



Electronic Service Manuals

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You may contact Michco through the following methods:

Phone (517) 484-9312 or (800) 331-3339

2011 N. High St. -- Lansing, Michigan -- 48906

Fax: (517) 484-9836

Email: CustServe@Michco.com

Web site: www.Michco.Com

Parts Web site: www.FloorMachineParts.Com

Order Parts on Line at:

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Parts Manual

Port A Scrub 14 with Power Pack

Introduction



Preface

Please be advised explicitly that we cannot accept any legal issues out of the contents of this manual. If repair work has to be performed make sure that only genuine spare parts are used; only genuine spare parts may guarantee a dependable machine. We reserve the right for technical improvement..

Valid as of: 05/09

Minuteman International Inc.
14N845 US ROUTE 20
PINGREE GROVE, IL. 60140-8893
U.S.A

Proper use

The machine is a vacuum scrubbing machine for wet cleaning of hard-surfaced floors. Using the machine beyond this scope of application will be deemed improper use; The manufacturer cannot be held liable for consequential damages; the user alone bears the risk. The term of proper use also includes operation, maintenance and repair work to be performed in compliance with the manufacturer's specifications. The E 24 may only be used by persons that are familiar with the machine and aware of possible hazards involved. If modifications to the machine are made in absence of the manufacturer's prior consent, the latter cannot be held liable for damage resulting from such unauthorized modification.

Notes on warranty

The terms of the sales contract apply. Damages are not subject to warranty if they are due to non-compliance with the maintenance and service provisions. The maintenance work has to be performed by an authorized Minuteman service center.

The following is excluded from warranty: fuses, natural wear, damages caused by overload, inexpert handling and unauthorized modification of the machine. Moreover, any claim for warranty cannot be accepted if damages of the machine are caused by fitting parts or accessories without Minuteman's prior and explicit consent or by non-compliance with the maintenance instructions.

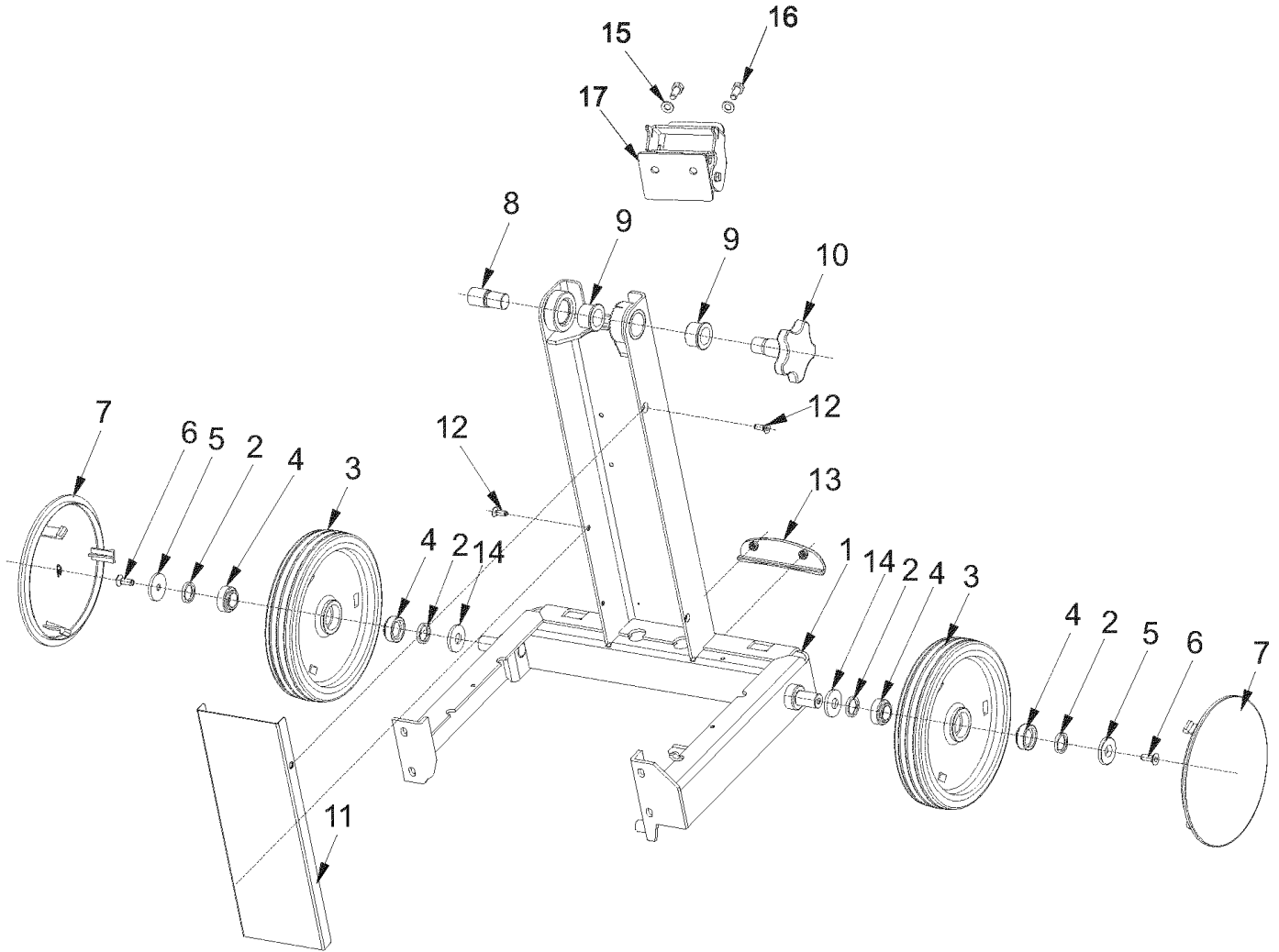
For Safety When Servicing or Maintaining Machine

- 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.

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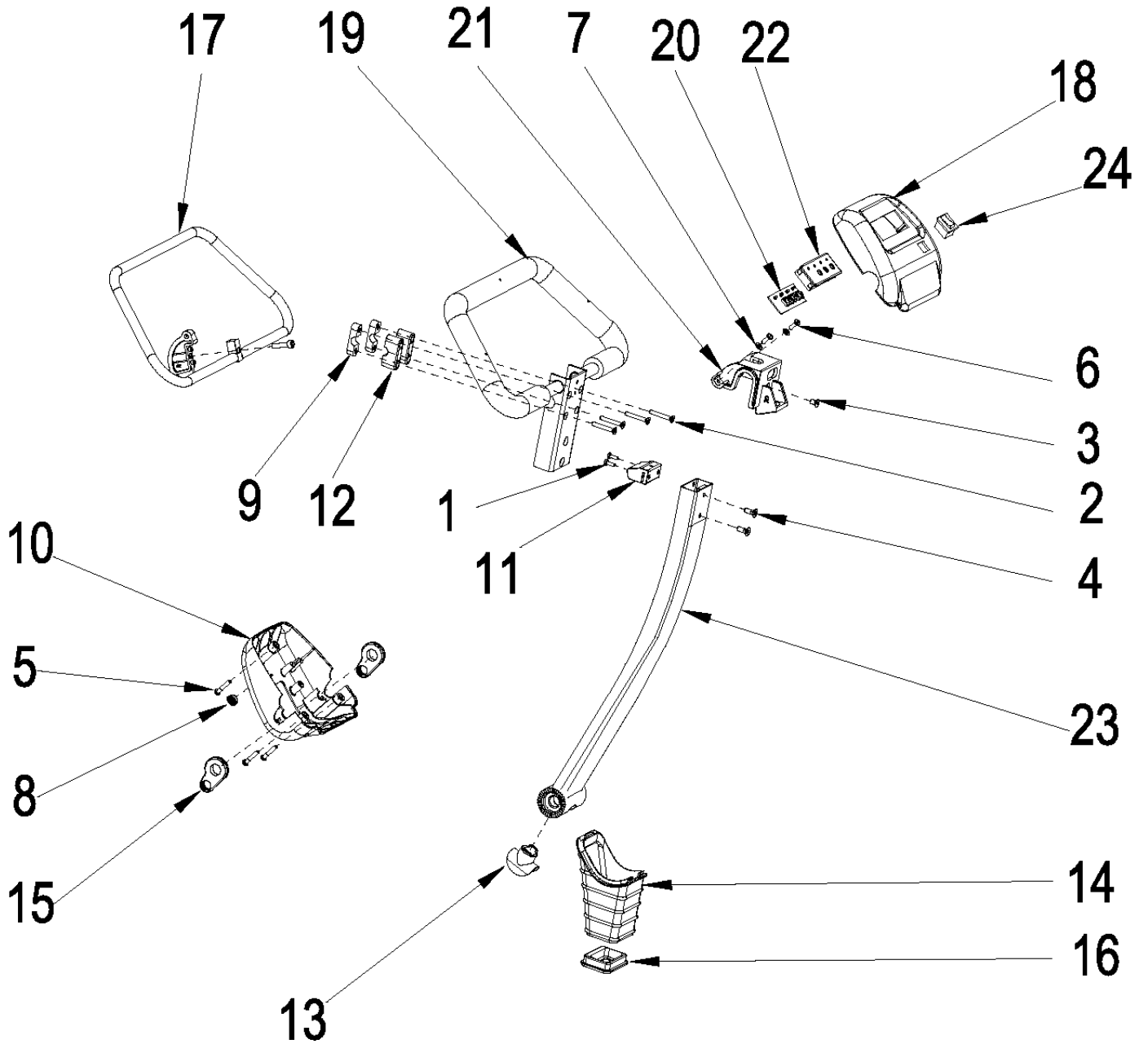
CHASSIS ASSEMBLY EXPLODED ASSEMBLY VIEW



