



Predator Automatic Scrubber 20

OPERATORS MANUAL AND PARTS LIST

Model PAS20BA



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

TECHNICAL CHARACTERISTICS
POWR-FLITE® PREDATOR™ 20 AUTO SCRUBBER MODEL PAS20BA

Technical Specifications	U.S. Standard	Metric
Area per hour	22,000 sq. feet.....	2043 sq. meters
Solution Tank	10 gallons.....	38 liters
Recovery Tank	10 gallons.....	38 liters
Cleaning Width (brush)	20 inches.....	500 mm
Squeegee Width	29½ inches.....	750 mm
Brush Pressure	90 lbs.	41 kg.
Brush Speed	225 RPM	
Brushes	(1) 20 inches	(1) 500 mm
Brush Motor (power rating)	24 volts/500 watts	
Brush Motor (power rating)	¾ HP	
Vacuum Motor (power rating)	24 volts/450 watts (Bypass)	
Supply Voltage (battery)	24 volts	
Continuous Operating Run Time	4-5½ hrs. battery chg.	
Batteries	12 volt, 120 amp min.-190 amp max., 2 required (deep cycle group 27)	
Dimensions - Scrubber	44"L x 20"W x 38"H.....	1100mmL x 505mmW x 950mmH
Weight w/o batteries	220 lbs.	100 kg.
Battery storage area	13¾"L x 13¾"W x 9"H.....	344mmL x 344W x 225mmH

IMPORTANT SAFETY INSTRUCTIONS

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

- **CAUTION:** Operators must read and understand this manual completely before operating this equipment.
- **CAUTION:** Make sure key switch is in the “OFF” position before installing pad.
- **CAUTION:** Loose objects on the floor can become dangerous projectiles if struck by the high-speed pad. Remove them before operating this machine.
- **CAUTION:** Keep hands and feet away from revolving pad.
- **CAUTION:** Keep machine moving to prevent damage to finish or floor.
- **CAUTION:** Make sure key switch is turned “OFF” and battery connector is unplugged from machine before performing any maintenance procedures.
- **CAUTION:** Maintenance and repairs must be performed by authorized personnel.
- **CAUTION:** 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.
- **CAUTION:** Do not operate this equipment in bare feet or with open-toed shoes or sandals.
- **CAUTION:** Charging batteries generate explosive gases. ***NO SMOKING OR OPEN FLAMES OR SPARKS.*** Make sure the charger has turned off before disconnecting it from the batteries. Charge batteries in a well-ventilated area with the tanks in the raised and locked position.
- **CAUTION::** Store or park this machine on a level surface only. Remove key from switch if machine is left unattended.
- **CAUTION::** Do not operate machine or charger in areas where flammable liquids or gases are present. Do not use or pick up flammable chemicals or liquids with this machine.
- **CAUTION:** Make sure all caution, warning and instructional decals are in place and legible. Replace damaged or missing labels.
- **CAUTION:** These machines are designed for level floor operations only. ***DO NOT OPERATE*** on ramps or inclines unless adequate personnel are available for assistance.
- **CAUTION:** Do not expose electrical components to water or other liquids. To clean machine wipe down with a damp cloth.

POWR-FLITE PREDATOR AUTOMATIC SCRUBBER 20

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

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

1. Sealed ball-bearing wheels - maintenance free with threaded rubber cast iron wheels.
2. Unprecedented quality & workmanship, simplified control panel.
3. From safety & theft-proof position, control panel equipped with key for "on/off" prevents unauthorized operation.
4. Hospital quiet, reduced noise level.
5. Bypass vacuum motor with tangential discharge.
6. High-speed brush drive with 90 lbs. of contouring pad pressure prevents streaking and produces high productivity.
7. Solution control conveniently located with ease of operation and dispensing control...user friendly...
8. Increased working capacity and productivity offered by higher brush drive speed, increased full contouring pad pressure and operation fatigue eliminating drive system.
9. 15% fewer working parts and components for trouble free operating and servicing machine.
10. 8 year warranty on housing and tanks
5 year warranty on frame
1 year warranty on motor
11. Rotationally molded design for housing, skirt and tank provide lighter weight, chemical resistance and styling features.
12. Design prevents solution contamination with serviceable access to the solution and recovery tanks, vacuum and motor.
13. Nylon squeegee body with reversible rubber squeegees.
14. Easy "Safe" access to the drive brush for pad or brush removal without requiring tilting of the unit to rear.
15. Squeegee design provides smooth follow operation when cleaning along walls and making runs.
16. Formed one piece zinc-plated frame.
17. Aluminum brush housing with baked enamel finish.
18. Vinyl splash skirt will not corrode.
19. Handle mounted safety brake lever.

