

Powr-Flite[®]

OPERATOR'S MANUAL & PARTS LIST

Automatic Scrubber Model PAS20E



WARNING: OPERATOR MUST READ AND UNDERSTAND THIS MANUAL COMPLETELY BEFORE OPERATING THIS EQUIPMENT.

Save These Instructions

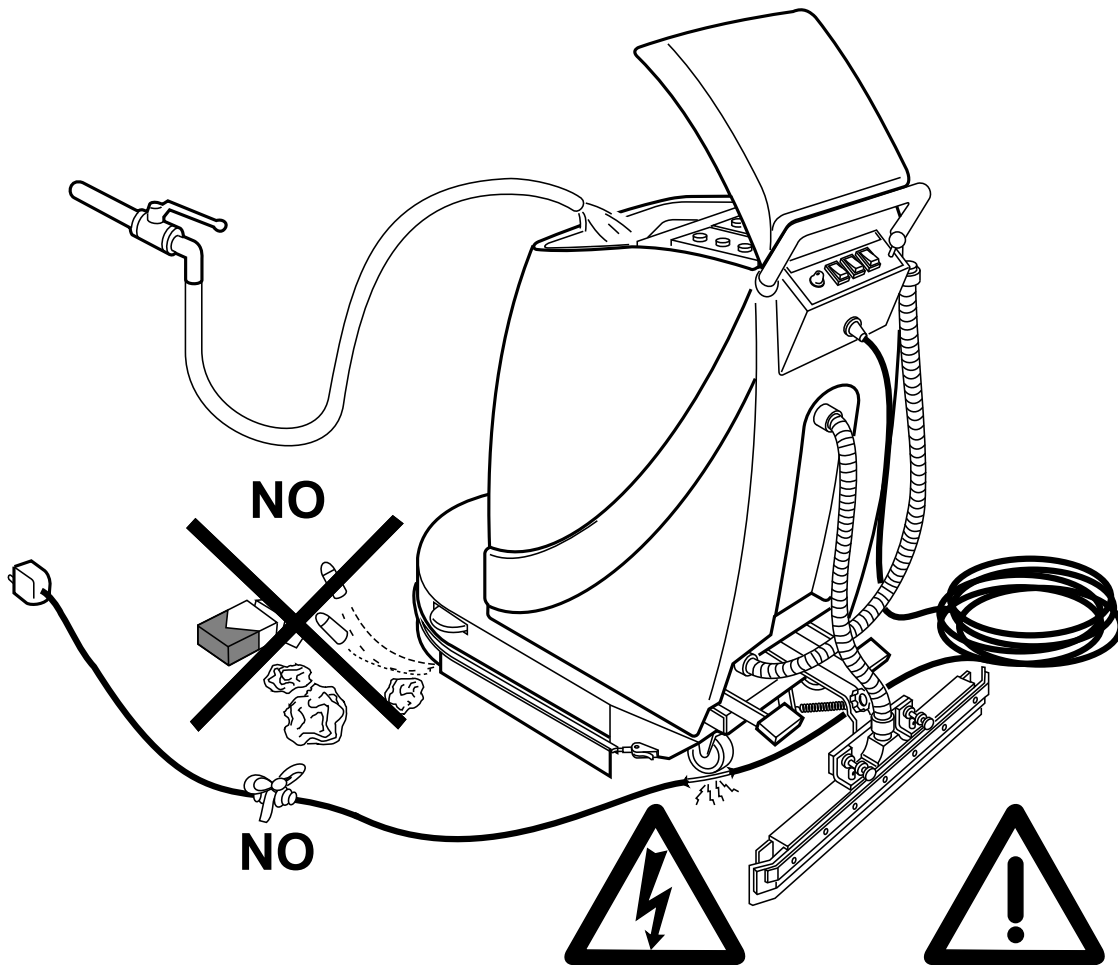
POWR-FLITE PREDATOR AUTOMATIC SCRUBBER 20

This manual refers to a cord electric automatic floor scrubber. Designed to be simple, easy to operate and safe, with maneuverability. Routine maintenance has been simplified and reduced to the minimum to keep equipment on the job.

The objective of this manual is to ensure that the machine is operated correctly and performs the service which we offer to our customers. Therefore, we advise you to **follow the instructions it contains scrupulously** since the manufacturer accepts no responsibility for damage to persons, or things, or damage to the machine if the machine is not operated the way described in this manual or if the maintenance and safety instructions are not fully complied with.

The instructions provided in this manual do not replace the safety instructions and technical data for installation and operation directly applied on the product, nor do they replace the safety standards current in the country of installation and the rules dictated by normal common sense.

The operator or maintenance worker must advise a person in authority of any faults or deterioration which could affect the original safety of the machine.



WARNING:

DO NOT OPERATE MACHINE IN AREAS WHERE FLAMMABLE LIQUIDS OR GASES ARE PRESENT.

DO NOT USE OR PICK UP FLAMMABLE CHEMICALS OR LIQUIDS WITH THIS MACHINE.

IMPORTANT SAFETY INSTRUCTIONS

All operators must read, understand and practice the following safety instructions. They will be repeated occasionally throughout this manual, and additional warnings may be added for specific cases.

Powr-Flite Predator 20 Electric Auto Scrubber

Your new Powr-Flite® Electric Auto Scrubber will afford you many years of trouble-free operating satisfaction provided it is given proper care. Prior to packaging, your Powr-Flite® Auto Scrubber was inspected by a Quality Control Technician.

UNCRATING

Your Powr-Flite® Electric Auto Scrubber was protectively packed to prevent damage in shipment. We suggest that upon removing the unit from its carton, you carefully inspect it for any possible damage in transit. If damage is discovered, immediately notify the transportation company who delivered your machine. As a manufacturer, we are unable to act upon any claim for concealed damage; you must originate the claim.

IMPORTANT SAFEGUARDS: This machine is designed to be safe when used to perform the functions specified in the Operator's Manual. Should damage occur to electrical or mechanical parts, the machine should be repaired by the manufacturer or competent service station before using in order to avoid further damage to the machine or physical injury to user.

WARNING: You must have training in the operations of this machine before using it. READ THIS OPERATOR'S MANUAL.

WARNING: Machines can burn flammable materials and vapors. Do not use this machine with or near fuels, or to pick up grain dust, solvents, thinners, or other flammable materials or liquids.

WARNING: Do not operate this machine unless it is completely assembled.

WARNING: Do not use this machine as a step or to move furniture.

