



# Electronic Service Manuals

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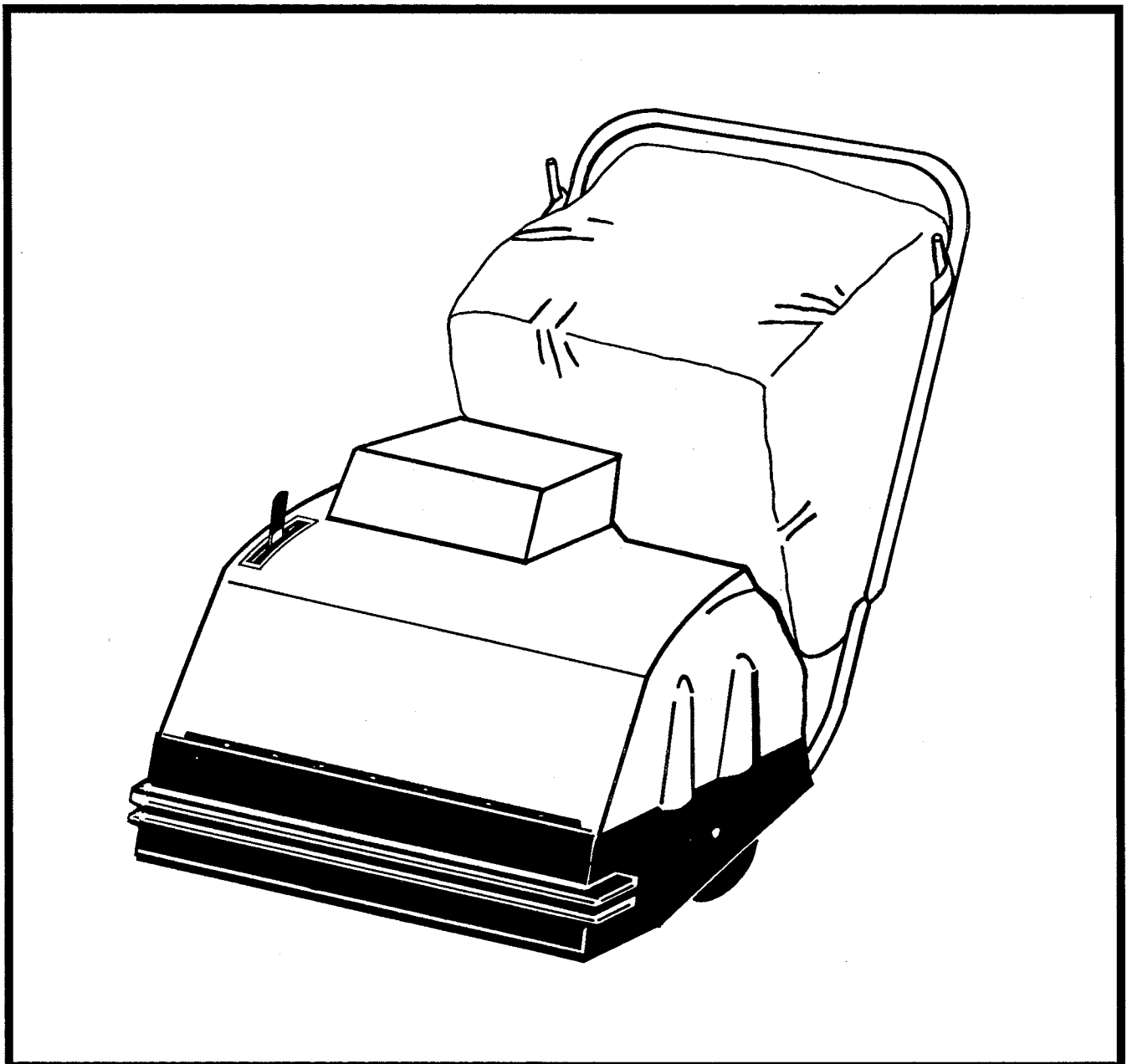
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**724**

**Model: MC827824**

**Wide Area  
Carpet Vacuum  
Battery**

■ OPERATION ■ SERVICE ■ PARTS ■ CARE



Revised 11/01

***Minuteman***<sup>®</sup>

# **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-724-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 AV-724-B VACUUM CLEANER

Though the AV-724-B 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 AV-724-B carton for shipping damage when received. Report any damage to delivering freight carrier immediately.

