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DATE OF LAST UPDATE 20-02-2015

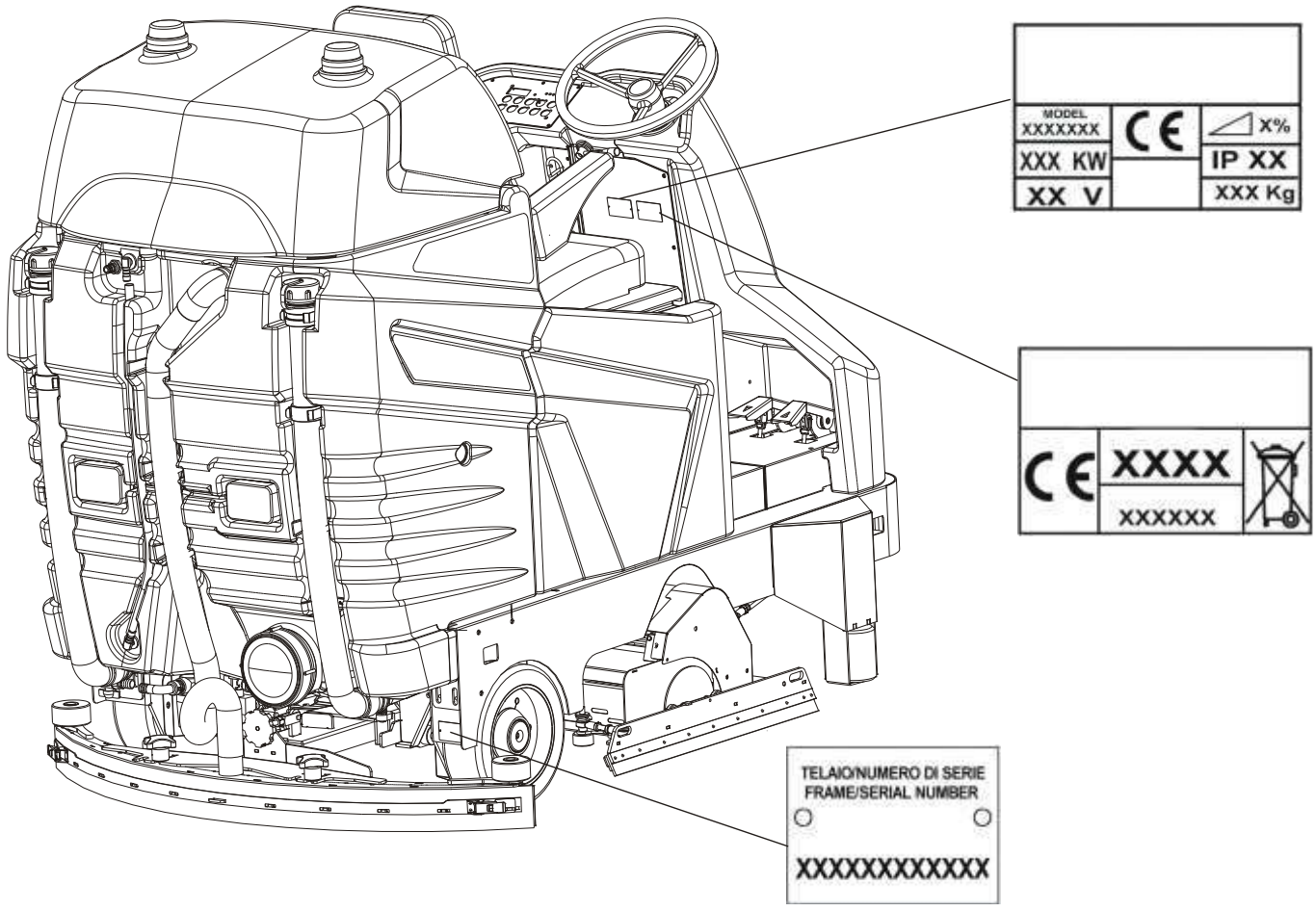
INTRODUCTION

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 specialized 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 driver's seat.



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

Our scrubbers conform to 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 TO 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

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 specialized personnel to clean the electrical components. Said personnel should use products that are not corrosive and are anyway suitable for electrical circuits.
Specialized 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 ears.

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.
- empty and wash the tanks as described in the relative section.
- remove the detergent can if fitted
- clean the filter on the detergent suction pipe in the can
- wash the detergent dosing system as indicated on page 22 of the manual
- clean the clean water filter, empty the filter protection and drain the water completely from the system
- clean the ECO-SYSTEM circuit and allow for water-flowing.
- clean the machine inside and outside
- keep brushes and squeegee raised
- lock the machine in place with the parking brake
- remove the key
- remove the battery lead connections
- keep the machine in a protected place
- keep the machine within a temperature range of 5°C / 40 °C
- keep the machine within a humidity range of 30°C / 80 ° C

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 bare 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 slippy 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 the responsibility to update the manual with the documentation that the Manufacturer will send if modifications are made to the machine.

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 scrubber-dryer 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

DISPOSAL

SPENT OILS

Spent oils must not be thrown away into the environment under any circumstances.
They must be given to authorized 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 authorized 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 authorization (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 authorized 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 condition –in case of damage, report to the forwarder.
PAY PARTICULAR ATTENTION WHILE TRANSPORTING THE MACHINE AT TEMPERATURES BELOW 0°C TO PREVENT THE WATER INSIDE THE TANKS AND THE PIPES FROM BECOMING 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 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

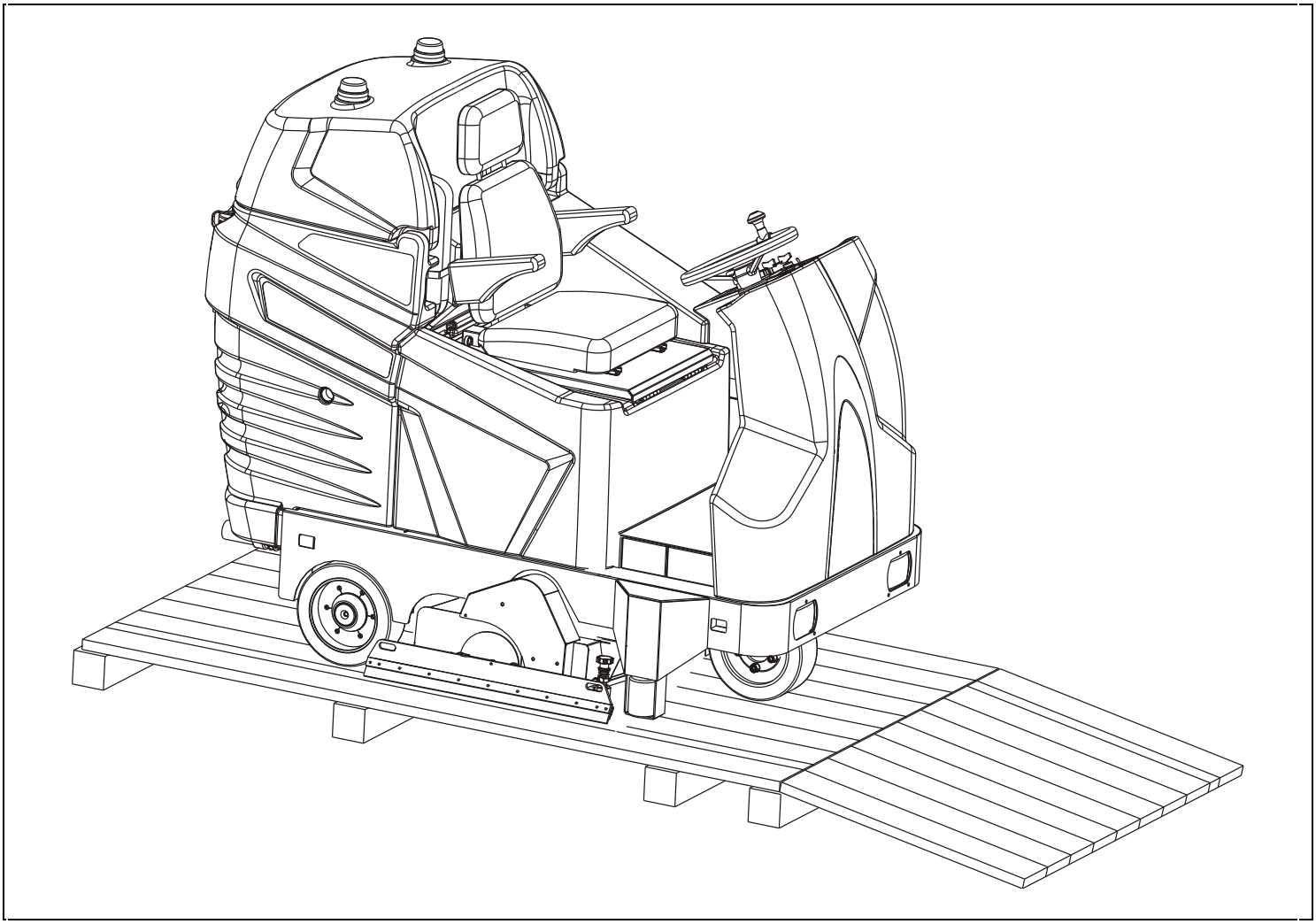
In case of transport by means of manual pushing –for machines featuring electronic traction only - the machine must be pushed on at walking pace. Do not tow it with fork lifts.

UNPACKING

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

- Squeegee;
- battery cable fitted with connector, terminals and terminal covers;
- on board battery charger;

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



Follow the instructions below to unpack the machine:
- connect the inclined ramp to the front part of the pallet, as shown in the figure;
- remove the fasteners fixing the front wheels and eventual other devices;
- make use of the inclined ramp.

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

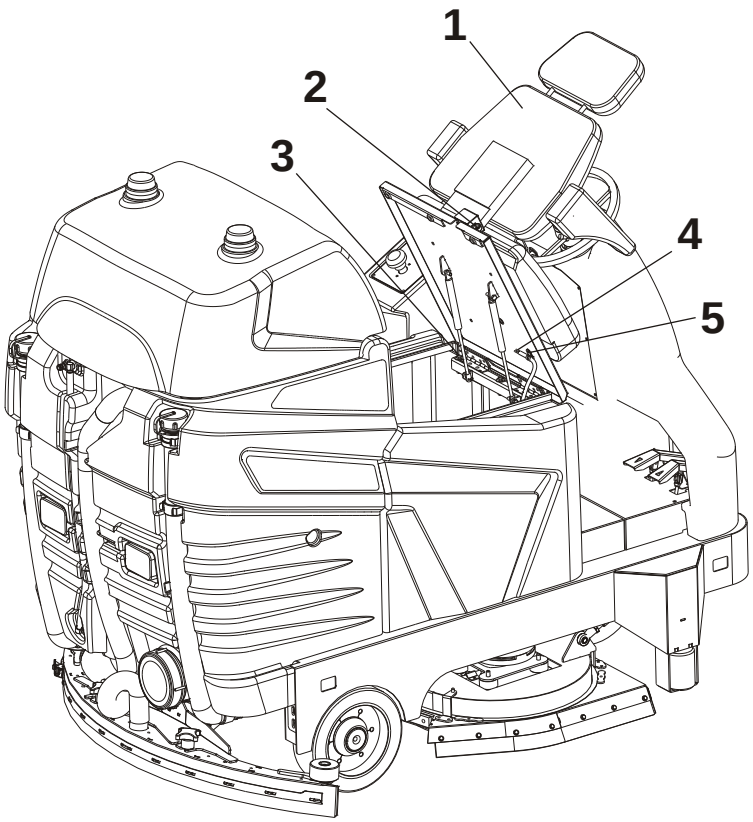
INSTALLING BATTERIES

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

CAUTION: THE MACHINE'S CONTROL BOARD AND BATTERY CHARGER COME OFF THE ASSEMBLY LINE CONFIGURED FOR USE WITH LEAD ACID BATTERIES.

IF GEL BATTERIES OR AGM BATTERIES ARE USED, THE MACHINE'S CONTROL BOARD AND THE BATTERY CHARGER MUST BE SET. CONTACT A RESELLER OR A TECHNICIAN BEFORE MOUNTING THESE TYPES OF BATTERIES.

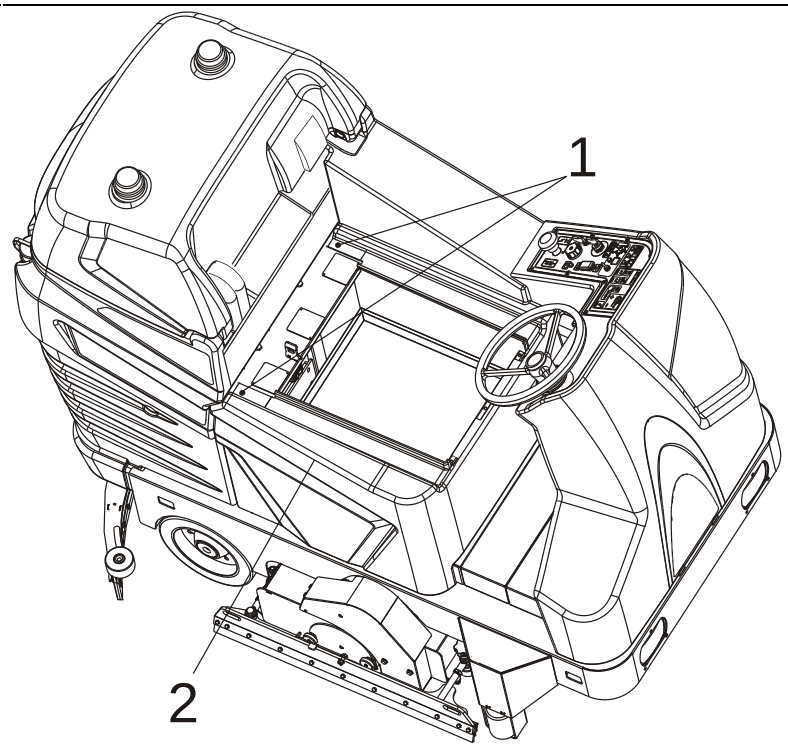
REFER TO THE SPECIFICATION SHEET FOR BATTERY TYPES AND SIZES SUITABLE FOR THE MACHINE.



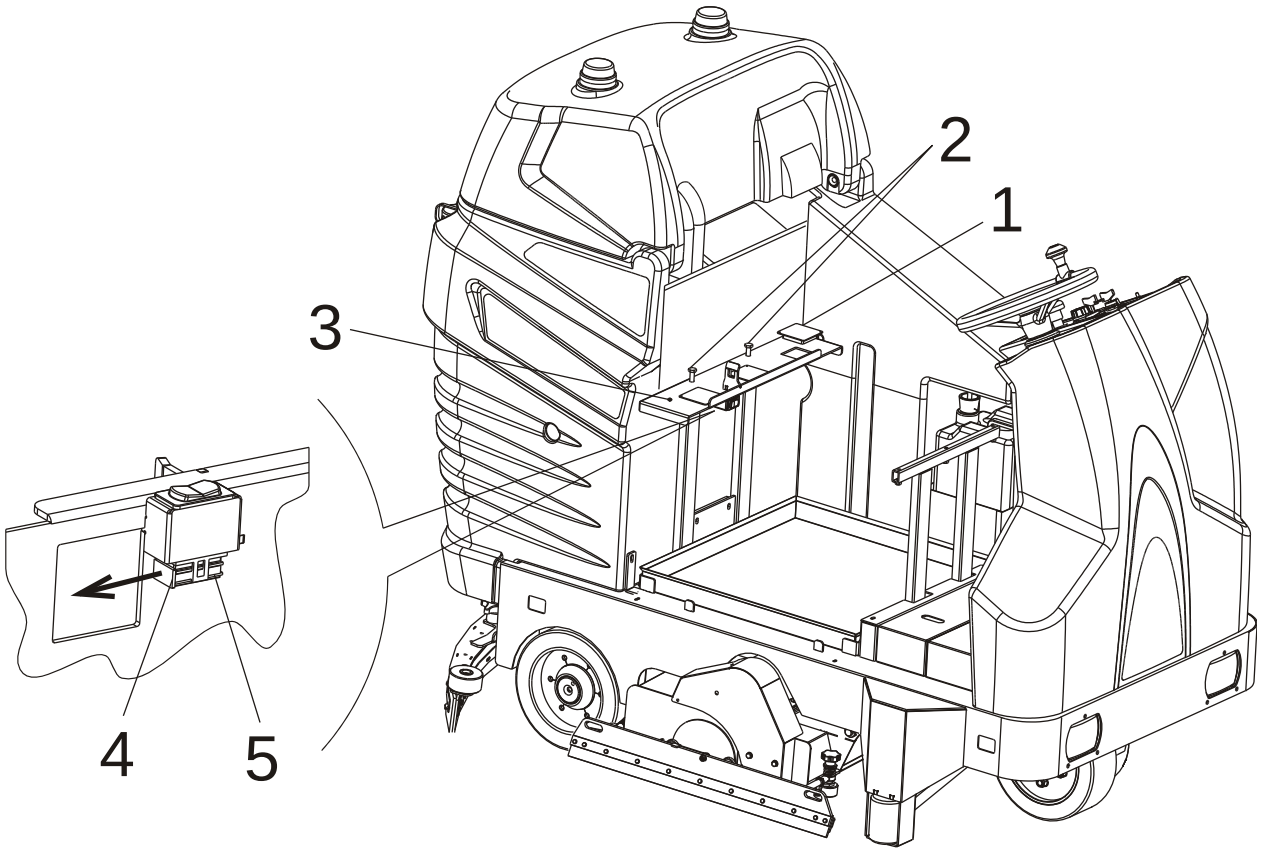
Follow the instructions below to mount the batteries on the machine:

- park the machine on a flat surface, put on the brake and remove the key;
- open the hood of the seat (pos. 1) by releasing the special safety hook (pos 2);
- remove the nut pos.5;
- unplug the seat safety device cables (pos 7);
- remove the 3 screws pos. 3
- Lift the hood pos.1

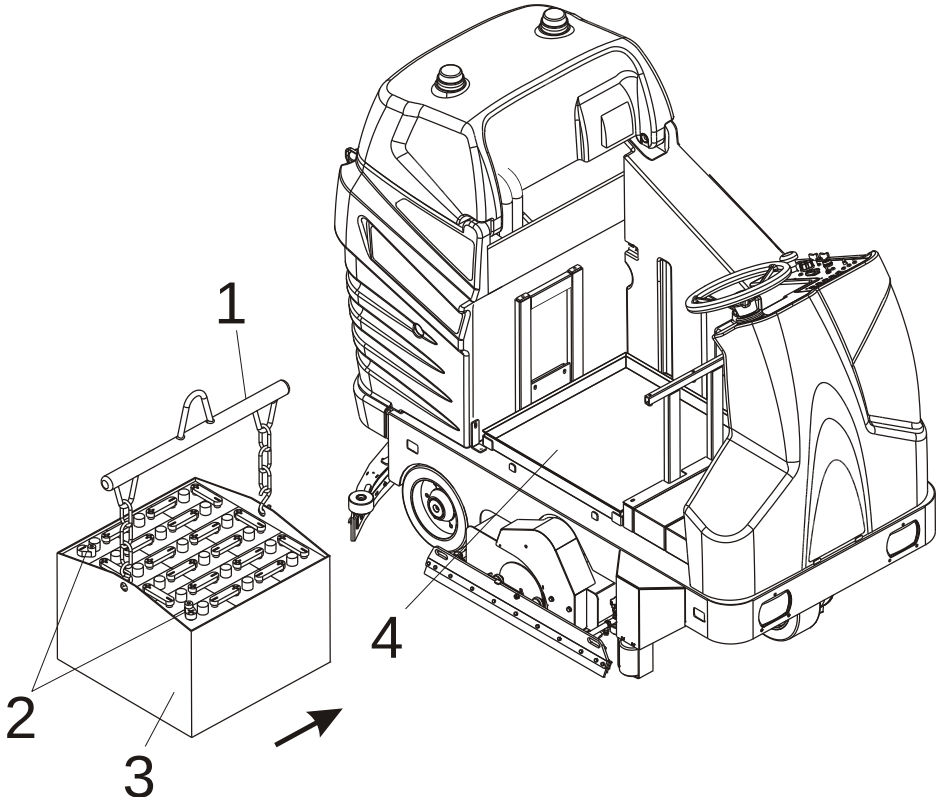
.



- Remove the 2 screws pos.1;
- Remove the battery hood pos.2.



- Remove the 3 metal plate caps (pos. 1);
- Remove the 2 bolts (pos.2);
- Pull the safety lever (pos.4) in the direction indicated by the arrow and remove the connector (pos. 5) from the switch;
- Remove the seat rest plate (pos.3).



- To install the battery (position 3), lift it with an overhead travelling crane, a carriage or a crane and use a lifting beam (position 1), chains or belts to fasten it.
- Position the battery inside the compartment provided (pos. 4) on the machine by fitting it in the direction indicated by the arrow and not lowering it from above. Position the poles (pos. 2) towards the right of the machine as shown in the illustration.

BATTERY CONNECTION

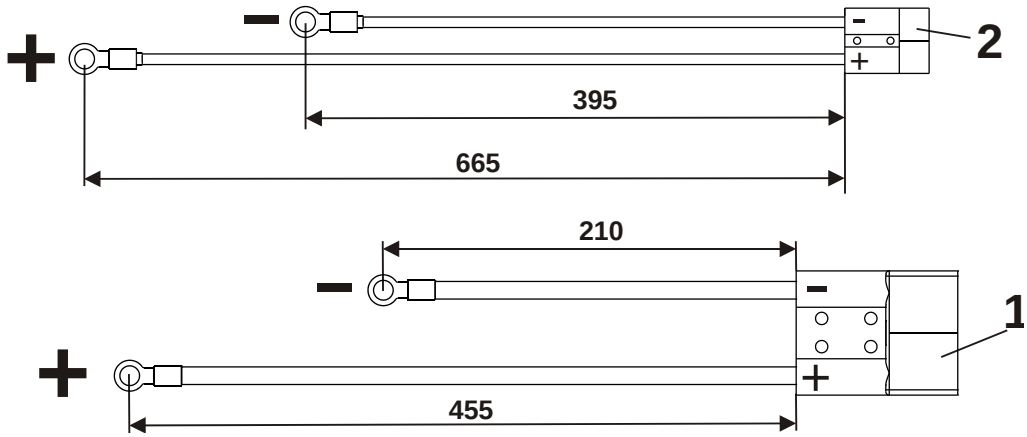
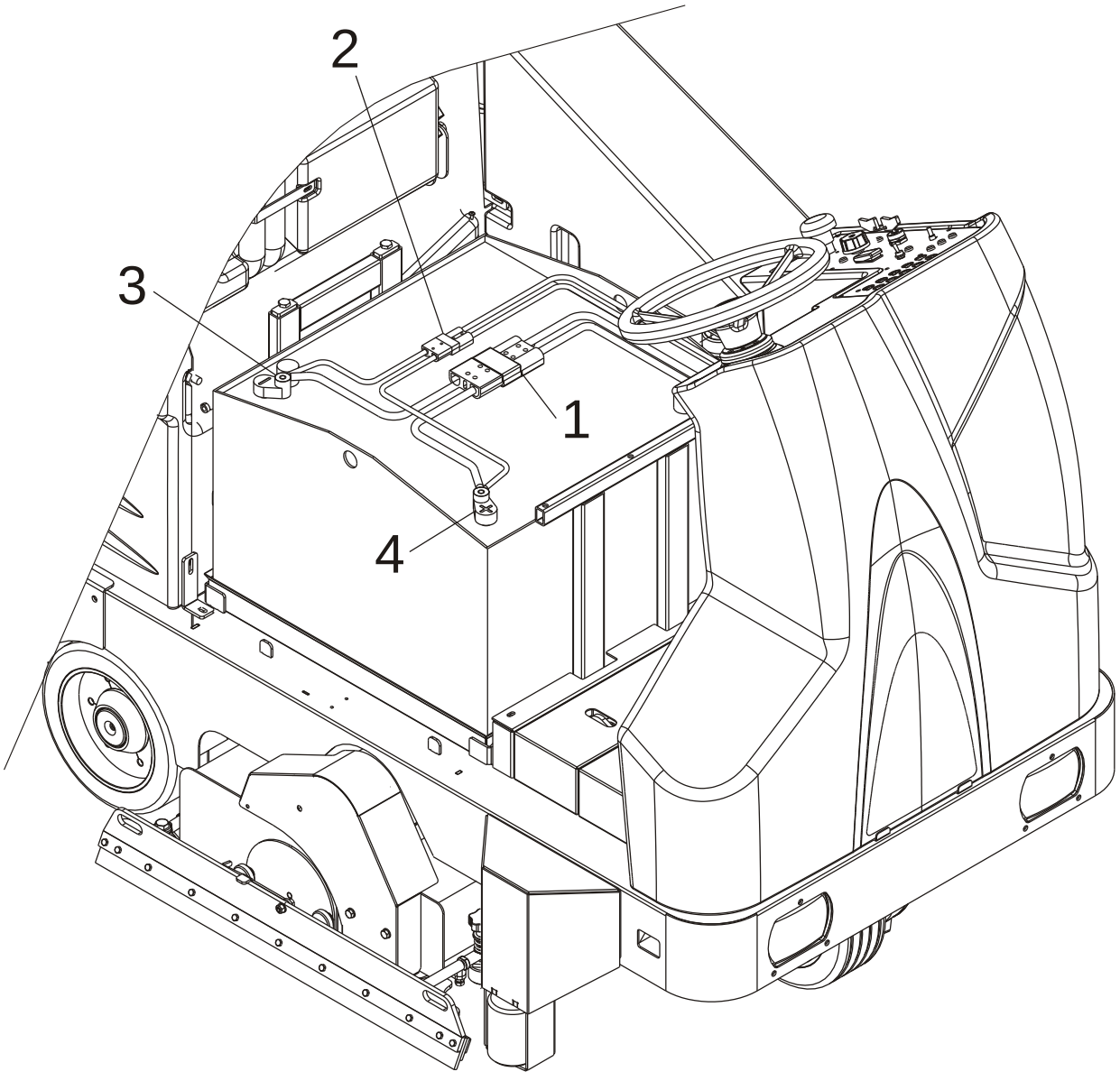


