



Lumina 20 Brush Drive Battery Burnisher Parts and Instruction Manual

Technical Specifications

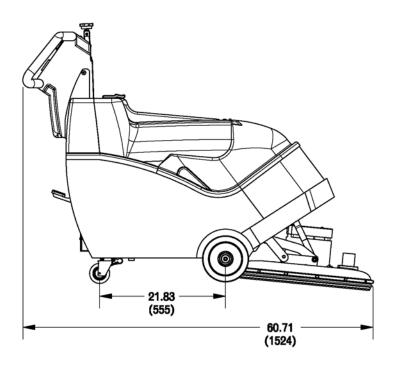


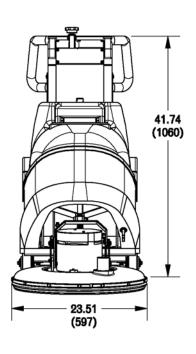
Model

Model No. Brush Speed Motor Voltage, Batteries Battery Capacity Gross Weight

Lumina 20 Brush Drive

M26036QP / M26036CE 2600 RPM 2.5HP 36 volts, 3-12volt 165 AH 916 lbs (415 kg) with batteries 638 lbs (290 kg) without batteries





For Safety When Servicing or Maintaining Machine

- · Stop on level surface.
- Disconnect the power to the machine by pulling the red Battery Connector located under the recovery tank near the batteries.
- · Avoid moving parts. Do not wear loose jackets, shirts, or sleeves when working on machine.
- Avoid contact with battery acid. 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.
- · Do not clean machine with a pressure washer.
- · Authorized personnel must perform repairs and maintenance. Use Minuteman supplied replacement parts.



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 product M26036TDCE, M26036TDQPIW, M26036CE, Lumina Burnisher 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 and EN 60335-1.

SO	UND	VIBRATION
73 dB 69dB		$.5 \text{ m/s}^2$
Operator At 3m		At Operators Handle

Tests were conducted on 11/3/04 with calibrated sound and vibration equipment under the conditions noted below:

General Condition: Indoors Wind:
Temperature: 25°C Humidity:
Barometric Pressure: 29.5

Jeff Pollack, Standards Engineer

Date

0 km/hr

70%

Form: EC053C



Table of Contents

Technical Specifications	2
Declaration of Conformance	3
Safety Instructions	5
Operating Instructions	6
Inspection	
Electrical	6
Batteries	6
Operation	6
After Use	6
Maintenance	6
Floor Seal Strip	6
Battery Service and Installation	7
Charging of Batteries	7
Machine Overview	7
Battery Cable Routing	7
Control Panel	7
Pad Installation	8
Pad Pressure Adjustments	8
Circuit Breaker Protection	8
Carbon Brush Replacement	8
Batteries	9
Exploded Views	10
Base Assembly	10
Base Assembly BOM	11
Mainframe Assembly	
Mainframe Assembly BOM	13
Housing Assembly	
Housing Assembly BOM	15
Pad Driver Assembly	16
Pad Driver Assembly BOM	17
Electrical Assembly	
Electrical Assembly BOM	19
Pressure Control Assembly	20
Console Assembly	21
Dashboard Assembly	22
Replacement Parts	22
Wiring Diagram	24
Warranty	26



IMPORTANT SAFETY INSTRUCTIONS

CAUTION: Operators must read and understand this manual before operating or maintaining this machine.

Keep hands and feet clear of moving parts while machine is in operation.

Disconnect the power to the machine by pressing the Red Emergency Disconnect Button when charging batteries or during installation or removal of pads.

During operation, loose objects on the floor can become dangerous projectiles if struck by the high speed pad. Special attention should be paid in removing or avoiding loose floor tile, electrical cables and 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 dust, etc.

Keep machine moving to reduce the risk of damaging floor finish and floor.

Make sure the Red Emergency Disconnect Button is pressed and the battery connector is unplugged from the 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 machine. 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; any damage is the responsibility of the delivery carrier who should be notified immediately.

Electrical

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

Batteries

Burnishers are shipped with batteries. (3 required)

Part No. 956701 12V 165AH 20 Hr. Rate (Standard)

Part No. 956210 12V 210AH 20 Hr. Rate (Optional)

We do not recommend mixing AMP hour capacities. Any alternate battery sets can be used if they equal physical size and capacity. See next page for service and installation.

Operation

Before starting, familiarize yourself with the machine and its controls (see "Machine Overview" and "Dashboard Control Panel" diagrams). To turn the machine ON, do the following:

- 1. Make sure 20" high speed pad is used. Make sure the pad is installed on the machine by following instructions under "Pad Installation."
- 2. Make sure that no battery charger is plugged into the recharge port.
- 3. Lift the red emergency disconnect button so it is in the up position.
- 4. Lower the pad driver assembly by pushing the pedal slightly outward on the machine (unlock it), and then release it slowly.
- 5. Turn the power switch to the ON position. The pad driver will then slowly adjust itself to the floor. Move forward in a straight line, check the reading on the Operating Range Meter and make sure you are in the Green Zone.
- 6. Adjust the pad pressure as needed by turning the knob accordingly. (See Pad Pressure Adjustments.)

