



INSTRUCTION MANUAL

E51M E61M



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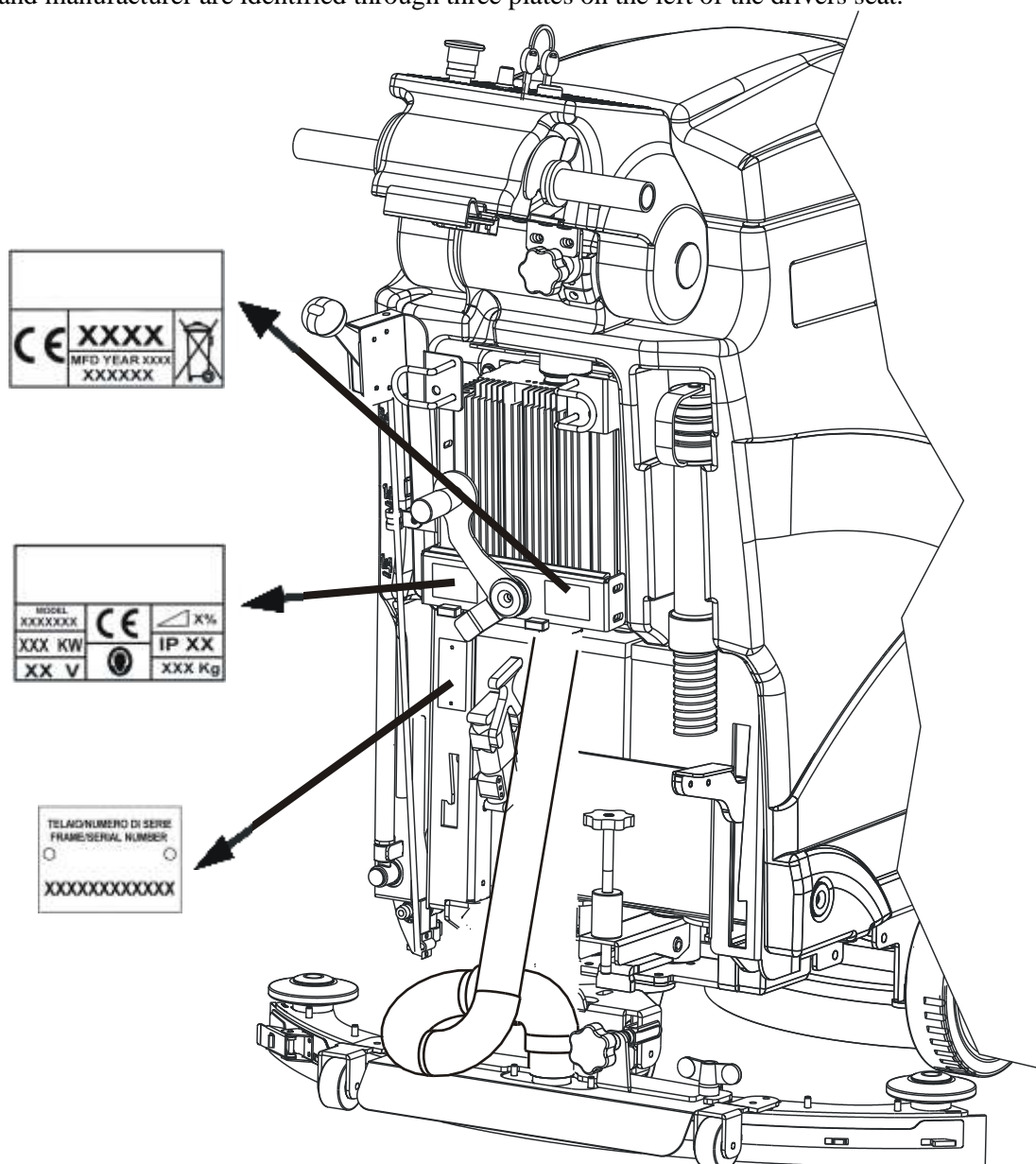
INTRODUCTION

Our company, a leading industrial cleaning machine manufacturer, is delighted to welcome you to the ranks of our scrubber owners and it trusts that you will get the greatest satisfaction from the use of the machine. We are certain that while using the machine you will have the opportunity to see the quality, solidity and possibilities for use by yourselves. Our scrubber is ideal for private, industrial or public uses. Described in this manual are various installation, checking and maintenance operations necessary for keeping your scrubber in tip top condition. These are normal maintenance measures that any operator will be able to carry out with implements that he or she should normally have in the company. In the case of particularly demanding work, please call in specialised help.

OUR COMPANY AIMS AT THE CONSTANT IMPROVEMENT OF ITS PRODUCTS AND RESERVES THE RIGHT TO MAKE MODIFICATIONS AND IMPROVEMENTS WHEN IT CONSIDERS IT ADVISABLE WITHOUT BEING OBLIGED TO UPGRADE PREVIOUSLY SOLD MACHINES WITH SAID IMPROVEMENTS AND MODIFICATIONS

MACHINE IDENTIFICATION

The machine and manufacturer are identified through three plates on the left of the drivers seat.



REFER TO THESE DETAILS WHEN ORDERING SPARE PARTS OR MAKING ANY OTHER ENQUIRY TO THE MANUFACTURER.

Our scrubbers conform with the EEC directives and show the CE mark.

ATTENTION!

BEFORE USING THE MACHINE OR CARRYING OUT ANY OPERATION ON IT, ALL THE PROCEDURES AND WARNINGS DESCRIBED IN THIS MANUAL MUST BE READ AND UNDERSTOOD.

RIGOROUS COMPLIANCE WITH THE REGULATIONS AND INSTRUCTIONS CONTAINED IN IT, TOGETHER WITH THE OPERATOR'S ATTENTION AND PRUDENCE WILL BE THE BEST GUARANTEE AGAINST ACCIDENTS THAT COULD OCCUR AT WORK.

OUR SCRUBBERS ARE DESIGNED TO PROVIDE MAXIMUM SAFETY IF USED ACCORDING TO THE INSTRUCTIONS

OPERATORS WHO DO NOT KNOW THE REGULATIONS AND PROCEDURES CONTAINED IN THIS MANUAL MUST BE PREVENTED FROM USING THE MACHINE.

THE USER'S MANUAL IS AN INTEGRAL PART OF THE SCRUBBER AND MUST ACCOMPANY IT UNTIL THE SCRUBBER IS DEMOLISHED.

PURSUANT TO DIRECTIVE 2006/42 CE, PRESIDENTIAL DECREE 459 DATED 24/07/1996 AND LATER MODIFICATIONS NOTICE IS GIVEN THAT:

OPERATOR IS INTENDED TO MEAN THE PERSON(S) ASSIGNED TO INSTALL, OPERATE, ADJUST, CARRY OUT ORDINARY SERVICING, CLEAN, REPAIR AND TRANSPORT THE MACHINE.

OUR COMPANY WILL NOT BE HELD LIABLE FOR ANY PROBLEMS, BREAKAGE, ACCIDENTS OR OTHER OCCURRENCES DUE TO THE IGNORANCE OR THE NON-APPLICATION OF THE PROCEDURES CONTAINED IN THIS MANUAL OR TO THE IMPROPER USE OF THE MACHINE.

FURTHERMORE, OUR COMPANY SHALL NOT BE HELD LIABLE FOR THE CARRYING OUT OF MODIFICATIONS AND/OR THE INSTALLATION OF PARTS OR ACCESSORIES THEY HAVE NOT BEEN AUTHORISED BEFOREHAND.

GENERAL WARNINGS AND ADVICE DANGER SIGNS - ATTENTION



THIS SYMBOL HIGHLIGHTS ALL THE OPERATIONS THAT REPRESENT A POTENTIALLY HAZARDOUS SITUATION FOR THE OPERATOR IT IS THEREFORE NECESSARY TO ADHERE CLOSELY TO THE CONDITIONS SHOWN BY THIS SYMBOL.



GLOVES MUST BE WORN



SAFETY GLASSES OR GOGGLES MUST BE WORN



BE CAREFUL NOT CRUSH YOUR HANDS BETWEEN PARTS IN MOTION



ATTENTION: DO NOT GET IN TOUCH WITH WATER
THE DEVICES MARKED WITH THIS LABEL ARE NOT TO GET WET. (USUALLY THEY ARE ELECTRICAL COMPONENTS)



AN ANTI-VAPOUR MASK HAS TO BE WORN WHEN USING CORROSIVE DETERGENTS.



EMERGENCY SITUATIONS

ONLY EXTINGUISH FIRES WITH POWDER FIRE EXTINGUISHERS



RESPONSIBILITIES OF THE OPERATOR

- The operator is responsible for the day-to-day servicing of the machine
- The operator must care for the machine and keep it in good operating condition
- The operator must inform his or her superior or the technical department when scheduled maintenance is requested in the case of damage or breakage
- The operator must not carry people, animals or objects on the machine.
- When moving the machine, observe the safety measures for circulation
- The machine cannot be used for toxic-harmful materials
- Never let people get close to the machine's sphere of action
- Never leave the sweeper with the key and the emergency switch inserted
- Engage the hand brake
- If the machine malfunctions, have a look at the procedures shown in the various chapters
- Never collect pieces of string, wire or anything else that could damage the brushes by winding around them
- Never suck up pieces of wood, plastic waste etc. as they may clog the vacuum pipe
- Never remove or alter the plates on the machine.

IMPORTANT COMMUNICATION

WARNING

DURING THE LAST FEW YEARS, A NEW AGGRESSIVE SOLVENT-BASED DETERGENT TYPE WAS MADE AND DISTRIBUTED IN THE MARKET. THIS DETERGENT IS CURRENTLY NAMED AS "DETER-SOLVENT".

EVEN IF THE SOLVENT CONTAINED IN THE DETERGENT IS OBTAINED FROM THE FRUITS, IT STILL HAS TO BE CONSIDERED AS "SOLVENT".

THE POLIETHYLENE MATERIAL USED IN THE SCRUBBER TANKS IS MIXED WITH A % OF RUBBER.

THE "DETER-SOLVENT" PRODUCT, IF LEFT IN THE SCRUBBER'S TANKS FOR A LONG PERIOD OF TIME COULD ATTACK THE RUBBER'S MOLECULAS, CAUSING THE TANK TO SWELLS AND CRACKS.

IF THE "DETER-SOLVENT" PRODUCT IS USED, IT'S MANDATORY TO RINSE THE TANKS PROPERLY WHEN THE MACHINE STOPS WORKING.



CLEANING AND MAINTENANCE

The machine must be cleaned by persons who have received proper instruction for the purpose, who know how to cut off the sources of energy and who know the characteristics of the machine so as not to find themselves in a hazardous situation. Clean the machine coverings, the panels and commands with cloths soaked in water or a detergent solution.

Solvents such as petrol, alcohol, etc. must not be used.

Call in specialised personnel to clean the electrical components. Said personnel should use products that are not corrosive and are anyway suitable for electrical circuits.

Specialised personnel with thorough knowledge of the machine and its components must be called in to carry out maintenance operations.

Any maintenance and cleaning operation must be carried out with the machine off, with all the mechanisms still, after the hot sections have cooled down and with the battery disconnected.

When using compressed air guns for cleaning, protect the eyes and hair.

STORING THE MACHINE

If the machine is not used for a long period, it is essential:

- To recharge the batteries before storing the machine as empty batteries may get damaged;
- To empty and wash the tanks as described in the relative section;
- To clean the clean water filter;
- If the machine is equipped with the ECO SYSTEM device, clean its circuit by using clean water before storing the machine;
- To clean the machine inside and outside;
- To keep brushes and squeegee raised;
- To lock the machine in place with the parking brake;
- To remove the key;
- To remove the battery lead connections;
- To keep the machine in a protected place;
- To keep the machine within a temperature range of 5 °C / 40 °C;
- To keep the machine within a humidity range of 30 % / 80 %.



PRECAUTIONS FOR THE SAFETY OF OPERATORS AND TECHNICIANS

- The machine must not be used by non-authorized personnel who have not been trained to use it properly or by people who are under the influence of substances that could alter their nervous reflexes (alcohol, psycho pharmaceuticals, drugs etc.)
- Do not use the machine in inflammable areas or where there is the danger of explosions
- Do not collect material that is alight or anything else that could cause a fire.
- Do not remove protections or guards when the machine is in operation.
- Do not use the machine to clean objects.
- Do not start to perform maintenance operations with parts in movement
- Protect eyes and ears when using compressed air or water guns for cleaning the machine.
- To raise the machine, make use of devices that are adequate to bear the weight of the machine itself.
- Do not cause flames or sparks around the machine.
- Disconnect the battery cables before working on the electrical circuit.
- Avoid contact with battery acid
- Move carefully over uneven or crumbling paving and on slopes.
- Slow down on slopes and slipping surfaces
- Make sure the machine is not exposed to rain and weather conditions, whether in motion or still.
- Temperature of usage of the machine has to be kept within + 5 °C / + 40 °C.
- Humidity has to be kept within 30% / 80 %.

UPDATING OF THE USER'S MANUAL

When large-scale modifications are made to the machine or new parts are installed, the updated documentation must be sent to the Dealer along with the purchased part or as an update of the manual

OBLIGATIONS OF THE EMPLOYER OR OWNER OF THE MACHINE

The employer or owner of the machine is responsible for giving the User's Manual to all the personnel who are going to have to use the machine.

The employer or owner of the machine also undertakes to update the manual with the documentation that the Manufacturer will send if modifications are made to the machine.

DISPOSAL



SPENT OILS

Spent oils must not be thrown away into the environment under any circumstances.

They must be given to authorised Collectors in compliance with the regulations currently in force.

Temporary storage must be inside watertight containers with sealed lid to avoid contact with the environment and with rainwater.

The filters must also be given to authorised collectors and temporarily kept like the oils.



DEAD LEAD BATTERIES

Dead batteries must be considered harmful toxic waste, they must be given only to Collectors with specific authorisation (to be checked at the time of consignment).



SCRAPPING OF THE MACHINE

When the machine is to be scrapped, it is necessary to dispose of the materials the machine consists of, properly.

It is compulsory to give the machine to authorised collectors who will see to the proper disposal of: batteries, oils, filters, plastics, metals, electric engines, electric cards etc. in accordance with the regulations currently in force.



DISPOSAL OF THE RECOVERY SOLUTION TANK

Prior to be moved on specific purification plants, the recovery tank solution is to be disposed of in the appropriate sites.

TRANSPORT- HANDLING



TRANSPORT

The machine must be fixed to a pallet to make it easier to transport and more secure.

At the reception of the machine, check that the packaging is in good conditions –in case of damage, report to the forwarder.

PAY PARTICULAR ATTENTION WHILE TRANSPORTING THE MACHINE AT TEMPERATURES BELOW 0°C AS TO PREVENT THE WATER INSIDE THE TANKS AND THE PIPES TO GET FROZEN.

DRAIN THE TANKS, REMOVE THE SCREEN OF THE CLEAN SOLUTION FILTER AND LET THE WATER FLOW AWAY COMPLETELY OUT OF THE PIPES.



TRANSPORT- HANDLING

When the machine is moved from one place it is used in to another you are advised to:

- not load it on the vehicle with a forklift truck in order not to damage it
- lock the machine in place with the parking brake
- fix it well to the vehicle using belts, ropes and chains.



TRANSPORTING THE MACHINE BY MANUAL PUSHING

In case of transport by means of manual pushing –for machines featuring electronic traction only - the machine must be pushed on at walking pace. Do not tow it with fork lifts.

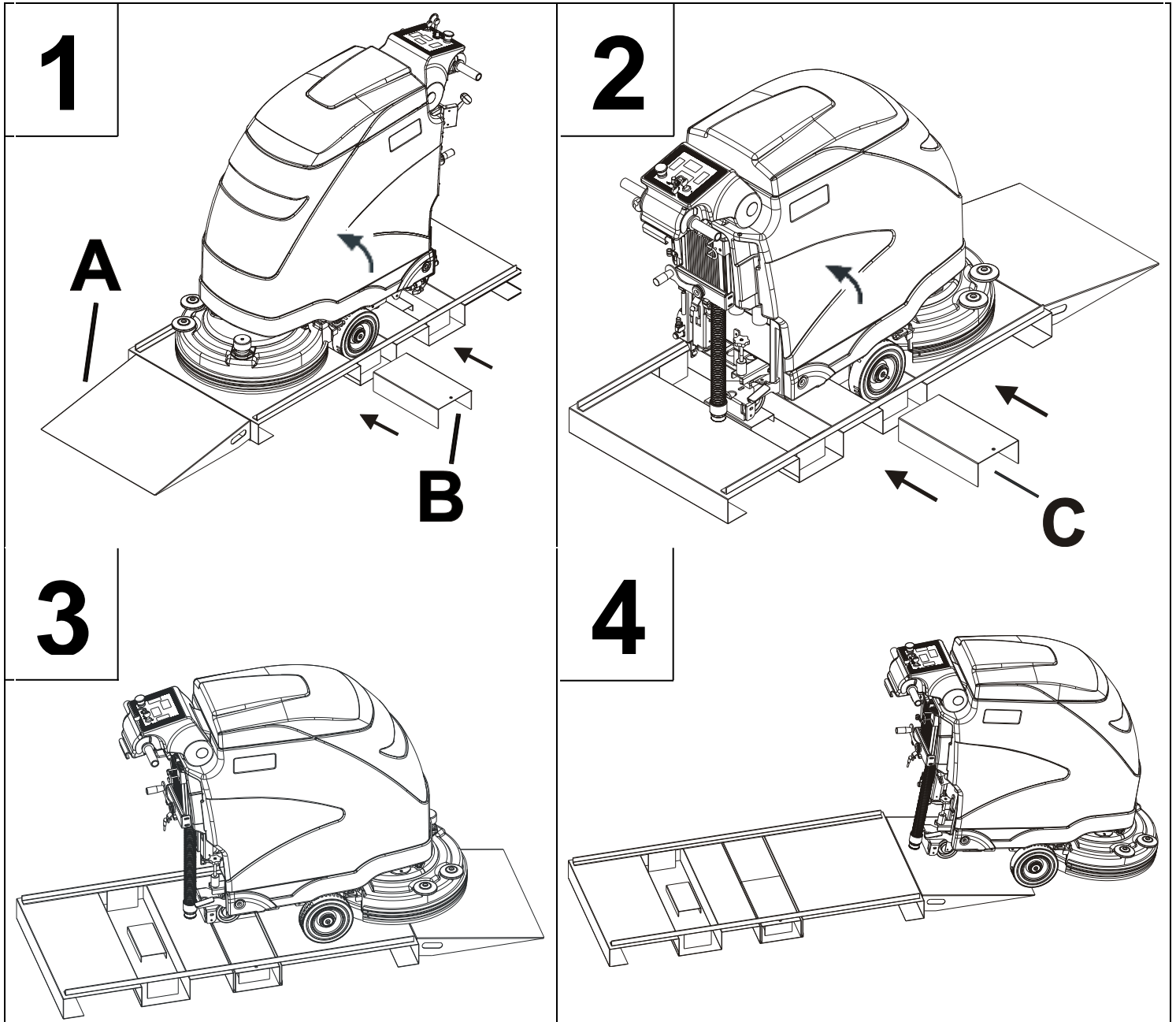


UNPACKING

Make sure that all the parts indicated in the following list are present before unpacking the machine:

- Squeegee;
- battery box;
- battery jumper L = 25 cm, fitted with terminals and terminal covers;
- battery cable L = 51.5 cm, fitted with connector, terminals and terminal covers;
- battery charger on board the machine;
- two 12 Volt dry charge batteries (optional).