BILL OF MATERIAL

Chassis group				
ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	3180105	1	Base Frame Assy	
2	3130077	4	Seal - Wheel	
3	931756	2	Wheel	
4	3130071	4	Bush-Wheel	
5	3130038	2	Washer-Main Wheel	
6	829306	2	Hex. Soc. CSK. Head Screw SS	M6x16
7	931128	2	Cover Wheel	
8	931045	1	Hex Soc. Head Pin	
9	3130054	2	Bush LH&RH- Pillar Handle	
10	931753	1	Knob - Handle	
11	3180028	1	Cover Assy - Pillar	
12	829203	2	Hex.Soc.CSK. Head Screw SS	M5x10
13	3130062	1	Lifting Handle-Frame	
14	921066	2	Optional Washer	
15	844081	2	Washer	8.4x16.0x1.6
16	802407	2	Hex Head Screw	M8x16
17	3180154	1	Battery Holder Assy	

HANDLE ASSEMBLY
EXPLODED ASSEMBLY VIEW



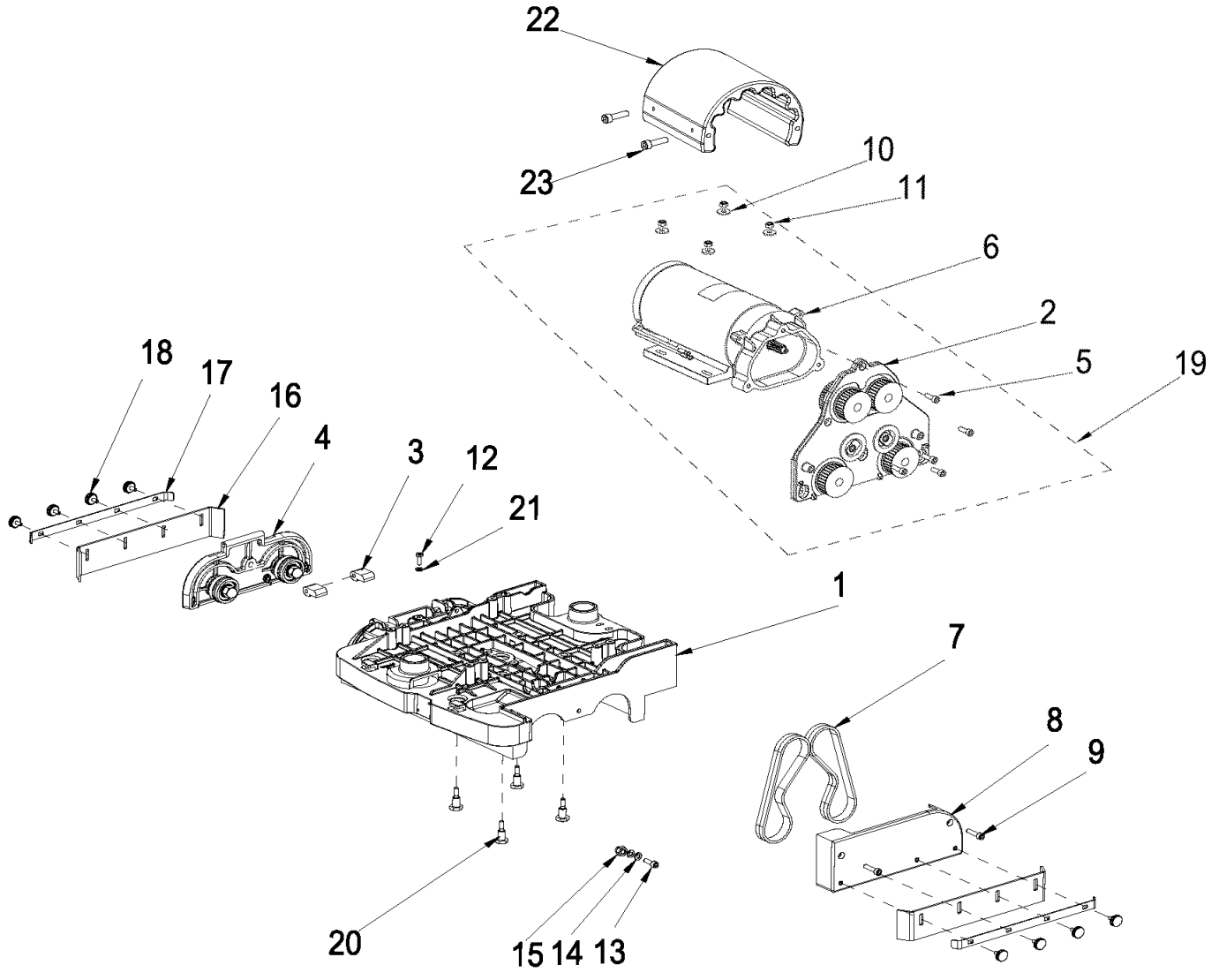
HANDLE ASSEMBLY BILL OF MATERIAL



Handle group

ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	818104	2	CR Pan Head-SS	M4x12
2	828210	4	Hex Soc Csk Hd Screw-SS	M5x35
3	829203	1	CR CSK Screw – SS	M5x10
4	829306	2	Hex Soc Csk Hd Screw-SS	M6x16
5	837208	3	Self Tap Screw	4.8x25
6	837210	2	Self Tap Screw	4.8x13
7	845052	2	Washer – SS 304	5.2x10x1.6
8	3130143	1	Cap	
9	931134	2	Guide – Shifter Bottom	
10	3130174	1	Switch Cover Bottom	
11	931158	1	Guide Rope	
12	931166	2	Guide Shifter Top	
13	931182	1	Boot Cable	
14	931183	1	Bellow Handle	
15	931194	2	Grommet Switch Cover	
16	931199	1	Plug – Handle Cover	
17	931819	1	Shifting Lever Assy	
18	3180136	1	Switch Cover Top	
19	3180029	1	Steering Assy	
20	3130147	1	Controller Board	
21	3130072	1	Bracket – Channel	
22	3130144	1	Bracket Controller Board	
23	3180016	1	Handle Weldment	
24	3180127	1	Main Switch with Connector	

**BRUSH CONTROL ASSEMBLY
EXPLODED ASSEMBLY VIEW**



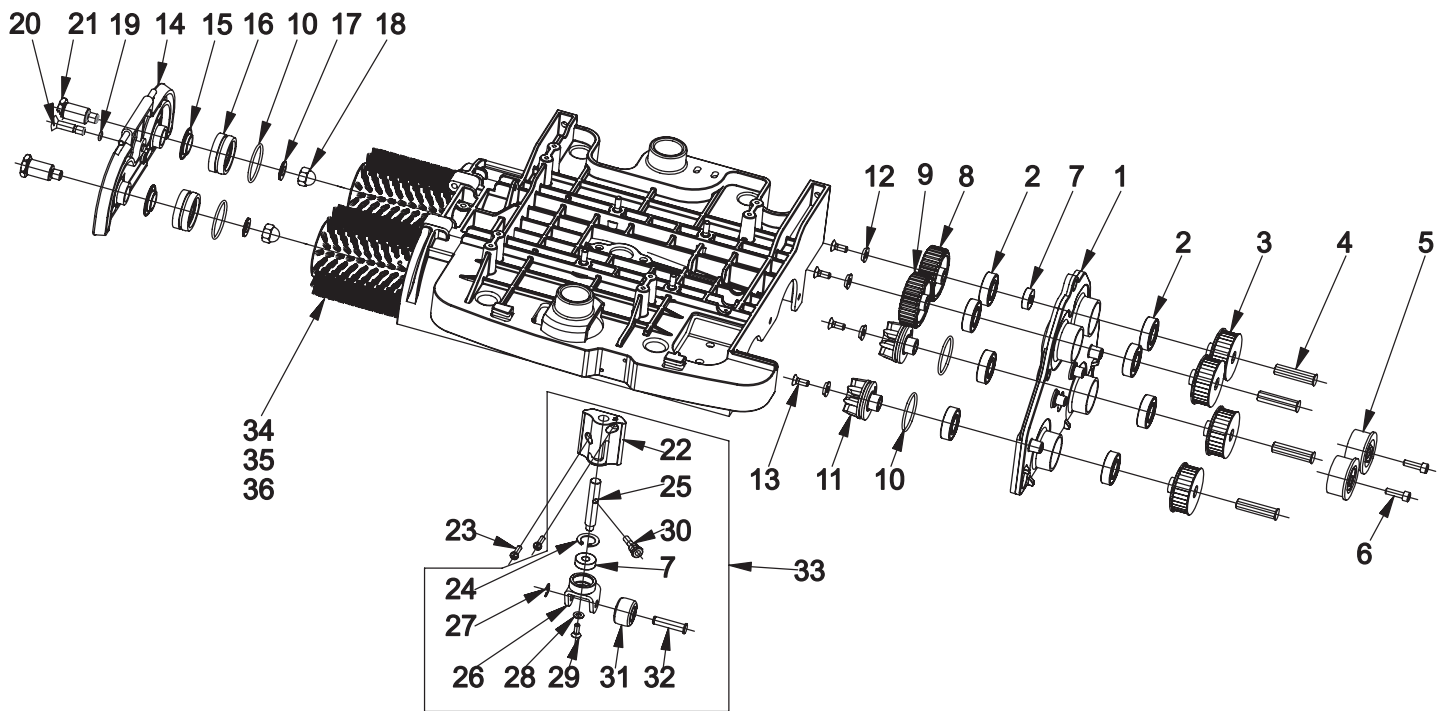
**BRUSH CONTROL ASSEMBLY
BILL OF MATERIAL**



