



Electronic Service Manuals

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**Battery Burnisher
Multi-Flex® Pad Driver
PAMS® Dust
Control Option**

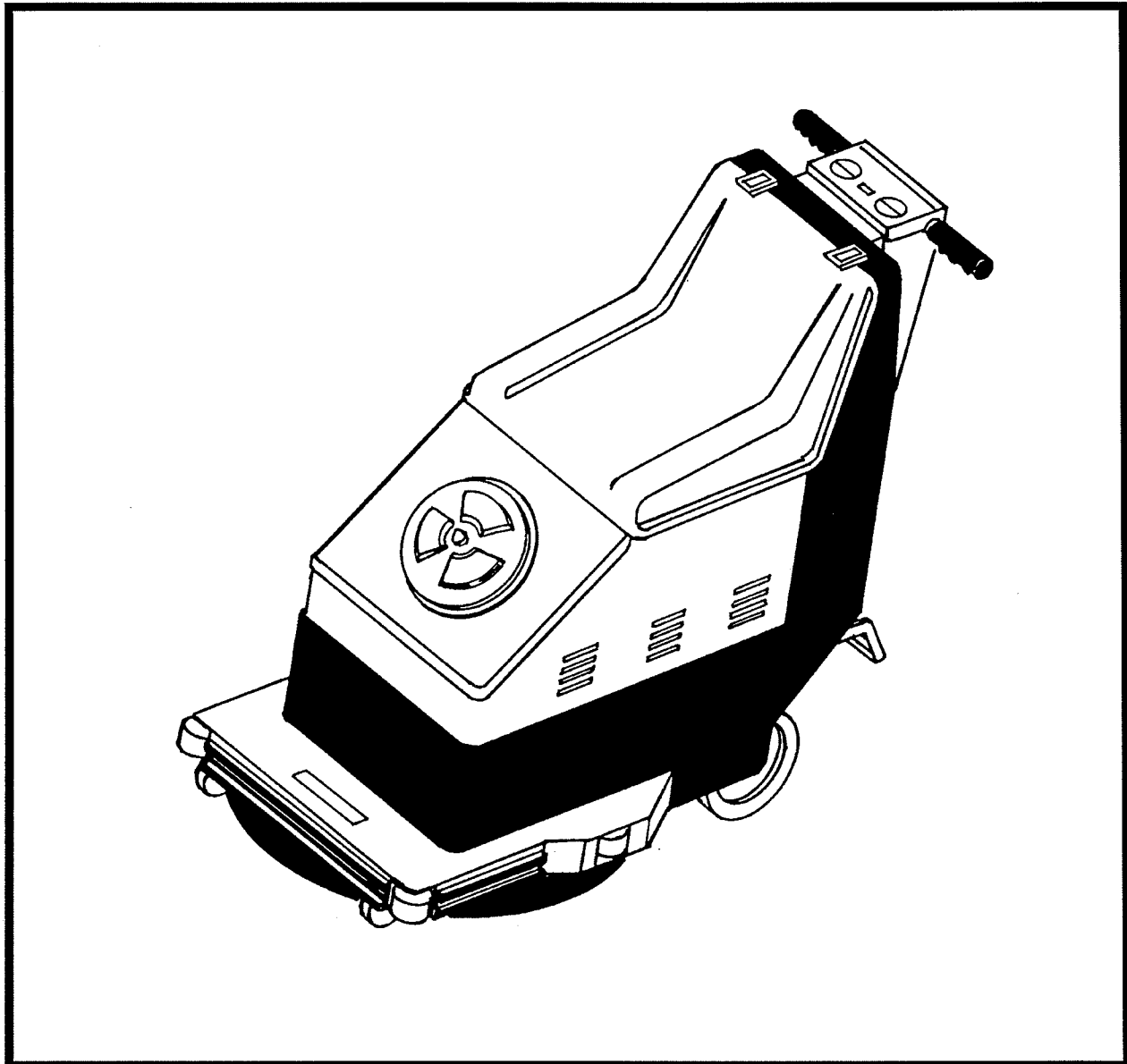
**Model:
M26000-00, 01**

OPERATION

SERVICE

PARTS

CARE



Revised 10/93

Minuteman®

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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.
- Master switch must be in the **OFF** position when charging batteries or during installation or removal of pads.
- During operation loose objects on the floor can become dangerous projectiles if struck by high speed pad. Special attention should be paid in removing or avoiding loose floor tile, electrical cables, telephone connection boxes.
- 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.
- Keep machine moving to reduce the risk of damaging floor finish and floor.
- Make sure master switch is turned "**OFF**" and battery connector is unplugged from machine 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.

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 with the battery cover removed completely.

Maintenance and repairs must be performed by authorized personnel.

SAVE THESE INSTRUCTIONS

OPERATING INSTRUCTIONS

INSPECTION

Carefully unpack and inspect your burnisher for shipping damage. Each unit is tested and thoroughly inspected before shipment, and any damage is the responsibility of the delivering carrier who should be notified immediately.

ELECTRICAL

This machine is battery operated and is designed to operate on 36 volts D.C. (3) 12 volt batteries.

BATTERIES

Burnishers are shipped without batteries.

Part No.	956709	12V 185AH	20 Hr. Rate	3 required
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We do not recommend mixing AMP hour capacities. Any alternate battery sets can be used if they equal physical size and capacity. See page 4 for service and installation.

OPERATION

After pad installation, turn master switch ON. Battery condition meter on control panel will indicate charge condition of batteries. Main switch indicator light will light up. Lower pad driver assembly by striking tee handle on rear of control panel upwards and inwards with your knee. Rotate handles forward to turn on pad driver assembly. Move forward in a straight line, check the reading on the operating range meter to insure you are in the GREEN ZONE. Adjust pad pressure as needed.