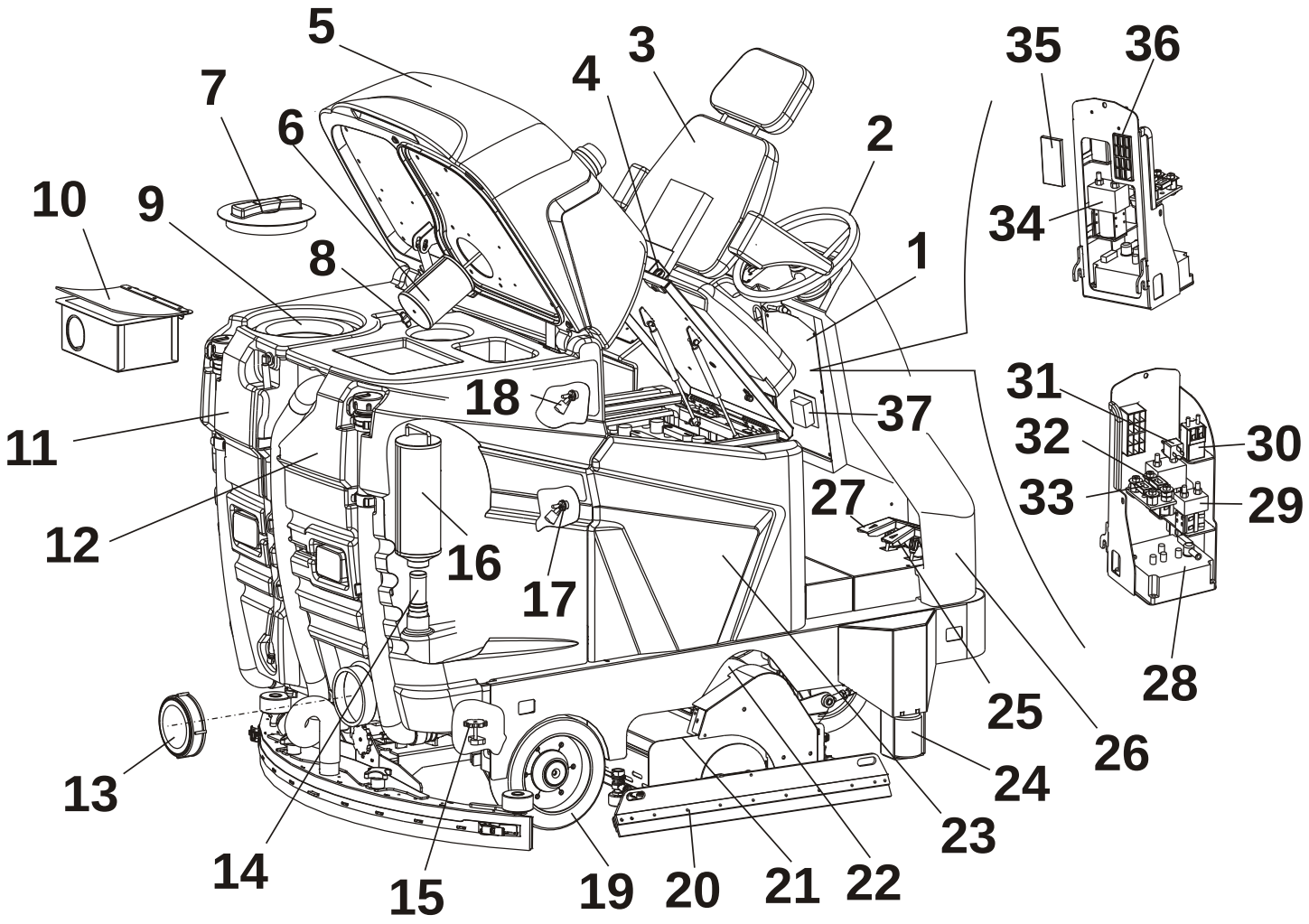
FIG. A



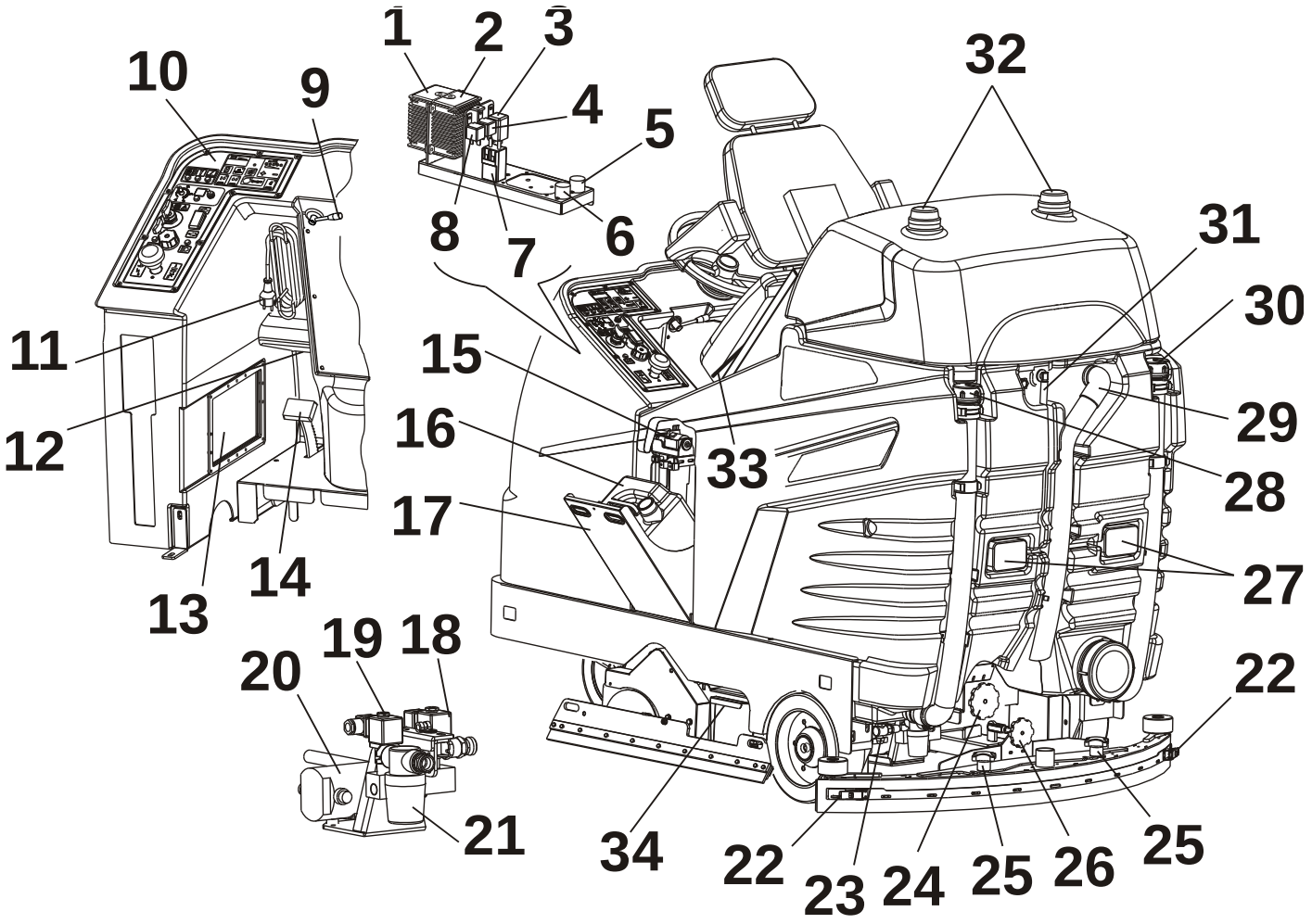
After positioning the battery on board the machine, connect the cables.
The machine features 3 connectors shown in figure A:

1) Battery connector for supplying power to the machine;
2) Battery-charger connector;

Connect the cables of connectors 1 and 2 to the negative pole 3 and positive pole 4 in accordance with the polarities.
Connect connectors1 -2 to the respective connectors on the machine.
Fit all the machine components back on and connect them up again.



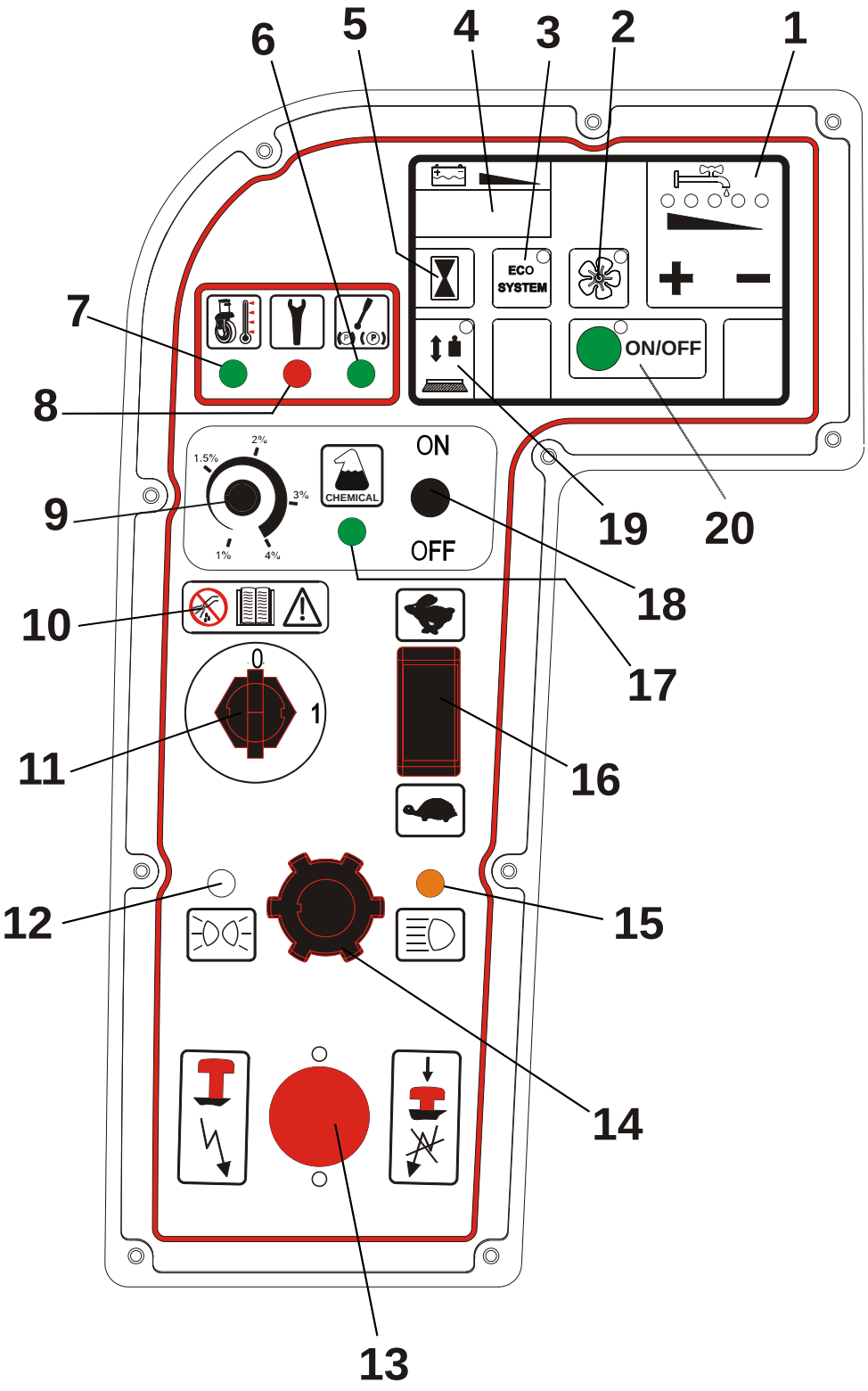
1. Fuses inspection door	20. Splashguard
2. Handwheel	21. Brush tray
3. Seat	22. Brush motor
4. Hood and seat opening device	23. Battery seat
5. Lid and vacuum motor seat	24. Bumper roller
6. Vacuum filter	25. Forward movement pedal
7. 250 diameter lid of the solution tank	26. Machine front nose
8. Blocking filter device	27. Backward movement pedal
9. Filling-in solution	28. Drive control card
10. Gathering material gasket	29. Brush remote switch
11. Solution tank	30. Suction unit remote switch
12. Recovery tank	31. Relay
13. Recovery tank inspection hatch cap	32. 80 A brush input peak protection fuse
14. ECO-SYSTEM safety filter	33. 125A drive system protection fuse
15. Squeegee maximum pressure adjustment	34. Forward movement remote switch
16. ECO-SYSTEM filter	35. Fuse holder cover
17. ECO-SYSTEM floating device	36. Fuse holder
18. Max. level floating device of the recovery tank	37. Cut out switch
19. Rear wheel	



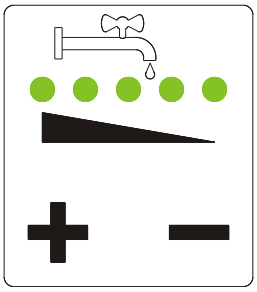
1. Transformer no. 2 36V-24V (LIGHTS)	18. ECO-SYSTEM solenoid valve
2. Transformer no.1 36V-24V (SERVICES)	19. CLEAN WATER solenoid valve
3. Flashing light intermittence	20. Solution pump
4. Reverse light relay	21. Clean water filter
5. Handbrake engaged buzzer	22. Rear blade locking plate hook
6. Motor temperature alarm buzzer	23. Clean water tank tap
7. Service remote switch	24. Squeegee adjusting pressure handwheel
8. Drive motor temperature alarm relay	25. Squeegee locking knobs
9. Parking brake locking and unlocking device	26. Squeegee adjusting inclination handwheel
10. Control panel	27. Rear lights
11. Battery charger cable	28. Solution drain pipe
12. Cooling fan (battery recharge phase)	29. Squeegee vacuum pipe
13. Battery charger	30. Recovery tank drain pipe
14. Pedal brake	31. Solution tank level
15. Solution pump	32. Flashing lights
16. Detergent can	33. Seat adjusting lever
17. Detergent can compartment	34. Dirt container

PRIMARY FUNCTIONS AND CONTROLS

CONTROL PANEL



1



WATER ADJUSTMENT BUTTONS

Use the buttons + or – to set the maximum quantity of water to use for the operation. Press the + button to increase the quantity of water; the 5 green led lights on the panel come on progressively one at a time.

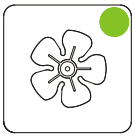
Each led light is associated with a maximum pre-set quantity of water.

Press the - button to decrease the quantity of water; the 5 led lights will go out progressively one at a time. **The water is shut off when all the led lights are off.**

The machine keeps memory of the preset quantity of water even when switched off.

If the 5 led lights start flashing at the same time, this means that there is no solution into the tank.

2



SUCTION FAN BUTTON

If the suction fan is switched off, this button can be used to turn it on, the squeegee lowers and a green light indicator will come on.

If the suction fan is switched on, the light will start flashing, when this button is pressed, but the suction function will remain active for a fixed period of time and once lapsed the squeegee will lift and the suction function will come off.

The warning light will start flashing even when the machine is in reverse drive to indicate that the squeegee is being raised from the floor.

The suction function may turn off automatically when the solution on the recovery tank is too full. The machine is equipped with a float that switches off the function when the tank reaches its maximum level. In case of prolonged idle time, the suction fan will switch off automatically after 1 minute regardless of whether the squeegee does not lift automatically from the floor for safety reasons, but must be lifted by pressing the button

3

ECO-SYSTEM OPERATION BUTTON

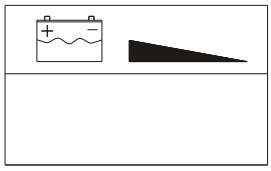
Press this button to enable the ECO-SYSTEM.

The green light is on when the system is operating.

If the button is pressed and the led light does not come on, it means that the solution level on the recovery tank is too low and therefore, the function cannot be enabled. Continue to wash in “normal” mode until reaching the minimum level. However, it is advisable to have enough solution in the recovery tank for better performance in the ECO-SYSTEM mode.

If the level on the recovery tank goes below the minimum level required for the ECO-SYSTEM function, all five led lights on the water metering unit will start flashing and the brushes will stop operating.

4



CHARGE BATTERY LEVEL INDICATOR AND DISPLAY

The charge level of the battery is displayed when the machine is switched on (100 – 90 – etc). **When the battery charge level reaches 20, the number on the display starts blinking and the brush operation is disabled raising the plate, since a protection device is triggered to prevent the battery from getting damaged, however the suction and forward functions remain active.**

At this point, the brush plate shall be raised and the floor shall be dried quickly.

Upon reaching level 10, the number on the display shall start blinking and the suction function will also be disabled, the forward function will be the only active function. Lift the squeegee, go to the tank drainage area and charge the batteries.

When 4 blinking dashes (----) appear on the display, the forward function will also be disabled as the battery reaches a minimum discharging threshold. Therefore, the machine must be pushed over to the tank drainage area and then pushed over to the battery charging area.

5

HOUR METER BUTTON

Hold down this button to display the operating hours of the machine.

6

HANDBRAKE ENGAGED RED INDICATOR LIGHT

When the LED is on and the buzzer buzzes, this means the handbrake is engaged. Disengage the brake by means of the lever before starting to move the machine.

7

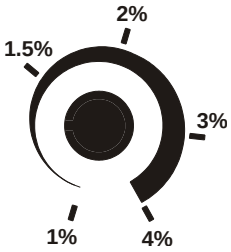
RED WARNING LIGHT: FORWARD GEAR MOTOR TEMPERATURE

If the temperature on the gear motor casing exceeds 75-85°C, the red warning light will come on and the gear motor will stop operating, emitting a buzzing warning.

8

GREEN WARNING LIGHT: DRIVE ALARM
It shows any anomalies present on the motor's drive board.
The green light will come on under normal operation. The light will start flashing if there is a problem with the drive system.
The number of blinks indicates the type of fault (see troubleshooting table)

9



DETERGENT PERCENTAGE ADJUSTMENT POTENTIOMETER
By turning the potentiometer, the percentage of detergent in the solution being conveyed to the brushes can be increased or decreased.

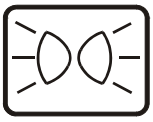
10

WARNING SYMBOLS
The symbol on the left advises to use the instruction manual at all times for any information regarding the machine, whereas the symbol on the right forbids the use of water on the instrument panel as there are electrical parts.

11

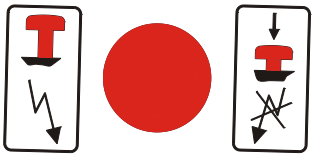
KEY-OPERATED SWITCH
The ignition sequence will start by rotating the key-operated switch clockwise (position 1); a series of information will appear on the display in successive order.
THE BUTTONS ON THE INSTRUMENT PANEL AND THE DRIVE CONTROLS SHOULD NEVER BE TOUCHED DURING THIS SEQUENCE.
The charge level of the battery will appear on the display at the end of the sequence, e.g. 100 - 90 - 80 etc.
The machine is ready to be used only at this point.

12



TRANSPARENT INDICATOR LIGHT: DIPPED HEADLIGHTS
Indicator on when lights are on.

13

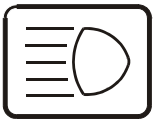


EMERGENCY SWITCH
To stop the machine in case of an emergency and stop all functions, press the button. To reset everything, pull the button up.

14

LIGHT AND HORN SWITCH
By turning clockwise, the lights (position, dipped, full beam) come on.
When pressed, the horn sounds.

15



FULL-BEAM LIGHT ORANGE INDICATOR LIGHT
Indicator on when lights are on.

16

SPEED SELECTOR
By pressing the button towards the "hare" symbol, the machine moves forward and in reverse at normal speed.
By pressing the button towards the "tortoise" symbol, the machine moves forward and in reverse at half speed. This speed can be used in very dirty environments and allows using a lot of solution at low speed.

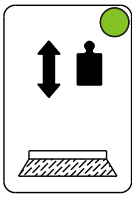
17

DETERGENT DOSING SYSTEM GREEN INDICATOR LIGHT
When the indicator light is on, this indicates the detergent dosing system is on.

18

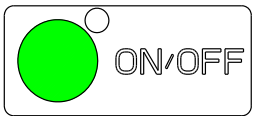
LEVER SWITCH
By pushing the lever towards the ON or OFF position, the detergent dosing system is turned on or off.

19



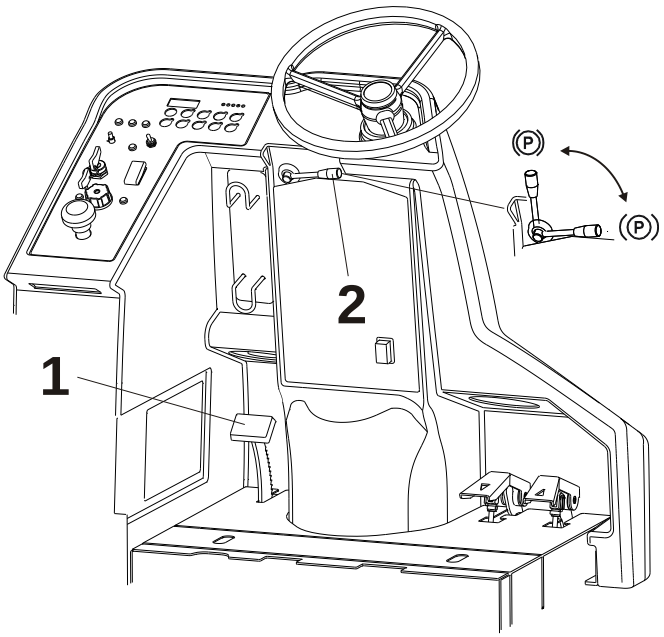
BRUSH BUTTON
Press this button to enable the brush function; a green led light will come on and the brush plate will descend. The brushes will start rotating when the forward pedal is pressed. When the forwards pedal is released, the brushes will rotate for other 3 seconds before stopping. In case of prolonged halt, after 1 min the brush plate will automatically rise.
When the machine is in motion with lowered brushes, by pressing the brush button the brushes will stop rotating and the brush plate will rise.
The electrovalve and the solution pump are also connected to the brush function and allow the user to automatically open or shut the flow of the solution while the brush is rotating.
This function cannot be activated if there is not solution in the tank. In this case by pressing the button, the five led lights on the solution metering unit will start flashing and the brush function will not be enabled. When this occurs, make sure to fill the tank.
This function will be automatically deactivated in case there is no solution in the tank. When this occurs, the five led lights on the solution metering pump will start flashing and the brushes function will be deactivated.

20



GREEN ON/OFF BUTTON
This button enables the operator to use all the functions of the machine. Press the button once to lower the brush plate and the squeegee, the led lights on this button and on the brush and suction fan buttons will come on. Push the drive pedal to start rotating the brushes and the solution metering pump.
The vacuum motor will also turn on. The quantity of water used will equal to the quantity stored after the last use.
Press this button again to stop the operation of the brushes and the brush plate will lift from the floor.
The squeegee will also lift from the floor with a preset delay to allow the operator to dry the entire floor.
If this button is pressed when the tank is empty, the five led lights on the solution metering unit will start flashing and the brush function will not be enabled, but only the squeegee. When this occurs, make sure to fill the tank.

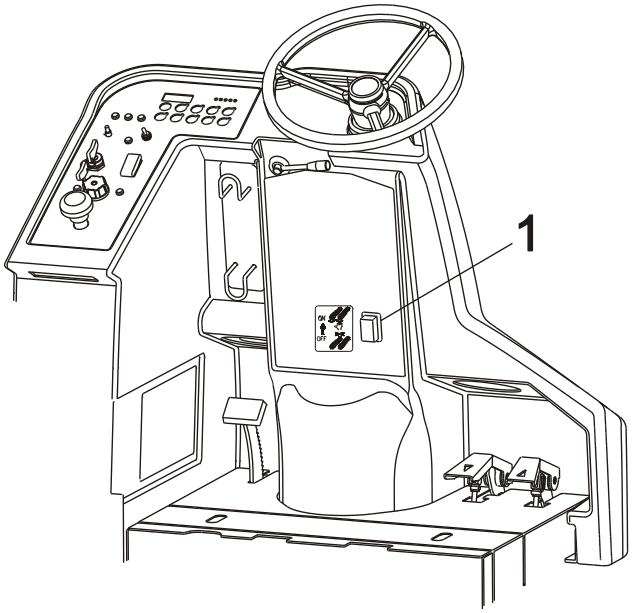
BRAKE PEDAL

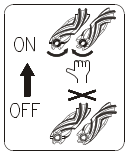


SERVICE BRAKE
The machine is fitted with a service brake that operates on both the rear wheels. By pushing the pedal pos. 1, the brake gets inserted.

PARKING BRAKE
The machine is fitted with a parking and emergency brake that operates on both the rear wheels.
To lock the machine push the brake pedal (pos.1) down, turn the lever pos.2 anticlockwise to its maximum stroke and then release it.
Push the pedal (position 1) and turn the lever (position 2) clockwise to release the brake.

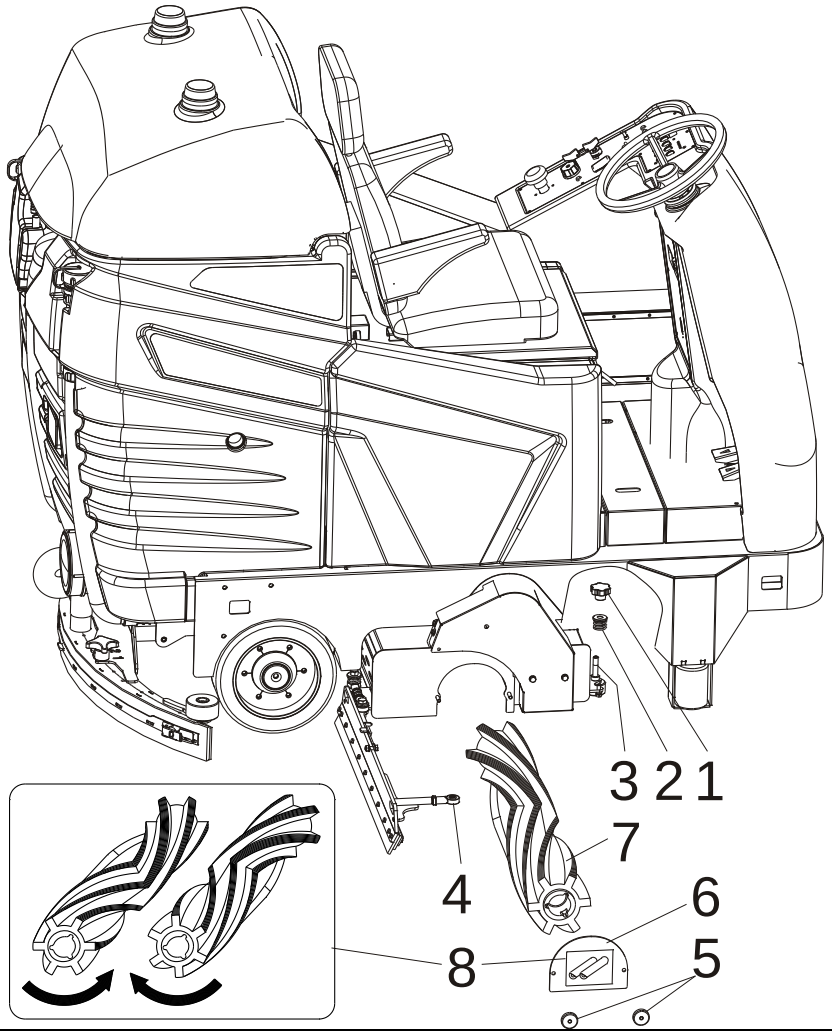
BRUSH CUT-OUT SWITCH





If during the washing phase, there is over-absorption of the brushes, the cut-out switch intervenes and stops the brushes.
To re-start the brushes, activate the cut-out switch again by lifting the switch (pos 1)

BRUSHES REPLACEMENT/ ROTATION



Follow the instructions below to replace or rotate the brushes:

- Switch the machine off on a flat surface with the lifted brush plate and remove the key;

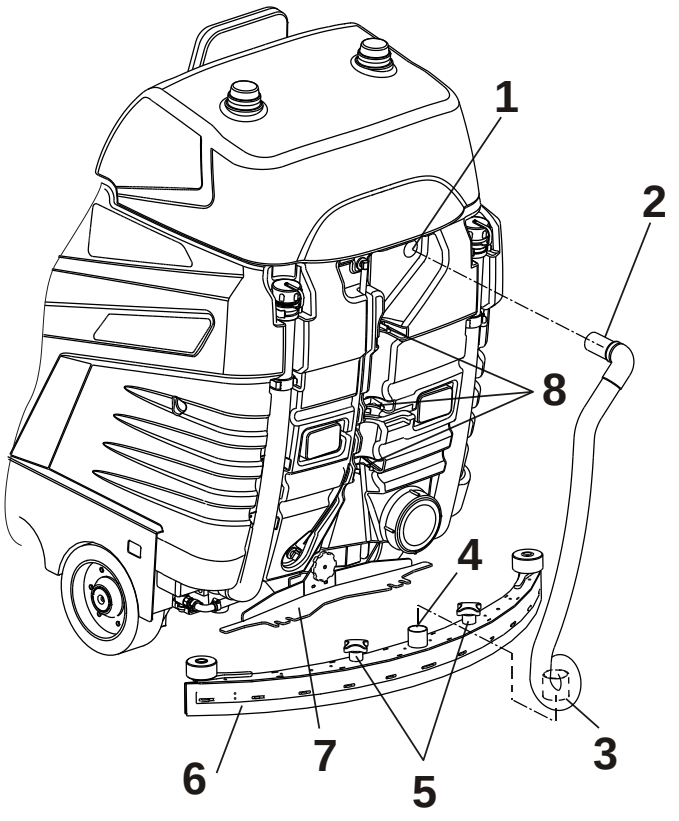
Insert the brake

- Unloose the handwheel (pos. 1), remove the spring (pos. 2) from the pin (pos. 3).
- Remove the splashguard joint (pos 4) from the pin (pos 3) and rotate the splashguard backward.
- Remove the handwheels (pos 5) and the hub (pos 6)
- Remove the brush (pos 7) from the hub located on the left side of the roller plate and replace it with a new one: then remount everything following the instructions on the contrary.
  ATTENTION – when remounting the brush, follow the assembly phase as indicate in the label pos 8.
- **To mount the left brush, follow the same instructions.**
- Insert the key
- To activate the brushes, make sure there is water in the tank
- **ATTENTION: – The brushes must always be replaced together, bearing in mind that the minimum diameter is 115 mm**

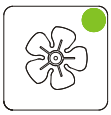
ATTENTION – After 40-50 working hours we recommend to invert the brushes position to even out the wear so they can last longer
Eliminate wires or any plastic threads or any other material which are tangled with the brush.

