

***Minuteman***<sup>®</sup>

*PowerBoss*<sup>®</sup> 20

Floor Scrubber

Battery

Traction Drive

Model:

**PB20025CE**

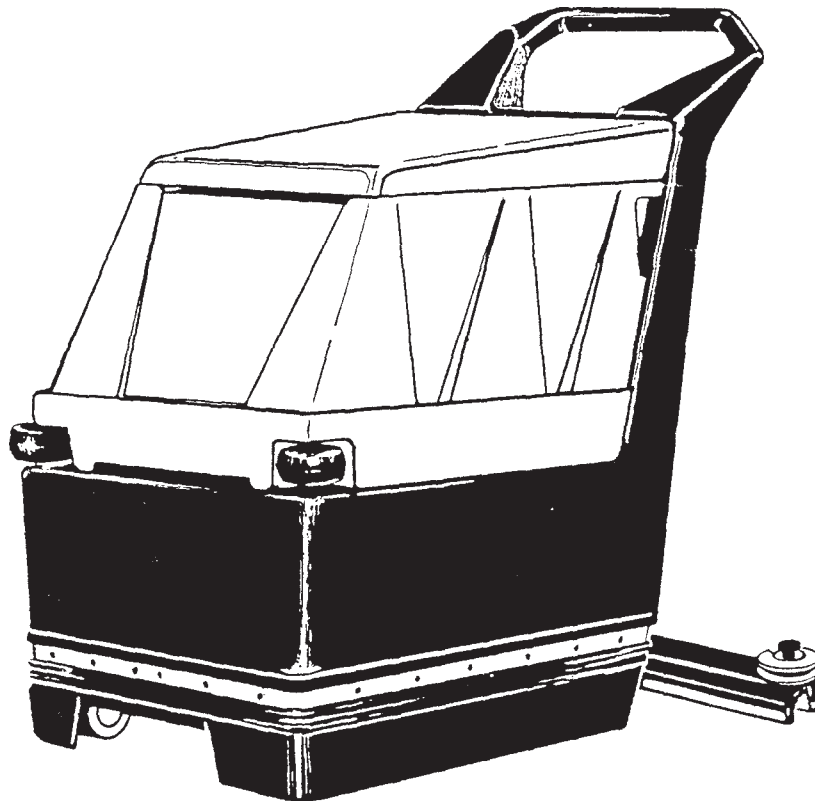
**PB20025QP**

**OPERATION**

**SERVICE**

**PARTS**

**CARE**



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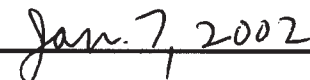
# EC Declaration of Conformity

according to Directives 89/392, 89/336 and 72/73

We, Minuteman International Incorporated, of 111 South Rohlwing Road Addison Illinois 60101 USA, declare under our sole responsibility that the products MC20024CE, MC20025CE, MC20524, MC20525, PB20025CE, Automatic Floor Scrubbing machines to which this declaration relates corresponds to the relevant requirements of the EC Directives 89/392, 89/336 and 72/73. The following standards were used to determine compliance with the Directives: EN 292, EN 294, EN 811, EN 55011, EN 55104, EN 50082-2, EN 60335-1 and IEC 335-2-72.

<b>SOUND</b>		<b>VIBRATION</b>												
<b>76 dB Operator</b>	<b>73 dB At 3m</b>	<b>.9 m/s<sup>2</sup> At Operators Hand Grips</b>												
<p>Tests were conducted on 6/7/96 with calibrated sound and vibration equipment under the conditions noted below:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">General Condition:</td> <td style="width: 33%;">Cloudy</td> <td style="width: 33%;">Wind:</td> <td style="width: 33%;">0 km/hr</td> </tr> <tr> <td>Temperature:</td> <td>29<sup>0</sup>C</td> <td>Humidity:</td> <td>85%</td> </tr> <tr> <td>Barometric Pressure:</td> <td>29.5</td> <td></td> <td></td> </tr> </table>			General Condition:	Cloudy	Wind:	0 km/hr	Temperature:	29 <sup>0</sup> C	Humidity:	85%	Barometric Pressure:	29.5		
General Condition:	Cloudy	Wind:	0 km/hr											
Temperature:	29 <sup>0</sup> C	Humidity:	85%											
Barometric Pressure:	29.5													

  
 \_\_\_\_\_  
 Jeff Pollack, Standards Engineer

  
 \_\_\_\_\_  
 Date

# IMPORTANT SAFETY INSTRUCTIONS

## CAUTION

Operators must read and understand this manual before operating or maintaining this equipment.

- Keep hands and feet clear of moving parts while machine is in operation.
- All switches must be in the "OFF" position when charging batteries.
- Electrical motors and components can cause an explosion when operated near explosive materials or vapors. Do not operate this machine near flammable materials such as solvents, thinners, fuels, grain dusts, etc.
- Make sure all switches are turned "OFF" and battery connections are removed before performing any maintenance procedures.
- Store or park this machine on a level surface only.
- These machines are designed for level floor operation only. **DO NOT OPERATE** on ramps or inclines.
- Battery acid can cause burns. When working on or around batteries, wear protective clothing and safety glasses. Remove metal jewelry. Do not lay tools or metal objects on top of batteries.
- This machine is not suitable for picking up hazardous dust.

Charging batteries generates explosive gases. **DO NOT CHARGE BATTERIES WHEN OPEN FLAMES OR SPARKS ARE PRESENT. DO NOT SMOKE.** Make sure the charger is turned off before disconnecting it from the batteries. Charge the batteries in a well-ventilated area.

Maintenance and repairs must be performed by authorized personnel.

**SAVE THESE INSTRUCTIONS**

## ELECTRICAL REQUIREMENTS:

This piece of equipment operates on 24 Volt DC.

## BATTERY REQUIREMENTS:

2 x 12V 185 Amp Hour 20 Hour Rate Deepcycle P/N 956709

2 x 12V 105 Amp Hour 20 Hour Rate Deepcycle P/N 956712

Use adapter 740699.

## BATTERY SERVICE AND INSTALLATION:

\* Warning: Battery acid can cause burns. When working on or around batteries, wear protective clothing and safety glasses. Remove metal jewelry. Do not lay tools or metal objects on top of batteries.

## BATTERY INSTALLATION:

1. Disconnect tank drain hose from rear of machine.
2. Disconnect vacuum recovery hose.
3. Raise tank assembly by gripping side hand holds, and tilting forward.
4. Install batteries as shown in figure 2.

## CHARGING OF BATTERIES:

Charging of batteries generates explosive gases. DO NOT CHARGE BATTERIES WHEN OPEN FLAMES OR SPARKS ARE PRESENT. DO NOT SMOKE. Make sure the charger is turned off before disconnecting it from the batteries. Charge the batteries in a well-ventilated area. Fluid levels should be checked before and after charging and maintained at the proper levels.