After Use

To raise the pad driver, push down until the pedal arm engages into the pedal catch. Turn machine off by turning the key switch on the control panel. Machine can be cleaned with a mild detergent and a damp cloth. Batteries should be charged after each use or when the battery condition meter shows a low charge. Once the battery charger reads 0 amps, the batteries are recharged. This should take approximately 8 hours if the batteries are completely discharged.

Maintenance

Periodically remove batteries from machine. Clean the batteries and battery tray with a solution of baking soda and water. Check all battery cables and wiring for signs of damage and wear. Replace as needed. Grease front wheel and rear caster zerks once a month for best operation.

Floor Seal Strip

When the floor seal strip show signs of excessive wear, seal should be replaced. The strip can be removed by loosening the screw on the retainer strap until the seal can slide off of the pad shroud housing. To install new seal, slip the retainer strap over the new seal strip and pad shroud. Make sure the seal is seated equally around the perimeter and the holes on the floor seal are oriented towards the back portion of the shroud.



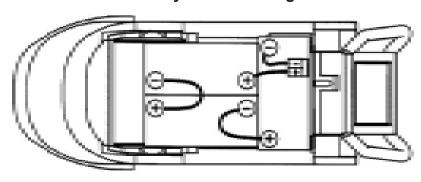
Battery Service and Installation

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.

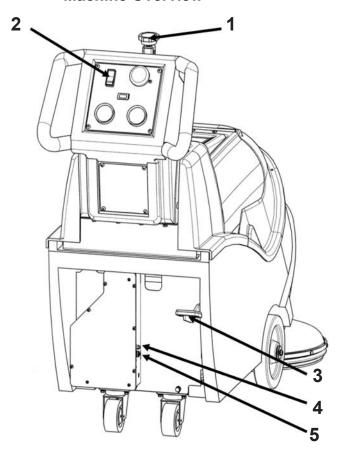
Charging of Batteries

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

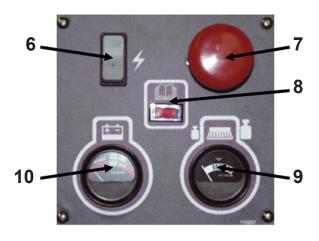
Battery Cable Routing



Machine Overview



Control Panel

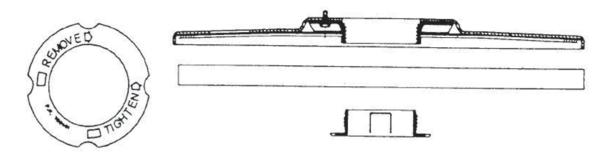


- 1. Pad Pressure Adjust knob
- 2. Dashboard Control Panel
- 3. Foot Pedal
- 4. Circuit Breaker 70 AMP
- 5. Circuit Breaker 3 AMP
- 6. Main Power Switch
- 7. Emergency Button
- 8. Carbon Brush Indicator
- 9. Pad Pressure Gauge
- 10. Battery Gauge



Pad Installation

The red emergency disconnect button and the key switch must be in the OFF position before installation and the pad driver assembly in the RAISED position. 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 the pad. Push centering locking cup through the pad and into the 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 the center-locking cup counter-clockwise



Pad Pressure Adjustments

The pad pressure adjust knob is located on the top of the control console. Counter-clockwise rotation increases pad pressure, the opposite rotation decreases. Different floors, conditions, and pads produce carrying pad load conditions. Ideal burnishing conditions are maintained while the operating range meter remains in the Green Zone. If the meter reads in the Red Zone decrease the pad pressure. When the machine is operated in the Red Zone for a long period of time motor overload will occur and the 70-amp circuit breaker for the motor will trip. If the motor circuit trips:

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

Circuit Breaker Protection

70 amp circuit breaker protects pad driver motor from excessive overload conditions. 3.0 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 the breakers.

Carbon Brush Replacement

Design life of 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. Four (4) are required, P/N 572003. Red indicator on control panel (above Emergency Disconnect Button, below the Dashboard) will glow when carbon brush service is required.

Carbon Brush Service

- 1. Disconnect batteries from machine.
- 2. Remove two screws that hold dust control housing and motor cover to motor.
- 3. Blow out top of motor with air line.
- 4. Loosen screw and remove carbon brush lead.
- 5. Slide brush spring off the back of carbon brush and remove brush.
- Reverse order for installation of new carbon brushes.