NOTICE: brushes, discs and disc pad holders must be purchased separately.



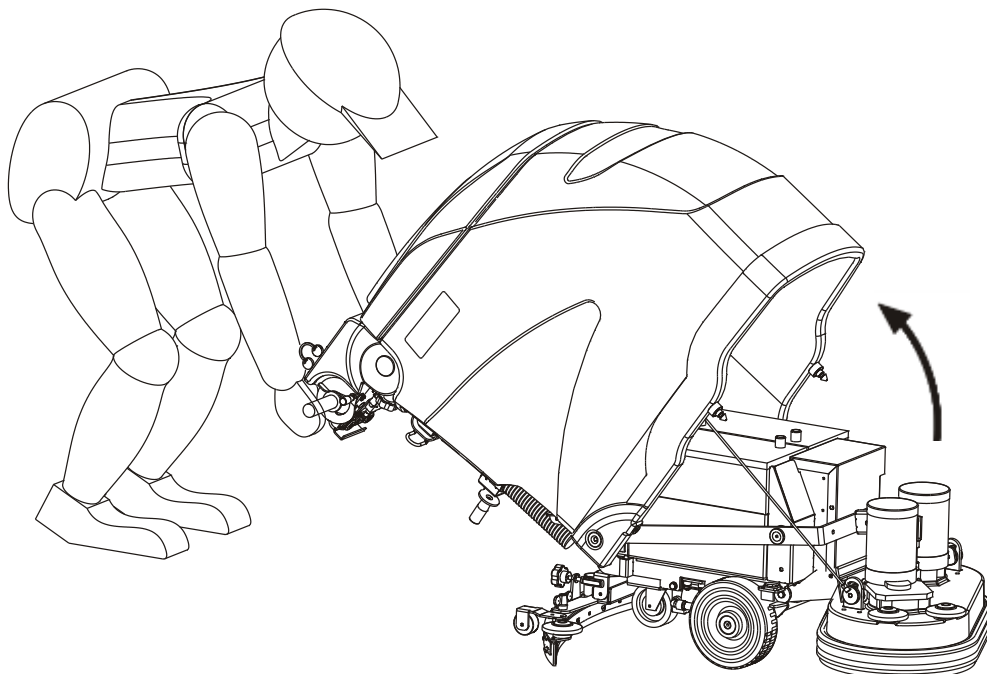
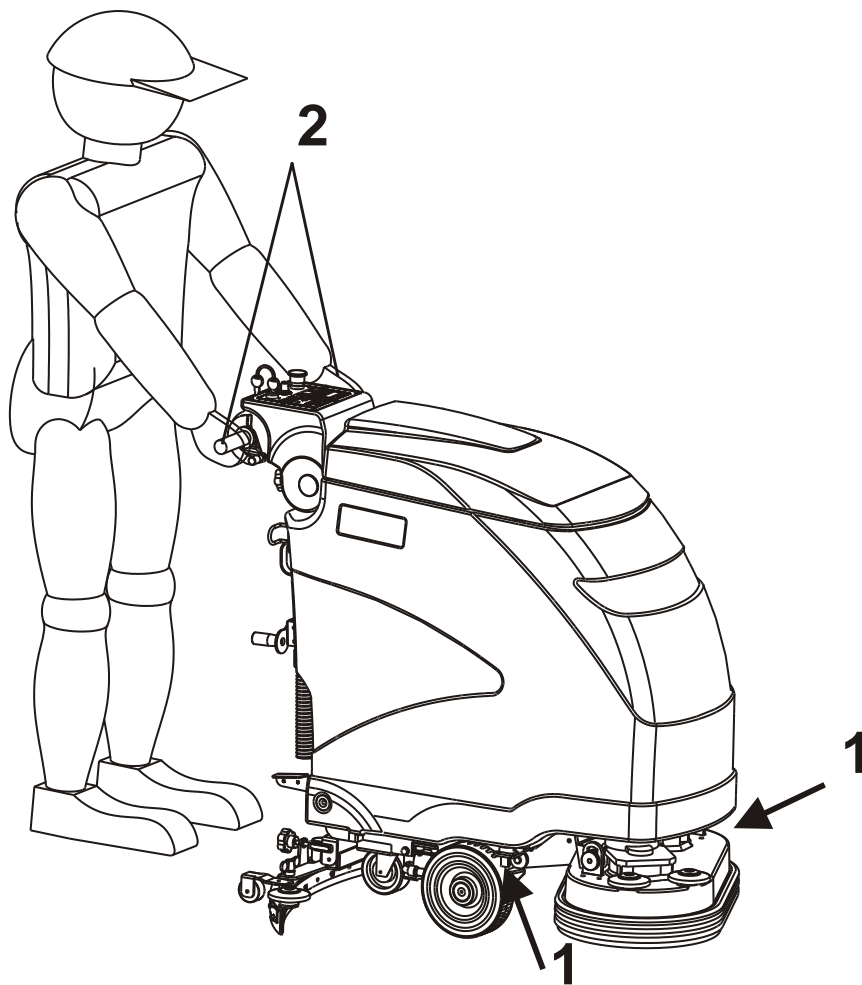
Follow the instructions below to unpack the machine:

- connect the inclined ramp (position A) to the front part of the pallet, see figure 1;
- tilt the machine slightly and place the wheel lifting plate (position B), see figure 1;
- tilt the machine slightly again and place another wheel lifting plate from the other side of the machine (position C), see fig. 2;
- remove the machine from the pallet along the inclined ramp (see fig. 3-4).

CAUTION: DO NOT USE A FORKLIFT TO REMOVE THE MACHINE FROM THE PALLET AS IT MAY CAUSE DAMAGE TO THE MACHINE.

CAUTION: MOUNT THE BATTERIES ONLY AFTER REMOVING THE MACHINE FROM THE PALLET.

LIFTING THE TANK



Follow the instructions below to lift the tank:

- Bring the machine into a stop position in a flat surface area, put on the brake and turn the key into position 0;
- Unblock the tank by means of the two levers pos. 1 placed on both sides;
- **REACH THE DRIVER'S POSITION AND LIFT THE TANK BY THE GRIPS (POS. 2) PAYING ATTENTION TO HANDLE IT WITH CARE WHILE PUTTING IT DOWN ON THE GROUND.**



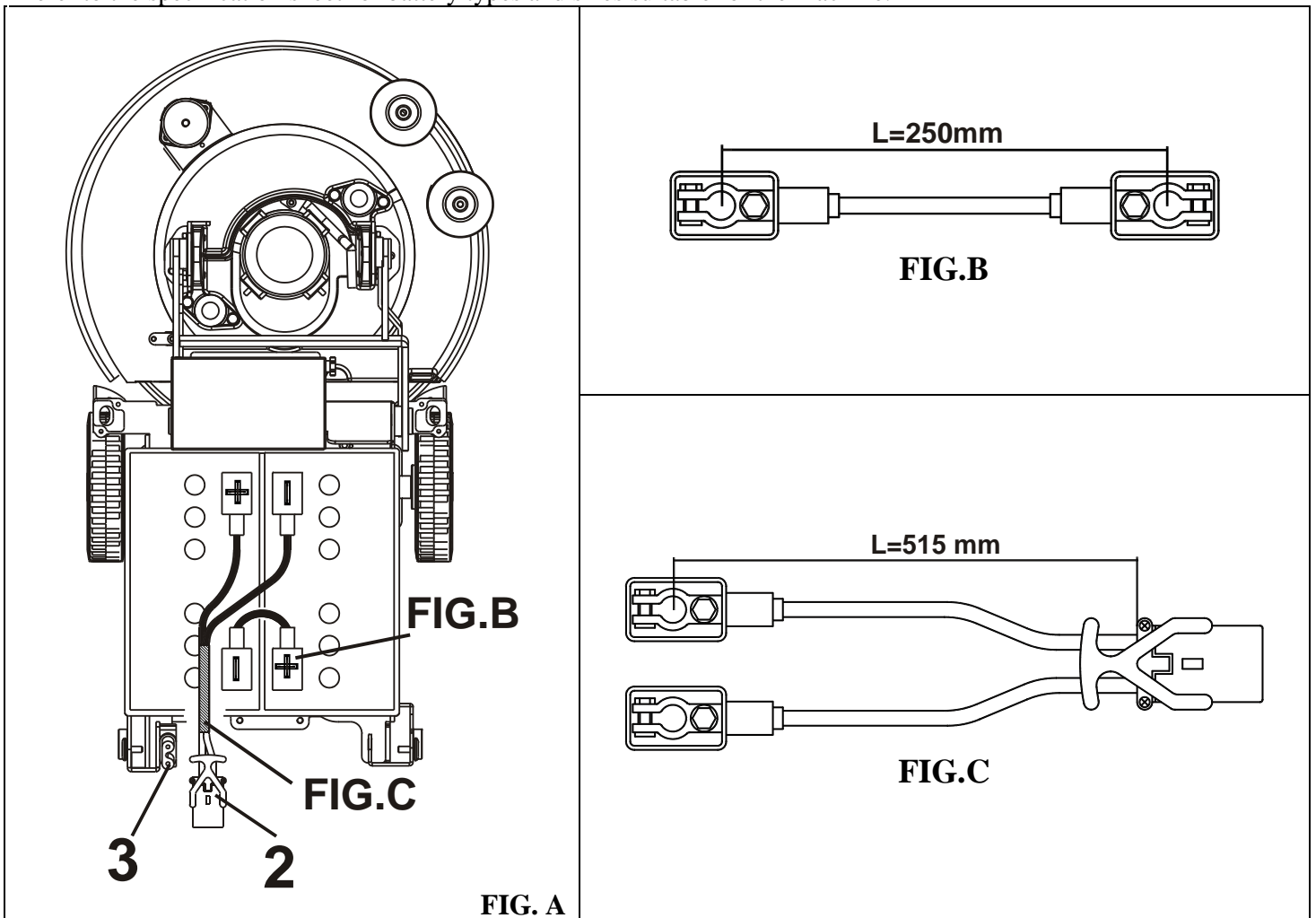
INSTALLING BATTERIES

CAUTION: USE PROTECTIVE GLOVES AND GOGGLES WHEN HANDLING BATTERIES, AVOIDING ANY CONTACT WITH THE ACID INSIDE THE BATTERIES.

CAUTION: THE BATTERY CHARGER AND THE CONTROL BOARD ARE SET ACCORDING TO THE TYPE OF BATTERIES SHOWN IN THE SHEET ATTACHED TO THE USER'S MANUAL.

IF YOU WANT TO MOUNT BATTERIES WITH A DIFFERENT AMPERAGE OR OF A DIFFERENT TYPE (I.E. LEAD-ACID, AGM OR GEL) THE SETTING SHOULD BE DONE ON THE BATTERY CHARGER AS WELL AS ON THE CONTROL BOARD ON THE MACHINE. CONTACT A RESELLER OR A TECHNICIAN BEFORE MOUNTING THESE TYPES OF BATTERIES.

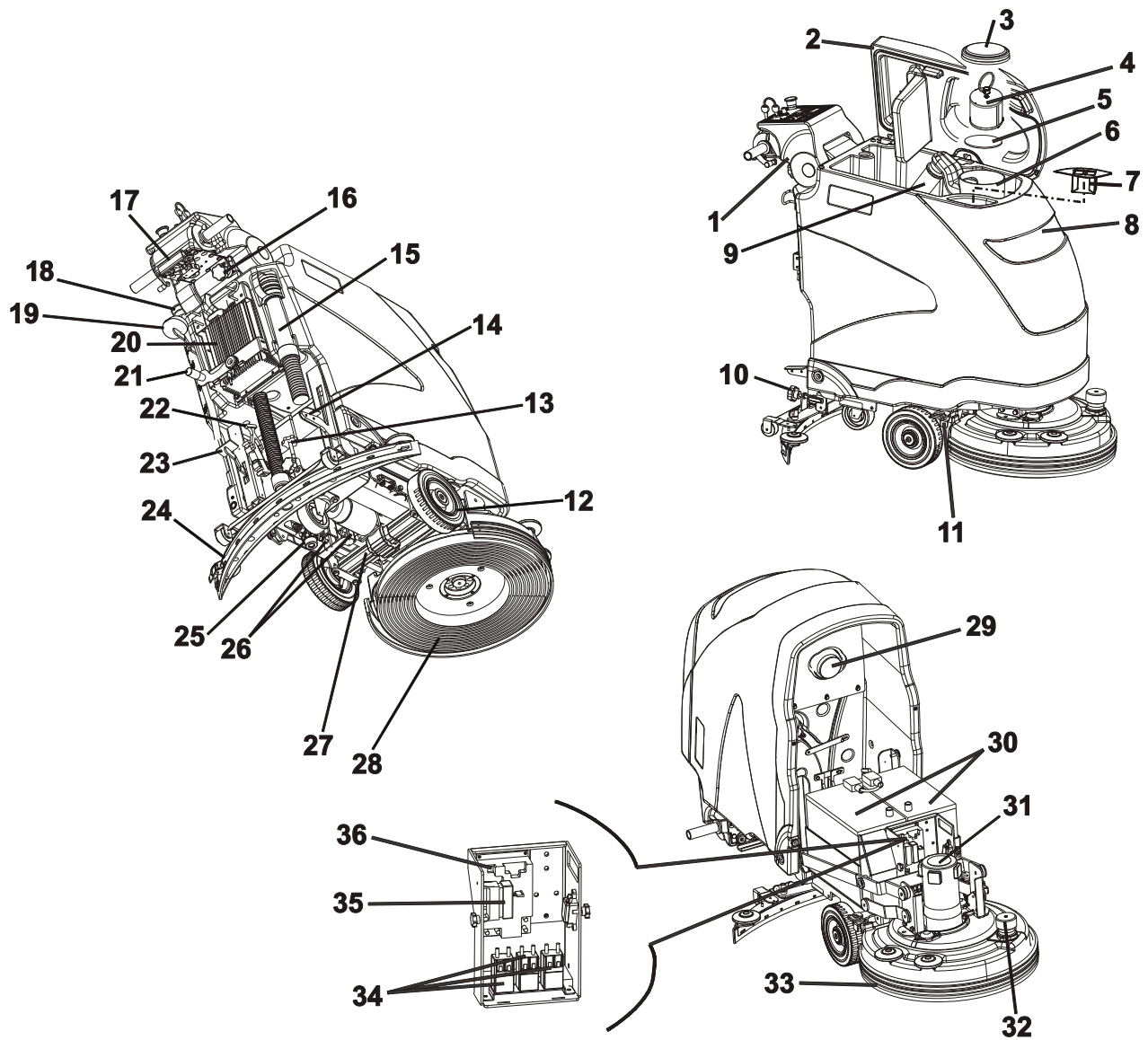
Refer to the specification sheet for battery types and sizes suitable for the machine.



Follow the instructions below to mount the batteries to the machine:

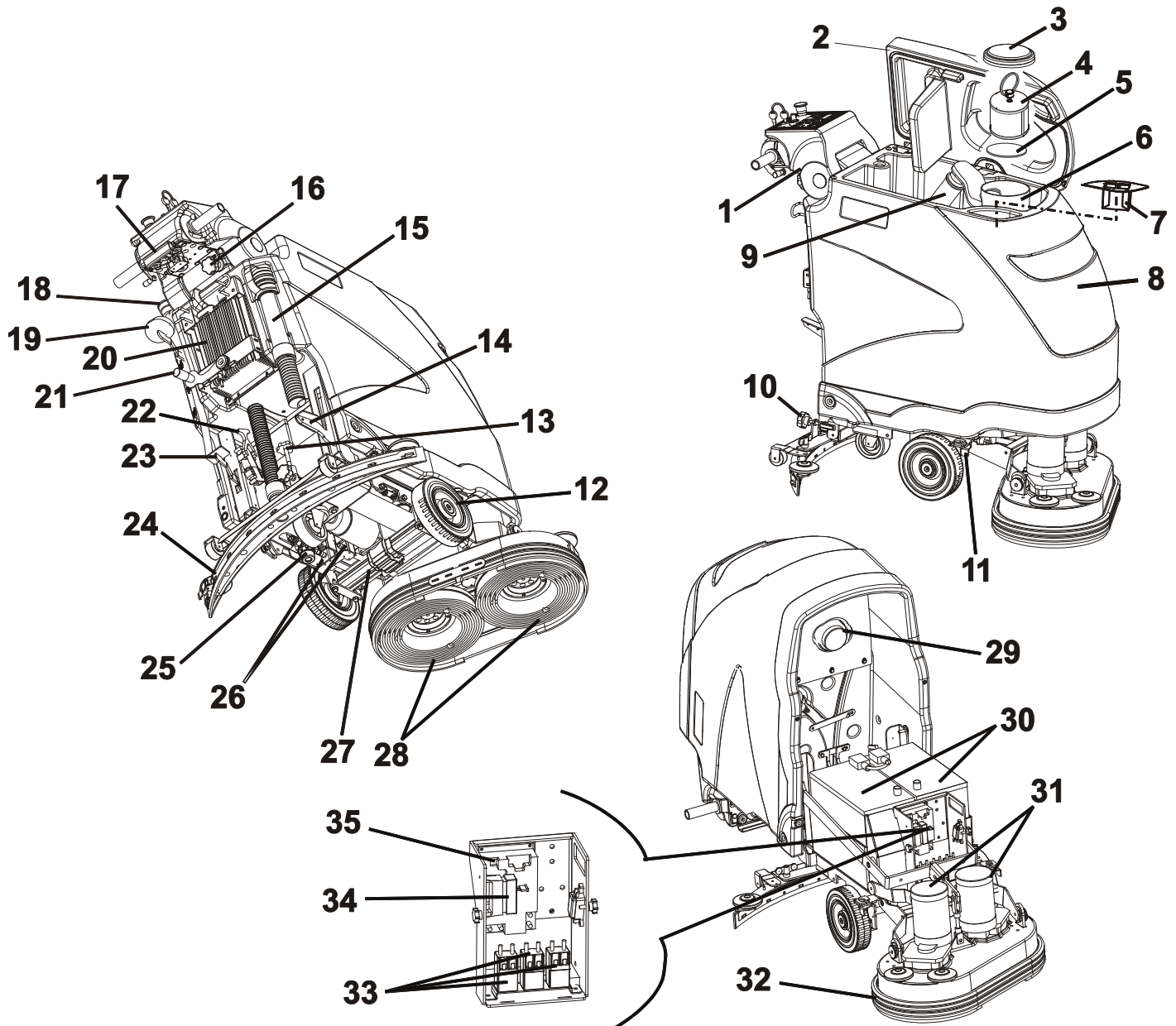
- park the machine on a flat surface, put on the brake (if available) and remove the key (if available);
- Lift the tank following the instructions as indicated in the previous section of the present manual;
- Place the batteries in the battery box. Make sure the poles are clean and apply a thin layer of petroleum jelly.
BE VERY CAREFUL NOT TO TURN OVER THE BATTERIES AS IT COULD CAUSE ACID TO LEAK AND DAMAGE THE MACHINE.
- Connect the jumper (fig. C) and the battery cable (fig. D) as indicated in figure B, make sure to tighten the screws on the terminal clamps and place the terminal covers.
- Connect the mobile connector (position 2 – fig. B) with the fixed connector (position 3 – fig. B) into the machine.

