

Minuteman[®]
Excellence Meets Clean



**Parts and Instruction Manual
M2400 Electric Burnisher
W/ Dust Control Option**

This manual is furnished with each new **MINUTEMAN M2400**. This provides the necessary operating and preventive maintenance instructions. Operators must read and understand this manual before operating or servicing this machine.

This machine was designed to give you excellent performance and efficiency. For best results and minimal cost, please follow the general guidelines below:

- Operate the machine with reasonable care.
- Follow the manufacturers suggested maintenance instructions as provided in this booklet.
- Use original Minuteman supplied parts.

TECHNICAL SPECIFICATIONS

Model	M2400		
Model No.	M17150-00, 01, 04, 05 M24000-00, 02, 04, 06 M24000-01, 03, 05, 07 M20150-01, 02, 03, 04 M17150-01CE, 05CE M20150-02CE, 04CE M24000-01CE, 03CE, 05CE, 07CE		
Brush Speed	15000 rpm	2400 rpm	1500-2400 rpm
Brush Diameter	17" (43cm) or 20" (51cm)	20" (51cm)	20" (51cm)
Horse Power	1½ hp	1½ hp	1½ hp
Voltage	115V or 240V	115V or 240V	115V or 240V
Cable Length	50' (15m) 14-3	50' (15m) 14-3	50' (15m) 14-3
PAMS® Dust			
Control	Option	Option	Option
Wheels	6" (15cm)	6" (15cm)	6" (15cm)
Weight	84 lbs (38 kg)	84 lbs (38 kg)	84 lbs (38 kg)
Pad Housing	Cast Aluminum	Cast Aluminum	Cast Aluminum
Handle	Dual switch w/ indicator light	Dual switch w/ indicator light	Dual switch w/ indicator light
Circuit Breaker	15 amp	15amp	15amp
Carbon Brush Light	Yes	Yes	Yes
Pad Pressure	Adjustable	Adjustable	Adjustable

EC Declaration of Conformity

according to Directives 72/23, 89/392, and 89/336

We, Minuteman International Incorporated, of 111 South Rohlwing Road Addison Illinois 60101 USA, declare under our sole responsibility that the products M17150-01CE,05CE; M20150-02CE,04CE; and M24000-01CE,03CE,05CE,07CE Commercial Floor Burnishers to which this declaration relates corresponds to the relevant requirements of the EC Directives 72/23, 89/392 and 89/336. The following standards were used to determine compliance with the Directives: EN 292, EN 294, EN 811, EN 55014, EN 55104, EN60335-1, and IEC 335-2-67.

SOUND		VIBRATION												
77 dB Operator	70dB At 3m	3.0 m/s² At Operators Handle												
Tests were conducted on 12/18/96 with calibrated sound and vibration equipment under the conditions noted below: <table style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 33%;">General Condition:</td> <td style="width: 33%;">Indoors</td> <td style="width: 33%;">Wind:</td> <td style="width: 33%;">0 km/hr</td> </tr> <tr> <td>Temperature:</td> <td>25°C</td> <td>Humidity:</td> <td>70%</td> </tr> <tr> <td>Barometric Pressure:</td> <td>29.5</td> <td></td> <td></td> </tr> </table>			General Condition:	Indoors	Wind:	0 km/hr	Temperature:	25°C	Humidity:	70%	Barometric Pressure:	29.5		
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Temperature:	25°C	Humidity:	70%											
Barometric Pressure:	29.5													



 Jeff Pollack, Standards Engineer

6/30/2003

 Date

Form: EC020 RevB

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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, electric shock, or injury:

- Do not leave appliance when plugged in. Unplug from outlet when not in use and before servicing.

WARNING

To reduce the risk of electric shock - Do not expose to rain. Store indoors.

- Never allow children or untrained adults to operate this equipment.
- Keep the area of operation clear of all persons, particularly small children, and pets. Keep bystanders at least 25 feet away from the area of operation.
- Use only as described in this manual. Use only manufacturer's recommended attachments.
- Do not use with damaged cord or plug. 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 pull or carry by cord, use cord as a handle, close a door on cord, or pull cord around sharp edges or corners. Do not run appliance over cord. Keep cord away from heated surfaces.
- Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
- Do not handle plug or appliance with wet hands.
- 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 they may be present.
- Connect to a properly grounded outlet only. See grounding instructions.

SAVE THESE INSTRUCTIONS

INSPECTION

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

WARNING

- Read Instruction Manual before operating this piece of equipment.
- To reduce the risk of fire use only commercially available floor cleaners and waxes intended for machine application.
- To reduce the risk of electrical shock, do not expose to rain. Store indoors.
- Electrical motors and components can cause an explosion when operated near volatile materials and vapors. Do not use this machine near flammable materials such as solvents, thinners, fuels, grain dust, etc.
- Risk of explosion. Floor sanding can result in an explosive mixture of fine dust and air.

Use floor-sanding machine only in a well-ventilated area free from flame or match.

ELECTRICAL - 115 Volt - M24000-00, 02, 04, 06; M17150-00, 04; M20150-01, -03

This floor machine is designed to operate on a standard 15 amp, 120 volt, 60 hz, AC circuit. Voltages below 105 volt AC or above 125 volts AC could cause serious damage to the motor.

ELECTRICAL - 240 Volt - M24000-01, 03, 05, 07; M17150-01, 05; M20150-02, 04;

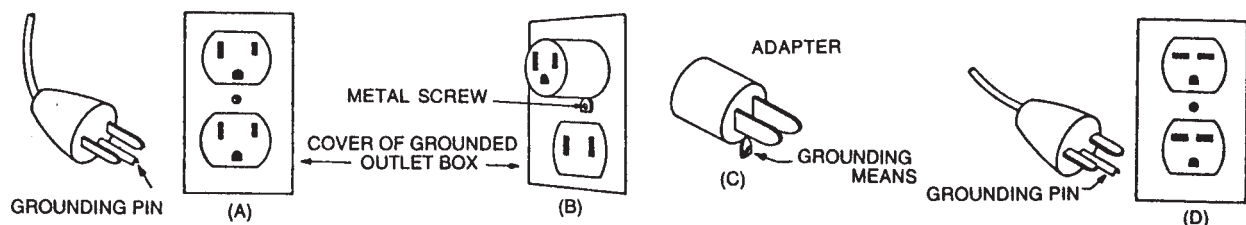
M24000-01CE, 03CE, 05CE, 07CE; M17150-01CE, 05CE; M20150-02CE, -04CE

This machine is designed to operate on a standard 10 amp, 230 volt, 50 hz, AC circuit.

GROUNDING INSTRUCTIONS

- This floor finishing machine should be grounded while in use to protect the operator from electric shock. The machine is equipped with a three-conductor cord and a three-prong grounding type attachment plug to fit the proper grounding type receptacle. The green (or green and yellow) conductor in the cord is the grounding wire. Never connect this wire to other than the grounding blade.
- Floor Finishing Machines Rated Less Than 150 Volts - If the machine is provided with an attachment plug as shown in Sketch A it is intended for use on a 120-volt (nominal) circuit. If a properly grounded receptacle as shown in Sketch A is not available, an adapter as shown in Sketch C is available and should be installed as shown in Sketch B if the outlet box that houses the receptacle is grounded. Be sure to fasten the grounding tab with the faceplate screw.