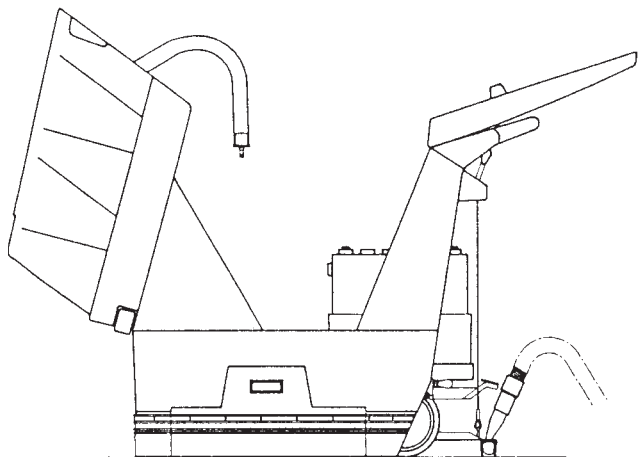


Figure 1

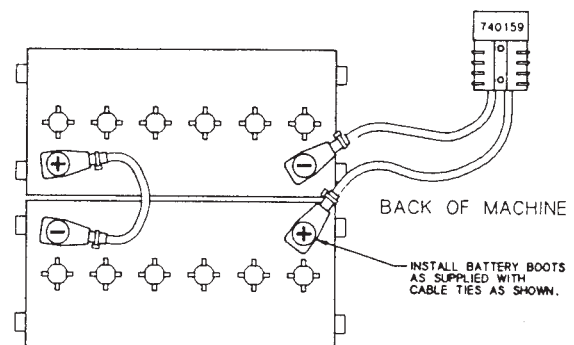
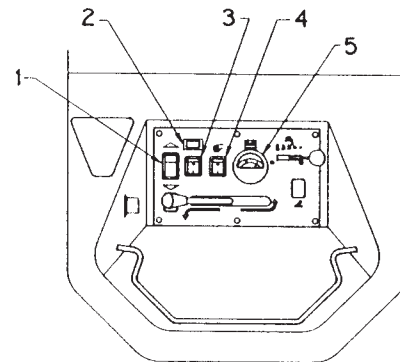
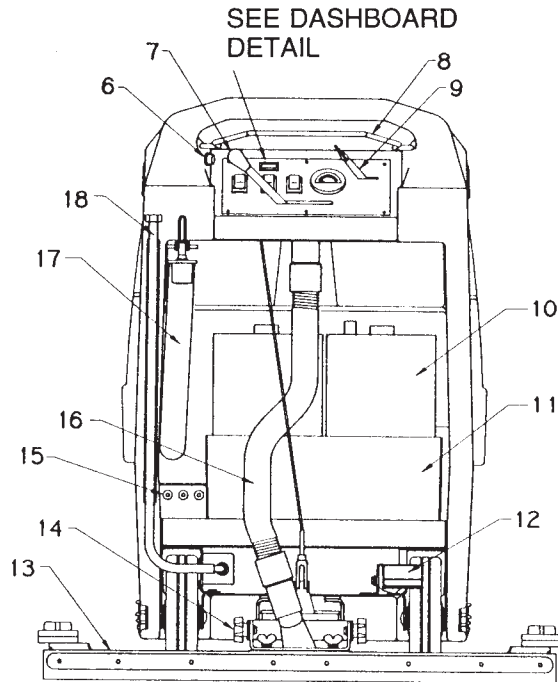


Figure 2

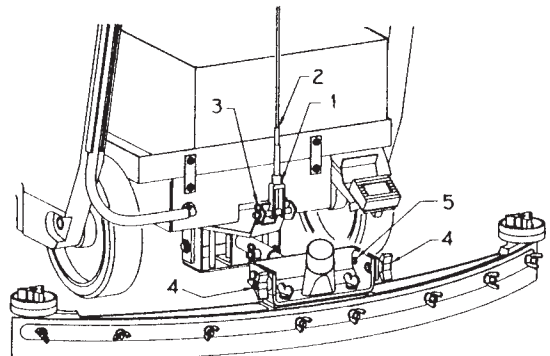
## CONTROL PANEL IDENTIFICATION



- |                            |   |
|----------------------------|---|
| 1. Forward/reverse switch  | 10. Batteries                             |
| 2. Power on indicator      | 11. Battery box                           |
| 3. Main power switch       | 12. Foot pedal for lowering/raising brush |
| 4. Vacuum switch           | 13. Squeegee                              |
| 5. Battery condition gauge | 14. Squeegee pitch control                |
| 6. Speed control           | 15. Circuit breakers                      |
| 7. Squeegee lift lever     | 16. Recovery hose                         |
| 8. Traction control        | 17. Recovery tank dump hose               |
| 9. Solution control        | 18. Solution tank dump hose               |

## SQUEEGEE PITCH CONTROL ADJUSTMENTS

Some minor adjustments may be required do to floor types and conditions to extend downward travel. Remove clevis pin (3) and unscrew Item 1 from Cable 2. To adjust pitch (angle) of squeegee loosen bolts 5 and knobs 4, squeegees angular position can now be changed for best performance.



## BRUSH INSTALLATION - REMOVAL

### INSTALLATION - Figure 1

1. Disconnect batteries.
2. Raise brush mechanism (B) to the "up" position by depressing pedal downward as shown.
3. Remove side skirt (C) by lifting up and away.
4. Center brush (D) under machine as shown lining up center hex drive hub.
5. By releasing foot pedal (B) to lower brush mechanism, drive hub will engage.

### REMOVAL - Figure 2

1. Disconnect batteries.
2. Raise brush mechanism (B) to "up" position by depressing pedal downward as shown.
3. Remove side skirt (C) by lifting up and away.
4. Brush has snap-on push-off clutch plate. By pushing brush away from machine and from side it will release brush assembly.

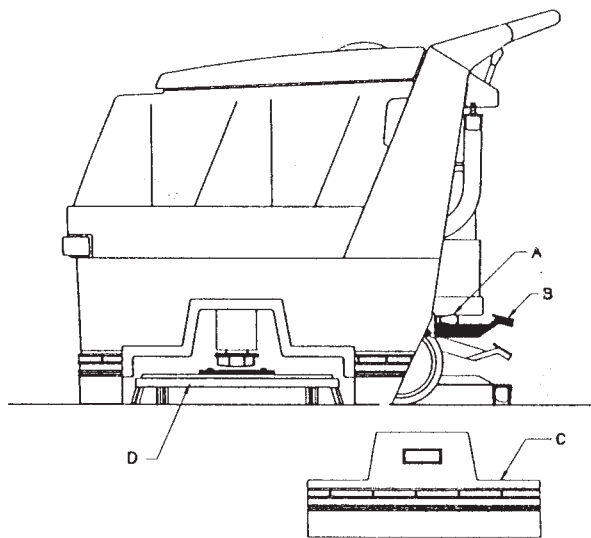


Figure 1

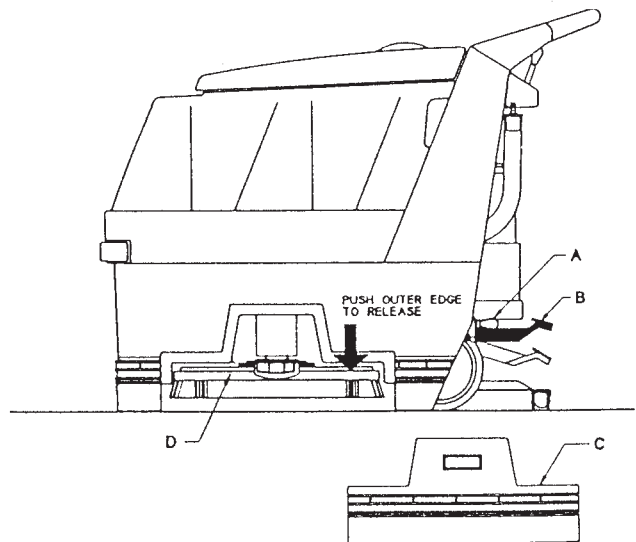


Figure 2

## OPERATING INSTRUCTIONS

1. Filling: Fill the solution tank with the desired amount of water and add liquid cleaning solution to the proper dilution ratio. DO NOT USE powdered cleaning chemicals. Powders are unlikely to dissolve thoroughly, resulting in clogging the in-line solution filter. This can reduce or stop water flow to the brush.
2. Close lid.
3. Turn on main power switch (Refer to Page 3 #3).
4. Adjust main speed control #6 to full counter-clockwise position and position switch #1 into forward position.
5. Lower brush assembly.
  - To lower the brush, first push the pedal slightly towards the center of the machine (unlock it), then release it slowly.
  - To lift the brush, press the pedal down until lift mechanism engages.
  - Brush will come on automatically when lever handle is raised and remain on approximately 5 seconds after release.
6. Adjust solution control feed lever.
7. Select vacuum operations.
  - "Vacuum on" mode  
Vacuum will remain on until switched to the "off" position
  - "Vacuum auto" mode  
Vacuum will come on automatically when lever handle is raised and remain on approximately 5 seconds after release.
8. Lower squeegee assembly.
9. Raise lever handle #8 and adjust forward speed.