MOUNTING THE SQUEEGEE

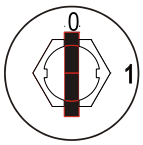
Follow the instructions below to mount the squeegee to the machine:



- disable the suction function to keep the squeegee support in up position and facilitate assembling procedures;

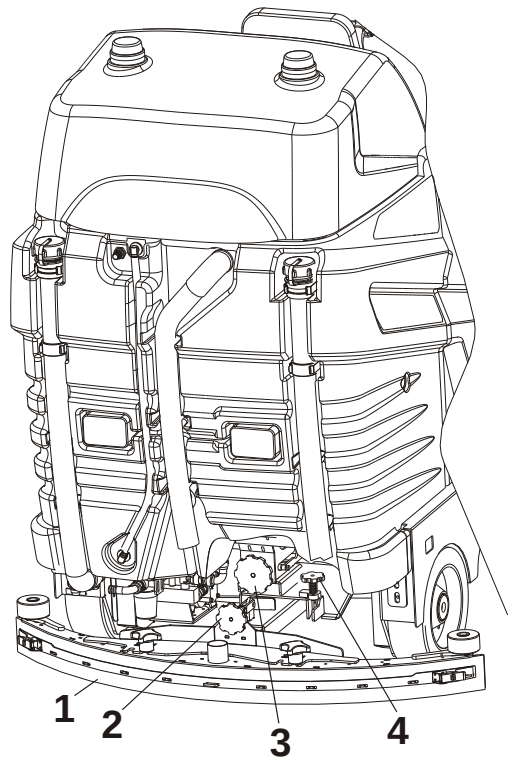


- park the machine on a flat surface, insert the brake, switch it off and remove the key;



- Fit in the squeegee (pos.6) into the squeegee support (pos.7) centring the knobs (position 5) into the corresponding slits on the support (position 7).
- Once the squeegee is fitted completely, secure the knobs (position 5).
- Connect the squeegee hose from the curved side (pos. 2) into the special hole located in the tank (pos. 1) and press down until it fits into place completely
- Mount the other end of the hose, from the roll-up side (position 3) into the squeegee in the cuff pos. 4
- Connect the hose in the special locking springs pos. 8

ADJUSTING THE SQUEEGEE



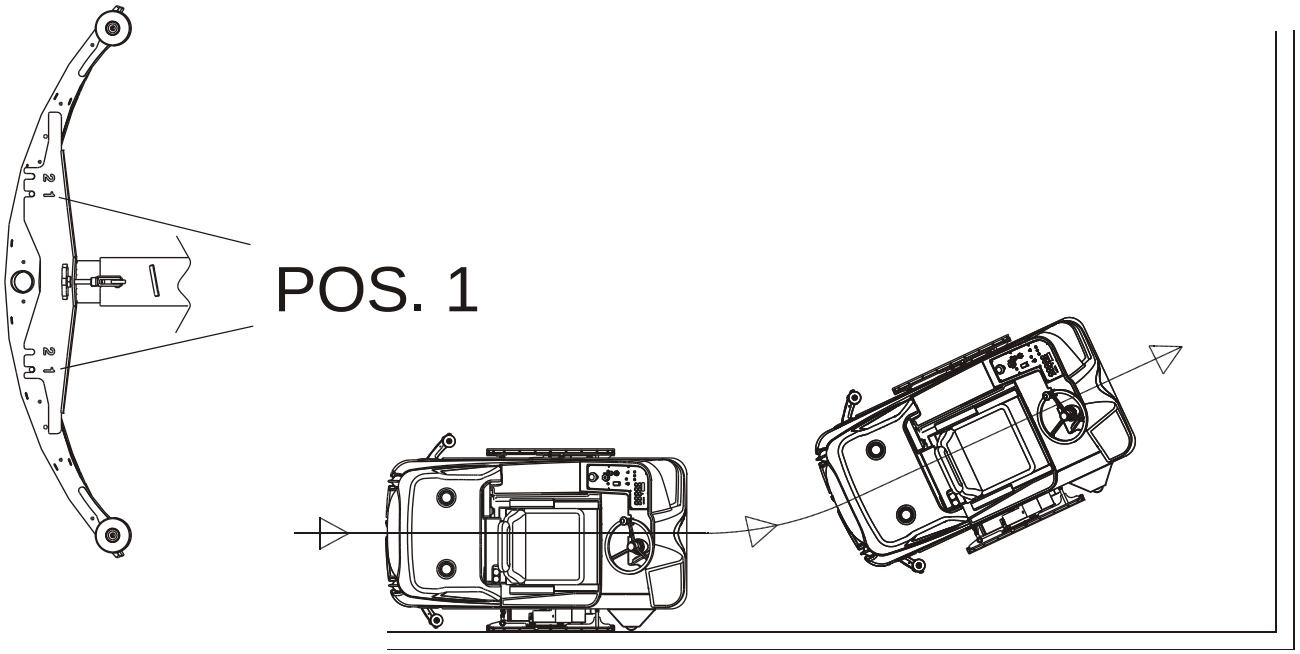
There are 3 types of adjustments that can be carried out on the squeegee:

- **Inclination adjustment,** with knob position 2.
  It adjusts the inclination of the squeegee in order to have a constant pressure over the entire length of the blade (position 1).
  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.

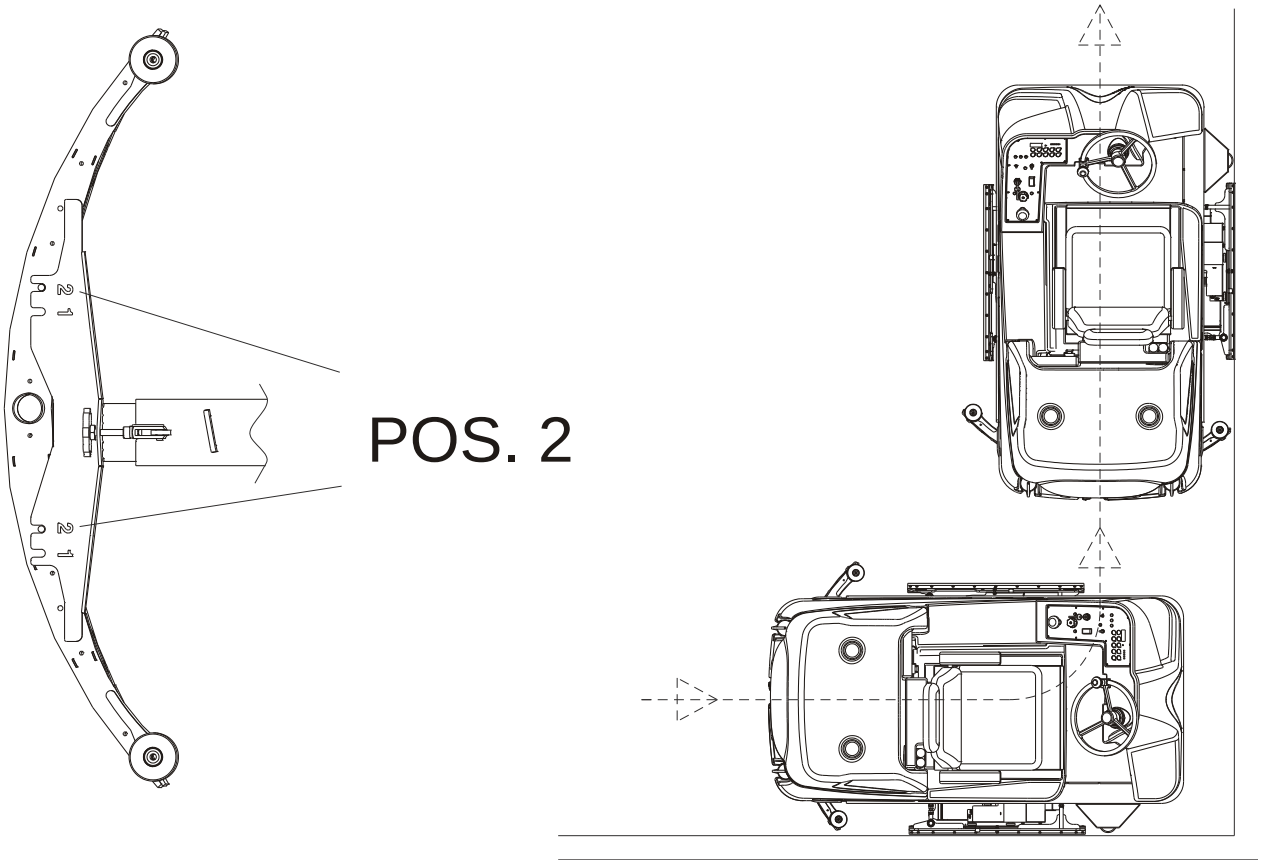
- **Pressure adjustment,** using the knob in position 3**.**
  This allows for optimal pressure on the blade (position 1) which can be adjusted for each type of floor and for each type of blade.
  For rough floors or uneven floors, increase the pressure by turning the knob (position 3) clockwise.
  For smooth floors, lower the pressure by turning the knob counter-clockwise

- **Max. pressure limit** by means of the knob in position 4.
  Allows setting max. pressure to be applied to the squeegee blades. To be adjusted when thinner blades are fitted or when the second suction unit is fitted.

POS. 1: NORMAL SITUATION

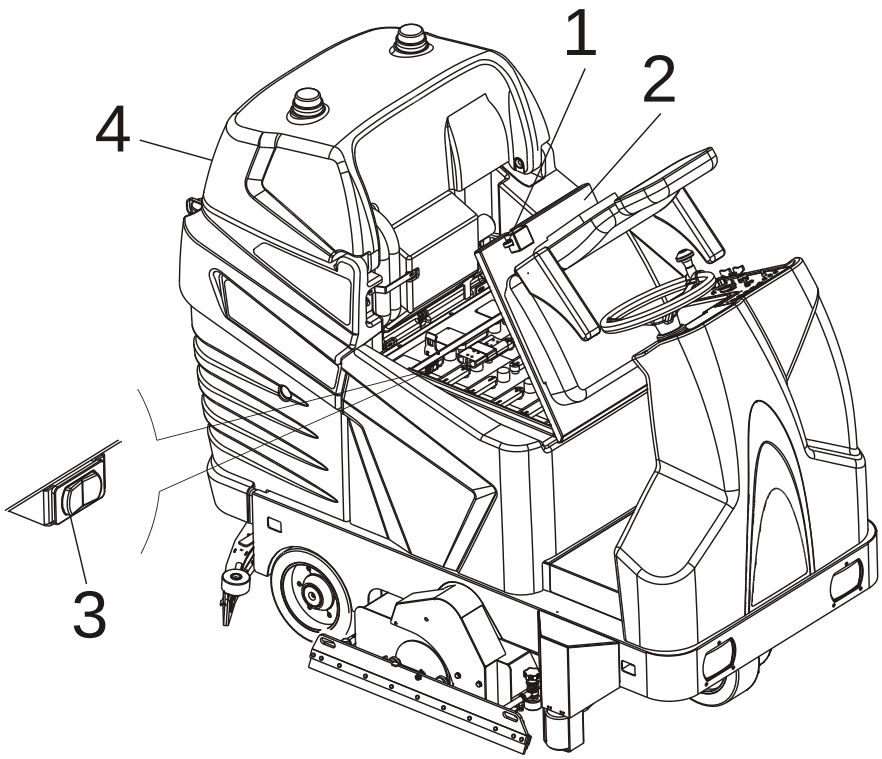


POS. 2: ENABLE YOU TO WORK NEXT TO THE WALLS AND TO TURN LEFT OF 90° NEAR THE CORNER

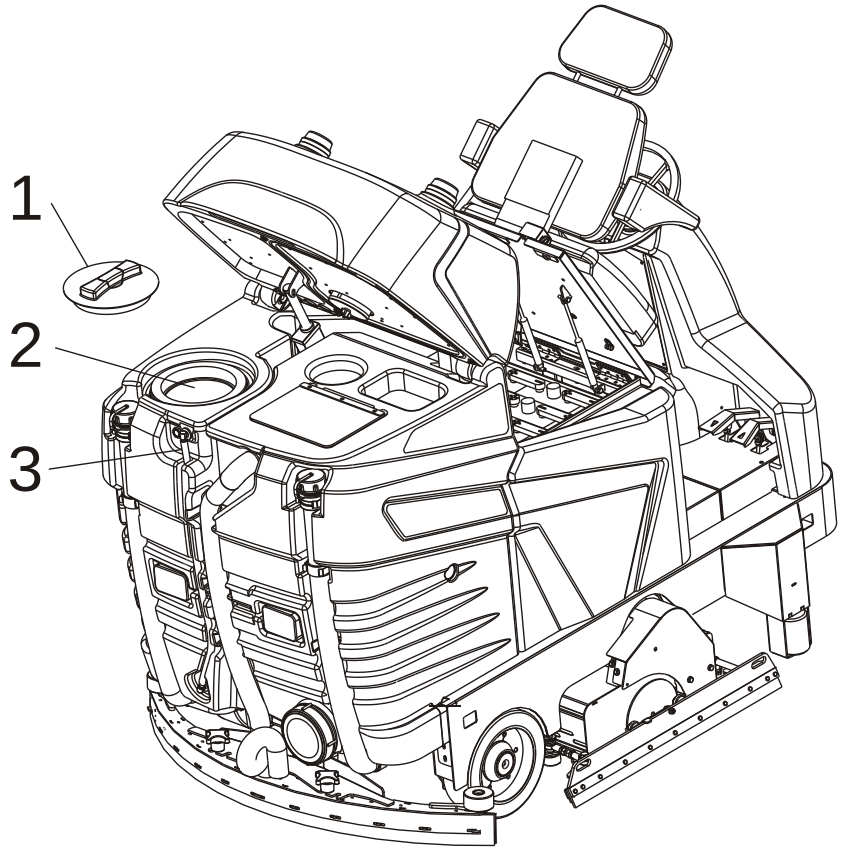


FILLING THE DETERGENT SOLUTION TANK

The solution tank can only be filled with clean water when the detergent dosing system is used, or with a mix of water and detergent suited to the type of floor and to the conditions of dirt to be washed and a product suitable for reducing foam.



- Stop the machine on a flat floor area, turn off the ignition key and engage the brake;
- Open the seat hood (pos. 2) by releasing the safety catch (pos.6);
- Open the tank lid (pos.4) by means of the button (pos.3) which controls an electric actuator.



- Loosen the cap (pos. 1) and remove it;
- Only fill the tank with clean water, with a temperature below 40°C, in the event of the detergent dosing system being used.
- In the event of the detergent dosing device not being used:
  - Pour the detergent solution into the tank directly. 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.
  - After pouring the detergent solution, fill the tank with water. Make use the water used to fill the tank does not exceed 40°C.

  WARNING: DO NOT POUR INFLAMMABLE LIQUIDS INTO THE TANK
  - After filling the tank, place the device (pos 1) The level of the water or of the solution in the tank can be seen through the level pipe (pos. 3).

DETERGENT DOSING DEVICE

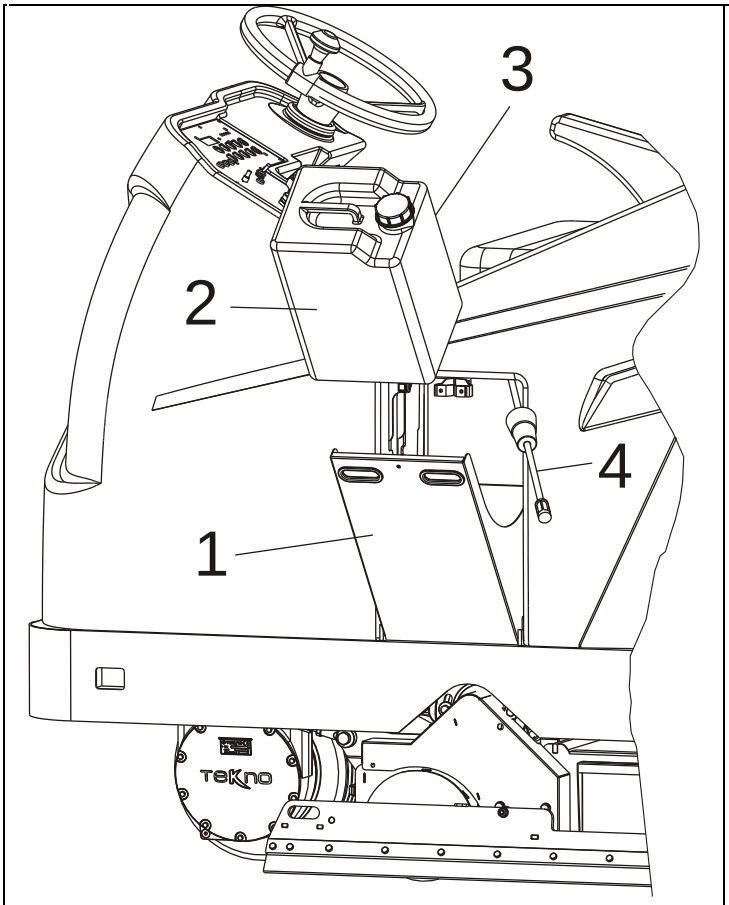


FIG. 1

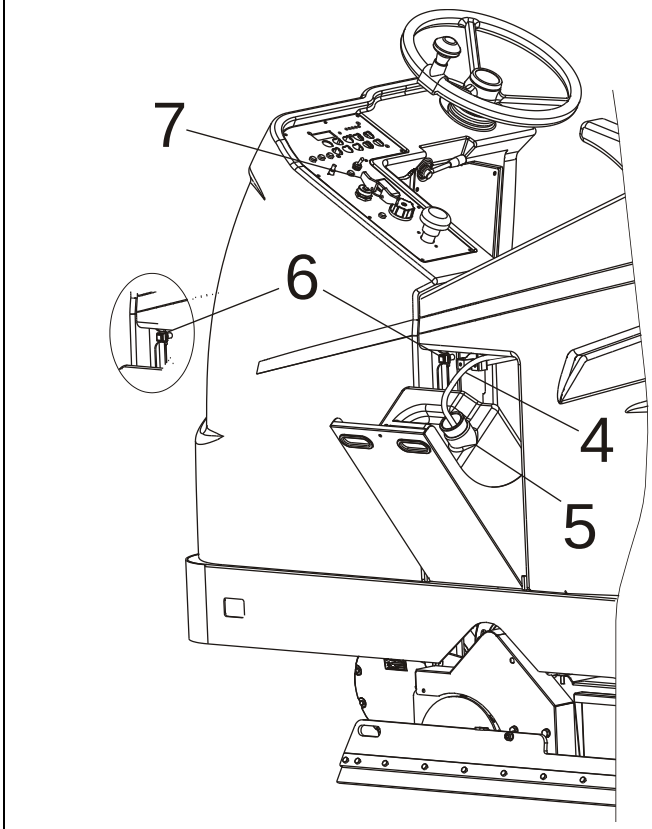


FIG.2

To use the detergent dosing device, the detergent can must be fitted in the compartment provided on board the machine.
To do this, proceed as follows:
Open the compartment (pos. 1);
Take out the pipe (pos. 4) so it does not hinder can fitting:
Fit the can (pos. 2) as indicated in FIG.1. While performing this operation, do not remove the cap (pos. 3) of the can to prevent detergent coming out. **Use low-foam liquid detergents or use a foam reducing product. Do not use inflammable liquids.**

For the percentages of detergent to be used and for safety precautions to be taken, see the instructions on the pack.

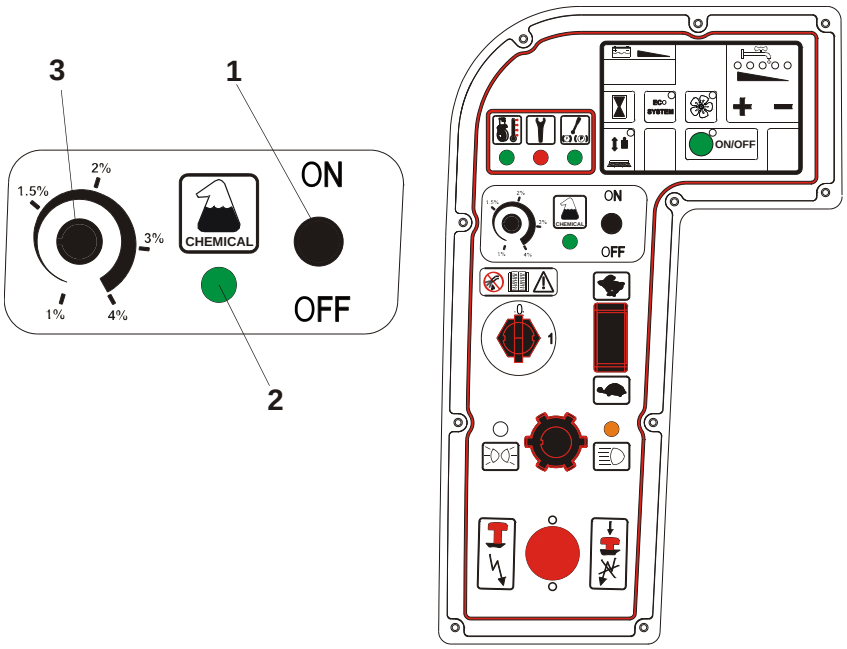
- Once the can has been fitted, remove the cap (pos. 3) and insert the pipe (pos. 4), making sure the filter reaches the bottom so as to suction up all the detergent in the can.
- Block the pipe (pos.4) by means of the cone (pos.5) inserting it in the can with a slight pressure (FIG.2).

DETERGENT DOSING SYSTEM WASHING

Once the washing operation has terminated, to keep the system in good working order and prevent scale, the system is best washed as follows:

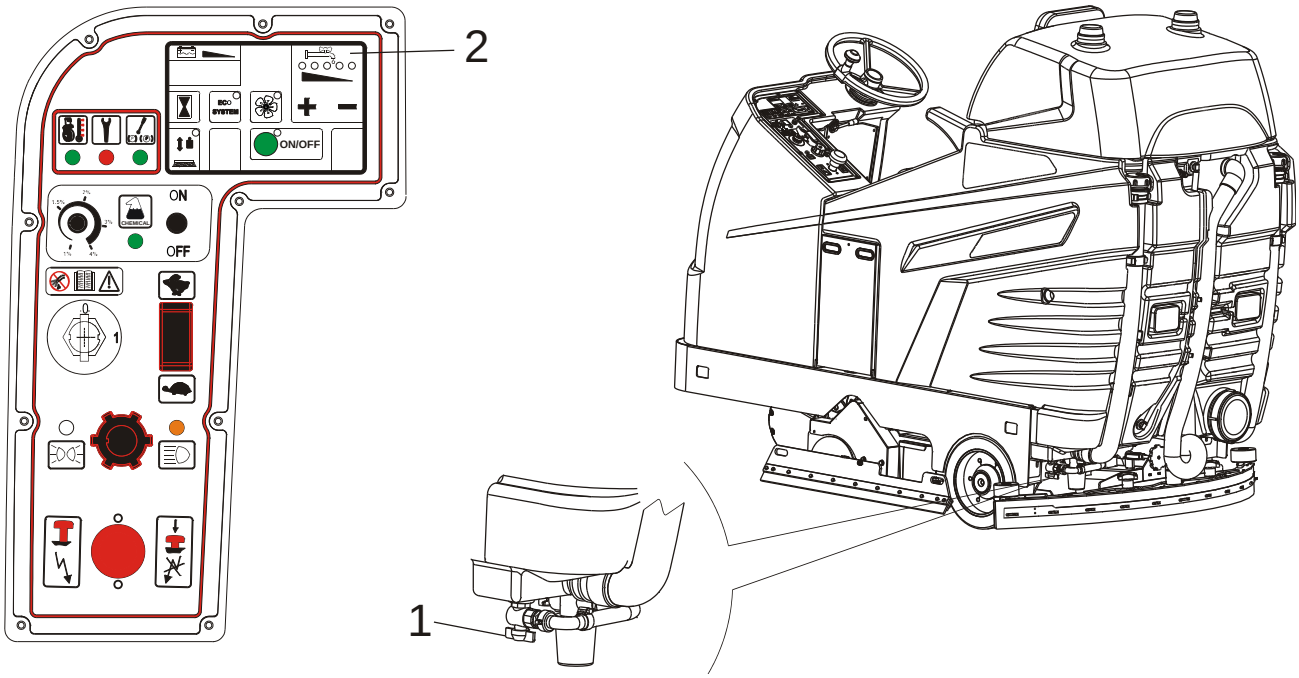
- Remove the detergent can and insert another one filled only with water.
- Make sure there is some water in the clean water tank.
- Fit the detergent suction pipe (pos.4) and block it in position by means of the cone (pos.5).
- With the machine stopped, turn the ignition key (pos.7) to POS.1 and press the red key (pos.6).
  The metering pump will start to operate and suck up the water from the can and begin washing the entire dosing system.
  At the same time, the water pump will also begin operating, washing the pipes, the solenoid valve and the pump.