ADAPTER (Not applicable in Canada)



POUR USAGE COMMERCIAL SEULEMENT MODE D'EMPLOI SECURITAIRE



Lorsque l'on utilise un appareil électrique, des précautions de base doivent toujours être suivies telles que:

BIEN LIRE LE MODES D'EMPLOI AVANT USAGE

AVERTISSEMENT - Pour réduire les risques de feu, choc électrique ou blessure:

- Ne pas quitter l'appareil lorsque la prise de courant est branchée. Débrancher de la sortie électrique lorsque la machine n'est pas en usage ou pour en faire le service.

AVERTISSEMENT

Pour réduire le risque de choc électrique - Ne pas exposer à la pluie - Entreposer à l'intérieur.

- Ne jamais laisser des enfants ou des adultes inexpérimentés faire fonctionner cet appareil.
- Garder la zone de fonctionnement libre de toute personne, particulièrement les petits enfants et les animaux. Garder les spectateurs à une distance d'au moins 7,6 mètres (25 pieds) de la zone de fonctionnement.
- Utiliser tel que prescrit dans le livre d'opération et seulement avec les attachements recommandés par le fabricant.
- Ne pas s'en servir avec corde ou prise de courant endommagée. Si l'appareil ne fonctionne pas ou a été échappé, endommagé, entreposé à l'extérieur ou déposé dans l'eau, l'appareil devrait être envoyé à un département de service pour inspection.
- Ne pas tirer ou porter par le câble ou se servir du câble comme poignée. Ne pas fermer de portes sur le câble ou tirer le câble près d'objets pointus. Ne pas conduire l'appareil écrasant le câble et soyez certain de protéger le câble entre toutes surfaces de chauffage.
- Ne pas débrancher en se servant du câble. Pour débrancher tirer sur la prise et non sur le câble.
- Ne pas manipuler la prise ou l'appareil avec les mains mouillées.
- Ne placer aucun objet dans la sortie et ne pas s'en servir si la sortie est obstruée. Eliminer toute poussière, maillon, cheveux ou quoique ce soit qui pourrait réduire le mouvement d'air.
- N'exposer aucun cheveux, vêtement, doigts ou autres aux ouvertures de l'appareil.
- Ne rien ramasser de ce qui brûle ou de fumée tels que cigarettes, allumettes ou cendres en feu.
- Ne pas employer sans filtre de poussière ou autre en position.
- Fermer tous les contrôles après utilisation.
- Soyez très prudent lors du nettoyage d'escaliers.
- Ne pas ramasser de liquide inflammable ou combustible tel que gazoline et ne pas utiliser dans les endroits ou ces derniers pourraient être présent.
- Brancher dans une prise avec une prise de terre seulement. Voir références pour prise de terre.

CONSERVEZ CES RECOMMANDATIONS DE MODE D'EMPLOI

INSPECTION

Déballer soigneusement en constatant s'il y a lieu tout dommage apparent. Chacune des pièces d'équipement est entièrement inspectée à l'usine et tout dommage de transit est la responsabilité de la compagnie de transport qui devrait être prévenue immédiatement.

AVERTISSEMENT

- S.V.P. lire le manuel d'instruction avant d'opérer cette pièce d'équipement.
- Pour réduire le risque d'incendie, se servir de ces appareils uniquement pour usage commercial et avec les produits contruits spécifiquement pour usage avec ces appareils.
- Les moteurs électriques peuvent être la cause d'explosion si ils sont utilisés près de matériaux ou de vapeurs explosives. Ne pas opérer près de matériaux inflammables tels que solvant, essence, poussière de grain etc.

ELECTRICITE - 115 Volt Modèles M17120-00, 01, 02 M20120-01, 02, 03

Ces appareils sont conçus pour opérer sur un circuit standard de 15 amp, 120 volt, 60 hz, circuit AC. Tout voltage en bas de 105 volt AC ou au-delà de 125 volts AC pourrait occasionner des dommages au moteur.

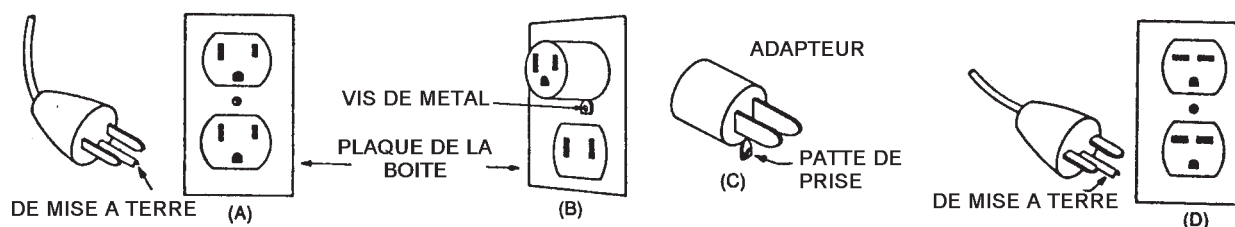
ELECTRICITE - 230 Volt Modèles M17240-01, 02, 03 M20240-01, 02, 03

Ces appareils sont conçus pour opérer sur un circuit standard AC de 16 amp, fusible type L 230 volt, 50 hz. Tout voltage en bas de 200 volt AC ou au-delà de 250 volts AC pourrait occasionner des dommages au moteur.

INSTRUCTIONS POUR PRISE DE TERRE

- Ces appareils doivent posséder une prise de mise à terre pour protéger l'opérateur contre les chocs électriques. Cet appareil est muni d'une corde électrique à trois fils et d'un receptacle à trois fourchons et prise de mise à terre pour s'accorder dans un receptacle avec prise de mise à terre réciproque. Le fil conducteur vert (ou vert et jaune) de la corde électrique est le fil designé comme prise de mise à terre. Ne jamais relier ce fil à un fil autre que celui de prise de mise à terre.
- Appareils estimés à moins de 150 volts - Si ces appareils offrent une prise de courant tel que dans le croquis A, ils sont destinés pour utilisation avec un circuit de 120 volts. Si un receptacle avec prise de mise à terre n'est pas disponible tel que montré au croquis A, un adapteur tel que vu au croquis C est disponible et devrait être installé tel que montré au croquis B si la boîte électrique est munie d'une prise de mise à terre. Assurez-vous de bien relier la patte de prise avec la vis.
- Appareils destinés à plus de 150 volts - Si ces appareils offrent une prise de courant tel que démontré au croquis D, ils doivent être utilisés avec un circuit de 240 volts. Aucun adapteur n'est disponible pour cette prise.

ADAPTEUR (Non requis au Canada)



Model 2400 Burnisher Operating Instructions



Install 20 Inch Pad inside pad driver.
Hand Tighten center clip or push straight in.