WARNING:

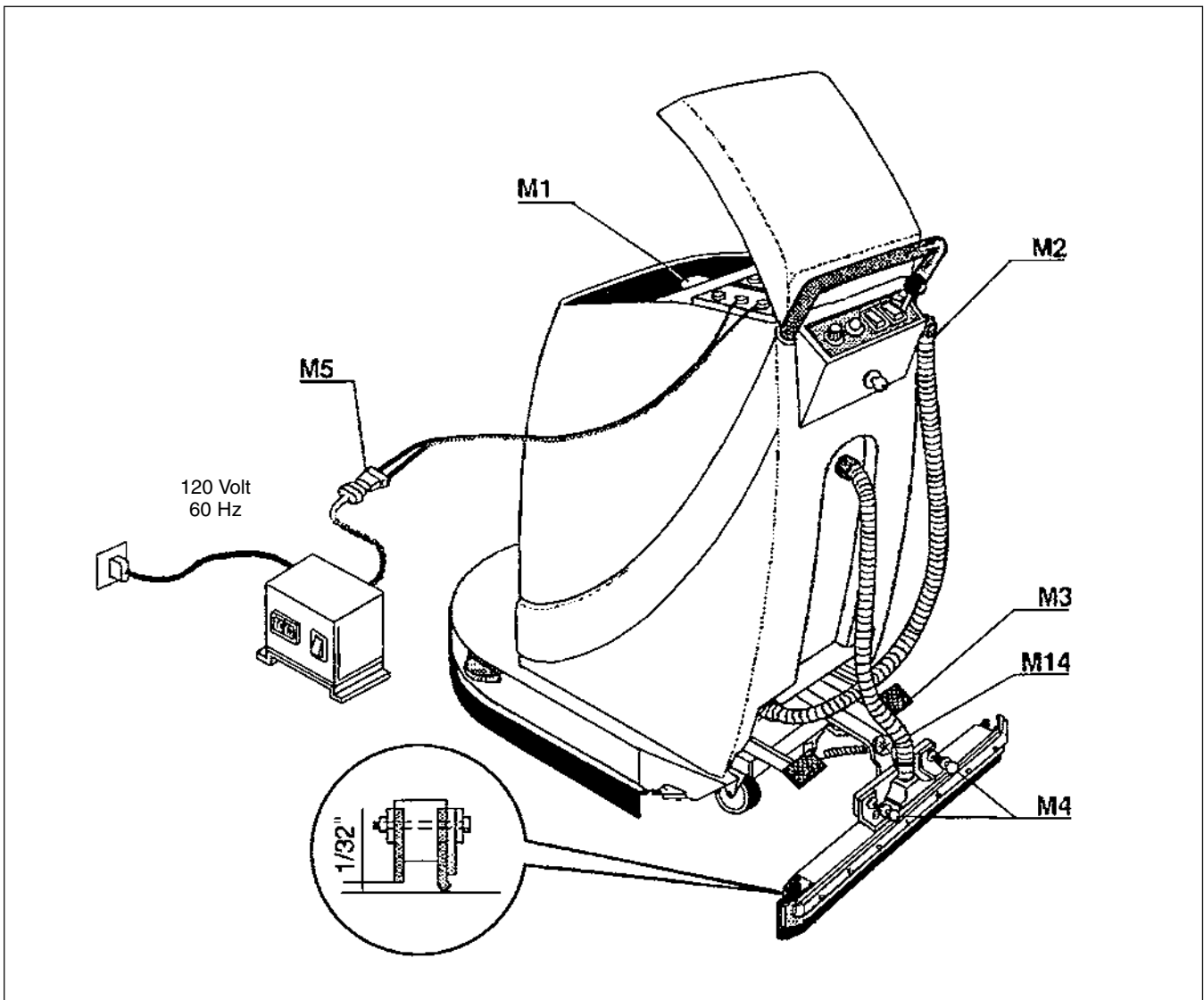
DO NOT OPERATE MACHINE OR CHARGER IN AREAS WHERE FLAMMABLE LIQUIDS OR GASES ARE PRESENT.

