

# Parts and Instruction Manual

## 747 Wide Area Vacuum



## PREFACE

Thank you for your purchase of the new industry standard for vacuums. Minuteman International takes great pride in offering the most dependable, reliable and best value in industrial floor cleaning equipment. We set the standard.

Our Customer Service Department would like to hear from you. If you see any errors, omissions or something that needs clarification in this Parts Catalog please let us know. We are working hard towards continually improving our processes to bring you the best you deserve.

Thank you!

*The Minuteman International Team*

## Technical Specifications

<b>Model</b>	<b>747</b>
Model No.	MC827854
<b>Height (retracted)</b>	24" (61 cm)
<b>Length (retracted)</b>	37 <sup>3</sup> / <sub>4</sub> " (96 cm)
<b>Width</b>	29 <sup>1</sup> / <sub>2</sub> " (75 cm)
<b>Bristle width</b>	26 <sup>1</sup> / <sub>2</sub> " (67 cm)
<b>Volume flow rate</b>	200 CFM (340 m <sup>3</sup> /hr)
<b>Brush diameter</b>	4" (10 cm)
<b>Brush bristle</b>	Conductive Nylon
<b>Bag volume</b>	9 ft <sup>3</sup> (.25 m <sup>3</sup> )
<b>Filter area</b>	19 ft <sup>2</sup> (1.75 m <sup>2</sup> )
<b>Hose diameter</b>	5" (13 cm)
<b>Motor</b>	<sup>3</sup> / <sub>4</sub> HP (.6 kW), PM, 24VDC
<b>Wheel diameter (main)</b>	16" (41 cm)
<b>Wheel diameter (casters)</b>	4" (10 cm)
<b>Weight (without batteries)</b>	154 lbs (70 kg)

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## **FOR COMMERCIAL USE ONLY**

### **IMPORTANT SAFETY INSTRUCTIONS**

When using an electrical appliance, basic precautions should always be followed, including the following:

### **READ ALL INSTRUCTIONS BEFORE USING**

#### **WARNING - To reduce the risk of fire, or injury:**

- Do not leave appliance with batteries connected to machine. Disconnect batteries when not in use and before servicing.

#### **WARNING**

- Do not allow to be used as a toy. Close attention is necessary when used by or near children.
- Use only as described in this manual. Use only manufacturer's recommended attachments.
- If appliance is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, return it to a service center.
- Do not put any object into openings. Do not use with any opening blocked; keep free of dust, lint, hair, and anything that may reduce air flow.
- Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts.
- Do not pick up anything that is burning or smoking, such as cigarettes, matches, or hot ashes.
- Do not use without dustbag and/or filters in place.
- Turn off all controls before unplugging.
- Use extra care when cleaning on stairs.
- Do not use to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.

### **SAVE THESE INSTRUCTIONS**

## GENERAL BATTERY INFORMATION

Minuteman uses deep cycle batteries for all battery powered equipment. A deep cycle battery is designed for continuous duty over a long period of time. A deep cycle battery can be recharged many more times than a standard battery and still hold its original rating.

The batteries used for the AV-747-B are deep cycle, 80 amp hour batteries. It is very important to use deep cycle batteries in the machine to ensure extended life of the batteries. A common battery will usually have a life of 50 cycles before it begins to lose its original capacity. A cycle for a battery is when the battery is discharged then recharged. As you can see, a deep cycle battery should last up to 4 times longer than a standard battery.

A general rule for charging batteries after using the machine is for every hour the machine is run, the batteries should be charged for 2 hours. Example: If machine has run for 4 hours, batteries should be recharged for 8 hours.

## 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.

Have water readily available in case of an accident, for flushing acid from skin or clothing. Use plain water for flushing acid from eyes. Seek immediate medical attention.

When working on the electrical system of the machine, make sure the batteries are disconnected from the circuit.

## 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. The water should be to the bottom of the filler neck. Distilled water or tap water may be used. **CAUTION:** If water is to the top of the internal plates or below them, add water before charging or operating machine. This is an unsafe condition.

Check batteries periodically for leaks or cracks. If there are any leaks or cracks, replace the battery immediately. A leaking battery can cause a ground path that will reduce the life of the battery. Keep battery taps clean. If machine is not used for extended periods of time, batteries should be kept fully charged with a boost charge once a week.

## **MAINTENANCE AND OPERATION INSTRUCTIONS FOR 747 WIDE AREA VACUUM CLEANER**

Though the 747 Wide Area Vacuum is designed primarily for use on carpet, it performs very well on hard surface floors. Sand, dust, paper and so forth are readily vacuumed from these floors. However, it is not recommended that this machine be used to vacuum metal slugs, metal shavings or similar type debris from floors, either carpeted or otherwise.

Inspect the 747 Wide Area Vacuum carton for shipping damage when received. Report any damage to delivering freight carrier immediately.

### **OPERATING**

1. Be sure the unit is used only on the voltage shown on nameplate.
2. When starting the 747 Wide Area Vacuum, push down slightly and momentarily on the handle. Doing this ensures quick, easy starts, even when long pile carpets are being vacuumed.
3. In general, carpets with short naps - such as indoor/outdoor carpeting - are best vacuumed with a setting of low, 2 or 3. Higher pile carpets are best cleaned with settings above 2. To adjust brush height, disengage the cam lever (on right side) from the machine base and position it in desired position. This handle is made to lock loosely in the positioning holes in the base.
4. The rate at which an operator pushes the machine depends on the debris load, carpet nap length and type of debris. In areas where large amounts of "tracked in" sand are present, carpets should be vacuumed with a double pass - that is a forward and backward pass made without turning the machine around at the end of one pass. A slow, moderate walk pace by an operator, normally suffices to give good cleaning results.
5. The filter bag should be kept clean. When it contains 15 - 20 pounds of normal debris, it is ready for cleaning. To clean, release bag clamp and remove from machine and empty.
6. When storing, the handle may be folded over the cover. Two screws with wing nuts need to be removed from the handle assembly when it is put in this folded position.