AFTER USE

Turn main switch OFF. Push down on foot pedal to raise pad. Machine can be cleaned with a mild detergent and a damp cloth. Batteries should be charged after each use or when battery condition indicator shows LOW CHARGE.

MAINTENANCE

Periodically remove battery from machine. Clean batteries, battery tray, and battery compartment with a solution of baking soda and water. Check all battery cables and wiring for signs of damage or wear. Replace as needed.

Grease front and rear wheel zerts once a month for best operation.

Motor bearings have lifetime lubrication.

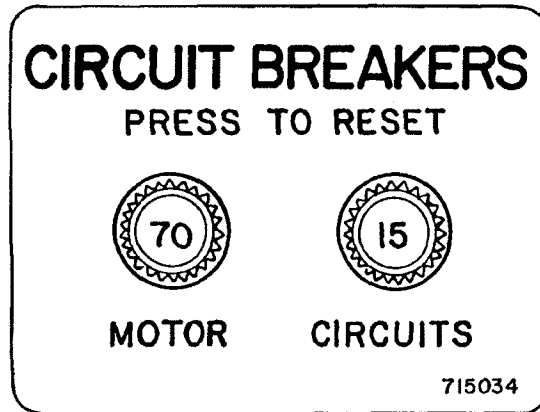
DUST CONTROL OPTION

Refer to page 8 for component identification. Dust control shroud item 35 is self adjusting. Replaceable filter item 69 should be cleaned or replaced after every 8 hours of use or sooner depending on dust conditions. Dust collection tray item 40 is removable and can be emptied of heavy debris when required.

REPLACING FLOOR SEAL STRIP

When floor seal shows signs of excessive wear, seal should be replaced. Edging can be removed by grasping seal at front leading edge and pulling off. To install new seal, see page 8 item 55, push edging on until ends meet. Floor seal edging should be pushed on and seated equally around perimeter of air shroud.

CIRCUIT BREAKER PROTECTION



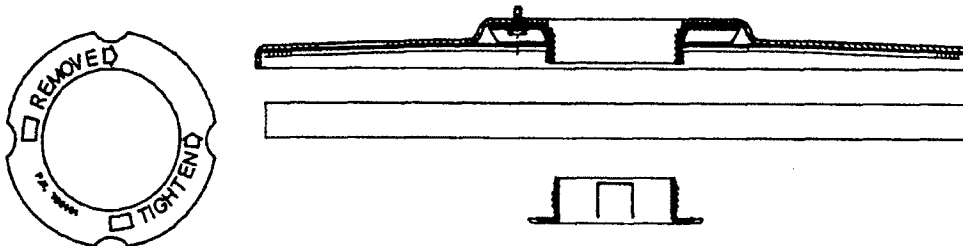
70 AMP circuit breaker protects pad drive motor from excessive overload conditions, i.e. excessive pad pressure, loaded pad.

15 AMP circuit breaker protects control circuits against possible electrical shorts.

If either circuit breaker trips, first determine the cause and correct the condition before resetting breakers.

PAD INSTALLATION

Master switch should be in the **OFF** position before installation and pad driver assembly in the **UP** position. Tilt machine back on its rear support. Remove center cup locking device by gripping on outer edges and turning clockwise. **NOTE:** Center cup cannot be pulled out it must be unscrewed. After removing used pad place new pad on pad driver assembly using outer flange of pad driver to center pad. Push centering locking cup through pad and into pad driver assembly. The ratchet teeth on the center cup will engage into the pad driver assembly and should be pushed in as far as possible. If further tightening is needed rotate center locking cup counter clockwise.



PAD PRESSURE ADJUSTMENTS

Pad pressure adjust knob is located on the left side of the control panel. Counterclockwise rotation increases pad pressure, the opposite rotation decreases. Different floors, floor conditions and pads produce varying pad load conditions. Ideal burnishing conditions are maintained while the operating range meter remains in the **Green Zone**. If meter reads in the **Red Zone**, decrease pad pressure. When the machine is operated in the **Red Zone** for a long period of time, motor overload will occur and the 60 AMP motor circuit will trip. If the motor circuit trips:

1. Check pad condition
2. Decrease pad pressure
3. Reset circuit breaker.

BATTERY SERVICE AND INSTALLATION

WARNING

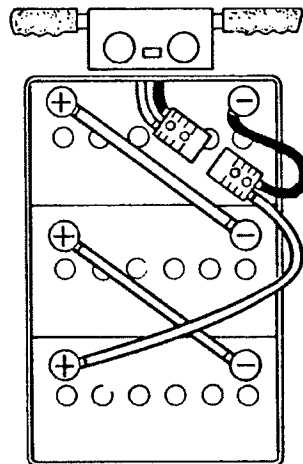
Battery acid can cause burns. When working on or around batteries, wear protective clothing and safety glasses. Remove metal jewelry. Do not lay tools or metal objects on top of batteries.

CHARGING OF BATTERIES

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 with the battery cover removed completely. Fluid levels should be checked before and after charging and maintained at the proper levels. If burnisher is not used for extended periods of time, batteries should be kept fully charged with a boost charge once a week.