## OPERATING

- a) Be sure the unit is used only on the voltage shown on nameplate.
- b) When starting the AV-724-B, push down slightly and momentarily on the handle. Doing this insures quick, easy starts, even when long pile carpets are being vacuumed.
- c) 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.
- d) 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.
- e) 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.
- f) 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

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

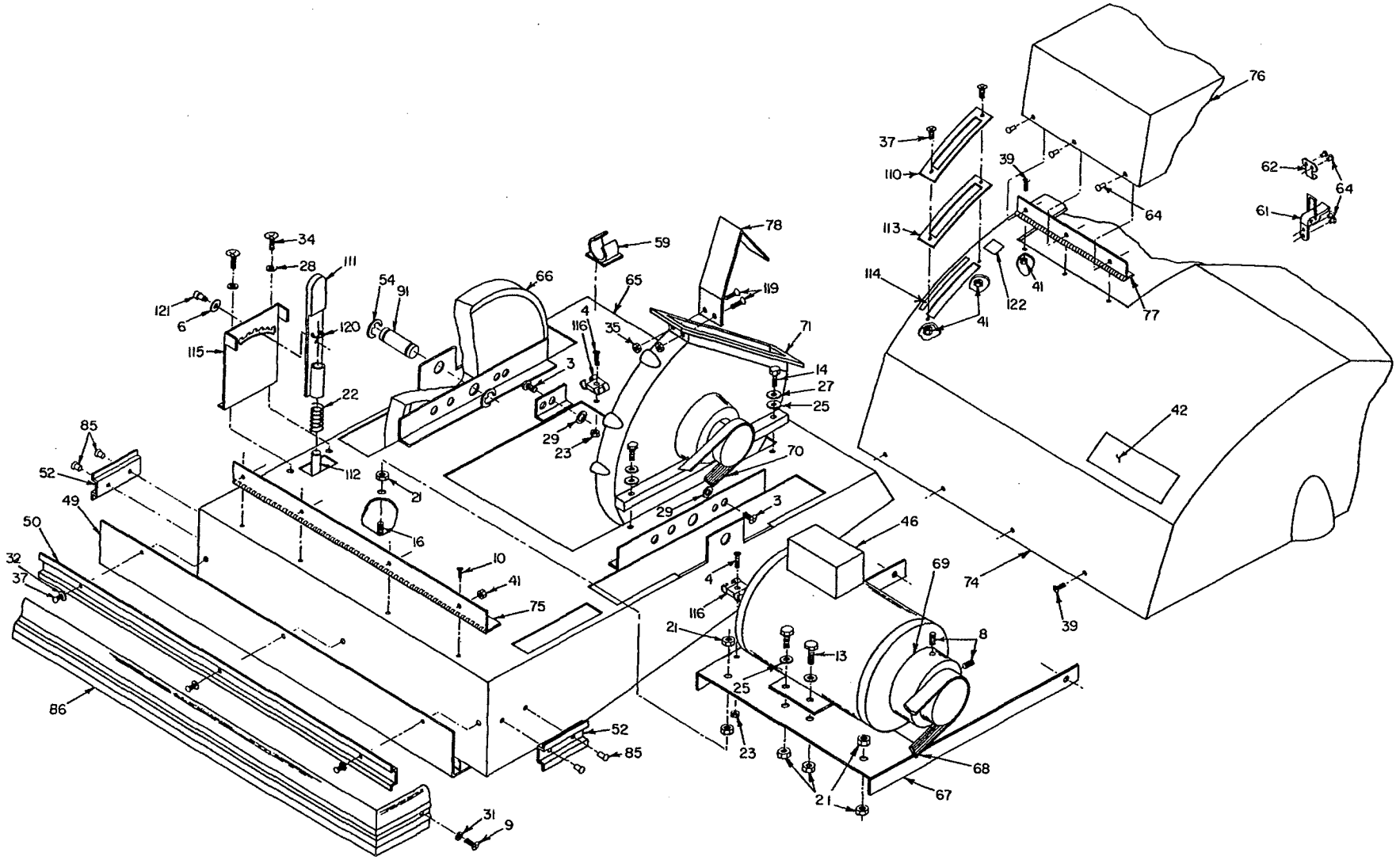
NOTE: Inspect and replace the brush bearing, if necessary, at the time of reassembly. When remounting end caps be sure to press them squarely into the machined brush ends. Note: Be sure to line up holes in caps and brush before pushing caps all the way into the brush core. After caps are lined up and 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, not 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.