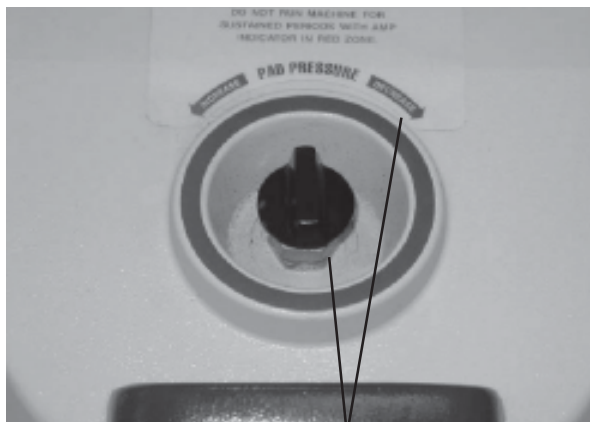


Hand Tighten or push in. DO NOT FORCE.

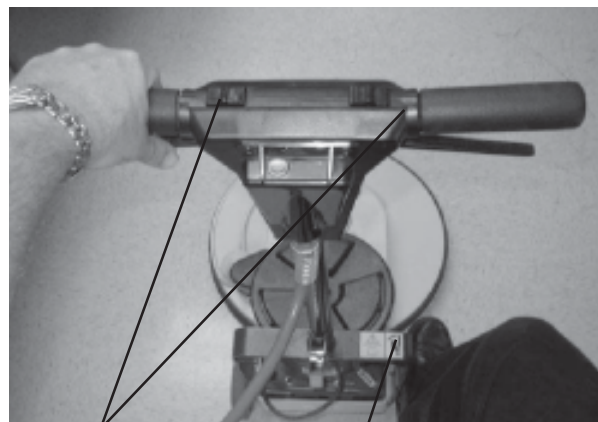
1. Install the polishing pad on to the pad driver. Make sure your installing a true 20" polishing type pad. Then install the locking centering device cup by lining up the threads on the pad driver and the cup and push straight down, or just screw the cup device onto the pad driver. Hand tighten the cup to the pad driver. Do not force the centering cup if cross-threaded. Because of patented centering cup Just hit the high side of the cup with the palm of your hand to straighten out the cross threading problem. To remove the centering cup hold onto it with one hand and with the other hand spin the pad driver in the opposite direction until the cup is removed.

2. Plug the machine into a standard 115-volt grounded wall outlet. If an extension cord is required, it must be 3-wire cord. The burnisher is equipped with a 3 wire, 14-gauge cord, 50 feet long. If the extension cord to be used is more than 25 feet a larger wire size cord should be used, preferably a 12- gauge cord no longer than 50 feet long. Failure to use a larger size cord may result in reduced performance and motor overheating. After the cord is properly plugged into the outlet a red light will illuminate on the rear of the operators handle telling the operator you now have power to the machine.

3. After the pad is on the machine stand the burnisher up straight on top of the pad so it is flat on the floor. If you are starting with a new pad, decrease the pad pressure adjustment centering wheel as far as it can go. This will raise your pad to the highest position. Next by stepping onto the foot locking lever, located on the right side of the machine, push downward with your foot to release the handle. While the handle is lowered down take one of your thumbs and pull either safety interlocking switches, located at the top of the handle, with you fingers grab the lever switch and pull at the same time. CAUTION: This machine has a high starting torque. Have both hands on the control handle when starting to ensure complete control.



Pad Pressure Adjustment Knob. When using new pad, turn



Safety Interlocking switches.

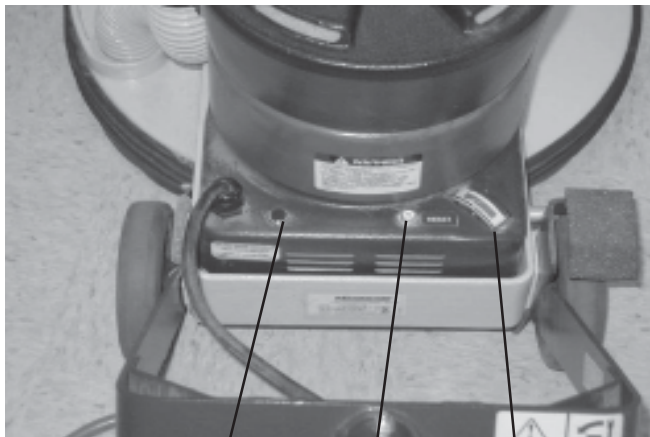
Model 2400 Burnisher Operating Instructions

4. After the machine has started the pad pressure gauge, located at the backside near the rear of the base, should be reading at the top of the white zone, or telling the operator the pad is off the floor. Now, to increase the pad pressure keep the burnisher running with one hand and pushing the machine in a back and forth motion. With the other hand turn the center adjustment knob, in the center of the base, to the increase clockwise position until the gauge gets to the 15 amp red line. After the meter needle reads between the lower edge of the red zone, or 15 amps, you have reached the proper polishing pressure. If the burnisher runs over a high spot, the gauge needle will go into the top of the red zone, but should fall back into the safety-working zone as you go along. As the pad is being used more pad pressure will be required just by running the machine back and forth and screwing the adjustment knob to the increase position until the needle reaches 15 amps, or the bottom of the red safety working zone. If the operator works too long in the red zone the machine will trip the thermo-reset breaker located at the rear base of the machine. To prevent it from happening again adjust the pad pressure screw knob counter clockwise to decrease pad pressure.



Pad Pressure Gauge. Needle will “peg” then drop to its normal pressure. Adjust pad pressure knob so pad pressure gauge reads at the 15 amp red line. Be sure to keep unit moving to prevent damage to the floor.

5. The machine should always be started with the pad pressure fully decreased when using a new pad, and then adjusted to the correct pad pressure.
6. Burnish with the machine in a straight line. The pace of the machine should be determined by the condition of the floor. Normally the machine can be operated at a slow to medium walking pace. Overlap with the pad driver approximately 2” to 3” when making a pass. For the ease of use, start nearest the wall outlet and work away from this point. **CAUTION:** Do not let the machine sit in one spot for more than 5 to 10 seconds. Due to the high RPM’s of this machine and the heat it develops, sitting in one spot longer than this may damage the floor finish and possible the floor itself.
7. The machine employs an adjustable spring loaded center caster directly in the center of the pad driver. This caster is preset at the factory to have the machine operate at 14.0 to 14.5 amps. If the machine circuit breaker trips, or the wall circuit breaker trips, adjust the center wheel caster to “decrease” the pad pressure on the floor. If the machine is not properly burnishing the floor with full pad contact, adjust the caster to “increase” the pad pressure on the floor.
8. This machine employs a motor carbon brush wear indicator light located on the rear base of the machine. This light will illuminate when the brushes are worn to the point where there is approximately 250 hours remaining. The carbon brushes should be replaced shortly after this light indicates excessive wear.