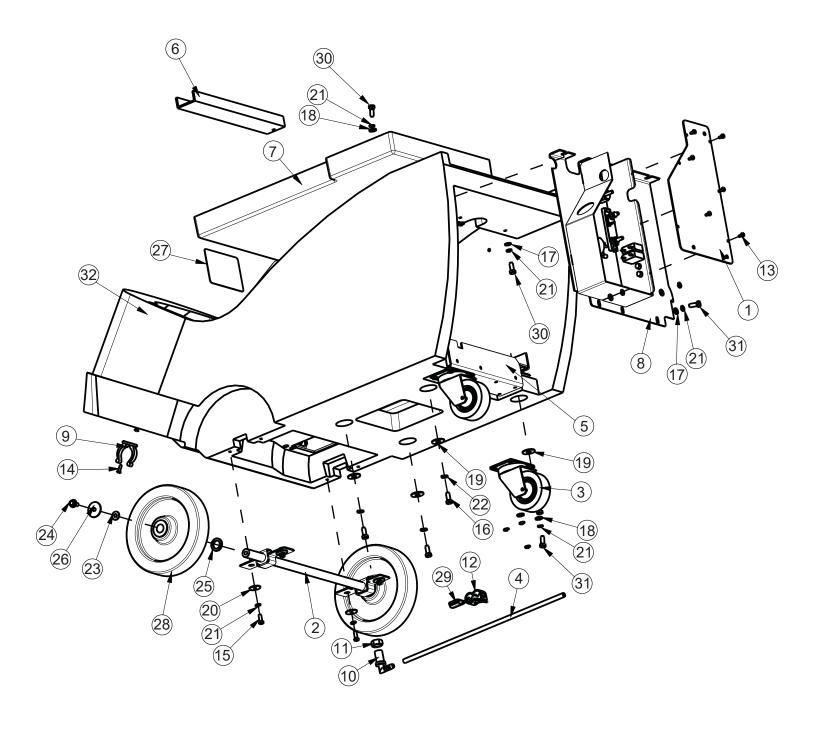


MODEL	BATTERY P/N	DESCRIPTION
M26036QP	956701	BATTERY WET 12V 155AH (CR-155)
M26036QPIW	956701	BATTERY WET 12V 155AH (CR-155)