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1. Control panel	19. Tap
2. Tank lid	20. Battery charger
3. Suction filter lid	21. Squeegee lever
4. Suction filter	22. Battery mobile connector
5. Safety suction filter	23. Brake pedal
6. Filter support	24. Squeegee
7. Drum of the clean water filter	25. Detergent solution filter
8. Tank	26. Solenoid valves
9. Suction lock float with filter	27. Drive gear motor
10. Squeegee slope adjustment hand-wheel	28. Brush
11. Tank unlock lever	29. Vacuum motor
12. Wheels	30. Batteries
13. Squeegee pressure adjustment hand-wheel	31. Brush gear motor
14. Brush plate lift pedal	32. Brush inclination adjustment knob
15. Recovery tank outlet pipe	33. Splashguard
16. Instrument panel inclination adjustment hand-wheel	34. Contactors
17. Anti-crushing device	35. Fuse holder
18. Level indicator pipe and solution tank outlet drain	36. Drive board

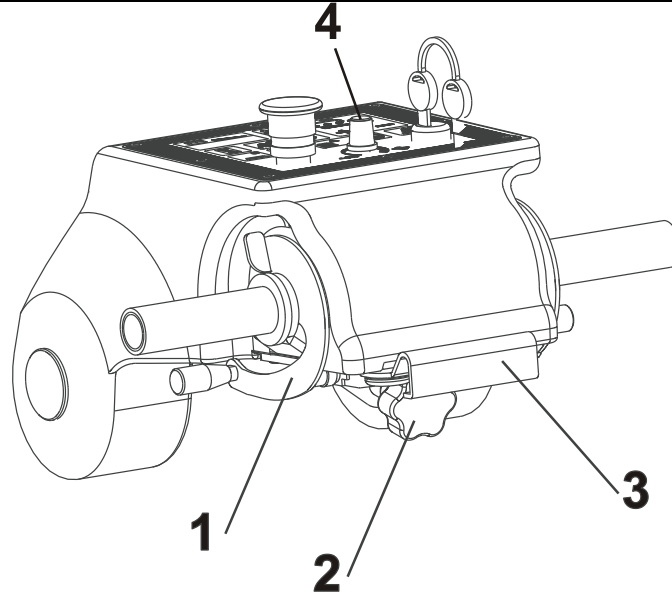
E61 – M610



1. Control panel	19. Tap
2. Tank lid	20. Battery charger
3. Suction filter lid	21. Squeegee lever
4. Suction filter	22. Battery mobile connector
5. Suction safety filter	23. Brake pedal
6. Filter support	24. Squeegee
7. Drum of the clean water filter	25. Detergent solution filter
8. Tank	26. Solenoid valves
9. Suction lock float with filter	27. Drive gear motor
10. Squeegee inclination adjustment hand-wheel	28. Brushes
11. Tank unlock lever	29. Vacuum motor
12. Wheels	30. Batteries
13. Squeegee pressure adjustment hand-wheel	31. Brush gear motor
14. Brush plate lift pedal	32. Splashguard
15. Recovery tank outlet pipe	33. Contactors
16. Instrument panel inclination adjustment hand-wheel	34. Fuse holder
17. Anti-crushing device	35. Drive board
18. Level indicator pipe and solution tank outlet drain	

PRIMARY FUNCTIONS AND CONTROLS

CONTROL PANEL



DRIVE OR REVERSE DRIVE CONTROL

Rotate the mechanism forward to drive the machine.

Rotate the mechanism backwards for reverse drive.

- 1** ----- The speed of the machine will either increase or decrease progressively when rotating the control progressively forward or backwards, it will go from speed level 0 (machine in halt position) to the maximum speed set with the potentiometer (position 4) located on the instrument panel.

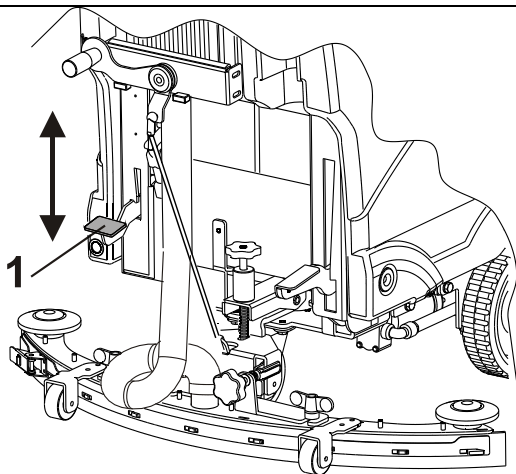
INSTRUMENT PANEL INCLINATION ADJUSTMENT HAND-WHEEL

- 2** ----- Enables the instrument panel to be positioned in three different inclinations.

ANTI-CRUSHING DEVICE

- 3** ----- This is a safety device that halts the machine in reserve drive and makes it go forward for a brief period in case the operator is trapped between the machine and an obstacle behind him.

BRAKE PEDAL



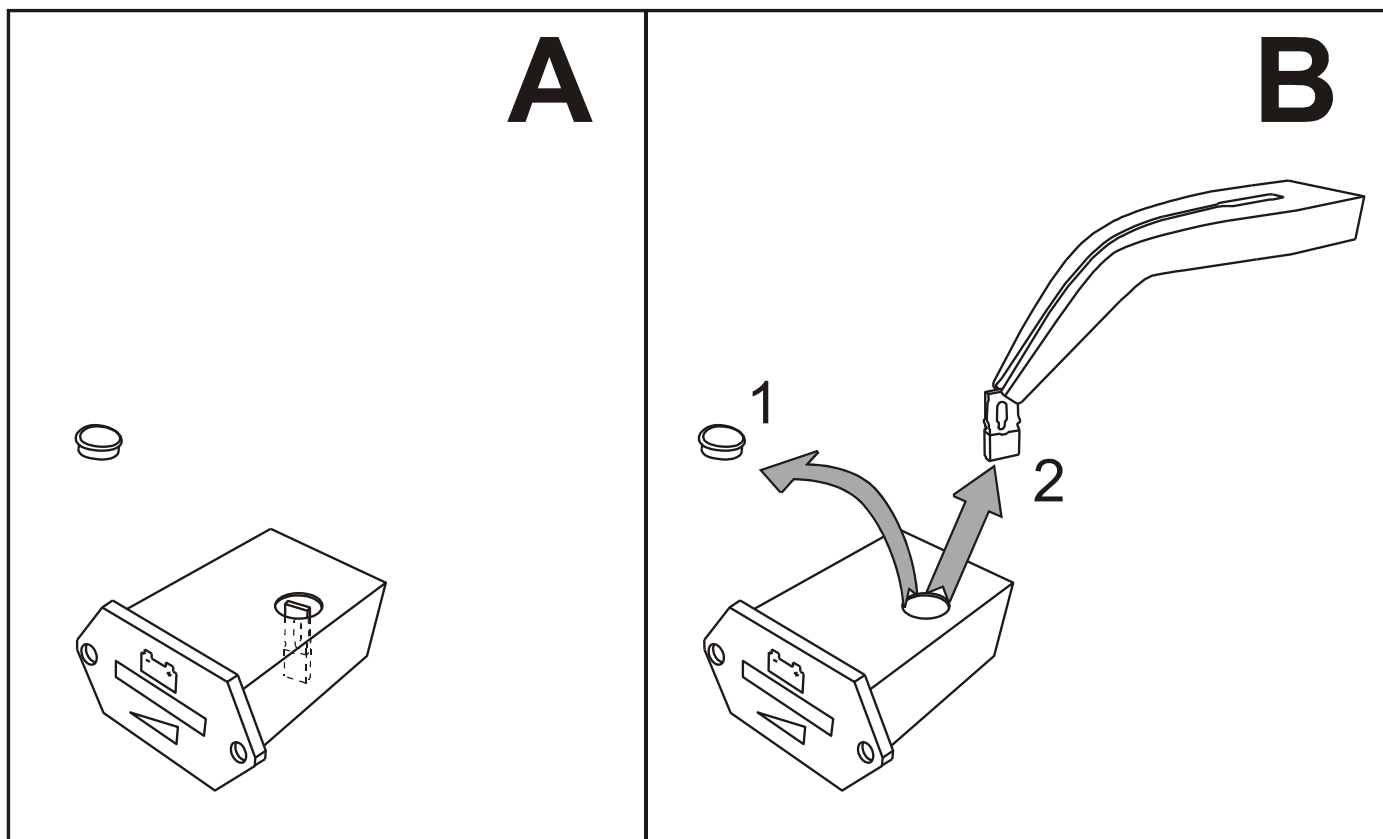
On the versions with electronic drive, the machine is fitted with a parking brake and with an emergency brake that operate on both front wheels.

To lock the machine, push the brake pedal (position 1) down and hook it into the preset housing. The machine will then be locked.

Use the brake pedal (position 1) to unlock the machine, unhook it from the housing and release it slowly.

The machine will then be unlocked.

SETTING THE CHARGE INDICATOR ACCORDING TO THE BATTERY TYPE

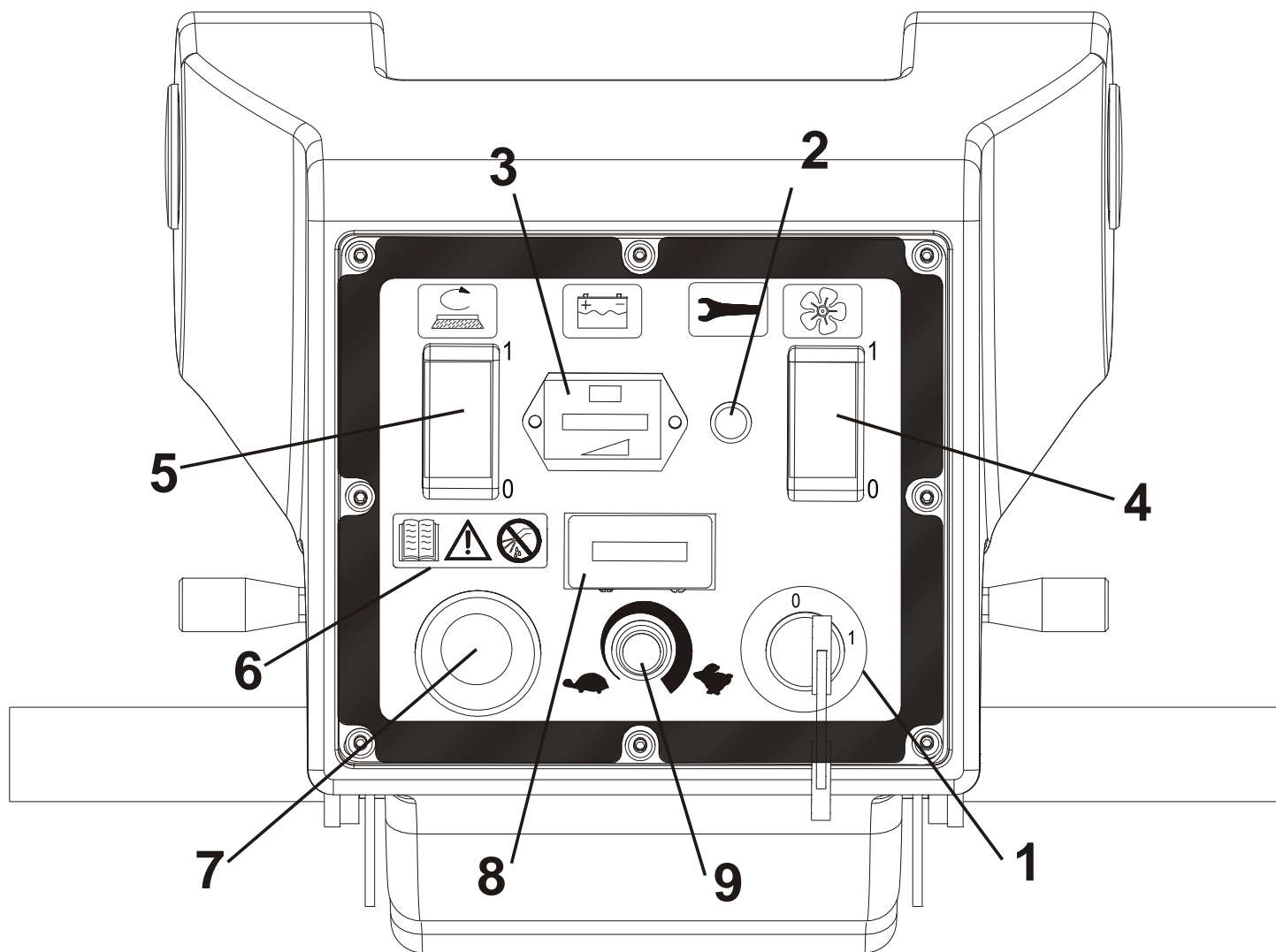


With the jumper inserted, the charge indicator is set for lead acid batteries (FIG.A).

Without the jumper, the charge indicator is set for gel/agm batteries (FIG.B).

If the indicator is set for gel/agm batteries and you want to install lead acid batteries, please contact EUREKA for the jumper.

CONTROL PANEL



KEY-OPERATED SWITCH

Turn it clockwise (position 1) to turn on the machine.



RED LIGHT: DRIVE ALARM

Indicates any faults in the drive board of the drive motor.

The number of flashes indicates the type of fault (consult the troubleshooting table).



BATTERY CHARGING INDICATOR

The green LED light indicates that the battery is charged.

When the red light comes on after about 20 seconds, the brush motors will stop running. Go to the charging zone and charge the battery.

Warning: The indicator is configured for acid-lead batteries.

To avoid damaging the batteries, make sure to change the settings when installing other types of batteries (GEL, AGM, etc.).

In case different batteries are fitted (GEL, AGM, etc.) the setting must be changed to avoid damaging the batteries. (SEE PAGE 15)

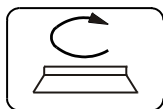


VACUUM BUTTON

Push the switch to position 1 to turn on the vacuum.

Push the switch to position 0 to turn off the vacuum.

5



BRUSH DRIVE BUTTON

Push this switch to position 1 to activate the brush function.

The brushes will start spinning when the forward and reverse gear pedal is pushed.

When the pedal is released the brushes will spin for another 3 seconds before stopping.

The solenoid valve is connected to the brush function; it opens and closes the solution flow automatically.

6



WARNING SYMBOLS

The symbol on the left always recommends using the instruction manual to find any information on the machine, whereas the symbol on the right part of the machine warns the operator not to get the control panels wet as the electrical parts could get damaged.

7

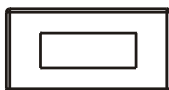


EMERGENCY BUTTON

This button is used to halt the machine in case of emergency and to lock all its functions.

Turn the knob clockwise to reset the power.

8



HOUR METER (OPTIONAL)

9



SPEED ADJUSTING POTENTIOMETER

To set up the maximum speed of the machine turn the knob clockwise or counter-clockwise.

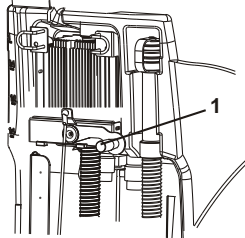
SETTING UP THE MACHINE



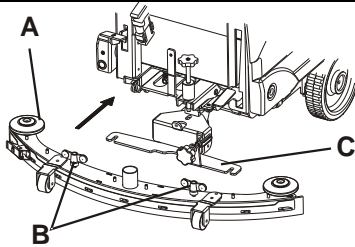
MOUNTING THE SQUEEGEE

Follow the instructions below to mount the squeegee to the machine:

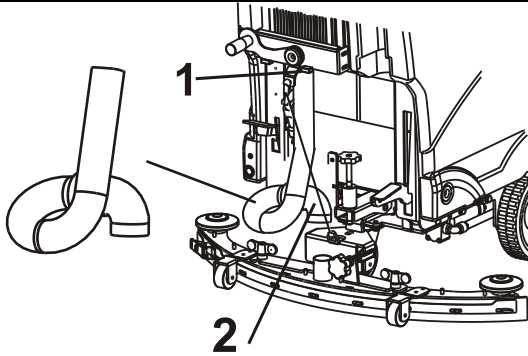
- park the machine on a flat surface, put on the brake (if available) and remove the key (if available);



- Position the squeegee lever into position 1 (raised position).

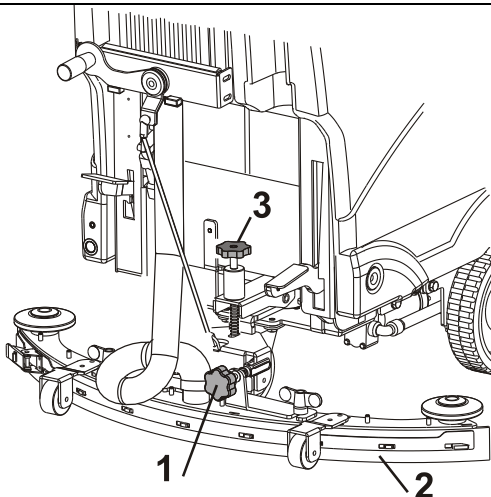


- Fit in the squeegee (position A) into the squeegee support (position C).
- Once the squeegee is fitted completely, secure the knobs (position B).



- Connect the squeegee hose from the straight side (position 1) into the special seat located on the bottom of the tank and press down hard until it fits into place completely.
- Mount the other end of the hose, from the roll-up side (position 2) into the squeegee. The hose's curve will be used as an anti-drip device

ADJUSTING THE SQUEEGEE



There are 2 types of adjustments that can be carried out on the squeegee:

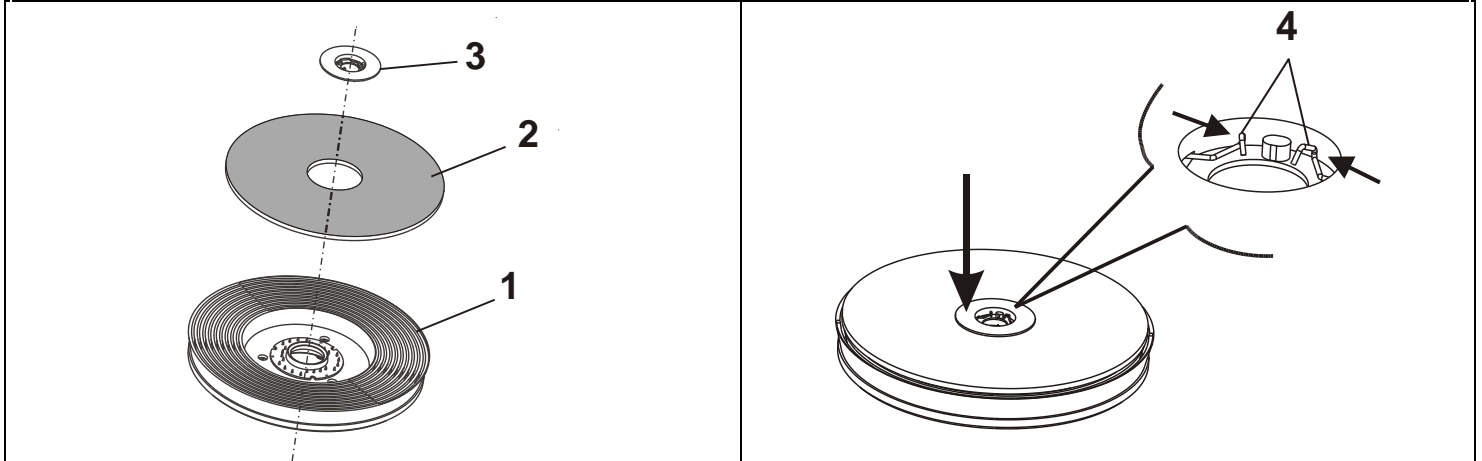
- **Inclination adjustment** with knob (position 1). It adjusts the inclination of the squeegee in order to have a constant pressure over the entire length of the blade (position 2). Turn the knob counter-clockwise if there is too much pressure on the outer points and little pressure on the central area. Turn the knob clockwise if there is little pressure on the outer points and too much pressure on the central area. To make the adjustment lower the squeegee, turn on the suction fan and drive forward slowly. Examine the pressure distribution on the blade and if necessary correct the inclination as described above.