WARNING: When disconnecting power cord from electrical outlet, grasp the plug. Pulling it out by the cord itself can damage cord insulation and internal connection to plug. To prevent electric shock, always remove the electrical plug from the electrical outlet before doing any repairs or maintenance to this machine.

WARNING: To prevent injury, always remove the electrical plug from the electrical outlet before changing the pad or brush and before leaving the machine.

WARNING: To prevent injury, keep hands, feet and loose clothing away from the rotating pad.

WARNING: Maintenance and repairs must be done by authorized personnel only.

WARNING: Never attempt to make emergency repairs or use non-original replacement parts.

WARNING: DO NOT RUN OVER POWER CORD.

WARNING: Never leave the machine unattended, particularly when there are children present.

WARNING: Keep all fasteners tight. Keep adjustments according to specifications.

WARNING: Always use a three-wire electrical system connected to the electrical ground. For maximum protection against electric shock, use a circuit that is protected by a ground fault circuit interrupter. Consult with your electrical contractor.

WARNING: To prevent damage to the power cord, do not let the pad, pad driver, wheels or squeegee touch the power cord when the machine is running. Always lift the power cord over the machine.

WARNING: Make sure all labels, decals, warning, cautions and instructions are fastened to the machine.

WARNING: Operators must read and understand this manual completely before operating this equipment.

WARNING: Loose objects on the floor can become dangerous projectiles if struck by the high-speed pad. Remove them before operating this machine.

WARNING: Keep machine moving to prevent damage to finish or floor.

WARNING: Do not operate this equipment in bare feet or with open-toed shoes or sandals.

WARNING: Store or park this machine on a level surface only.

WARNING: These machines are designed for level floor operations only. DO NOT OPERATE on ramps or inclines unless adequate personnel are available for assistance.

WARNING: Keep the electrical parts of this machine dry. Do not expose electrical components to water or other liquids. To clean machine wipe down with a damp cloth. Store machine in a building.

TECHNICAL CHARACTERISTICS

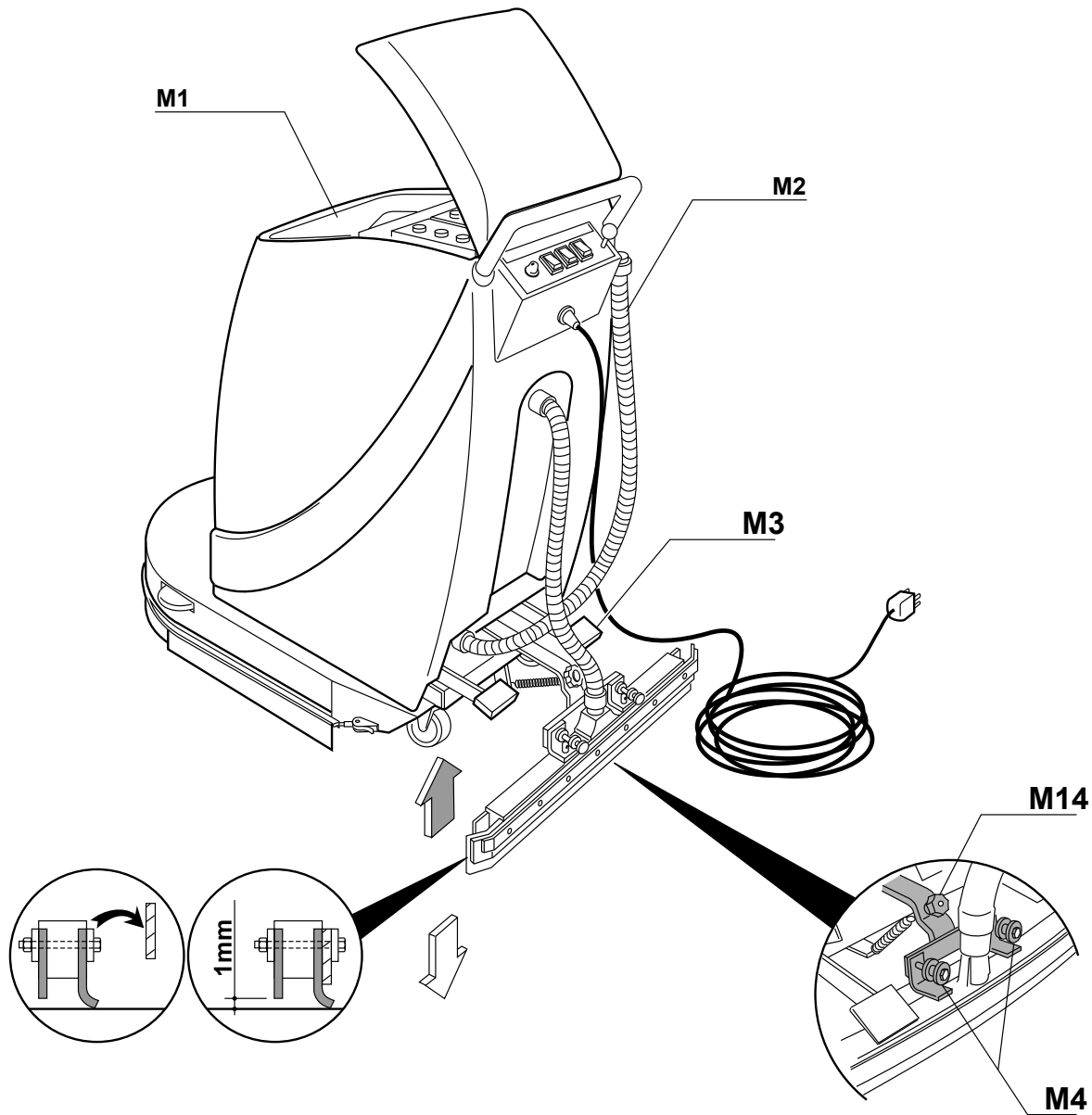
POWR-FLITE® PREDATOR™ 20 AUTO SCRUBBER MODEL PAS20E

Technical Specifications	U.S. Standard	Metric
Area per hour	15,000 sq. feet	1425 sq. meters
Solution Tank	17 gallons	30 liters
Recovery Tank	17 gallons	30 liters
Cleaning Width (brush)	20 inches	500 mm
Squeegee Width	32 inches	750 mm
Brush Pressure	55 lbs.	25 kg
Brush Speed (operating)	330 RPM	
Brushes	20 inches	500 mm
Brush Motor (power rating)	1.0 H.P., 115 volt, 750 watts, 12.6 amp max	
Vacuum Motor (power rating) (U.L. Listed)	1.25 H.P., 115 volt, 1000 watts, 8.0 amp max	
Vacuum Water Lift	88 inches	
Power Cord (U.L. Listed)	50 feet, 14/3, STW/A	23 meters
Wheels/Casters	2 Fixed, 2 Casters, Non-Mar Polyurethane	
Dimensions - Scrubber	43"L x 21.5"W x 39"H	110 cm L x 55 cm W x 100 cm H
Weight	132 lbs	60 kg