Carbon Brush Wear Indicator Light
Circuit Breaker
Pad Pressure Gauge

Preventive Maintenance

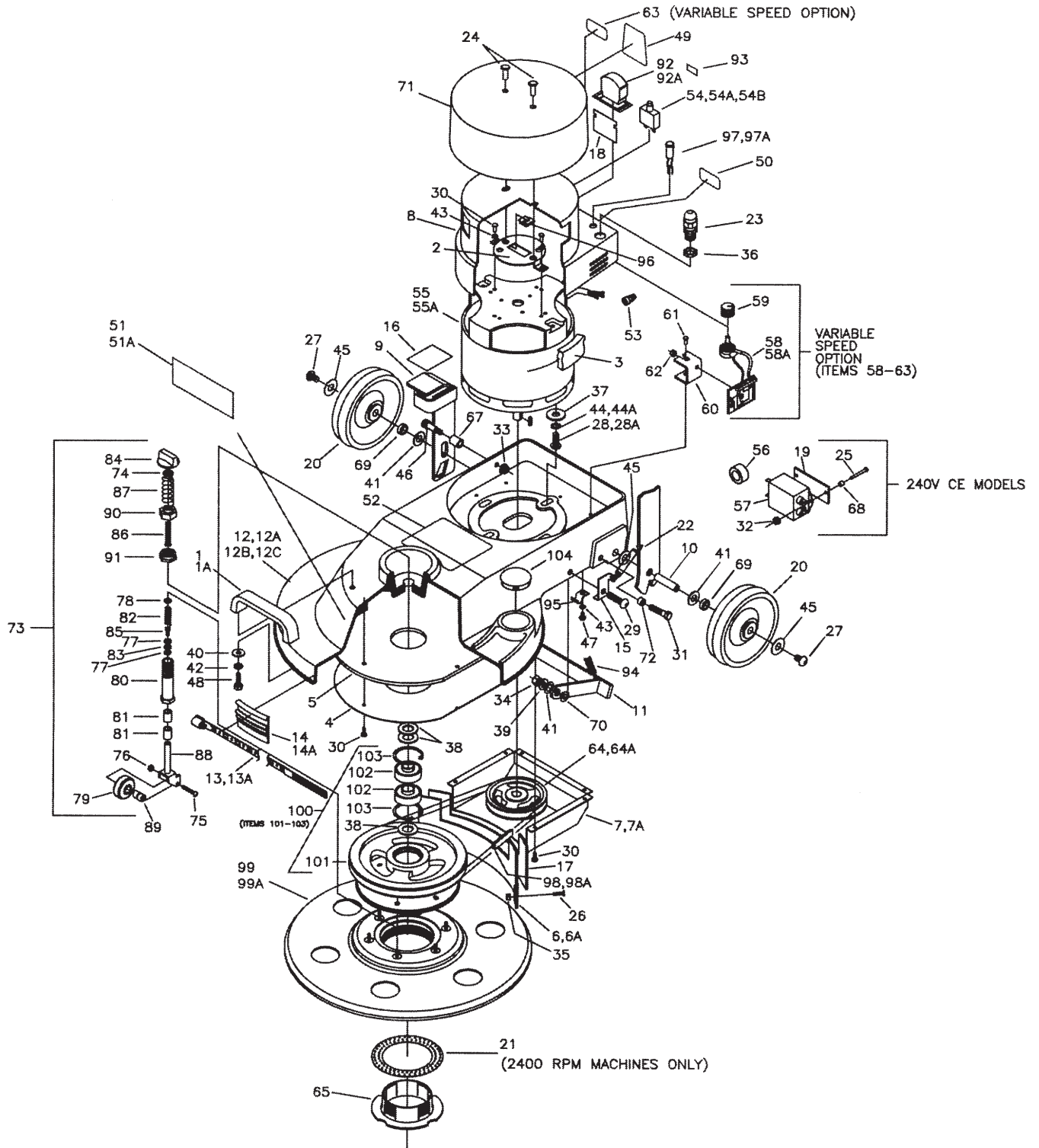
1. Inspect motor carbon brushes approximately every 250 hours. A set of carbon brushes should last as long as 2500 hours. Premature wear may indicate other problems with the motor. These can be inspected by removing the motor cover. Indications for changing carbon brushes would be if the indicator light comes on or if the carbon brushes are flush with or slightly recessed in the brass brush holder.
2. Periodically clean the motor by removing the motor cover and blowing it out with compressed air.
3. Check the drive belt of wear and proper tension. Retention the belt by loosening the four motor mount screws, then apply force to the motor toward the rear of the machine. Take out excessive slack. Do not overtighten the belt. This can cause excessive loads to the bearings and reduce the belt life.

Trouble Shooting

1. Machine will not start.
 - A. Check to see if the machine circuit breaker is reset.
 - B. Check to see if there are any disconnected wires at the motor or switches.
 - C. Check to see if the “on/off” switch and safety switch are activating.
2. Motor will not start, circuit breaker trips.
 - A. Check rectifiers in the motor for damage.
 - B. Inspect internal wiring for loose connections or direct shorts.
 - C. Inspect carbon brushes for excessive wear.
3. Machine runs a short period of time, then the circuit breaker trips.
 - A. Check motor carbon brushes for wear.
 - B. Adjust pad pressure to the floor to relieve pad pressure.
 - C. Extension cord under size, pulling a low voltage.