Brush control group

ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	3180005	1	Housing – Brush with Insert assy	
2	3180022	1	Housing Assy-Gear Support	
3	931171	2	Hinge - Idler End	
4	3180009	1	Idler Support Assy Brush	
5	831306	3	Hex. Soc.Hd Cap Screw -SS	M6X16
6	3180104	1	Brush Motor With Connector	
7	925002	2	Drive Belt 425-5M-15-HTD	
8	3180028	1	Cover - With Seal	
9	831308	2	Hex-Soc-Hd-Cap-Screw	M6X25
10	844063	4	Washer	6.4X18X2
11	859068	4	Hex. Nylock Nut - St	M6
12	818206	1	CRPH-Screw	M5X16
13	831306	1	Hex Soc Hd Cap Screw	M6x16
14	844061	2	Washer	6.4X12X1.6
15	838060	1	Domed Cap Nut-SS	M6
16	931235	2	Lip-Flash Guard	
17	3130024	2	Strip-Flash Guard	
18	931172	8	Knob-SQG	
19	3180107	1	Geared Motor	
20	3130010	4	Stud-Brush Housing	
21	845052	1	Washer	5.2X10X1.6
22	3130148	1	Weight Motor	
23	831309	2	Hex-Soc-Hd-Cap-Screw	M6x30

BRUSH HEAD ASSEMBLY EXPLODED ASSEMBLY VIEW



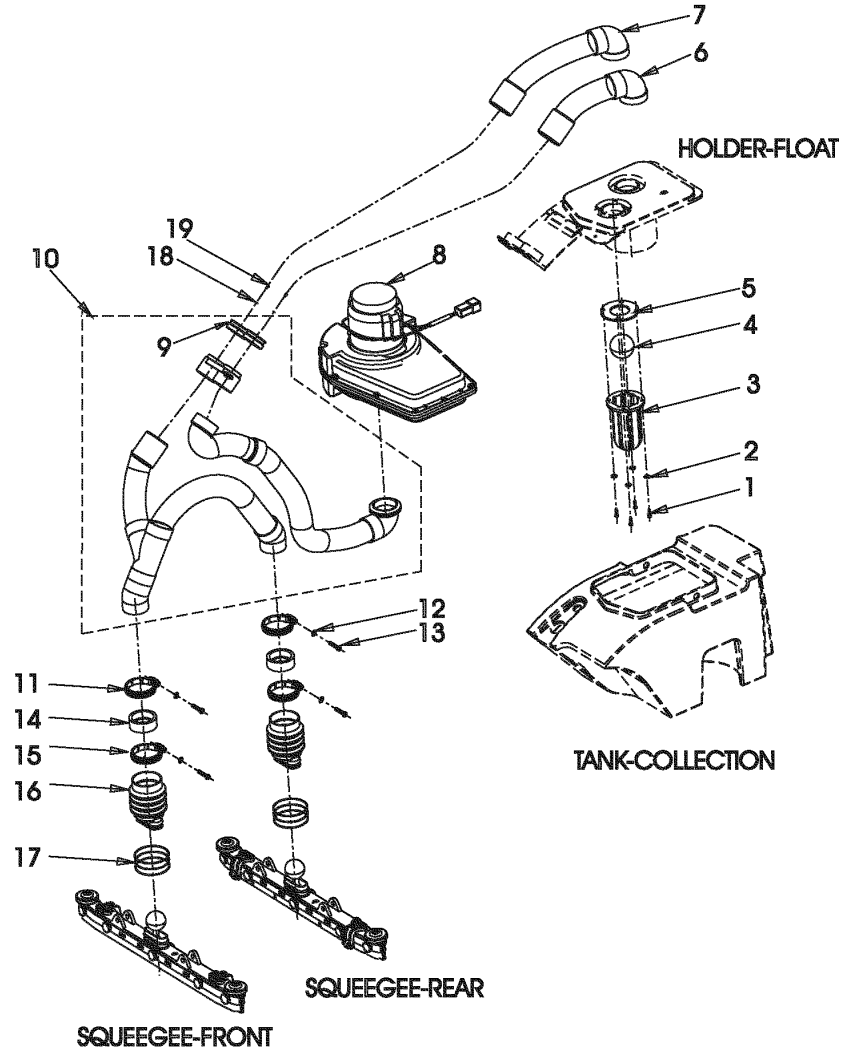
BRUSH HEAD ASSEMBLY BILL OF MATERIAL



Brush head group

ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	3130006	1	Housing-Gear Support	
2	875010	8	Bearing	6003 2RS
3	3180008	4	Sprocket Assy Gear	
4	931027	4	Drive Key	
5	931815	2	Idler - Plain Assy	
6	831307	2	Hex. Soc. Hd Cap Screw - St	M6X20
7	875011	2	Bearing	608 2Z
8	931036	1	Gear-LH	
9	931035	1	Gear-RH	
10	854007	4	O' Ring	36X2.5
11	931129	2	Pulley-Drive	
12	925012	4	Washer-Bridge	
13	829306	4	Hex-Soc-CSK-Hd-Screw-SS	M6X16
14	3130005	1	Cover Idler End	
15	931157	2	Spacer-Idler End	
16	3130075	2	Idler Pulley - Brush	
17	845101	2	Washer-SS-304	10.5X20X2
18	838100	2	Domed Cap Nut-SS	M10
19	854008	1	Oring	6X2.0
20	931758	1	Knob Idler Cover	
21	3130042	2	Pin-Idler End	
22	3130066	1	Bracket-Parking Wheel	
23	837207	2	Self Tapping Screw	4.8X16
24	881041	1	Circlip Internal	Light B22
25	3130035	1	Pin-Parking Stand	
26	3180024	1	Bracket-Castor	
27	925129	1	Circlip	E6.0 (Type C)
28	3130021	1	Washer-Castor	
29	829203	1	Hex-Soc-CSK-Hd-Screw-SS	M5X10
30	3130067	1	Knob-Parking Wheel	
31	3130043	1	Wheel-Parking	
32	3130034	1	Pin-Wheel	
33	3180023	1	Parking Wheel Kit	NOT SHOWN
34	931892	2	Brush (PA / Blue)	
35	931893	2	Brush (PP / Black)	
36	931894	2	Brush (SIC / Grey)	