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

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 indications 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.



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.

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 10 gallons (38 liters). Always use the products and the dilution quantities recommended by the seller. Never use foamy detergents. Use defoamer if excess foam develops.

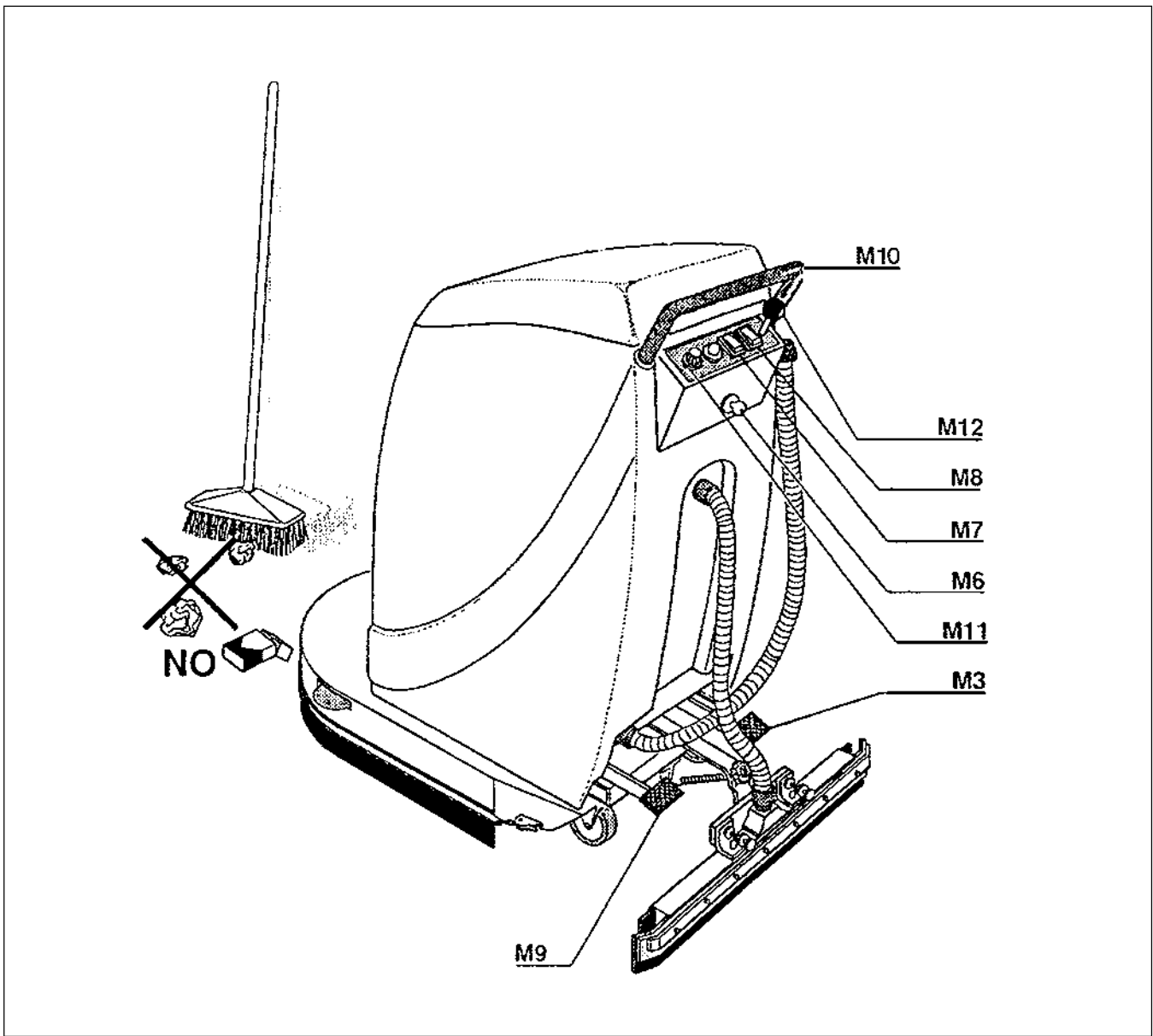
Water collection tank: The dirty water collection tank should be emptied, preferably each time after use, so that the dirt does not settle there. To do this, remove the plug of the drain hose **M2**, which is kept in position by a simple spring clip, and empty dirty water into the proper drain conforming 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 pressing pedal **M3**. 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**.