Exploded Views

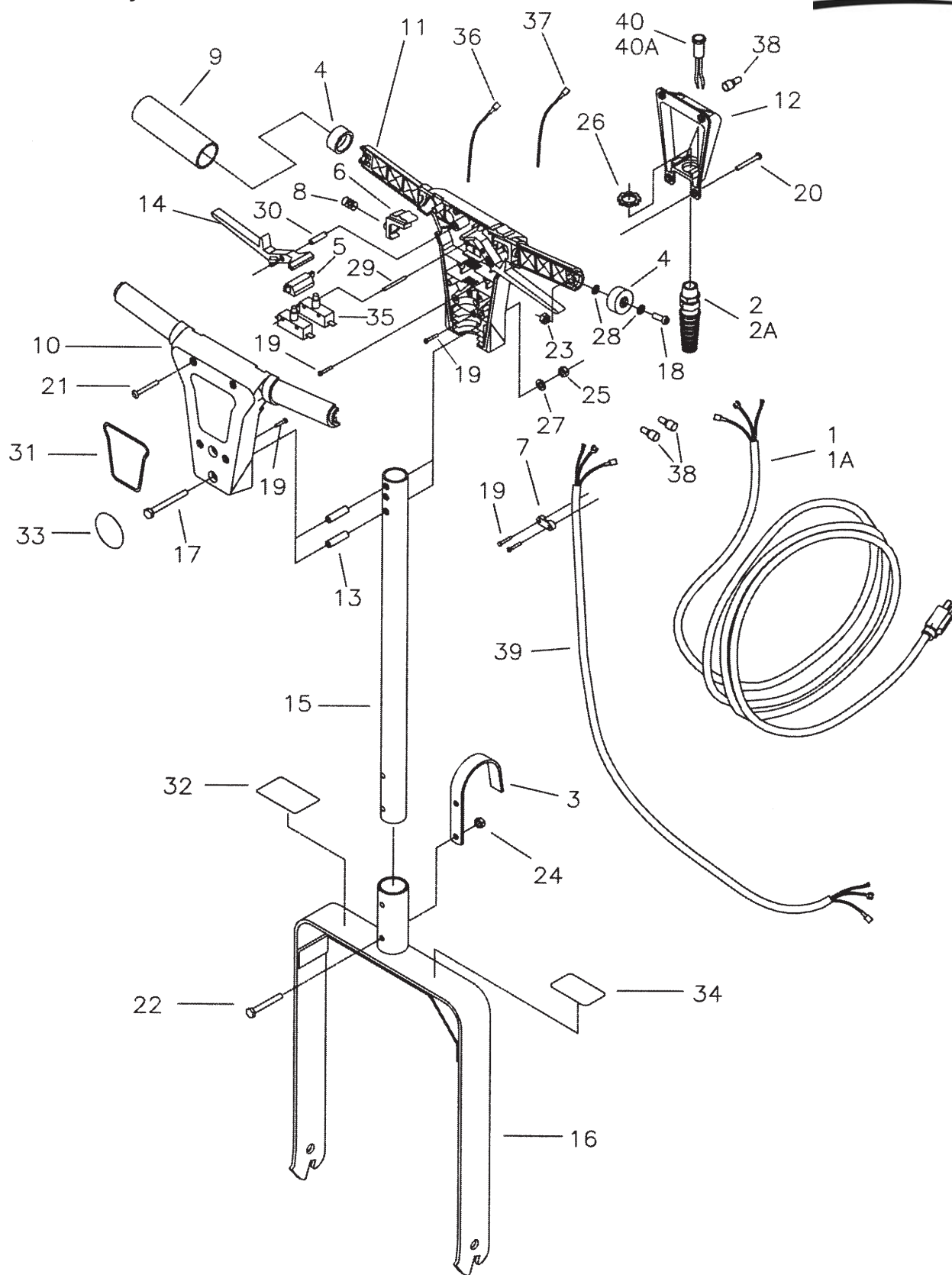
Base Assembly



Base Assembly BOM

Item	Part No.	Qty.	Description	Item	Part No.	Qty.	Description
1	130040PTD	1	Handle PTD DK Grey	53	740044	1	Cap-Wire 12-18 74B
1A*	130040CTD	1	Handle - Coated	54	740220	1	Circuit Breaker 20AMP 2-Terminal 115V
2	150208	1	Motor Bracket 56/56 Frame	54A	740106	1	Circuit Breaker 9AMP Push Button
3	150209	2	Foam Tape 25 in.	240V			
4	230002	1	Housing Plate	54B	741400	1	Circuit Brkr 10A Push Btn (Norway)
5	230003	1	Housing Plate Gasket	55	742115	1	Motor 1.5 HP 115V 66 Frame E623
6	230004	1	Curved Sealing Plate 17"	55A	742230	1	Motor 1.5 HP 230V 66 Frame
6A	230022	1	Curved Sealing Plate 20"	56*	742254	1	RFI Shield Torroid
7	230005	1	Rear Closure 17"	57*	742256	1	RFI Filter
7A	230023	1	Rear Closure 20"	58	742260	1	Triac Control Asy. 115V
8	230006	1	Motor Shroud	58A	742261	1	Triac Control Asy. 230V
9	230010	1	Release Pedal Weldment	59	190031	1	Knob
10	230013	1	Axle	60	230039	1	Heat Sink 2400
11	230016	1	Release Weldment	61	710377	1	SCR 1/4-20 x .37 Zinc
12	230017PTD	1	Base Casting 17" Painted	62	712666	1	Nut-Hex Jam 1/4-28 SS
12A*	230017PTDCE	1	17" Casting CE Painted	63	715191	1	Decal - Speed Control
12B	230020PTD	1	Base Casting 20" Painted	64	760028	1	Pulley MTR 4" ODX .62ID (1500 rpm)
12C*	230020PTDCE	1	20" Casting CE Painted	64A	832409	1	Pulley (2400 rpm & V.S.)
13	230019	1	Clamp Band Assy. 17" HS	65	760401	1	Center Cup New Style
13A	230030	1	Clamp Band Assy. 20" HS	66**	762160	4	Carbon Brush 115V
14	230021	1	Dust Skirt 17" HS	66A**	740281	4	Motor-Brush Carbon 240V
14A	230037	1	Dust Skirt 20" HS	67	762318PLT	1	Sleeve .375 x .623 x .75
15	230024	1	Spring Bracket	68*	762410	2	Bushing-.20x.312x.265 Alm
16	230031	1	Non-Skid Strip	69	77-81-A	2	Spacer .53x.75x.25
17	230036	1	Foam Gasket	70	829014	2	Flanged Bushing
18	230038	1	Shielding Bracket	71	829194	1	Top Cover w/Screen Print
19*	230040	1	Line Filter Bracket	72	832122	1	Spacer .384x.50x.31
20	230043	2	Wheel, 6" w/Nylon Brushing	73	832480	1	Caster Asy Complete
21	260581MCH	1	Pad Grabber, Ring Machined	74	711319	1	Nut-Hex 5/16-18 ST PL
22	430051	1	Spring-Return .313x.438x2.	75	712533	1	SCR-MC 10-24 x 1.25 SS
23	450050	1	Bushing - Heyco .875x.875x1.	76	712638	1	Nut-Hex 10-24 SS Nyloc
24	710196	2	SCR-MC 5/16-18x.62	77	712763	2	Bearing Race Washer SS
25*	710360	2	SCR-MC 10-32x1 Zinc	78	712764	1	WSR #10 SS
26	710579	2	SCR-MC 1/4-20x.62 Zinc	79	762018	1	Caster Center
27	710985	2	SC 3/8-16 x .62	80	787791	1	Brush Shaft
28	710986	4	SC 3/8-16 x 1 Zinc (1500 rpm)	81	831089	2	Shaft Bushing .375x.56x.75
28A	711246	4	BLT-HH 3/8-16 x .87 (2400 rpm & V.S.)	82	831542	1	Spring .31x.42x1.5
29	710987	2	SC 3/8-16 x 1.50 Zinc	83	832186	1	Thrust Bearing
30	711142	11	SCR-ST-F 10-24 x .37 Zinc	84	832418	1	Adjustment Knob 5/16x18
31	711243	1	Bolt-HH 3/8-16 x 1.50 STL Zinc	85	832448	1	Shoulder Screw
32*	711350	2	Nut-Nyloc 10-32	86	832453	1	SCR-ADJ 5/16x18
33	711379	1	Nut-Flanged Wizz 5/16-18	87	833102	1	Spring-Knob .60x.73x1.75 Z
34	711380	2	Nut-Nyloc 3/8-16	88	833224	1	Caster Weldment Yoke SS
35	711387	2	Nut-Nyloc 1/4-20 1/2Nut	89	833368	1	Bushing-Cast .203x.4995x.7
36	711400	1	Nut-Pipe Lock 1/2	90	833507PLT	1	Cap Nut M2300PLT
37	711508	4	WSR-FLT .44 x 1.00 x .08	91	880023	1	Nut-Nyloc 3/4x16
38	711512	3	WSR-Flat .75 x 1.37 x .08	92	832552	1	Meter 115V 25 AMP w/Clip
39	711515	2	WSR-Flat .406 x .812 x .0625	92A	832819	1	Meter 230V 0-15 AMP
40	711519	2	WSR-Flat .25 x 1.01 x .06	93	832603	1	Decal-CB Reset
41	711524	4	WSR-WAVE .52 x .87 x .01	94	832619	1	Spring
42	711544	2	WSR-Helical 1/4	95	832623	1	Spring Clamp
43	711553	3	WSR-Internal Lock #10	96	832829	2	Nut-U Type 5/16x18
44	711555	4	WSR-Internal Lock 3/8 (1500 rpm)	97	832859-1	1	Indicator Light 115V Asy
44A	711556	4	WSR-Lock Internal 1/2 (2400 rpm & V.S.)	97A	742313-1	1	Lamp Assy 230V VDE
45	711592	3	WSR-FLT .50 x .90 x .075 NYL	98	833073	1	Belt A38 (1500 rpm)
46	712081	1	BLT-SDR 5/16-18 x .75	98A	832574	1	Belt V (2400 rpm & v.s.)
47	712822	1	SCR-MC TR HD 10-24 x .50 SS	99	833199	1	MultiFlex 17" Assy.
48	713002	2	BLT-HH 1/4-20 x .75 #5	99A	833900	1	MultiFlex 20" Assy. New
49	715061	1	Decal, General Warning	100	833212	1	Pulley Asy w/Bearings
50	715067	1	Decal, Brush Wear Indicate	101	833122	1	Drive Pulley Machined
51	710159	1	Decal, 1500	102	881060	2	Bearing 3/4"
51A	715193	1	Decal, 2400	103	881317	2	Ret. Ring
52	715234	1	Decal-Pad Pressure	104	833823	1	Dome Plug 2" Black