### **MAINTENANCE**

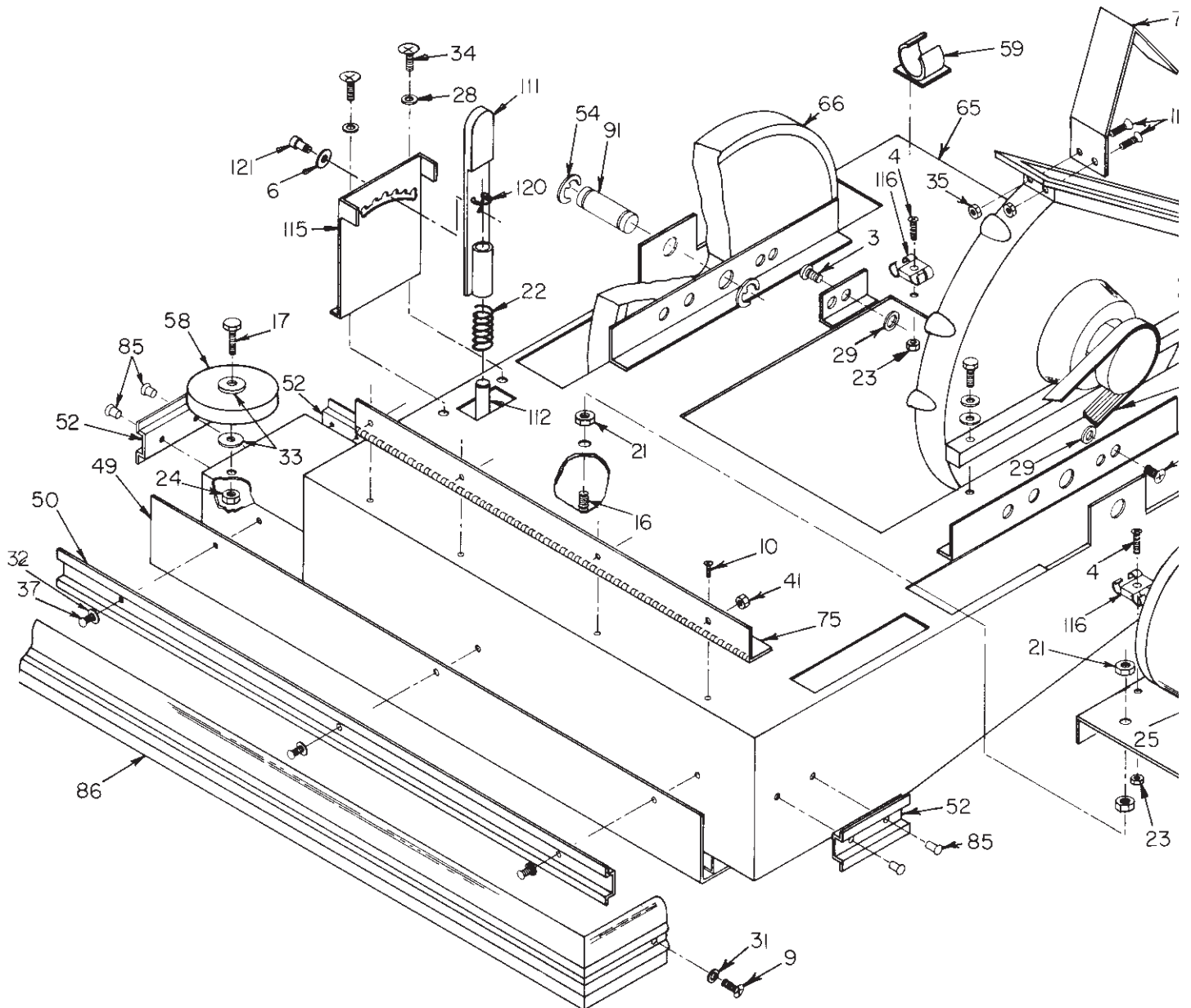
1. Keep filter bag clean.
2. A drop of number 30 oil should be applied to the caster bearings and main wheel axles, two or so times a year.