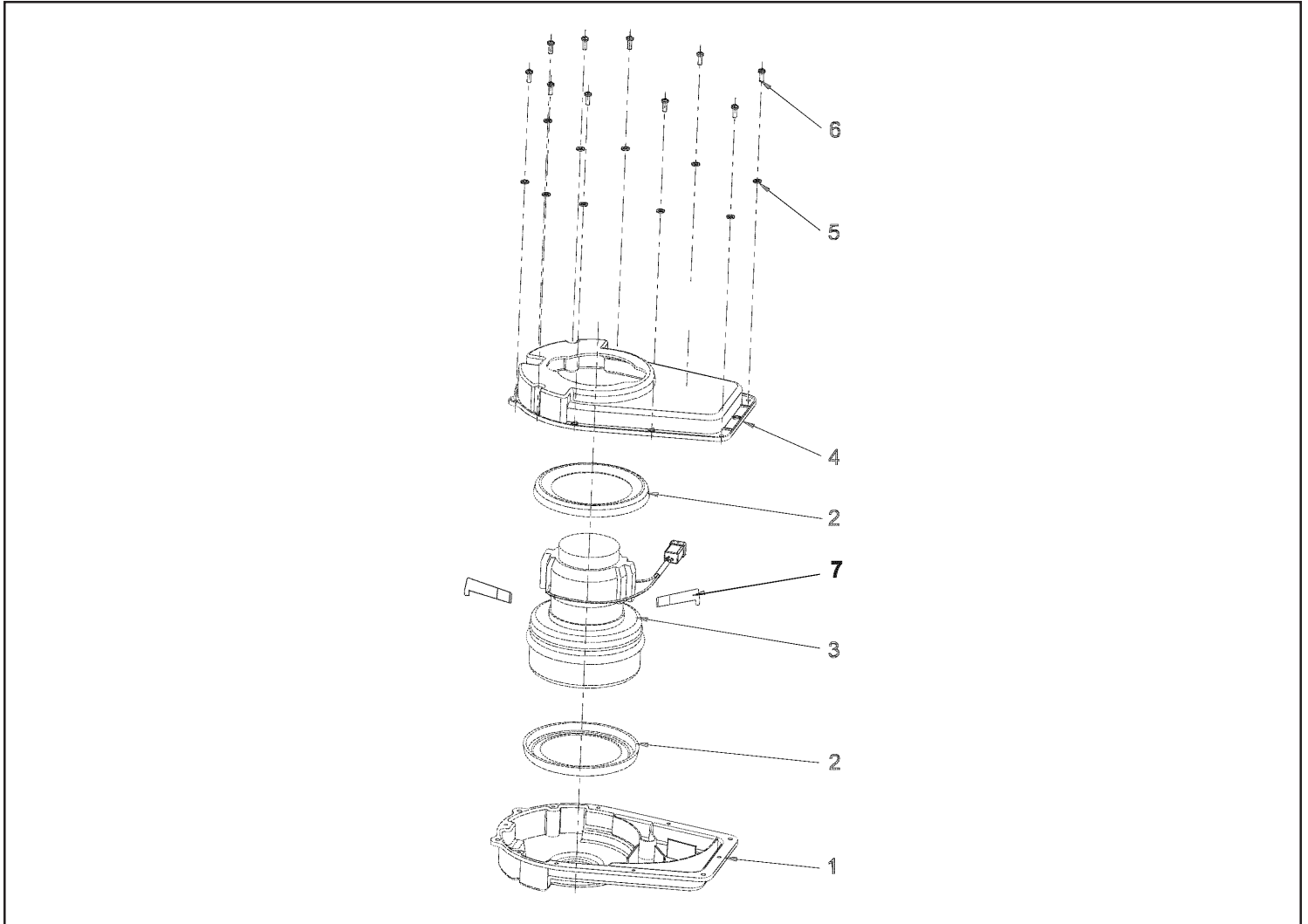
VACUUM MOTOR ASSEMBLY 1 EXPLODED ASSEMBLY VIEW



BILL OF MATERIAL

Vacuum motor group				
ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	836206	4	CRPH Self Tapping Screw - SS	3.5X16
2	845039	4	Washer - SS	4.0X8.0X0.5
3	931132	1	Guide - Float	
4	931810	1	Float	
5	931196	1	Gasket - Float	
6	931850	1	Hose Assy - Vacuum	
7	931851	1	Hose Assy - Collection	
8	3180111	1	Vacuum Motor Sub Assy	
9	931204	2	Gasket - Lip	
10	3180044	1	Hose Assy SQG Group	
11	3130064	2	Clamp Hose	
12	844052	4	Washer	5.2X10X1.6
13	837208	4	CRPH Self Tapping Screw - Steel (Form F)	4.8x25
14	931191	2	Lip - Valve	
15	3130027	2	Clamp Bellow SQG	
16	931184	2	Bellow - Sqq	
17	931054	6	Ring - Bellow	
18	844043	2	Washer - SS	4.3X12X1.0
19	818104	2	CRPH Screw	M4X12

VACUUM MOTOR ASSEMBLY 2 EXPLODED ASSEMBLY VIEW

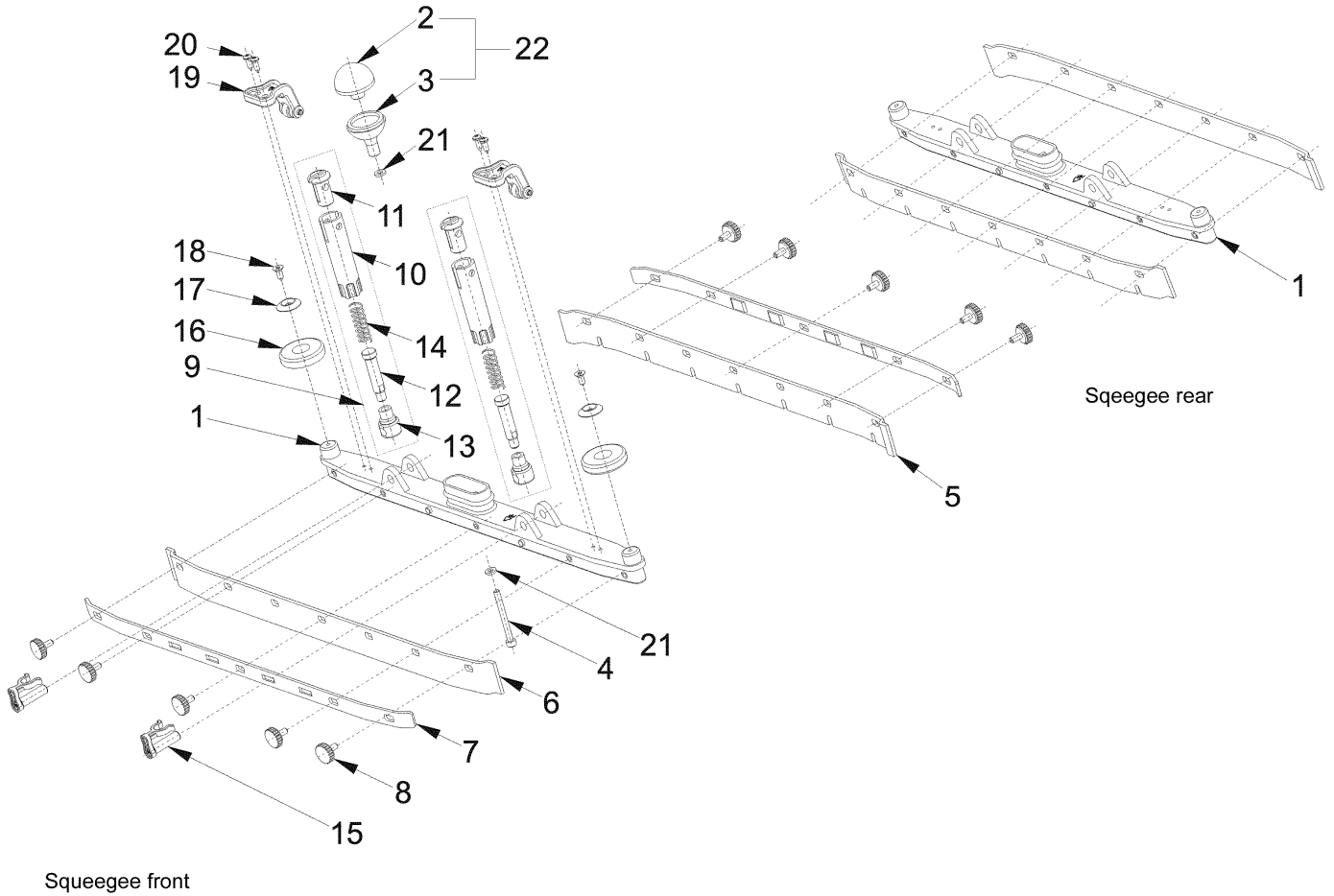


BILL OF MATERIAL

Vacuum motor assembly

ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	3130046	1	Hsg Bottom - V.M	
2	931197	2	Gasket - V.M	
3	3180112	1	V.M with Connector Assy	
4	3130047	1	Hsg Top - V.M	
5	845052	10	Washer - SS 304	5.2X10X1.6
6	837210	10	Self Tap Screw	4.8X13
7	881044	1	Carbon Brush Set	