THE BASIC DESCRIPTION OF THE MACHINE CAN BE SUMMED UP BY THE FOLLOWING FEATURES:

- 1) Sealed ball-bearing wheels - maintenance free with non-mar polyurethane covered castors and wheels.
- 2) Unprecedented quality & workmanship, simplified control panel.
- 3) Hospital quiet, reduced noise level.
- 4) Bypass vacuum motor with easy access for filter and float cage service.
- 5) High-speed brush drive with 55 lbs. of contouring pad pressure prevents streaking and produces high productivity.
- 6) Solution control conveniently located with ease of operation and dispensing control...user friendly...
- 7) Increased working capacity and productivity offered by higher brush drive speed, increased full contouring pad pressure.
- 8) 10 year warranty on housing and tanks.
1 year warranty on brush and vacuum motors.
1 year warranty on parts and workmanship.
- 9) Rotationally molded design for housing, skirt and tank provide lighter weight, chemical resistance and styling features.
- 10) Design prevents solution contamination with servicable access to the solution and recovery tanks, vacuum motor.
- 11) Nylon squeegee body with reversible natural rubber squeegees.
- 12) Easy "Safe" access to the drive brush for pad or brush removal without requiring tilting of the unit to rear.
- 13) Squeegee design provides smooth follow operation when cleaning along walls and making runs.
- 14) Formed one piece zinc-plated frame.
- 15) Aluminum brush housing with baked enamel finish.
- 16) Vinyl splash skirt will not corrode.
- 17) Rear mounted quick release drain hose.
- 18) Compact and highly maneuverable.
- 19) Go anywhere portable convenience.

GENERAL OPERATION



Solution Tank: The solution tank is located under the lid, at the front of the machine, with the filling-funnel **M1** in an accessible position for easy re-filling.

WARNING: Always switch off and unplug the machine before filling the solution tank.

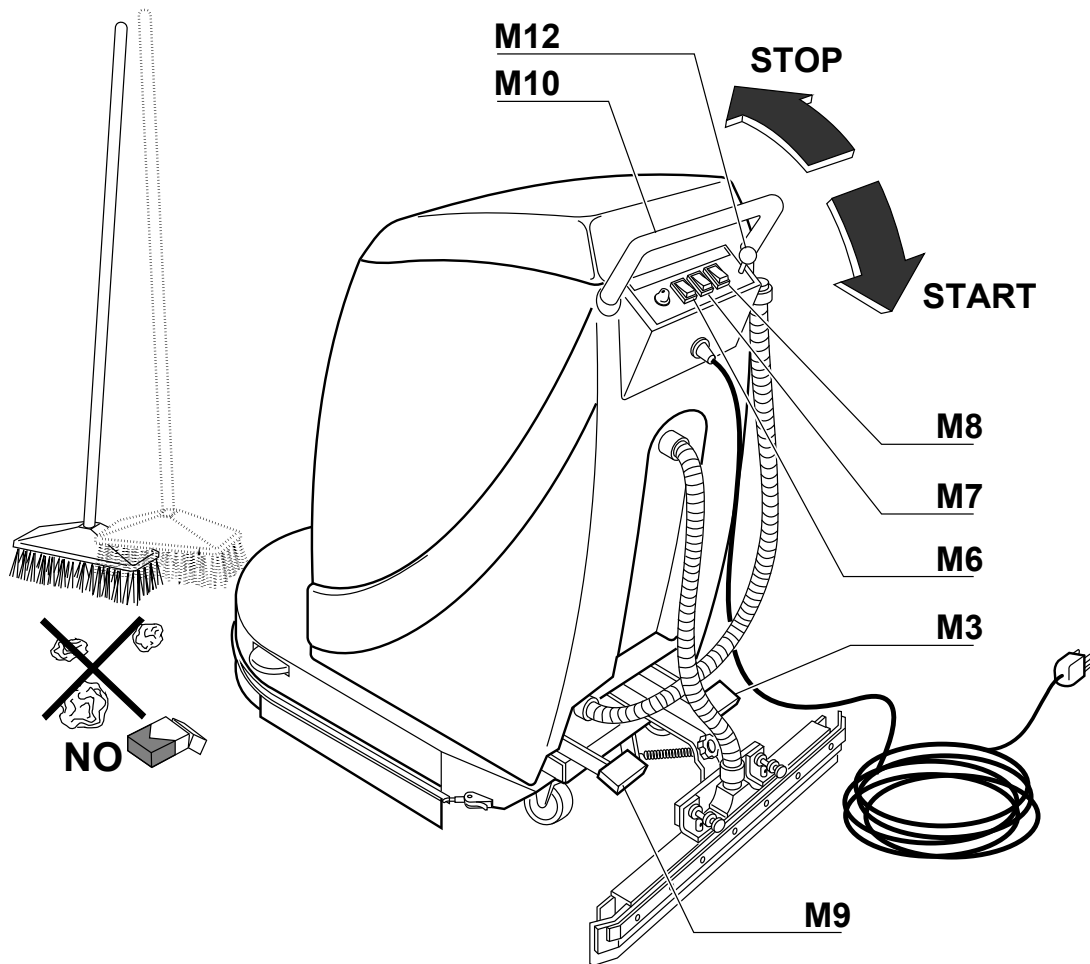
Note: Always empty the dirty water collection tank, as described in the next paragraph, before refilling the tank with the diluted detergent solution. The solution tank has a maximum capacity of 8 gallons (30 liters). Always use the products and the dilution quantities recommended by the seller. Always use low foam detergents. Use defoamer if excess foam develops. Remove hose from vac intake and pick up defoamer directly into the recovery tank.

Water collection tank: The dirty water collection tank should be emptied, preferably each time after use, so that the dirt

does not settle there. To do this, remove the plug of the drain hose **M2**, which is kept in position by a simple spring clip, and empty dirty water into the proper drain conforming to local regulations.

Squeegee: The squeegee has the final task of completing the drying of the floor and it is very important for it to be in the correct position. Lower the squeegee to the working position by depressing pedal **M3** as shown. Adjust the position of the squeegee by means of the knobs **M4** so that the black rubber bar is about $\frac{1}{32}$ " (the thickness of a business card) from the floor. The squeegee behind this is in para rubber and must press on the floor with a certain amount of force. *After the first few hours the squeegee adjusts itself to the correct angle and drying becomes even better.* Squeegee pressure is adjusted by knob **M14**.