DETERGENT DOSING SYSTEM CONTROLS



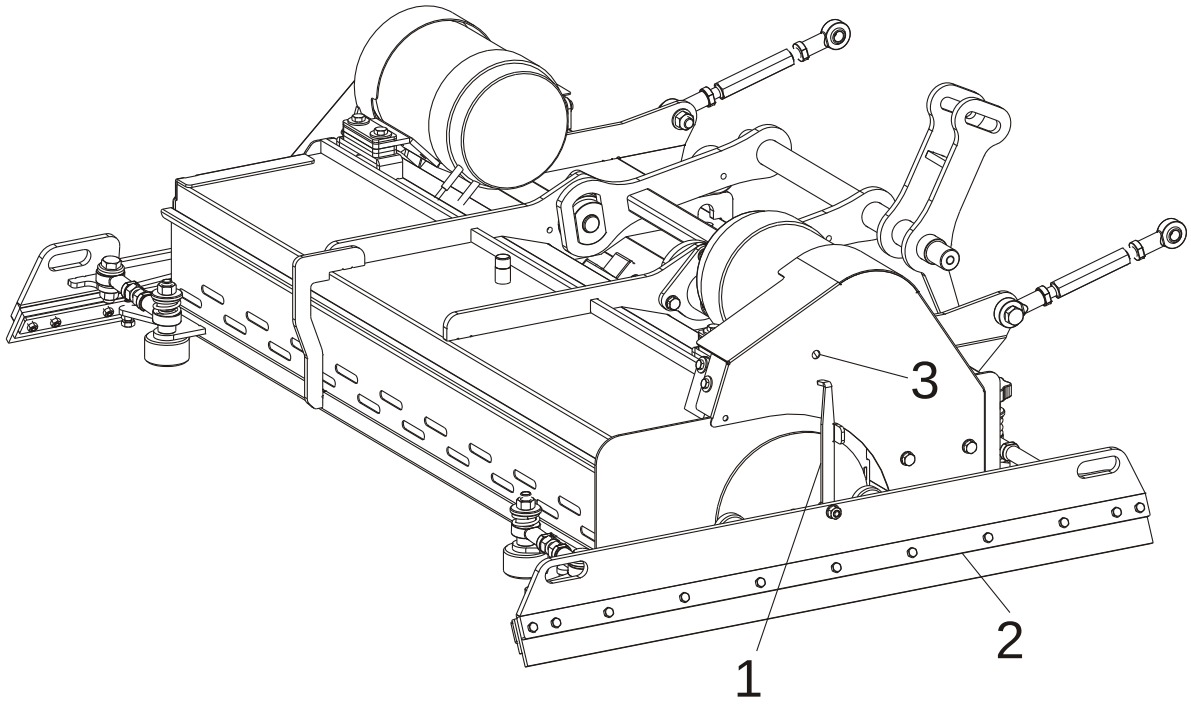
The detergent dosing device is switched on by moving the lever switch (pos. 1) to ON.
At the same time as the pump, the green indicator light (pos. 2) also comes on to indicate the system is ON.
The detergent pump operates when the water pump is on.
The percentage of detergent can be metered by means of the potentiometer (pos. 3).
For the percentages to be used, follow the instructions on the pack.
Our scrubber-dryer features an electronic solution dosing device proportionate to the speed of the machine, so the exact quantity of solution can always be obtained on the brushes, thus avoiding waste.
This operating principle is also applied to the detergent dosing system.

ADJUSTING THE QUANTITY OF SOLUTION ON THE BRUSHES



The max. quantity of the solution on the brushes can be adjusted by using the + and – keys (pos. 2) located on the board panel. Our scrubber-dryer features a solution electronic dosing system which – for being proportional to the machine speed- constantly allows for the correct flow of solution on the brush – thus minimizing any waste. In fact, by decreasing the machine speed, the solution flow decreases accordingly. On the contrary, by increasing the machine speed, the flow will increase till reaching the preset maximum level at maximum speed.
The above-mentioned dosing device can be activated also with the machine in ECO-SYSTEM mode.
Make sure that the valve (pos. 1) located beneath the machine is open before operating the machine.

LIFTING THE SPLASHGUARD FOR THE PRE-WASHING



A pre-washing operation is highly advisable when using the machine for particularly dirty surfaces, as to allow the chemical product present in the detergent solution to remove the dirt more efficiently.
Once pre-washing is over, clean the surface by activating the brush function. Do not use the squeegee to gather the solution. During this operation it is advisable to lift the machine splashguard as to allow the detergent solution to spread smoothly over the surface.
After a few minutes, wash the surface one more time after lowering the splashguard and activating the vacuum function as to dry the floor.
To lift the splashguard (right & left), please refer to the following instructions:

- Rotate the lever (pos 1) upwards.
- Lift the splashguard (pos.2) manually by pulling it upwards;
- Insert the lever (pos 1) into the hole (pos 3). In this way, the splashguard will remain raised from the ground.
  Once pre-washing is over, release the lever (pos 1) from the hole, thus letting the splashguard pos. 2 lower and bending the lever.

USING THE MACHINE

Our scrubber-dryers must be operated by properly trained authorised staff.
Scrubber-dryers 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:

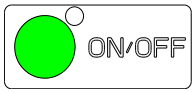
- Make sure the battery connector is plugged-in;
- Make sure the key is fitted correctly;
- Check the battery charge level.
  The charge level of the battery will appear in the instrument panel when the machine is on. Charge the batteries if the battery charging level is low
- Make sure the brushes are 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

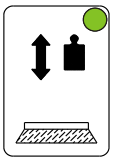
- Release the parking brake using the lever;

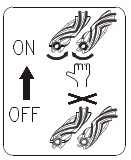
- Turn the key to position 1

- Push the ON/OFF button. A green led will turn on and all the functions will be activated. At this point, both the brush tray and the squeegee will lower. The brush motors and the vacuum motor will switch by pressing the advance pedal. The quantity of detergent solution will be the one which has been kept in memory since the last time the machine has been used. In case you wish to adjust it, work on the + and – buttons -on the control panel.

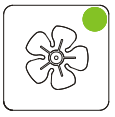


- The brush function can be enabled individually using this button on the instrument panel. The brush plate will lower onto the floor by means of the actuator; however, the brushes will not start rotating until the drive command is activated.
  Press the button again to disable the function and the pilot light will start flashing giving enough time to lift the brush plate and switch off the motors before turning off itself.
  If during the washing operation, there is an over-absorption of the brushes, the cut-out switch intervenes and stops the brushes. By pressing the advance pedal, the brush bottom starts flashing, the writing E1 appears on the control board and after 5 sec. the plate will lift. To start again: turn the key in pos 0 and then in pos. 1; activate the cut-out switch again.

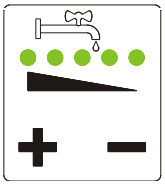




- It is possible to turn on the suction fan using the special button in the instrumental panel.
  The squeegee will lower by means of the actuator; however, the suction fan will only come on when the drive pedal is pressed. Press the button again to disable the function and the pilot light will start flashing; the squeegee will remain on the floor for a preset period of time and it will then lift and switch off the suction fan as well as the pilot light on the instrument panel.
  The pilot light will also start to flash if the machine goes in reverse drive to indicate that the squeegee is being raised from the floor. The machine is also fitted with a float that shuts off the vacuum motor when the water level in the recovery tank is too high. If this occurs, the pilot light on the suction motor button will start to flash and switch off the suction fan. The pilot light will continue to flash until the tank is emptied, or until the machine switches off.
  Drain the tank into the special drainage areas.

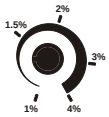


- Set the desired maximum solution quantity using + and – keys.
  The led lights may start flashing if there is a leakage of the solution while operating or while attempting to enable the brush function without solution in the tank. When this occurs, make sure to fill the tank.



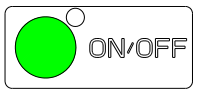
- Move the detergent dosing system switch to ON. The green indicator light will come on to indicate the system is operating. The metering pump will operate in conjunction with the water pump with the same switch-on and off procedures. The percentage of detergent will also remain unchanged when the water flow is increased or decreased by means of the keys + and –. The detergent flow is also proportionate to the machine speed, just like the water flow.

- Set the percentage of detergent according to the instructions on the pack.



- **When starting the washing operation, make sure to lubricate the cutting edge of the splashguard blades. As soon as the brush plate lowers with the detergent solution opened, slowly move the machine forwards and backwards for a few meters in order get the splashguard rubber wet. This operation will protect the cutting edge of the splashguard blades and increase its life.**
- To avoid damaging the floors, when you start working, **be very careful not to halt the machine over the same floor area while the brushes continue to operate**
- The brushes will stop automatically after 3 seconds when the forward pedal is released. Stopping the pump and closing the electrovalve, the flow of the solution will be shut off. When resuming the drive operation, the brushes will start and the solution will automatically start to flow.
- In case of prolonged idle time, the brush plate will lift after 1 minute and switch off the function.
  The suction fan will also switch off but the function will remain active (pilot light on) and the squeegee will not lift automatically for safety reasons. The suction fan will resume operation when the drive pedal is pressed again. IMPORTANT: make sure to press this button to lift the squeegee.
- 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.
- Once the solution is used up, the machine can continue its washing operation using the ECO SYSTEM function that can be enabled by pressing the button located in the instrument panel, this will enable the machine to re-use the water from the recovery tank as it is duly filtered by the special tank filter.

  The ECO-SYSTEM function can also be enabled before consuming the entire detergent solution; in this case, the operation will only be allowed if there is enough solution in the recovery tank.
  The function will not be enabled if the level is too low (the pilot light will not come on when pressing the button). If this occurs, continue to wash the floor using the detergent solution until the function can be enabled.
  However, if the ECO SYSTEM is started when there is still some solution left in the clean water tank, the operation can be deactivated at any time and it is possible to resume washing using the solution from this tank.
  When using the ECO SYSTEM mode, the water is also distributed according to the speed of the machine, therefore the maximum quantity of water will flow when the machine reaches its maximum speed.
  The detergent dosing system will also remain on in ECO-SYSTEM mode. Decide whether to switch it off or reduce the percentage inasmuch as the solution in the recovery tank already contains detergent.
- It is advisable to run a pre-wash operation before washing very filthy floor surfaces, as described on page 24.
- When completing the washing operation turn off the wash functions using the green ON/OFF button, which will switch off the brush function as well as the vacuum function after a preset delay and lift the squeegee. The 2 functions can be switched off individually using the relevant buttons for each function. In this case, the pilot light on the green ON/OFF button will remain active and must be switched off by pressing the button.



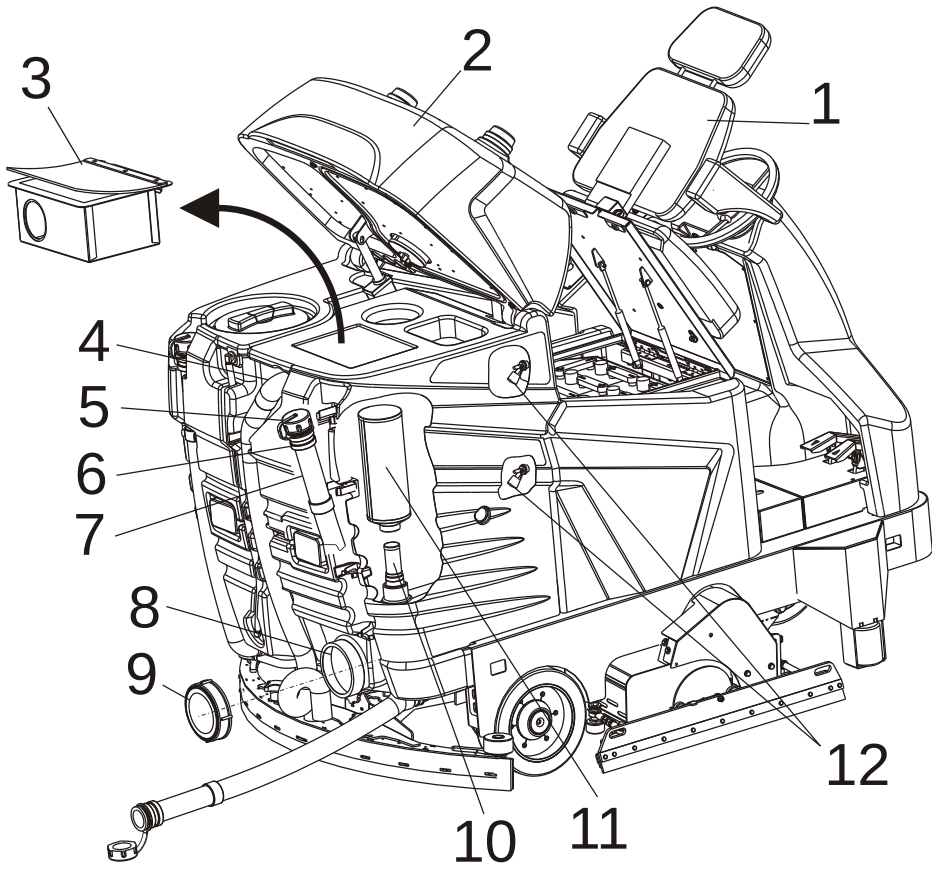
PERIODIC SERVICE

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.

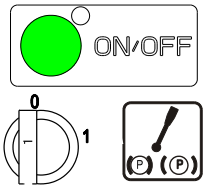
WARNING!
DO NOT CARRY OUT ANY MAINTENANCE OPERATION NEITHER ON THE MACHINE NOR ON ITS COMPONENTS WITHOUT HAVING FIRST STOPPED THE MACHINE, ENGAGED THE PARKING BRAKE, BLOCKED OFF THE WHEELS AND DISCONNECTED THE STARTING BATTERY CONNECTORS.

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:

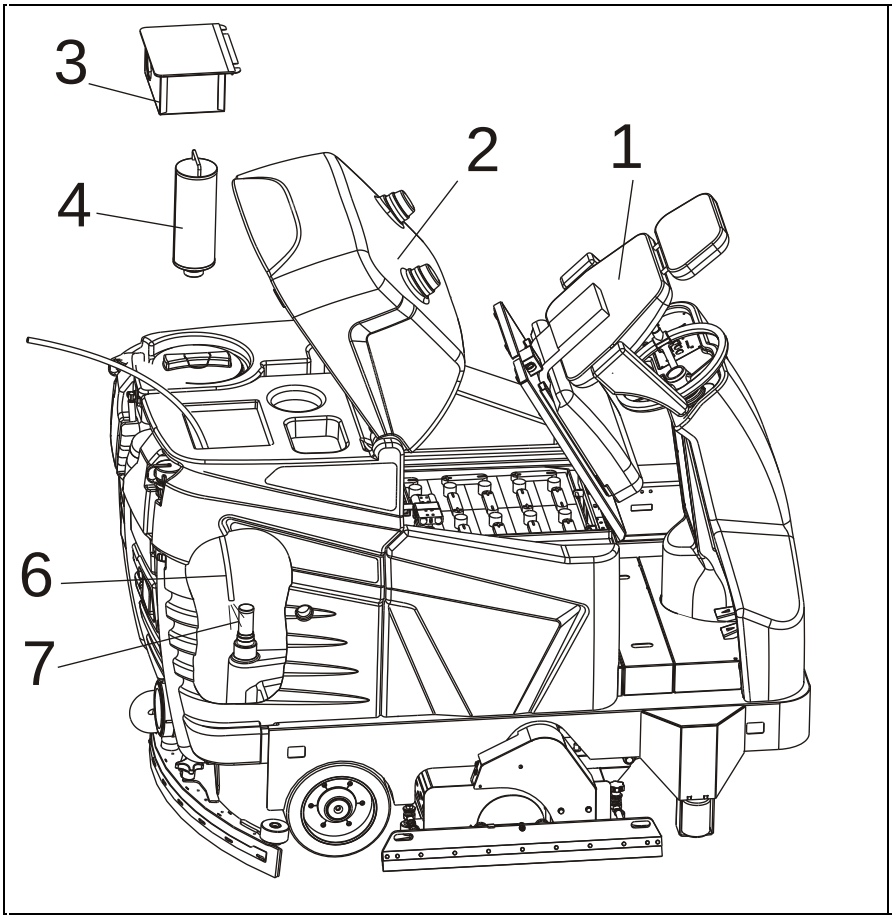


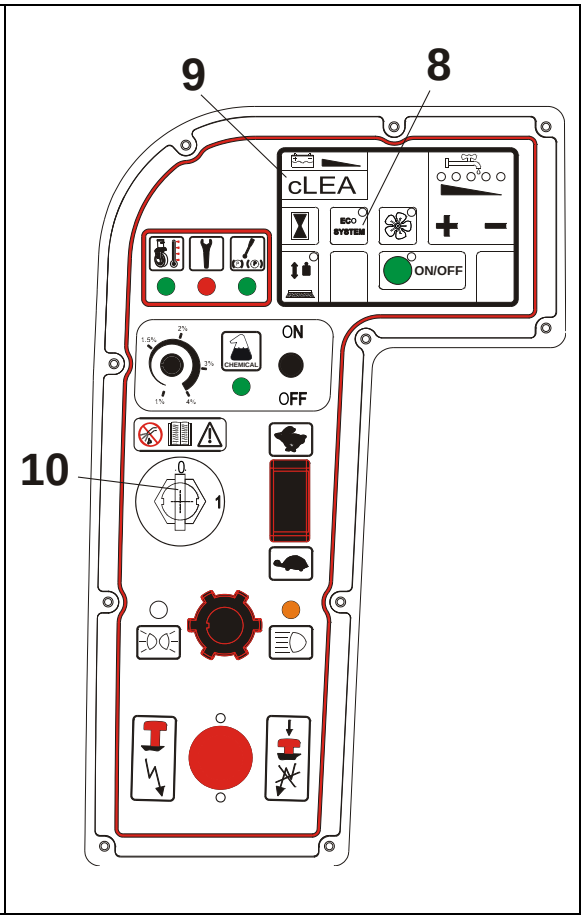
- Turn off the washing function using the ON/OFF button and go to the tank drainage area ;
- Turn off the machine, remove the key and put on the brake.
- Open the hood of the seat pos. 1 by releasing the special safety hook;
- Open the tank lid pos. 2 by lifting it manually till the safety bar pos. 8 gets inserted;
- Remove the safety filter for bigger debris (pos. 3 by holding it from its upper part and pulling it out of the tank. Empty the filter in an appropriate dirt container. Wash the filter with water and remove the pieces which have got stuck through the meshes of the net, if there are any.
  Remove the drain pipe from the dirty water tank (pos6) and while keeping the pipe vertically (pos 5) open the lid by rotating it counterclockwise as indicated by the arrow. Part of the pipe is flexible (pos 7) and therefore it can be squeezed to limit the water flow. Once opened, lay the pipe on the ground.
- After draining the tank, make sure to clean it thoroughly using water. If necessary, for cleaning use the hatch (pos.8) removing the cap (pos. 9).

- Wash the ECO-SYSTEM filter (pos.11) using water throughout the filter, paying attention not to damage it.
  After each working day, carefully remove the filter and wash it inside in order to remove possible encrustations. Before doing it, wash the area surrounding the filter. Unscrew the filter anti-clockwise.
  Do not remove the safety filter pos.10 placed on the connection in which the filter is screwed in. To clean it, wash it with water.
- Wash the level sensors pos.12. **Do not direct the water flow directly onto the sensors as not to damage them.** If necessary, clean them by using a tissue in order to remove the material which might have got stuck in them (metallic debris) and could thus prevent the floating device from closing properly.
- After completing the cleaning procedures, remount the ECO-SYSTEM filter (pos.11), put the cap back on the dirty water drain pipe and rotate it clockwise, then place the pipe back into its housing in the tank.
- The suction pipe on the squeegee (pos. 4) shall be washed periodically, in order to prevent encrustation formation inside the pipe.

CLEANING INSTRUCTIONS ECO-SYSTEM

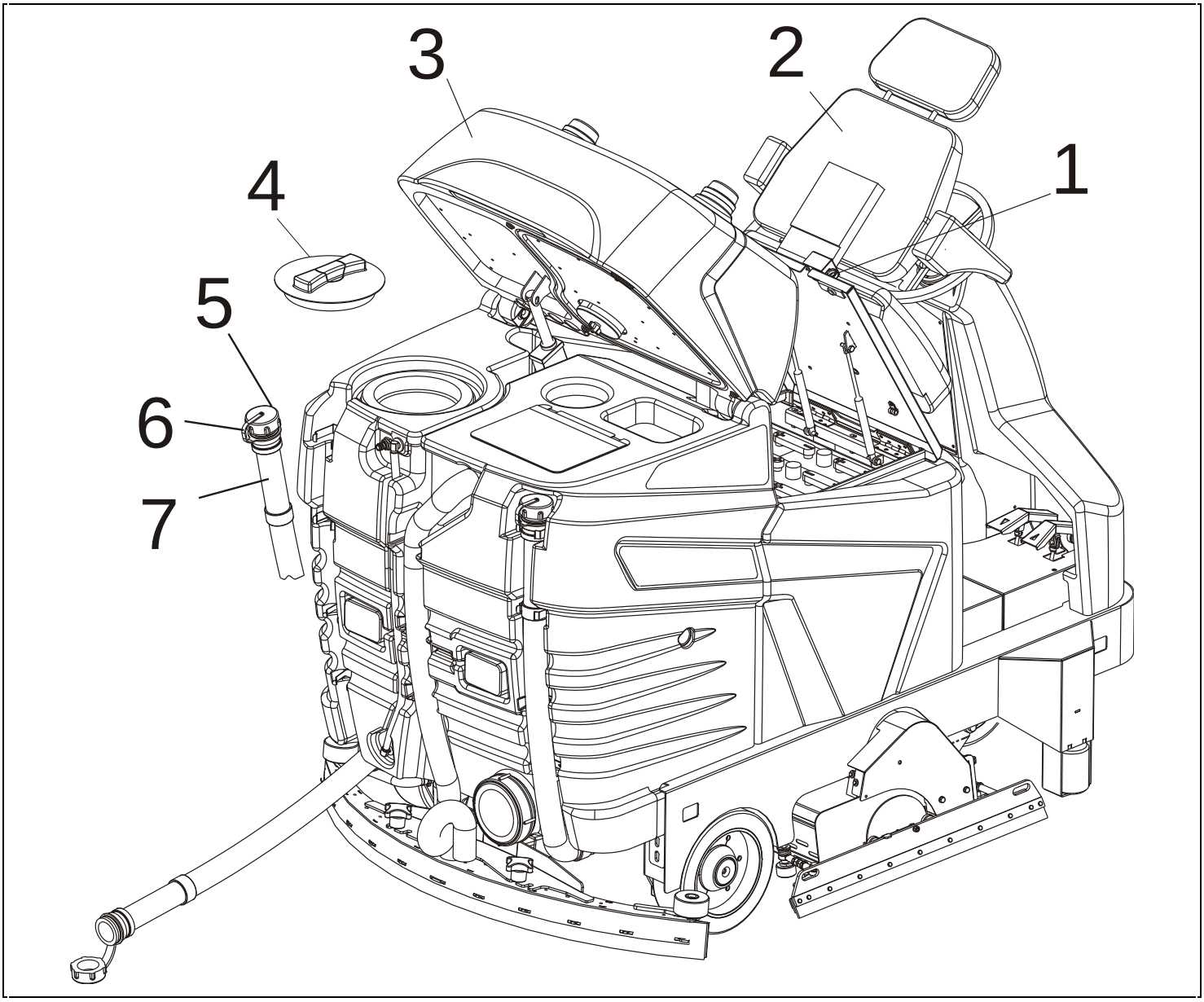
At the end of each working day take the machine to the tank draining area.





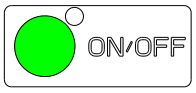
Open the seat hood (pos. 1), by releasing the safety catch;
Open the tank cover (pos.2) by means of the key provided;
Remove the basket (pos.3);
Empty and wash the recovery tank;
Remove and wash carefully the ECO-SYSTEM filter pos.4;
At this point start the ECO-SYSTEM clearing cycle as follows:
With the machine turned off hold the ECO-SYSTEM button pos.8 turn the key (pos.10) in pos.1. Hold the button till the word cLEA appears on the display pos.9.
At this point move to the rear of the machine.
When the pump starts to operate, pour water using a pipe (pos. 6) onto the safety filter (pos. 7) (which must never be removed) so as to allow washing all the ECO-SYSTEM plant (pipes, solenoid valve, pump)
The cleaning operation will last about 40 seconds. If this time is not enough, repeat the complete cycle. To restore the normal functions of the machine, turn off and on the key.
REASSEMBLE THE ECO-SYSTEM FILTER.

DRAINING AND CLEANING THE SOLUTION TANK

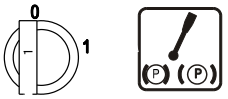


The recovery tank must be drained after each washing operation. In order to drain and wash the tank proceed as follow:

- Turn off the washing function using the ON/OFF button and go to the tank drainage area;



- Turn off the machine, remove the key and put on the brake.



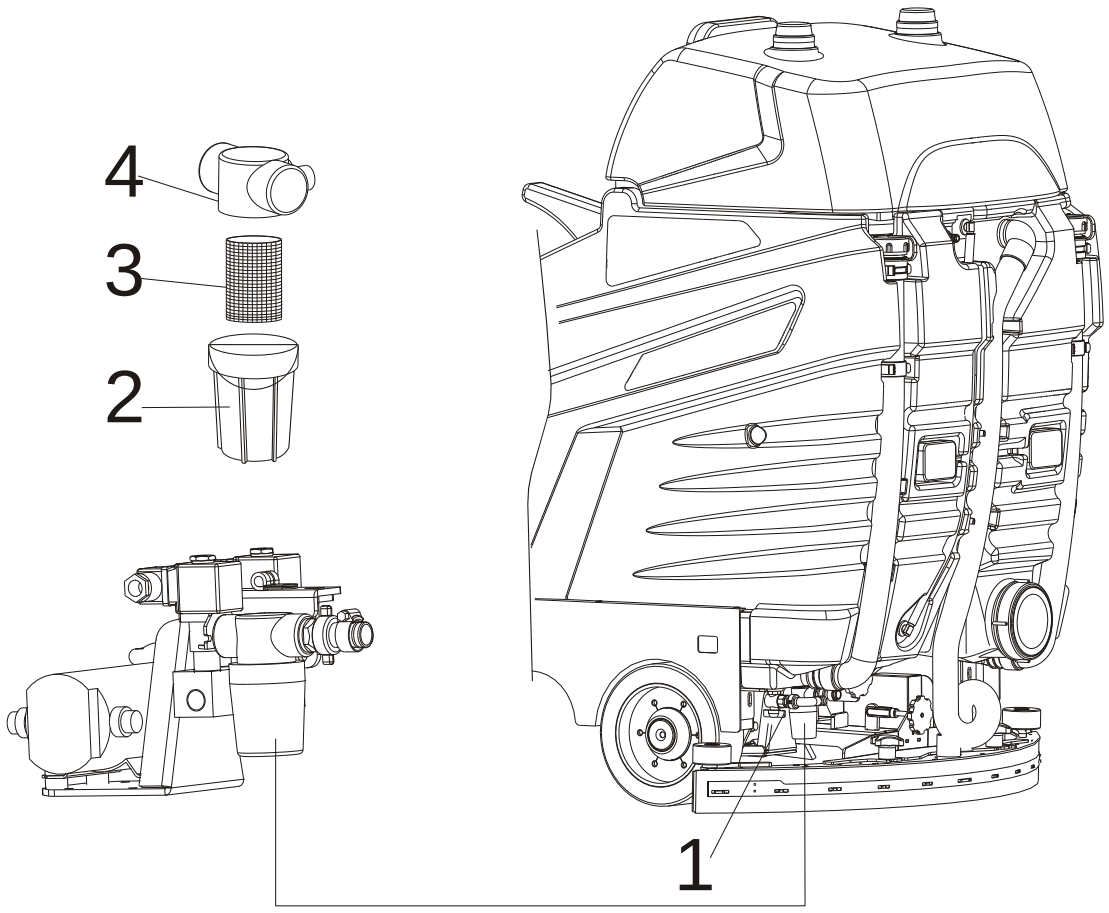
- Remove the drain pipe from the clean water tank (position 6) and while keeping the pipe vertically (position 5) open the lid by rotating it counterclockwise as indicated by the arrow. Part of the pipe is flexible (position 7) and therefore it can be squeezed to limit the water flow. Once opened, lay the pipe on the ground slowly.
- After completing the cleaning procedures, open the hood of the seat pos. 2, by releasing the special safety hook pos. 1;
- Open the solution tank (pos. 3) using the switch provided.
- Unscrew the cap pos.4 and remove it;
- Wash the tank with water by means of a rubber pipe, trying to direct the water flow towards the interior of the machine as to clean it completely.
- Once completing the cleaning procedures, close the cap pos. 4, as well as the dirty solution tank pos.3, and the hood of the seat pos. 2 and place the drain pipe pos.6 with its cap pos. 5 into its housing.