BATTERY CABLE ROUTING

185 AH

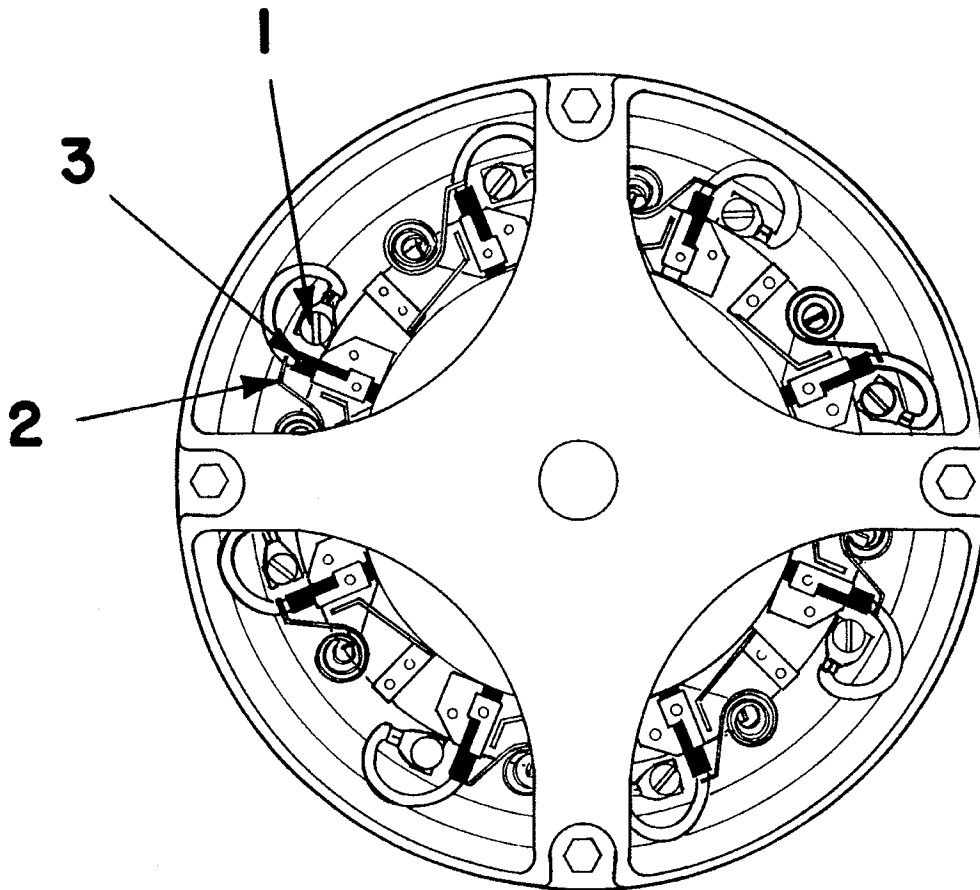


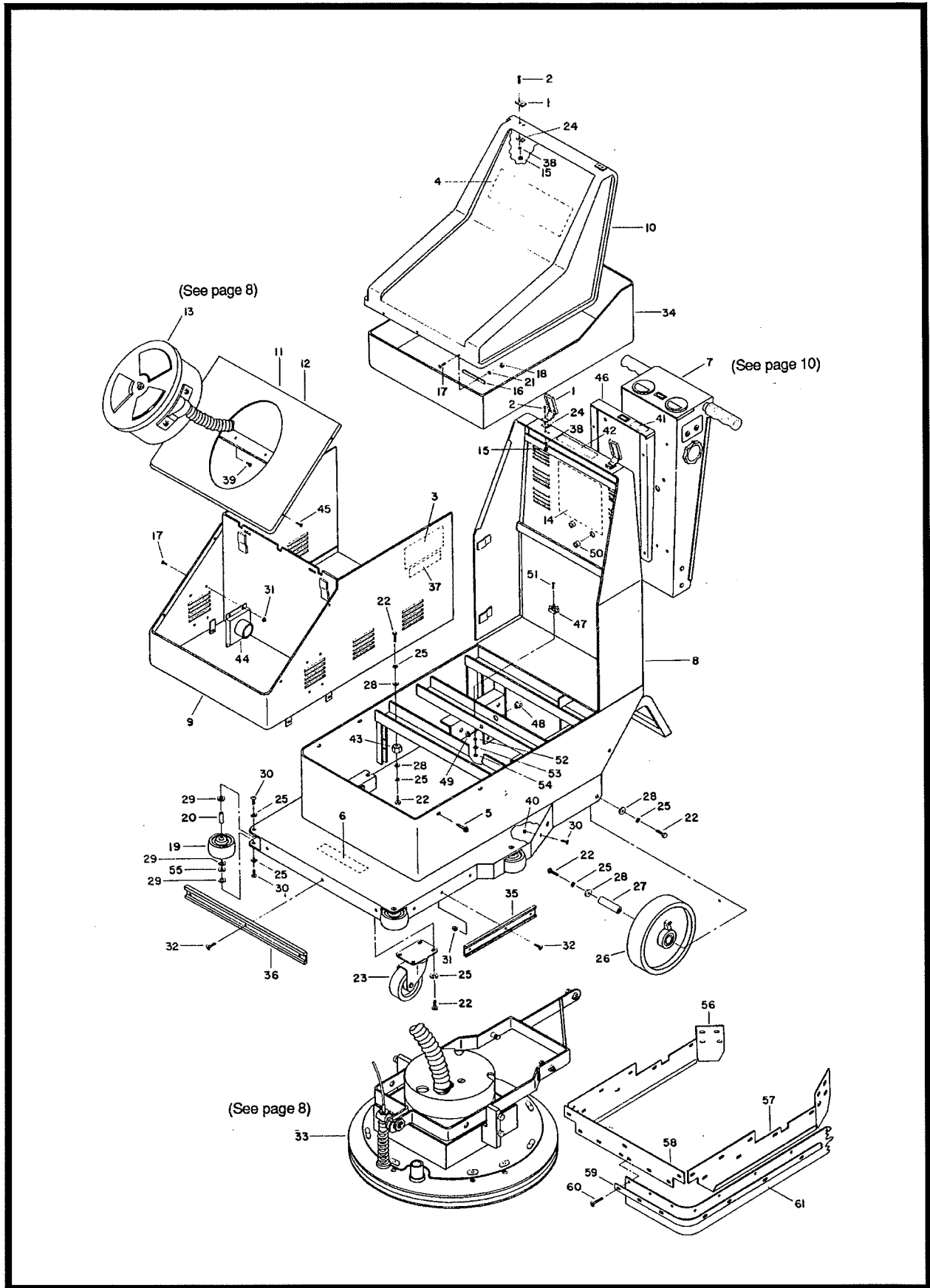
CARBON BRUSH REPLACEMENT

Design life carbon brushes is between 1800-2000 hours. Replace brushes if worn to 3/8" or less, broken or chipped. All carbon brushes should be replaced when motor is serviced. 8 required, PN 740211. Red indicator on control panel will glow red when carbon brush service is required.