SQUEEGEE ASSEMBLY EXPLODED ASSEMBLY VIEW



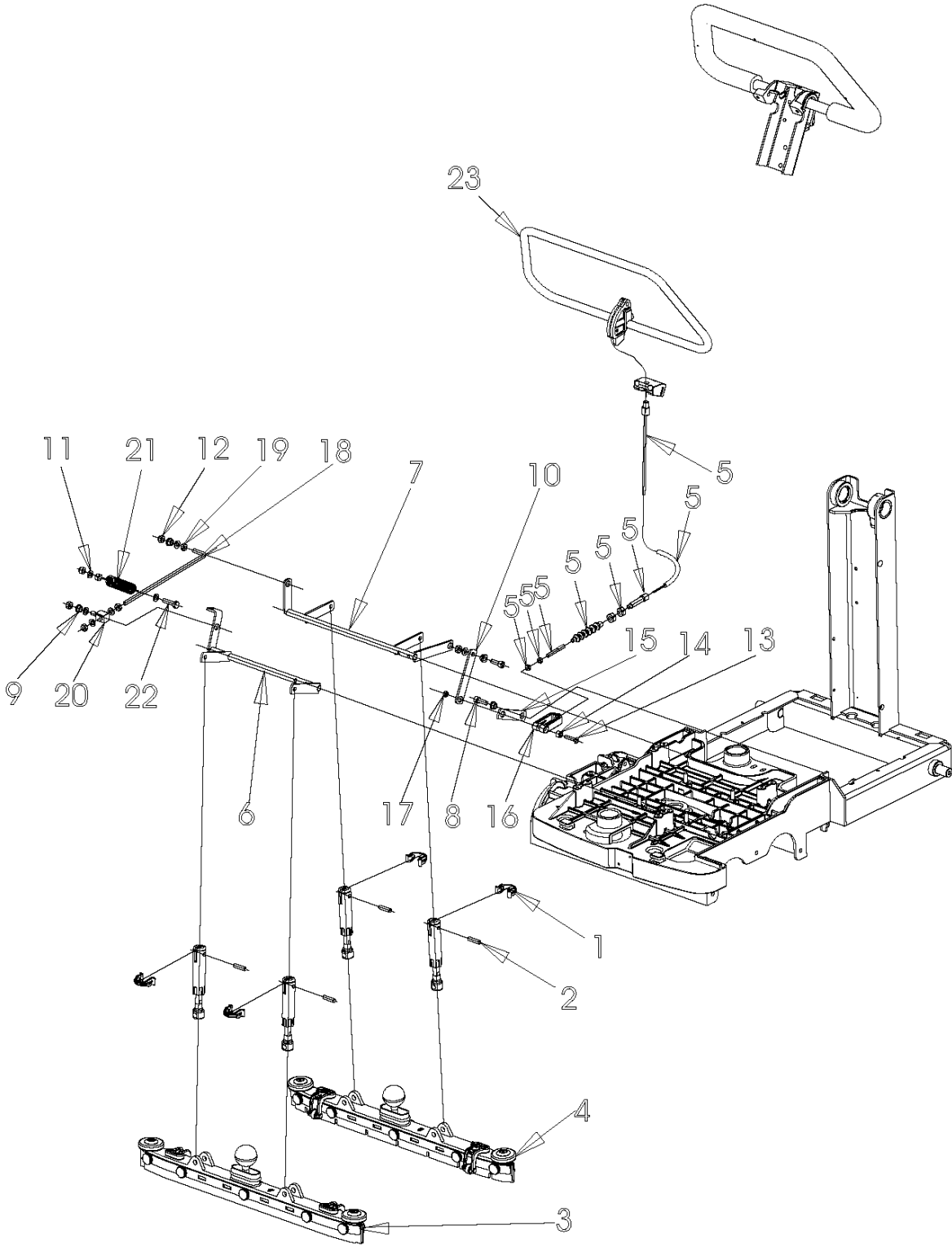
SQUEEGEE ASSEMBLY BILL OF MATERIAL



Squeegee group

ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	3130051	2	Body Sqq	
2	931170	2	Valve Top	
3	931126	2	Valve Bottom	
4	832213	2	Hex. Soc. Hd Cap Screw - SS	M5X50
5	931233	2	Lip - Sqq. Inner	
6	931224	2	Lip - Sqq. Outer	
7	3130022	4	Strip - Lip Sqq	
8	931172	20	Knob - Sqq	
9	3180012	4	Squeegee Rod Sub Assy	
10	3130048	4	Guide - Pillar Sqq	
11	931175	4	Bush Top - Pillar Sqq.	
12	931050	4	Pin 10 - Pillar Sqq	
13	3130049	4	Bush Bottom - Pillar Sqq	
14	931251	4	Spring - Pillar Sqq.	
15	3130063	4	Locking Clip-SQG Pillar	
16	931146	4	Deflector - Roller	
17	931147	4	Washer - Deflector	
18	841106	4	CSK-Self-Screw	4.2x16
19	931841	4	Wheel - Sqq. Assy	
20	837210	8	CRPH-Self-Screw-SS	4.8X13
21	845052	4	Washer - SS	5.2X10X1.6
22	Reference Only	1	Suction Valve	

SQUEEGEE LIFTING ASSEMBLY EXPLODED ASSEMBLY VIEW



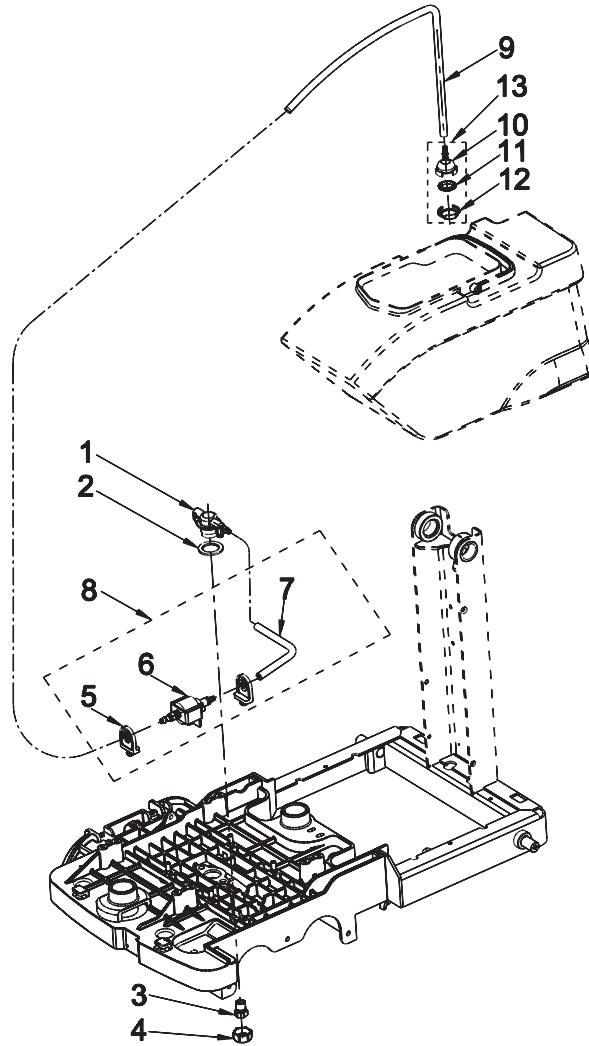
SQUEEGEE LIFTING ASSEMBLY BILL OF MATERIAL



Squeegee lifting

ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	931181	4	Clip - Clamp	
2	931051	4	Pin 6 - Pillar Sqg	
3	3180013	1	Squeegee Front	
4	3180014	1	Squeegee Rear	
5	931804	1	Cable Assy - Squeegee	
6	3180027	1	Sqg Rod Assy - Front	
7	3180026	1	Sqg. Rod Assy - Rear	
8	831323	2	Hex. Socket Head Cap Screw - St	M6X18
9	3130053	4	Bush-SQG	
10	931109	1	Link - 75	
11	844061	7	Washer - St	6.4X12X1.6
12	859068	4	Hex. Nylock Nut - St	M6
13	828208	1	Hex-Soc-CSK-Hd-Screw	M5X25
14	3130052	1	Bush9.8-SQG	
15	931107	1	Link - 50	
16	3130061	1	U Bracket - Stud	
17	822058	3	Hex-Nut	M5
18	3130018	1	Stud - Link Adj	
19	822068	4	Hex-Nut	M6
20	3130019	1	Connector - Link	
21	931252	1	Hook - Spring	
22	803308	1	Hex Head Screw	M6X25
23	931819	1	Shifting Lever Assy	