- **Pressure adjustment** using the knob in position 3. This allows for optimal pressure on the blade (position 2) which can be adjusted for each type of floor and for each type of blade. For rough floors or uneven floors, increase the pressure by turning the knob (position 3) clockwise. For smooth floors, lower the pressure by turning the knob counter-clockwise.



MOUNTING THE ABRASIVE DISC ONTO THE DISC PAD HOLDER

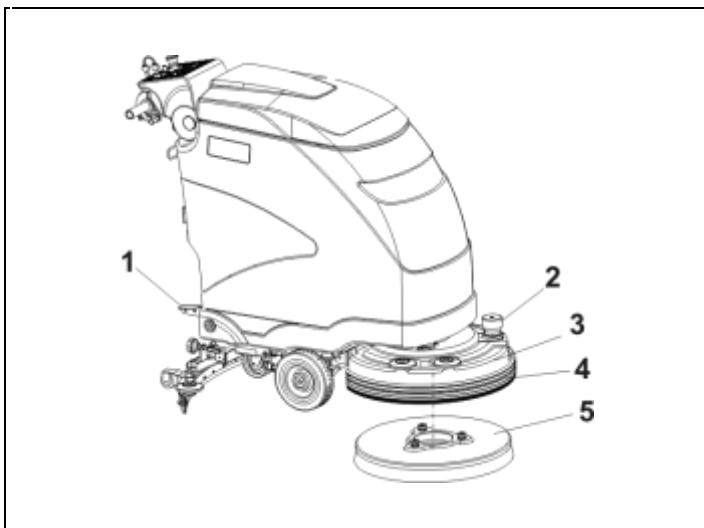
The machine can operate with brushes or abrasive discs of various types mounted on special disc pad holders. Follow the instructions below to mount the abrasive disc onto the disc pad holder:



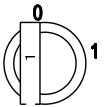
- Remove the disc lock (position 3) from the disc pad holder (position 1) by pressing the 2 ends of the spring catch (position 4) against each other.
- Position the abrasive disc (position 2) and centre it onto the disc pad holder (position 1).
- Place the disc lock (position 3) on the centre and press down hard until the spring fits into place (position 4); this operation can be carried out using the palm of your hand, or your foot if the disc pad holder is resting on the ground.



MOUNTING THE BRUSH OR ABRASIVE DISC ON MACHINE

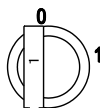


Follow the instructions below **to mount** the brush or disc pad holder with abrasive disc:



- Turn off the machine and press the key into position 0.
- Lift the brush plate (pos.3) with the pedal (pos.1).
- Put the inclination of the brush plate into 0 position by turning the brush adjusting knob (pos.2) clockwise.
- Position the brush or disc pad holder (pos.5) under the brush plate lifting the splashguard (pos.4) and centre it with the plate.
- Slowly lower the brush plate with the pedal (pos.1).
- Go into drive position and move the machine from right to left and vice versa until the brush fits into place correctly on the centre of the plate.

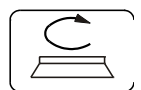
- Rotate the key-operated switch (pos.1) and wait till the battery charge level is no more visible on the display. At this point the starting-up sequence is complete.



- Put the potentiometer for speed adjustment into min. position by pressing it towards the drawing of the turtle, on the label.



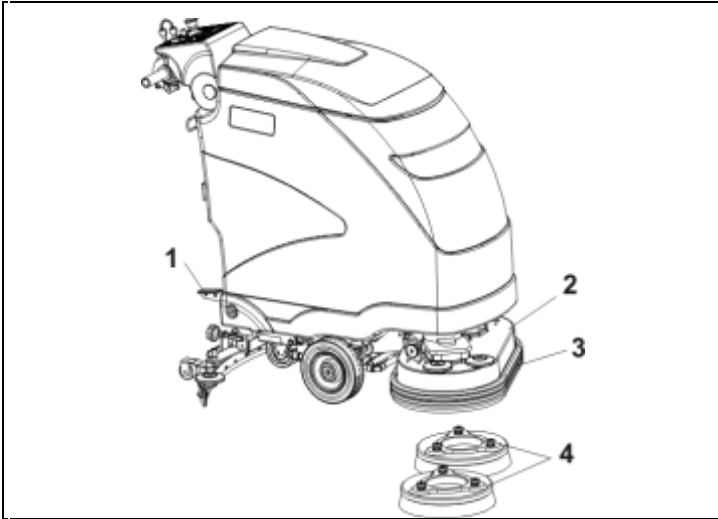
- Push the brush switch to activate the brush. The brush does not rotate when the green light is on.





- Slowly push forward the drive control and release it as soon as the brush starts rotating. The brush motor will rotate for 2 seconds thus allowing for brush release. Repeat the same operation again if necessary.
- With the brush removed from the plate, move the brush plate back into its original position by means of the knob pos. 2. Turn the knob clockwise (towards the sign +, on the label) for 4 rounds (inclination recommended).
- Lift the brush plate with pedal (pos. 1).




MOUNTING THE BRUSH OR ABRASIVE DISC ON MACHINE



Follow the instructions below **to mount** the brushes or disc pad holders with abrasive discs:

- Turn off the machine and press the key into position 0. 
- Lift the brush plate (pos.2) with the pedal (pos.1).
- Position the brush or disc pad holder (pos.4) under the brush plate lifting the splashguard (pos.3) and centre it with the plate.
- Slowly lower the brush plate with the pedal (pos.1).
- Go into drive position and move the machine from right to left and vice versa until the brush fits into place correctly on the centre of the plate.
- Rotate the key-operated switch (pos.1) and wait till the battery charge level is no more visible on the display. At this point the starting-up sequence is complete. 

- Put the potentiometer for speed adjustment into min. position by pressing it towards the drawing of the turtle, on the label. 

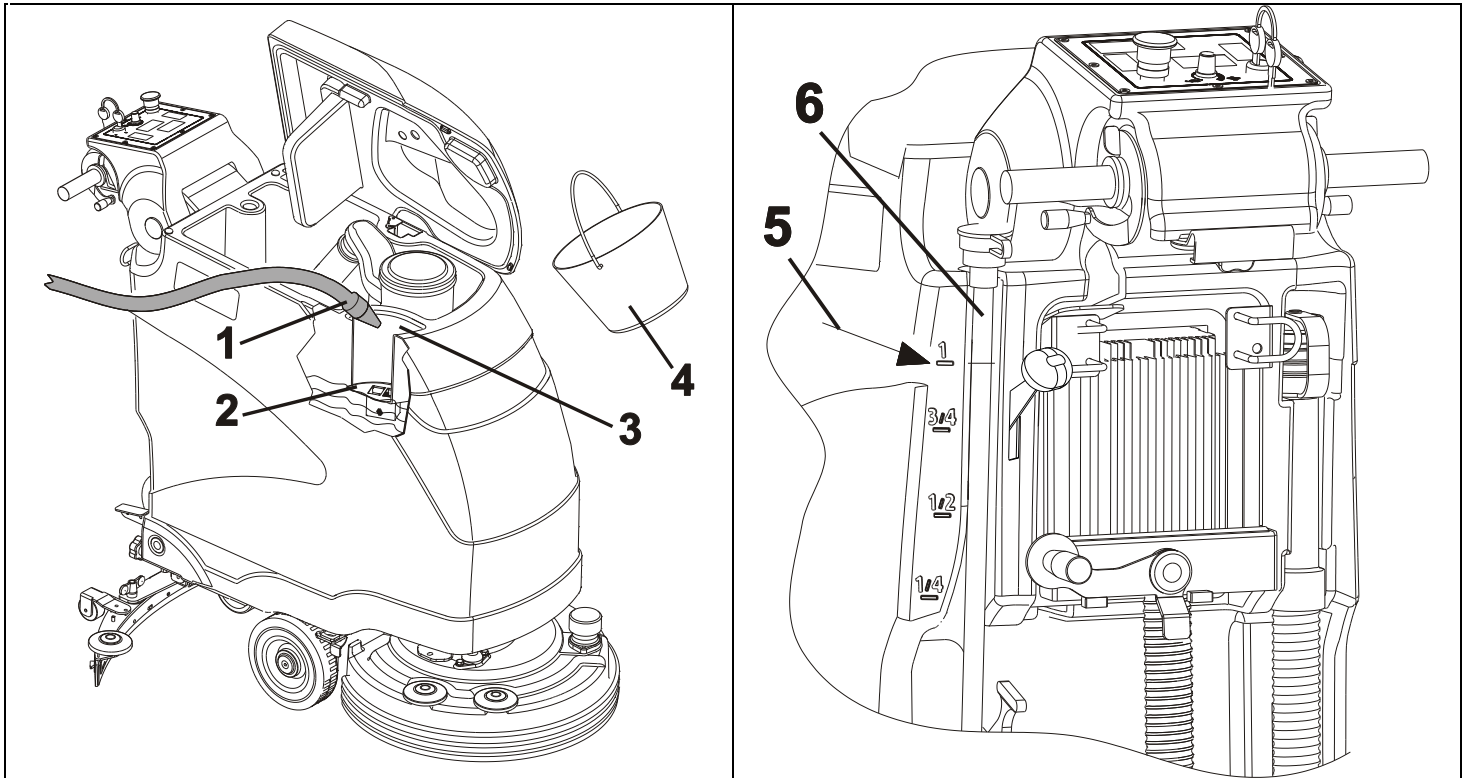
- Push the brush switch to activate the brush. The brush does not rotate when the green light is on. 

- Slowly push forward the drive control and release it as soon as the brush starts rotating. The brush motor will rotate for 2 seconds thus allowing for the brush release. Repeat the same operation again if necessary.



FILLING THE DETERGENT SOLUTION TANK

The tank should be filled using clean water mixed with an appropriate detergent solution suited for the type of floor and for the dirty conditions of the floor and using a product suitable for cutting down foam.



Use the mouth of the tank (see position 3) to fill the solution tank.

For TRAC and ECO versions, there is a filter (see position 2) located inside the mouth of the tank (see position 3), which **should only be removed if the opening is clogged or obstructed.**

Use either a rubber hose (see position 1) connected to the water distribution system or a clean bucket (see position 3) and pour water into the tank.

Make sure the water used to fill the tank does not exceed 40°C.

Look at the instructions on the package to determine how much detergent solution to use, how to mix the solution and what safety precautions to take before using the product.

Make sure to use low-foaming liquid detergents or appropriate products to cut-down foam.

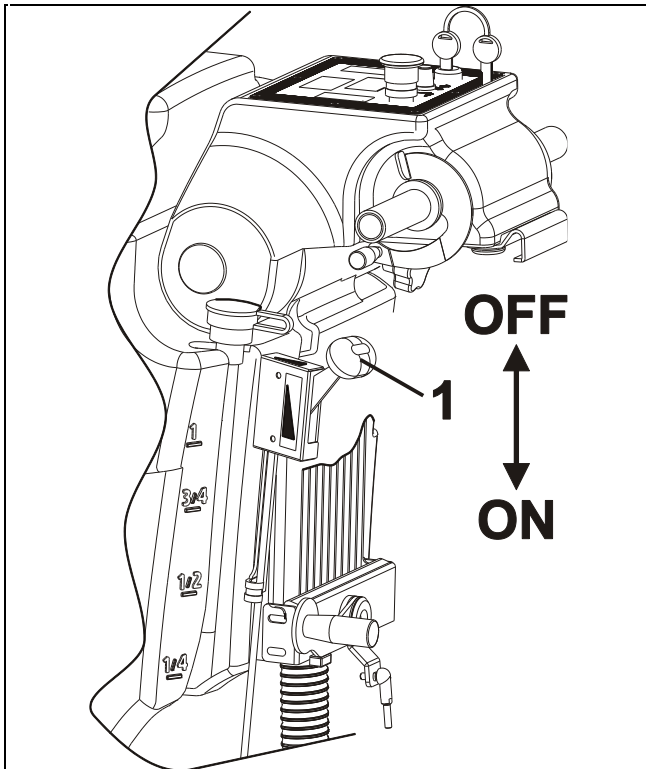
Fill up the tank only to the level indicated by the filter (see position 2) **without exceeding** notch 1 (see position 5), which is located in the rear part.

The tank level can be viewed through the clear pipe (see position 6).

In order for the machine to work properly, it is advisable not to exceed notch 1.

WARNING: DO NOT POUR INFLAMMABLE LIQUIDS INTO THE TANK.

ADJUSTING THE QUANTITY OF SOLUTION ON THE BRUSHES (WATER + DETERGENT)



The quantity of the solution on the brushes can be adjusted using the lever in position 1.
The lever in upward position will shut-off the flow of the solution completely.
Push down the lever gradually so the valve can open and increase the flow of the solution progressively.
Adjust the flow according to the operating speed and the dirty conditions of the floor.
Is fitted with a solenoid valve that keeps the solution from spilling out when the machine comes into a stop position.

USING THE MACHINE

Our squeegee machines must be operated by properly trained authorised staff.
Squeegee machines that do not operate properly must be taken out of service immediately.

CHECK BEFORE USE

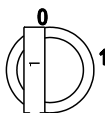
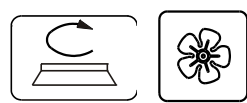
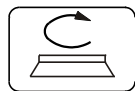
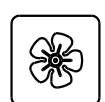

Make sure to check the following before using the machine:

- Make sure the battery connector is plugged-in;
- Make sure the key is fitted correctly;
- Check the battery charge level.

The level of charge in the batteries is displayed via the battery level indicator. When the brush is activated the machine runs a check of the batteries, and the LEDs on the indicator light up. During this phase the brush completes one rotation and then stops. After a moment, the brush restarts working and the battery level indicator will reflect the level of charge in the batteries. If the red LED is on the brushes will stop working automatically, therefore connect the charger and fully charge the batteries.

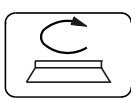
- Make sure the brushes or discs are in good condition and mounted correctly.
- Make sure the splash guards that are mounted into the brush plate are in good condition.
- Make sure the rubber wheels on the squeegee are in good condition and set properly.

OPERATION

- Release the parking brake (if available);
- Turn the key to position 1 on the TRAC and ECO versions; 
- Lower the squeegee by turning the special lever;
- Lower the brush plate using the pedal;
- Turn on the brush and the suction fan using the buttons in the instrument panel; 
- Enable the brush function using the button in the instrument panel; the brushes will not start rotating until the drive command is enabled. 
- Turn on the suction fan using the special button in the instrument panel. 
- Set the desired maximum operating speed using the potentiometer located in the instrument panel. 
- Use the valve to adjust the quantity of the solution in the brushes.
- To avoid damaging the floor, **be very careful not to halt the machine over the same floor area while the brushes continue to operate.**

The brush will stop automatically after 3 seconds when the drive command is released and the solenoid valve will also shut off the flow of the solution. When resuming the drive operation, the brushes will restart and the solution will automatically start to flow.

If the squeegee leaves wet lines on the floor during the washing operation, it means that there are pieces trapped beneath the rear rubber wheels of the squeegee. Lift the squeegee and remove the trapped pieces. Use a cloth to wipe off the rear rubber wheels if the pieces cannot be removed manually. In any case, it is always advisable to sweep the floors before washing.

- Make sure to check the level of the solution present in the clean water tank through the clear pipe. For the BASE and TRAC versions, once the detergent solution is used up, take the machine to the tank drainage area, drain the dirty water into the appropriate location, ready for disposal, then wash the water tank and fill up the tank with clean water and a mix of water and detergent solution, then resume the washing operation.
- It is advisable to run a pre-wash operation before washing very filthy floor surfaces.
- The machine is also fitted with a float valve that shuts off the suction function when the water level in the dirty water tank is too high. Under standard machine operating conditions, when filling the clean water tank accordingly, the float valve will never be activated, unless the machine is handled roughly or the floor surface level is uneven. If the suction fan operation stops (which can be easily noticed as the noise of the suction motor will stop and the machine will no longer vacuum), open the lid and make sure the balls located in the float valve have dropped to release the suction function, then resume the operation.
- When completing the washing operation make sure to switch off the brushes using the button; lift the brush plate and the squeegee, then **turn on the suction function and take the machine to the tank drainage area.** 

The suction function is left in on-position to keep water from leaking out from the lid in case there are uneven areas on the floor while going to the tank drainage area.

PERIODIC SERVICING

INTRODUCTION

REGULAR AND PERIODIC SERVICING OF YOUR SCRUBBER GUARANTEES OUTSTANDING PERFORMANCE OF THE MACHINE AND ITS LONG LIFE. THE PAGES THAT FOLLOW CONTAIN THE INFORMATION THAT WILL HELP TO PLAN THE CARE AND THE SERVICING THAT THE SCRUBBER NEEDS.

WARNING!

DO NOT CARRY OUT ANY MAINTENANCE OPERATION NEITHER ON THE MACHINE NOR ON ITS COMPONENTS WITHOUT HAVING FIRST:

- STOPPED THE MACHINE
- ENGAGED THE PARKING BRAKE
- BLOCKED OFF THE WHEELS
- DISCONNECTED THE STARTING BATTERY CONNECTORS.

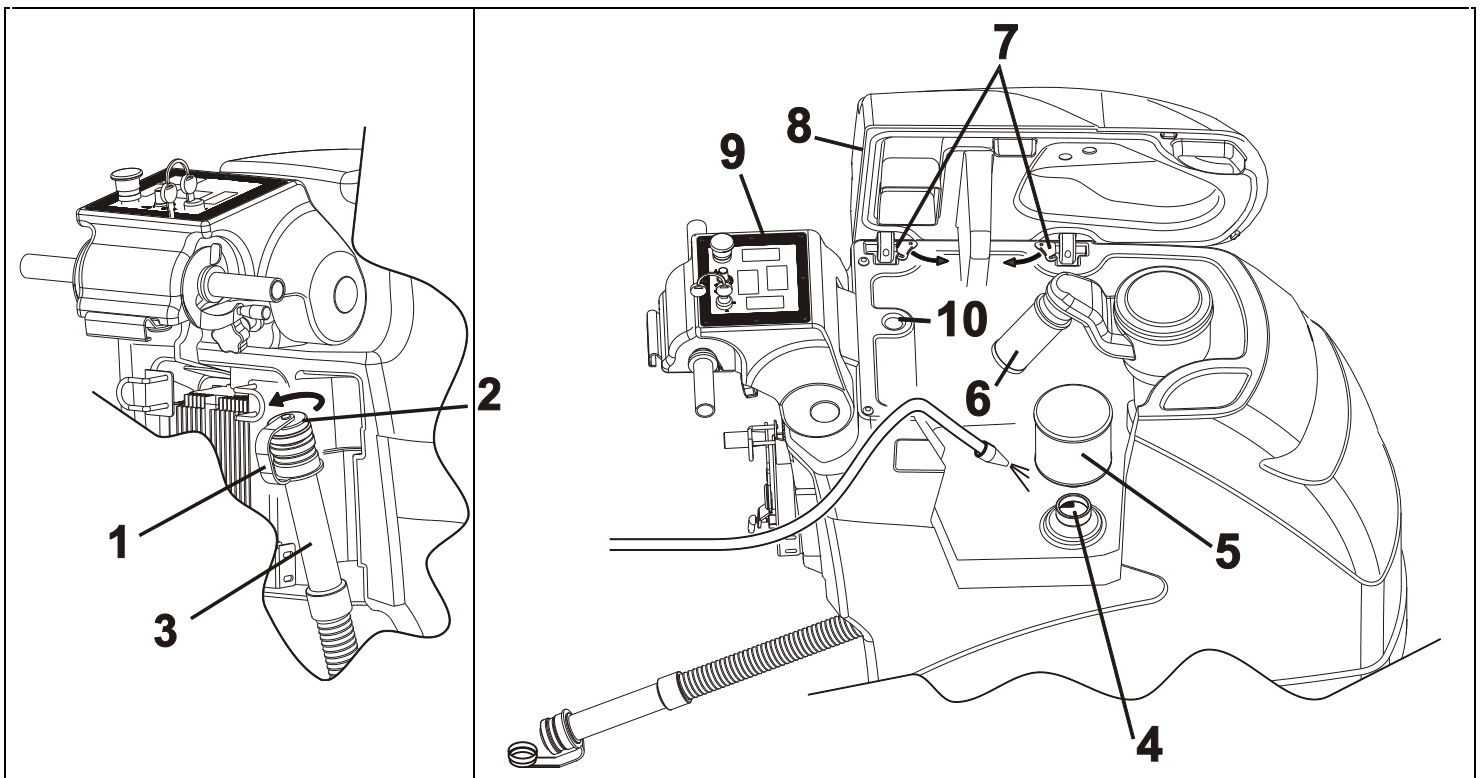
WARNING!