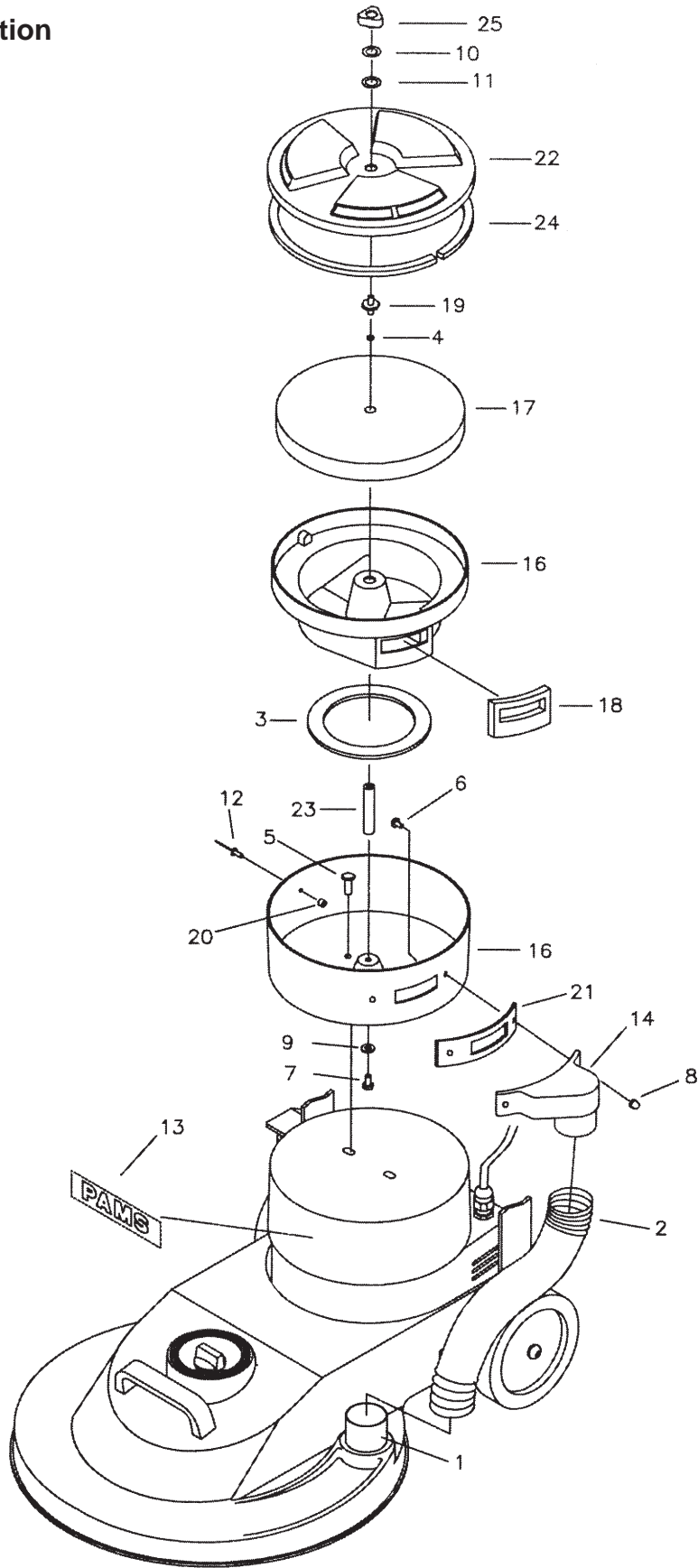
Handle Assembly



Handle Assembly BOM

Item	Part No.	Qty.	Description
1	150002	1	Cord-14GA-3 50FT Med Grey
1A	740600	1	Cord-European F3 G1.5MM 50Ft B
2	150003	1	Strain Relief 100x50
2A	150004	1	Strain Relief Heyco 3251
3	170040PLT	1	Cord Hook Plated
4	190006	2	End Cap
5	190008	1	Switch Cap
6	190009B	2	Safety Button Black
7	190010	1	Strain Relief
8	190015	2	Trigger Spring
9	190016	2	Foam Grip 4 1/2 I/L
10	190022	1	Switch Box Front Cover Black
11	190023	1	Switch Box Back Cover Black
12	190024	1	Electrical Box Cover Black
13	190029	2	Bushing .270 x .343 x 1.250
14	190033B	2	Switch Trigger Long Black
15	230025	1	Tube Handle
16	230027	1	Yoke Weld
17	710186	2	SCR-MC TR-HD 1/4-20 x 2 1/4
18	710380	2	SCR-MC 1/4-20 x .75 Zinc
19	711128	4	SCR-ST-B HI/LO 8 x .62 Zinc
20	711160	4	SCR-HI/LO #10 x 5/8 Zinc
21	711162	4	SCR-HI/LO #10 x 1 1/2 Zinc
22	711214	2	Bolt-HH 1/4-20 x 2.00 STL Zinc
23	711316	2	Nut-Hex 1/4-20 ST PL
24	711373	2	Nut-Nyloc 1/4-20
25	711387	2	Nut-Nyloc 1/4-20 1/2Nut
26	711400	1	Nut - Pipe Lock 1/2
27	711504	2	WSR-Flat 1/4 SS
28	711554	4	WSR-INT Lock 1/4
29	711619	2	Roll Pin 1/8 x 1 3/5
30	711620	2	Roll Pin .25 x 1.25
31	715175	1	Decal - MMAN Runner
32	715237	1	Decal - Read Instruction
33	715501	1	Decal - Made in USA
34	715950	1	Label - Patent Numbers
35	740029	2	Switch - Snap SPST PB NO/NC
36	740361	1	Wire Assembly 14G White 6.00"
37	740362	1	Wire Assembly 14G Black 6.00"
38	741129	3	Splice, Crimp, End
39	742259	1	Cable Assy, 2400 Handle
40	742313	1	Lamp-230V VDE
40A	832859	1	Indicator Light (115V)