WATER FEED ASSEMBLY EXPLODED ASSEMBLY VIEW

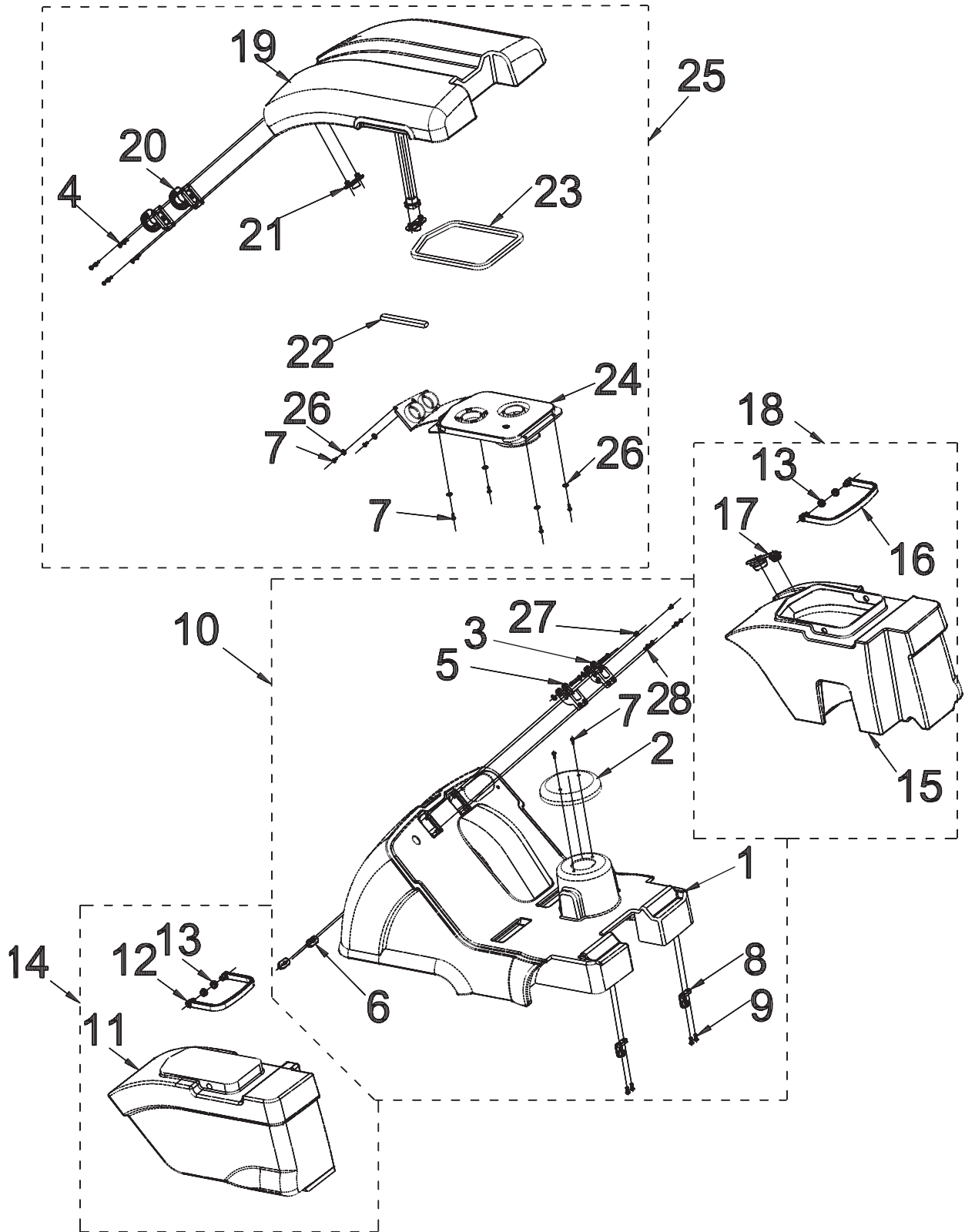


BILL OF MATERIAL

Water feed system

ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	931142	1	Holder - Nozzle	
2	931198	1	Washer - Nozzle	
3	931816	1	Nozzle Assy	
4	931143	1	Nut - Nozzle	
5	3130076	2	Bracket - Pump	
6	3130140	1	Vibrating Pump – 24V	
7	3130116	1	Hose - Nozzle	
8	3180115	1	Pump Kit 24V	
9	931290	1	Hose - Pump	
10	928062	1	Body-Filter	
11	928063	1	Filter	
12	3130074	1	Cap-Filter	
13	931809	1	Filter Assy	

TANK ASSEMBLY EXPLODED ASSEMBLY VIEW



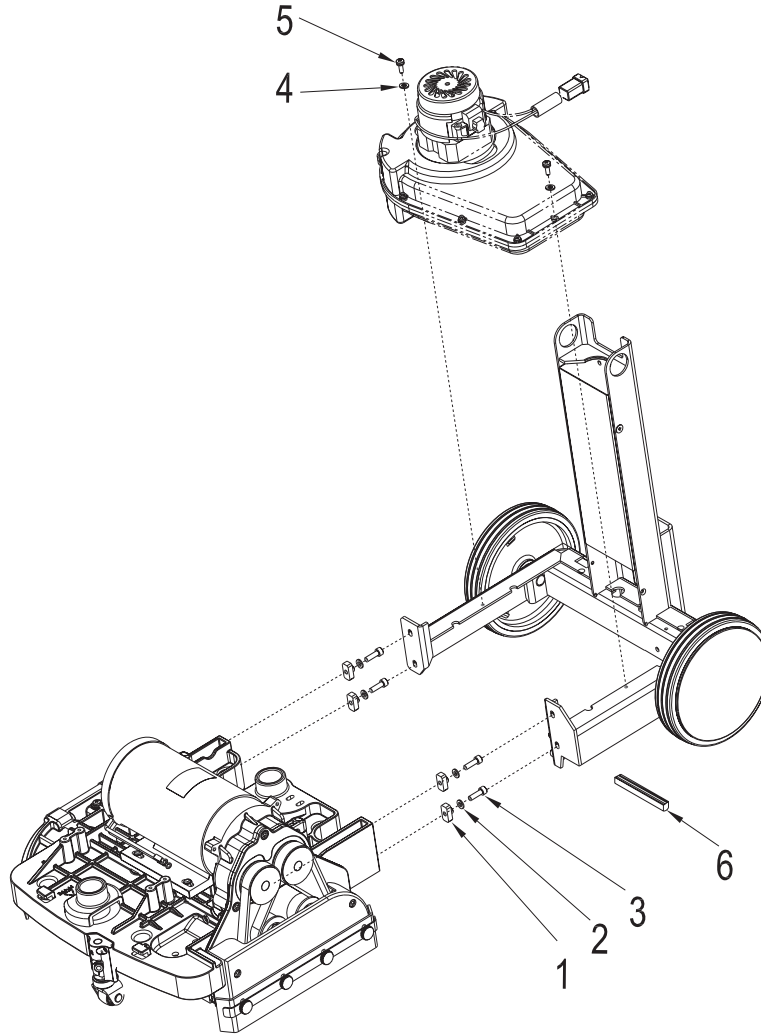
TANK ASSEMBLY BILL OF MATERIAL



Tank group

ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	3130117	1	Bottom Housing	
2	931125	1	Cap - V.M	
3	931144	1	Yoke Hinge - Lid (Right)	
4	836210	12	CRPH Self Screw-SS	3.5X16
5	931162	1	Yoke Hinge - Lid (Left)	
6	3130068	2	Mounting Plate - Bot. Hsg	
7	836004	8	CRPH Self Screw - SS	3.5X13
8	931159	2	Bracket - Housing	
9	812104	4	CRCSK Screw - St	M 4X12
10	3180057	1	Bottom Housing Assy	
11	3130119	1	Tank - Fresh	
12	3130060	1	Handle - Fresh	
13	3130050	4	Spacer - Tank	
14	3180059	1	Tank - Fresh assy	
15	3130118	1	Tank - Collection	
16	3130058	1	Handle - Collection	
17	931203	1	Cap - Collection Tank	
18	3180058	1	Tank - Collection Assy	
19	931216	1	Lid	
20	931145	2	Hook Hinge - Lid	
21	931156	2	Hose Guide	
22	931265	1	Gasket - Fresh	
23	3130126	1	Gasket - Collection	
24	3180118	1	Holder Float Assembly	
25	3180133	1	Top Cover Assy	
26	845039	6	Washer -SS	4.0X8.0X0.5
27	836004	2	CRPH Self Tapping Screw-SS	3.5X9.5(DIN 7981)
28	836209	4	CRPH Self Screw-SS	3.5x18