DO NOT TAMPER WITH ANY SAFETY-RELATED PART

THESE CAN BE REMOVED ONLY AS PART OF THE MAINTENANCE OF AN AUTHORISED SERVICE CENTRE.



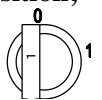
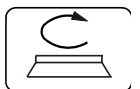
DRAINING AND CLEANING THE RECOVERY TANK



The recovery tank must be drained and cleaned after each washing operation.

In order to drain and wash the tank proceed as follows:

- Turn off the brush function and lift the brush plate;
- Lift the squeegee by pressing the special lever and go to the tank drainage area with the **suction fan in on-position**;
- Turn off the suction fan, turn the key to position 0 for the versions provided with a key and put on the brake (if available); for the BASE version try to stop the machine in a flat surface area;
- Remove the drain pipe from the dirty water tank (see position 1) and while keeping the pipe vertically (see position 2) open the lid by rotating it counterclockwise as indicated by the arrow. Part of the pipe is flexible (see position 3) and therefore it can be squeezed to limit the water flow;

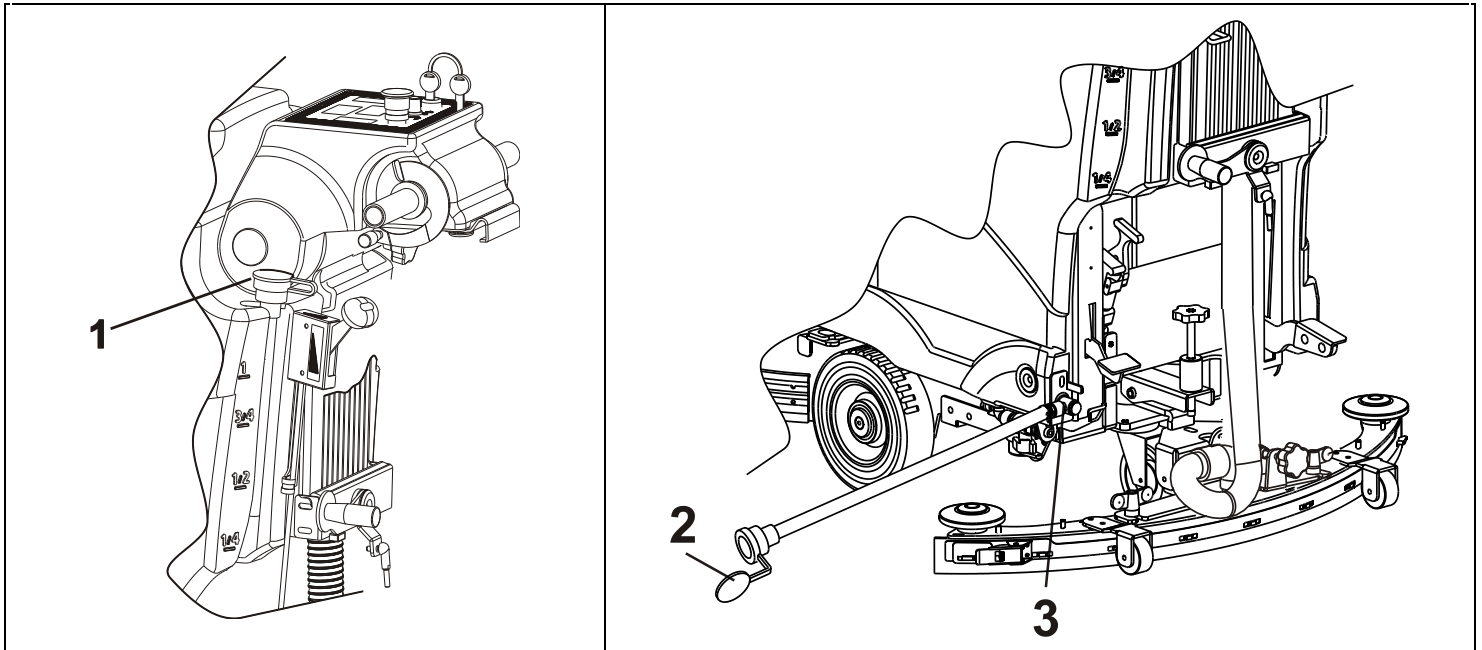


- After draining the tank, make sure to clean it thoroughly using water. To ease this operation, use two fingers to rotate the 2 plates in the direction indicated by the arrows (see position 7) and remove the cover (see position 8);
- Wash the float valve (see position 6) without removing it from the machine.
- The suction duct on the squeegee as well as the suction pipe shall be washed periodically.
Before proceeding with the above operation, fit the water pipe into the duct (see position 10) then let the water flow without removing the drain pipe. This will help prevent encrustation formation inside the duct, providing an optimal vacuum operation at all times.

Avoid splashing water onto the instrument panel (see position 9) while cleaning the tank.

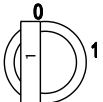
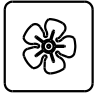
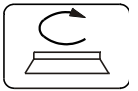


DRAINING AND CLEANING THE SOLUTION TANK



After completing the washing operation, in order to drain any leftover water from the solution tank, proceed as follows:

- Turn off the brush function and lift the brush plate;
- Lift the squeegee using the special lever, turn off the suction fan and go to the tank drainage area;
- Turn the key to position 0 for the versions provided with a key and put on the brake (if available); for the BASE version try to stop the machine in a flat surface area;
- Release the clean water level clear pipe (see position 1) from the knob located on the instrument panel;
- Open the cap (see position 2) and lay the pipe on the ground.
- Once the tank is drained, put the cap back into the pipe and place it into its special housing, hooking it back into the knob (see position 1);
- The filter located in the mouth of the tank used for filling clean water should be cleaned periodically;
- It is also recommended to flush the tank periodically using water once it is drained completely; this will help prevent incrustations due to the detergent solution.



CHECKING BRUSHES OR ABRASIVE DISCS

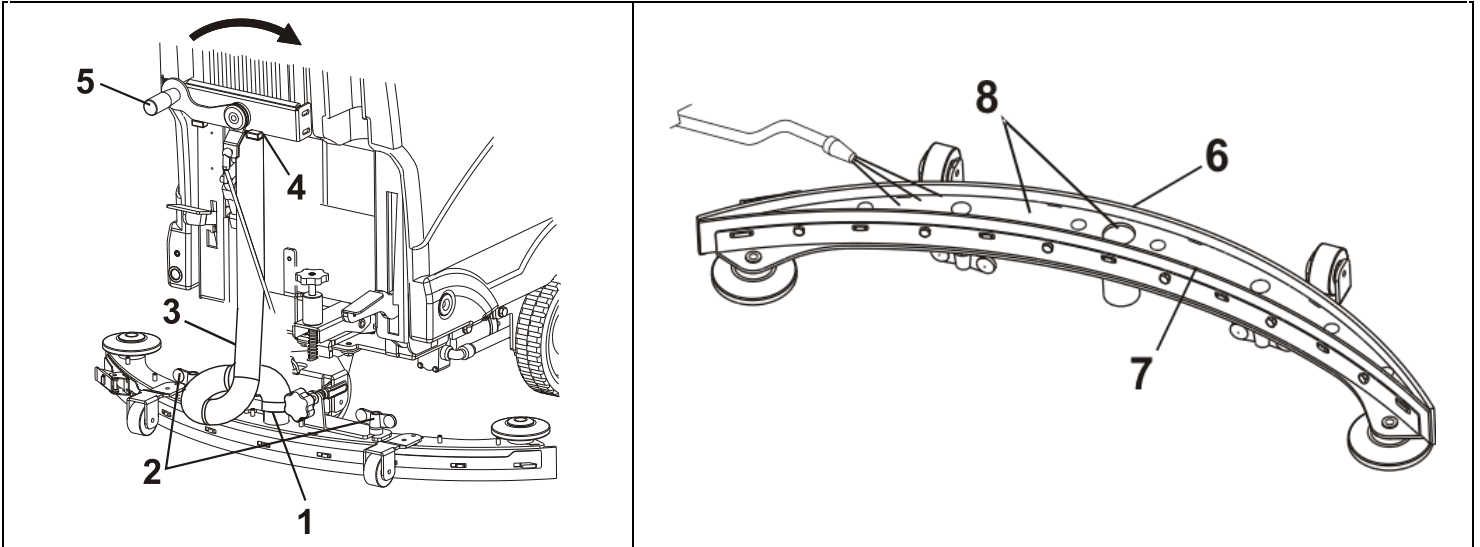
After using the machine, remove the brushes or discs (for the BASE version change the brushes or discs manually and for the TRAC and ECO versions use the special keys).

- Check the condition of the brushes and replaced them if they are worn out (the length of the lower bristle shall not be less than 10 millimetres)
- Check the condition of the abrasive discs and replace them if worn out


For the E61 and M610 versions, make sure to switch the right brush with the left brush periodically to even out the wear so they can last longer.



CLEANING THE SQUEEGEE



After completing the washing operation, clean the squeegee and make sure the blades are in good condition, then proceed as follows:

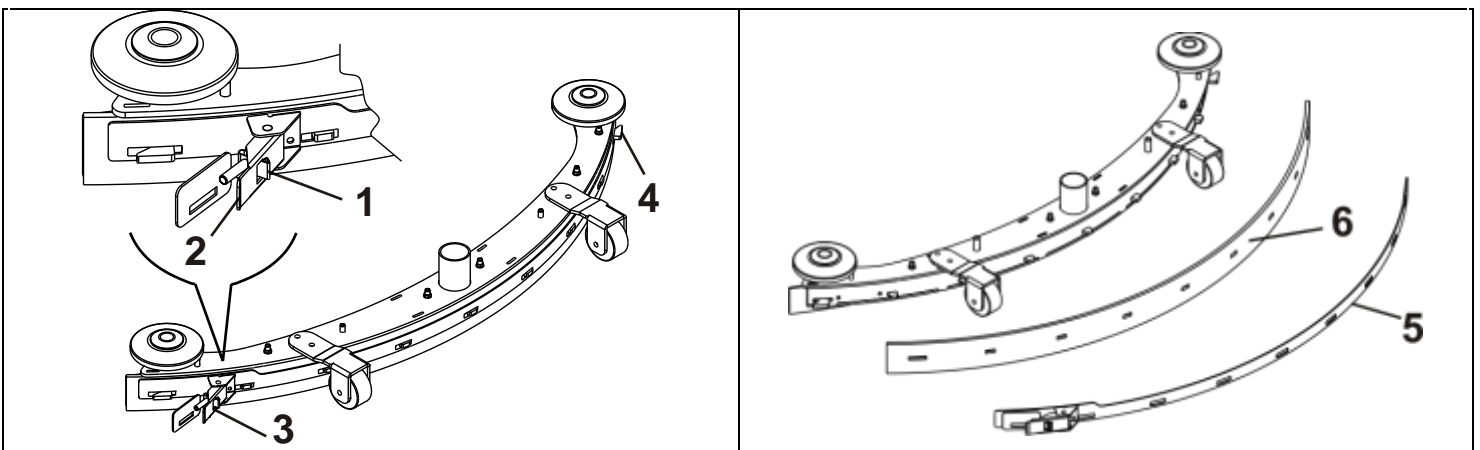
- Bring the machine into a stop position in a flat surface area;
- Put on the brake (if available);
- Turn the key to position 0; 
- Lift the squeegee using the lever (see position 5);
- Unscrew both screw knobs (see position 2) and remove the squeegee vacuum pipe (see position 3) from the sleeve (see position 1);
- Remove the squeegee, lay it on the ground facing up (as shown in the figure), wash it using water and for better vacuum flow, remove any pieces or incrustations from the lower part and from the mouth of the squeegee (see position 8);
- Use a piece of cloth to wipe off the rear drying blade (see position 6) and the front drying blade (see position 7);
- Make sure the blades are in good condition and rotate them if necessary in order to have a new edge in contact with the floor.



REPLACING SQUEEGEE BLADES

The squeegee is fitted with two drying blades, a rear and a front blade, as specified in the previous paragraph. Each blade has 4 edges that can be used and rotated 4 times before being replaced, unless one of the edges is torn. For better drying performance, make sure the edge of the rear blade is not worn out. If the blade is worn out, rotate it or replace it.

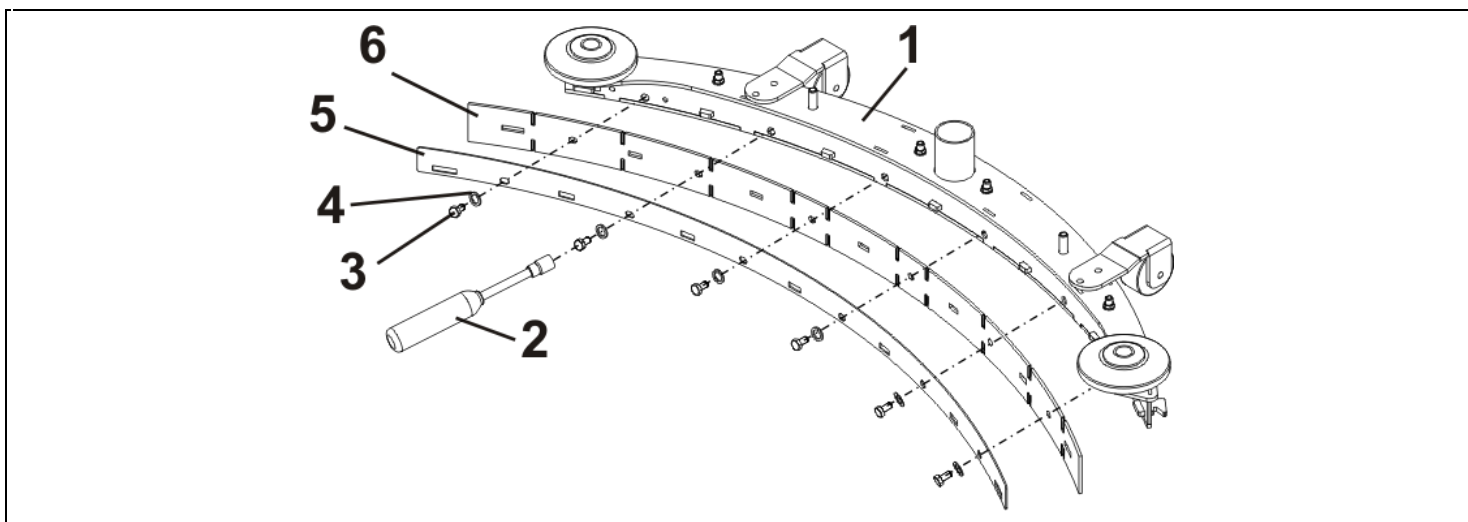
REPLACING THE REAR BLADE



Follow the instructions below to rotate or replace the **rear blade**:

- Remove the squeegee from the machine;
- Remove the blade locking plate (see position 5) by unlocking the retainer (see position 3). This retainer is fitted with a safety device that keeps it from opening involuntarily. To release the retainer, push the small lever (see position 1) towards the outer part of the squeegee and then pull the big lever (see position 2) towards the rear part of the squeegee;
- Follow the same procedure to remove the locking plate (see position 5) from the other end of the squeegee (see position 4);
- Remove the blade (see position 6);
- Rotate the blade and mount it back so that a new edge is on the drying side;
- Hook the locking plate (see position 4);
- Hook the retainer (see position 3) and lock it into place.

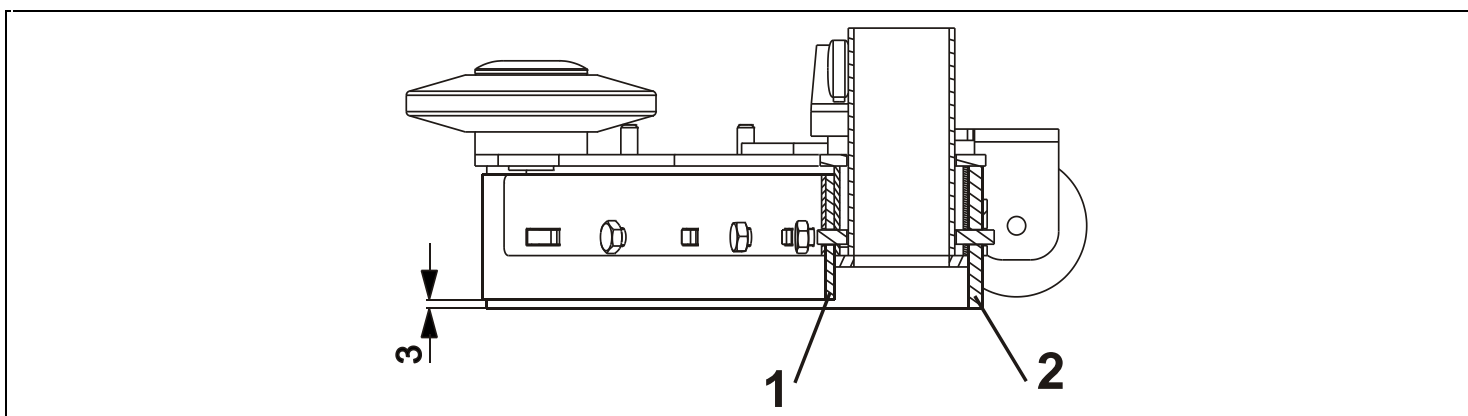
REPLACING THE FRONT BLADE



Follow the instructions below to replace the **front blade**:

- Remove the squeegee (see position 1) from the machine;
- Use a 10-mm tubular nut driver (see position 2) and remove the 6 screws (see position 3) and the respective washers (see position 4);
- Remove the blade locking plate (see position 5);
- Remove the blade (see position 6);
- Rotate the blade and mount it back so that a new edge is on the drying side of the blade;
- Put the blade locking plate (see position 5) back into place;
- Put the 6 screws back into place (see position 3), including the respective washers (see position 4) and make sure not to tighten the screws excessively causing the rubber blade to deform (swell).