### **After Use:**

1. Turn off solution feed.
2. Raise squeegee assembly.
3. Turn off vacuum motor.

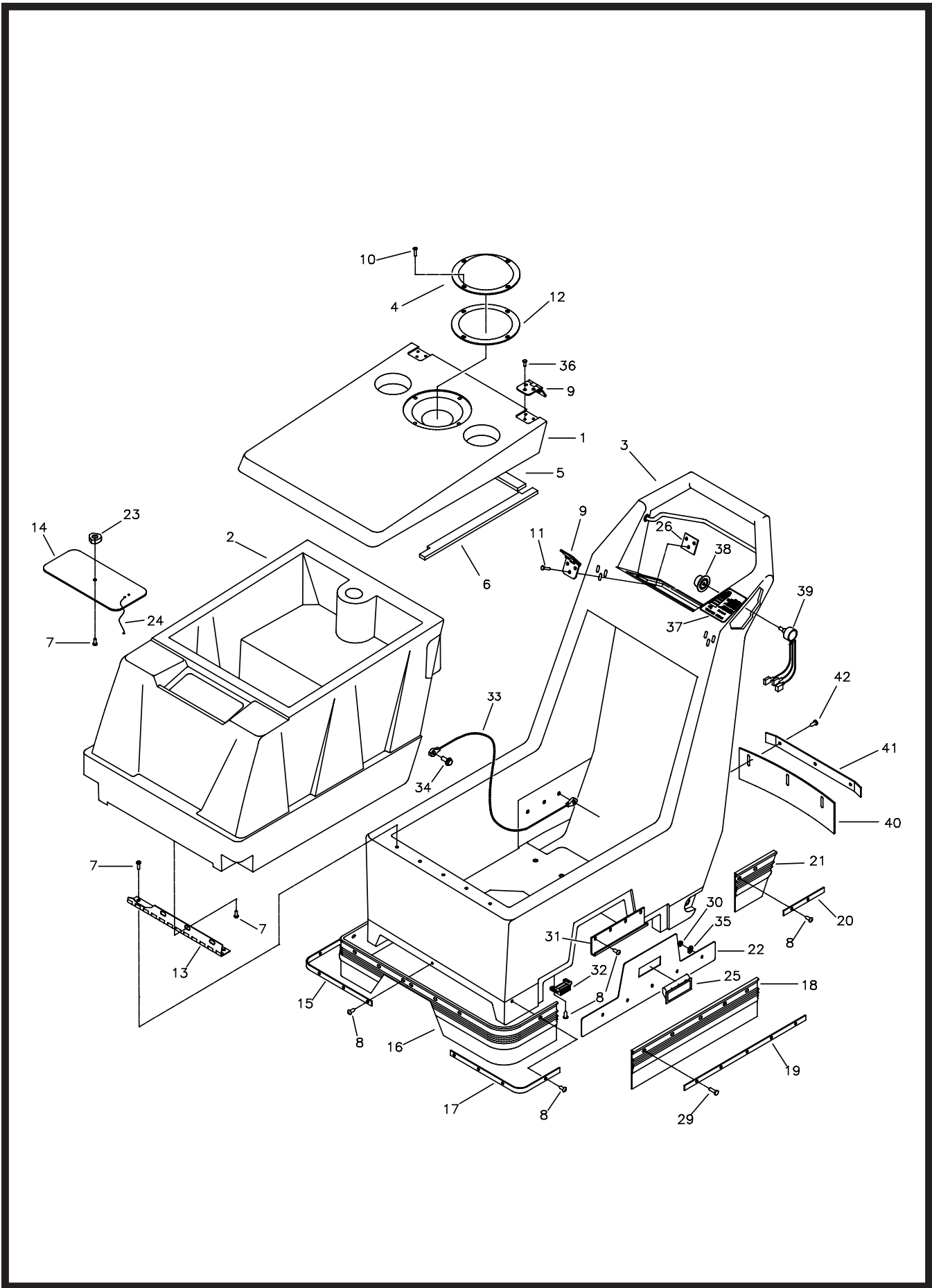
Solution and recovery tanks should be emptied after every use.

### **MAINTENANCE:**

- |         |  |
|---------|--|
| Daily   | 1. Clean float assembly & squeegee blades. Vac filter.                       |
|         | 2. Recharge batteries (check battery acid levels before and after charging). |
| Monthly | 1. Check wear on squeegee blades.  |
|         | 2. Grease front wheels.  |
|         | 3. Grease pivot points on brush motor assembly.                              |

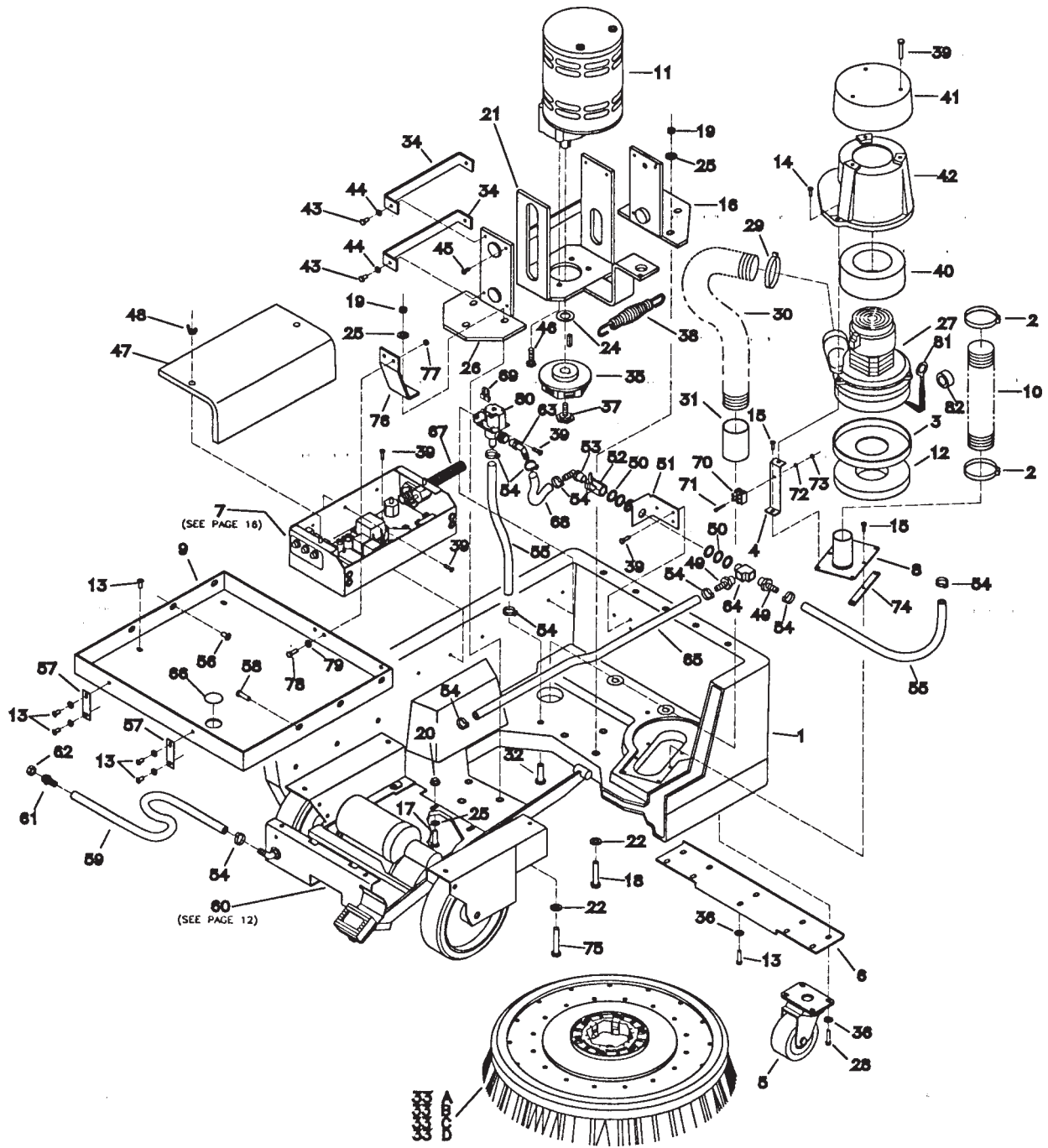
Every 500 hours check condition of carbon brushes on vacuum motor and brush drive motor.