CARBON BRUSH SERVICE

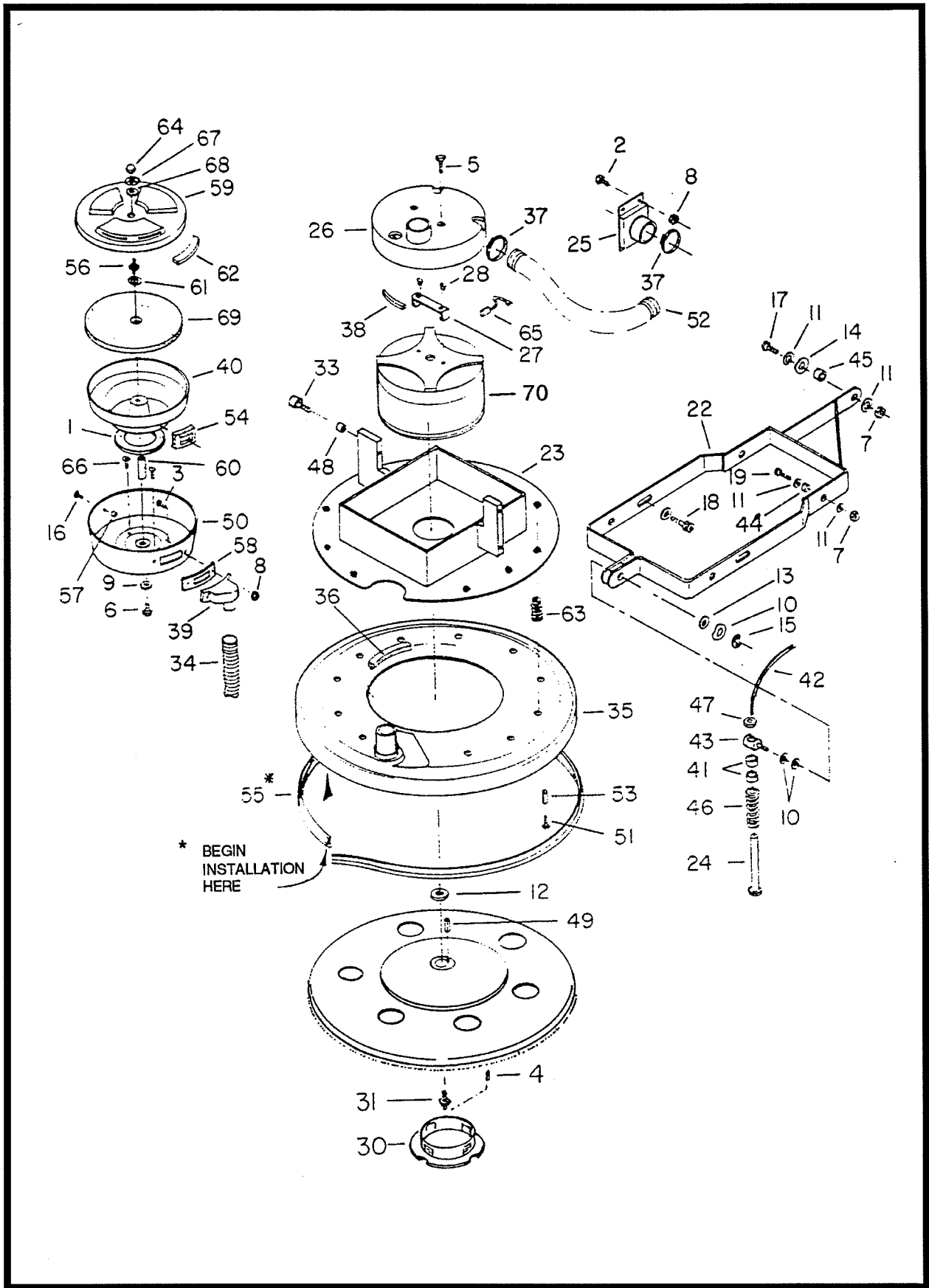
1. Disconnect batteries and remove from machine.
2. Remove motor electrical cables.
3. Remove motor from machine.
4. Remove top motor cover from motor (page 3 item 42).
5. Blow out top of motor with air line.
6. Loosen screw (1) and remove carbon brush lead.
7. Slide brush spring (2) off the back of carbon brush (3) and remove brush.
8. Reverse order for installation.