Exploded Views

Base Assembly



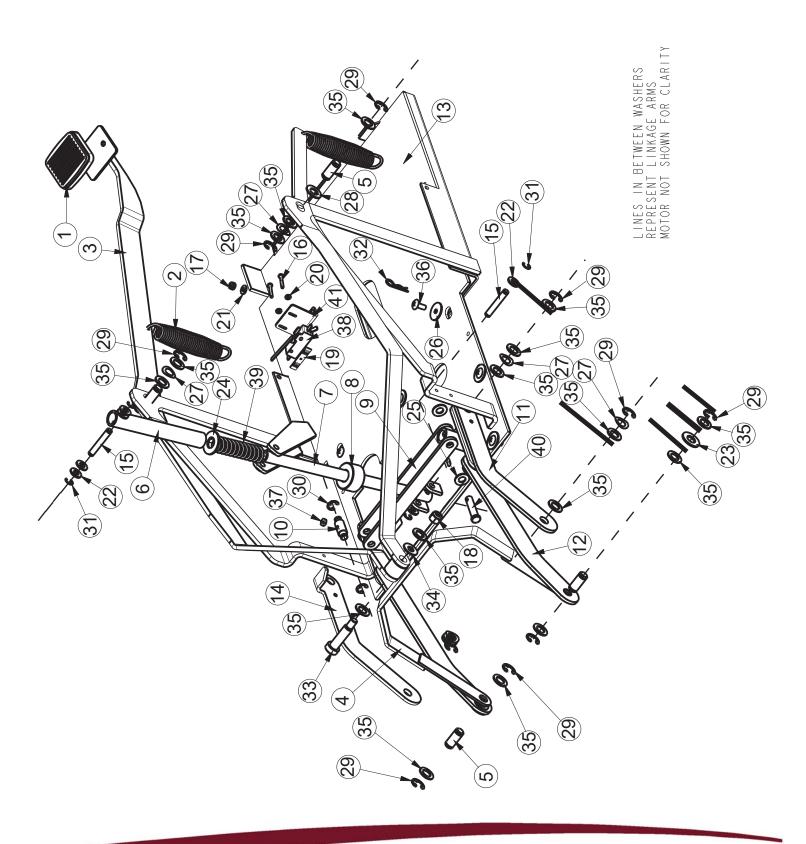




Base Assembly BOM

	BILL OF MATERIAL			
ITEM	PART NO.	QTY	DESCRIPTION	
1	200154	1	ELECTRICAL BOX COVER 14GA	
2	200250	1	WELD-AXLE	
3	172167	2	CASTER, 3 1/2" PU WHEEL	
4	260224	1	DRAIN HOSE 1/4 X 18 SILICONE	
5	260536	1	WELD-PLATE BASE	
6	260537	1	BATTERY SPACER, LUMINA	
7	260604	1	TRAY, BATTERY	
8	260570	1	BURN REAR PANEL ASSY	
9	260579	1	CLIP-TOOL 1.5 INCH HOSE	
10	320271	1	FITTING-PP 90 11/16-16UNC X 3/8HOSE	
11	320272	2	NOZZLE BODY LOCKNUT	
12	320273	1	CLAMP-HOSE SHUT-OFF	
13	711124	6	SCR-PHSMS 10 X .37 ZP B POINT	
14	711160	2	SCR-HI/LO 10 X .625 BLACK ZINC	
15	711203	4	SCR-HH 1/4-20 X .62 ZP TAP	
16	711228	4	SCR-HH 5/16-18 X .75 ZP GR 5	
17	711504	6	WASHER-FLAT 1/4 SS	
18	711505	7	WASHER-FLAT 1/4 ZP	
19	711507	4	WASHER-FLAT 3/8 X 1.12 X .06	
20	711519	4	WASHER-FLAT 1/4 X 1.00 X .06 ZP	
21	711544	23	WASHER-LOCK 1/4 SPLIT ZP	
22	711545	4	WASHER-LOCK 5/16 SPLIT ZP	
23	711575	2	WASHER-FLAT 1/4 X .75 X .06 ZP	
24	712042	2	SCR-HH 5/16-18 X.62 ZP GR 5 FLANGE	
25	712318	2	WASHER-FLAT 3/4 X 1.12 X .12 ZP	
26	712759	2	WASHER-FLAT .31 X 1.37 X .06 SS	
27	715430	1	DECAL-BATTERY ROUTING LUMINA 20	
28	762332	2	WHEEL-8 X 2.25 X .75 W/BEARING	
29	809444	1	CLIP-CORD	
30	713003	2	SCR-HH 1/4-20 X 1.00 ZP GR 5	
31	712565	2	SCR-THMS 1/4-20 X .62 SS	
32	200102MCH	1	2600 BASE	