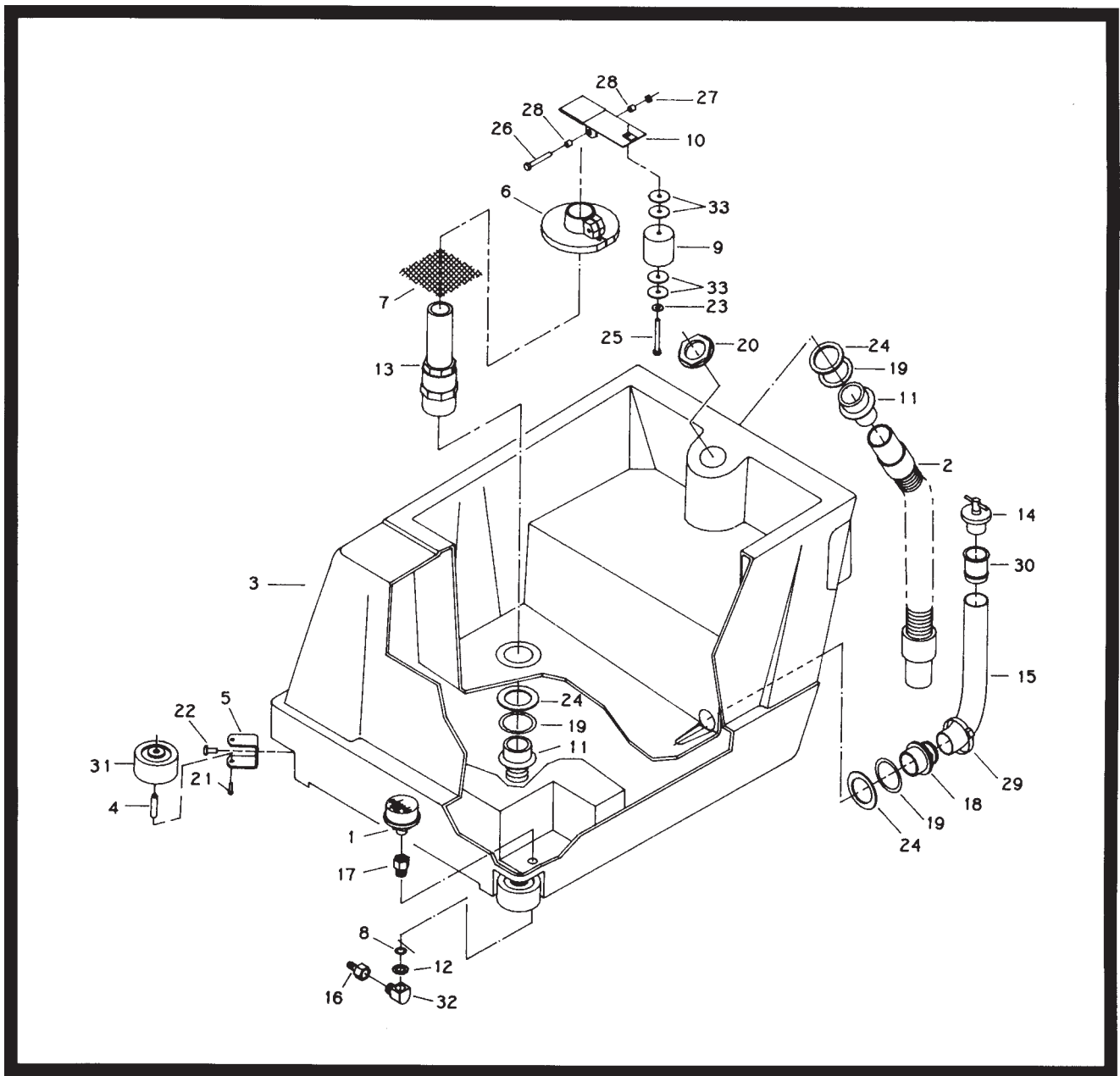
# Parts List

Item	Part No.	Qty.	Description
1	210002	1	Lid Assembly Recovery
2	210450PB	1	Tank Assembly Complete
3	210451	1	Base Assembly Complete
4	210004	1	Recovery Dome
5	210006	2	Lid Gasket
6	210007	2	Lid Gasket
7	710178	10	SCR-MC 1/4-20 x .50 STPL
8	711106	25	SCR-ST-A 10 x .75 PL
9	430044MCH	2	Hinge Lid 20"
10	712540	4	SCR-MC 10-24 x .37 SS TH
11	712536	6	SCR-MC 10-24 x .62 SS TH
12	210005	1	Dome Gasket
13	260087	1	Hinge
14	450066	1	Solution Tank Cover
15	210055	1	Side Skirt Retainer
16	210052	1	Splash Skirt
17	210056	1	Skirt Retainer Front
18	210053	1	Skirt at Access Panel
19	210057	1	Skirt Retainer at Access Panel
20	210058	1	Skirt Retainer at Wheel
21	210054	1	Skirt at Wheel
22	210059	1	Access Panel
23	833214	1	Knob 3-Sided
24	450062	1	Cord, Nylon
25	210061	1	Pocket Pull
26	430126	2	Hinge Backing Plate
29	712822	5	No. 10-24 x .50 Lg. Screw
30	712900	5	Nut-Hex 10-24 STPL
31	210063	1	Access Panel Hanger
32	210027	2	Magnetic Catch
33	833436	1	Tilt Cable
34	712042	1	5/16-18 x .62 Wizz Bolt HH
35	711553	5	WSR-Internal Lock #10
36	712540	6	SCR-MC 10-24 x .37 SS TR
37	715614	1	Decal Speed Control
38	809874	1	Knob
39	740368	1	Potentiometer Assembly
40	210077	1	Skirt
41	210078	1	Retainer
42	711104	3	SCR-ST 10 x .50