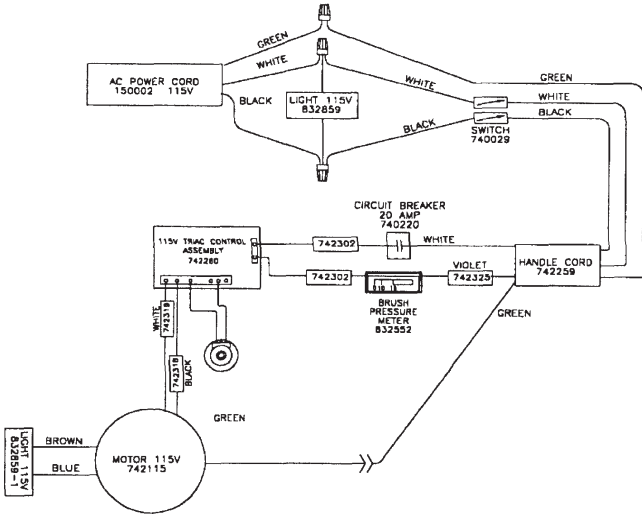
Dust Control Option



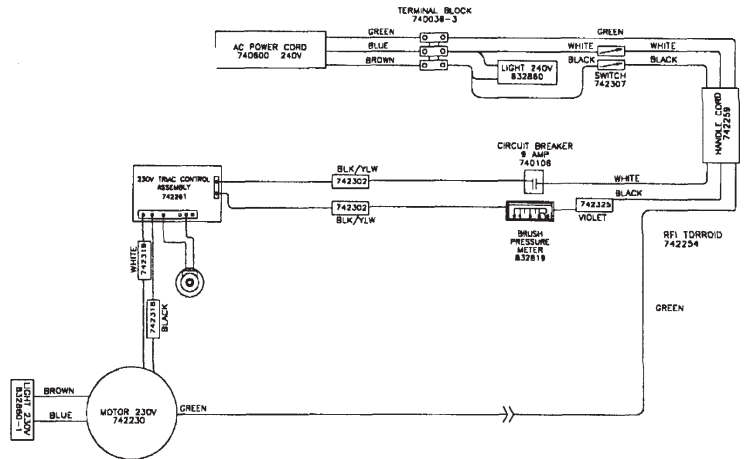
Dust Control Option BOM

Item	Part No.	Qty.	Description
1	230034	1	Dust Tube
2	230101	1	Hose 2" C/L 14"
3	380035	1	Gasket 4.31 x 5.81 x .19
4	390061	1	O-Ring - Valve Stem
5	710197	2	SCR-SC 5/16-18 x .75
6	710556	2	SCR-MC 10-32 x .75 Zinc
7	711202	1	BLT-HH 1/4-20 x .50 STL Zinc
8	711350	2	Nut-Nyloc 10-32
9	711505	1	WSR-Flat 1/4
10	711524	1	WSR-Wave .52 x .87 x .01
11	711594	1	WSR-Flat .56 x .88 x .03 Nickel
12	711903	1	Rivet-Pop .19 x .25 AL
13	715100	1	Decal - Pams Light Grey
14	762131PTD	1	Hose Fitting D/C 2300
15	762132	1	Dust Collection Tray
16	762396B	1	Filter Housing Burgundy
17	762403	1	Filter Pad 9" 5per
18	762404	1	Filter Gasket
19	762409PLT	1	Thrd Pin Retainer Zinc PL
20	462410	1	Bushing .20 x .312 x .265 ALM
21	762411	1	Gasket - Dust Collection
22	762415	1	Filter Housing Cover
23	762416PLT	1	Threaded Spacer Plated
24	805042	3.166 Ft	Gasket
25	833214	1	Knob - 3 Sided 1/4 20 Insert

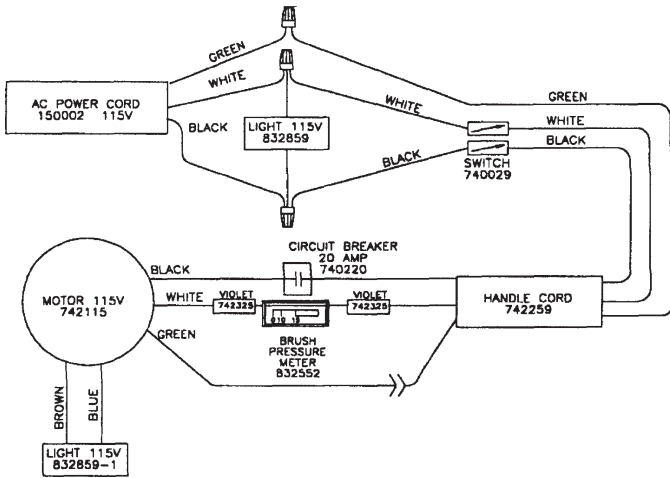
WIRING DIAGRAM 115V VARIABLE SPEED MODELS



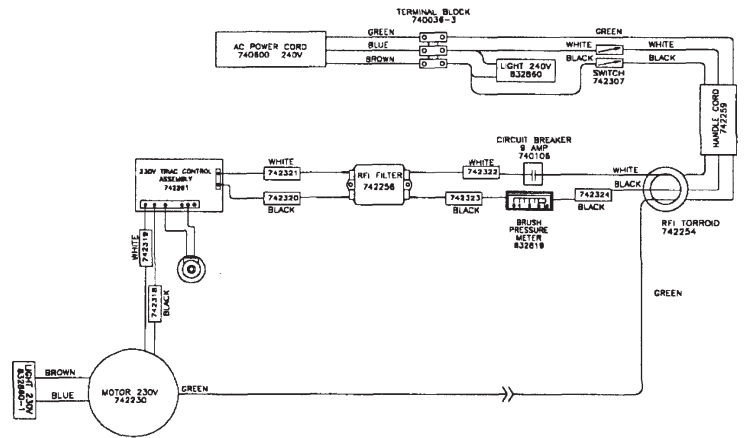
WIRING DIAGRAM 230V VARIABLE SPEED MODELS