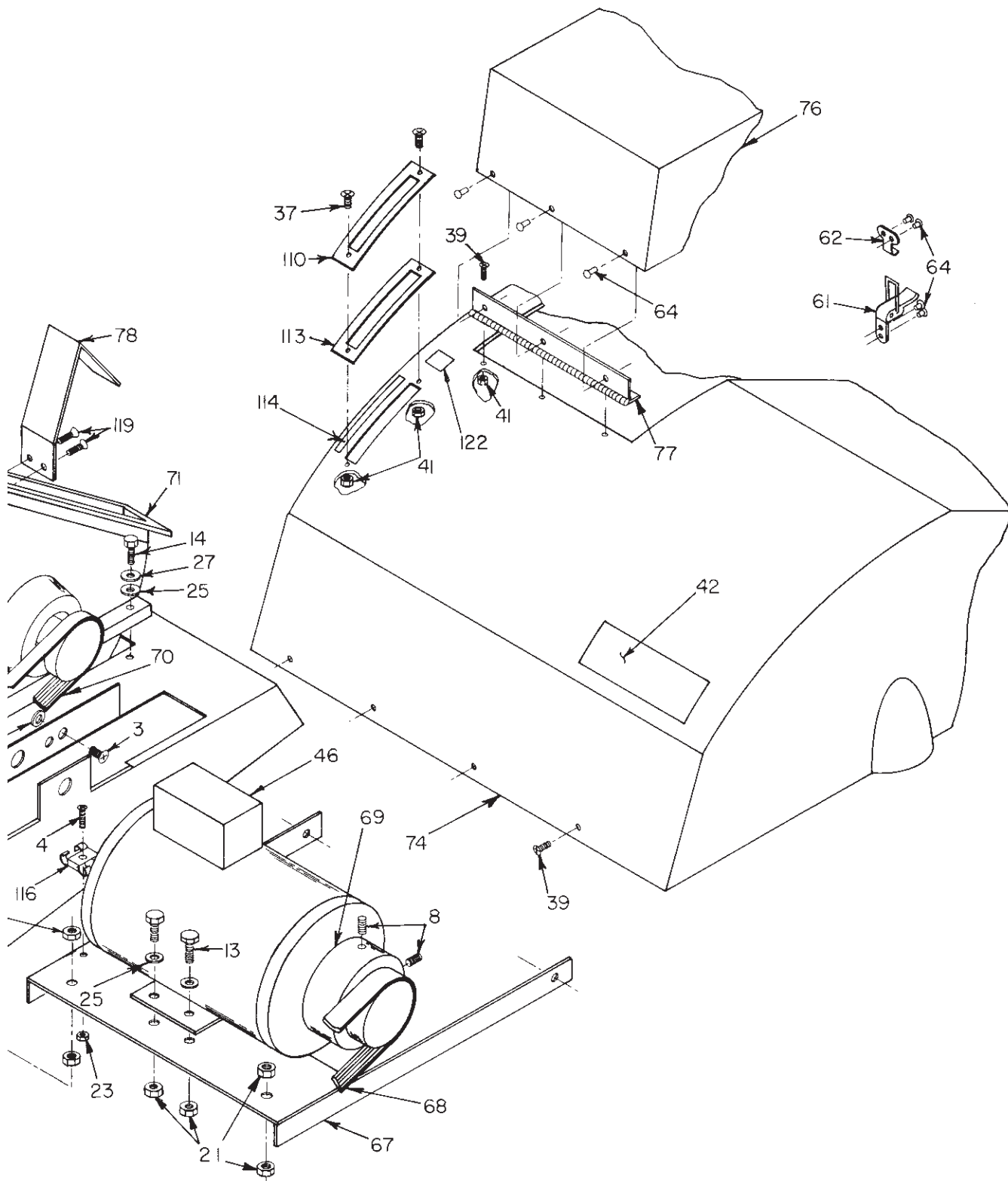
3. To replace brush , remove brush drive belt from motor pulley by rotating motor shaft by hand and pulling outwardly on belt. Then, tip machine over on its top or side (hold motor mount assembly in position when tipping or turning over); remove the sheet metal guard covering the brush pulley. Use two small wrenches to simultaneously remove brush axle screws on each side of frame, and slip brush out of brush cavity. Remove screws, axle, pulley and bearing end caps from brush.

**NOTE:** Inspect and replace the brush bearing, if necessary, at the time of reassembly. When remounting end caps be sure to press them squarely into the machined brush ends. Note: Be sure to line up holes in caps and brush before pushing caps all the way into the brush core. After caps are lined up and pressed in squarely, tighten cap screws securely. All parts can now be reassembled. Turn both axle screws in brush axle at the same time for ease of installation. Also, be sure brush belt is on brush before putting brush in brush cavity. After brush axle screws are securely tightened, line up belt on brush pulley and then work the other end of the belt for tightness - it should be snugly tight, IIQ1 taught. Adjust tightness, when necessary, by adjusting screw heights on front of motor mount platform. Check for tightness on fan belt also. If this belt is too loose, move motor toward front of machine by loosening motor mount screws and sliding motor on forward. Be sure motor is at right angles (square) with belts, then tighten mount screws. Recheck tightness of brush belt - adjust again, if necessary. Reassemble other parts and unit is ready for use.

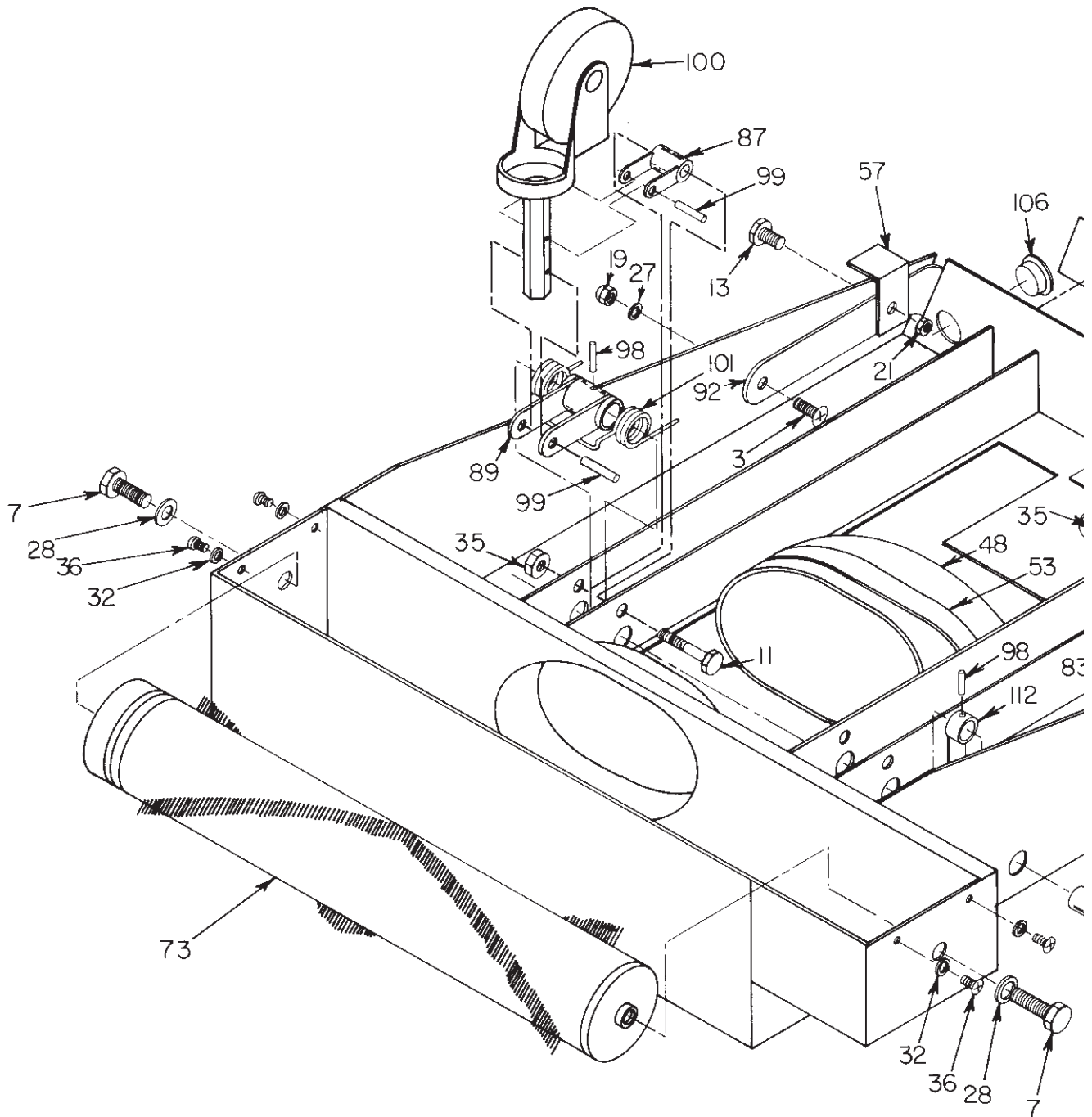
When the filter bag is removed for cleaning (or replacement) be sure unit is disconnected from power source. It is good policy to inspect the fan to see if it has become fouled with debris such as string, wire and so forth. Periodically inspect the brush to determine whether it has become fouled with string, wire or similar debris.