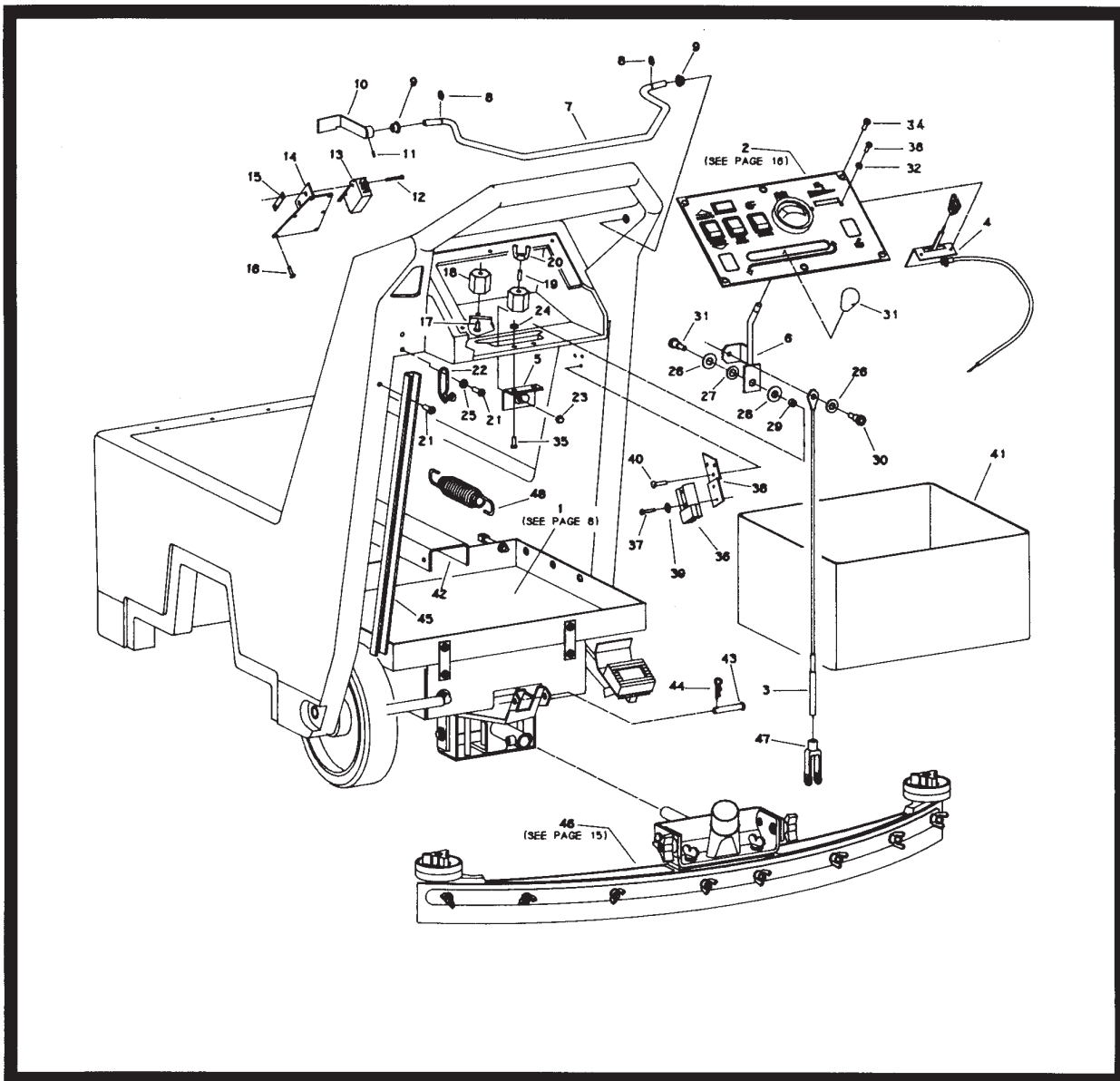
# Parts List

Item	Part No.	Qty.	Description
1	210119	1	Base, Plastic Machined
2	260203	2	Hose Clamp Wire Grip
3	290017	1	Gasket 4.31 x 5.81 x .19
4	450038-H	3	Z-Bracket
5	762333	2	Caster 3.5"
6	210010	1	Caster Mounting Bracket
7	210456	1	Electrical Panel Assembly
8	430069	1	Vacuum Manifold Assembly
9	210398	1	Battery Tray
10	210074	1	Vacuum Hose 1.5 x 31 C/L
11	740209	1	Gearmotor 24V
12	460019	1	Gasket 3.75 X 5.75 x .75
13	710178	8	SCR-MC 1/4-20 x .50 STPL
14	710182	3	SCR-MC 1/4-20 x 1.00
15	711106	9	SCR-ST-A 10 x .75 PL
16	210040	1	Motor Bracket Weldment
17	711231	4	BLT-HH 5/16 - 18 x 1.25 STPL
18	711243	5	BLT-HH 3/8-167 x 1.5 STPL
19	711380	8	Nut-Nyloc 3/8-16
20	711374	3	Nut-Nyloc 5/16-18
21	210389	1	Motor Mount Weldment
22	711506	4	WSR-Flat 5/16 STPL
23	711509	6	WSR-Flat 1/2 STPL
24	711517	1	WSR-Flat .77 x 1.37 x .03
25	711515	6	WSR-Flat .44 x .87 x .07
26	210397	1	Motor Bracket Weldment
27	740225	1	Vac Motor 3ST24V 6515-13
28	710180	8	SCR-MC 1/4-20 x .75
29	760859	1	Hose Clamp
30	210075	1	Hose Rubber Flex 2 x 15"
31	801013	1	Sleeve, Hose
32	832136	1	Nylon Sleeve Solution Feed
33A	381041	1	Strata-Grit Brush
33B	381040	1	Polygrit Brush
33C	381039	1	Nylon Brush Assembly Complete
33D	381038	1	Pad Driver
34	430106	2	Stabilizer Bar
35	430035	1	Drive Hub
36	711505	10	WSR-Flat 1/4
37	210066	1	Drive Hub Retainer Bolt
38	260211	1	Extension Spring
39	711106	13	SCR-ST-A 10 x .75
40	380064	1	Foam Ring
41	840011	1	Vac Motor Cover, Top
42	840012	1	Vac Motor Cover, Bottom
42CE	840012CE	1	Vac Motor Cover, Bottom CE
43	711202	4	BLT-HH 1/4-20 x .50
44	711535	4	WSR-Helical 1/4
45	710823	2	SCR-SC 1/4-20 x .50 Nylon
46	710986	4	SCR-SC 3/8-16 x 1.00
47	210402	1	Electrical Box Cover
48	711368	2	Wing Nut 1/4-20
49	342430	2	Hose BARB 3/8 MPT x 3/8 BARB
50	711579	6	WSR-Flat .56 x .1.00
51	210370	1	Solution Valve Bracket
52	809413	1	Solution Valve
53	450040	1	Elbow 3/8 MPT x 3/8 BARB
54	450076	9	Crimp Clamp SS 185R
55	210401	2	Solution Hose Nylon 12"
56	710195	5	SCR-MC 5/16-18 x .50
57	210399	2	Mounting Tab
58	710197	1	SCR-MC 5/16-18 x .75
59	430118	1	Clear Dump Hose 24"
60	210453	1	Traction Drive Assembly
61	828952	1	3/8 BARB x 1/4 MPT
62	430114	1	Nylon Cap 1/4 FPT HC4
64	210408	1	3/8 Brass Tee
65	210403	1	Hose Nylobraid 45"
66	715615	1	Stick-On Cover
67	740550	1	Wire Harness
68	210419	1	Solution Hose
69	740482	1	Diode Assembly
70	832996	1	Terminal Block
71	710306	1	SCR-MC 6-32 x .87
72	711542	1	WSR-Helical 6
73	711301	1	Nut-Hex 6-32
74	250041	1	Seal Rubber .12 x .62 x 14.5
75	711244	1	BLT-HH 3/8-16 x 1.75
76	210098	1	Reinforcing Bracket
77	711373	2	Nut-Nyloc 1/4-20
78	711204	2	BLT-HH 1/4-20 x .75
80	740493	1	Water Valve 24 VDC
81	742281	1	Ground Strap
82	742254	1	Torroid Ferrite

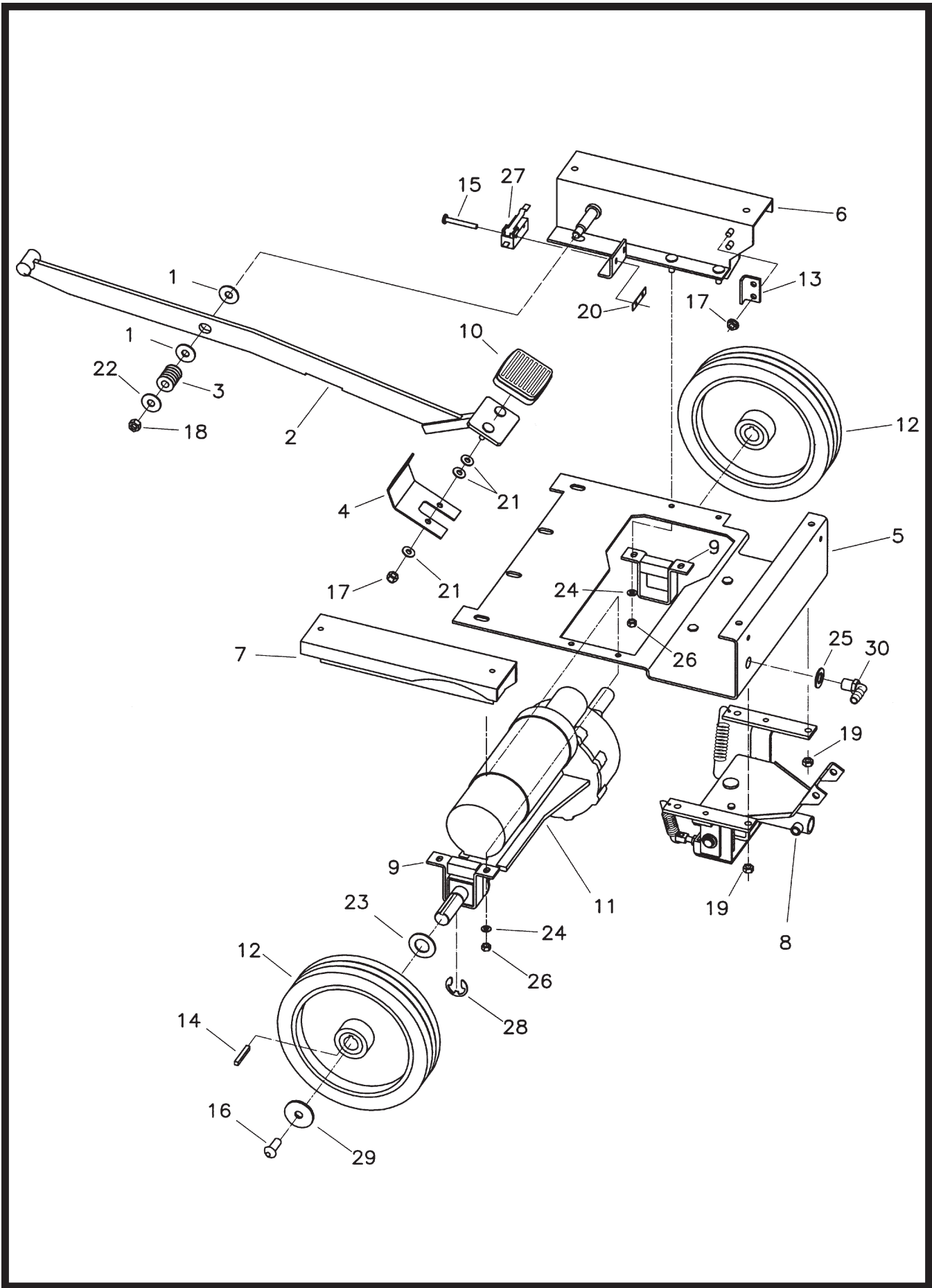


### Parts List

Item	Part No.	Qty.	Description	Item	Part No.	Qty.	Description
1	130118	1	Solution Strainer M3-40	18	760220MCH	1	1 1/2 Adapter MCH (833310)
2	210068	1	Vac Recover Hose 34.5 C/L	19	450081	3	WSR SS 1.908 x 2.41 x .03
3	210120	1	Sol/Recovery Tank	20	828971	1	Nut 1 1/2 Pipe Thread
4	833254	2	Bumper Wheel Axle	21	710353	2	SCR-MC 10-32 x .37 STPL
5	832949	2	U Bracket Wheel Mount	22	710985	2	SCR-SC 3/8-16 x .62
6	430041	1	Float Housing	23	711504	1	WSR-Flat 1/4 ID SS
7	430050	1	Filter Screen 4x4	24	828970	3	WSR NEOP 1.81 x 2.37 x .9
8	210414	1	O-Ring	25	712092	1	SCR Nylon 1/4-20 x 2.5
9	430089	1	Float	26	712568	1	SCR-MC 1/4-20 x 2.00 SS
10	430090	1	Float Valve Weldment	27	712667	1	Nut-Hex 1/4-20 SS Nyloc
11	450083	2	Hose Adapter	28	762384	2	Bushing .277 x .375 x .37
12	711513	1	WSR-Flat .69 x 1.06 x .03 SS	29	760245	1	Hose Clamp 62P24
13	210009	1	Standpipe Assembly	30	760343	1	Tube Hose 24/32B
14	833316	1	Drain Plug 1 1/4	31	832896	2	Guide Wheel
15	210069	1	Black Drain Hose 32" C/L	32	830062	1	90° Street Elbow 3/8 x 3/8
16	210410	1	3/8 Hose Barb x 3/8 FPT Brass	33	712759	4	WSR-Flat .31 x 1.37 x .06 SS
17	210409	1	Adapter Brass 3/8 FPT x 3/8 MPT				