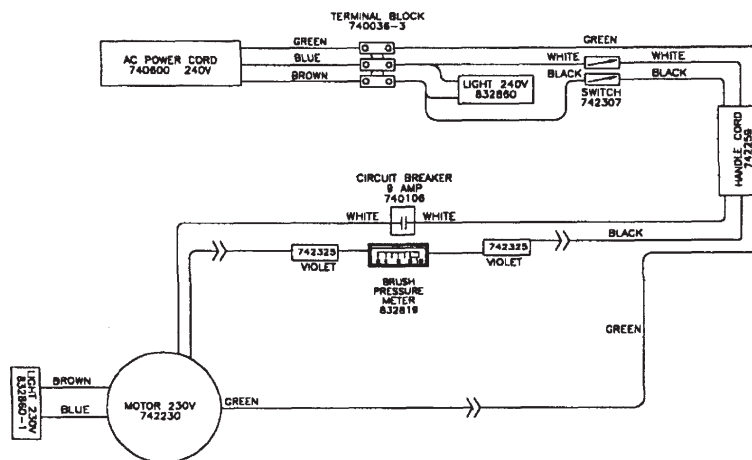
WIRING DIAGRAM 115V SINGLE SPEED MODELS



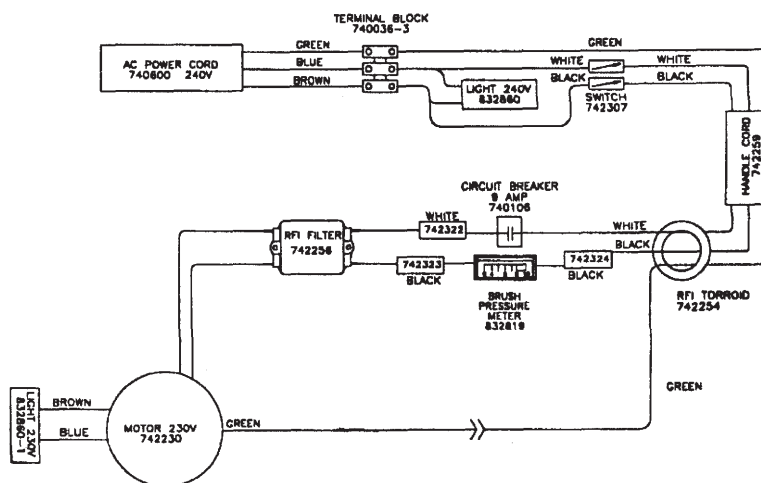
WIRING DIAGRAM 230V CE VARIABLE SPEED MODELS



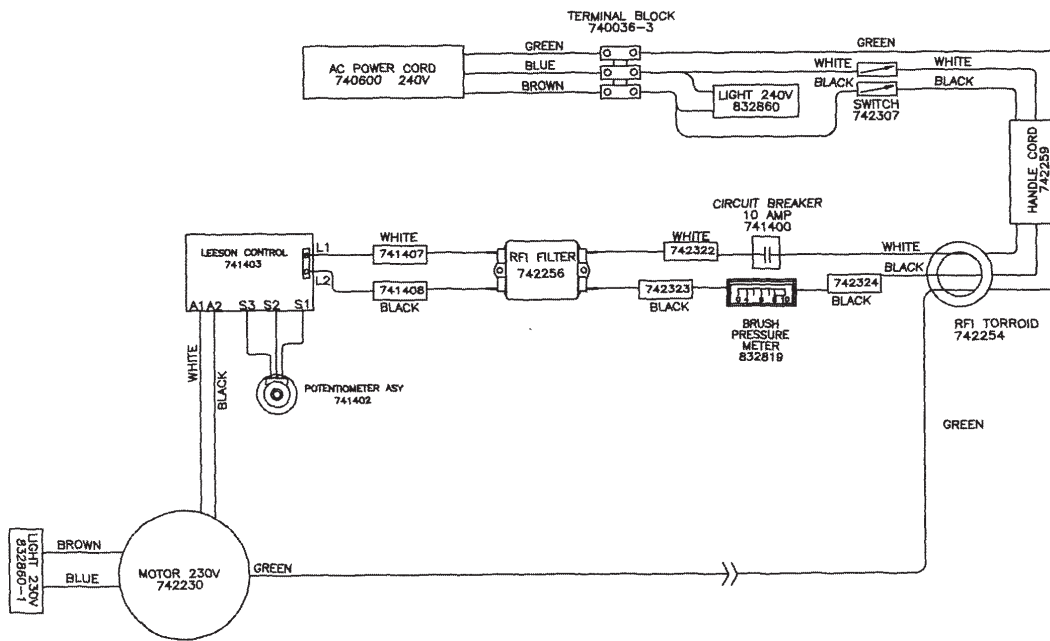
WIRING DIAGRAM 230V SINGLE SPEED MODELS



WIRING DIAGRAM 230V CE SINGLE SPEED MODELS



WIRING DIAGRAM 230V NORWAY VARIABLE SPEED MODELS



Minuteman International Made Simple Commercial Limited Warranty

Minuteman International, Inc. warrants to the original purchaser/user that the product is free from defects in workmanship and materials under normal use. Minuteman will, at its option, repair or replace without charge, parts that fail under normal use and service when operated and maintained in accordance with the applicable operation and instruction manuals. All warranty claims must be submitted through and approved by factory authorized repair stations.

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 are covered by and subject to the warranties and/or guarantees of their manufacturers. Please contact Minuteman for procedures in warranty claims against these manufacturers.

Special warning to purchaser -- Use of replacement filters and/or prefilters not manufactured by Minuteman or its designated licensees, will void all warranties expressed or implied. A potential health hazard exists without original equipment replacement.

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

Minuteman disclaims any implied warranty, including the warranty of merchantability and the warranty of fitness for a particular purpose. Minuteman 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 is not responsible for costs or repairs performed by persons other than those specifically authorized by Minuteman. 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.

Cord Electric Group..... Three years parts, two years labor, ninety days travel (Not to exceed two hours)
Exceptions..... Port-A-Scrub, one year parts, six months labor
MPV 13, one year parts
MPV 14 and 18, two years parts, one year labor
RapidAir blower, one year parts, one year labor
Explosion-Proof Vacuum, one year parts, one year labor
Pneumatic Vacuums, three years parts, one year labor

Battery Operated Group..... Three years parts, two years labor, ninety days travel
(Not to exceed two hours)
Exceptions..... Sweepers, one year parts, one year labor, ninety days travel
(Not to exceed two hours)

Internal Combustion Group....One year parts, one year labor, ninety day travel
(Not to exceed two hours)

Replacement Parts.....Ninety days

Batteries.....0-3 months replacement, 4-12 months pro-rate

Polypropylene Plastic Tanks...Ten years, no additional labor