CHECKING THE INSTALLATION OF THE SQUEEGEE BLADES

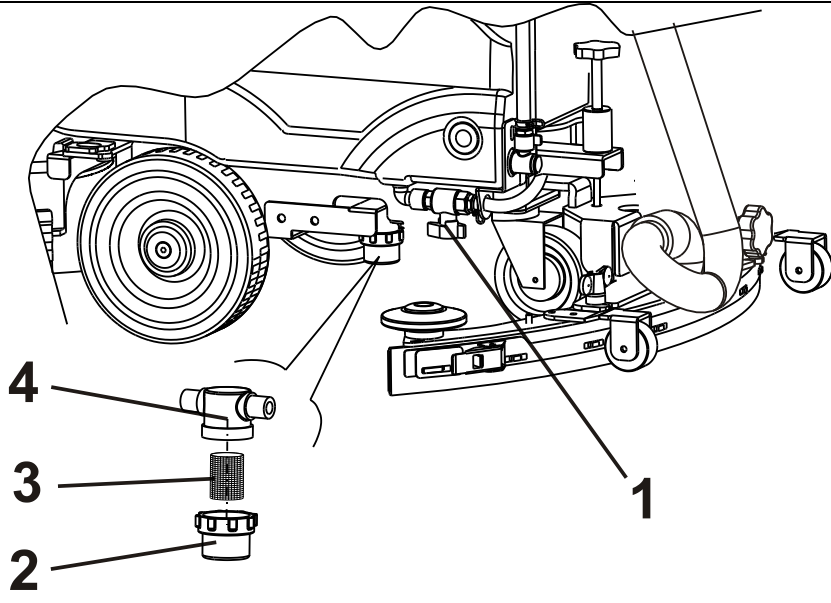


Once the squeegee blades are rotated or replaced, lay the squeegee onto a flat surface and check the following:

- Make sure the rear blade (see position 2) is fitted correctly and levelled throughout its entire length. If the blade is not fitted evenly, release the blade locking plate and re-position the blade so that it is levelled correctly against the floor.
- Make sure the front blade (see position 1) is fitted evenly and check for any deformations due to tightening the screws excessively. Also make sure the blade is raised 3 mm above the ground throughout its entire length.



CLEANING THE DETERGENT SOLUTION FILTER

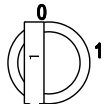


The machine is fitted with a filter on the duct that comes from the detergent solution tank. In theory, the solution located in this tank should not have any impurities as the buckets or containers used to fill the solution are supposed to be clean, in addition there is a filter in the mouth of the tank that filters the water.

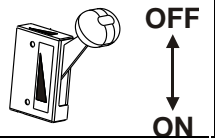
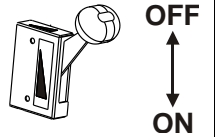
Follow the instructions below to clean the filter:

- Bring the machine into a stop position in a flat surface area and put on the brake;

- Turn off the machine and remove the key;



- Close the valve;
- Unscrew the clear cup manually (see position 2);
- Remove the protective screen (see position 3) and clean it with water together with the cup;
- Put the cup (see position 2) and the protective screen (see position 3) on the fixed part of the filter (see position 4); make sure the protective screen is fitted correctly into its housing inside the cup and into the support;
- For the V2 TRAC version, open the valve (see position 1) or the lever handle located near the instrument panel.

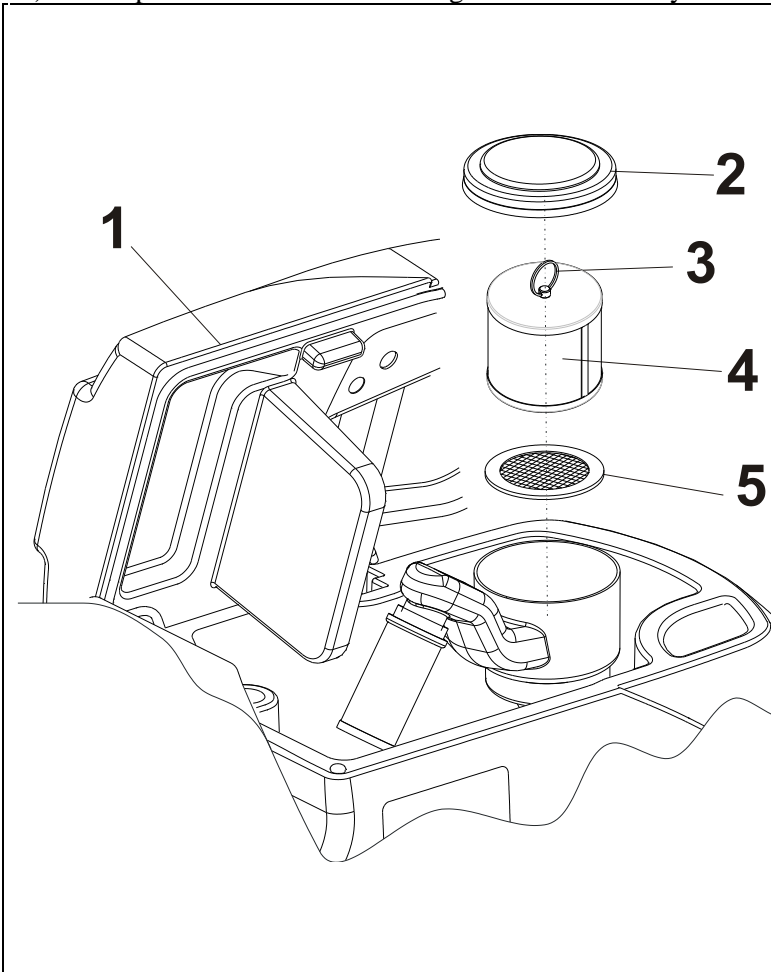




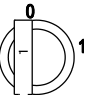
CLEANING THE SUCTION FILTER

The machines are fitted with a washable cartridge filter on the suction duct, which provides two functions:

- 1) To filter the air vacuumed by the squeegee, trapping dust before releasing it into the environment, without putting it back into the air;
- 2) To protect the suction motor against dust that may ruin moving mechanical parts, making them last longer.

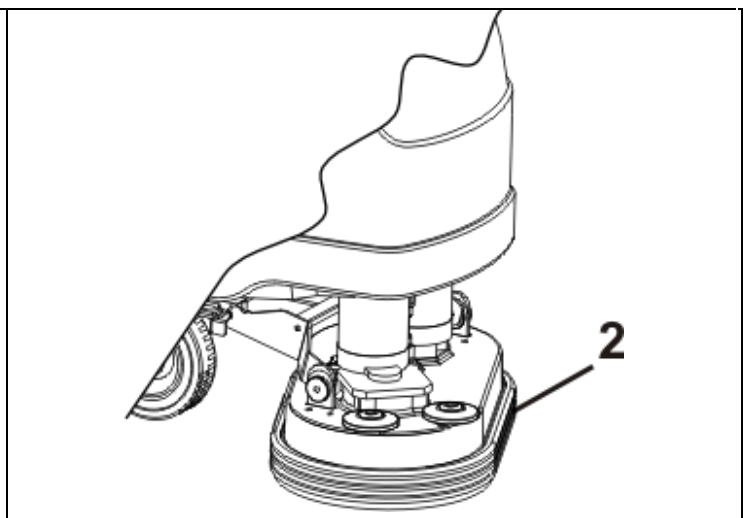
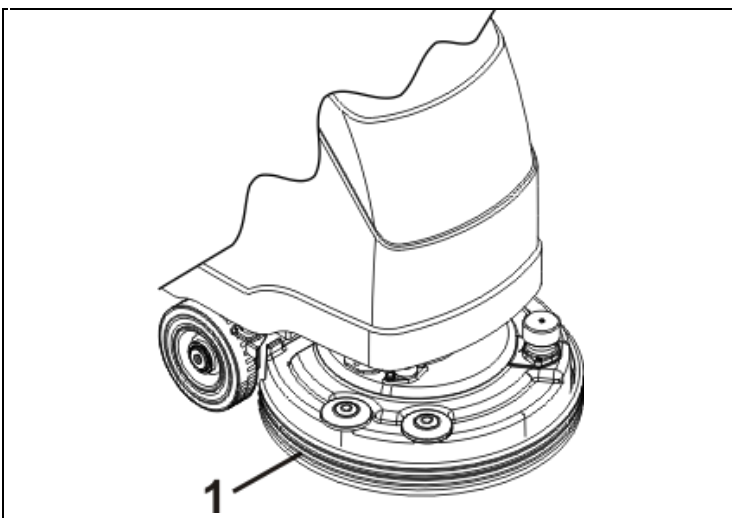


Follow the instructions below to clean the filter:

- Bring the machine into a stop position in a flat surface area and put on the brake (if available);
- Drain the dirty water tank and wash it
- Turn off the machine and remove the key (if available); 
- Open the cover (see position 1);
- Remove the lid from the filter support (see position 2);
- Position the ring (see position 3) located above the filter into a vertical position and pull it vigorously until releasing the filter from its housing (see position 4);
- Wash the filter with water and dry it using hot air, be careful not to damage it;
- There is a safety filter (see position 5) located beneath the suction filter, which normally does not need any maintenance. However, **if deemed necessary clean the filter without removing it from its housing;**
- Put the air filter (see position 4) back into place by pressing it down until it is fitted into its housing; make sure the filter is completely dry or use a spare filter;
- Position the ring (see position 3) back into horizontal position;
- **Put the lid back on (see position 2);**
- Close the tank cover (see position 1).



CHECKING THE BRUSH PLATE SPLASHGUARD

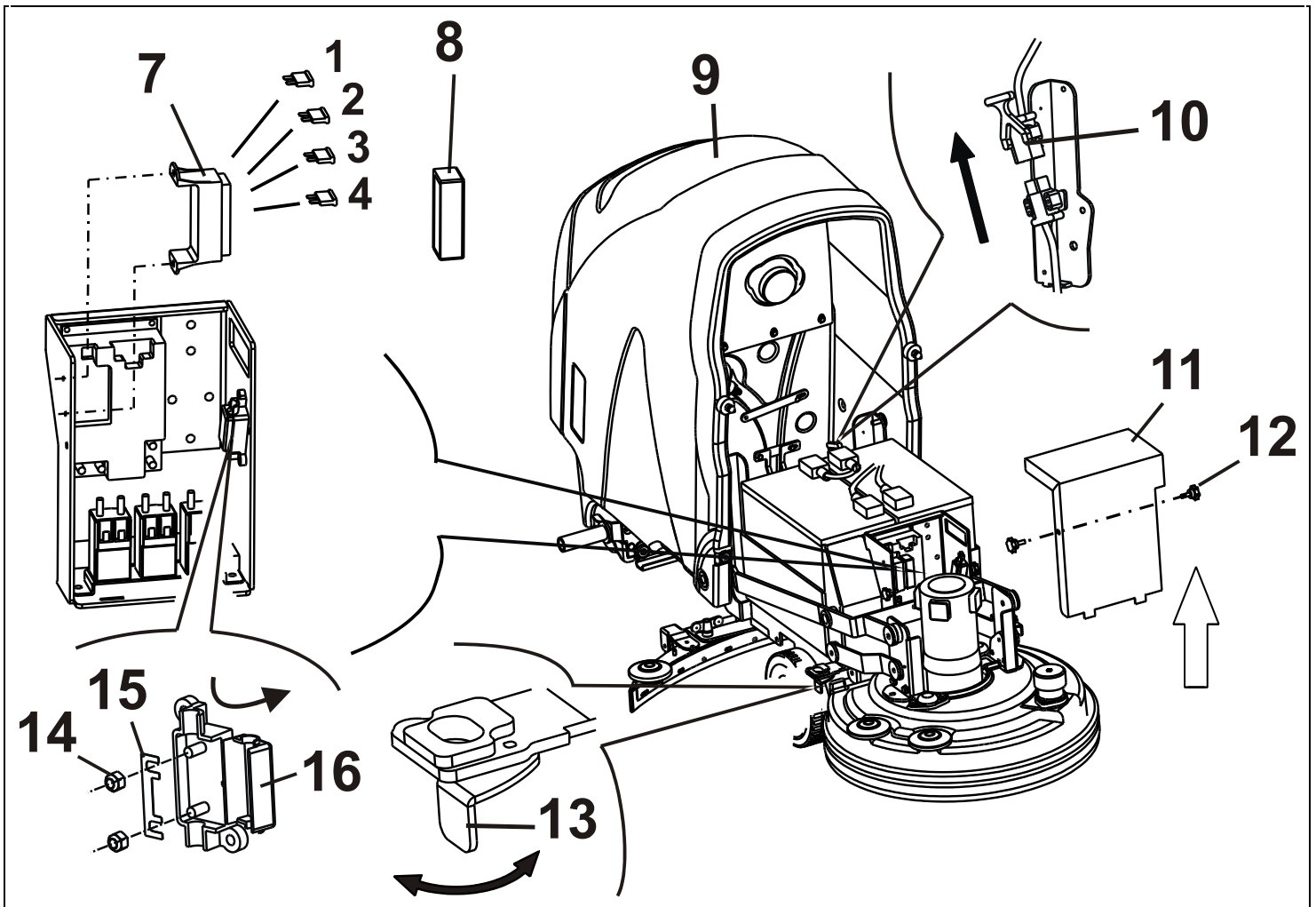


Check the splashguards periodically to make sure they are in good condition, do this for both the single brush version (see position 1) and the double brush version (see position 2). Replace the splashguards if damaged.



CHECKING OR REPLACING FUSES

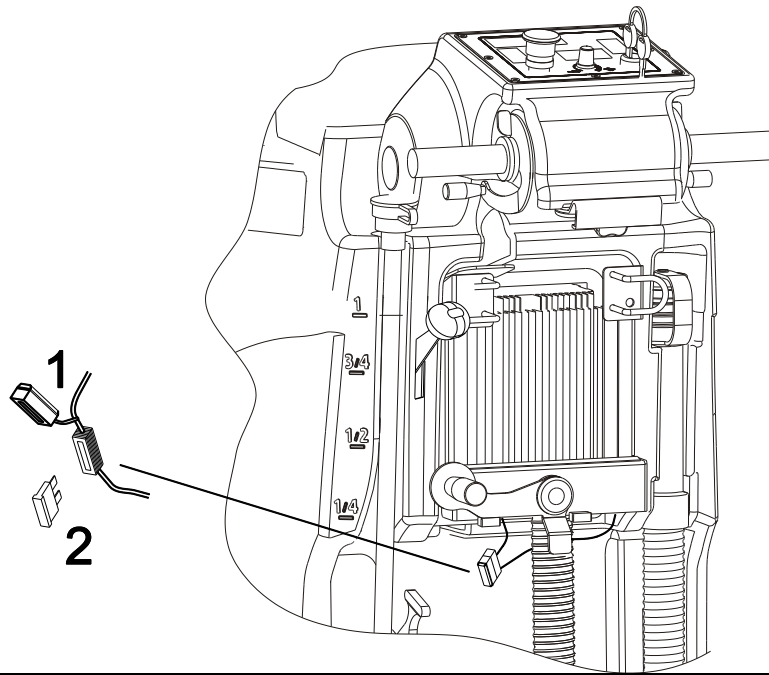
CHECKING OR REPLACING FUSES IN THE FRONT SWITCHBOARD



To check or replace the fuses on the switchboard proceed as follows:

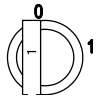
- Drain both tanks into the special drainage areas;
- Bring the machine into a stop position in a flat surface area and put on the brake;
- Unplug the battery plug (see position 10);
- Unfasten the tank (see position 9) by pushing it inwards using the small levers (see position 13) located at both ends of the machine;
- **REACH THE DRIVER'S POSITION AND LIFT THE TANK BY THE GRIPS (POS. 15) PAYING ATTENTION TO HANDLE IT WITH CARE WHILE PUTTING IT DOWN ON THE GROUND;**
- Unscrew the 2 screw knobs (see position 12), pull upwards and remove the switchboard cover (see position 11);
- Remove the lid (see position 8) from the fuse holder (see position 7);
- There are 5 fuses located in the fuse holder and they have the following functions and features:
 - POSITION 1:** 5A fuse for electrical equipment protection;
 - POSITION 2:** 30A fuse for drive system protection;
 - POSITION 3:** 5A fuse for electronic drive board protection;
 - POSITION 4:** 30A fuse for suction motor protection;
- Fuse holder pos. 16, 30A fuse for E51-M510, 40A fuse for E61-M610: **BRUSH MOTORS PROTECTION;**
- Once the fuses are checked or replaced, put everything back together and bring the machine back to its operating condition.

CHECKING OR REPLACING FUSES IN THE BATTERY CHARGER ALL VERSIONS



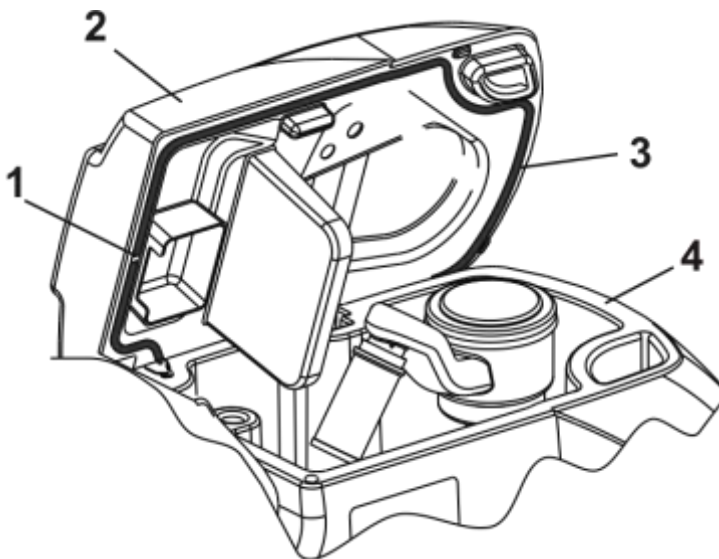
To check or replace the fuses beneath the instrument panel proceed as follows:

- Turn off the key and unplug the battery connector as specified in the previous paragraph;
- Open the fuseholder cover (pos.1)
- Replace the 15A fuse (pos.2) with a fuse of an equal amperage



CHECK THE SEAL ON THE COVER

**FOR VERSIONS: E51 V2 TRAC-E51 V3 ECO-E61 V1 BASE-E51 V2 TRAC-E51 V3 ECO- V2
TRAC-M510 V3 ECO-M610 V2 TRAC-M610 V3 ECO**



The recovery tank cover seal ensures that a proper vacuum is created inside the tank and this provides a better suction performance on the squeegee.

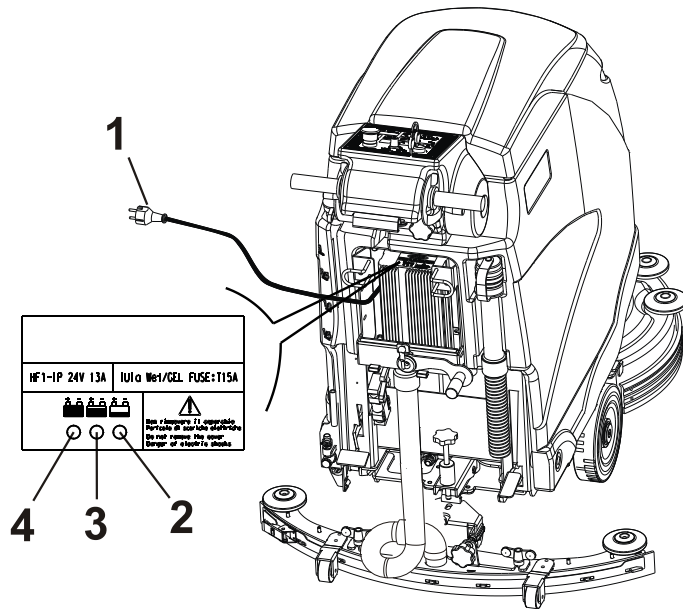
It is very important to keep the seal intact in order for the machine to work properly.