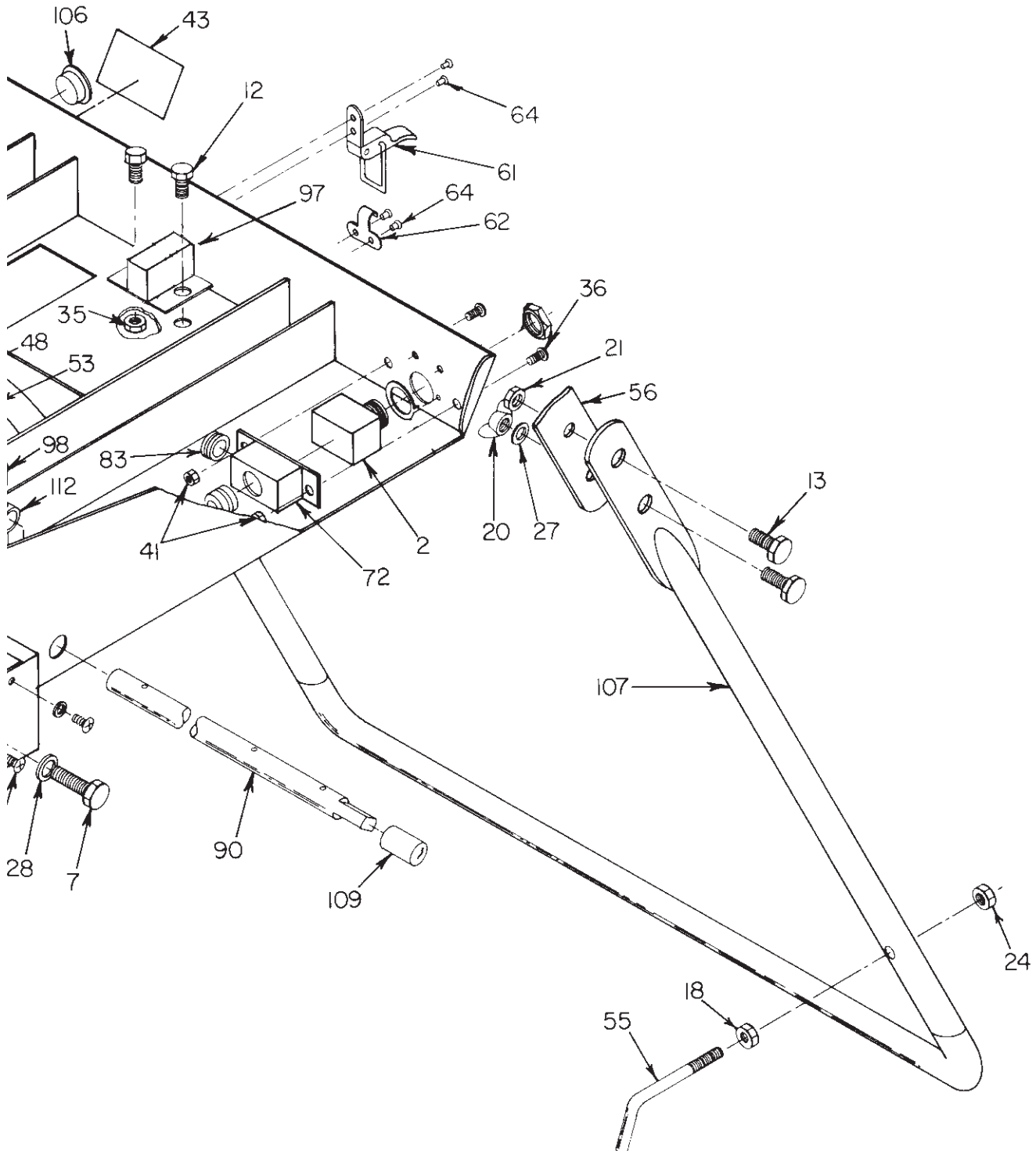
**Exploded Views  
Main Assembly I**



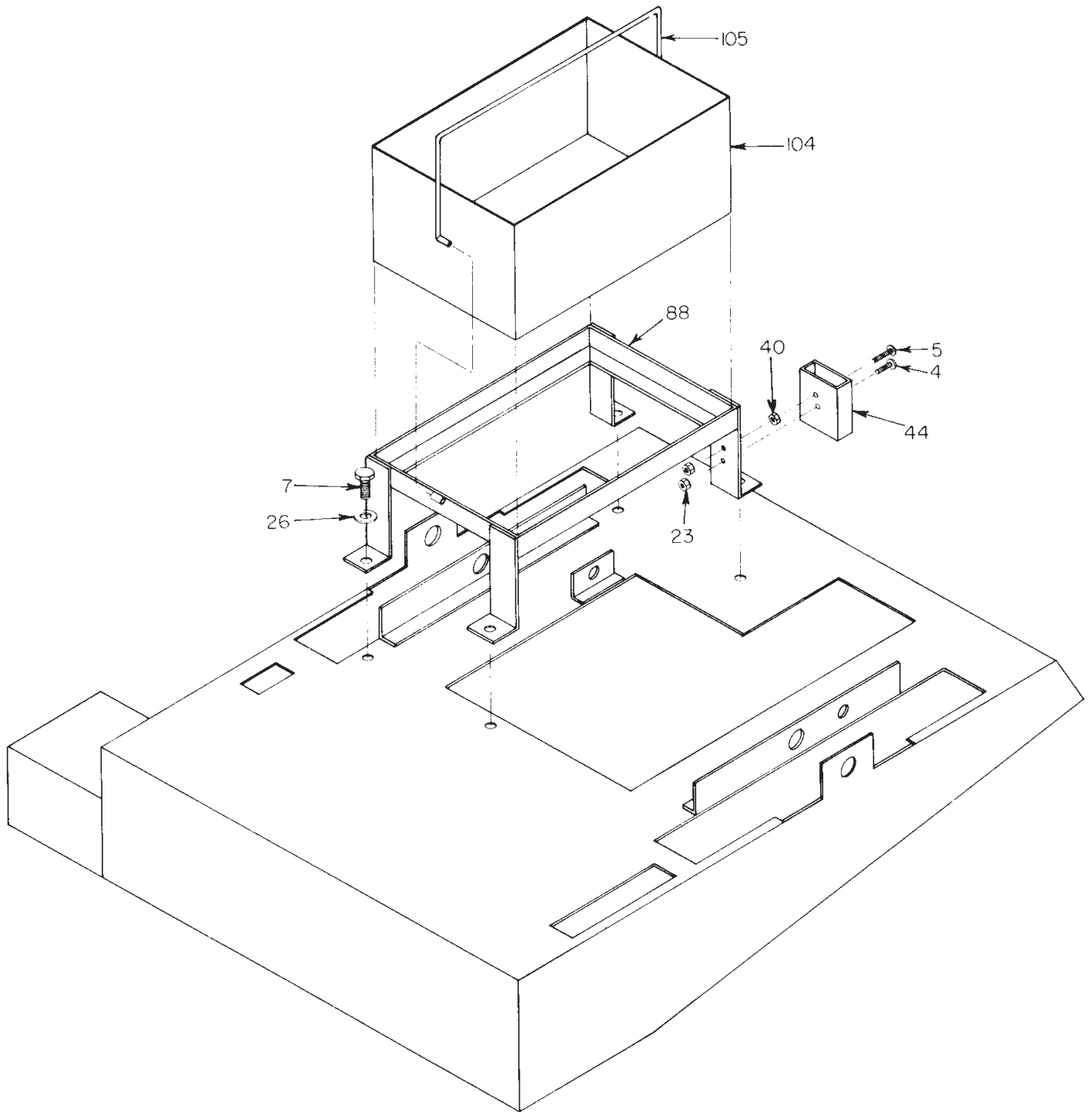


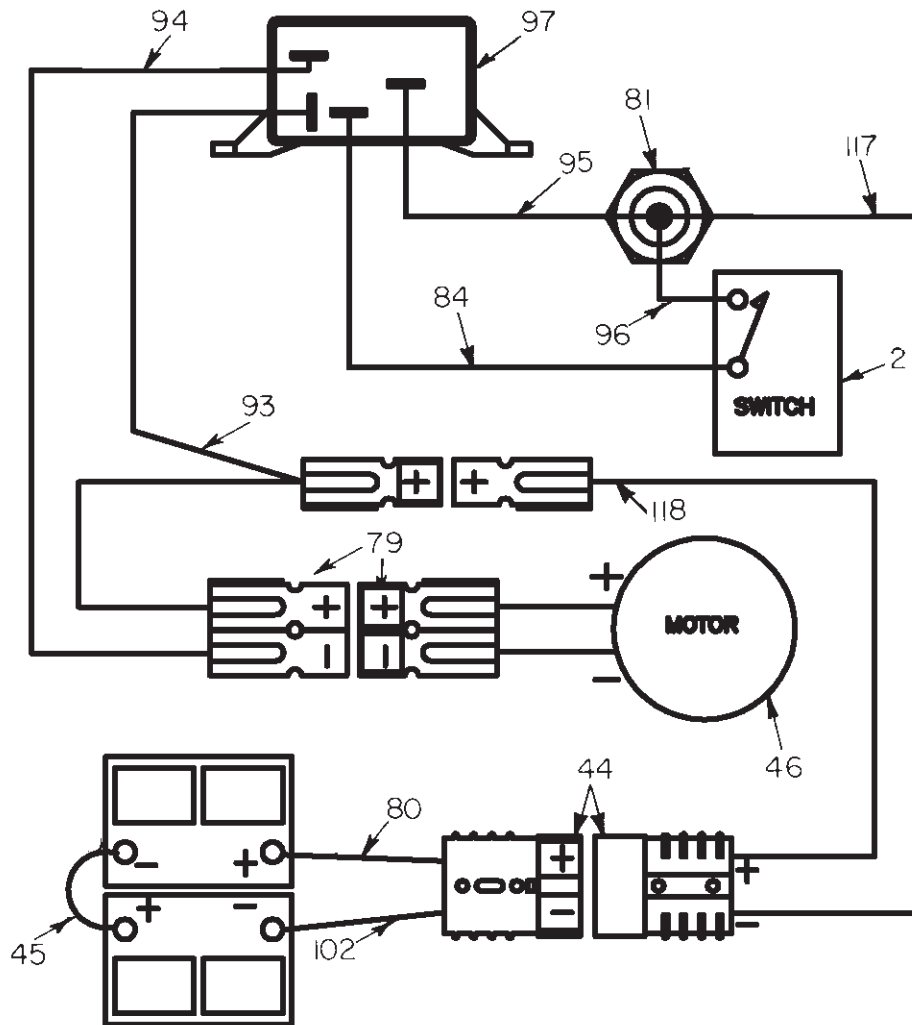
**Main Assembly II**





**Main Assembly III**





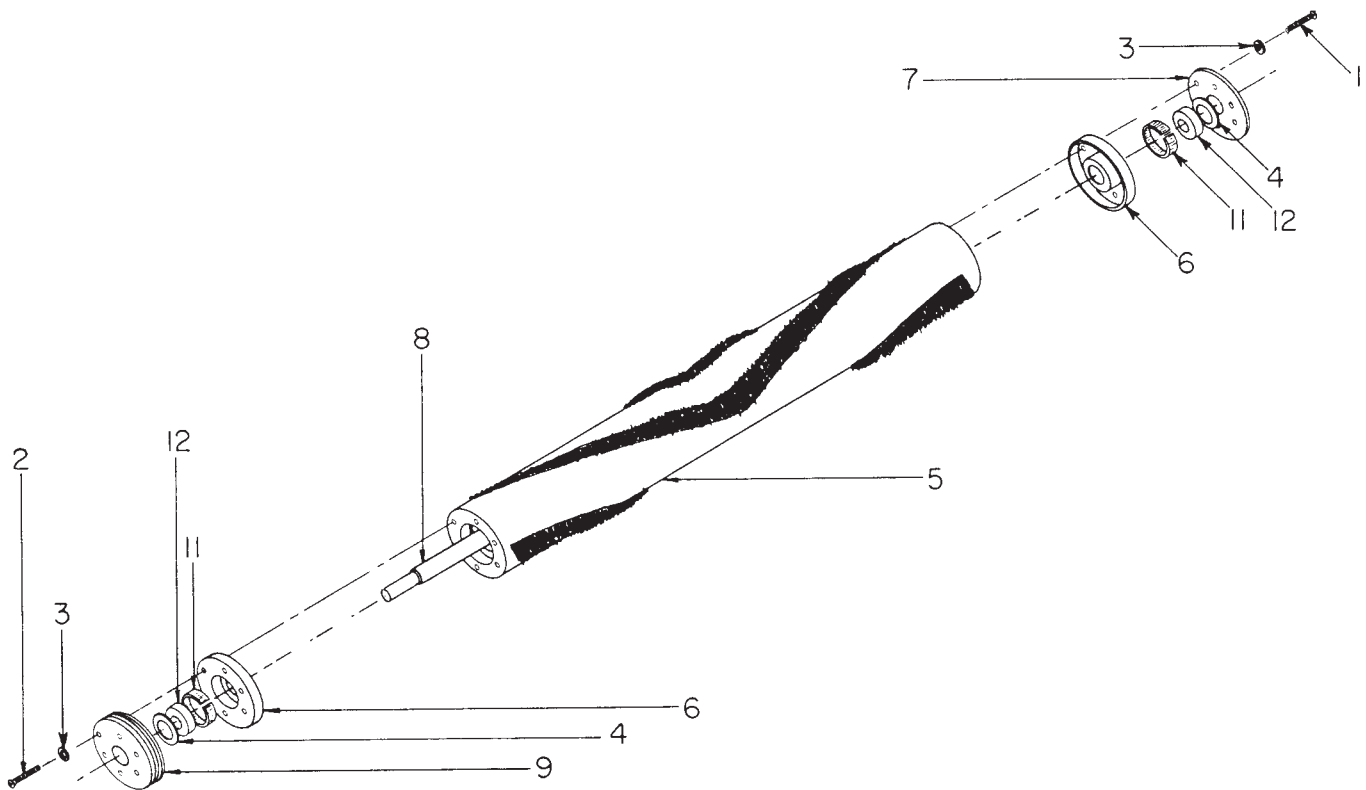
**Main Assembly Bill of Material**

ITEM	PART NO.	QTY	DESCRIPTION
2	601163	1	SWITCH-20A125V LATCHING PB
3	710195	4	SCR-MC 5/16-18 X .50 ZINC
4	710207	3	SCR-MC 6-32 X .87 ZINC
5	710310	1	<b>SCR-MC 6-32 X 1.5 ZINC</b>
6	711599	1	WSR-FLT .187 X 1.00 X .06
7	711202	3	SCR-HH 1/4-20 X .50 ZP