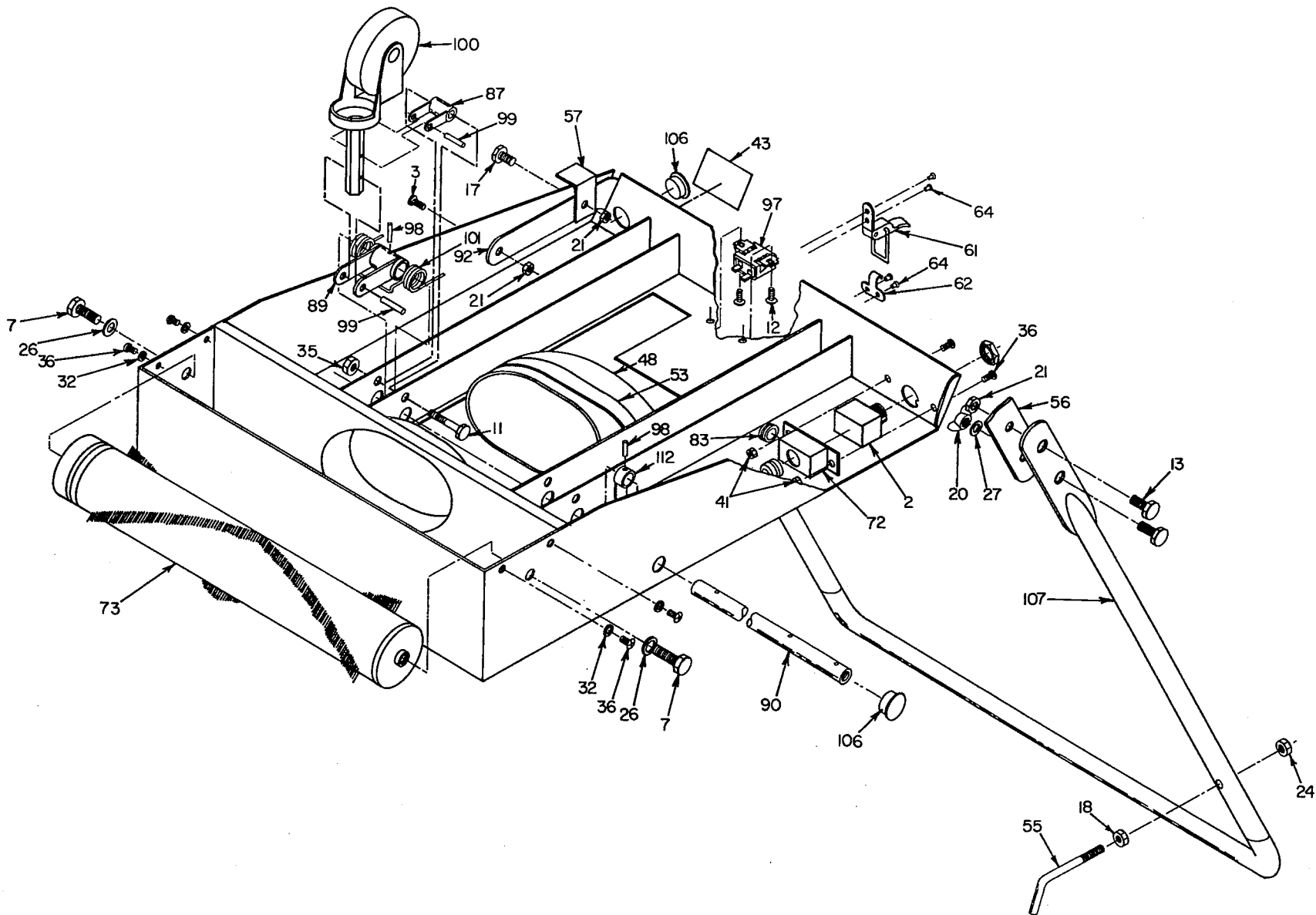
- d) When the filter bag is removed for cleaning (or replacement) be sure unit is disconnected from power source. It is good policy to inspect the fan to see if it has become fouled with debris such as string, wire and so forth.
- e) Periodically inspect the brush to determine whether it has become fouled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