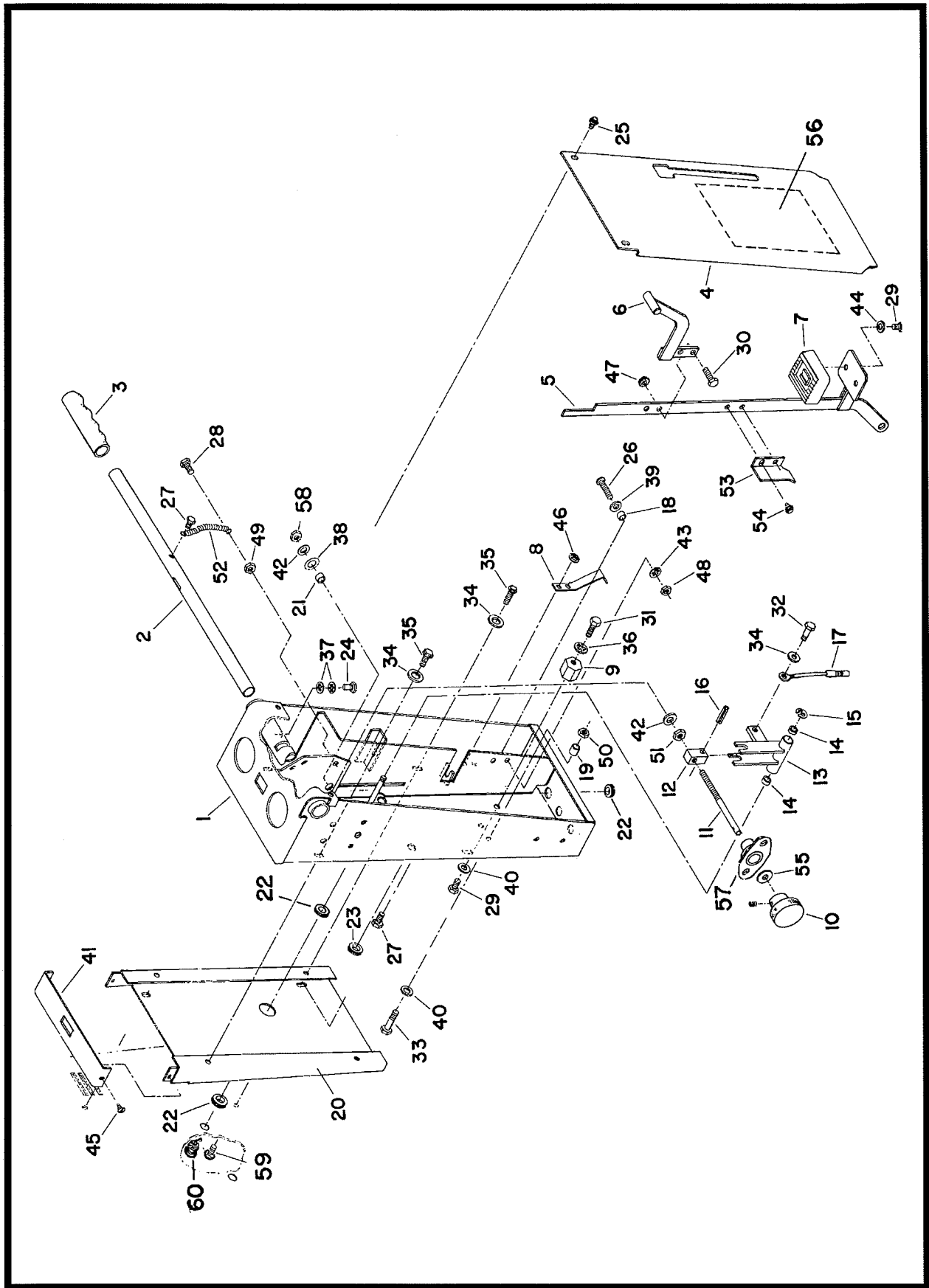


MAIN FRAME ASSEMBLY

ITEM NO.	PART NO.	QTY	DESCRIPTION
1	762368	2	Latch, Poly Black
2	710490	8	SCR-MC 4-40 x .50 ST PL
3	715039	2	Decal, Logo
4	715099	1	Decal, Logo
5	711109	4	SCR-ST-A 12 x .50 PL
6	715040	1	Decal, Caution
7			(See Page 10)
8	750103	1	Cabinet Assembly
9	750401	1	Battery Box
10	762366	1	Cover, Battery ABS
11	750105	1	D/C Nose Cover Assembly
12	762341	1	Cover, Front
13			(See Page 8)
14	715033	1	Decal, Battery Routing
15	711428	8	Nut-Hex 4-40
16	762367	1	Bkt, Mounting
17	710353	7	SCR-MC 10-32 x .37 ST PL
18	711310	3	Nut-Hex 6-32 ST PL
19	762331	4	Wheel, 2.5D x 1.28W x .38ID
20	762334	4	Axle, Wheel
21	711543	3	WSR-Helical #10
22	711202	12	BLT-HH 1/4-20 x .50 ST PL
23	762333	2	Caster, 3.5 Dia. w/Zert
24	762390	2	Shim, Latch
25	711544	12	WSR-Helical 1/4
26	762332	2	Wheel 8 x 2 x .75 w/bearing
27	762335	2	Axle, Wheel 2.56 x .75D
28	711505	4	WSR-Flat 1/4
29	711515	12	WSR-Flat .44 x .87 x .07
30	710177	8	SCR-MC 1/4-20 x .37 ST PL
31	711427	17	Nut-Flanged Wizz 10-32
32	710254	11	SCR-MC 10-32 x .50 ST PL
33			(See Page 8)
34	762369	1	Case, Battery Liner
35	760204	2	Side Bumper 9.75"
36	760205	1	Bumper Front 17"
37	715100	2	Decal PAMS™
38	711596	7	WSR-Internal Lock #4
39	710195	2	SCR-MC 5/16-18 x .50 ST PL
40	711425	4	Nut-Flanged Wizz 1/4-20
41	715067	1	Decal Brush Wear Indicator
42	715073	1	Decal, Caution CB Reset
43	740132	2	Insulator
44	750697	1	Hose Mounting Bracket
45	711104	4	SCR-ST-A 10 x .50
46	750696	1	Support Weldment
47	740036	1	Terminal Block
48	380032	1	Strain Relief, Round
49	760114	1	Grommet .25 x .50 x .37
50	740108	2	Strain Relief
51	710207	1	SCR-MC 6-32 x .87 ST PL
52	711501	1	WSR-Flat #6
53	711503	1	WSR-Flat #10
54	711301	1	Nut-Hex 6-32 ST PL
55	711523	4	WSR-Wave .37 x .68 x .02
56	760208	1	Pad Guard Skirt Left
57	760207	1	Pad Guard Skirt Right
58	760206	1	Retainer Mtg Bkt Front
59	762344	2	Retainer, Bumper
60	710255	24	SCR-MC 10-32 x .62 ST PL
61	762345	2	Skirt, Rubber

