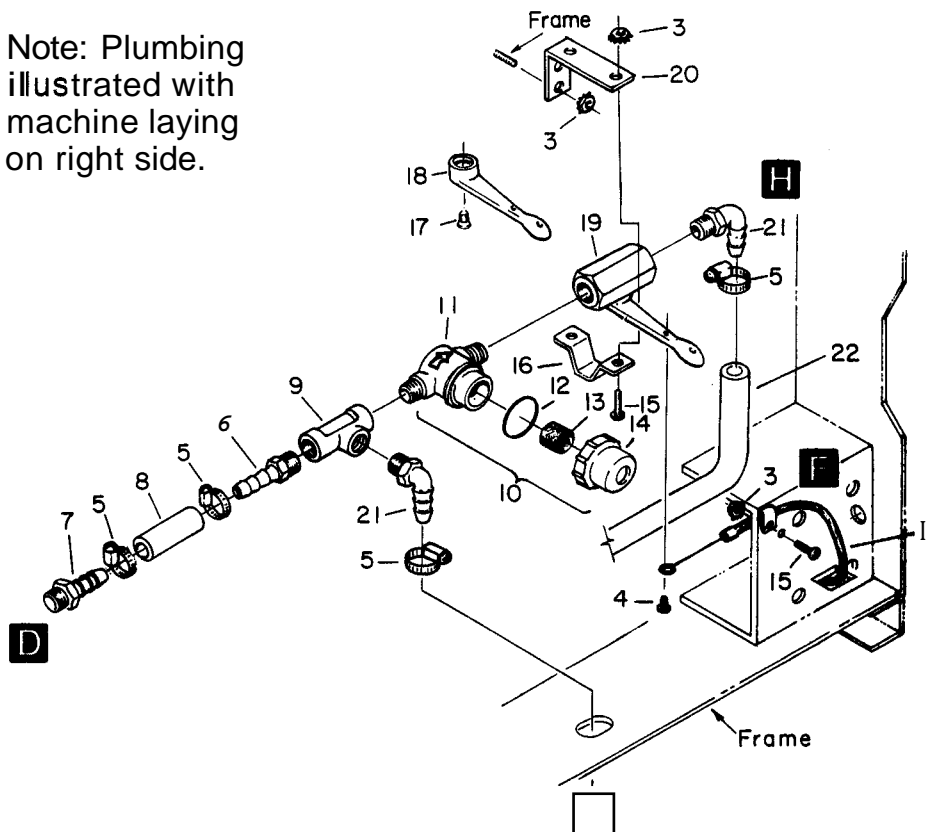


PLUMBING

KEY	PART NO.	DESCRIPTION
1	27401	Cable, Solution
2	87018	Washer, #10 9/16 OD
3	57104	Nut, 10-32 w/Star Washer
4	70233	Scr, #10 x 3/8 PH Hi-Lo
5	20042	Clamp, 3/8 Hose
6	40013	Hosebarb, 3/8 MPT x 1/2
7	40022	Hosebarb, 1/2 MPT x 1/2
8	39380	Hose, 1/2 x 5" Clear
9	78212	Tee, 3/8 FPT
10	73383	Strainer Asm, Solution
11	41184	Housing, Strainer
12	59021	O-Ring, Filter Seal
13	73405	Screen, 80 Mesh
14	27372	Cap, Strainer
15	70066	Scr, 10-32 x 3/4 PHMS
16	14454	Brkt, Valve
17	70091	Scr, 10-24 x 1/2 FHMS
18	38136	Handle, Valve Lever
19	84112	Valve, 3/8 FPT
20	14617	Brkt, Solution Valve Mtg
21	40027	Hosebarb, 3/8 MPT x 1/2 90°
22	39381	Hose, 1/2 ID Clear x 22"
23	56012	Nipple, 1/4 FPT QD
24	87015	Washer, 9/16 ID x 1.06 Flat
25	40014	Hosebarb, 1/4 MPT x 3/8
26	39280	Hose, 3/8 x 8" Rubber
27	40034	Hosebarb, 3/8 MPT x 3/8 90°
28	65104	Pump Asm, w/Conn 24VDC 50PSI
29	56036	Nipple, 3/8 Close
30	40040	Hosebarb 3/8 FPT x 1/2 Hose
31	39386	Hose, 1/2 x 4" Clear

Note: Plumbing illustrated with machine laying on right side.