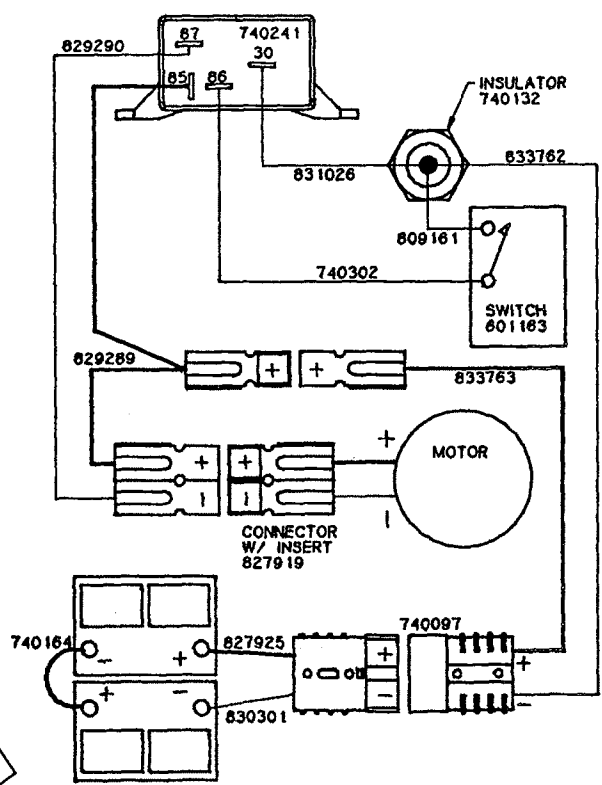
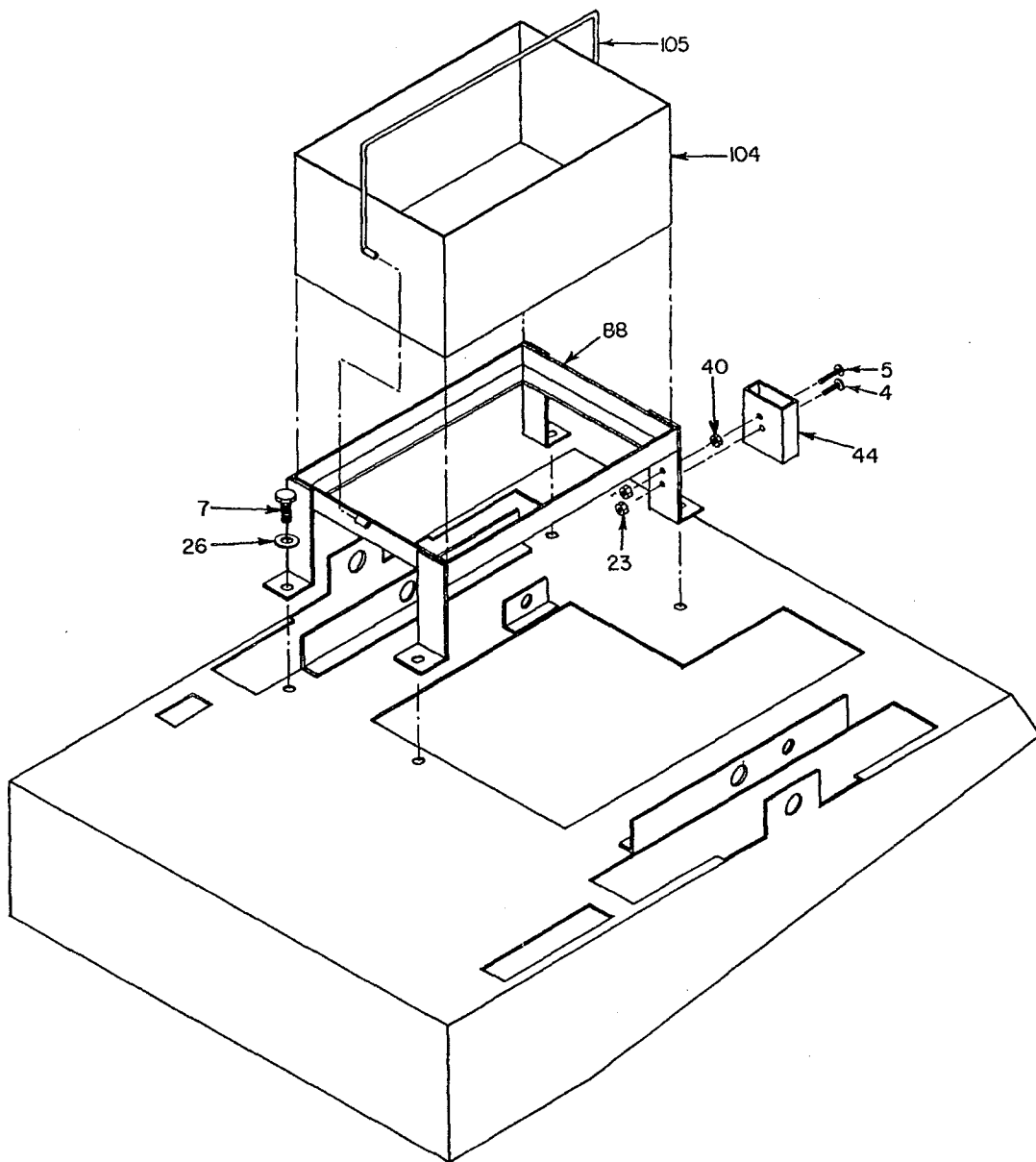
## PARTS LIST