BRUSH HEAD MOUNTING ASSEMBLY EXPLODED ASSEMBLY VIEW

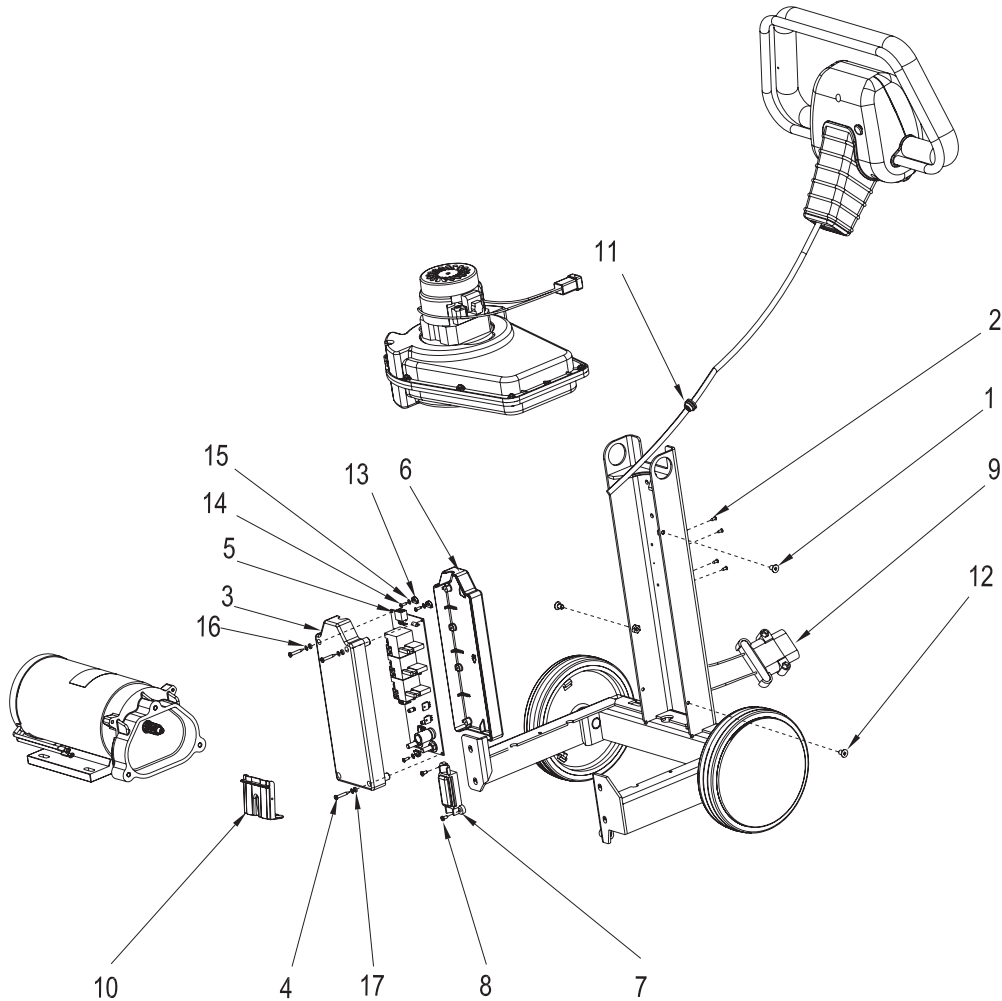


BILL OF MATERIAL

Brush head mounting group

ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	3130040	4	Support Plate-Housing	
2	844061	4	Washer	6.4X12X16
3	831307	4	Hex Soc Hd Cap Screw	M6X20
4	845041	2	Washer-SS	4.3X9X0.8
5	818105	2	CR Pan Head-SS	M4X15
6	3130207	1	Edge Protector B10	

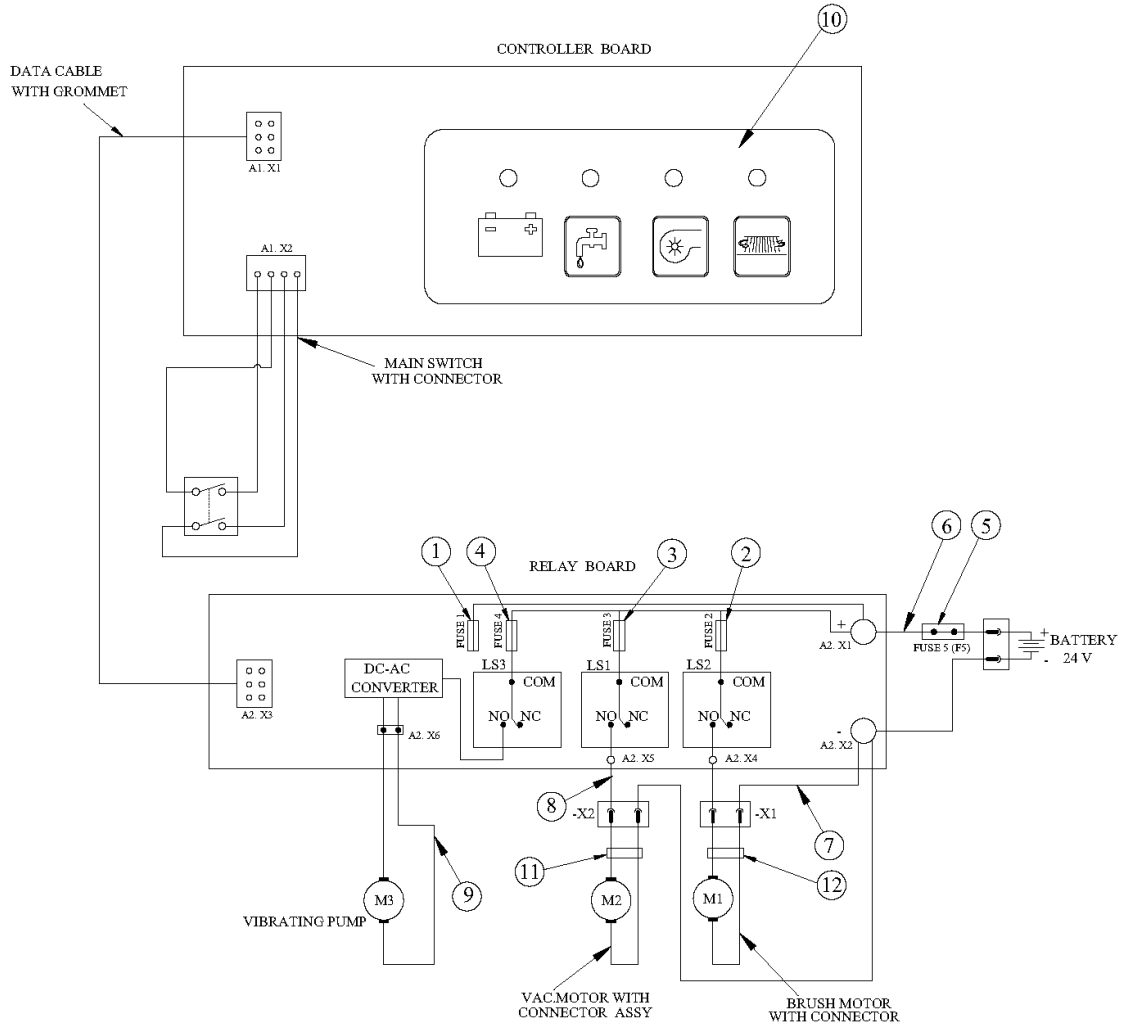
ELECTRIC ASSEMBLY 1 EXPLODED ASSEMBLY VIEW



BILL OF MATERIAL

<i>Electric 1</i>				
ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	829203	2	CR CSK Screw	M5X10
2	841106	4	CSK-Self-Screw	4.2x16
3	3130146	1	Relay Mounting Bracket - Top	
4	836210	3	CRPH Self Screw	3.5x25
5	3180122	1	Relay Board Assy	
6	3130145	1	Relay Board Mounting Bracket	
7	932023	1	Fuse Holder 50	
8	817206	2	CR Pan Head - SS	M5X16
9	3180128	1	Battery Plug Assy - Male	
10	931123	1	Bracket - Capacitor	
11	3180123	1	Data Cable Assy	
12	841103	2	CR CSK HD Screw - ST	4x10
13	3130198	3	Channel - Relay	
14	825004	3	CRPH Self Screw	3x12
15	844039	3	Washer	4x8x0.5
16	844111	3	Washer	3.5x7.0x0.5
17	3130206	3	Rubber Bush	

ELECTRIC ASSEMBLY 2 EXPLODED ASSEMBLY VIEW

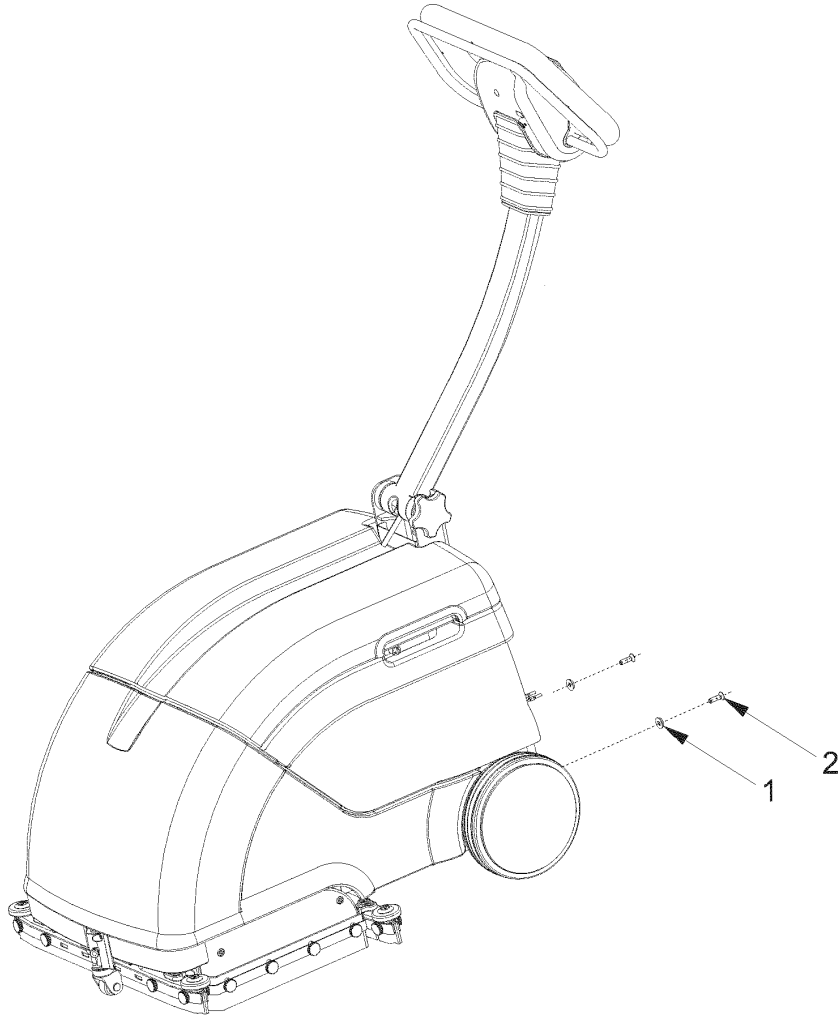


BILL OF MATERIAL

Electric 2

ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	3130017	1	Fuse - 1A	
2	3130208	1	Fuse - 35A	
3	932025	1	Fuse - 25A	
4	932026	1	Fuse - 5A	
5	932024	1	Fuse - 50A	
6	3180124	1	Fuse Link Cable	
7	3180125	1	Cable Assy - BM	
8	3180126	1	Cable Assy - VM	
9	3180129	1	Cable Assy - Pump	
10	3170020	1	Sticker Panel - 14B	
11	3130173	1	Ferrite - Vacuum Motor	
12	3130172	1	Ferrite - Brush Motor	