8	711016	2	SK 1/4-20 X .50
9	711115	1	SCR-ST-A 8 X .62 ZINC
10	711124	4	SCR-ST-B 10 X .37 NI
11	711221	2	BLT-HH 1/4-20 X 2.25
12	712565	2	SCR-MC 1/4-20 X .62 SS
13	711228	8	BLT-HH 5/16-18 X .75 STL ZINC
14	711231	4	BLT-HH 5/16-18 X 1.25
16	710776	2	SCR-MC 5/16 X 2.50 ZINC
17	3400027	1	BLT-HH 3/8-16 X 1.75 #5
19	711359	2	NUT-ACORN 5/16-18BR NIPL
20	711366	2	NUT-WING 5/16-18 ST PL
21	711379	16	NUT-FLANGED WIZZ 5/16-18
22	833929	1	SPRING-COMP .063 X .54 X 1.25
23	711435	4	NUT-FLANGED WIZZ 6-32
25	711506	8	WSR-FLT 5/16 (NARROW) ST PL
27	711539	4	WSR-EXT LOCK 3/8
28	711544	8	WSR-HELICAL 1/4
29	711575	5	WSR-FLT .31 X .75 X .06 STL
31	712300	2	WSR #8 BR NIPL
32	711553	20	WSR-INT LOCK #10
33	712301	2	WSR-FLT .406 X .812 X .0625
34	712565	2	SCR-MC 1/4-20 X .62 SS
35	712667	4	NUT-NYLOC 1/4-20 SS
36	712810	10	SCR-MC 10-24 X .37 ZINC
37	712811	5	SCR-MC 10-24 X .50 STZ RD HD
39	712822	4	SCR-MC 10-24 X .50 SS TR
40	712900	1	NUT-HEX 10-24 STPL
41	712908	12	NUT-FLANGED WIZZ 10-24
42	715384	1	DECAL-MMAN 1.4 X 9.68 DK GRY
43	715029	1	DECAL-NAME PLATE SERIAL