GENERAL OPERATION



The area to be scrubbed: Debris and grit must be swept up before starting the scrubbing operation to avoid vacuum line blockage and to permit the detergent to perform efficiently.

Prior to startup and operation: *Caution:* **A)** Loose objects on the floor can become dangerous projectiles if struck by the high speed pad. Remove them before operating machine. **B)** Keep machine moving to prevent damage to finish or floor. **C)** These machines are designed for level floor operations only.

DO NOT OPERATE ON RAMPS OR INCLINES unless adequate personnel are available for assistance.

Starting up and operation: Plug the machine into an outlet position allowing operation by moving away from the outlet.

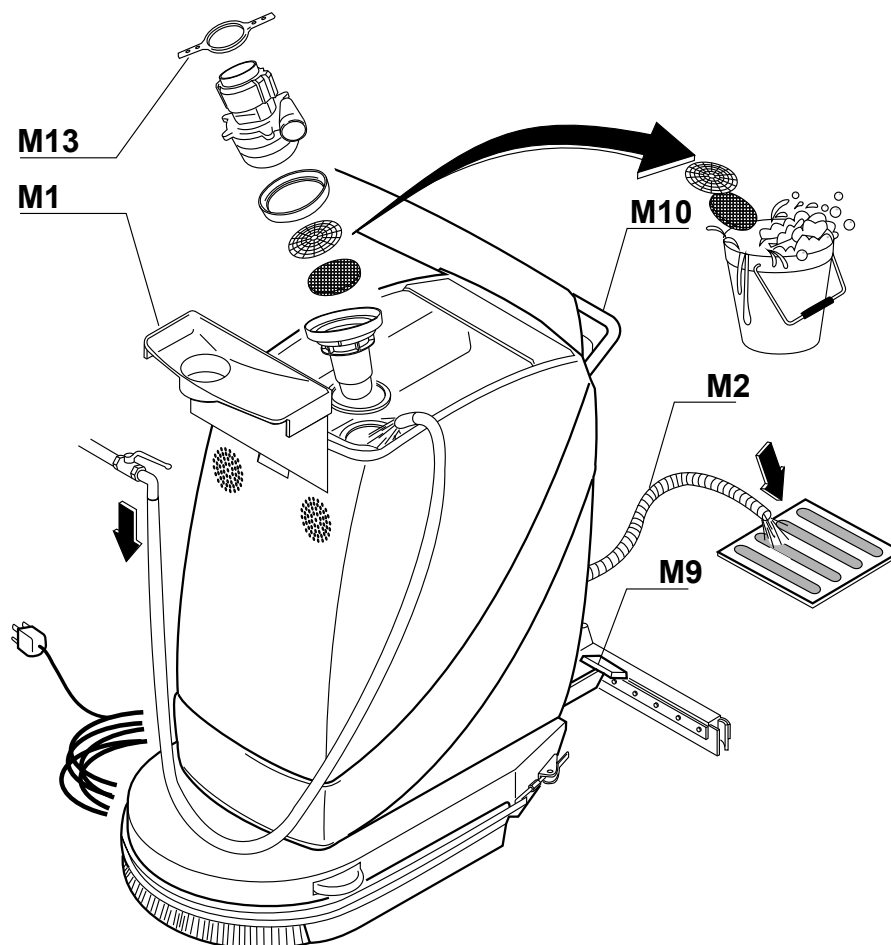
NOTE: The PAS16 is intended for use with 120V/60Hz cycle grounded circuit. Extension cords are not recommended.

Then:

- Press switches **M7** and **M8**.
- Lower the brush by pressing pedal **M9**.
- Lower the squeegee by depressing pedal **M3**.
- Set the detergent solution supply to minimum by adjusting knob **M12**. Experience will help with the selection of the correct solution amount. Moving outward up and down as illustrated, allows cord to keep off of dirty floor and from dragging dirt into cleaned path.
- Depress the handle (**M10**) to begin scrubbing with the brush. Release the handle (**M10**) to stop the brushes from turning.

Particularly dirty floors: Certain floors or areas may require special attention and, in some cases, cleaning twice. Go over the floor quickly the first time, with the squeegee raised and the brush in the working position. In this way, the detergent solution is left on the floor for a longer time and can dissolve the heavy dirt. The second time, go over the floor more slowly with both the brush and the squeegee lowered. Always apply and brush stripping solution without squeegee and vacuum then return to area after a

GENERAL OPERATION



minimum of 5 minutes and remove the suspended dirt, finish and solution.

Squeegee: Every week, check the blades of the squeegee and wash them carefully. Then replace them in the correct working position. If drying is not perfect even after the unit has been cleaned, replace any blades which are excessively worn. If the squeegee does not pick up enough water or streaks, lift and wipe off the blades.

The pad driver or brush must be in good working condition because it is the component which removes the dirt.

To remove the brush/ pad driver from the machine:

- Depress the brush pedal (M9) to lift the brush.
- With the brush in the air depress the handle (M10) to rotate the brush.
- Release the handle and the brush will release from the machine and fall to the floor.

To replace the drive block, pad or brush:

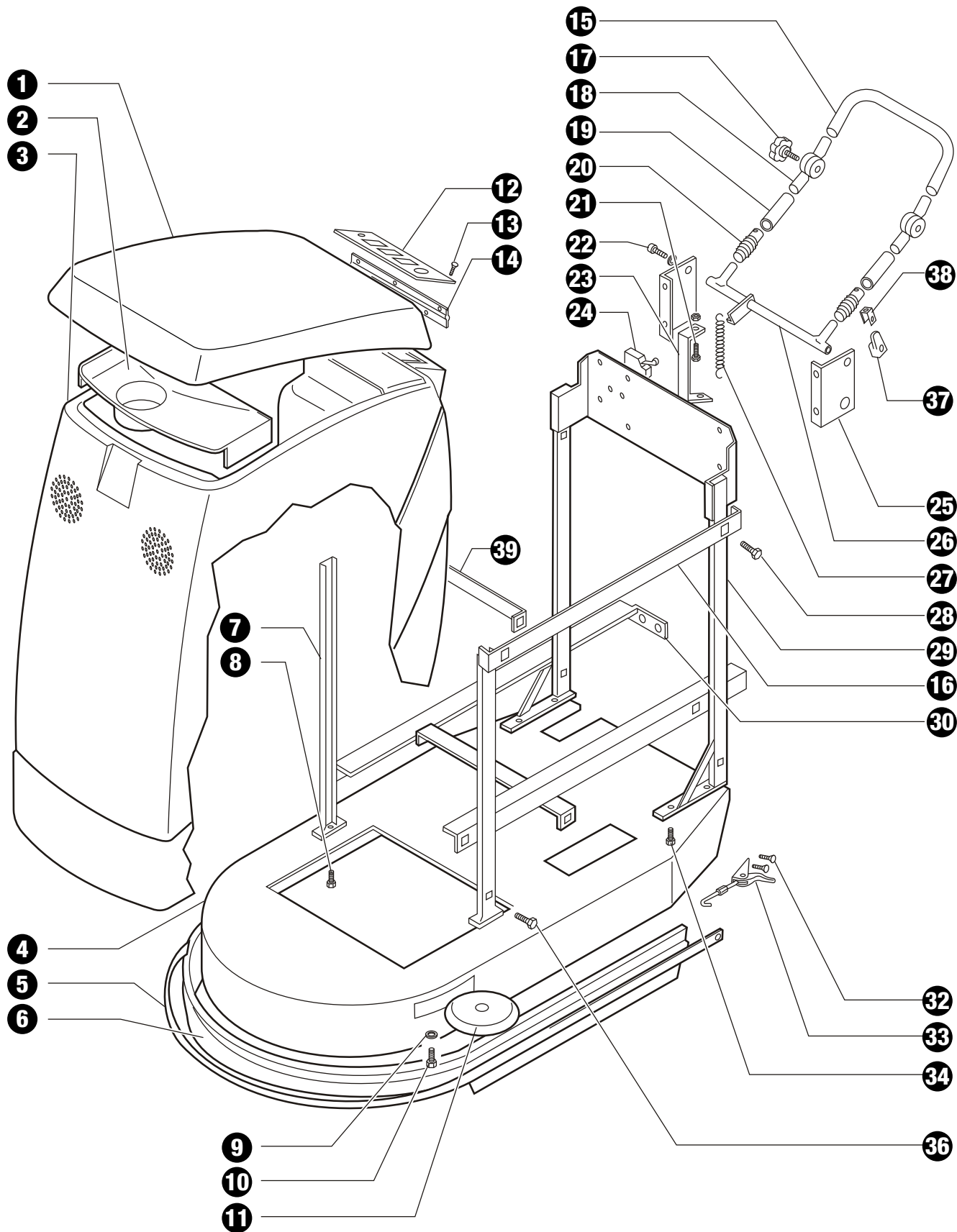
- Center the brush/pad driver under the front of the machine.

- Release the brush pedal (M9) to lower the brush drive motor on to the brush/pad driver.
- Turn the brush motor on by depressing the brush switch (M7). The brush/pad driver should lock in place.
- If the brush/pad driver does not connect, small adjustments are needed from one side to the other to make the brush/pad driver lock in place.

The machine is supplied with a pad driver. Brushes in tynex, poly and steel are available on request, together with floor pads recommended for use with the pad driver. **Black** for stripping, **green** for deep scrub, **blue** for cleansing and red for light scrub.

Water collection tank: This tank should be cleaned every week. Lift the lid and remove the panel or funnel M1 of the solution tank. Remove the strap M13 and lift the vacuum motor out of its seat. Thoroughly clean the filter and wash out the dirt deposited in the tank with a jet of water, allowing it to drain out through hose M2. If necessary, replace filter. Replace float cage with open side facing front of scrubber.