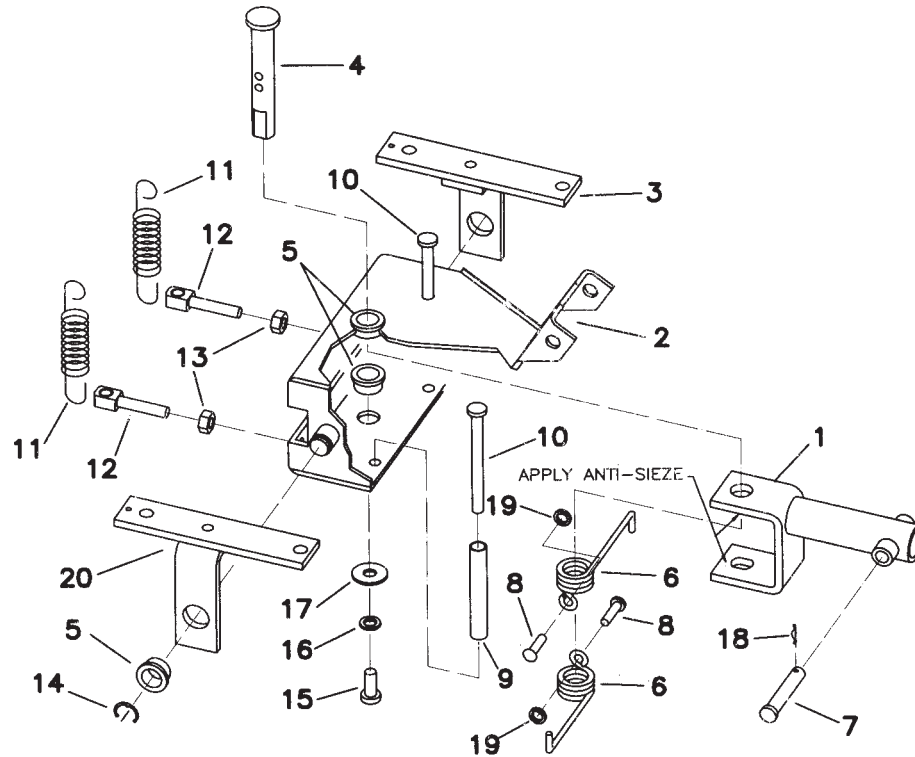
Item	Part No.	Qty.	Description	Item	Part No.	Qty.	Description
1	210451	1	Base Assembly Complete	25	711503	2	WSR-Flat 10
2	210457	1	Dashboard Assembly	26	711506	2	WSR-Flat 5/16 STPL
3	210406	1	Squeegee Lift Cable	27	711523	1	WSR-Wave .37 x .68 x .02
4	210045	1	Solution Control Cable	28	829014	1	Flanged Bushing
5	430059	1	Squeegee Lift Bracket Assembly	29	762058	1	Spacer .319 x .375 x .250
6	430060	1	Squeegee Lift Arm Assembly	30	712041	2	BLT-SDER 1/4-20 x .44 x .37
7	210363	1	Wire Handle	31	760592	1	Knob Oval Tapered
8	711721	2	Retaining Ring	32	712320	2	WSR-Nylon .22 x .45 x .04
9	829052	2	Nylon Flanged Bushing	33	711124	2	SCR-ST-B 10 x .37 NI
10	210367	1	Cam Assembly	34	712822	6	SCR-THMS 10-24 x .50 STPL
11	711002	1	SCR-SK 8-32 x .50	35	710180	2	SCR-MC 1/4-20 x .75 STPL
12	710307	2	SCR-MC 6-32 x 1.00	36	740159	1	SB175 Plug Red
13	833329	1	Micro Switch	37	710383	2	SCR-MC 1/4-20 x 1.25
14	210362	1	Switch Bracket	38	210072	1	Anderson Plg. Bracket
15	711430	1	Tinnerman Clip	39	711554	2	WSR-Internal Lock 1/4 ID
16	711161	6	SCR-Hi/Lo 10 x 5/8	40	830504	3	SCR 1/4 -14 x .75 PAN
17	710178	2	SCR-MC 1/4-20 x .50 STPL	41	210048	1	Battery Liner
18	740132	2	Insulator (Glastic)	42	210064	1	Battery Spacer
19	833638	2	Brass Stud	43	210415	1	Clevis Pin .312 x 1.69
20	711368	2	Wing Nut 1/4-20, Nyloc	44	711808	1	Cotter Pin
21	711161	4	SCR Hi/LO 10 x 3/4 PL	45	430120	1	U-Channel
22	760286	1	Wire Formed Hook	46	210452	1	Squeegee Assembly Complete
23	711352	1	Nut-Acorn 1/4-20 ST N1	47	881009	1	Yoke
24	711425	4	Nut-Flanged Wizz 1/4-20	48	260211	1	Extension Spring



## Parts

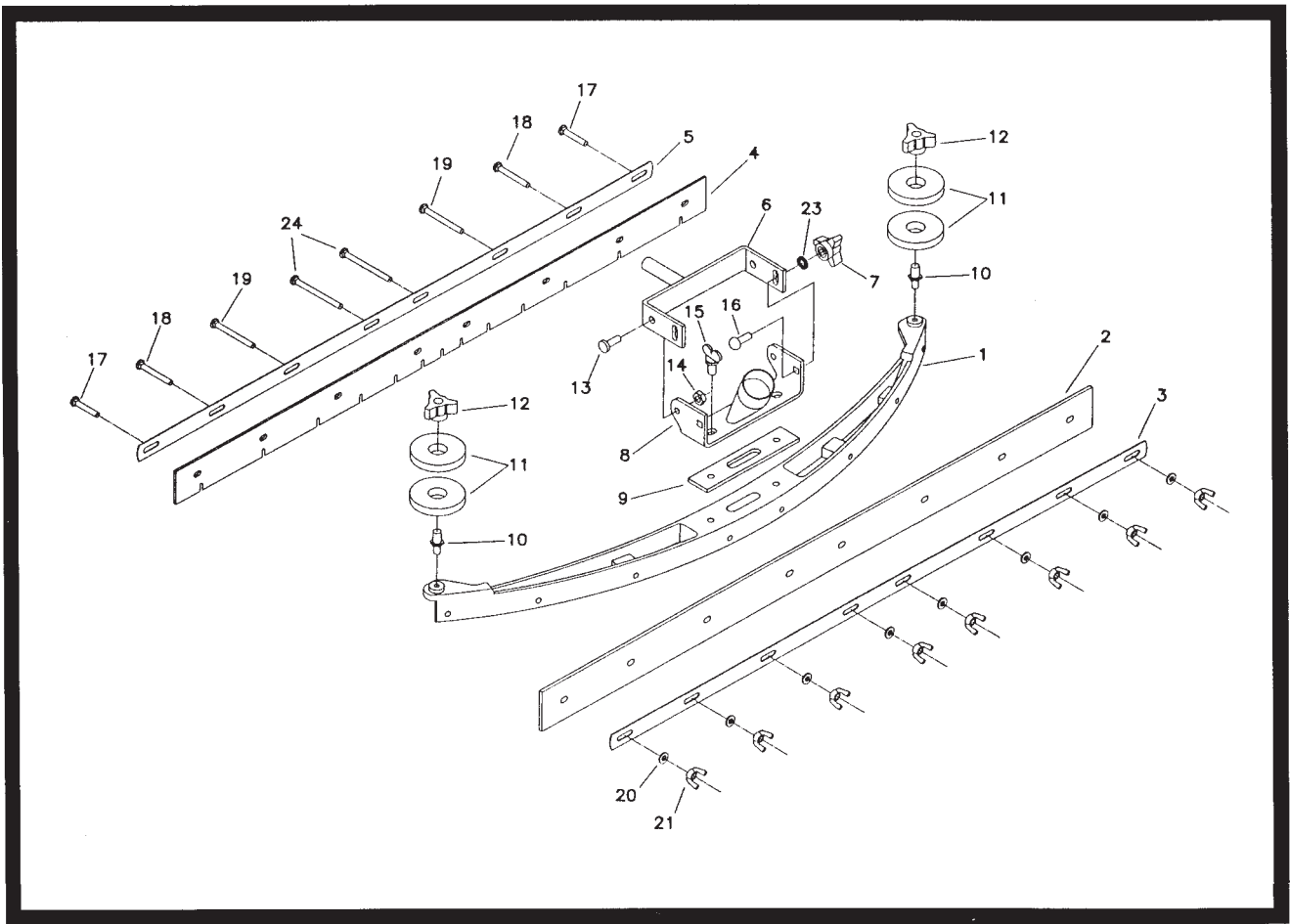
ITEM	PART NO.	REQ'D	DESCRIPTION
1	210033	2	OILITE THRUST WSR
2	210039	1	MOTOR LIFT LEVER WELDMENT
3	210047	1	SPRING-DIE
4	210076	1	FOOT PEDAL GUARD 200
5	210130	1	PLATFORM 200TD
6	210131	1	WHEEL MOUNT STRUT RH
7	210132	1	WHEEL MOUNT STRUT LH
8	210139	1	SQUEEGEE MECHANISM ASM
9	210140	2	MOUNTING BRACKET WELDMENT
10	210142	1	PEDAL PAD
11	210143-1	1	TRANSAXLE, 12" 24V W/TERMINALS
12	210155	2	WHEEL-8 X 1.5 X .75, 200TD
13	210387	1	PEDAL STOP
14	361233	2	KEY-SQ 3/16 X 1-1/2
15	710307	2	SCR-MC 6-32 X 1 ZINC
16	710986	2	SC 3/8-16 X 1 ZINC
17	711373	4	NUT-NYLOC 1/4-20
18	711380	1	NUT-NYLOC 3/8-16
19	711425	4	NUT-FLANGED WIZZ 1/4-20
20	711430	1	NUT-TINNERMAN 6-32
21	711505	6	WSR-FLT 1/4
22	711509	1	WSR-FLT 1/2
23	711512	2	WSR-FLT .75 X 1.37 X .08
24	711544	4	WSR-HELICAL 1/4
25	711579	1	WSR-FLT .56 X 1.00
26	712667	4	NUT-HEX NYLOC 1/4-20 SS
27	740129	1	SWITCH-SNAP SPST NC
28	809148	2	RET RING-E TYPE .75
29	809226	2	WSR-FLT .40 X 1.50 X .12
30	833325	1	FITTING NYLON 90 1/4MPT X 3/8 HOSE