CHECHING BRUSHES

- Check the condition of the brushes and replaced them if they are worn out;
- Check the wear of the brushes: the minimum diameter shall not be less than 115 millimeters;
- Check that there are not any wires, plastic threads or any other material which are tangled with the brush

Every 40 – 50 hours make sure to switch the front brush with the rear brush to even out the wear so they can last longer

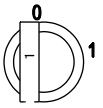
CLEANING THE DETERGENT SOLUTION FILTER



The machine is fitted with a filter on the pipe 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

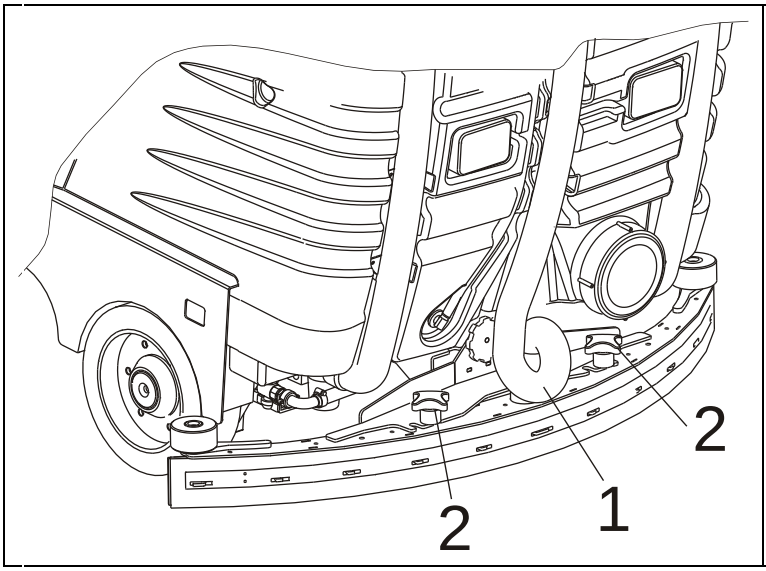
- Bring the machine into a stop position in a flat surface area and put on the brake;

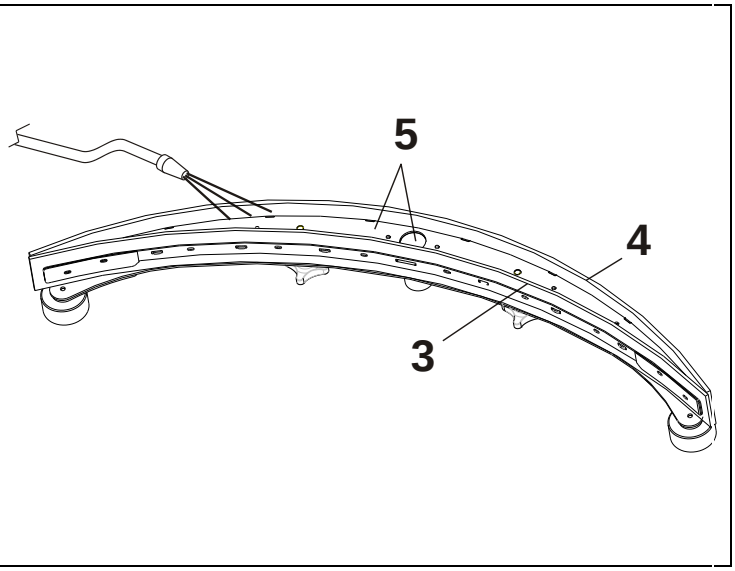
- Turn off the machine and remove the key;



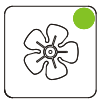
- Close the valve pos.1;
- Remove the transparent cup pos.2
- Remove the protective screen (pos 3) and clean it with water together with the cup;
- Put the cup (see position 2) and the protective screen (see position 3) on the fixed part of the filter (see position 4); make sure the protective screen is fitted correctly into its housing inside the cup and into the support;
- Open the valve pos.1.

CLEANING THE SQUEEGEE

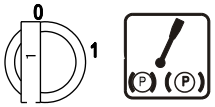




After completing the washing operation, clean the squeegee and make sure the blades are in good condition, then proceed as follows:



- Deactivate the suction function, in case it is active and lift the squeegee

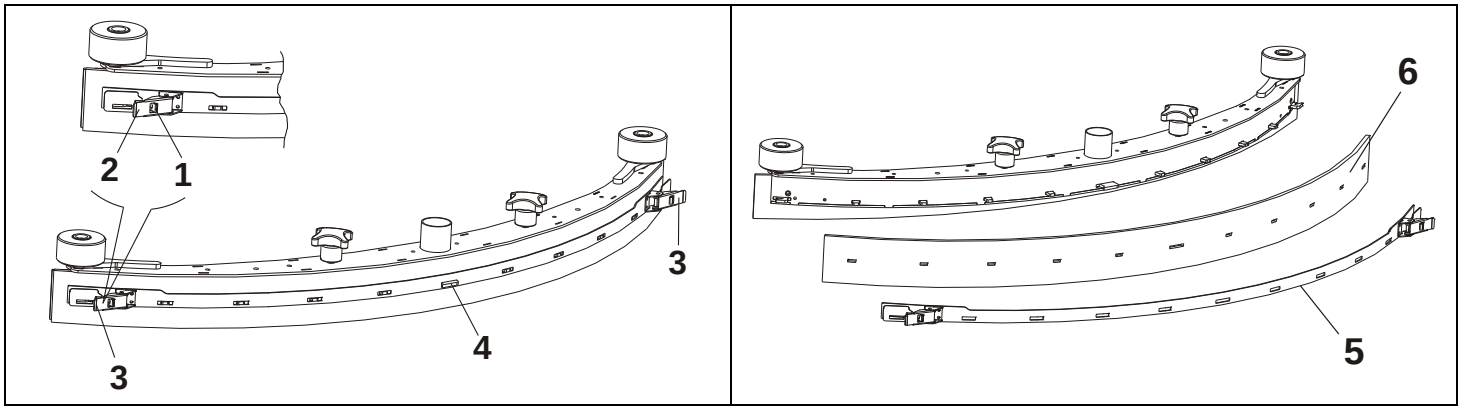


- Bring the machine into a stop position in a flat surface area;
- Turn the key to position 0 and put on the brake
- Unscrew both screw knobs (see position 2 and remove the squeegee vacuum pipe (see position 1);
- Remove the squeegee, lay it on the ground facing up (as shown in the figure), wash it using water and for better vacuum flow, remove any pieces or incrustations from the lower part and from the mouth of the squeegee (see position 5);
- Use a piece of cloth to wipe off the rear drying blade (see position 4) and the front drying blade (see position 3).
- 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.

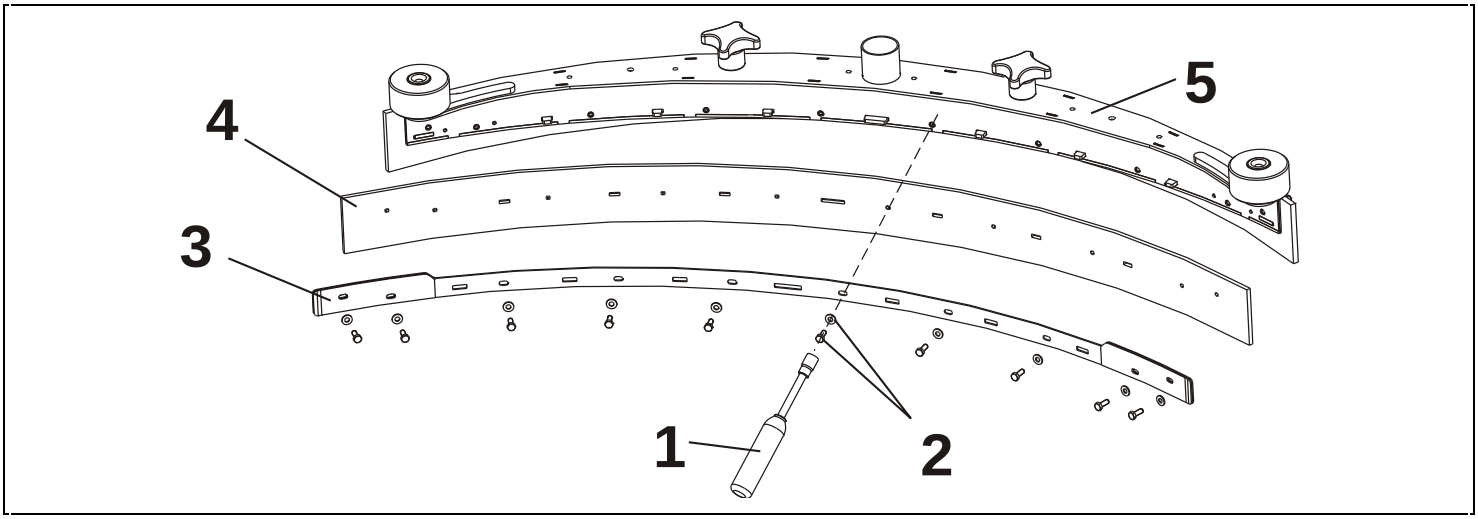
REPLACING THE REAR BLADE



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;
- Remove the blade (see position 6);
- Rotate the blade and mount it back so that a new edge is on the drying side;
- Position the plate on the squeegee fitting it first of all in the centre slot (pos. 4) and then fastening it at the ends.
- By remounting the blade (6) please pay attention that the blade lays on the floor regularly and uniform in its entire length.

REPLACING THE FRONT BLADE



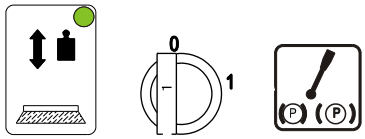
Follow the instructions below to replace the **front blade**:

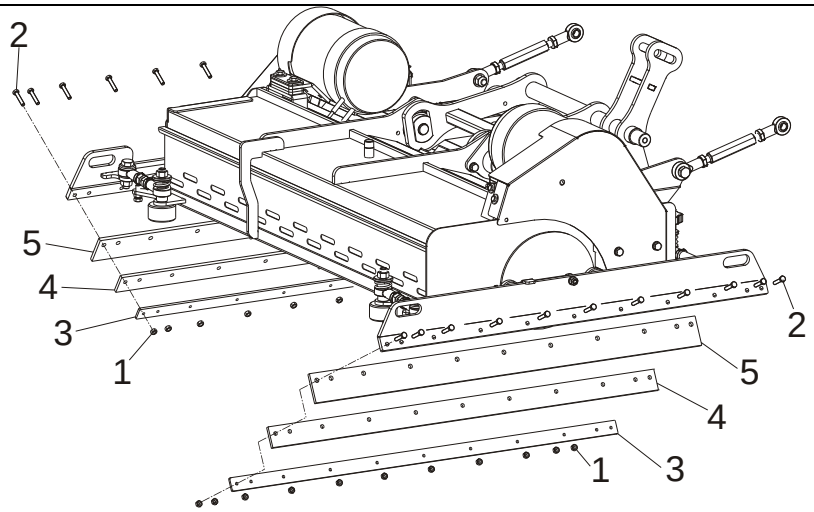
- Remove the squeegee (see position 5) from the machine;
- Use a 10-mm tubular nut driver (see position 1) and remove the 6 screws and the respective washers (see position 2);
- Remove the blade locking plate (see position 3);
- Remove the blade (see position 4);
- Rotate the blade and mount it back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

ROTATING OR REPLACING THE SPLASHGUARD BLADES

Follow the instructions below to rotate or replace the splashguard blades :

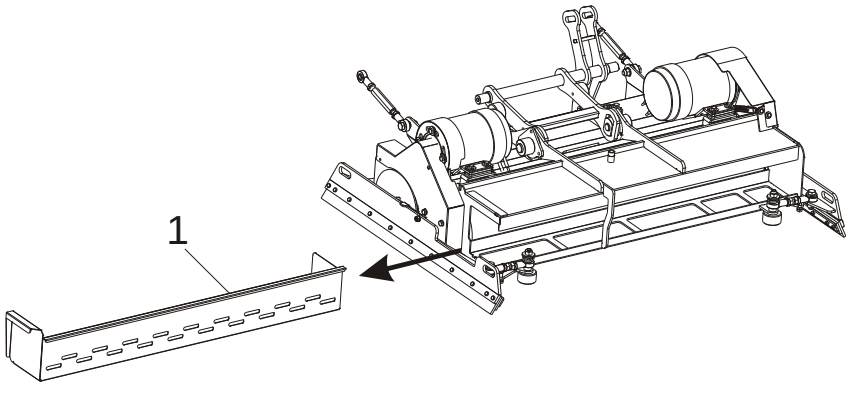
- Turn off the brushes function and lift the brush plate;
- Turn off the machine, remove the key and the battery connector and put on the brake.

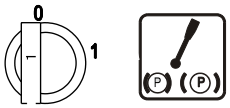




- Use a 10mm hex wrench and remove the nuts (pos 1)
- Unscrew the screws (pos 2)
- Remove the internal rubber locking plate (position 3) and the internal rubber (pos 4);
- Remove the blade (pos. 52), rotate it 180° and put it back into place if the external edge is in good condition, otherwise replace it with a new one
- Put the rubber, the internal plate and the sheet (pos 3) back into place with the anti-slip surface on the rubber, using the screws. Before fixing completely the screws, make sure that the rubber is equally distributed over the entire length. Fix the nuts.

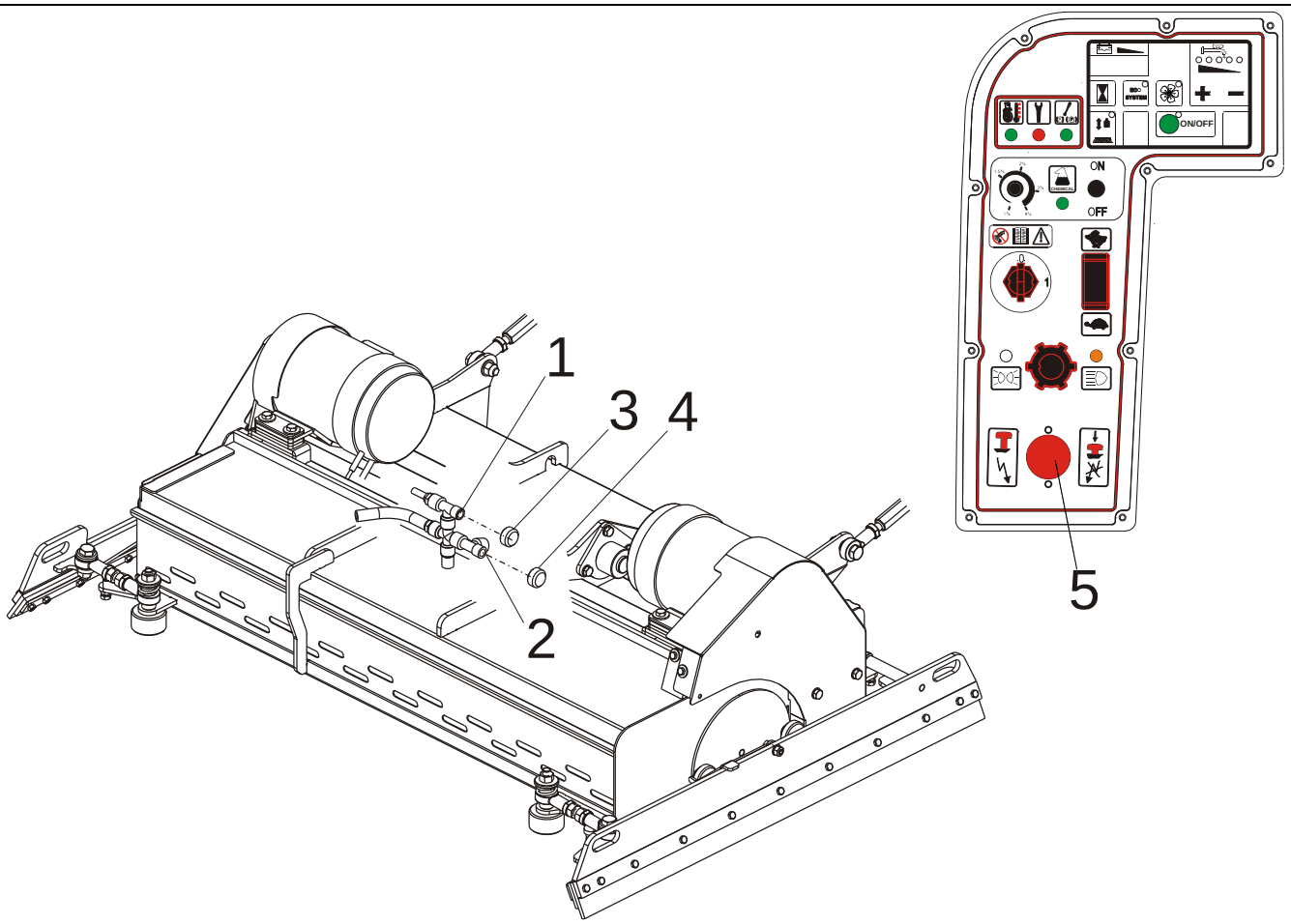
CLEANING THE DIRT CONTAINER





- With the lifted plate turn off the machine and remove the key, insert the brake.
- Lift slightly the dirt container (pos 1) releasing it from its place and remove it.
- Empty the dirt container. Clean the dirt container with water and remove all pieces tangled in the net. Remount the container making sure it is well locked in its place.

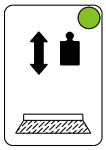
CLEANING THE SOLUTION PIPE FITTING



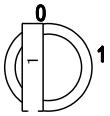
The machine is fitted with a metering pump for clean water and a metering pump for detergent.
If the solution does not flow out of the tank properly, make sure the output pipe fitting is not obstructed or clogged (pos.1and 2).
POS.1: detergent output pipe fitting;
POS.2: clean water output pipe fitting.
To check that proceed as follows:

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

- Lower the brush plate by pressing the special button in the control board;

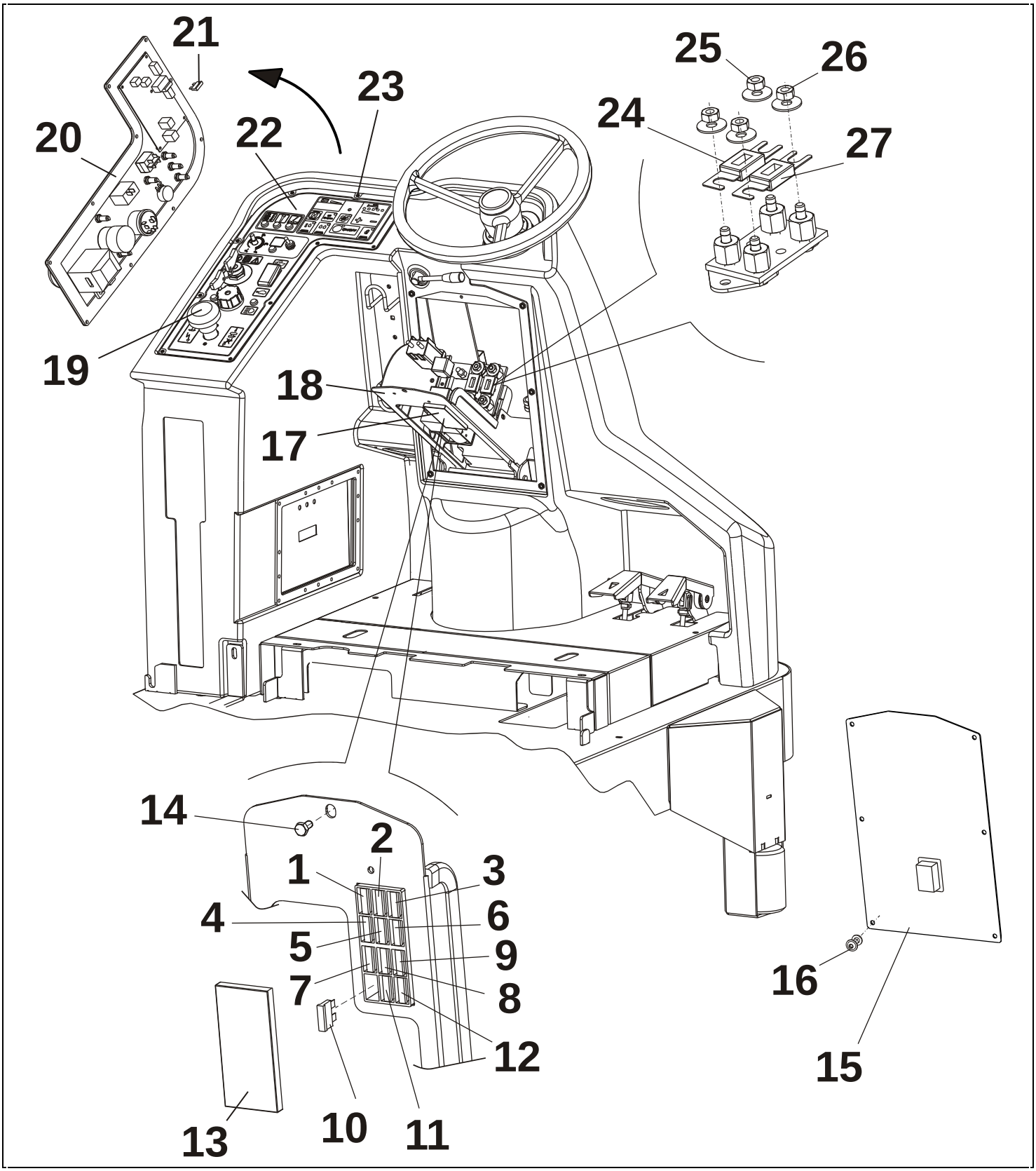


- With the lowered plate, turn off the machine and remove the key;

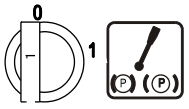


- Press the emergency button (pos.5) so as to interrupt supply.
- Unscrew the cap manually pos.3 OR POS. 4;
- Use a thin piece of wire of approximately Ø2-3 mm and remove any incrustations from the pipe fitting pos.1 or pos.2;
- Mount the cap;
- Pull the emergency button upwards;
- Insert the key and turn it towards the ignition
- After some seconds, the machine will lift automatically the plate and it will be ready to start working.

CHECKING OR REPLACING FUSES



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



- Bring the machine into a stop position in a flat surface area, turn the key in pos. 0 and put on the brake;
- Press the emergency button (pos.19);
- Remove the 6 locking screws pos.16 from the fuse holder hood pos.15 and remove it;
- To make fuse changing more accessible, remove the screw (pos. 14) and open the control panel box (pos. 18) as shown in the illustration;

- In the electric plan there are different fuses and fuse holders that have the following functions:
- There are 12 fuses located in the fuse holder pos.17 and they have the following functions and features
  POSITION 1 : 30 A fuse vacuum motor (STANDARD)
  POSITION 2 : 5 A fuse control board and battery charger protection;
  POSITION 3 : 30 A service supply protection fuse (transformers, function control board, etc);
  POSITION 4 : 10 A fuse pump protection;
  POSITION 5 : 3 A fuse flashing light protection;
  POSITION 6 : 10 A fuse for the protection of the 24V transformer 1 output (drive motor temperature indicator warning light, drive motor temperature alarm buzzer, reverse buzzer, drive system operation warning light, flashing lights)
  POSITION 7 : 5A reverse light protection fuse;
  POSITION 8 : 10 A fuse for the protection of the 24V transformer 2 output (all lights, horn, headlight warning lights, handbrake warning light, handbrake buzzer)
  POSITION 9 : 30 A suction motor protection fuse;
  POSITION 10 : 3 A lid actuator protection fuse;
  POSITION 11 : 3 A drive motor cooling fan protection fuse;
  POSITION 12 : 3 A battery-charger cooling fan protection fuse;
- Fuse pos.24: 80 Ah fuse **BRUSH MOTORS PROTECTION**

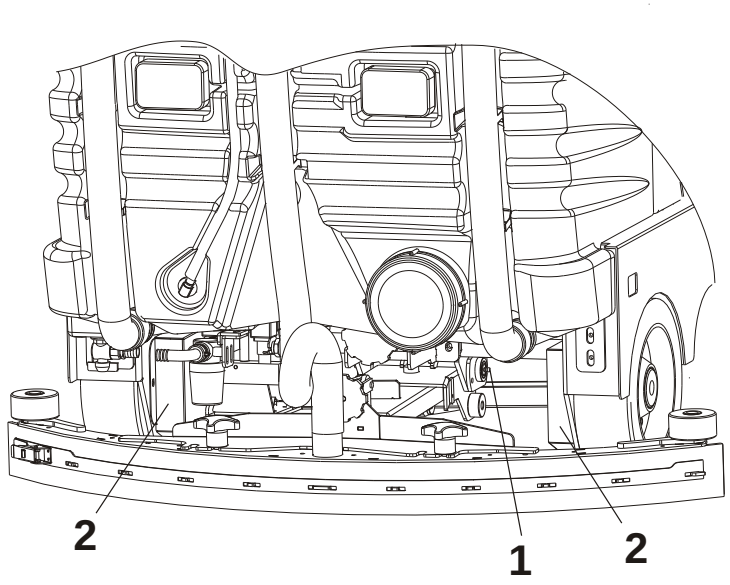
ATTENTION: This fuse is used by the function card to control the correct absorption of brush motors (amperometric protection). It is possible that, although the motor reducers work with a correct absorption, error E1 appears on the display.
In this case there is an oxidation of the fuse that gives a wrong reading.
Please proceed as follows:
- Unscrew the 2 nuts pos.25 that fix the fuse of 80 Ah pos. 24
- Clean the fuse holder and oil it with vaseline
- Reassemble the nuts.

IMPORTANT: use exclusively the spare fuse by Eureka

- Fuse pos.27: 125 A fuse **PROTECTION OF THE DRIVE SYSTEM**
  TO REPLACE IT PROCEED AS FOLLOWS:
  – Remove the 2 nuts pos.26;
  – Replace **125 A fuse** pos.27 with a fuse of equal amperage and with the same manufacturing characteristics;
  – Reassemble the 2 nuts.
- Fuse pos.21: 20 A fuse **CONTROL BOARD CARD PROTECTION**;
  TO CHECK OR REPLACE IT, PROCEES AS FOLLOWS:
- Use a 2.5mm Allen wrench and remove the 10 clamping screws (see position 23) from the instrument panel, including the respective nylon washers;
- Carefully turn the instrument panel (see position 22), follow the arrows and make sure not to jerk it as it may damage the electrical system;
- Remove the **20 A fuse** (see position 21), check it and replace it if necessary with a fuse of equal amperage;
- Put the instrument panel back into place (see position 22);
- Put the washer and screws back into place (see position 23) and close the panel using the special wrench, make sure to apply enough pressure on the seal beneath the panel (see position 20).