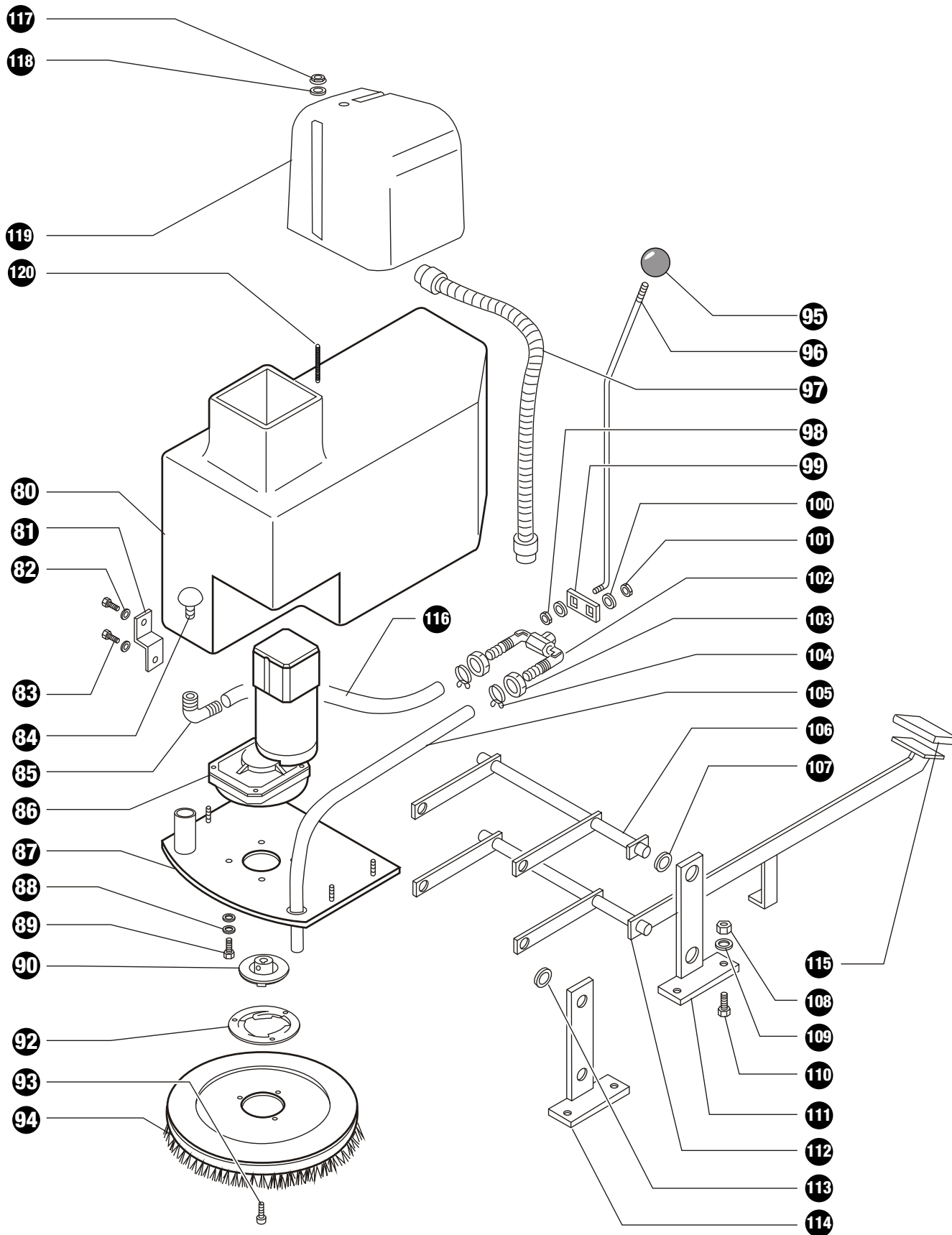
PARTS LIST



PARTS LIST

REF#	PART#	DESCRIPTION
1	PAS275	COVER
2	501.002.1	FUNNEL
3	501.003.1	HOUSING
4	PAS800	FRAME
5	501.052	BUMPER STRIP
6	PAS2BA	SPLASH GUARD
7	501.013	FRAME BRACE
8	PAS167	SCREW
9	430.015	WASHER
10	430.016	SCREW
11	PAS1	BUMPER WHEEL
12	503.012	CONTROL PANEL
13	PAS153	SCREW
14	PAS109	HINGE
15	430.323.2	HANDLE
16	501.022	CROSS MEMBER
17	PAS337	KNOB
18	PAS339	COUPLING
19	PAS338	HANDLE
20	PAS335	BELLOWS
21	501.027	SCREW
22	PAS167	SCREW TRANS SUPPORT
23	501.028.1	SUPPORT
24	PAS56	MICROSWITCH
25	501.033	SQUARE
26	PAS158	HANDLE LEVER
27	PAS329	SPRING HANDLE
28	PAS147	M6 BOLT
29	501.038	PANEL
30	431.042	YOKE
32	PAS465	SCREW
33	PAS122	HOOK & LATCH ASSEMBLY
34	PAS167	SCREW TRANS SUPPORT
36	PAS147	M6 BOLT
37	PAS267	CABLE GUIDE
38	503.038	YOKE
39	501.023	YOKE