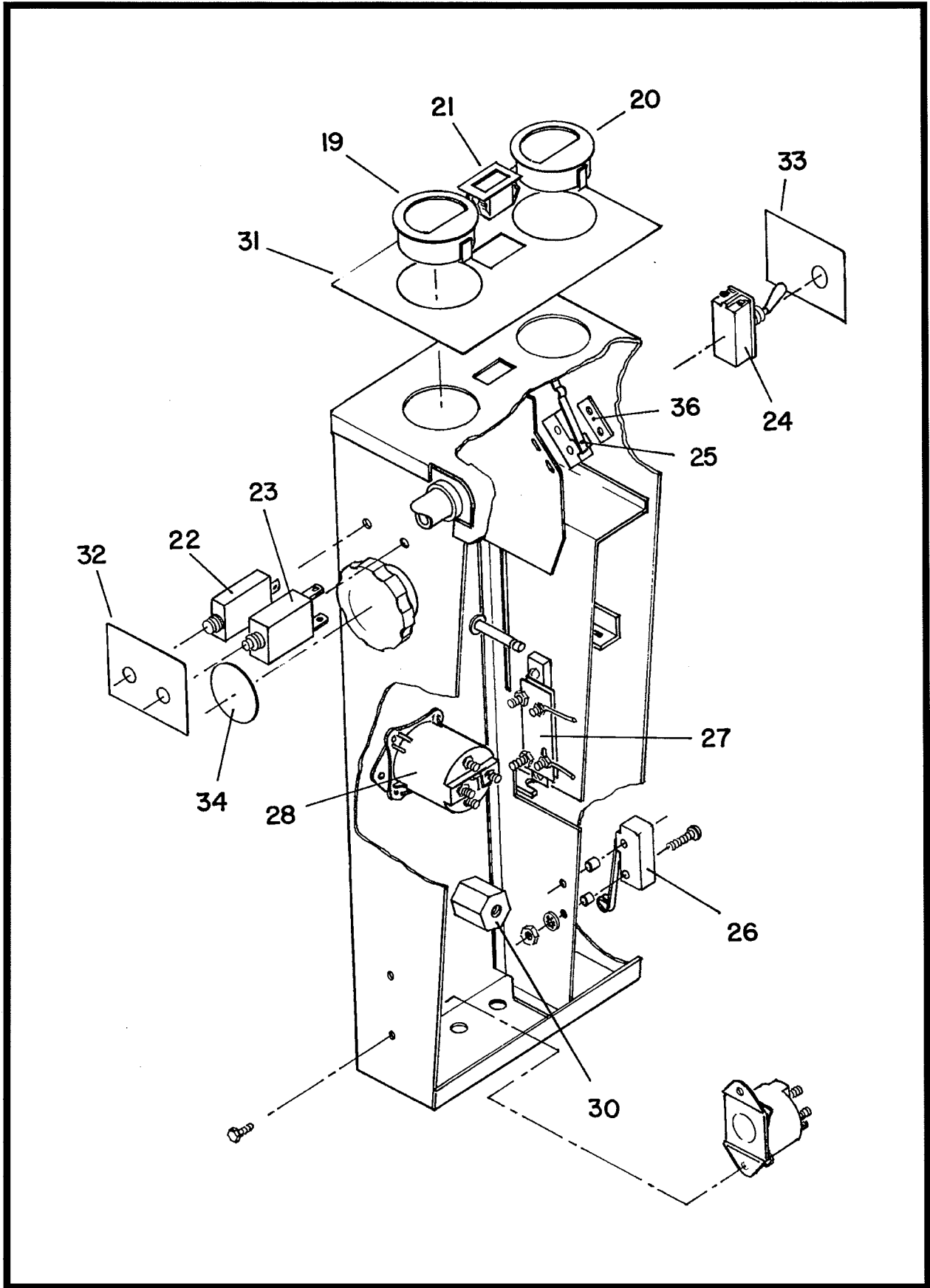


ITEM NO.	PART NO.	QTY	DESCRIPTION
1	380035	1	Gasket, 4.31 x 5.81 x .19
2	710353	4	SCR-MC 10-32 x .37 STPL
3	710555	2	SCR-MC 10-32 x .56 STPL
4	711001	1	SCR-SK 8-32 x .12
5	711124	2	SCR-ST-B 10 x .37 NI
6	711202	1	BLT-HH 1/4-20 x .50 STPL
7	711376	3	Nut-Nyloc 1/2-13
8	711427	6	Nut-Flanged Wizz 10-32
9	711505	1	WSR-Flat 1/4
10	711507	3	WSR-Flat .37 x 1.12 x .06
11	711509	6	WSR-Flat 1/2 STPL
12	711512	2	WSR-Flat .75 x 1.37 x .08
13	711523	1	WSR-Wave .37 x .68 x .02
14	711582	2	WSR-Wave .50 x .75 x .02
15	711717	1	Retaining Ring-E Ext. .37
16	711903	1	Rivet-Pop .19 x .25 AL
17	712010	1	BLT-HH 1/2-13 x 1.25 STPL
18	712041	2	BLT-SDER 1/4-20 x .44 x .37
19	712047	2	BLT-HH 1/2-13 x 1.50
20	740210	1	MTR 2.5 HP 36V 2200
21	750037	1	Hako Multi-Flex Pad Driver
22	750102	1	MTR Lift Bracket Assembly
23	750104	1	Motor & D/C Platform
24	750688	1	Spring Pin Assembly
25	750697	1	Hose Mtg. Bracket Weldment
26	760075	1	Cover, Motor Cooling Imp. 2.5
27	760076	1	Bracket Mounting (760075)
28	760085	2	Insert Plastic (760076)
29	760098	1	Locking Nut
30	760401	1	Center Cup, New Style
31	760101PLT	1	THD Drive Pin 3/8 x 24
32	760105	1	O-Ring .375 x .625 x .125
33	760183	4	Cam Follower Bearing
34	760196	1	Hose Battery D/C
35	760203	1	Vac Shroud Battery D/C
36	760235	1	Air Seal Foam 1 x 1 x 34"
37	760859	3	Camp, Hose
38	762001	1	Edging Motor Cooling (762365)
39	762131MCH	1	Hose Fitting 2300
40	762132	1	Dust CollectionTray
41	762146PLT	2	Bushing Zinc Plated
42	762253	1	Cable Assembly Pressure Adj.
43	762258	1	Guide Pin Adjustment Pres.
44	762337	2	Bushing .50 x .62 x .41
45	762338	1	Bushing .50 x .62 x .21
46	762339	1	Spring, Compression
47	711307	1	Nut 10-24
48	762371	4	Bushing .260 x .50 x .37
49	762375	1	Key, .187 x sq. x .78
50	762396	1	Filter Housing
51	762397	11	Leveler Bolt
52	762398	1	Hose Rubber Flex 2 x 13
53	762399	11	Bushing .25 x .37 x 1
54	762404	1	Filter Gasket
55	762408PKG	1	Floor Seal, Pkg. of 6
56	762409PLT	1	THD Pin Retainer Zinc PL
57	762410	1	Bushing .196 x .312 x .265
58	762411	1	Gasket Dust Collection
59	762415	1	Filter Housing Cover
60	762416PLT	1	Spacer Threaded Plated
61	800181	1	O-Ring Retainer Screw
62	805042	1	Gasket
63	809857	11	Spring Conical
64	833214	1	Knob 3-Sided 1/4 20 INSE
65	740211	8	Brush Carbon Replacement
66	710923	2	SCR-SC 5/16 x 18 x .62
67	711524	1	WSR-Wave .52 x .87 x .01
68	711594	1	WSR-Flat .56 x .88 x .03
69	762403	1	Filter Pad 9", Case of 5
70	740210	1	Motor 2.5 HP 36V DC