To clean and check the seal, proceed as follows:

- Open the cover (see position 2);
- Use a piece of cloth to wipe off the seal (see position 3) and make sure it is not broken or damaged;
- If the seal is damaged, remove it from the cover, mount a new seal and make sure to fit the seam of the seal into the rear position (see position 1);
- Clean the area of the tank where the seal leans (see position 4) when the cover is closed.



RECHARGING BATTERIES



To charge the batteries follow the instructions below:

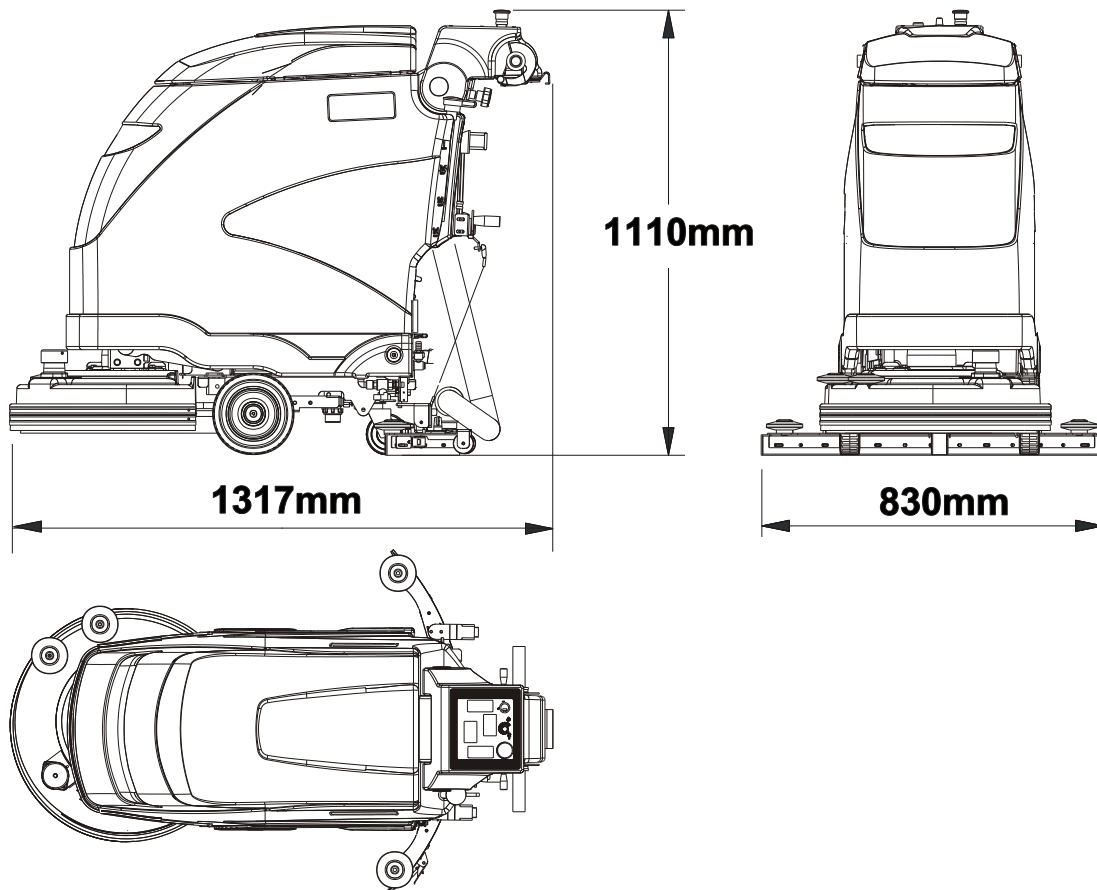
- Bring the machine into a stop position in a flat surface (available);
- **Before charging the battery make sure to scrupulously follow the battery charger instruction manual provided with the machine;**
- Uncoil the cable from the cable reel located on board the machine and connect the plug into a standard electrical power socket.

The battery charger can run with a voltage range of 100-240 VAC.

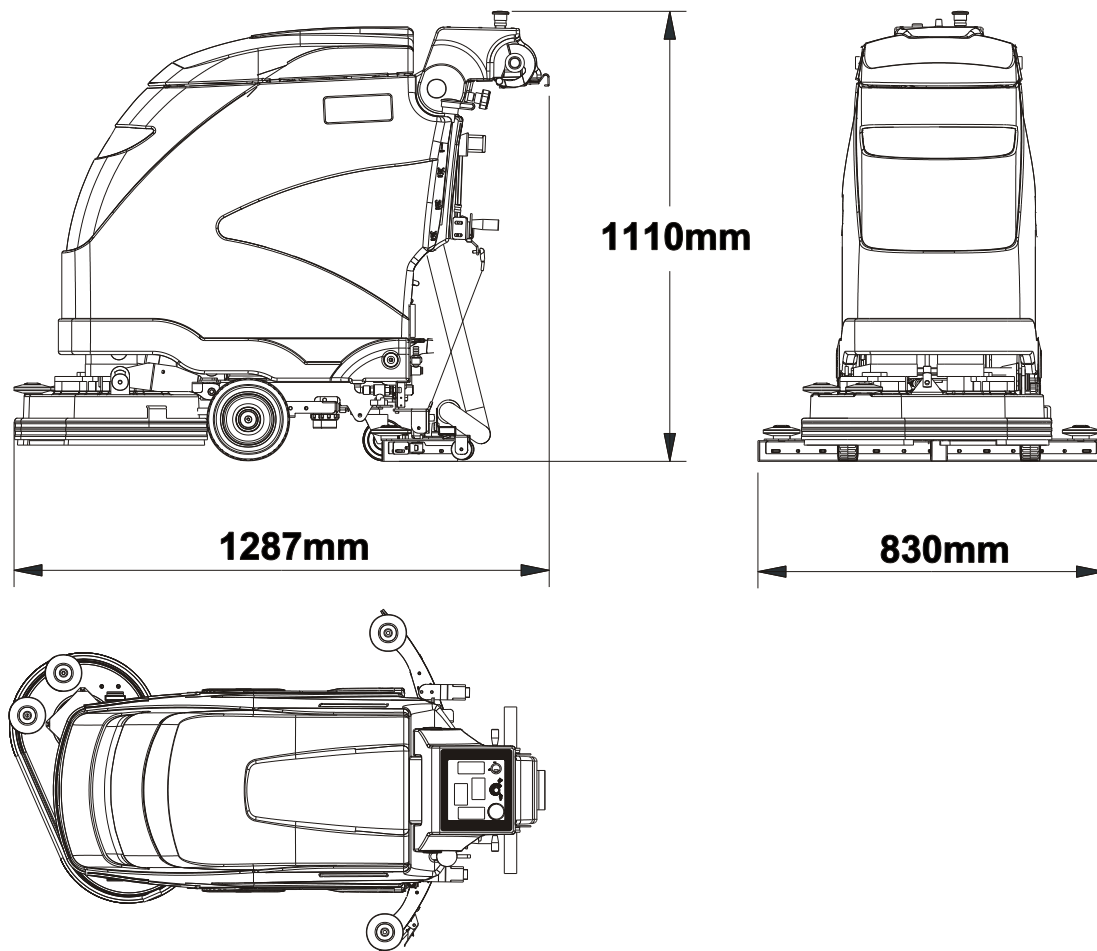
WARNING: WHEN PLUGGING THE BATTERY CHARGER INTO THE ELECTRICAL SOCKET, THE MACHINE FUNCTIONS ARE AUTOMATICALLY DISABLED

- There are 3 led lights located above the battery charger:
Position 2 “RED” light – position 3 “YELLOW” light – position 4 “GREEN” light
These lights indicate the charging status of the battery.
The GREEN light indicates that the charging cycle is completed and the plug can be disconnected from the electrical socket and rolled back into the cable reel.
- **Once the battery is charged make sure to check the electrolyte level and if necessary fill it up only using distilled water;**
- The battery must always be charged in ventilated areas;
- The gas released during the charging process can cause explosions if it comes into contact with flames or sparks;
- Battery acid should never come into contact with the eyes, skin or clothes, make sure to wear goggles, gloves and appropriate clothing;
- If it comes into contact with the eyes or skin, wash immediately with abundant water;
- Do not place metal objects on the batteries;
- Do not fill the batteries with sulphuric acid or other products.

DIMENSIONAL DRAWINGS VERSIONS: E51 – M510

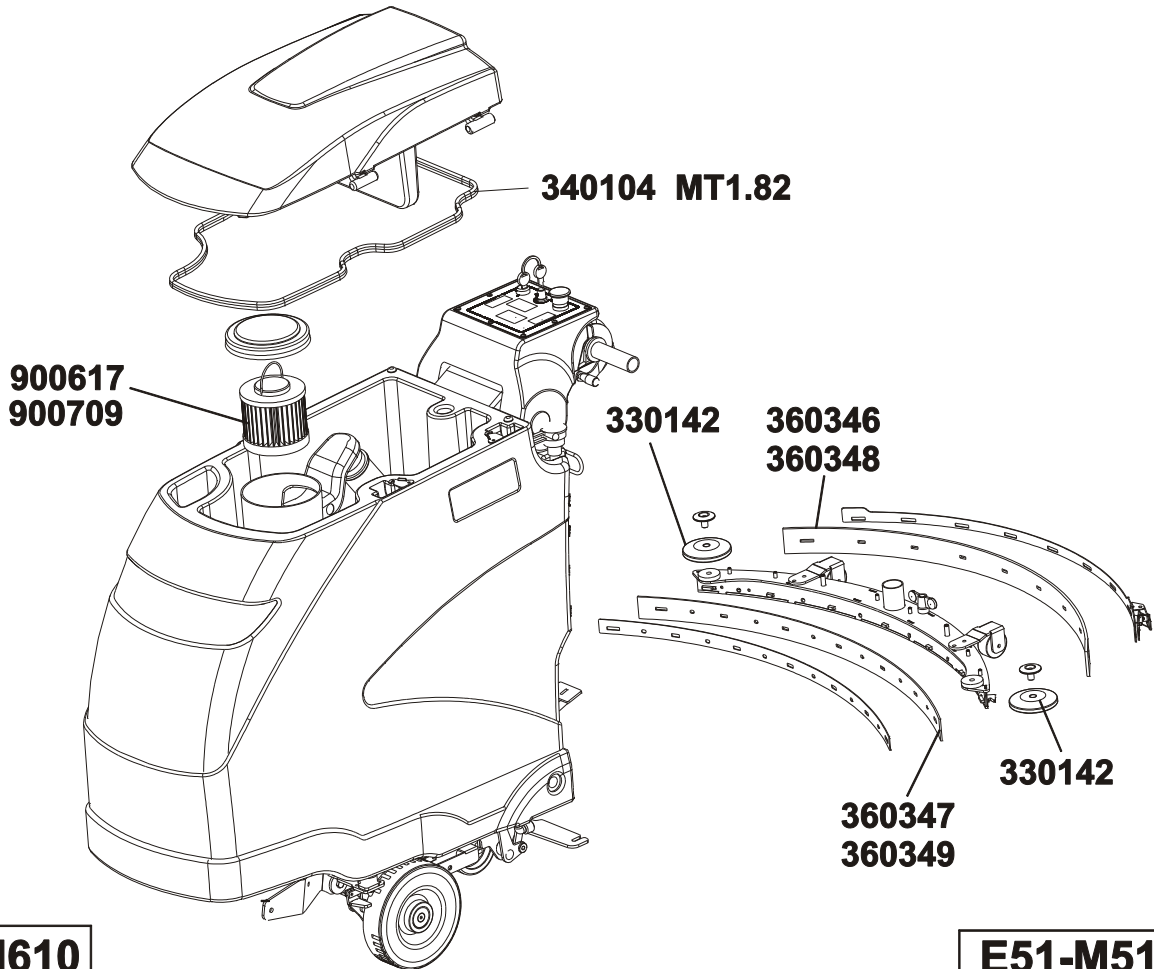


DIMENSIONAL DRAWINGS VERSIONS: E61 – M610

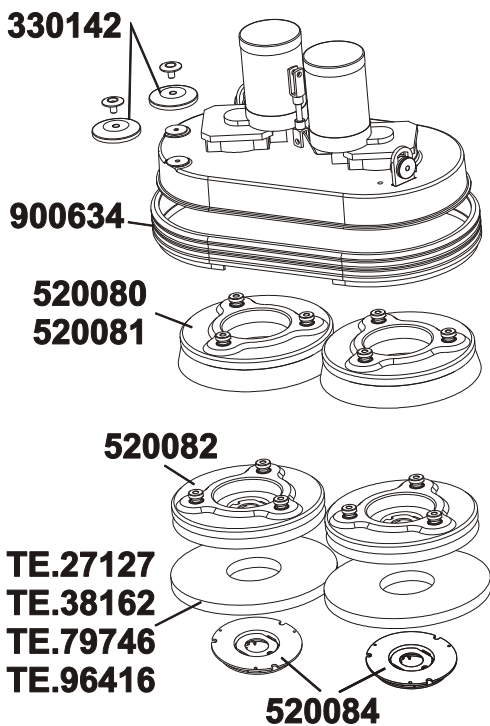


RECOMMENDED SPARE PARTS USED FOR SERVICING. SERVICING OPERATIONS CAN BE CARRIED OUT BY THE USER HIMSELF ON CONDITON IT HAS PREVIOUSLY BEEN INSTRUCTED BY EITHER THE MACHINE OWNER OR HIS EMPLOYER

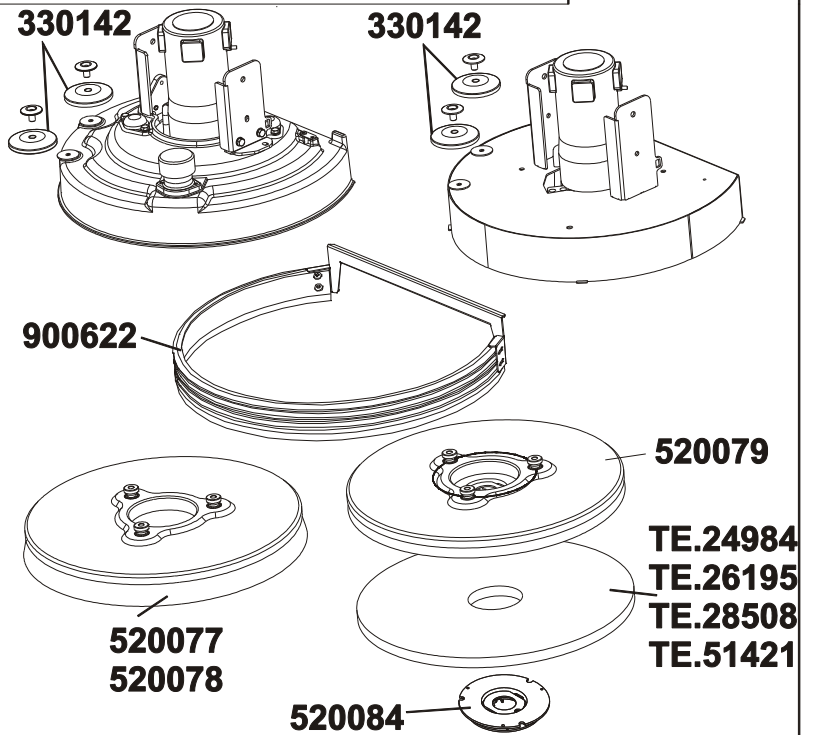
**E51-E61
M510-M610**



E61-M610



E51-M510



**RECOMMENDED SPARE PARTS USED FOR SERVICING. SERVICING OPERATIONS
CAN BE CARRIED OUT BY THE USER HIMSELF ON CONDITON IT HAS PREVIOUSLY
BEEN INSTRUCTED BY EITHER THE MACHINE OWNER OR HIS EMPLOYER**

- **COD. 330142: BUMPER DISC**
- **COD. 340104: LID GASKET MT. 1,82**
- **COD. 360346: SQUEEGEE REAR RUBBER IN LYNATEX (5mm)
(STANDARD FOR VERSIONS V2 - TRAC; V3 – ECO)**
- **COD. 360349: SQUEEGEE FRONT RUBBER IN LYNATEX (STANDARD)**
- **COD. 360348: SQUEEGEE REAR RUBBER POLYURETHANE (OIL- RESISTANT)**
- **COD. 360347: SQUEEGEE FRONT RUBBER IN POLYURETHANE (OIL-RESISTANT)**
- **COD. 360374: SQUEEGEE REAR RUBBER IN LYNATEX (3mm)
(STANDARD FOR VERSIONS V1 – BASE)**
- **COD. 520077: PPL BRUSH - 0,9 mm (1 FOR EACH MACHINE)**
- **COD. 520078: TYNEX BRUSH - 1,2 mm (1 FOR EACH MACHINE)**
- **COD. 520079: PAD WITH DISC LOCK (1 FOR EACH MACHINE)**
- **COD. 520080: PPL BRUSH - 0,6 mm (2 FOR EACH MACHINE)**
- **COD. 520081: TYNEX BRUSH - 1,2 mm (2 FOR EACH MACHINE)**
- **COD. 520082: PAD WITH DISC LOCK (2 FOR EACH MACHINE)**
- **COD. 520084: DISC LOCK**
- **COD. 900617: CARTRIDGE SUCTION FILTER - CLASS M (exUSGC)**
- **COD. 900622: SELF-LEVELLING SPLASHGUARD**
- **COD. 900634: SELF-LEVELLING SPLASHGUARD**
- **COD. TE.24984: RED ABRASIVE DISC - 20” 510mm**
- **COD. TE.26195: WHITE ABRASIVE DISC - 20” 510mm**
- **COD. TE.27127: RED ABRASIVE DISC - 12” 305mm**
- **COD. TE.28508: BLUE ABRASIVE DISC - 20” 510mm**
- **COD. TE.38162: BLACK ABRASIVE DISC - 12” 305mm**
- **COD. TE.51421: BLACK ABRASIVE DISC - 20” 510mm**
- **COD. TE.79746: WHITE ABRASIVE DISC - 12” 305mm**
- **COD. TE.96416: BLUE ABRASIVE DISC - 12” 305mm**

TROUBLE-SHOOTING CHART

WARNING! ANY OTHER TYPE OF SERVICE OPERATION OR TEST, EXCEPTION MADE FOR THOSE SHOWN IN THE PRESENT MANUAL, MUST BE CARRIED OUT BY AUTHORISED SERVICE CENTRES ONLY

BEFORE ANY INTERVENTIONS CHECK THE CORRECT VOLTAGE OF THE BATTERY: 24V

PROBLEM	CAUSE	SOLUTION
The battery gets discharged	1. Either exhaust or broken elements	Replace it
The board instruments don't switch on when inserting the key	2. Flat or worn out battery 3. Fuse burn out 4. Emergency switch pressed 5. Battery mobile connector disconnected 6. Key operated switch broken	Recharge it Replace it Unblock it Connect it Replace it
The brush motor does not rotate	7. Flat or worn out battery 8. Fuse if broken 9. Switch is broken 10. Electric remote switch is broken 11. Carbons worn out 12. Faulty motor	Recharge it Replace it Replace it Replace it Replace them Replace it
The drive does not work	13. Brake is engaged 14. Flat or worn out battery 15. Key disconnected 16. 30A Fuse (POS. 2 OF THE FUSE-HOLDER). Traction fuse is faulty 17. 5A protection traction fuse (PSO. 3 OF THE FUSE-HOLDER) is broken 18. Motor gear is faulty 19. Motor carbons are worn out 20. Electronic control board is broken 21. Microswitch in the control panel is broken 22. Main potentiometer is faulty 23. Potentiometer on control panel (V-MAX) is faulty	Disengage it Recharge it Insert it Replace it Replace it Replace them Replace it Replace it Replace it Replace it Replace it
The red warning light on the control board card indicating -when switched off- the correct functioning of the drive electric control is blinking	24. Diagnosis for led flashings	
	- SWITCHED OFF: NO ERRORS, NORMAL WORKING CONDITIONS	
	- 1 FLASHING: forward speed microswitch engaged when starting up the machine	- Pull the drive control switch in O position - Check that the switch is correctly placed into O position
	2 FLASHINGS: reverse speed microswitch engaged when starting up the machine	- Check the microswitch on the drive control
	- 3 FLASHINGS: the potentiometer signal is off	Check the cables of the potentiometer
	- 4 FLASHINGS: the potentiometer is not working	- Pull the drive control switch in O position. - Check that the switch is correctly placed into O position - Check the microswitch on the drive control
	- 5 FLASHINGS: thermal protection	Wait for some minutes before starting and checking the absorptions of the motor
	- 6 FLASHINGS: -The power fuse is faulty - Faulty power component on the starting card	- Replace the power fuse - Replace the traction board
- 7 FLASHINGS: overcurrent	Cables from the battery to the traction board or from traction board to the engine are loose, oxidized or not properly connected. Check the cables.	