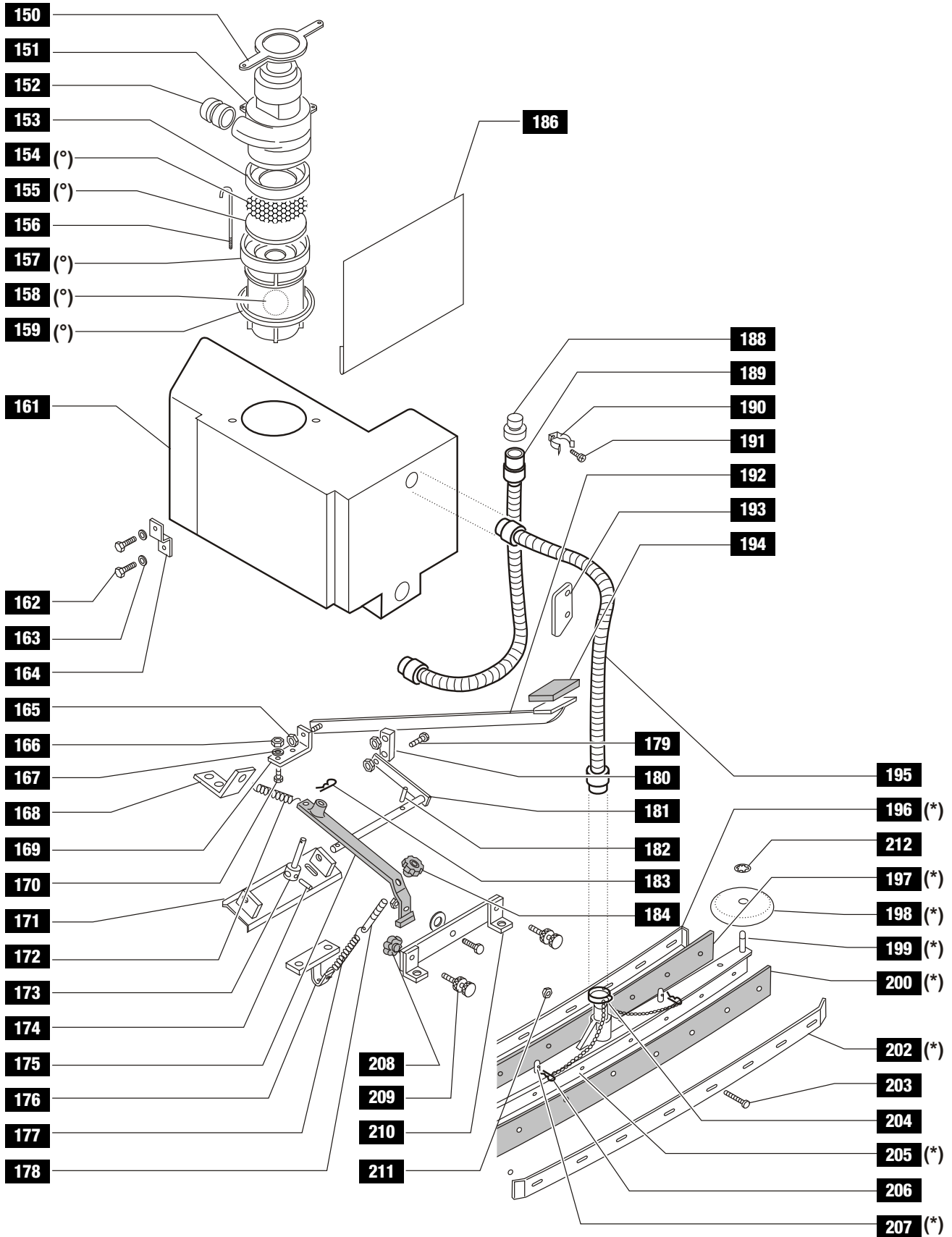
PARTS LIST



PARTS LIST

REF#	PART#	DESCRIPTION
80	501.087.1	TANK
81	501.086	PLATE
82	ER320	WASHER
83	PAS147	M6 BOLT
84	PA53	FILTER
85	PAS296	HOSE FITTING
86	430.066.E	MOTOR REDUCER
87	501.090	PLATE
88	ER320	WASHER
89	PAS162	SCREW M16 x 12
90	PAS24	COUPLING
92	PAS23	SPIN ON CLUTCH PLATE
93	PAS111	COUPLING SCREW 5/16-20 x 1-3/8
94	500.171	BRUSH
94	500.171.1	TINEX BRUSH
94	500.171.2	STEEL BRUSH
94	500.171.3	VEGETABLE BRUSH
94	500.178.3	PAD HOLDER
95	PAS11	KNOB
96	PAS151	ROD
97	PAS288	SOLUTION HOSE 4'
98	PAS268	SPLIT PIN
99	PAS269	LEVER
100	PAS270	WASHER
101	PAS271	LEVER NUT
102	PAS12	SOLUTION VALVE
103	PAS262	NUT
104	PX42	CLAMP 5/8 WORM GEAR STAINLESS HEX SLOT PHIL HD SAE8 C1/2-1
105	PAS288	SOLUTION HOSE 4'
106	PAS204	UPPER LEVER
107	410.064	WASHER
108	430.117	NUT
109	PAS188	WASHER
110	PAS167	SCREW
111	430.119	SUPPORT
112	PAS203	LOWER LEVER
113	410.063	WASHER
114	PAS466	NUT
115	PAS14	FOOT PEDAL COVER
116	503.116	PIPE
117	PAS304	M6 SELF LOCKING NUT
118	710.166	WASHER
119	503.119	COVER
120	510.051	TIE ROD

PARTS LIST



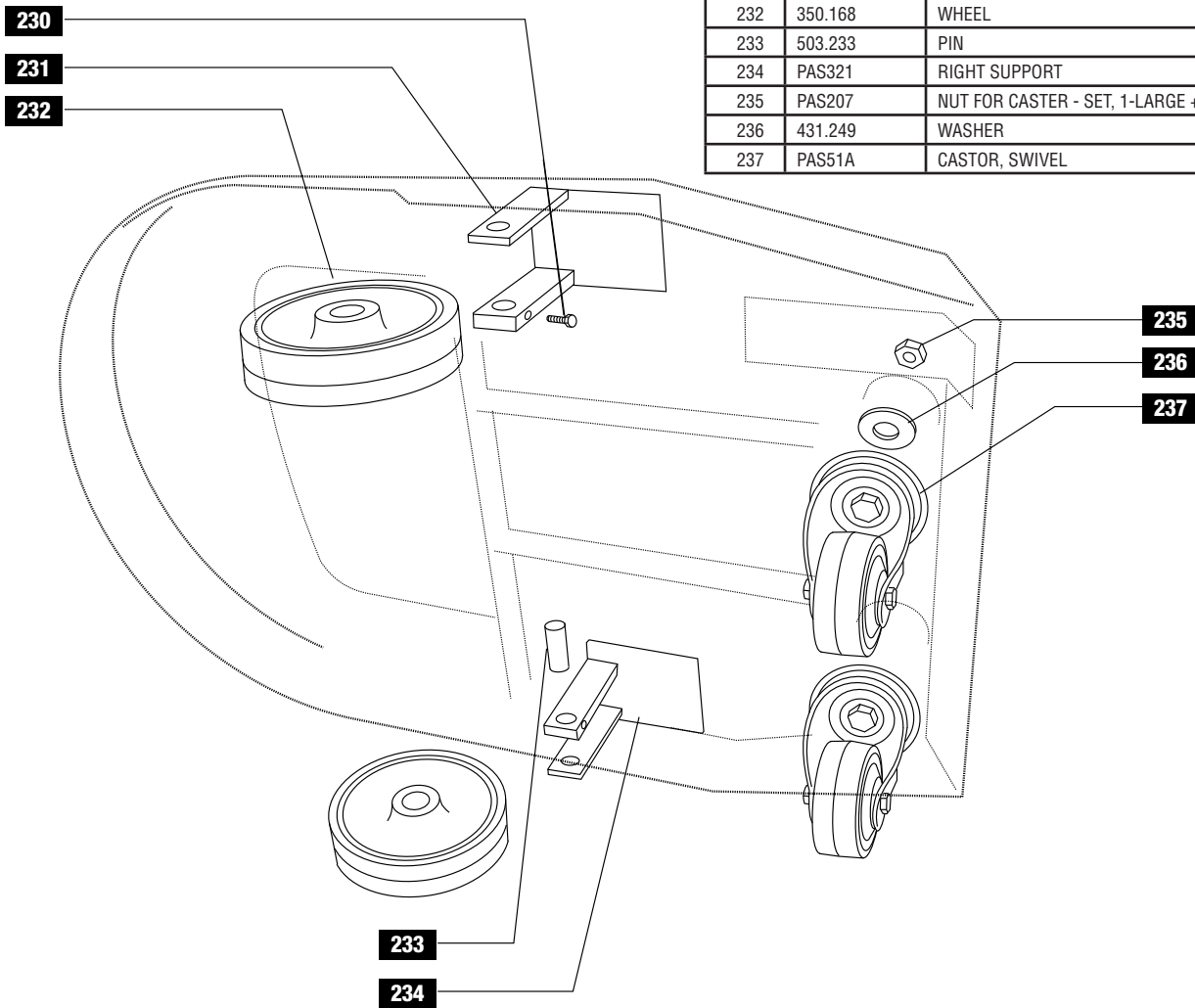
PARTS LIST

REF#	PART#	DESCRIPTION
(°)	PAS17	COMPLETE FLOAT LEVER
150	PAS15	MOTOR LOCK RING
151	PAS808	SUCTION MOTOR
152	PAS330	SLEEVE
153	PAS102	GASKET MOTOR
154	06.169	SCREEN FILTER
155	PAS107	FILTER FOR MOTOR SUPPORT
156	410.105.1	TIE ROD
157	500.068.E	SUPPORT
158	500.094	FUEL LEVEL
159	PAS103	FLOAT SEAL
(*)	500.228	COMPLETE FLOOR WASHING
161	503.161	TANK
162	PAS147	M6 BOLT
163	ER320	WASHER
164	501.086	PLATE
165	501.177	NUT
166	PAS189	12MM NUT CASTER
167	PAS188	WASHER
168	431.248	SQUARE
169	501.180	SQUARE
170	PAS167	SCREW TRANS SUPPORT
171	501.184	YOKE
172	PAS329	SPRING HANDLE
173	PAS19	PIN SQUEEGEE MOUNT
174	PAS197	M6 X 45 HEX HEAD SCREW
175	PAS184	LEVER
176	PAS403	BRACKET
177	PAS329	SPRING HANDLE
178	PAS32	TIE ROD WITH SINGLE HOLE
179	PAS197	M6 X 45 HEX HEAD SCREW
180	PAS265	CROSS MEMBER
181	PAS459	SQUEEGEE LEVER
182	PAS280	ROLL PIN 6MM X 25MM
183	PAS266	SPLIT PIN
184	PAS35	PRESSURE KNOB SQUEEGEE
186	PAS105	PLATE TANK
188	PAS36	DRAIN PLUG FOR HOSE
189	PAS37	DRAIN HOSE
190	PAS38	HOSE CLIP
191	PAS507	M4 SCREW
192	501.210	PEDAL
193	PAS259	BRACKET FOR BRUSH PEDAL
194	PAS14	FOOT PEDAL COVER
196	PAS192	OUTER BAR
197	PAS142	FRONT SQUEEGEE BLADE
198	PAS1	BUMPER WHEEL
199	PAS193	SUPPOET STUB