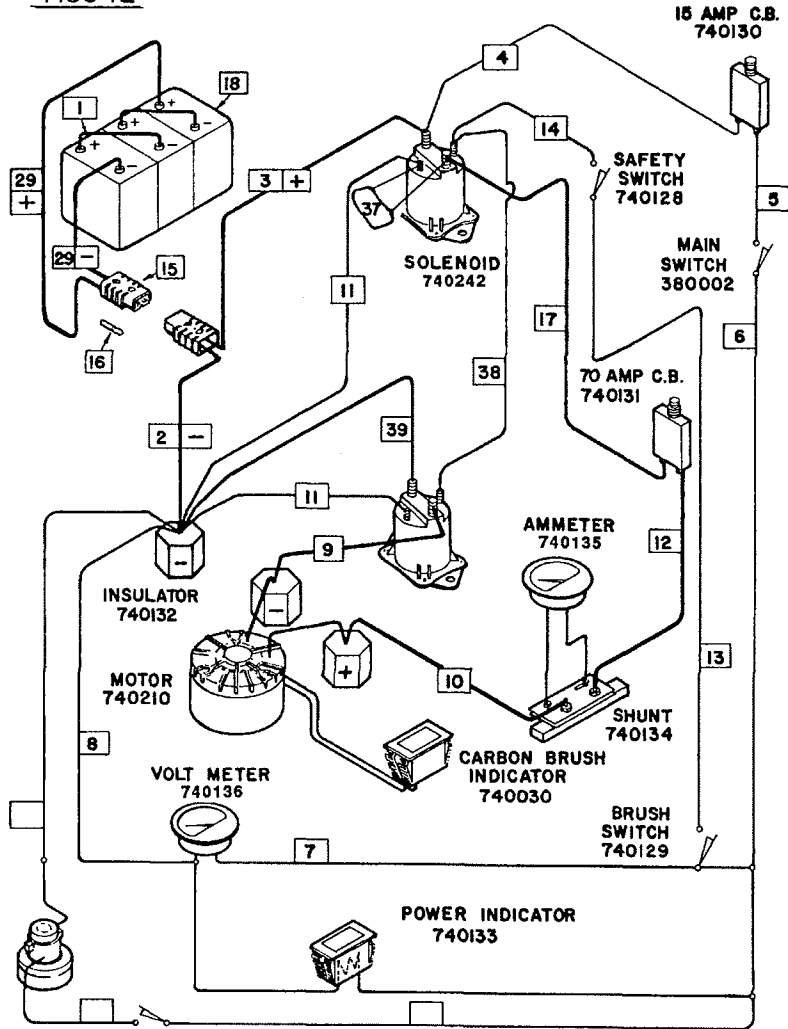


HANDLE ASSEMBLY

ITEM NO.	PART NO.	QUANTITY	DESCRIPTION	ITEM NO.	PART NO.	QUANTITY	DESCRIPTION
1	750678	1	Wldment, Control Box	31	711208	1	BLT-HH 1/4-20x1 Brass
2	762279	1	Tube, Handle	32	712041	1	BLT, SDER 1/4-20x.44x.37
3	762086	2	Grip, Handle	33	710387	2	SCR-MC 1/4-20x1.75 ST PL
4	762280	1	Cover, Rear Control Box	34	711506	6	WSR, Flat 5/16 ST PL
5	750107	1	Pedal Bkt Asy Weldment	35	712042	6	Bolt HH 5/16-18x.62 SP
6	750682	1	Weldment, Handle Asy	36	711554	1	WSR-Lock 1/4 ID ST PL
7	762294MCH	1	Pedal	37	711558	4	WSR, LOC INT 5/16 ID
8	762296	1	Bkt, Spring Steel	38	711525	1	WSR, Wave 5/8-.65x.86x.01
9	740132	1	Insulator (Glastic)	39	711501	2	WSR, Flat #6
10	762284	1	Knob, Adjustment	40	711505	2	WSR, Flat 1/4
11	762283	1	Rod, Adjustment	41	760074	1	Cover, Light Mounting
12	762282	1	Block, Adjustment	42	711515	2	WSR Flat .44x.87x.07
13	750679	1	Asy, Pivot Bracket	43	711551	2	WSR, Intrnl Tooth Loc #6
14	762281	2	Bushing .371Dx.500Dx.25L	44	711544	5	WSR, Helical SPR LOC 1/4
15	711717	1	Ring, Snap .37 E Type Ext	45	711102	2	SCR-ST-A 8x.50 NI
16	711667	1	Rollpin .312x1.50	46	711426	2	Flanged Wizz Nut 8/32
17	762253	1	Cable Asy Pressure Adj	47	711425	2	Flanged Wizz Nut 1/4 20
18	380039	2	Bushing .19x.31x.31	48	711301	2	Nut-Hex 6-32 St PL
19	762297	2	Bushing .25x.37x.50	49	711427	1	Flanged Wizz Nut 10/32
20	750696	1	Support Weldment	50	711316	2	Nut-Hex 1/4-20 ST PL
21	762295	1	Bushing .37x.62x.19	51	711393	1	Nut-Hex Jam 3/8-24 ST PL
22	762386	2	Grommet .37x.06x.62	52	762084	1	Spring
23	762299	4	Grommet .50x.09x.75	53	762385	1	BKT, SW Activator Safety
24	712046	1	BLT Mched 5/16x18	54	712050	2	SCR, IHW 10/32x5/16
25	711104	2	SCR-ST-A 10x.50	55	711519	1	Washer
26	710008	2	SCR-MC 6/32x1.25 ST PL	56	715042	1	Decal, Wiring Diagram