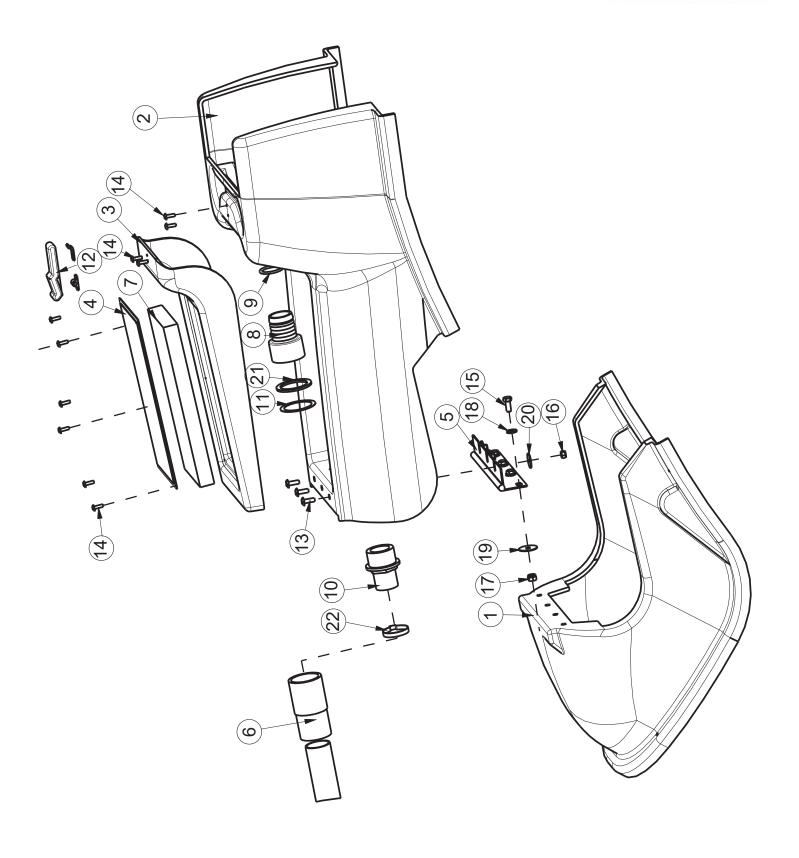




Mainframe Assembly BOM

BILL OF MATERIAL			
ITEM	PART NO.	QTY	DESCRIPTION
1	210142	1	PEDAL PAD
2	260211	2	HOBBY SPRING
3	260511	1	UPPER WMT
4	260513	1	MOTOR LIFT WELDMENT
5	260519	4	PIVOT PIN
6	260521	1	GUIDE TUBE
7	260522	1	SPRING GUIDE
8	260523	1	SPRING SPACER 1.50 X .632 X .84
9	260524	2	ADJUSTMENT LINK
10	260525	1	ADJUSTMENT NUT
11	260528	1	LINK
12	260529	2	TRAILING LINK
13	260536	1	BASE PLATE WELDMENT
14	260576	1	LINK
15	670605	2	ROLLER PIN
16	710307	2	SCR-MC 6-32 X 1.0 ST PL PAN HD
17	711350	2	NUT NYLOC 10-32
18	711380	1	NUT-NYLOC 3/8-16 NUT
19	711430	1	NUT-TINNERMAN TWIN 6-32
20	711501	2	WSR-FLAT # 6
21	711503	2	WSR, FLAT#10
22	711506	8	WSR-FLT .344 X .690 X .062 STL ZINC
23	711509	2	WSR-FLAT 1/2 (.54X1.082X.087)
24	711511	1	WSR-FLAT .62 X 1.31 X .09
25	711515	2	WSR-FLAT .406 X .812 X .0625
26	711519	6	WSR- FLAT .25 X 1.01 X .06
27	711524	6	WSR-WAVE .52 X .87 X .01
28	711592	2	WSR-FLAT .50 X .9 X .075 NYL
29	711713	14	RETAINING RING - "E" TYPE EXT .500
30	711717	2	RETAINING RING- E TYPE .37
31	711721	4	RET RING-E TYPE .312
32	711808	1	COTTER PIN-HAIR #13
33	712102	1	BLT- SHLDR 1/2 X 1-1/2
34	712301	1	WSR-FLAT .87 X .38 X .06
35	712310	28	WSR- FLAT .52 X .87 X .06 PL
36	712565	6	SCR-MC 1/4-20X.63 SS TR HD
37	712905	1	NUT-HEX 10-24 NIPL
38	740830	1	SWITCH SPST NC CONTACT
39	762339	1	SPRING COMPRESSION
40	831965	1	3/8 x 1.63" CLEVIS PIN
41	260577-1	1	SWITCH INTERLOCK BRACKET



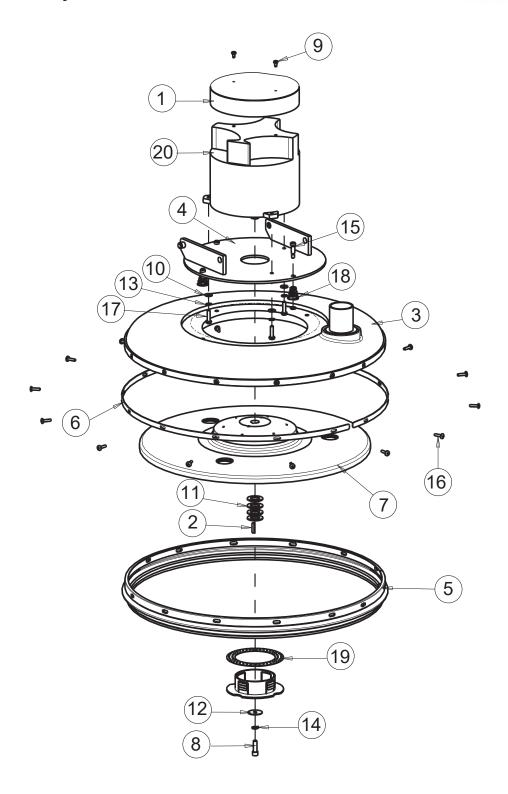






	BILL OF MATERIAL			
ITEM	PART NO.	QTY	DESCRIPTION	
1	260501	1	FIXED TOP COVER	
2	260502	1	TOP COVER REAR	
3	260503	1	BAG COVER TOP	
4	260504	1	PLATE-FILTER COVER	
5	260560	1	HINGE-9.75"	
6	260590	1	HOSE ASY DUST CONTROL	
7	260592	1	EXHAUST FILTER DUST CONTROL	
8	260596	1	INSERT FITTING 1-1/2" PVC FPT FEM ADAP	
9	310008	1	O-RING-BUNA 1.375 ID	
10	450037	1	ADAPTER MACHINED	
11	450081	1	WASHER-FLAT 1.908 X 2.41 X .03 SS	
12	450207	1	LATCH-SOFT	
13	710180	3	SCR-THMS 1/4-20 X .75 ZP	
14	711160	10	SCR-HI/LO 10 X .625 BLACK ZINC	
15	711228	4	SCR-HH 5/16-18 X .75 ZP GR 5	
16	711373	3	NUT-NYLOC 1/4-20 ZP	
17	711374	4	NUT-NYLOC 5/16-18 ZP	
18	711506	4	WASHER-FLAT 5/16 X .688 ZP	
19	711516	4	WASHER-FLAT 5/16 X 1.25 X .05 ZP	
20	711519	3	WASHER-FLAT 1/4 X 1.00 X .06 ZP	
21	828970	1	WSR NEOP 1.87X2.4X.125	
22	831001	1	CLAMP-CRIMP 440R	