ITEM	PART NO.	QTY	DESCRIPTION
44	740097	1	CONNECTOR-SB50 RED HOUSING ONLY
45	740164-1	1	JUMPER CABLE ASSY, RED 4G 12"
46	785208-1	1	DRIVE MTR .75HP 24V W/TERMINLS
48	808706	1	BLOWER HOSE
49	833859	1	BRUSH PLATE 747 14GA
50	808720	1	BUMPER CLIP
52	808737	3	BUMPER CLIP
53	808744	2	CLAMP-HOSE
54	808756	4	RET RING-E TYPE .62 5133-62
56	808760	1	HANDLE BRACKET
57	808803	2	BRKT-HOLD DOWN
58	808829	1	WHEEL-TRUCK
59	809444	2	CLIP-CORD
61	760428	1	LATCH ONLY-37-11-071-10
62	760429	1	LATCH-KEEPER 372507117
64	711910	2	RIVET-POP
65	827855PTD	1	747 MAINFRAME PAINTED
66	827871	2	WHEEL
67	827873	1	MOUNT MOTOR
68	827006	1	BELT-V 6 RIB POLY, 31"
69	827877	1	PULLEY MOTOR
70	827878	1	BELT-V 4 RIB POLY
71	827880	1	FAN ASSY AV747
72	827890	1	BOX SWITCH
73	830721	1	BRUSH-STATIC FREE ASM
74	827905	1	COVER, 747 BATT
75	827906	1	HINGE-BASE
76	827910	1	COVER
77	827911	1	HINGE-COVER
78	827912	1	BAFFLE
79	827919	1	CONNECTOR-W/INSERT TERM
80	827925	1	CABLE ASY POSITIVE
81	740132	1	INSULATOR (PLASTIC)
82	828378	1	DECAL
83	828596	2	GROMMET
84	740302	1	14G BLACK 13.50" B= 1
85	828893	6	RIVET

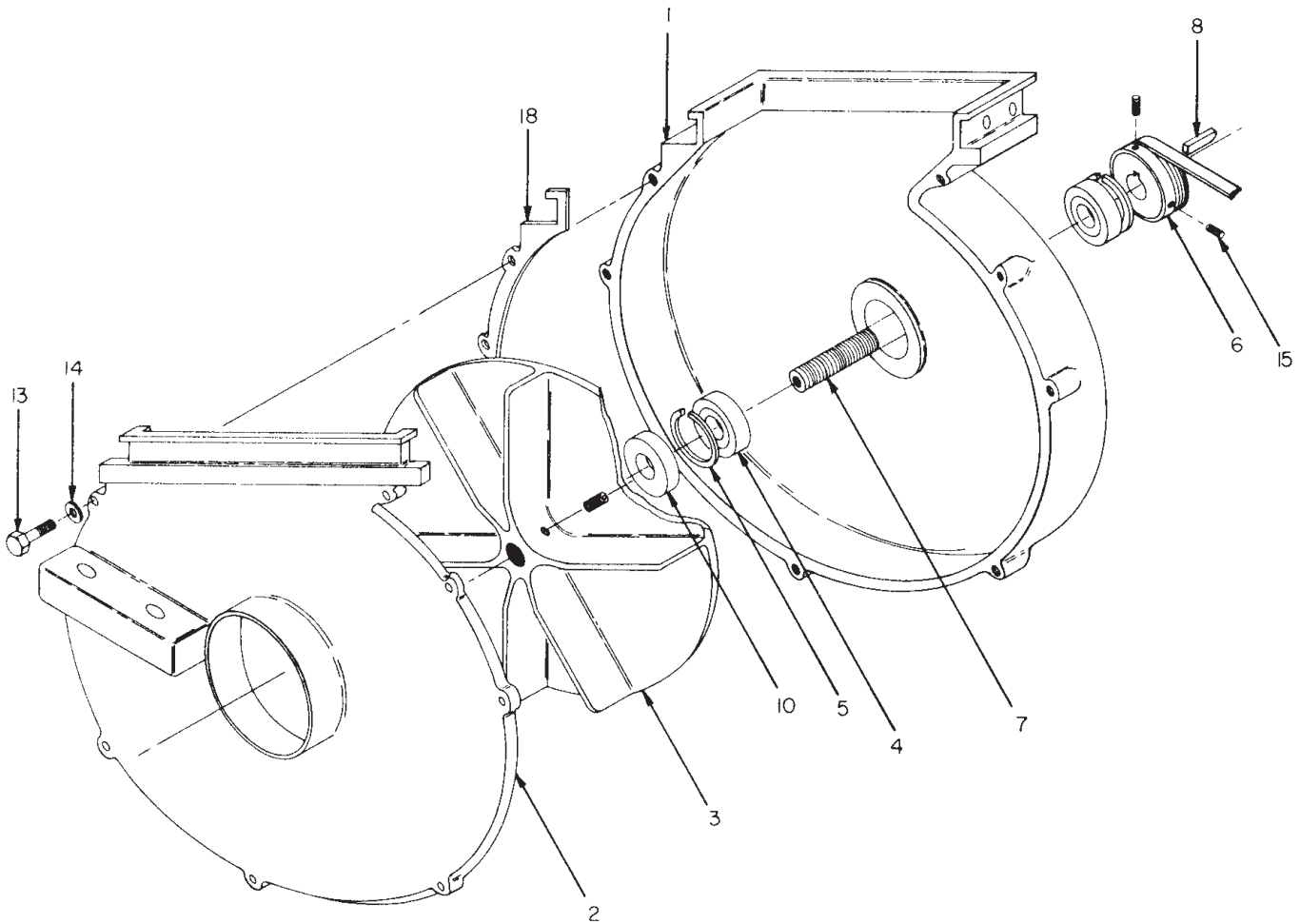
ITEM	PART NO.	QTY	DESCRIPTION
86	829182	1	BUMPER ASSY
87	829184	2	CASTER PIVOT
88	829185	1	BATTERY TRAY
89	829186	2	CASTER BRKT
90	829187	1	SHAFT
91	829202	2	AXLE REAR 747
92	829205	1	BRKT-HANDLE
93	829289	1	LEAD ASSY
94	829290	1	LEAD ASSY BLACK
95	831026	1	WIRE LEAD ASY
96	809161	1	WIRE ASY 12GA BLK 18"
97	740241	1	RELAY-24V 50AMP SPNO
98	829296	3	PIN-ROLL 1/4 X 7/8
99	711620	4	PIN-ROLL .25 X 1.25
100	829299	2	CASTER-SWIVEL
101	829310	2	SPRING-TORSION
102	830301	1	CABLE ASY NEG
103	831641	1	BAG, CLOTH 724/747 2-ZIPR
104	830902	1	BATTERY BOX
105	830903	1	BATTERY STRAP
106	832204	1	PLUG HOLE
107	808759CTD	1	HANDLE 747 PVC COATED
109	833472	1	END CAP 747
110	833695	1	COVER PLATE 747 18GA
111	833928	1	HANDLE, ADJUST NEW STYLE
112	833926	1	HANDLE MOUNT NEW STYLE
113	833699	1	GASKET HANDLE 747
114	715506	1	DECAL-747 HEIGHT ADJ
115	833927	1	ADJUSTING PLATE NEW STYL 3-16
116	833725	1	CLIP-T
117	833762	1	8G RED 13.25
118	833763	1	8G BLACK 20.00"
119	730562	2	SCR-MC 1/4-20 X .75 ZINC
120	711717	1	RET RING-E EXT .37
121	832448	1	SHOULDER SCREW
122	715504	1	DECAL-747 DISENGAGE