PROBLEM	CAUSE	SOLUTION
	- 8 FLASHINGS: either the power fuse or the power relay is faulty	Check that the 30A power fuse (pos. 4 on the fuse-holder) from + battery till the traction board is OK and that the battery and motor wires are properly connected If necessary, replace the traction board.
	- 9 FLASHINGS: under tension	Battery tension lower than 19V.
	- 10 FLASHINGS: overcurrent	Battery tension higher than 45V.
	- 11 FLASHINGS: amperometric protection of the traction motor: the motor has worked for more than 10 seconds above the maximum nominal current value (15 A)	Verify that the differential spins freely. Check with an ammeter the motor consumption. For the correct consumption values refer to the technical chart.
	- 13 FLASHINGS: temporary power supply interruption	Attention! If 13 flashes appear, the operator should first ensure that at least 3-4 seconds have passed between turning off the machine (key in position 0) and turning on the machine (key in position 1). This is the time required for the traction electronic card to activate. Otherwise 13 flashes are generated. If the problem persists, it could be a bad electrical contact issue: check that in the ignition switch, fuses and the 16 pole connector of the chopper there isn't any intermittent contact. If the problem persists again replace the chopper
	- 14 FLASHINGS: failed data reading	Remove the key and put the service switch in O position If necessary, replace the traction board.
The suction motor does not work	25. Flat batteries 26. 30A suction motor fuse worn out 27. Vacuum motor disconnected 28. Vacuum motor is faulty 29. Vacuum motor carbons are worn out 30. Control board is broken	Recharge them Replace the fuse Check the motor wiring Replace it Replace them Replace it
Not enough suction on the squeegee	31. Recovery tank is full 32. Float on the recovery tank 33. Lid on the exhaust pipe is open 34. Vacuum pipe disconnected 35. Vacuum pipe is clogged 36. Faulty vacuum pipe 37. Dirty squeegee 38. The squeegee is not adjusted properly 39. Material tangled with the squeegee blades 40. Squeegee blades either broken or worn out 41. The tank is either open or not properly closed 42. Damaged lid gasket 43. Faulty suction motor 44. Flat batteries	Empty it Switch off the vac. motor and unblock the float ball Tight the lid Verify that it is mounted properly Clean both the pipe and the vacuum hose on the tank Replace the pipe Clean the squeegee Adjust inclination and pressure Clean the blades Reverse the blades or replace them Close it Replace the gasket Replace/check the motor Recharge them
Not enough water flow on the brush	45. Solution tank is empty 46. Tap is closed 47. Faulty electrovalve of the detergent solution. 48. The cable from the handwheel to the tap is broken. 49. Clogged detergent solution filter 50. The solution pipe from the tank to the brush is clogged.	Fill the tank Open the tap Replace it Replace it Clean it Clean the connection

TECHNICAL SPECIFICATIONS SCRUBBER-DRYERS

TECHNICAL SPECIFICATIONS	MODEL	
	E51M M510M	E61M M610M
SCRUBBING WIDTH WITH BRUSH	mm 530	mm 610
BRUSH PRESSURE	Kg 25	Kg 25
CAPACITY OF SOLUTION TANK – RECOVERY TANK	Lt 40 - Lt 56	Lt 40 - Lt 56
PRODUCTIVITY	Sq/m/h 2120	Sq/m/h 2440
WEIGHT (with on-board battery charter, without batteries-without brush)	Kg 131	Kg 128.5
SIZE (without squeegee)	mm 1317x555 H=1110	mm 1301x630 H=1110
SQUEEGEE WIDTH	mm 830	mm 830
BRUSH / PAD DIAMETER, RPM	mm 530/510 - rpm 160	2 X mm310/ 305 - rpm 240
REDUCTION MOTOR FOR BRUSH/ES	V/Watt 24/520 X 1	V/Watt 24/400 X 2
VACUUM MOTOR	V/Watt 24/480	V/Watt 24/480
NEGATIVE PRESSURE, VACUUM MOTOR	mm / H2O 1250	mm / H2O 1250
DRIVE	ELECTRONIC	ELECTRONIC
DRIVE MOTOR WITH DIFFERENTIAL	V/Watt 24/180	V/Watt 24/180
POLYURETHANE FRONT WHEEL WITH BRAKE	Ø 200 X 50	Ø 200 X 50
MAX FWD/REV SPEED	Km/h 4 - Km/h 1,5	Km/h 4 - Km/h 1,5
MAX GRADIENTS (empty tank)	20%	20%
RECOMMENDED BATTERIES: 2 pcs 12V (158A IN C20) / (110A IN C5)	mm 345X170X285h Kg 36 each	mm 345X170X285h Kg 36 each
RECOMMENDED BATTERIES: 2 GEL TYPE 12V (105A IN C5)	mm 345X170X285h Kg 40 each	mm 345X170X285h Kg 40 each
NOISE LEVEL IN OBSERVANCE OF ISO 3744 – ACOUSTIC PRESSURE MEDIUM LEVEL Lpm=	68 dB	68 dB
VIBRATION: The vibrations to which the operator is subjected is below the max allowed by the CE DIRECTORY for industrial machiner.		

SERVICING

For further informations regarding the servicing, consult the pages of the manual related to maintenance

1^o SERVICING AND MAINTENANCE FOR SCHEDULED SERVICING OF E51 M - E61 M - M510 M - M610 M

AFTER 100 HOURS

DATE

DAY

MONTH

YEAR

WORKING HOURS

- Check that the batteries clamps are not loosen or oxidized
- Check the cover gasket
- Check the vacuum motor filter
- Check the brake
- Check, and replace if necessary, the fuses
- Check the brushes and the components of the brush plate
- Check, and if necessary rotate or replace, the squeegee blades
- Check the adjusting/closing detergent solution tap
- Check the drainpipes of the solution and recovery tanks
- Check that the vacuum pipe on the squeegee is not broken or clogged
- Check the squeegee lifting lever and its cable
- Test the machine in all its operating functions

THE SCHEDULED SERVICING WAS CARRIED OUT BY:

NAME: _____

SURNAME: _____

SIGNATURE: _____

DISTRIBUTOR'S STAMP

NOTE:

2°

**SERVICING AND MAINTENANCE FOR SCHEDULED
SERVICING OF E51 M - E61 M - M510 M - M610 M**

AFTER 200 HOURS

DATE

DAY	MONTH	YEAR	WORKING HOURS
-----	-------	------	---------------

- Check that the batteries clamps are not loosen or oxidized
- Check the cover gasket
- Check the vacuum motor filter
- Check the brake
- Check, and replace if necessary, the fuses
- Check the brushes and the components of the brush plate
- Check, and if necessary rotate and replace, the squeegee blades
- Check the adjusting/closing detergent solution tap
- Check the drainpipes of the solution and recovery tanks
- Check that the vacuum pipe of the squeegee is not broken or clogged
- Check the squeegee lifting lever and its cable
- Test the machine in all its operating functions

THE SCHEDULED SERVICING WAS CARRIED OUT BY:

DISTRIBUTOR'S STAMP

NAME: _____

SURNAME: _____

SIGNATURE: _____

NOTE:

Empty box for notes.

3°

**SERVICING AND MAINTENANCE FOR SCHEDULED
SERVICING OF E51 M - E61 M - M510 M - M610 M**

AFTER 300 HOURS

DATE

DAY	MONTH	YEAR	WORKING HOURS
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- Check that the batteries clamps are not loosen or oxidized
- Check the cover gasket
- Check the vacuum motor filter
- Check the brake
- Check, and replace if necessary, the fuses
- Check the brushes and the components of the brush plate
- Check, and if necessary rotate or replace, the squeegee blades
- Check the adjusting/closing detergent solution tap
- Check the drainpipes of the solution and recovery tanks
- Check that the vacuum pipe of the squeegee is not blocked or clogged
- Check the squeegee lifting lever and its cable
- Check the machine in all its operating functions

THE SCHEDULED SERVICING WAS CARRIED OUT BY:

DISTRIBUTOR'S STAMP

NAME: _____

SURNAME: _____

SIGNATURE: _____

NOTE:

4^o

**SERVICING AND MAINTENANCE FOR SCHEDULED
SERVICING OF E51 M- E61 M - M510 M - M610 M**

AFTER 400 HOURS

DATE

DAY	MONTH	YEAR	WORKING HOURS
-----	-------	------	---------------

- Check that the batteries clamps are not loosen or oxidized
- Check the cover gasket
- Check the vacuum motor filter
- Check the brake
- Check, and replace if necessary, the fuses
- Check the brushes and the components of the brush plate
- Check, and if necessary rotate or replace, the squeegee blades
- Check the adjusting/closing detergent solution tap
- Check the drainpipes of the solution and recovery tanks
- Check that the vacuum pipe of the squeegee is not broken or clogged
- Check the squeegee lifting lever and its cable
- Test the machine in all its operating functions

THE SCHEDULED SERVICING WAS CARRIED OUT BY:

DISTRIBUTOR'S STAMP

NAME: _____

SURNAME: _____

SIGNATURE: _____

NOTE:

5°

**SERVICING AND MAINTENANCE FOR SCHEDULED
SERVICING OF E51 M - E61 M - M510 M - M610 M**

AFTER 500 HOURS

DATE	DAY	MONTH	YEAR	WORKING HOURS
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MOTOR CARBON BRUSHES CHECKS

CHECK AND REMOVE THE MOTOR CARBON BRUSHES ONE AT A TIME SO AS NOT TO INVERT THEM. THE MOTOR CARBON BRUSHES SETTLE AND WEAR DIFFERENTLY THE ONE FROM THE OTHER, CONSEQUENTLY IF THESE ARE INSPECTED AND PUT BACK ON AGAIN BECAUSE THEY ARE NOT FULLY WORN, THEY MUST BE REFITTED IN THE SAME POSITION.

VACUUM MOTOR

Check the carbon brushes (2 in all) and replace them if they're shorter than 6 mm.
The length of a new carbon brush is 25 mm.

BRUSH MOTOR

Check the carbon brushes (4 for each motor) and replace them if they are shorter than 4 mm.
The length of a new carbon brush is 19 mm.

TRACTION MOTOR

Check the carbon brushes (4 in all) and replace them if they're shorter than 7 mm.
The length of a new carbon brush is 20 mm.

MACHINE

- Check that the batteries clamps are not loosen or oxidizes
- Check the cover gasket
- Check the vacuum motor filter
- Check the brake
- Check, and replace if necessary, the fuses
- Check the brushes and the components of the brush plate
- Check, and if necessary rotate or replace, the squeegee blades
- Check the adjusting/closing detergent solution tap
- Check the drainpipes of the solution and recovery tanks
- Check that the vacuum pipe of the squeegee is not blocked or clogged
- Check the wheel bearings
- Check the squeegee lifting lever and its cable
- Test the machine in all its operating functions

THE SCHEDULED SERVICING WAS CARRIED OUT BY:

DISTRIBUTOR'S STAMP

NAME: _____

SURNAME: _____

SIGNATURE: _____

NOTE:

SERVICING AND MAINTENANCE FOR SCHEDULED SERVICING OF E51 M - E61 M - M510 M - M610 M

AFTER 600 HOURS AS 100 HOURS	DATE	DAY	MONTH	YEAR	WORKING HOURS
THE SCHEDULED SERVICING WAS CARRIED OUT BY: NAME: _____ SURNAME: _____ FIRMA: _____			DISTRIBUTOR'S STAMP		

AFTER 700 HOURS AS 200 HOURS	DATE	DAY	MONTH	YEAR	WORKING HOURS
THE SCHEDULED SERVICING WAS CARRIED OUT BY: NAME: _____ SURNAME: _____ SIGNATURE: _____			DISTRIBUTOR'S STAMP		

AFTER 800 HOURS AS 300 HOURS	DATE	DAY	MONTH	YEAR	WORKING HOURS
THE SCHEDULED SERVICING WAS CARRIED OUT BY: NAME: _____ SURNAME: _____ SIGNATURE: _____			DISTRIBUTOR'S		

AFTER 900 HOURS AS 400 HOURS	DATE	DAY	MONTH	YEAR	WORKING HOURS
THE SCHEDULED SERVICING WAS CARRIED OUT BY: NAME: _____ SURNAME: _____ SIGNATURE: _____			DISTRIBUTOR'S STAMP		

AFTER 1000 HOURS AS 500 HOURS	DATE	DAY	MONTH	YEAR	WORKING HOURS
THE SCHEDULED SERVICING WAS CARRIED OUT BY: NAME: _____ SURNAME: _____ SIGNATURE: _____			DISTRIBUTOR'S STAMP		

NOTE

PRODUCT WARRANTY

Eureka S.p.A. warrants that our machine will be free from defects in material and workmanship for a period of 12 months from date of installation. Written notice of any claimed defect must be given to Eureka S.p.A. or its Authorized Sales/Service Representative within the warranty period and within thirty (30) days after such defect is discovered. Liability under this warranty is limited to either replacing or repairing, at Eureka or its Authorized Sales/Service Representative election, any part or parts deemed defective after examination.

This warranty does not extend to labour charges, handling charges or transport charges.

This warranty does not extend to the machine, or its parts, that have been subject to misuse, accident or improper handling, installation, maintenance or application, nor does it extend to the machine and/or parts which have been repaired or altered outside Eureka's plant or the facility of Eureka's Authorized Sales/Service Representative.

This warranty does not apply to routine wearable parts such as brushes, splashguards, flaps, filters, seals, plugs, hoses, fuses or similar items. Moreover, this warranty does not extend to the machine or any of its parts already repaired or replaced under this warranty.

Only replacement parts supplied by Eureka or Eureka's Authorized Sales/Service Representative are warranted for 30 days after installation.

The warranty for engines shall be limited to the warranty extended by the engine's manufacturer.

IMPORTANT!

Warranty claims will be evaluated only if the Installation Form will be sent by fax or by mail, filled in all its parts, to Eureka's headquarter within thirty (30) days after the machine's installation.

EUREKA S.p.A.

Viale dell'Artigianato 30/32, CITTADELLA (PD) 35013 - ITALY

Tel. ++39 - 049- 9481800

Fax. ++39 -049 – 9481899

INTERNET: www.eurekasweepers.com E-MAIL: info@eurekasweepers.com

INSTALLATION FORM NECESSARY TO ACTIVATE WARRANTY

Warranty claims will be evaluated only if the following Installation Form will be sent by fax or by mail, filled in all its parts, to Eureka's headquarter within thirty (30) days after the machine's installation. PLEASE RETAIN THE ORIGINAL COPY WITHIN THE MANUAL.

COMPANY & NAME OF THE SELLER	STAMP & SIGNATURE OF THE SELLER

USES' INFORMATION	
TYPE OF FLOOR	
CLEANING AREA (m²)	

MACHINE INFORMATION	
MODEL OF THE MACHINE	
FRAME'S NUMBER	
S/N	INSTALLATION DATE:

GENERAL INFORMATION I			
1) HAS THE LEAD TIME BEEN RESPECTED?		4) HAVE YOU READ THE OPERATION MANUAL PRIOR TO USE THE MACHINE?	
2) HAVE YOU BEEN SHOWN HOW TO USE THE MACHINE?		5) HAVE YOU BEEN OFFERED A PREVENTIVE "MAINTENANCE CONTRACT"?	
3) HAVE YOU CHECKED THE PERFECT FUNCTIONING OF THE MACHINE PRIOR TO USE IT??		6) HAVE YOU ACCEPTED IT?	

USER'S INFORMATION			
COMPANY NAME			
ADDRESS			N°
CITY			
PROVINCE			
COUNTRY			
PHONE #		FAX #	
INTERNET ADDRESS			
E-MAIL			
BUSINESS ACTIVITY			
NAME OF THE PERSON WHO RECEIVES THE MACHINE:			
POSITION:			
DATE	SIGNATURE		

Eureka S.p.A.

Viale dell'Artigianato 30/32, 35013 CITTADELLA (PD) Italy Tel ++39 - 049 - 9481800 Fax ++39 - 049 - 9481899
INTERNET: www.eurekasweepers.com E-MAIL: info@eurekasweepers.com

DICHIARAZIONE DI CONFORMITÀ

Noi: **EUREKA S.p.A. Unipersonale**
Viale dell'Artigianato 30/32
35013 CITTADELLA (PD)

dichiariamo sotto la nostra esclusiva responsabilità che il prodotto

LAVASCIUGA PAVIMENTI:

**MODELLI:
E51M E61M**

al quale questa dichiarazione si riferisce è conforme alle seguenti norme:

- **Sicurezza del macchinario, Concetti fondamentali, principi generali di progettazione Specifiche e principi tecnici - UNI EN 12100-1, UNI EN 12100-2**
- **Sicurezza del macchinario. Distanze di sicurezza per impedire il raggiungimento di zone pericolose con gli arti superiori, UNI EN 294.**
- **Sicurezza del macchinario. Spazi minimi per evitare lo schiacciamento di parti del corpo. UNI EN 349.**
- **Sicurezza degli apparecchi elettrici d'uso domestico e similare. Parte generale - EN 60335-1 (1994) + A11(1995) + A1(1996) + A2(2000) + A13(1998) + A14(1998) + A15(2000) + A16(2001)**
- **Sicurezza degli apparecchi elettrici d'uso domestico e similare. Parte 2: Norma particolare per macchine automatiche per il trattamento dei pavimenti per uso industriale e collettivo - EN 60335-2-72 (1998) + A1(2000)**
- **Compatibilità elettromagnetica – Parte 6.3 – Norma generica di emissione per ambiente residenziale, commerciale ed industria leggera - EN 61000-6-3 (2001)**
- **Compatibilità elettromagnetica – Parte 6.1 – Norma generica di immunità per ambiente residenziale, commerciale ed industria leggera - EN 61000-6-1 (2001)**

in base a quanto previsto dalle Direttive:

2006/42/CEE, 2014/35/UE, 2014/30/UE, 92/31/CEE, 1907/2006 CE, 93/68CEE

**LEGALE RAPPRESENTANTE E PERSONA AUTORIZZATA A COSTITUIRE
IL FASCICOLO TECNICO**

CITTADELLA 20/04/16

GIANFRANCO LAGO