### 210139 Parts List Squeegee Mechanism Assembly

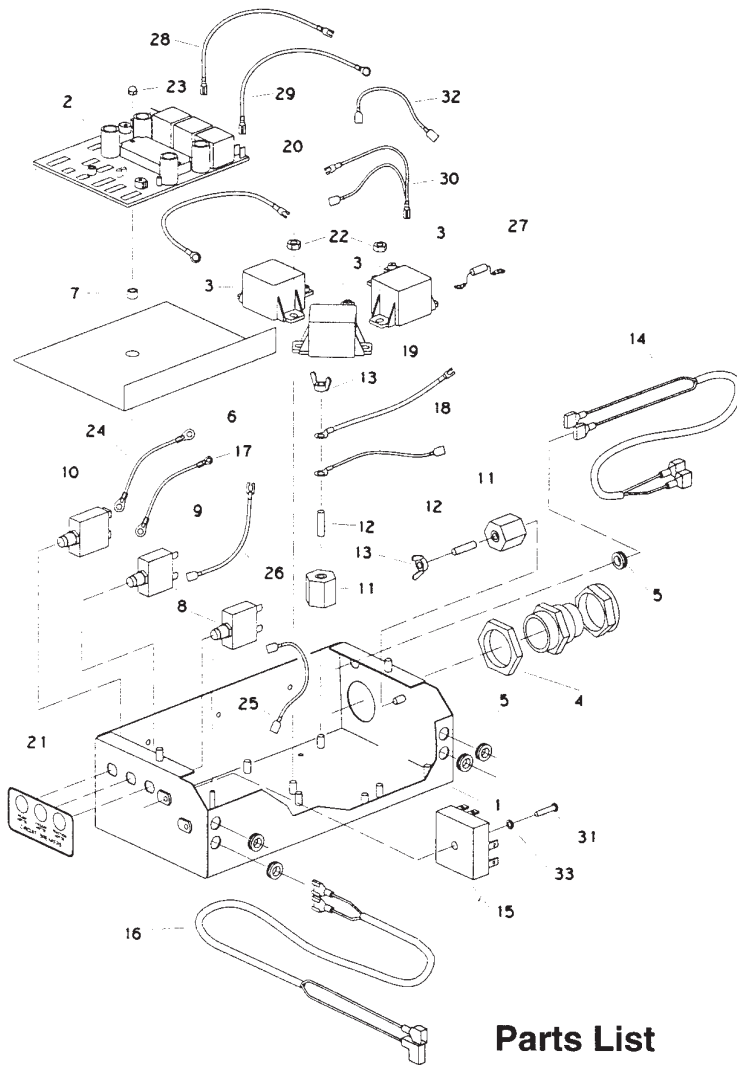
Item	Part No.	Qty.	Description
1	210379	1	Yoke Weldment
2	210372	1	Spring Housing Weldment
3	210136	1	Pivot Bracket Weldment, Right
4	210375	1	Swivel Pin
5	260041	4	1/2 Oilite Bushing
6	210391	2	Torsion Spring SS
7	210415	1	Clevis Pin
8	712536	2	SCR-MC 10-24 x .62
9	210400	2	Spacer Tube
10	710592	2	SCR-MC 1/4-20 x 2.75
11	210413	2	Return Spring
12	260292	2	Swing Bolt
13	711316	2	Nut-Hex 1/4-20
14	711713	2	1/2 Retaining Ring
15	710180	1	SCR-MC 1/4-20 x .75
16	711535	1	WSR-Helical 1/4
17	711519	1	WSR-Flat .25 x 1.00 x .06
18	711808	1	Cotter Pin
19	712320	2	WSR-Nylon .22 x .45 x .04
20	210135	1	Pivot Bracket Weldment, Left



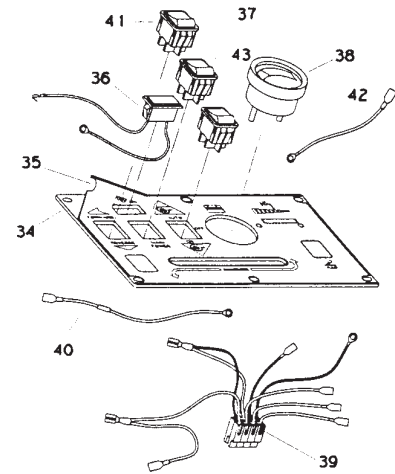
## Parts List

Item	Part No.	Qty.	Description
1	210351MCH	1	Squeegee Casting
2	210352	1	Rear Squeegee Blade
3	210353	1	Rear Squeegee Strap
4	210354	1	Front Squeegee Blade
5	210355	1	Front Squeegee Strap
6	210381	1	Pitch Control Bracket
7	210118	2	Knob 3-Sided 5/16 Nyloc
8	210357	1	Tube Bracket
9	210390	1	Squeegee Gasket
10	430075	2	Threaded Insert
11	430085	4	Squeegee Bumper Wheel
12	430074	2	Adjusting Nut
13	710975	2	SCR-SC 5/16-18 x .87 BH
14	711374	2	Nut-Nyloc 5/16-18
15	260267	2	Wing Bolt 3/8-16 x .75
16	70-516-16	2	Bolt-CARR 5/16 x 1.00
17	712571	2	Bolt-SS CARR 1/4-20 x 1.50
18	712572	2	Bolt-SS CARR 1/4-20 x 2.00
19	712573	2	Bolt-SS CARR 1/4-20 x 2.50
20	711504	8	WSR-Flat .25 x .56 SS
21	712668	8	Wing Nut 1/4-20 SS
22	210102	1	Reinforcing Blade
23	711539	2	WSR-External Lock 3/8
24	712574	2	Bolt-SS CARR 1/4-20 x 3.00