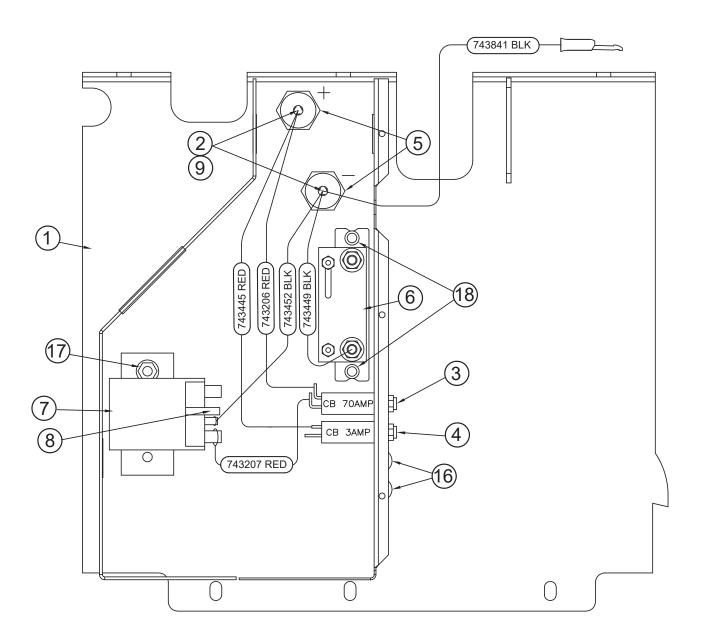




Pad Driver Assembly BOM

	BILL OF MATERIAL - 260610			
ITEM	PART NO.	QTY	DESCRIPTION	
1	260501	1	FIXED TOP COVER	
2	260502	1	TOP COVER REAR	
3	260503	1	BAG COVER TOP	
4	260504	1	PLATE-FILTER COVER	
5	260560	1	HINGE-9.75"	
6	260590	1	HOSE ASY DUST CONTROL	
7	260592	1	EXHAUST FILTER DUST CONTROL	
8	260596	1	INSERT FITTING 1-1/2" PVC FPT FEM ADAP	
9	310008	1	O-RING-BUNA 1.375 ID	
10	450037	1	ADAPTER MACHINED	
11	450081	1	WASHER-FLAT 1.908 X 2.41 X .03 SS	
12	450207	1	LATCH-SOFT	
13	710180	3	SCR-THMS 1/4-20 X .75 ZP	
14	711160	10	SCR-HI/LO 10 X .625 BLACK ZINC	
15	711228	4	SCR-HH 5/16-18 X .75 ZP GR 5	
16	711373	3	NUT-NYLOC 1/4-20 ZP	
17	711374	4	NUT-NYLOC 5/16-18 ZP	
18	711506	4	WASHER-FLAT 5/16 X .688 ZP	
19	711516	4	WASHER-FLAT 5/16 X 1.25 X .05 ZP	
20	711519	3	WASHER-FLAT 1/4 X 1.00 X .06 ZP	
21	828970	1	WSR NEOP 1.87X2.4X.125	
22	831001	1	CLAMP-CRIMP 440R	