REF#	PART#	DESCRIPTION
200	PAS116	CREPE RUBBER
202	PAS196	OUTER BAR
203	PAS197	M6 X 45 HEX HEAD SCREW
204	PAS191A	HOSE CLAMP
205	PAS194	SQUEEGEE BODY
206	PAS266	SPLIT PIN
207	PAS355	PIN W/HOLE
208	PAS33	WING NUT (KNOB) SQUEEGEE ASSY
209	PAS34	REGULATOR SQUEEGEE
210	503.210	SUPPORT
211	PAS149	M6 HEX FULL NUT S/S CIMEX
212	503.212	QUICKLOCK

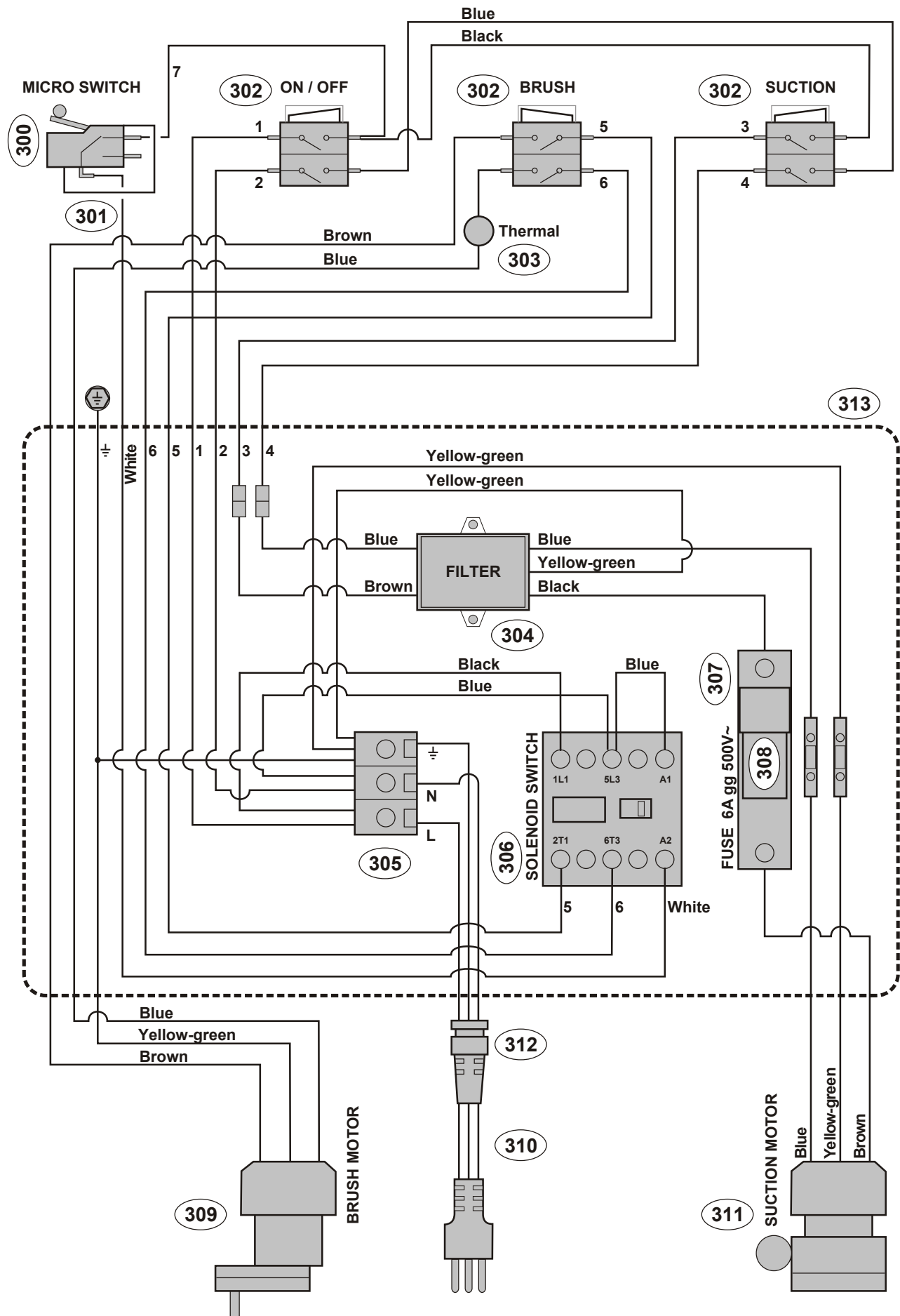
PARTS LIST

REF#	PART#	DESCRIPTION
230	PAS243	SCREW STAINLESS
231	503.231	SUPPORT
232	350.168	WHEEL
233	503.233	PIN
234	PAS321	RIGHT SUPPORT
235	PAS207	NUT FOR CASTER - SET, 1-LARGE + 1-SMALL
236	431.249	WASHER
237	PAS51A	CASTOR, SWIVEL



ELECTRICAL DIAGRAM

REF#	PART#	DESCRIPTION
300	PAS56	MICRO SWITCH
301	430.318.2	MICRO SWITCH COVER
302	PAS125	SWITCH
303	410.188	THERMAL
304	410.186	ANTIDISTURBANCE FILTER
305	PAS309	CONNECTING BOARD
306	503.306	SOLENOID SWITCH CONTROL
307	PAS954	FUSE HOLDER
308	PAS2082	FUSE 6A
309	430.066.E	BRUSH MOTOR
310	500.301	CABLE
311	PAS808	SUCTION MOTOR
312	PAS245	STRAIN RELIEF
313	503.313	IP55 BOX



Powr-Flite[®]

A Tacony Company

3101 Wichita Court • Ft. Worth, TX 76140-1755

1-800-880-2913 • Fax: 1-817-551-0719 • www.Powr-Flite.com