## ELECTRICAL PANEL ASSEMBLY



## DASHBOARD ASSEMBLY

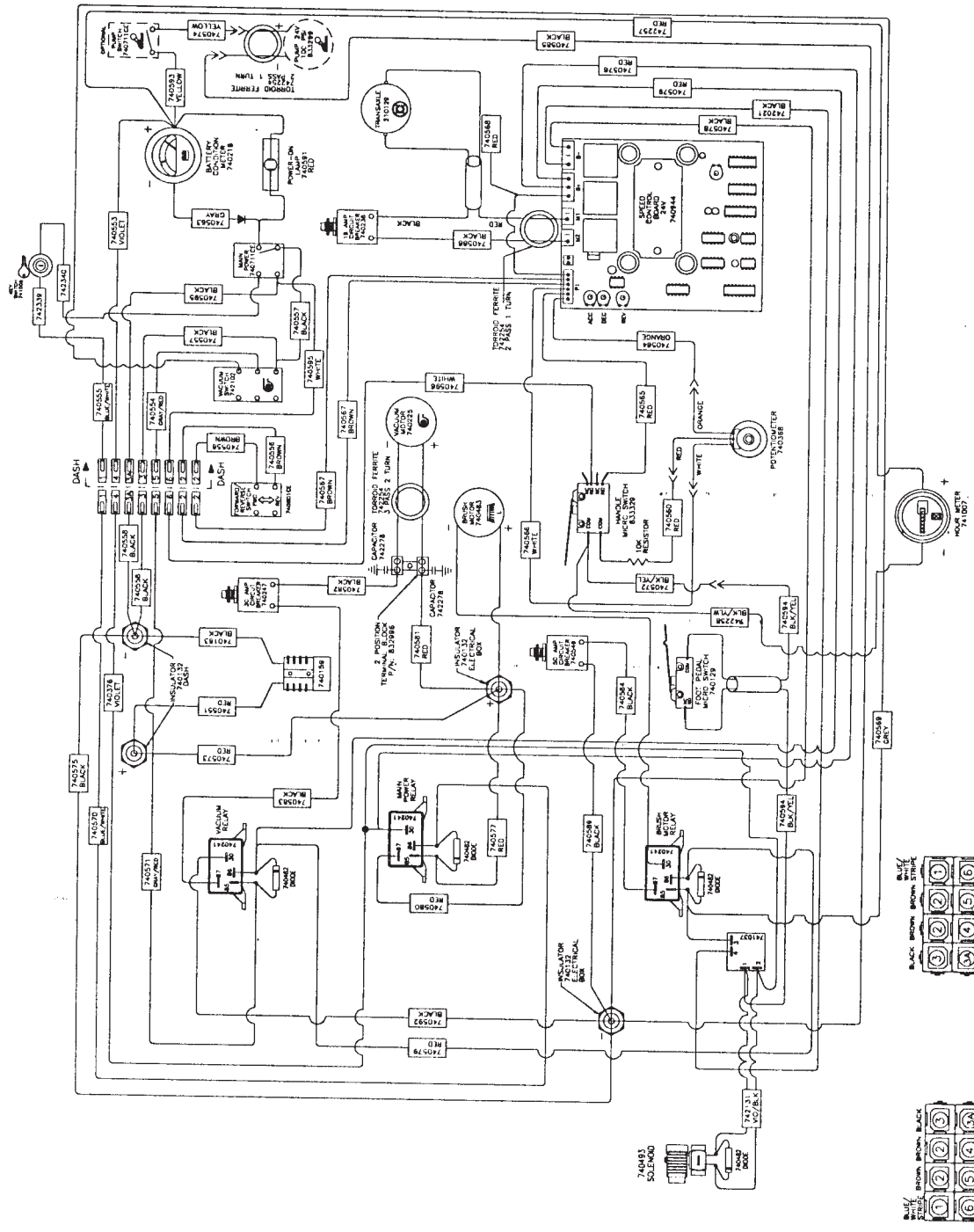


## Parts List

Item	Part No.	Qty.	Description	Item	Part No.	Qty.	Description
1	210404	1	Electrical Box	24	740589	1	Black 8 GA Wire Assembly
2	740944	1	SCR Control Board 24V	25	740588	1	Black 14 GA Wire Assembly
3	740241	3	Contactur 24V 50 amp	26	740583	1	Black 14 GA Wire Assembly
4	210405	1	Heyco Liquid Tight Fitting	27	740482	3	Diode Assembly
5	101008	5	Rubber Grommet	28	740576	1	Red 10 GA Wire Assembly
6	805637	1	Fiber Insulator	29	740578	1	Black 10 GA Wire Assembly
7	762073	2	Spacer Bushing	30	740579	1	Red 14 GA Wire Assembly
8	740238	1	Circuit Breaker 18 amp	31	712814	1	SCR-MC 10-24 x .87
9	740247	1	Circuit Breaker 30 amp	32	742021	1	Black 16 GA Wire Assembly
10	740549	1	Circuit Breaker 50 amp	33	711553	1	WSR-Internal Lock #10
11	740132	2	Insulator	34	210376	1	Dashboard 200TD
12	833638	2	Brass Stud	35	715716	1	Decal
13	711368	2	Wing Nut 1/4-20	36	740591	1	Panel Light Assembly
14	742131	1	Solenoid Wire Harness	37	740711	2	Switch
15	741037	1	5 Sec. Delay Timer	37CE	740711CE	2	Switch, CE
16	740594	1	Black/Yellow 14 Gauge Wire Assembly	38	740216	1	Gauge Battery Condition
17	740584	1	Black 8 GA Wire Assembly	39	740590	1	Dashboard Wiring Harness
18	740577	1	Red 14 GA Wire Assembly	40	740563	1	Gray/Diode Wire Assembly
19	740580	1	Red 10 GA Wire Assembly	41	740801	1	Switch Rocker
20	740592	1	Black 10 GA Wire Assembly	41CE	740801CE	1	Switch Rocker, CE
21	715613	1	Decal Circuit Breakers	42	740593	1	Yellow Wire Assembly
22	711316	6	Nut-Hex 1/4-20	43	742102	1	Switch 2 Position
23	711372	2	Nut-Nyloc 8-32				



# WIRING DIAGRAM CE MODELS



BLUE / STRIPE  
 BROWN / BROWN  
 BLACK / STRIPE  
 RED / WHITE  
 BLACK / VIOLET  
 RED / WHITE  
 STRIPE  
 DETAIL FOR WIRE LOCATIONS FOR CHASSIS REAR VIEW OF TERMINAL HOUSING

WHITE / STRIPE  
 BROWN / BROWN  
 BLACK / STRIPE  
 RED / VIOLET  
 BLACK / STRIPE  
 DETAIL FOR WIRE LOCATIONS FOR DASH REAR VIEW OF TERMINAL HOUSING

# LIMITED WARRANTY

Minuteman International, Inc. warrants to the original purchaser/user that this product is free from defects in workmanship and materials under normal use and service for a period of three years from date of purchase. In addition, Minuteman International, Inc. will, at its option, honor labor warranty claims for the first 12 months from date of sale, provided such claims are submitted through and approved by factory authorized repair stations. Minuteman International, Inc. will, at its option, repair or replace without charge, except for transportation costs, parts that fail under normal use and service when operated and maintained in accordance with the applicable operation and instruction manuals.

This warranty does not apply to normal wear, or to items whose life is dependent on their use and care, such as belts, cords, switches, hoses, rubber parts, electrical motor components or adjustments. Parts not manufactured by Minuteman International, Inc. such as engines, batteries, battery chargers, hydraulic pumps, and tires are covered by and subject to the warranties and/or guarantees of their manufacturers. Please contact Minuteman International, Inc. for procedures in warranty claims against these manufacturers.

**Special warning to purchaser** — Use of replacement filters and/or prefilters not manufactured by Minuteman International, Inc. or its designated licensees, will void all warranties expressed or implied.

A potential health hazard exists without exact original equipment replacement.

All warranted items become the sole property of Minuteman International, Inc. or its original manufacturer, whichever the case may be.

Minuteman International, Inc. disclaims any implied warranty, including the warranty of merchantability and the warranty of fitness for a particular purpose. Minuteman International, Inc. assumes no responsibility for any special, incidental or consequential damages.

This limited warranty is applicable only in the U.S.A. and Canada, and is extended only to the original user/purchaser of this product. Customers outside the U.S.A. and Canada should contact their local distributor for export warranty policies. Minuteman International, Inc. is not responsible for costs or repairs performed by persons other than those specifically authorized by Minuteman International, Inc. This warranty does not apply to damage from transportation, alterations by unauthorized persons, misuse or abuse of the equipment, use of non-compatible chemicals, or damage to property, or loss of income due to malfunctions of the product.

If a difficulty develops with this machine, you should contact the dealer from whom it was purchased.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow the exclusion or limitation of special, incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions and limitations may not apply to you.

***Minuteman***<sup>®</sup>  
***PowerBoss***<sup>®</sup>

**Minuteman International, Inc.**  
111 South Rohlwing Road  
Addison, Illinois 60101

(630) 627-6900  
FAX (630) 627-1130

*PowerBoss*<sup>®</sup>  
175 Anderson Street  
Aberdeen, North Carolina  
28315 USA

(910) 944-2167  
FAX (910) 944-3199

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