Once the fuses are checked or replaced, put everything back together and bring the machine back to its operating condition

GREASING POINTS

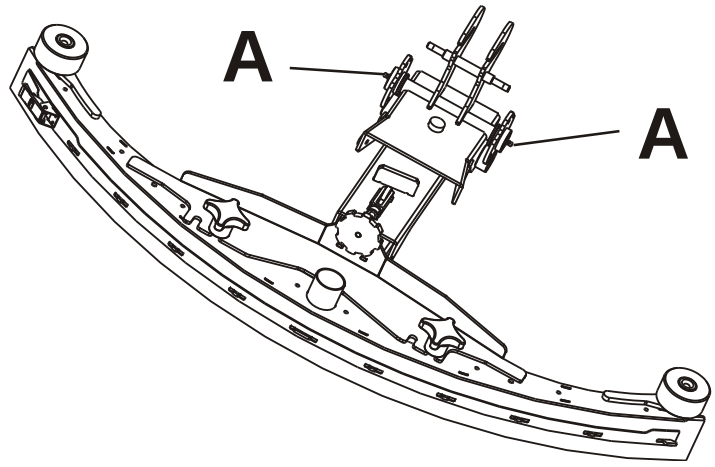


Every 100 hours, grease points A and B shown at POINTS 1 and 2.
POINT 1 - Squeegee rotation pin: fill lubricators (pos. A) using a lubrication pump.
POINT 2 - RIGHT and LEFT wheel brake pin:

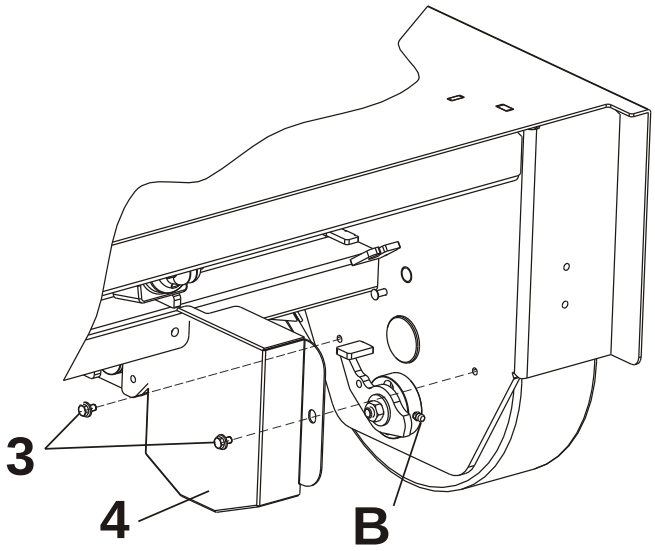
- Remove the 2 screws (pos. 3);
- Remove the protection guard (pos. 4);
- Using a lubrication pump, fill the lubricator (pos. B).
- Fit everything back together again.

Repeat the operation on the brake pin of the LEFT wheel.

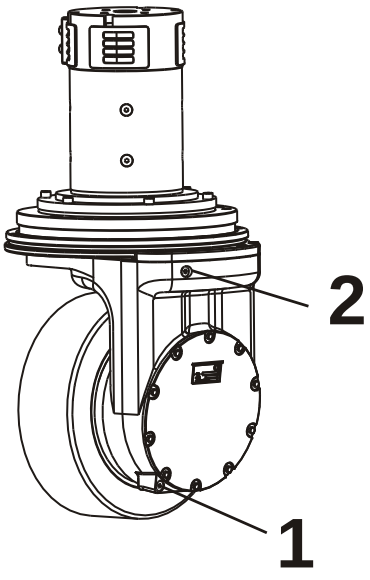
1



2



CHECKING AND REPLACEMENT OF MOTOREDUCER OIL



OPERATIONS TO BE CARRIED OUT ONCE EVERY 500 WORKING HOURS AS TO CHECK THE OIL LEVEL OF THE DRIVE WHEEL REDUCER:

1) Check the oil level by removing the level/oil cap (Pos.2)

2) If necessary, fill up the wheel reducer with SYNTHETIC OR MINERAL OIL SAE 80W90 up to the level and then refit the cap (Pos.2).

OPERATIONS TO BE CARRIED OUT ONCE EVERY 2000 WORKING HOURS AS TO REPLACE THE OIL OF THE DRIVE WHEEL REDUCER

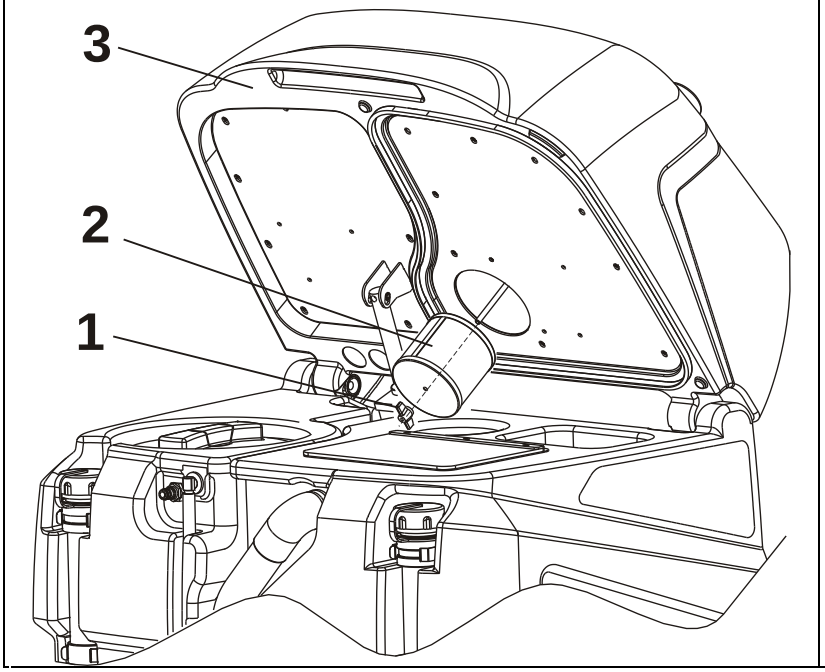
1) Unscrew and remove the level/oil filling cap (Pos.2);
2) Fit a suitable basin for the oil gathering. Then, unscrew the drain plug Pos 1 and remove it as to wait for the oil outflow;
3) Remove any metallic waste which got stuck on the drain plug;
4) Refit the drain plug Pos.1 by means of a proper gasket;

Fill up the reducer with SYNTHETIC OR MINERAL OIL SAE 80W90 up to the level and then refit the oil filling cap (Pos.2).

CLEANING THE SUCTION FILTER

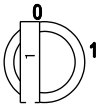
The machine is fitted with a stainless steel washable cartridge filter or – as optional – with a PU filter on the suction duct, which provides two functions:

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.



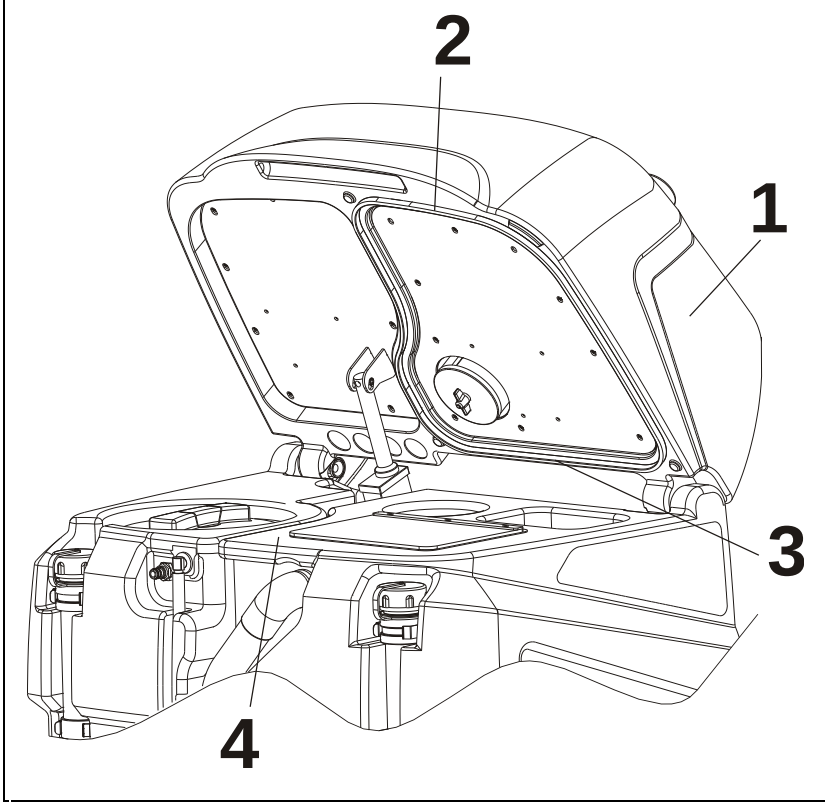
Follow the instructions below to clean the filter:

- Bring the machine into a stop position in a flat surface area and put on the brake
- Open the cover (see position 3);
- Turn off the machine and remove the key.



- Unscrew the locking filter handwheel pos.1;
- Remove the filter pos.2 from its seat;
- Wash the filter with water and dry it using hot air, be careful not to damage it;
- Put the air filter back into place pos. 2;
- Lower the locking filter handwheel pos.1;
- Turn the machine on and close the tank cover.

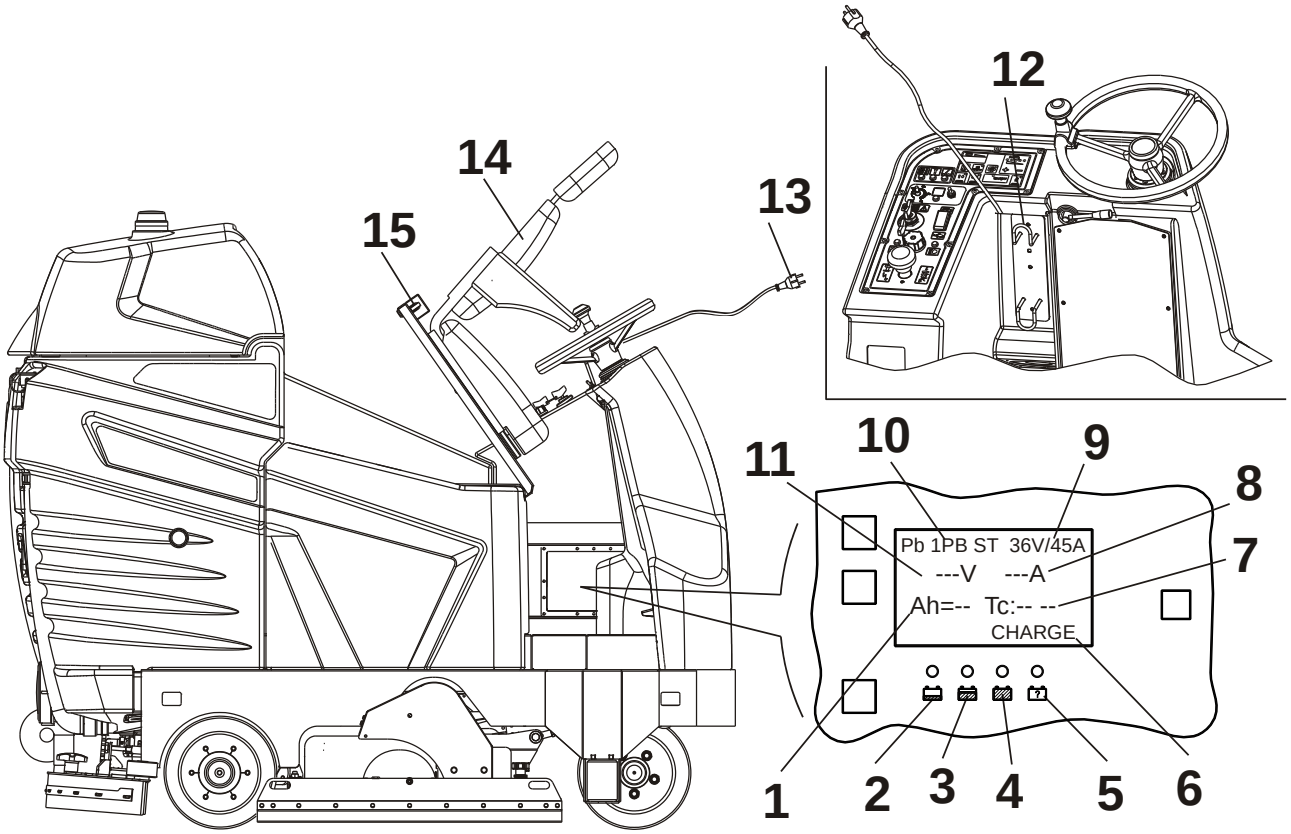
CHECK THE SEAL ON THE COVER



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 1);
- Use a piece of cloth to wipe off the seal (see position 2 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 3);
- Clean the area of the tank where the seal leans (see position 4) when the cover is closed.

RECHARGING BATTERIES



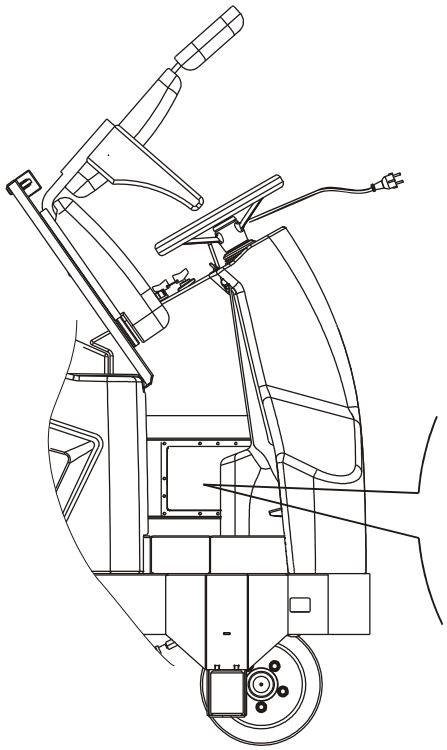
WARNING! THE CHARGER IS PRESET FOR LEAD BATTERIES. TO MOUNT GEL OR AGM BATTERIES, BOTH THE STATUS LED AND THE CHARGER HAVE TO BE SET ACCORDING TO THE TYPE OF BATTERY WHICH IS TO BE USED. TO THIS AIM, PLEASE CONTACT EITHER A TECHNICIAN OR AN AUTHORIZED RETAILER.

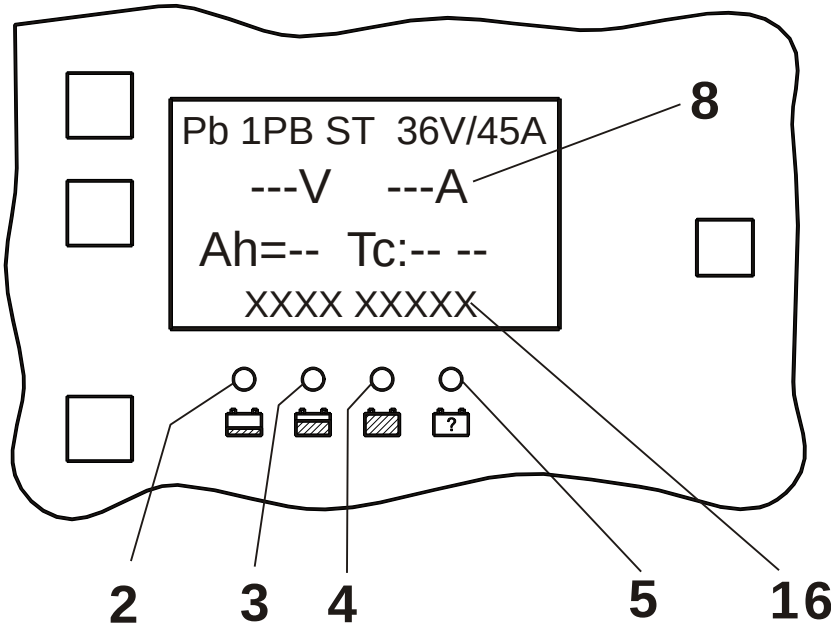
To charge the batteries follow the instructions below:

- Bring the machine into a stop position in a flat surface area, turn it off and put on the brake;
- **Before charging the battery make sure to scrupulously follow the battery charger instruction manual provided with the machine**.
- **The recharging of the battery is to take place in well-aired environments.**
- **Open the hood of the seat pos.14 by releasing the locking device pos.15;**
  The battery charger can run with a voltage range 230 VAC, for the use with different voltages it is advisable to use a proper charger.
- Unwind the cable from the cable reel pos.12 located on board the machine and connect the plug pos.13 into a standard electrical power socket. After fitting in the socket, the battery-charger display screen will light up and, after completion of a start sequence, a series of parameters will be displayed including the type of battery and the set charge curve (pos.10), the size of the battery charger (pos.9), the recharge voltage (pos.11), the recharge amperage pos.8, charged amps (pos.1), recharge time (pos.7).
- The word CHARGE will appear (pos.6) combined with the flashing of the green LED (pos. 2) to indicate that the charge phase is being correctly performed. If the word NO BAT appears in pos.6, this means the battery connector is disconnected. Connect the battery connector and start the charge cycle again.
- The LEDs 2-3-4 indicate recharge progression. At the end of recharge, all 3 will be on.
- **WARNING: WHEN PLUGGING THE BATTERY CHARGER INTO THE ELECTRICAL SOCKET, THE MACHINE FUNCTIONS ARE AUTOMATICALLY DISABLED.**
  Once the charge is completed 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 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.

RECHARGING BATTERIES

WARNING





IMPORTANT!

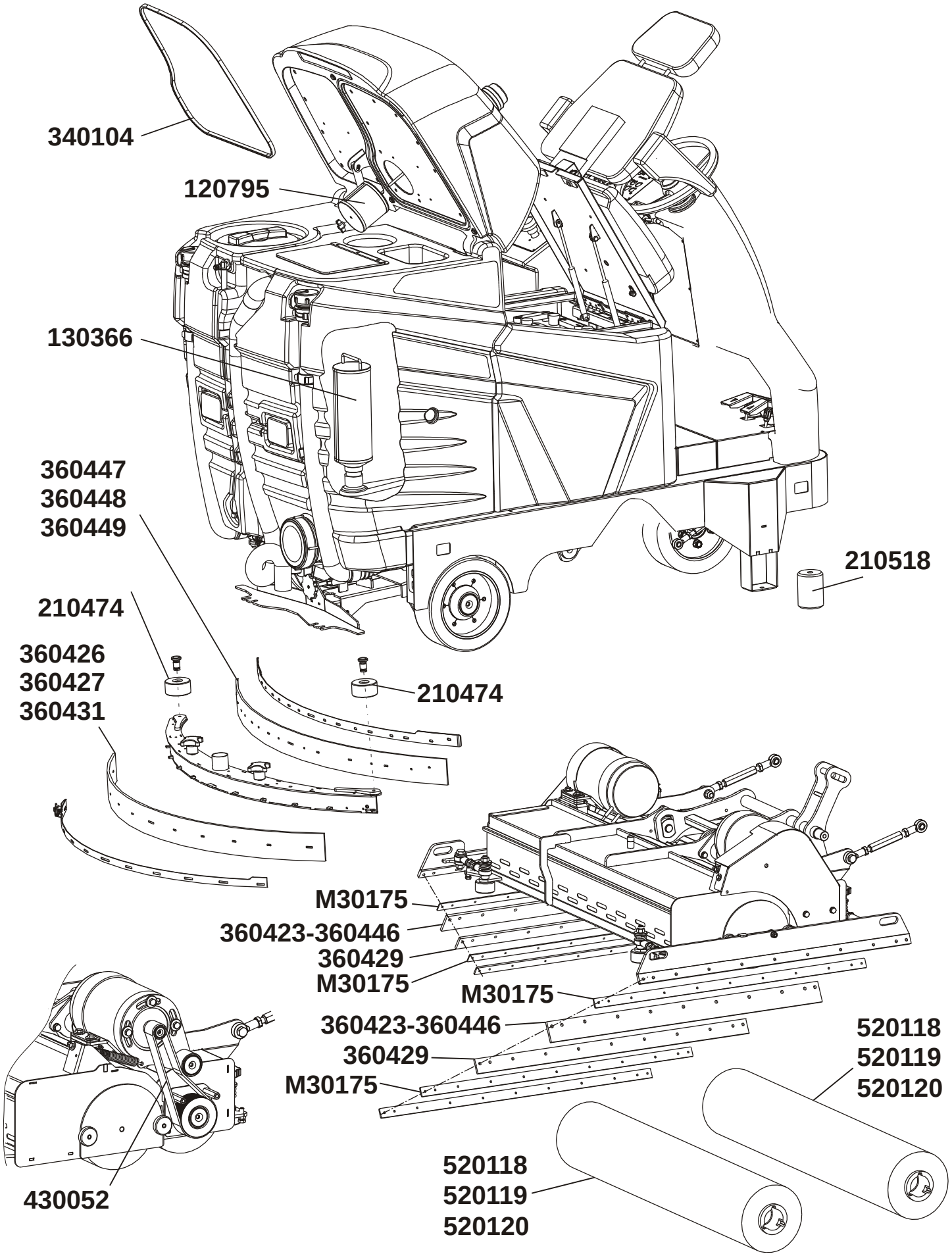
BEFORE DISCONNECTING THE PLUG FROM THE POWER MAINS MAKE SURE:
- **THE LEDS POS. 2 (GREEN), POS. 3 (YELLOW), POS. 4 (GREEN) ARE LIT UP ON THE BATTERY CHARGER SCREEN.**
- **THE POS. 8 INDICATION RELATING TO THE RECHARGE VALUES (AMPS) CORRESPONDS TO " 0 "**

IN THESE CONDITIONS THE BATTERY CHARGER HAS RECHARGED CORRECTLY AND COMPLETELY.

IMPORTANT!

IF BEFORE DISCONNECTING THE PLUG FROM THE POWER MAINS THE LED POS. 2 (GREEN) AND THE LED POS. 5 (RED) ARE ON, THIS MEANS THE BATTERY CHARGER HAS RECHARGED INCORRECTLY AND INCOMPLETELY BECAUSE, DURING RECHARGE, A FAULT HAS OCCURRED.
THE MESSAGE RELATING TO THE TYPE OF FAULT APPEARS INTERMITTENTLY AT THE BOTTOM OF THE SCREEN, POS. 16.
IN THIS SITUATION, IT IS BEST TO CONTACT YOUR DEALER OR TECHNICIAN.

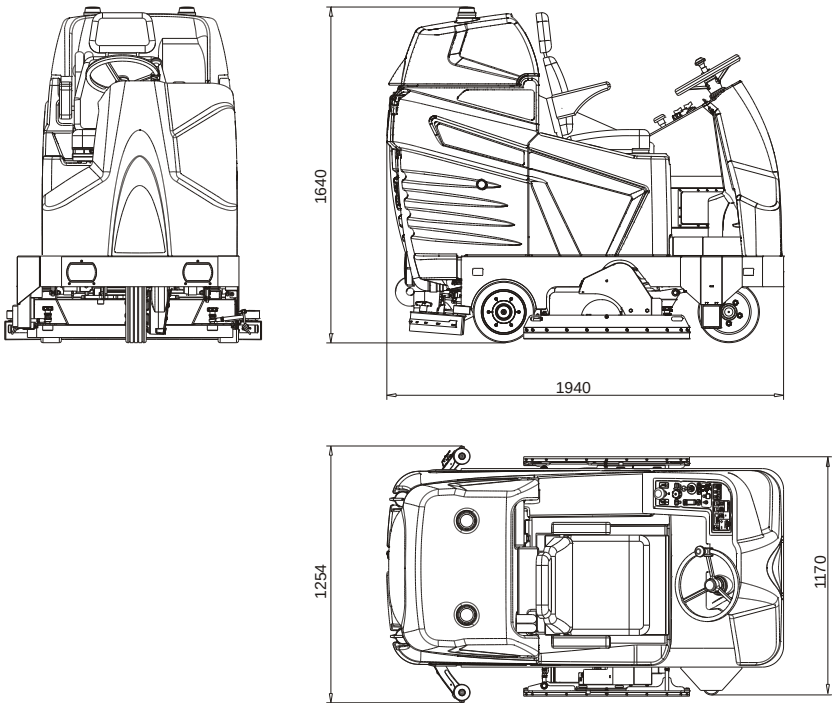
RECOMMENDED SPARE PARTS USED FOR SERVICING. SERVICING OPERATIONS CAN BE CARRIED OUT BY THE USER HIMSELF ON CONDITON IT HAS PREVIOUSLY BEEN INSTRUCTED BY EITHER THE MACHINE OWNER OR HIS EMPLOYER