**COVERING ASSEMBLY
EXPLODED ASSEMBLY VIEW**

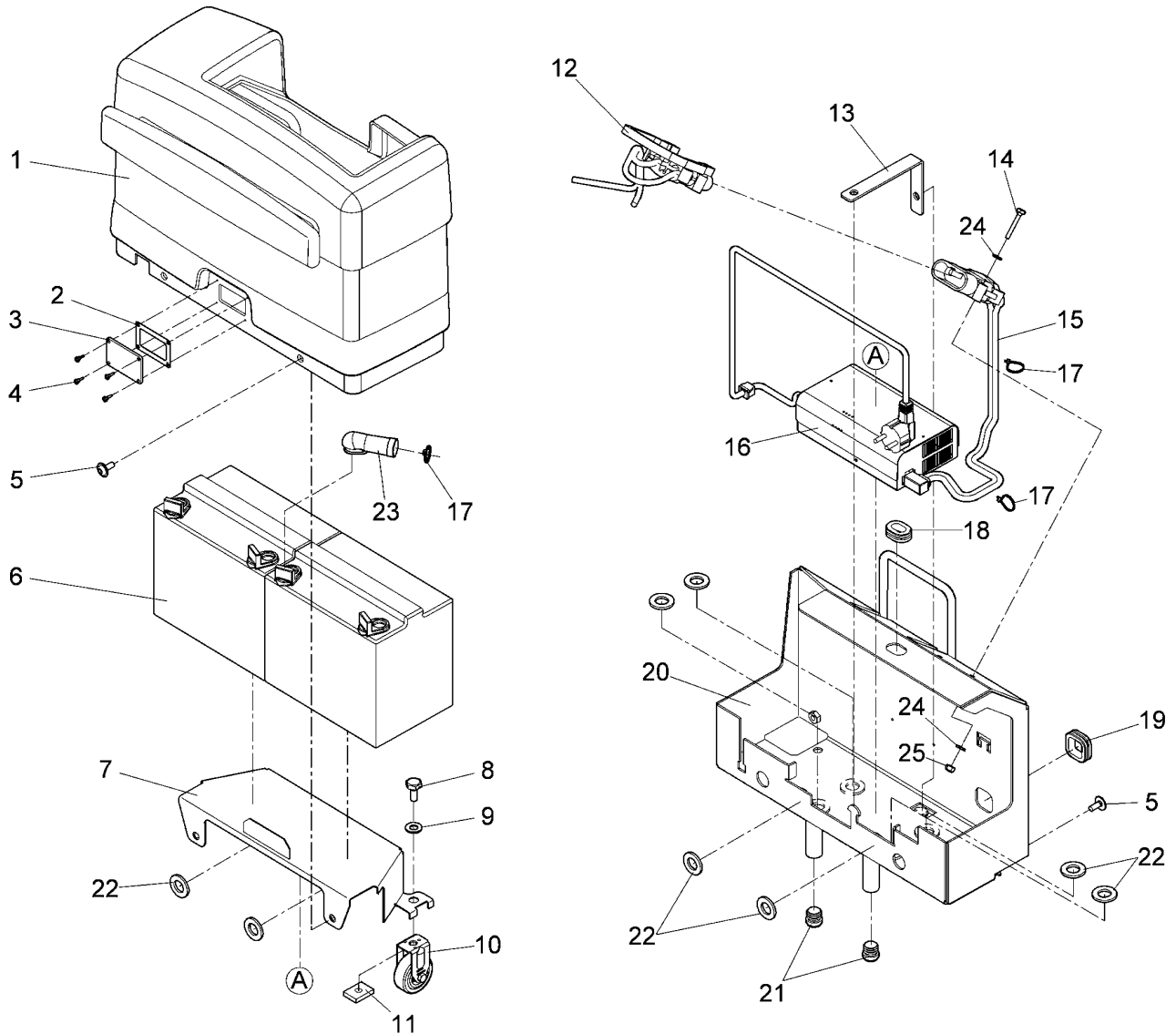


BILL OF MATERIAL

Covering assembly

ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	925012	2	Washer-Bridge	
2	829307	2	Hex Soc CSK Hd Screw-SS	M6X20

POWER TROLLEY ASSEMBLY EXPLODED ASSEMBLY VIEW



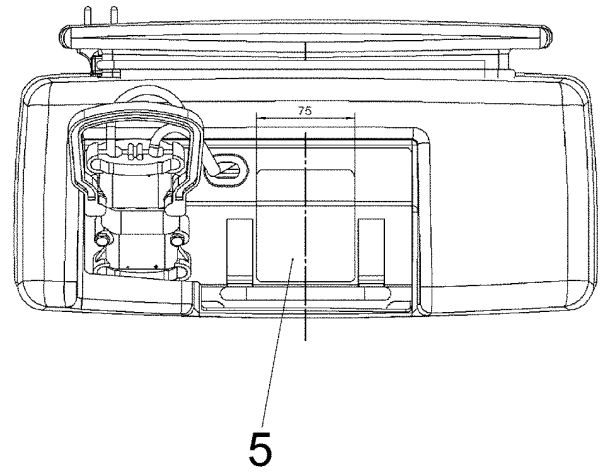
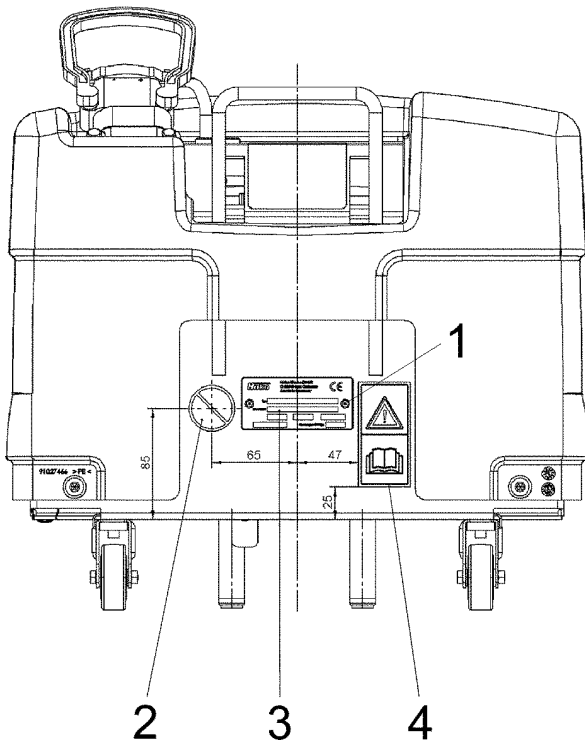
**POWER TROLLEY ASSEMBLY
BILL OF MATERIAL**



Power trolley

ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	01177330	1	Hood	
2	01072060	1	Seal	
3	01072050	1	Inspection glass	
4	01177340	4	Screw	
5	01006820	4	Lens flange screw	
6	01177350	2	Battery	
7	01177360	1	Sheet metal	
8	00021130	2	Hex.bolt	
9	00053760	2	Washer	
10	01077810	2	Fixed castor	
11	01177370	2	Threaded sheet metal	
12	01177380	1	Battery cable	
13	01172940	1	Tension band	
14	00053290	2	Hexagon screw	
15	01177550	1	Charging cable	
16	01177790	1	On-board charger - USA	
17	00121010	3	Cable tie	
18	00555440	1	Cable sleeve	
19	01079690	1	Bushing	
20	01177390	1	Console	
21	01177800	2	Sealing Plug	
22	01078240	8	Washer	
23	00694770	1	Lens cap	
24	00053730	4	Washer	
25	00051520	2	Hexagon nut	

**LABELING
EXPLODED ASSEMBLY VIEW**



BILL OF MATERIAL

Labeling

ITEM	PART NO.	REQ'D	DESCRIPTION	NOTES
1	00504370	2	Blind rivet	
2	01131570	1	Lable high-pressure cleaner	
3	01073780	1	Nameplate	
4	01071710	1	Decal "Instruction manual"	
5	17267550	1	Protection Decal	

Minuteman International Made Simple Commercial Limited Warranty
REVISION E
EFFECTIVE 1/1/2009

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 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
V Series Upright Vacuums, One year parts, one year labor
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
X12 and X12H, one year parts, one year labor
TRS 14, one year parts, one year labor
E17/E20 electric scrubbers, one year parts, six months 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)

Exceptions.....Mirage propane burnisher, one year parts, one year labor

Battery Chargers.....One year replacement

Replacement Parts.....Ninety days

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

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