**Brush Assembly**



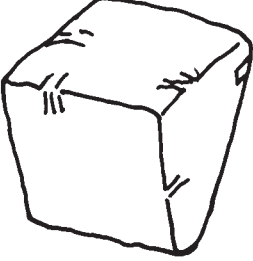
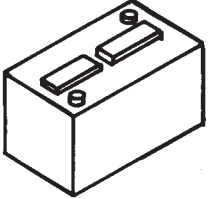
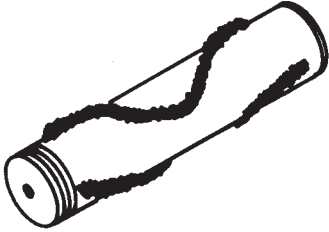
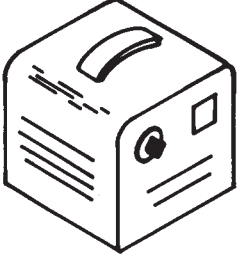
ITEM	PART NO.	QTY	DESCRIPTION
1	711161	6	SCR - HI-LO #10-16 X 3/4, PAN HD. #10
2	711162	6	SCR-HI/LO #10 X 1 1/2 ZINC
3	711553	12	WSR-INT LOCK #10
4	712318	2	WSR-FLT .75 X 1.12 X .12 PL
5	828927	1	BRUSH-CORE STATIC FREE
6	827894	2	CUP BEARING
7	827896	1	COVER BEARING
8	827897	1	SHAFT BRUSH
9	827898	1	PULLEY BRUSH
11	828145	2	RET RING
12	828588	2	BEARING-.500 X 1.125 X .312
**	830721		BRUSH ASSEMBLY COMPLETE

**Fan Assembly**



ITEM	PART NO.	QTY	DESCRIPTION
1	827881	1	HOUSING FAN BOTTOM MCH
2	827883	1	HOUSING FAN TOP MCH
3	808727BAL	1	BLOWER FAN BAL 724/747
4	801535	2	BEARING-MOTOR .6693 X 1.5748 X .4724
5	808733	2	RET RING
6	808734	1	FAN PULLEY
7	829183	1	SHAFT BEARING
8	808821	1	KEY-SQ .187 X 1
10	829285PLT	1	SPACER-.25 X .875 X .687 PLATED
13	711206	8	BLT-HH 1/4-20 X .87 STL ZINC
14	711544	8	WSR-HELICAL 1/4
15	711015	2	SK 10-24 X .37
18	827885	1	GASKET HSG
**	827880		FAN ASSEMBLY COMPLETE

Optional Accessories

	<p>831641 Cloth Bag                  829277 Paper Bag Liner</p>
	<p>956721 Batteries</p>
	<p>827892 Nylon Tynex Brush Asy.                  827893 Nylon Tynex Brush Core                   830721 Static-Free Brush Asy.                  828927 Static-Free Brush Core</p>
	<p>957722 Charger</p>

# ***“Excellence Meets Clean”***

**Minuteman is a Full Line Manufacturer of Sweepers and Scrubbers,  
for Industrial Facilities.**