Item No.	Part No.	Qty.	Description	Item No.	Part No.	Qty.	Description
1	601056	1	Ring Lock	61	827664	2	Latch
2	601163	1	Switch Assembly	62	827665	2	Strike
3	710195	4	SCR-MC 2/16 - 18 x .50	64	829214	11	Rivet
4	710306	3	SCR-MC 6 - 32 x .87	65	724000	1	Base Weld
5	710310	1	SCR-MC 6 - 32 x .15	66	827871	2	Wheel
6	711599	1	Flatwasher	67	827873	1	Mount Motor
7	710755	6	SCR-MC 1/4 - 20 x .50	68	827876	1	Belt, Poly V
8	711016	2	SCR-SK 1/4 - 20 x .50	69	827877	1	Pulley Motor
9	711115	1	SCR-ST-A 8 x .62	70	827878	1	Belt, Poly V
10	711141	4	SCR-ST-F 10 - 24 x .50	71	827880	1	Fan Assembly
11	711221	2	BLT-HH 1/4 - 20 x 2.25	72	827890	1	Box Switch
12	711227	2	BLT-HH 5/16 - 18 x .62	73	830721	1	Brush
13	711228	10	BLT-HH 5/16 - 18.75	74	827905	1	Cover
14	711231	4	BLT-HH 5/16 - 18 x 1.25	75	827906	1	Hinge Base
16	710776	2	BLT-HH 5/16 - 18 x 2.50	76	827910	1	Cover
17	711276	1	BLT-HH 3/8 - 16 x 1.75	77	827911	1	Hinge Cover
18	711328	2	Nut - Hex 3/8 - 16	78	827912	1	Baffle
19	711359	2	Nut - Acorn 5/16 - 18BR	79	827919	2	Connector
20	711366	2	Nut - Wing 5/16 - 18	80	827925	1	Cable Assembly Positive
21	711379	16	Nut - Flanged Wizz 5/16 - 18	81	827957	1	Cartoning
22	833929	1	Compression Spring	82	828378	1	Decal Battery (not shown)
23	711435	4	Nut-Flanged Wizz 6 - 32	83	828596	2	Grommet
24	711439	3	Nut-Flanged Wizz 3/8 - 16	84	828597	2	Heyco Plug
25	711506	8	WSR - Flat 5/16 ST PL	85	828893	6	Rivet Pop
26	711535	6	WSR - Helical .26 x .50 x .02	86	724004	1	Bumper
27	711540	10	WSR - Helical .32 x .62 x .03	87	829184	2	Caster Pivot
28	711544	2	WSR - Helical 1/4	88	829185	1	Battery Tray
29	711575	2	WSR - Flat .31 x .75 x .06 ST	89	819186	2	Caster Brkt.
30	712064	4	SCR - Wood FH 9 x 1.50	90	724002	1	Shaft
31	712300	1	WSR - Finish #8	91	829202	2	Axle Rear
32	712307	11	WSR - Helical .20 x .37	92	829205	1	Brkt. Handle
33	712317	2	WSR - Flat .41 x .81 x .06	97	940241	1	Contacto 50A 24V
34	712565	2	SCR-MC 1/4 - 20 x .62	98	829296	3	Roll Pin 1/4 x 7/8
35	712667	4	Nut - Hex 1/4 - 20 SS	99	829297	4	Roll Pin 1/4 x 1 1/4
36	712810	6	SCR-MC 10 - 24 x .37	100	829299	2	Swivel Caster
37	712811	9	SCR-MC 10 - 24 x .50	101	829310	2	Spring
39	712822	7	SCR-THMS 10 - 24 x .50	102	830301	1	Battery Lead Assembly
40	712905	1	Nut - Hex 10 - 24	103	830786	1	Bag
41	712908	11	Nut - Flanged Wizz 10 - 24	104	830902	1	Battery Box
42	715005	1	Decal, Logo Minuteman	105	830903	1	Battery Strap
43	715029	1	Decal, Serial Nameplate	106	832204	2	Plug Hose
44	740097	2	SB50 Red 6331G1	107	832963	1	Handle
45	781520	1	Black 8 in. 6 Gauge	108	833023	1	Chain, Static (not shown)
46	785208	1	Drive Mtr. .5HP 24V DC	109	833472	1	End Cap
48	808706	1	Blower Hose	110	833695	1	Cover Plate
49	724003	1	Brush Plate	111	833928	1	Handle Adj.
50	808720	1	Bumper Clip	112	833926	1	Mount Handle Adj.
52	808737	2	Bumper Clip	113	833699	1	Gasket Handle
53	808744	2	Hose Clamp	114	715506	1	Decal Handle Adj.
54	808756	4	E Ring	115	833927	1	Adj. Plate
55	808758	2	Mount Bracket	116	833725	2	T-Clip
56	808760	1	Handle Bracket	119	710601	2	SCR-MC 1/4 - 20 x .75
57	808803	2	BRKT Hold Down	120	808778	1	E-Ring
58	808829	1	Wheel Truck	121	832448	1	Shoulder Screw
59	809444	2	Clip Cord	122	715504	1	Decal, Disengage