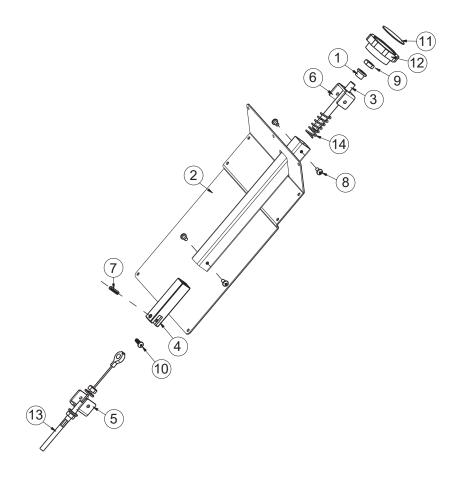




Electrical Assembly BOM

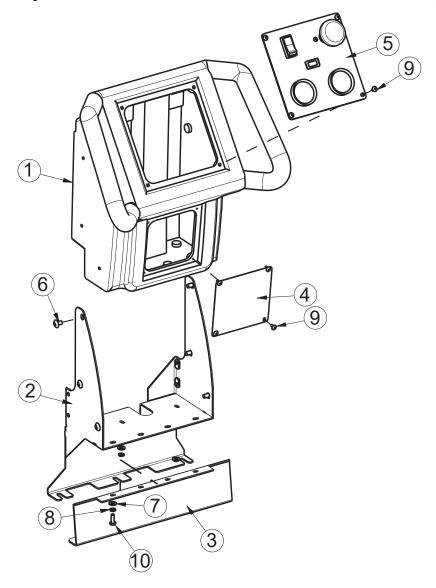
	BILL OF MATERIAL - 260570			
ITEM	PART NO.	QTY	DESCRIPTION	
1	260542	1	WELD-BACK PANEL	
2	711368	2	NUT-WING 1/4-20 ZP NYLOC	
3	740131	1	CIRCUIT BREAKER-70AMP PUSH BUTTON	
4	746006	1	CIRCUIT BREAKER-3.0AMP PUSH BUTTON	
5	740132	2	INSULATOR (ELECTRICAL)- 1/4-20 INSERT	
6	743464	1	SHUNT ASSY 100MV X 100A	
7	740243	1	CONTACT-36V SPNO 100A CONTINUOUS	
8	742000	1	DIODE ASY 24/26/32/38/AC	
9	833638	2	BRASS STUD- 1/4-20 X 1"	
10	743841	1	WIRE ASY, BLACK 6G	
11	743206	1	8G RED 8.00"	
12	743207	1	8G RED 4.50"	
13	743445	1	18G RED 13.00" B=26	
14	743449	1	8G BLACK 8.00"	
15	743452	1	18G BLACK 8.00" B=4	
16	742749	2	CIRCUIT BREAKER, HOLE PLUG	
17	711425	1	NUT-FLANGED WIZZ 1/4-20 ZP	
18	710356	2	SCR-RHMS 10-32 X .62 ZP	





	BILL OF MATERIAL - 260549			
ITEM	PART NO.	QTY	DESCRIPTION	
1	260066	1	BUSHING-FLG .377 X .50 X .31 OILITE	
2	260547	1	WELD-PRESS ADJUST	
3	260554	1	PRESS ADJ SCREW	
4	260557	1	PRESS ADJ SLIDE	
5	260562	1	PRESS ADJ RET BRKT	
6	260563	1	PRESS ADJ RET BRKT	
7	260564	1	PIN-ROLL 3/16 X 3/4	
8	710353	4	SCR-PHMS 10-32 X .37 ZP	
9	711391	1	NUT-JAM 3/8-16 ZP	
10	712536	1	SCR-THMS 10-24 X .62 SS	
11	715038	1	DECAL-PAD PRESSURE	
12	760034	1	KNOB-ADJ 3/8-16 THREAD	
13	762253	1	CABLE-PRESSURE ADJ ASSY	
14	833102	1	SPRING-KNOB .60 X .73 X 1.75 ZINC	

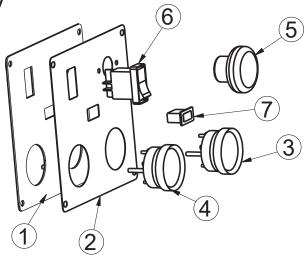




	BILL OF MATERIAL - 260568			
ITEM	PART NO.	QTY	DESCRIPTION	
1	200104	1	CONSOLE, HANDLE	
2	260538	1	FRONT HANDLE BRACKET WMT	
3	260541	1	REAR HANDLE BRKT	
4	260544	1	PANEL COVER	
5	260569	1	BURN DASH ASSY	
6	710195	6	SCR-PHMS 5/16-18 X .50 ZP	
7	711505	6	WASHER-FLAT 1/4 ZP	
8	711544	6	WASHER-LOCK 1/4 SPLIT ZP	
9	712540	8	SCR-THMS 10-24 X .37 SS	
10	713002	1	SCR-HH 1/4-20 X .75 ZP 5	