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

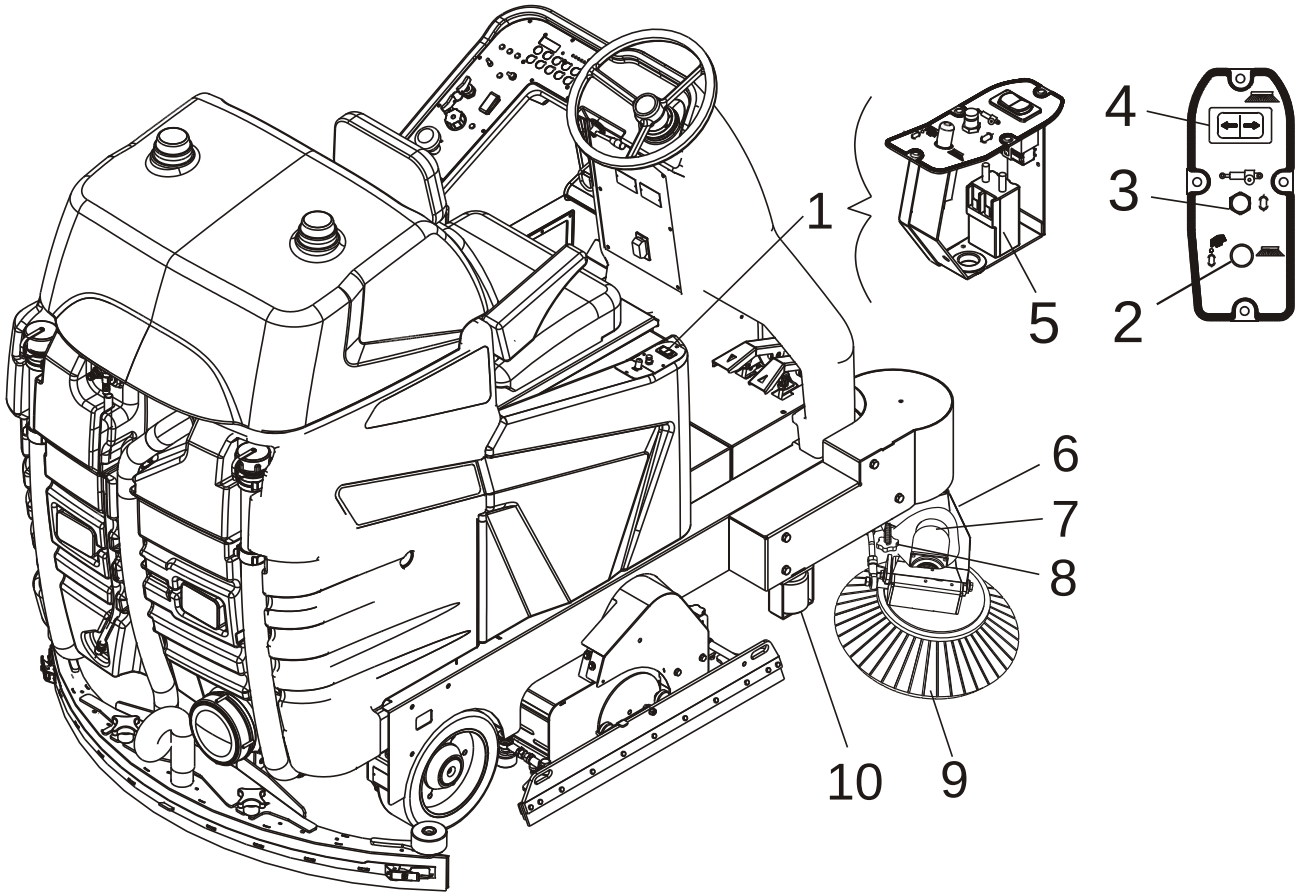
- **COD. 120795 : MOTOR SAFETY FILTER STAINLESS STEEL**
- **COD. 130366 : ECO-SYSTEM FILTER**
- **COD. 210474: BUMPER WHEEL**
- **COD. 210518: BUMPER WHEEL**
- **COD. 340104: COVER GASKET MT. 1.9**
- **COD. 360423: SPLASHGUARD RUBBER LH & RH IN LINATEX 6.35 mm (STANDARD)**
- **COD. 360426 : SQUEEGEE REAR BLADE IN LINATEX - 9.52 mm (OPTIONAL)**
- **COD. 360427 : SQUEEGEE REAR BLADE IN LINATEX 6.35 mm (STANDARD)**
- **COD. 360429: SPLASHGUARD RUBBER LH & RH (STANDARD)**
- **COD. 360431: SQUEEGEE REAR BLADE IN PRIMOTANO – 6.3mm (OPTIONAL)**
- **COD. 360446 : SPLASHGUARD RUBBER LH & RH IN PRIMOTANO 6.3mm (OPTIONAL)**
- **COD. 360447 : SQUEEGEE FRONT BLADE IN PPRIMOTANO – 4.7mm (OPTIONAL)**
- **COD. 360448: SQUEEGEE FRONT BLADE OF LINATEX OF 4.76mm (STANDARD)**
- **COD. 360449: SQUEEGEE FRONT BLADE OF LINATEX OF 6.35mm (OPTIONAL)**
- **COD. 430052: BELT (2 pc each machine).**
- **COD. 520118: 0.9 PPL BRUSH (2 X EACH MACHINE) – (STANDARD)**
- **COD. 520119: 1.2 PPL BRUSH (2 X EACH MACHINE) – (OPTIONAL)**
- **COD. 520120: 1.2mm ABRASIVE BRUSH (2 X EACH MACHINE) – (OPTIONAL)**
- **COD. M30175: ANTI-SLIP PROFILE MT. 0.81 (N°4 PCS EACH MACHINE)**

DIMENSIONAL DRAWINGS



SCRUBBER-DRYER TECHNICAL SPECIFICATIONS	
TECHNICAL CHART	**MODEL**
	E 110 – M 110
SCRUBBING WIDTH	mm 1025
BRUSH PRESSURE	Kg 45
SOLUTION / RECOVERY TANK CAPACITY	Lt 195 - Lt 195 with 175mm of free tank
PRODUCTIVITY	m^2/h 8200
MACHINE WEIGHT (WITHOUT CHARGER & BATTERIES)	Kg 680
MACHINE SIZE (WITHOUT SQUEEGEE)	mm 1940X1170 H=1640
SQUEEGEE WIDTH	mm 1254
BRUSH AND PAD HOLDER DIAMETER, RPM	mm Ø180X980, rpm 740
DIFFERENTIAL MOTOR FOR BRUSHES	V/Watt 36/950
WATER PUMP	V/Watt 24/150
VACUUM MOTOR	V/Watt 36/600
WATER LIFT	mm / H2O 1800
TRACTION	ELECTRONIC
DRIVE BY MEANS OF DIFFERENTIAL MOTOR	V/Watt 36/2600
FRONT WHEEL DIMENSIONS	Ø300 X 100
REAR WHEELS DIMENSIONS	Ø300 X 100
MAX FORWARD AND REVERSE SPEED	Km/h 8 – Km/h 4
MAX GRADIENTS (WITH EMPTY TANK)	19 %
RECOMMENDED 36V-400Ah (INC5) ACID, HEAVY DUTY BATTERY	Mm 614X620X458 h Kg 480
BATTERY TRAY SIZE	Mm 614X620X458h
NOISE LEVEL IN OBSERVANCE OF ISO 3744 – ACOUSTIC PRESSURE MEDIUM LEVEL Lpm=	67.4 dB
VIBRATION: The vibration to which the operator is subjected is below the max allowed by the CE DIRECTORY for industrial machinery (CEE2006/42).	

OPTIONAL
RIGHT SIDE SWEEPING BRUSH



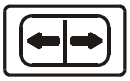
1. SIDE BRUSH CONTROL PANEL

2.

RESET FUSE – When the brush motor exceeds the established current draw for a few minutes, the fuse trips and stops the motor. Wait 1-2 minutes, press the fuse button and the brush will start working again.

3.

FUSE - 3 A glass fuse to protect the brush lifting actuator

4. 

BRUSH CONTROL BUTTON – By pressing the right side of the button, the brush drops and comes out of the side. By pressing on the left side of the button, the brush returns in and lifts up.
NOTE – the side brush only turns when the main brushes are operating.

5. REMOTE-CONTROL SWITCH

6. BRUSH PLATE

7. GEAR MOTOR

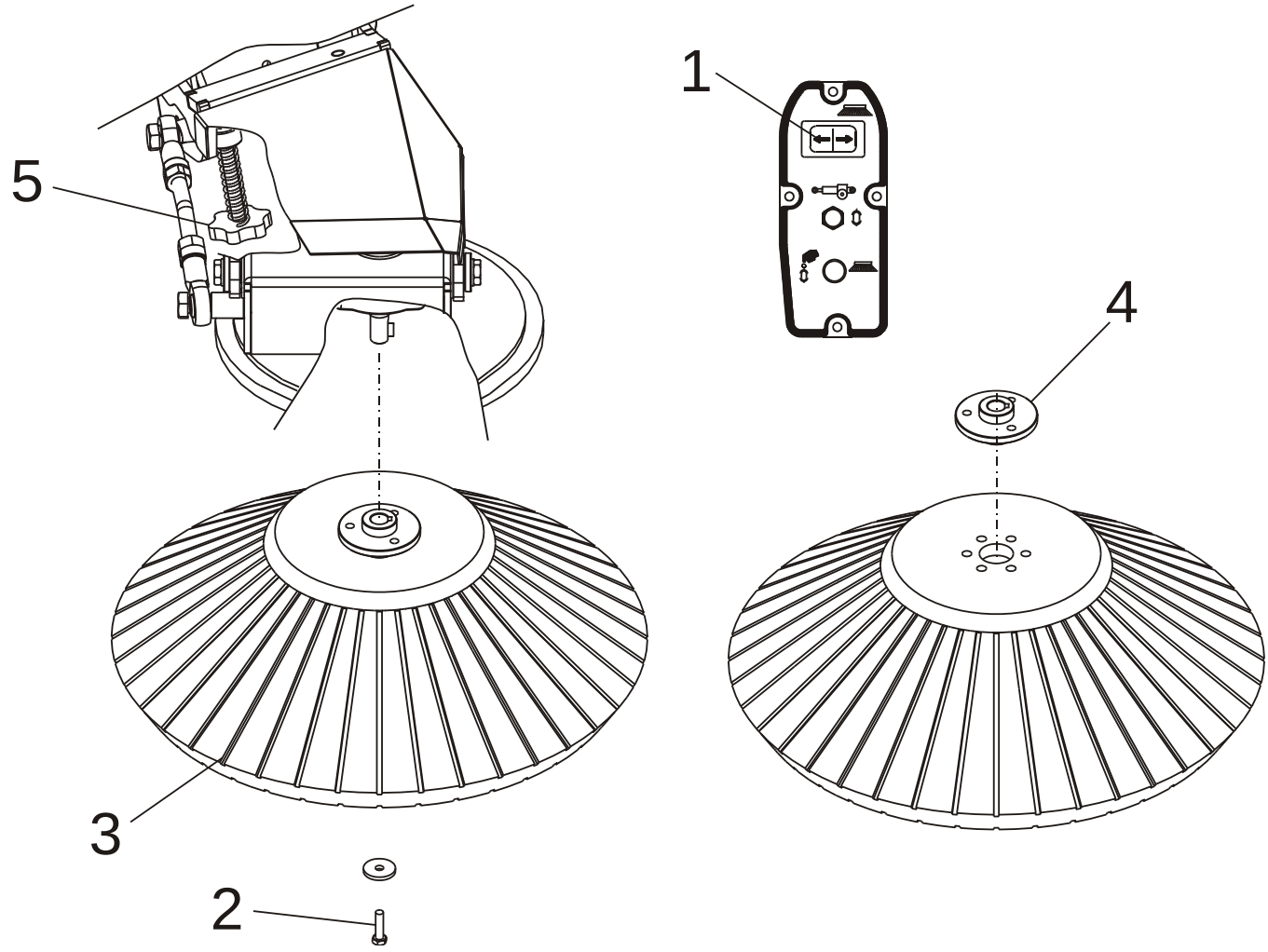
8. BRUSH PRESSURE ADJUSTMENT HANDWHEEL

9. BRUSH

10. BUFFER ROLLER

OPTIONAL
RIGHT SIDE SWEEPING BRUSH

REPLACING AND ADJUSTING THE RIGHT SIDE SWEEPING BRUSH



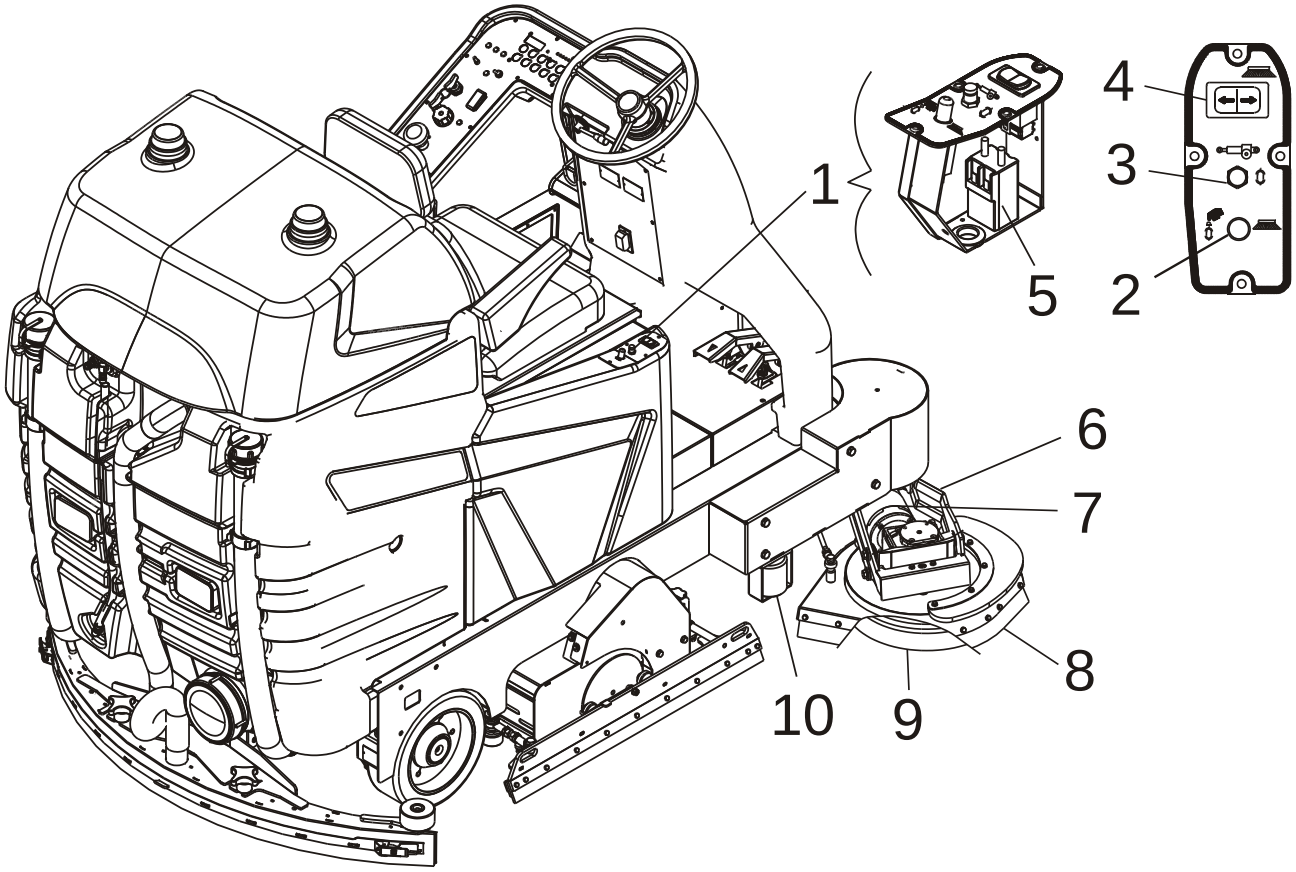
To **replace** the brush, proceed as follows:

- Position the brush in idle condition by means of the control pos. 1;
- Stop the machine on a flat section of floor, engage the parking brake, switch off the machine and interrupt the power supply.
- Using a specific wrench, loosen the screw pos. 2, remove the brush pos. 3 from the gear motor shaft.
- Remove the flange pos. 4 from the old brush and fit it on the new one.
- Fit everything back together again.

The **pressure** of the brush on the floor is adjusted by means of the handwheel pos. 5:

- By tightening the handwheel, the pressure drops.
- By loosening the handwheel the pressure of the brush on the floor increases.

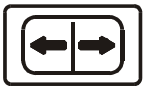
OPTIONAL
RIGHT SIDE SCRUBBING BRUSH



1. SIDE BRUSH CONTROL PANEL

2. RESET FUSE – When the brush motor exceeds the established current draw for a few minutes, the fuse trips and stops the motor. Wait 1-2 minutes, press the fuse button and the brush will start working again.

3. FUSE - 3 A glass fuse to protect the brush lifting actuator

4.  BRUSH CONTROL BUTTON – By pressing the right side of the button, the brush drops and comes out of the side. By pressing on the left side of the button, the brush returns in and lifts up.
NOTE – the side brush only turns when the main brushes are operating.

5. REMOTE-CONTROL SWITCH

6. BRUSH PLATE

7. MOTOR REDUCER

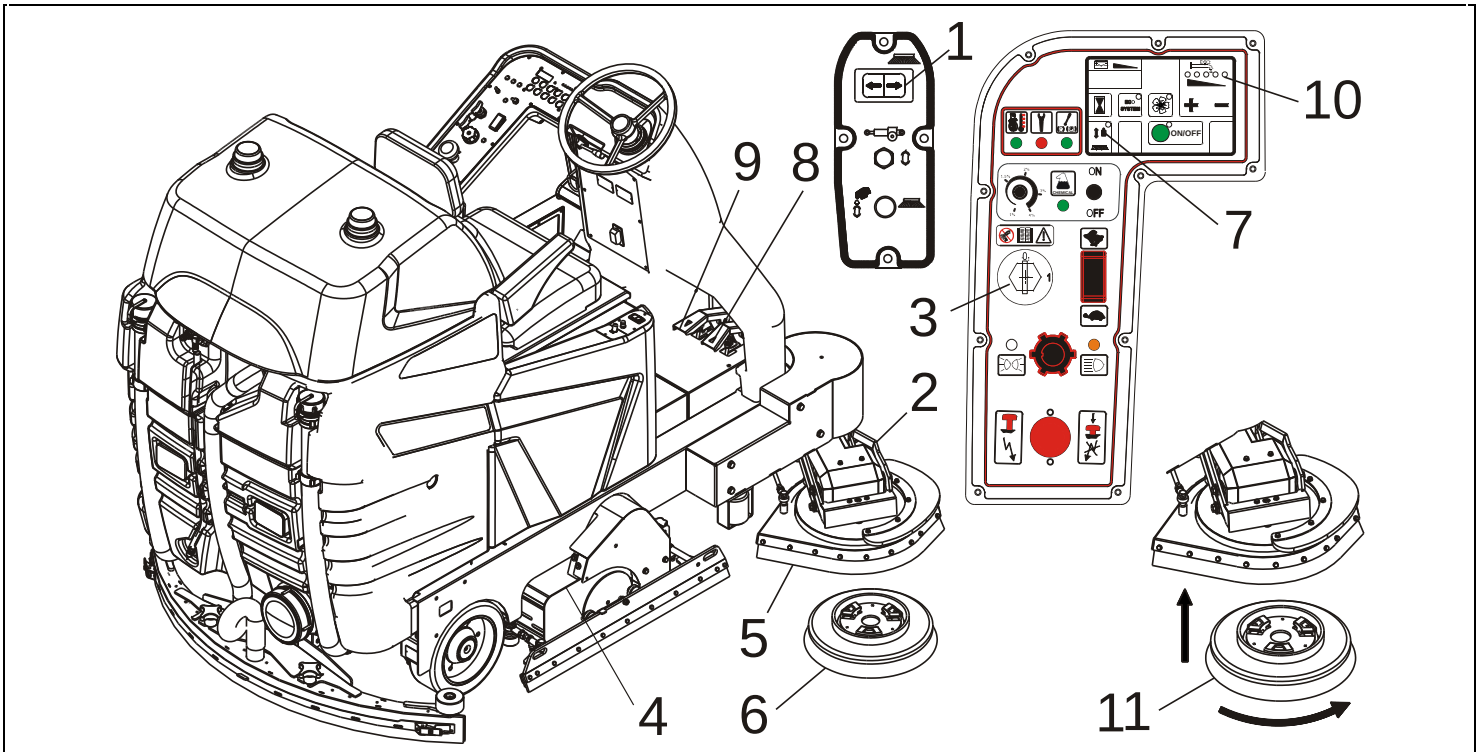
8. SPLASHGUARD

9. BRUSH

10. BUFFER ROLLER

OPTIONAL
RIGHT SIDE SCRUBBING BRUSH

FASTENING AND RELEASING THE BRUSH OR THE ABRASIVE DISC



To **automatically fasten** the side brush or the disc pad holder with abrasive disc, proceed as follows:

- Make sure there is water in the solution tank;
- Stop the machine on a flat piece of floor and engage the parking brake;
- Insert the key (pos. 3);
- By pressing the right side of the button (pos.1) the side brush plate (pos. 2) will come out and drop;
- Remove the key (pos. 3);
- Using your hand, lift the splashguard (pos.5) and the brush plate (pos. 2) and position the brush or the disc pad holder (pos.6) underneath the brush plate.
- Turn the key (pos.3) to position 1 and wait for the machine to perform the entire ignition procedure until the battery charge level appears on the screen.
- Lower the brush plate (pos. 4) by means of the button (pos.7) on the panel.
  NOTE – the side brush only turns when the main brushes are operating.
- Press the forward movement pedal (pos.8) lightly. The brush motors will start to turn and the machine will start moving slowly. Move forward for a short distance and then reverse the direction of movement by pressing the reverse pedal (pos.9) and move backwards slowly until the brush has fastened on. If necessary, repeat the operation. During fastening on operations, we suggest setting the detergent solution flow at 0 (all the LEDs pos. 10 off) to avoid any waste.

To **manually fasten** the side brush or the disc pad holder with abrasive disc, operate as follows:

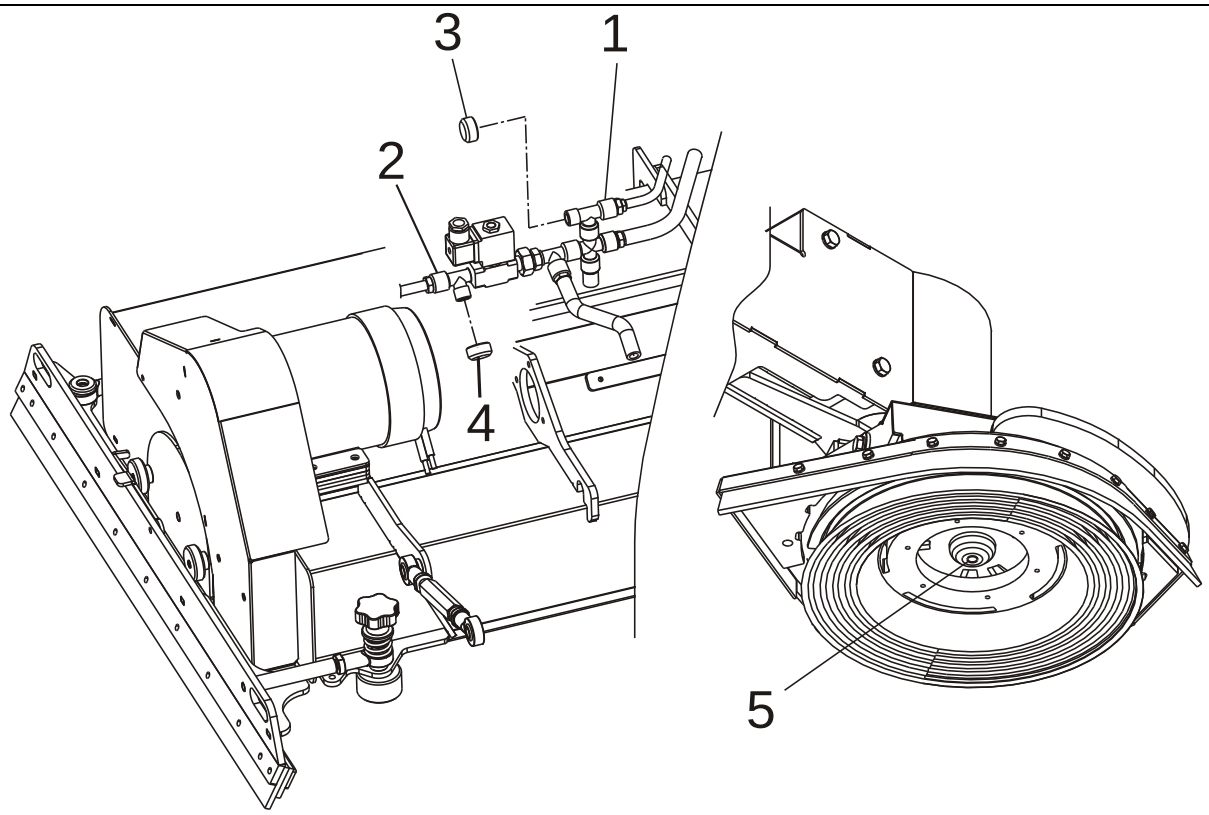
- Stop the machine on a flat piece of floor with the brush plate (pos.2) raised and engage the parking brake and remove the key.
- Manually position the brush (pos. 11) underneath the plate and turn it anti-clockwise.

To **release** the side brush or the disc pad holder with abrasive disc, proceed as follows:

- Stop the machine on a flat piece of floor and engage the parking brake;
- Raise the brush plate by pressing on the left side of the button (pos. 1) and remove the key (pos. 3);
- Manually take the brush and turn it clockwise.

OPTIONAL
RIGHT SIDE SCRUBBING BRUSH

CLEANING THE SOLUTION DOSER CONNECTOR



The machine features a pump that regulates the flow of clean water and a metering pump that regulates the flow of detergent.
In case of any flow blockage, make sure the nozzles indicated in pos. 1 and 2 are not blocked.
POS.1: detergent flow nozzle;
POS.2: clean water or solution flow nozzle.
To do this, proceed as follows:

- Stop the machine on a flat section of floor and engage the parking brake;
- Keep the side brush plate raised;
- Lower the central brush plate by pressing the relevant key on the panel;
- In this situation, switch off and remove the key; remove the battery connector;

NOZZLE POS. 1

- Unscrew the cap (pos.3) manually;
- With a piece of metal wire (Ø2-3 mm) remove any scale from the nozzle (pos.1);
- Fit the cap back on;

NOZZLE POS. 2

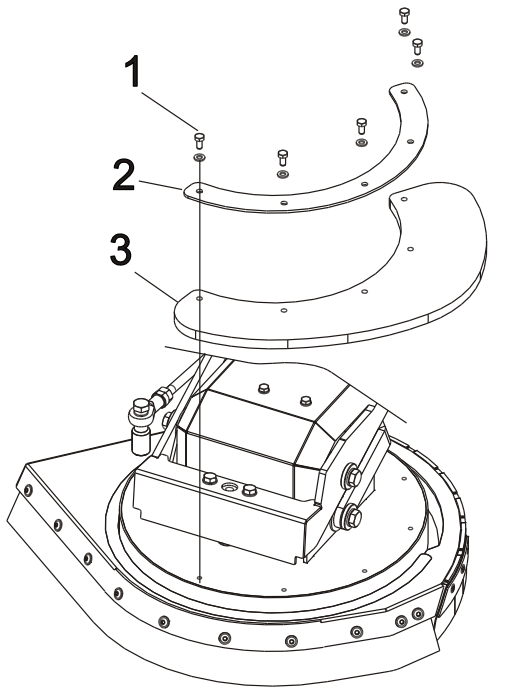
- Unscrew the cap (pos.4) manually;
- Blow compressed air inside the water pipe through the hole on the hub (pos.5) until this comes out of the nozzle (pos.2). To make the operation easier, if necessary remove the brush.
- Fit the cap back on.

To start the machine again:

- Fit the battery connector, insert the key and turn it in the direction of ignition;
- After a few moments, the machine will automatically raise the central brush plate and will be ready to operate again.