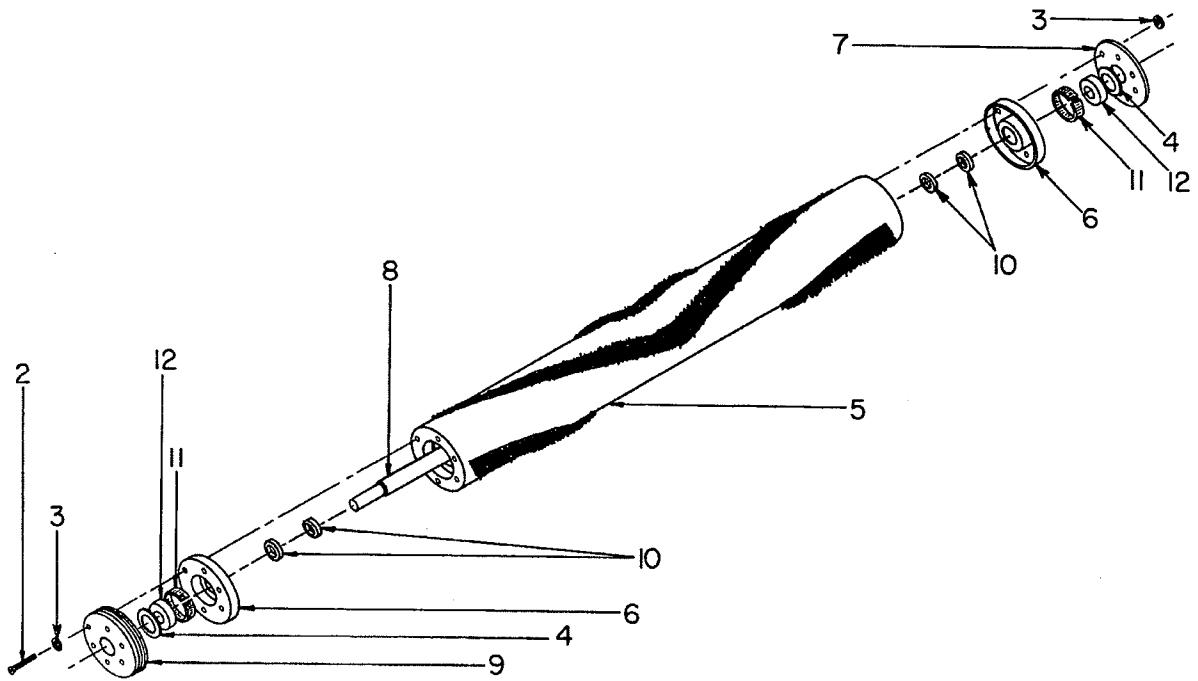
Diagrams for part numbers listed can be found on pages 5, 6 and 7.