Vinuteman® Excellence Meets Clean

Dashboard Assembly



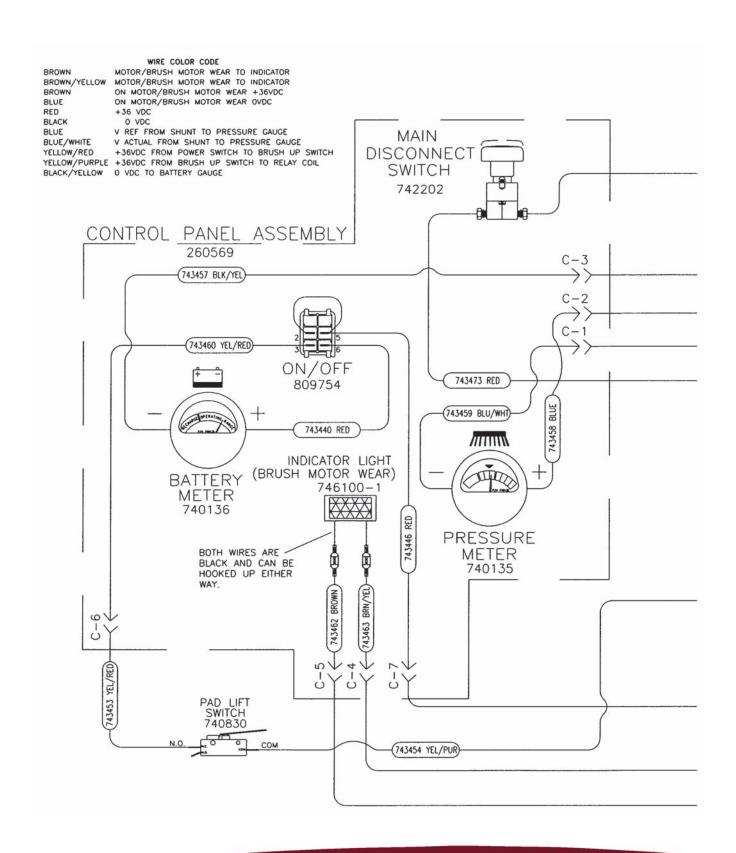
	BILL OF MATERIAL - 260569			
ITEM	PART NO.	QTY	DESCRIPTION	
1	260546	1	BURN DASHBOARD	
2	715297	1	DECAL-DASHBOARD 2600	
3	740135	1	METER-PRESSURE 100A DC	
4	740136	1	METER-VOLT 22V 45V (BATT)	
5	742202	1	SWITCH, DISCONNECT- E-STOP 1 POLE 125A	
6	809754	1	SWITCH-ROCKER	
7	746100-1	1	LIGHT ASSY	

Replacement Parts

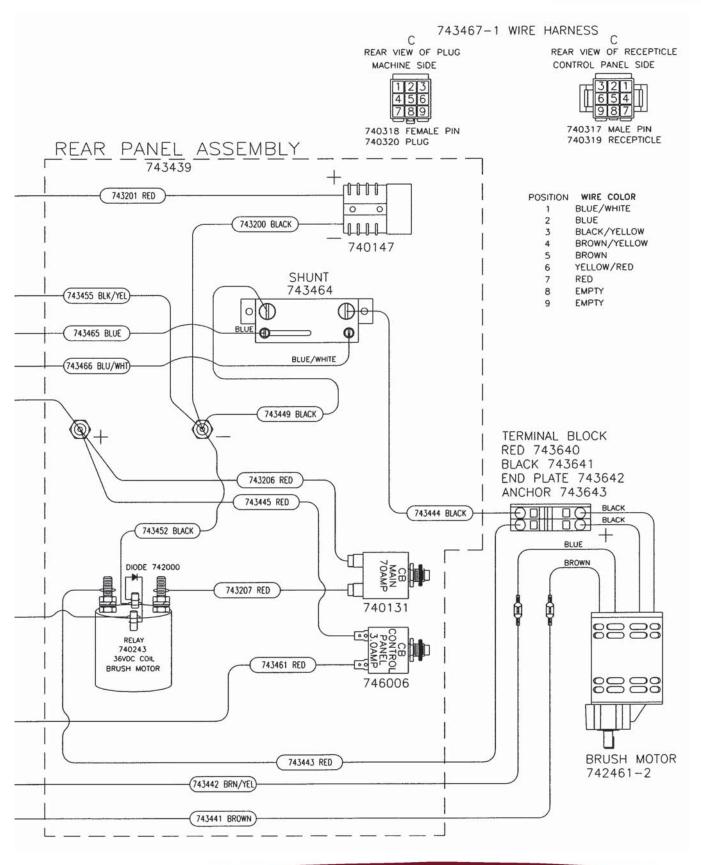
	DUST SKIRT P/N 260595
	CARBON BRUSH REPLACEMENTS P/N 572003 (QTY 4)
6899 8°9	210 AMP HOUR BATTERY (OPTIONAL) P/N 956210
	PAPER BAG REPLACEMENTS P/N 370202PKG













Minuteman International Made Simple Commercial Limited Warranty

REVISION O EFFECTIVE 4/1/2016

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 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 pre-filters 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.



Model	Parts	Labor	Poly	Travel**
Cord Electric Group	5yrs	3yrs	12yrs	90 days
Battery Operated Group	5yrs	3yrs	12yrs	90 days

Exceptions......

Model	Parts	Labor	Poly	Travel**
Port A Scrub, all models	1yr	6months	12yrs	90 days
A3S Blower	1yr	1yr	0	0
Phenom Dual Motor Upright Vacuums	2yrs	2yrs	0	0
Explosion Proof Vacuum	1yr	1yr	0	0
Propane Burnisher	1yr	1yr	0	90 days
	•	*	*Travel, 2 h	nours max

Stand-alone Battery Chargers:	One year
Replacement Parts:	Ninety days
Batteries:	0-3 months full replacement, 4-12 months pro-rate
Polypropylene Plastic Tanks:	12yr warranty, no additional labor



"Excellence Meets Clean"

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

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