Battery installation and charging: The batteries are supplied separately and must be inserted in the special compartment provided under the lid. Apply a layer of vaseline to the terminals and connect in series as shown on page 11. Make sure that the terminals are correctly tightened. The battery charger must be installed in the place set aside for charging the machine. The charger is provided with a cable for connection to the mains, normally **120v/60HZ**. Check that the voltage corresponds to the voltage indicated on the battery charger. To charge the batteries, connect the connector of the machine batteries **M5** to the connector of the battery charger. The battery charger will automatically regulate the voltage to the batteries and will switch itself off when the batteries have been fully charged.

CAUTION: **A)** Make sure key switch is turned "OFF" and battery connector is unplugged from machine before performing any maintenance procedures. **B)** 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. **C)** Charging batteries generate explosive gases.



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: Disconnect the batteries from the battery charger and connect to the machine.

Then:

- Turn master switch **M6** to position 1 and press switches **M7** and **M8**.
- Lower the brush by pressing pedal **M9**.
- Lower the squeegee by pressing pedal **M3**.
- Set the detergent solution supply to minimum by adjusting knob **M12**.
- Finally, adjust the correct supply of the detergent as a function of the amount of dirt and speed of advance by means of lever **M12**

Brush/pad install: The PAS20BA features hands free brush installation.

To install a brush on the PAS20BA, simply leave the brush on the floor under the front of the machine.

- Turn the switch **M7** and the handle **M10**.
- Release the pedal **M9**.

If the brush does not hook up immediately, make small side movements with the auto scrubber until the brush is installed.

To replace a worn brush or pad:

- With the machine on and the brush in the upper position, press the pedal **M9** to lift the brush.
- Release the handle **M10** and the brush will release and drop to the floor.

The machine is supplied with a pad driver. Brushes in carbide grit, 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.

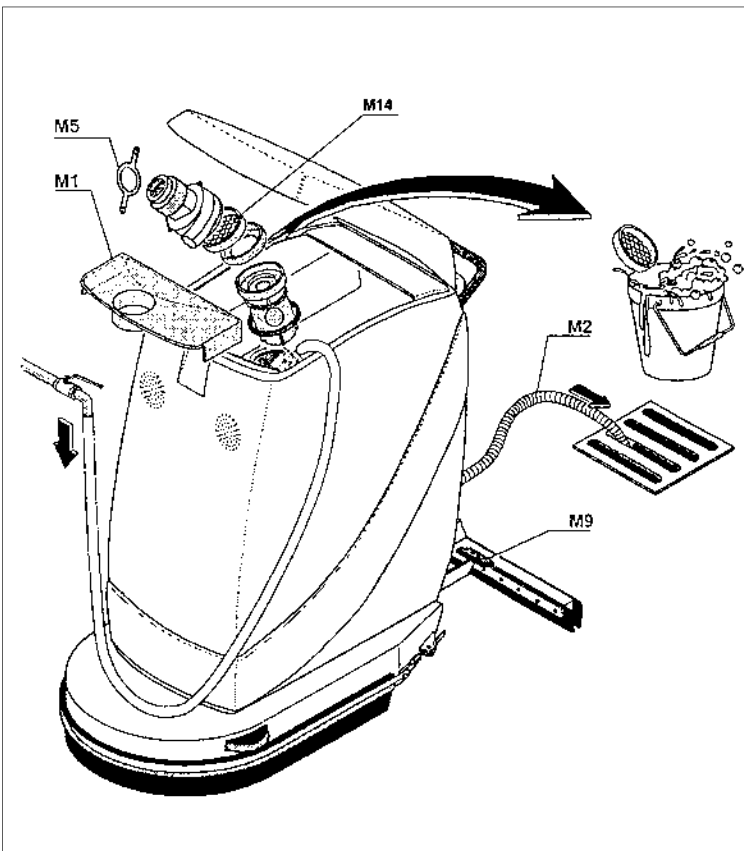
CAUTION! Make sure all caution, warning and instructional decals are in place and legible.