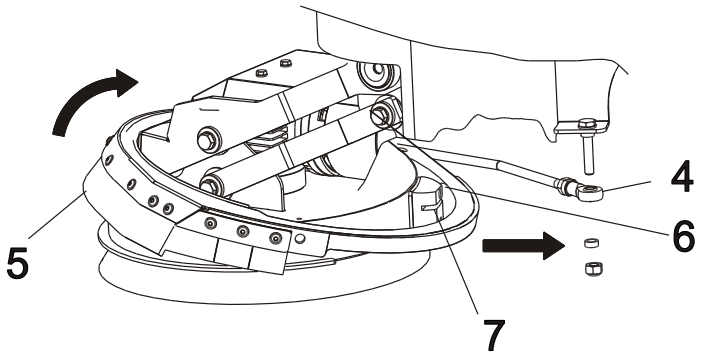
OPTIONAL
RIGHT SIDE SCRUBBING BRUSH

REPLACING THE SPLASHGUARD BLADES

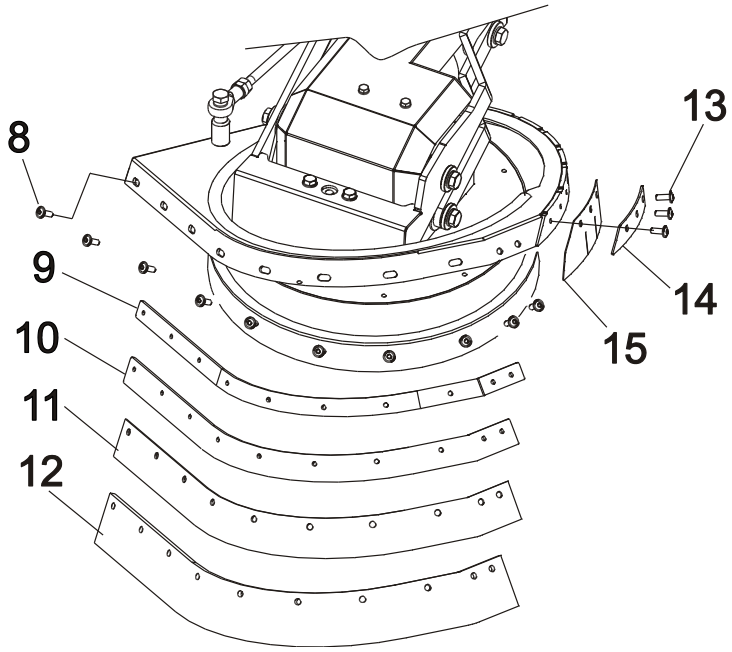


Position the machine on a flat section of floor with the side brush plate lowered and engage the parking brake; remove the battery connector

- Remove the screws and the relevant washers (pos. 1)
- Remove the plate (pos. 2) and the bumper (pos. 3)



- Release the tie-rod (pos. 4)
- Remove the splashguard (pos. 5) from its seat: lift in at the opposite point with respect to block position (pos. 6) just enough for it to come out, by pushing in the direction of the arrow, from the guide slit (pos. 7).



- Remove the screws (pos. 8), remove the plate (pos. 9), remove the nylon reinforcement (pos. 10) and then the inner blade (pos. 11) and the external blade (pos 12).
- Replace the blades (pos. 11-12).
- Fit everything back together again making sure that the blades protrusion is uniform along its entire length with respect to the support

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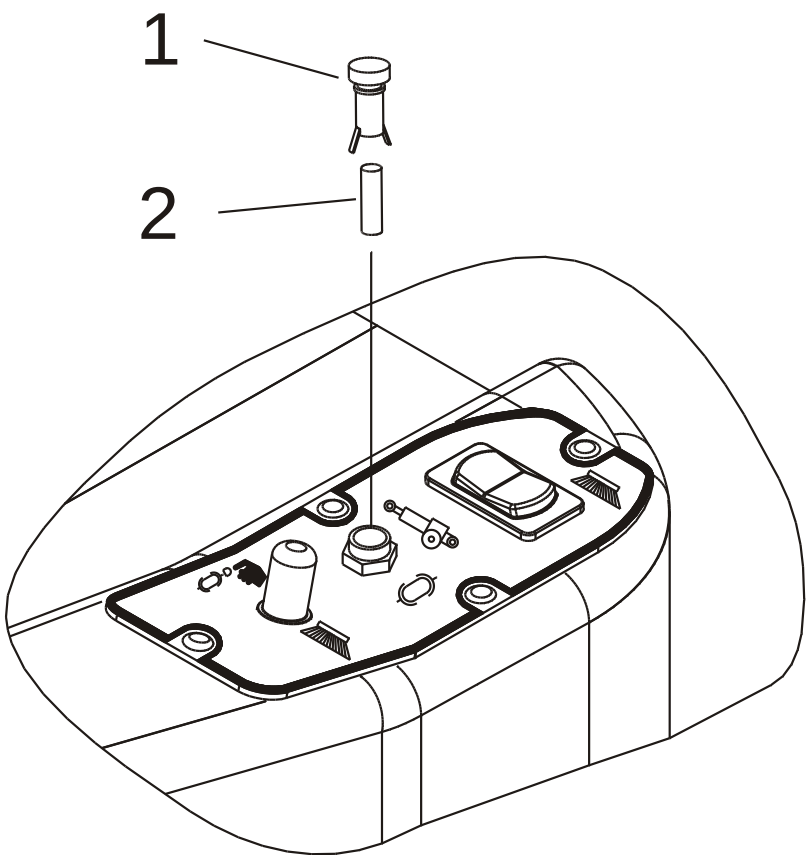
- Remove the screws (pos. 13), remove the plate (pos. 14), remove the blade (pos. 15)
- Replace the blade (pos. 15) and fit everything back together

OPTIONAL
RIGHT SIDE SWEEPING - SCRUBBING BRUSH

CONTROL AND RELACEMENT OF THE FUSE ON THE PANEL



The side brush control panel features a 3 A glass fuse to protect the actuator which operates the brush.
To check and replace the fuse proceed as follows:

- Disconnect the battery connector.
- Turn the fuse carrier cover (pos. 1) by 1/4 of a turn anticlockwise and remove it; the fuse is connected to the cover.
- Check and if necessary replace the fuse (pos. 2), removing it from the cover, with another having the same ampere and features.
- Fit the new fuse in the cover and then fit everything back together again.
- Reconnect the connector to the battery.

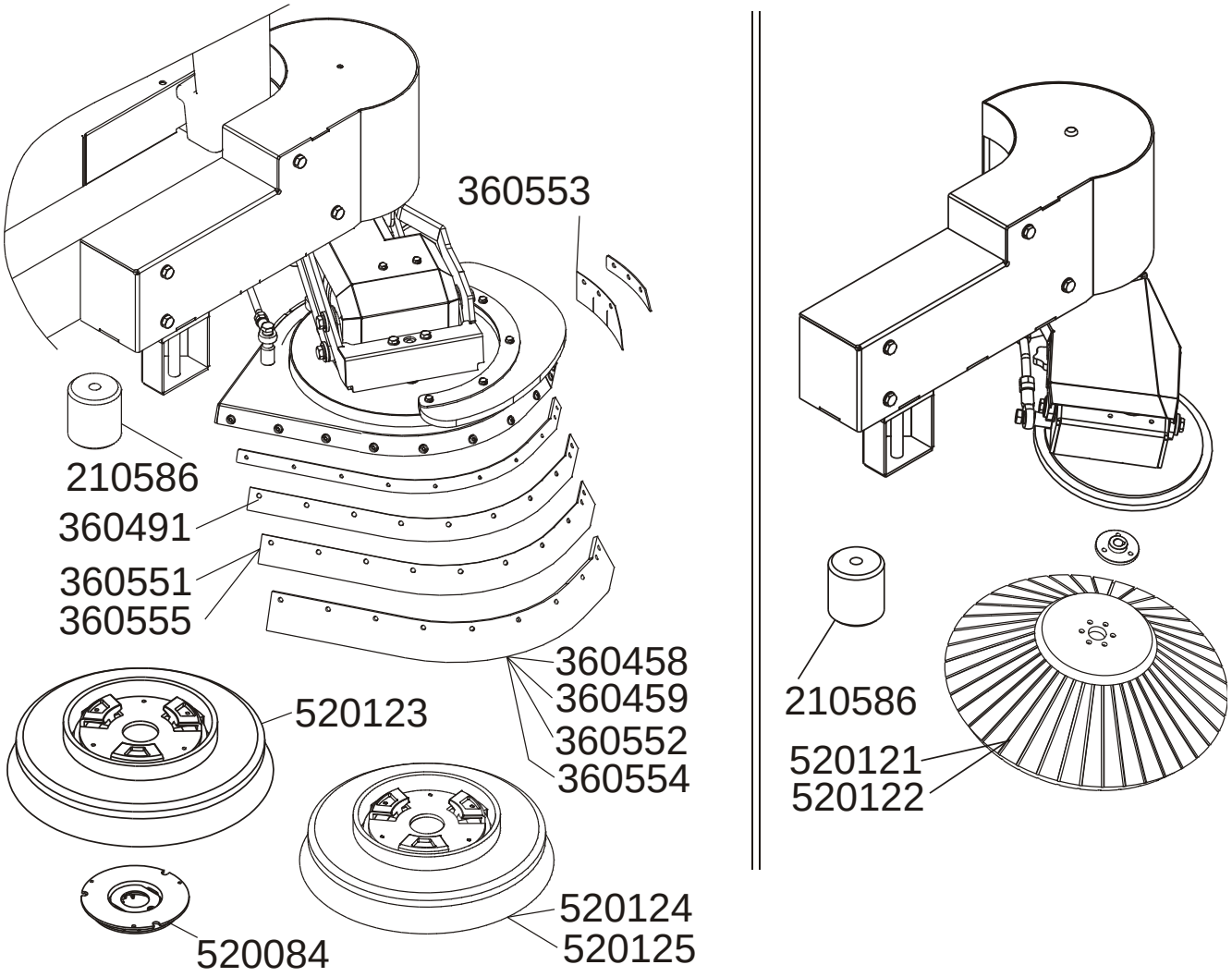
OPTIONAL
RIGHT SIDE SWEEPING - SCRUBBING BRUSH

TECHNICAL CHART WITH SIDE SWEEPING BRUSH	
TECHNICAL CHART	**MODEL**
	E 110 – M 1100
BRUSH SIZE – RPM N°	mm Ø 420 rpm 100
BRUSH MOTOR REDUCER	V/Watt 36/200
CLEANING PATH	mm 1400
CLEANING CAPACITY	m^2/h 11200
MACHINE WEIGHT (WITHOUR CHARGER & BATTERIES)	Kg 730
NOISE LEVEL IN OBSERVANCE OF ISO 3744 – ACOUSTIC PRESSURE MEDIUM LEVEL Lpm	67.4 dB
VIBRATION: The vibration to which the operator is subjected is below the max allowed by the CEE 2006/42 DIRECTORY for industrial machinery.	

TECHNICAL CHART WITH SIDE SCRUBBING BRUSH	
TECHNICAL CHART	**MODEL**
	E 110 – M 1100
BRUSH SIZE – RPM N°	mm Ø330X380 rpm 740
BRUSH MOTOR REDUCER	V/Watt 36/400
CLEANING PATH	mm 1335
CLEANING CAPACITY	m^2/h 10680
MACHINE WEIGHT (WITHOUR CHARGER & BATTERIES)	Kg 740
NOISE LEVEL IN OBSERVANCE OF ISO 3744 – ACOUSTIC PRESSURE MEDIUM LEVEL Lpm	67.4 dB
VIBRATION: The vibration to which the operator is subjected is below the max allowed by the CEE 2006/42 DIRECTORY for industrial machinery.	

OPTIONAL
RIGHT SIDE SWEEPING/SCRUBBING BRUSHES

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. 210586: WHEEL
- COD. 360458: SPLASHGUARD EXTERNAL BLADE IN PRIMOTHANE 6.3 MM - OPTIONAL
- COD. 360459: SPLASHGUARD EXTERNAL BLADE IN LINATEX 6.3 MM –OPTIONAL
- COD. 360491: SPLASHGUARD BLADE SUPPORT IN NYLON
- COD. 360551: SPLASHGUARD INNER BLADE IN LINATEX 4 MM – STANDARD
- COD. 360552: SPLASHGUARD EXTERNAL BLADE IN LINATEX. 4 MM – STANDARD
- COD. 360553: SPLASHGUARD BLADE
- COD. 360554: SPLASHGUARD EXTERNAL BLADE IN PRIMOTHANE 4 MM - OPTIONAL
- COD. 360555: SPLASHGUARD INNER BLADE IN PRIMOTHANE 4 MM - OPTIONAL
- COD. 520084: LOCKING DISK – SCRUBBING BRUSH
- COD. 520121: SWEEPING BRUSH IN PPL Ø1 MM
- COD. 520122: SWEEPING BRUSH IN PPL Ø1.4 MM
- COD. 520123: PAD HOLDER – SCRUBBING BRUSH
- COD. 520124: SCRUBBING BRUSH IN NYLON ABRASIVE
- COD. 520125: SCRUBBING BRUSH IN PPL Ø 0.9 MM

TROUBLE-SHOOTING CHART

IMPORTANT! ALL MAINTENANCE JOBS OR TESTS, WITH THE EXCEPTION OF THOSE DESCRIBED IN THE MANUAL, MUST ONLY BE PERFORMED BY AN AUTHORISED AFTER-SALES CENTRE (AAC)

PROBLEM	CAUSE	SOLUTION
The battery gets discharged	1. Either exhaust or broken elements	Replace it
The display of the control card does not switch on when inserting the key	2. Flat or worn out battery	Recharge it
	3. 5A fuse burn out (pos. 2 fuses box)	Replace it
	4. 30A fuse burn out (pos.3 fuses box)	Replace it
	5. Services supply remote switch faulty	Replace it
	6. Emergency switch pressed	Unblock it
	7. Battery mobile connector disconnected	Connect it
	8. Key operated switch broken	Replace it
	9. Control board is broken	Replace it
When you press the brush button the brush plate can not be lowered	10. Flat or worn out battery	Recharge it
	11. Faulty actuator	Replace it
	12. Faulty card	Replace it
	13. Actuator control module on the control board is broken	Replace it
	14. Some material got entangled underneath the brush plate thus preventing it from lowering	Remove the material as to unlock the brush plate
	15. Empty tank. The water output pipe lights are flashing	Fill the tank
	16. Faulty floating device	Replace it
The brush motor does not rotate	17. Flat or worn out battery	Recharge it
	18. Electric remote switch is broken	Replace it
	19. Control board is broken.	Replace it
	20. Amperometric protection cut-out switch of the motor reducers **THE WRITING "E1" APPEARS ON THE CONTROL BOARD**	Turn the machine off and start it again by the key, reactivate the cut-out switch. Check that there aren't any threads or any other material which might get tangled with the brush
	21. The thermal drill of the brush motor reducers intervenes	Wait until the machine gets cool and start it again. Check that there aren't any threads or any other material which might get tangled with the brush
	22. Carbons are worn out	Replace it
	23. 80A Fuse burn out	Replace it
	24. Faulty engine	Replace it
The drive does not work	25. Brake is engaged	Disengage it
	26. Flat or worn out battery	Recharge it
	27. Seat safety device engaged	Sit down
	28. Key disconnected	Insert it
	29. 125A protection traction fuse is faulty	Replace it
	30. Wheel gear motor is faulty	Repair/replace it
	31. Wheel motor is broken or blocked	Repair/replace it
	32. Motor carbons are worn out	Replace it
	33. Faulty electric motor remote switch	Replace it
	34. Electronic control board is broken	Replace it
	35. Faulty pedal box	Repair/replace it
	36. Faulty pedal control	Repair/replace it
RED LIGHT on the control board; the alarm enters into function and the gear motor comes to a stop.	37. The temperature on the forward gear motor exceeds 75-85° C.	Wait till the temperature falls down before re-starting the machine- Check the reason of the over-heating (climbs, over absorption etc.) Clean the motor air inlets.
	38. Faulty relay	Replace it
By pushing the brake pedal, the machine does not stop	39. Blocked pedal	Check it
	40. Blocked clamps	Replace it
	41. Worn clamps	Replace it
	42. Broken steel rope	Replace it

PROBLEM	CAUSE	SOLUTION
Not enough water flow on the brush	43. Tap is closed	Open the tap
	44. Faulty solenoid valve of the detergent solution.	Replace it
	45. Clogged detergent solution filter	Clean the filter
	46. The solution pipe from the tank to the brush is clogged	Make sure there is no incrustations
	47. Faulty 10A pump fuse	Replace fuse pos. 4 of the fuse-holder.
	48. Worn out carbons of the pump motor	Replace them
	49. Pump either clogged or faulty	Check the pump / replace it
	50. Clogged solution pipe fitting	Clean the pipe fitting (see pag.34 - pos.3)
	51. Control board is broken	Replace it
Not enough water flow on the brush with the ECO-SYSTEM	52. Faulty ECO-SYSTEM solenoid valve of the detergent solution	Replace it
	53. Clogged ECO-SYSTEM filter.	Clean it
	54. Control board is broken	Replace it
	55. Clogged pipe from the recovery tank to the brush	Make sure there is no incrustations
	56. Faulty 10A pump fuse	Replace fuse pos. 4 of the fuse-holder
	57. Worn out carbons of the pump motor	Replace it
	58. Pump either clogged or faulty	Check the pump / replace it
	59. Clogged solution pipe fitting	Clean it (see pag.34 - pos.3)
When the detergent dosing device is started by means of the switch on the panel, there is little or no detergent flow	60. Detergent can finished	Replace the can
	61. Clogged filter on detergent suction pipe	Clean the filter
	62. Detergent pump blocked or faulty	Check the pump or replace it
	63. Function control board faulty	Have it replaced
	64. Dosing device connector blocked	Clean the connector (see page 34–pos. 4)
The green warning light on the control board card indicating -when switched off- the correct functioning of the drive electric control is blinking	65. Diagnosis for led flashings	
	- **ON: NO ERRORS, NORMAL CONDITION**	
	- OFF: ERROR INSIDE THE REMOTE SWITCH	Replace it
	- 1 FLASHING: personalization out of spec.	Check it
	- 2 FLASHINGS: the micro of the seat are open	Sit down
	Forward pedal pushed when inserting the key	Release the pedal and push it again
	- 3 FLASHINGS: short circuit MOSFET	Replace it
	- 4 FLASHINGS: remote control switches are faulty	Replace it
	- 5 FLASHING: not used	
	- 6 FLASHINGS: - white thread n°46 as of diagram n°L8125 interrupted or not properly inserted	Connect it
	- the pedals are blocked, stiffen and do not come back onto their original seat	Connect/replace them
	- the potentiometer inside the control box does not function correctly	Check it
	- 7 FLASHINGS: low or high battery voltage	Recharge the battery
	- 8 FLASHINGS overheating or temporary cutback, when at 75°C the current starts to get off, at 90°C it stops	Wait till it cools up.
By pressing the vacuum button, the squeegee does not lower	66. Flat battery	Recharge it
	67. Reverse speed microswitch engaged	Put the forward speed microswitch
	68. Faulty actuator	Replace it
	69. Faulty card	Replace it
	70. Faulty actuator on the electronic control card	Replace it
	71. Material underneath the squeegee prevents it from lowering	Remove the material which got entangled in the squeegee
	72. The recovery tank is full; the floating device gets inserted and the button led is on	Empty the tank
	73. Faulty float device	Replace it
The suction motor does not work	74. Flat batteries	Recharge them
	75. 30A suction motor fuse worn out	Replace the fuse – Pos. 1 of the fuse holder
	76. Vacuum motor disconnected	Check the motor wiring
	77. Vacuum motor is faulty	Replace it
	78. Vacuum motor carbons are worn out	Replace it
	79. Control board is broken	Replace it
	80. Faulty remote switch	Replace it

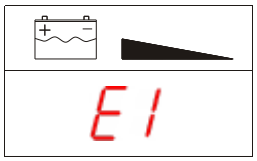
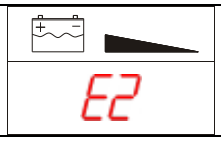
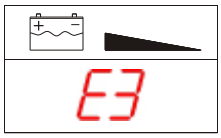
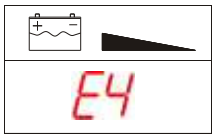
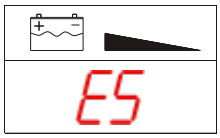
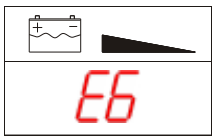
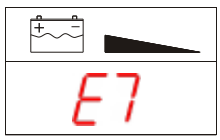
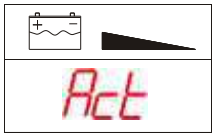
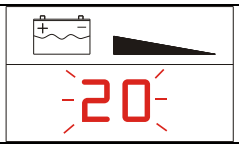
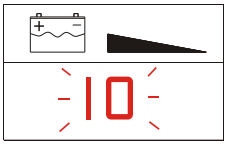
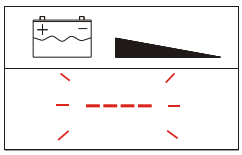
PROBLEM	CAUSE	SOLUTION
Not enough suction on the squeegee	81. Recovery tank is full	Empty the tank
	82. Lid on the exhaust pipe is open	Tight the lid
	83. Vacuum pipe disconnected	Verify that it is mounted properly
	84. Vacuum pipe is clogged	Clean the vacuum pipe
	85. Faulty vacuum pipe	Replace the pipe
	86. Dirty squeegee	Clean the squeegee
	87. The squeegee is not adjusted properly	Adjust inclination and pressure
	88. Material tangled with the squeegee blades	Clean the blades
	89. Squeegee blades either broken or worn out	Reverse the blade or replace them
	90. The tank is either open or not properly closed	Close or verify the lid
	91. Damaged lid gasket	Replace the gasket
	92. Faulty suction motor	Replace or check the motor
	93. Flat batteries	Recharge them
Front lights and side lights not working	94. Light faulty	Replace
	95. Switch faulty	Have it replaced
	96. Fuse carrier 10A fuse pos.8 faulty	Replace it
	97. Transformer no. 2 faulty	Replace it
	98. Service supply remote switch faulty	Have it replaced
Stop lights not working	99. Light faulty	Replace
	100. Micro switch on brake pedal faulty	Have it replaced
	101. Fuse carrier 10A fuse pos.8 faulty	Replace it
	102. Transformer no. 2 faulty	Replace it
	103. Service supply remote switch faulty	Have it replaced
Reverse lights not working	104. Light faulty	Replace
	105. Reverse light relay faulty	Have it replaced
	106. Fuse carrier 5A fuse pos.7 faulty	Replace it
	107. Fuse carrier 10A fuse pos.6 faulty	Replace it
	108. Transformer no. 1 faulty	Have it replaced
	109. Service supply remote switch faulty	Have it replaced
Reverse buzzer not working	110. Buzzer faulty	Have it replaced
	111. Fuse carrier 10A fuse pos.6 faulty	Replace it
	112. Transformer no 1 faulty	Have it replaced
	113. Service supply remote switch faulty	Have it replaced
Flashing lights not working	114. Lights faulty	Replace
	115. Fuse carrier 3A fuse pos.5 faulty	Replace it
	116. Fuse carrier 10A fuse pos.6 faulty	Replace it
	117. Intermittence faulty	Have it replaced
	118. Transformer no.1 faulty	Replace it
	119. Service supply remote switch faulty	Have it replaced
Tank inspection cover does not open	120. Suction unit on	Switch off suction unit
	121. Toggle switch faulty	Replace switch
	122. Toggle switch connector disconnected or badly connected	Check the connector connection
	123. Relay faulty	Have it replaced
	124. Fuse carrier 3A fuse pos.10 burnt out	Replace it
	125. Service supply remote switch faulty	Have it replaced
	126. Fuse carrier 30A fuse pos.3 burnt out	Replace it
	127. Actuator faulty	Have it replaced

OPTIONAL
RIGHT SIDE SWEEPING/SCRUBBING BRUSH TROUBLESHOOTING TABLE

IMPORTANT! ANY TYPE OF MAINTENANCE SERVICE OR TEST, EXCEPT FOR THOSE DESCRIBED IN THE MANUAL, MUST ONLY BE PERFORMED BY AN AUTHORIZED AFTER-SALES CENTRE (AAC)

PROBLEM	CAUSE	SOLUTION
Brush plate does not come out	128. Key detached 129. Fuse burnt out 130. Actuator faulty 131. Brush plate rotation pin blocked	Insert key Replace Replace Remove and check pin. If damaged, replace.
Brush does not turn	132. Key detached 133. Main brush plate not lowered 134. Reset fuse tripped 135. Gear motor faulty.	Insert key Lower the brush plate Reset the fuse; if the problem continues, check the causes. Have it replaced.
SIDE SCRUBBING BRUSH		
No water comes out	136. Brush plate not lowered 137. LEDs on panel relating to water flow are not lit up 138. Water control solenoid valve blocked or faulty. 139. Pipe clogged.	Lower the brush plate Insert one or more LEDs on panel Have it replaced. Clean pipe

CHECKING THE ALARMS ON THE DISPLAY OF THE CONTROL BOARD

ALARM	CAUSE	SOLUTION
	Amperometric protection by the cut-out switch for over-absorption of the brush motor. The led light of the brush bottom flashes for 5 sec and then the writing E1 appears, the plate will lift.	Stop the machine and start it again. Activate the cut-out switch again. Check out the cause of over-absorption (threads or any other material which might get tangled with the brush.) If the alarm persists, check the 100Ah fuse (it might be burnt). Check pag. 35 fuse pos. 24 Follow the instructions at pag. 36.
	Alarm: the contact of both the brushes actuator limit switches is open.	Make sure no foreign bodies are preventing the correct movement of the brush plate. If the problem continues, contact your dealer or a technician.
	Alarm: the contact of both the squeegee actuator limit switches is open.	Make sure that no foreign bodies are preventing the correct movement of the squeegee If the problem continues, contact your dealer or a technician.
	Alarm: the final position of the brush plate actuator is not reached within the max. lapse of time (10secs)	Make sure that no foreign bodies are preventing the brush plate from functioning. If the problem continues, contact your dealer or a technician.
	Alarm: the final position of the squeegee actuator is not reached within the max. lapse of time (10secs)	Make sure that no foreign bodies are preventing the brush plate from functioning. If the problem continues, contact your dealer or a technician.
	Alarm: when starting up the machine, the brushes actuator does not reach the pos. 0 within the max. lapse of time (10 sec.)	Make sure that no foreign bodies are preventing the brush plate from functioning. If the problem continues, contact your dealer or a technician.
	Alarm: when starting up the machine, the squeegee actuator does not reach the pos. 0 within the max. lapse of time (10 sec.)	Make sure that no foreign bodies are preventing the squeegee from functioning. If the problem continues, contact your dealer or a technician.
	That is not an alarm but rather a warning signal indicating that the brush plate is not in raised position when starting up the machine The machine requires the brush plate to be lowered before being used for any other operation.	Wait for a few seconds till the brush plate has been raised completely.
	1° The battery charge level it too much low. Upon reaching level 20 the number on the display shall start blinking and the brush function will be disabled, lifting the plate	Complete drying. Empty the recovery tank and recharge the batteries.
	2° The battery charge level it too much low. Upon reaching level 10 the number on the display shall start blinking and the suction function will be disabled.	Lift the squeegee, empty the recovery tank and recharge the batteries
	3° The battery charge level it too much low. When 4 blinking dashes appear on the display unit, it means that the minimum discharge threshold of the battery has reached its maximum level and if the battery is used any further it will cause irreparable damages. At this point, the forward drive will no longer operate.	The machine must be taken to the tank drainage area manually in order to charge the batteries.

PRODUCT WARRANTY

Eureka S.p.a. warrants that its 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 <u>Eureka's headquarter</u> 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 (m^2)	

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

GENERAL INFORMATION			
1) HAS THE LEAD TIME BEEN RESPECTED?		4) HAVE YOU READ THE OPERATION MANUAL PRIOR TO USING 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 USING 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) ItalyTel ++39 - 049 - 9481800 Fax ++39 - 049 - 9481899

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

ALLEGATO N. A1

DICHIARAZIONE DI CONFORMITA' 2006/42/CEE, 72/23/CEE, 89/336/CEE 92/31/CEE, 93/67CEE, 93/68/CEE

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

dichiariamo sotto la nostra esclusiva responsabilità che il prodotto

LAVASCIUGA PAVIMENTI:

MODELLO: E110 – M110

N°. TELAIO: _____

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, 73/23/CEE, 89/336/CEE, 92/31/CEE, 93/67CEE, 93/68CEE

LEGALE RAPPRESENTANTE

CITTADELLA 10/02/12 **GIANFRANCO LAGO**