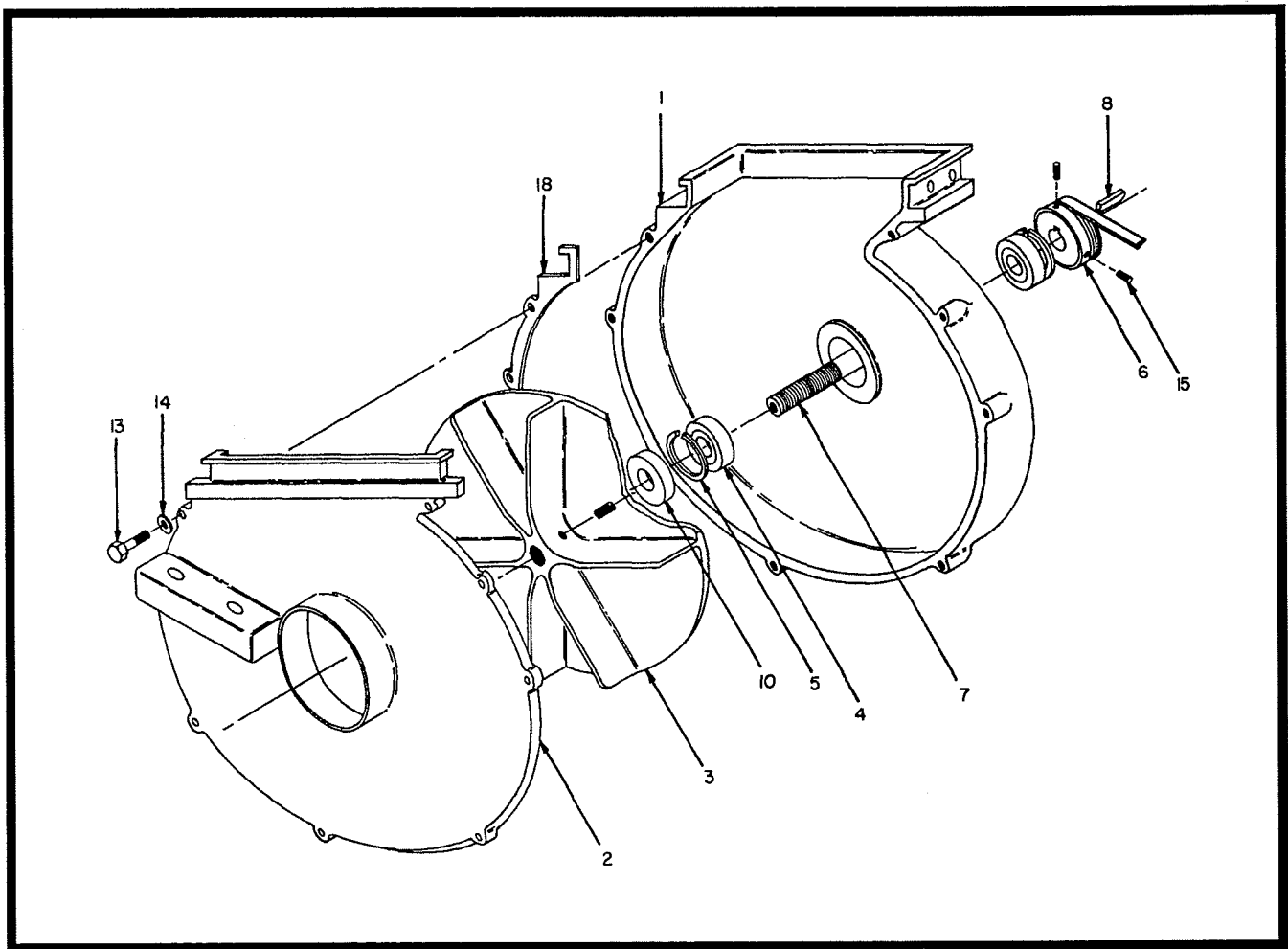


# BRUSH ASSEMBLY 724007



## PARTS LIST

Item	Part No.	Qty.	Description
2	711162	12	Screw (#10 x 1 1/4)
3	711553	12	Washer, Helical .20 x .37
4	712318	2	Flat Washer (1 1/8 OD x 3/4 x 1/8) (812121)
5	724005	1	Static-Free Brush
6	827894	2	Cup, Bearing
7	827896	1	Cover, Bearing
8	724006	1	Shaft, Brush
9	827898	1	Pulley, Brush
10	827903	4	Washer, Bellville
11	828145	2	Ring, Retaining
12	828588	2	Bearing

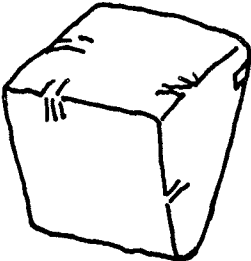
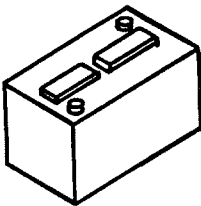
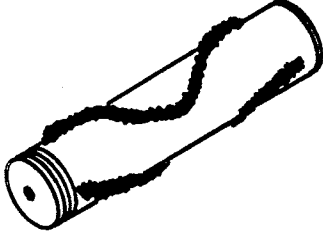
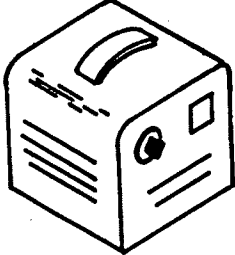


## PARTS LIST

### PARTS LIST

Item	Part No.	Qty.	Description
1	827881	1	Housing, Fan (bottom)
2	827883	1	Housing, Fan (top)
3	808724	1	Fan
4	801535	2	Bearing Ball
5	808733	2	Ring, Retaining
6	808734	1	Pulley, Fan
7	829183	1	Shaft, Bearing
8	808821	1	Key
10	829285	1	Spacer
13	710751	7	Screw (1/4 - 20 - 3/4) 811441)
14	711536	8	Lock Washer (1/4 STD) (811889)
15	711015	8	Screw, Set (#10 - 24 x 3/8) (812006)
18	827885	1	Gasket, Housing

## Optional Accessories

	<p>831641 829277</p> <p>Cloth Bag w/Zipper Paper Bag Liner</p>
	<p>956721 956723</p> <p>Battery, Wet Battery, Dry</p>
	<p>724007 724005</p> <p>Static-Free Brush Assembly Static-Free Brush Core</p>
	<p>957722 957721</p> <p>Charger 24V, 10AMP, 115V, 60HZ Charger 24V, 10AMP, 230V, 50HZ</p>

## 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.

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