Replace damaged or missing labels.

This auto scrubber has been designed to the strictest safety standards but the user must still use the machine with care and caution.

Here are a few rules which must be respected:

- Never leave the machine unattended, particularly when there are children around
- Always switch off the machine when filling the solution tank
- Never attempt to make emergency repairs or use non-original spare parts.
- Check the wear and deterioration of the materials at intervals and ask the sales representative for assistance.
- Do not smoke or expose open flames or sparks in the vicinity of the batteries (*portable grinders, welders, etc.*)
- Do not take current from the batteries using ad hoc clips or other forms of temporary connections.
- Do not rest metal tools or instruments on the batteries because the electrolyte liquid is corrosive.

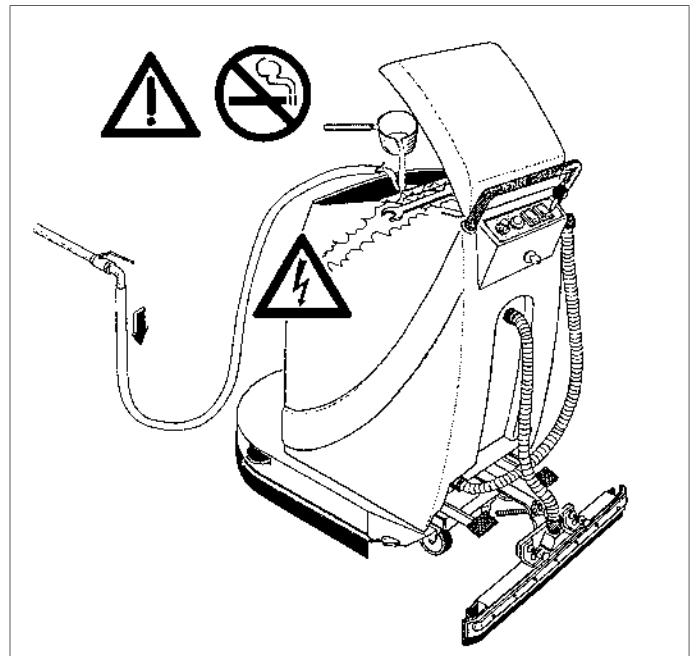


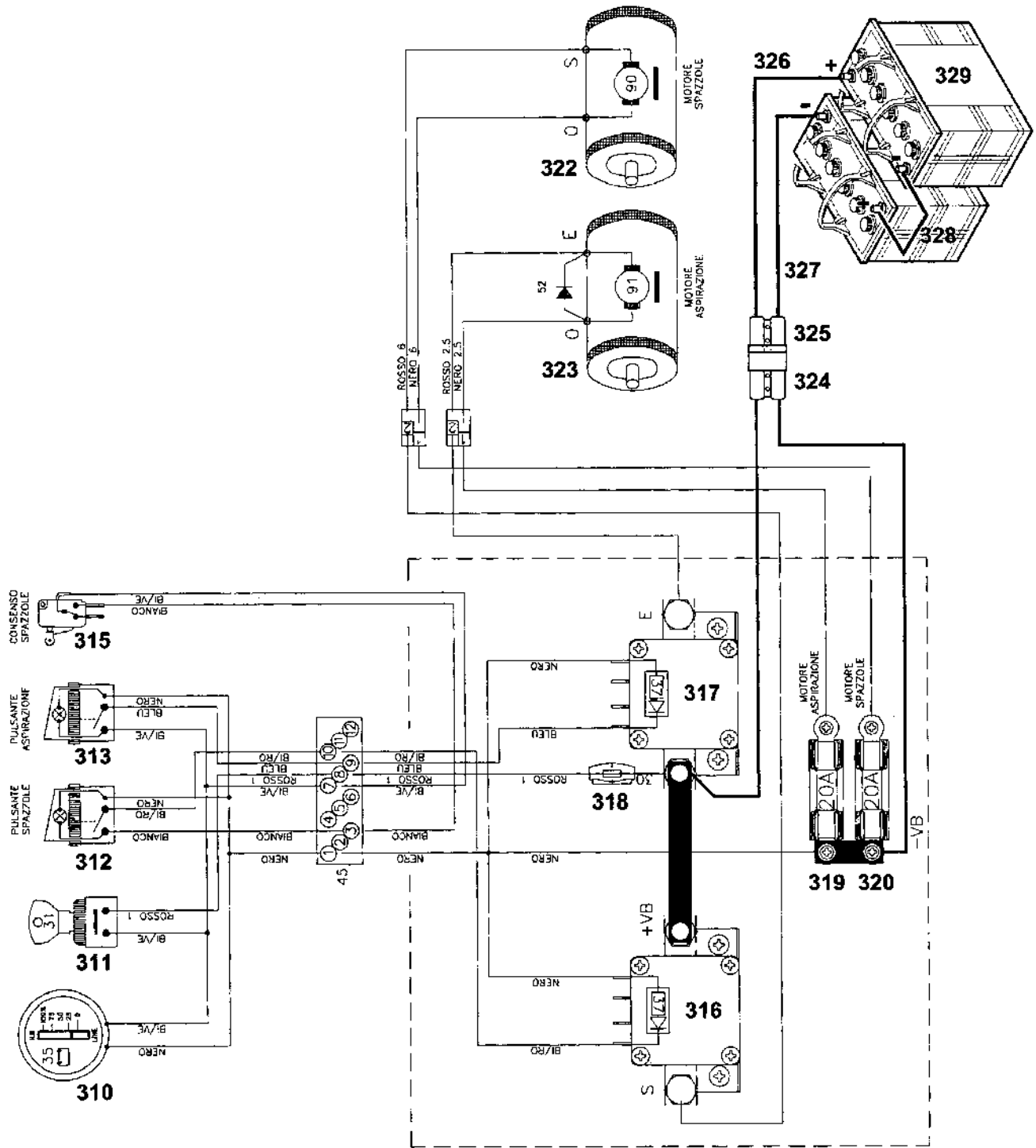
Squeegee: Every week, check the blades of the squeegee and wash them carefully. Then adjust them in the correct working position (*see above*). If drying is not perfect even after the unit has been cleaned, replace any blades which are excessively worn. Tighten fasteners from the center to the outside only. If the squeegee does not pick up enough water or streaks, lift and wipe off the blades.

Water collection tank: This tank should be cleaned every week. Lift the lid and remove the funnel **M1** of the solution tank. Remove the strap **M5** and lift the vacuum motor out of its seat. Remove filter **M14** and float cage from motor and thoroughly clean with water 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. Place float cage back with open side facing front of machine.

Batteries: Check the level of the electrolyte liquid by carefully removing plugs from top of battery and top off with distilled water, when the level drops below the plates of the battery. Keep the batteries clean and dry with antistatic cloths. When charging the batteries, remove the plugs of the batteries and lift the top flap of the machine to allow the gas which is generated to escape. **This gas can cause explosions in closed environments** and, therefore, it is advisable to carry out battery charging in well-ventilated environments.

WARNING! Do not operate machine or charger in areas where flammable liquids or gases are present. Do not use or pick up flammable chemicals or liquids with this machine.





Power-Flite[®]
COMMERCIAL FLOOR CARE EQUIPMENT

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