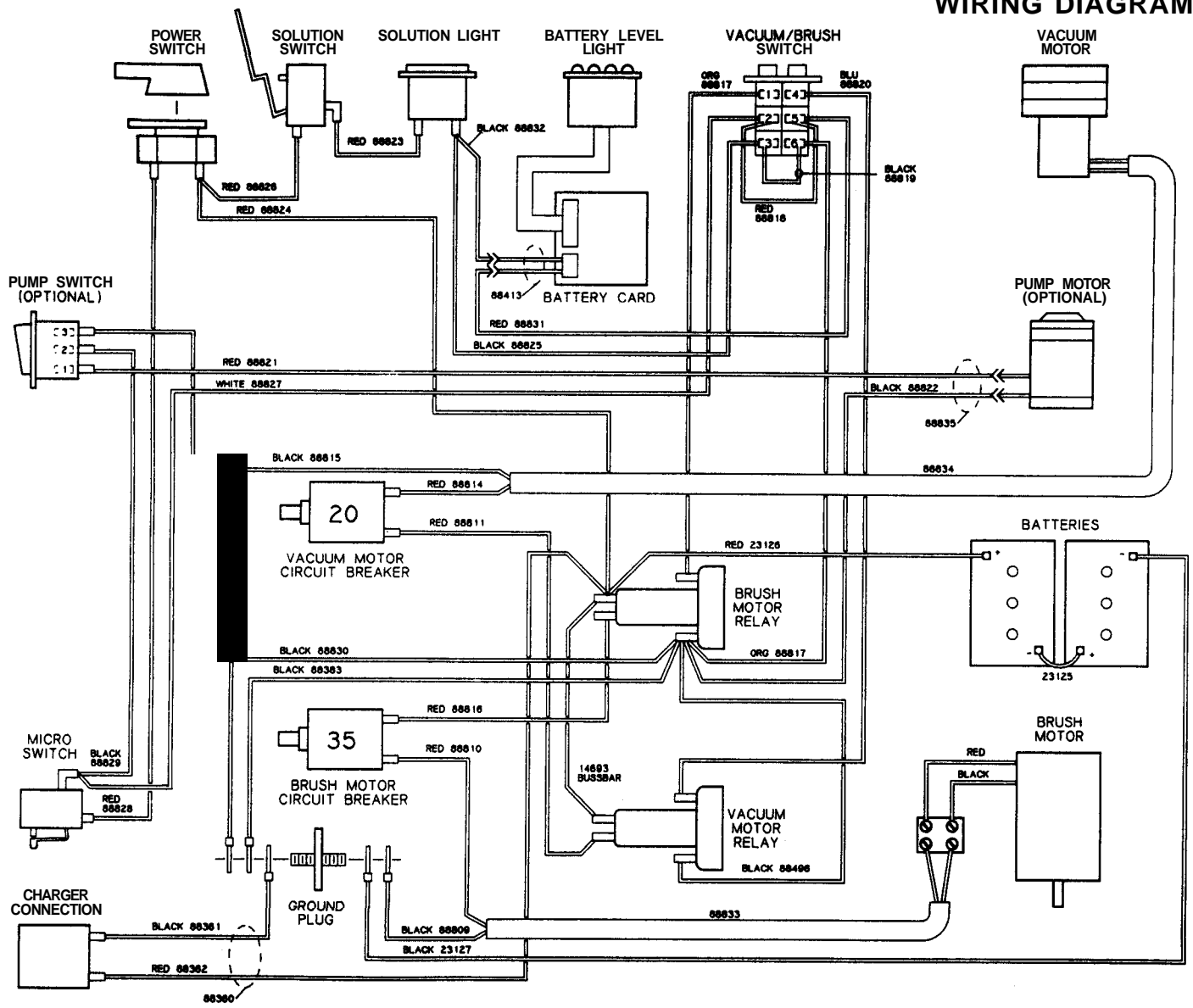
STANDARD MODEL



TROUBLE-SHOOTING GUIDE

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
No power.	Battery cables corroded at battery terminals.	1. Clean battery cable clamps and battery terminals. 2. Check voltage at points A and B. Voltage should be 22/26 VDC.
	Faulty main switch.	1. Check voltage at points B and C. Voltage should be 22/26 VDC. 2. Turn main switch on and check voltage at points B and D. Voltage should be 22/26 VDC. If no voltage remove leads and check switch for continuity.
	Faulty safety override switch.	With main switch "ON" check voltage at points B and G, and B and H. If no voltage at B and H remove leads and check micro-switch for continuity. Should have continuity in normal position and no continuity when switch is activated.
Vacuum motor does not run.	Circuit breaker tripped.	Reset vac motor circuit breaker (20 amp).
	Loose connection.	Check motor lead connections at terminals.
	Faulty vac switch.	Remove leads and check switch for continuity. Replace as needed.
	Faulty vac relay.	With main switch "ON" and vac switch "ON" check voltage at points B and I. Voltage should be 22/26 VDC.
	Faulty vac circuit breaker.	With main switch "ON" and vac switch "ON" check voltage at points B and J. Voltage should be 22/26 VDC.
Motor brushes worn.	Check motor brushes. Replace when worn to 3/8" . With batteries fully charged and motor secured, apply battery voltage directly to motor. No load amp draw of motor should be 6.2 amps.	
Brush motor does not run.	Circuit breaker tripped.	Reset circuit breaker.
	Loose connections.	Check motor leads at terminal block connections (located on inside front of frame). Tighten screws as needed.
	Faulty brush switch.	Remove leads and check switch for continuity. Replace as needed.
	Faulty brush relay.	With main switch "ON" and brush switch "ON" check voltage at points B and K. Voltage should be 22/26 VDC.
	Faulty brush circuit breaker.	With main switch "ON" and brush switch "ON" check voltage at points B and L. Voltage should be 22/26 VDC.
Motor brushes worn.	Check motor brushes. Replace when worn to 3/8" . With batteries fully charged and motor secured, apply battery voltage directly to motor. No load amp draw of motor should be 6 to 8 amps.	
Solution light does not work.	Loose connections.	Check for loose connections at solution light, solution switch and at vac fan relay ground.
	Faulty solution light. Light stays on with solution lever in "OFF" position.	Remove light and apply direct voltage (24 VDC) to light. Replace light as needed. Adjust solution light switch.
Battery charge level indicator does not light.	Loose connections.	Check connections at battery card, micro-switch at charger Connection, and ground connection at vac motor relay.
	Faulty PC Board or faulty light.	Check voltage into PC Board (point T). Voltage should be 22/26 VDC. Check voltage across first pin (from right) and eighth pin (from right) point U. Voltage should be 8/10 VDC. If voltage is 8/10 VDC replace battery charge level indicator light. If there is no voltage replace PC Board.

WIRING DIAGRAM



PUMP

Pump Assembly 65019