27	710328	3	SCR-MC 8-32x.37 ST PL	57	760035	1	Bearing, Flanged Mounted
28	710331	1	SCR-MC 8-32x.75 ST PL	58	711384	1	Nut, Loc 3/8-24 Fin Jam
29	711202	4	BLT-HH 1/4-20x.50 ST PL	59	710923	2	SCR-SC 5/16-18x.62 ST PL
30	711207	2	BLT-HH 1/4-20x1 ST PL	60	740108	2	Heyco Bushing



WIRING DIAGRAM
715042



ITEM NO.	PART NO.	QTY	DESCRIPTION	ITEM NO.	PART NO.	QTY	DESCRIPTION
1	740120	2	Asy, Cable Battery #4x15	21	740133	1	Light, Indicator 36V DC
2	740045	1	Cable Asy Neg	22	740131	1	Breaker, Circu 70A Motor
3	740046	1	Cable Asy Pos	23	740130	1	Breaker, Circuit 15A
4	740138	1	Asy, Wire #14x9	24	380002	1	Switch, Toggle 1.5 HP
5	740139	1	Asy, Wire #14x9	25	740129	1	Switch, Snap SPST NC
6	740140	1	Asy, Wire #14x8	26	740128	1	Switch, Snap SPST NC
7	740141	1	Asy, Wire #14x6	27	740134	1	Shunt 100MV x 100 AMP
8	740143	1	Asy, Wire #14x20	28	740242	2	Contactors SBC-4301B 36V
9	740121	1	Asy, Wire #6x27.00 (9)	29	750070	1	Cable Asy w/Plug
10	740122	1	Asy, Cable #6x31.50	30	740132	1	Insulator (Glastic)
11	740144	2	Asy, Wire #14x6	31	715037	1	Decal, Operation/Instruc
12	740124	1	Asy, Cable #4x12.75	32	715034	1	Decal, Circuit Breaker
13	740145	1	Asy, Wire #14x17.50	33	715036	1	Decal, Main Switch
14	740146	1	Asy, Wire #14x12	34	715038	1	Decal, Pad Pressure
15	740147	1	Plug Only SB175	36	711430	1	Nut-Tinnerman 6-32
16	740035	2	Terminal for Plug	37	750041	1	Capacitor Discharge Asy
17	740123	1	Asy, Cable #4x12.75	38	740041	1	Wire Asy 14x11
18	956709	3	Battery 12V 185AH A Post	39	740171	1	Cable Asy Jumper 4"
19	740136	1	Meter, Volt 22V 45V	***	740036	2	Terminal Block 6E/2DS
20	740135	1	Meter, 100 AMP DC	***	740049	1	Cable 16-2 48"

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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