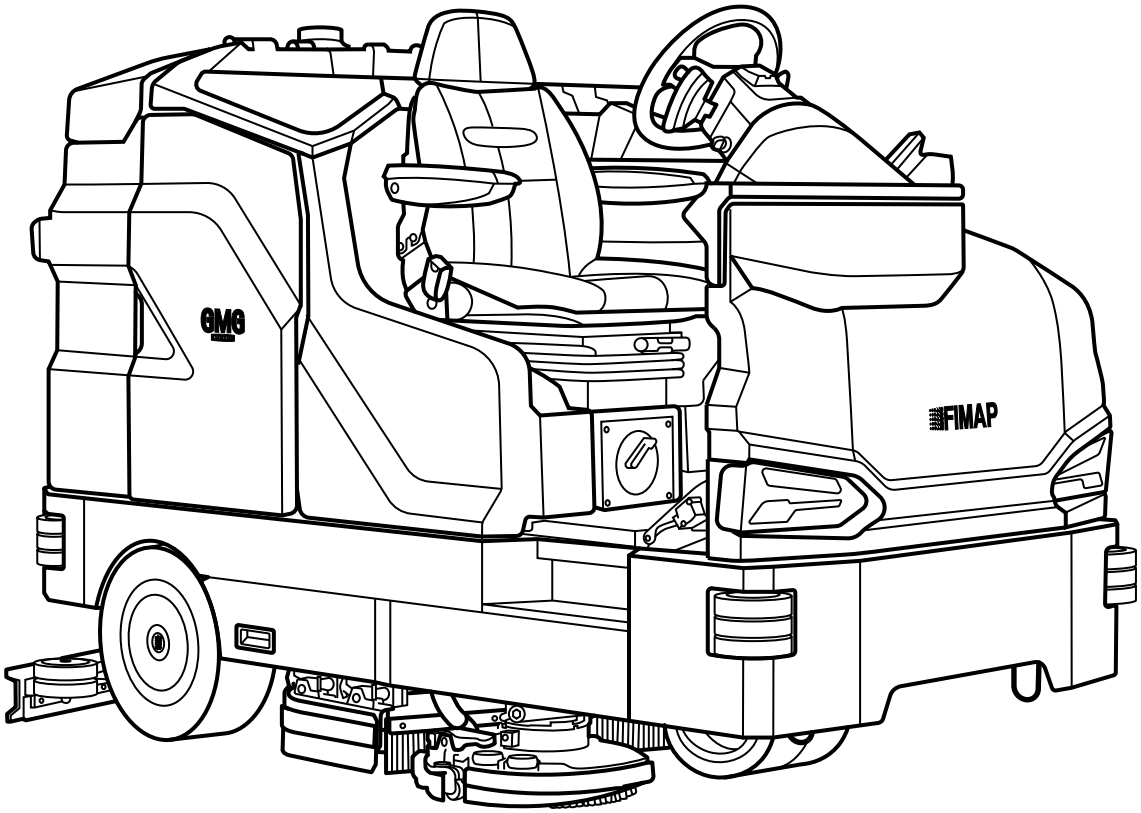
# GMG B




PROFESSIONAL SCRUBBING MACHINES

# *USE AND MAINTENANCE MANUAL*

FIMAP®

ORIGINAL INSTRUCTIONS DOC. 10114166 - Ver. AA - 03-2022

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## DEFINITION OF LEVELS OF WARNING

**DANGER:** indicates an imminent dangerous situation that, unless avoided, will result in death or serious injuries.

**WARNING:** Indicates a potentially dangerous situation that, unless avoided, could cause death of serious injury.

**ATTENTION:** Indicates a potentially dangerous situation that, unless avoided, could cause slight or moderate injuries.

**N.B.:** instructs the reader to pay particular attention to the topic that follows.

## GENERAL SAFETY REGULATIONS

Before using the machine, please read the following document carefully and follow the instructions contained herein, along with the instructions in the document supplied with the machine itself, "GENERAL SAFETY REGULATIONS" (document number 10083659).

# GENERAL DESCRIPTION

The descriptions contained in this document are not binding. The company therefore reserves the right to make any modifications at any time to elements, details, or accessory supply, as considered necessary for reasons of improvement or manufacturing/commercial requirements. The reproduction, even partial, of the text and drawings contained in this document is prohibited by law.

**The company reserves the right to make any technical and/or supply modifications. The images are for reference purposes only, and are not binding in terms of design and supply.**

## SYMBOLS USED IN THE MANUAL

**Open book symbol with an "i"**
Indicates the need to consult the instruction manual.

**Open book symbol**
Tells the operator to read the user manual before using the device.

**lided place symbol:**
The operations preceded by this symbol must always be carried out in a dry, lided area.

**Information symbol:**
Indicates additional information for the operator, to improve the use of the device.

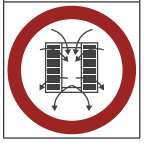
**Warning symbol:**
Carefully read the sections preceded by this symbol meticulously following the instructions indicated for the safety of the operator and the device.

**Danger symbol (corrosive substances):**
The operator should always wear protective gloves to avoid the risk of serious injury to the hands caused by corrosive substances.

**Danger symbol (battery acid leakage):**
Indicates the danger of leaking acid or acid fumes from the batteries while they are being recharged.

**Danger symbol (moving carriages):**
Indicates that the packed product should be handled with suitable carriages that conform to legal requirements.

**Anchor point symbol:**
Indicates the locations of the anchor points to be used to safely tow or secure the machine.



**Mandatory room ventilation symbol:**
Informs the operator that the room must be ventilated while the batteries are being recharged.

**Symbol indicating the compulsory use of protective gloves:**
Indicates that the operator should always wear protective gloves, to avoid the risk of serious injury to his hands from sharp objects.

**Symbol indicating the compulsory use of tools:**
Informs the operator of the need to use tools not included with the machine.

**Symbol indicating a treading ban:**
Informs the operator that it is forbidden to tread on machine components, as this could lead to serious injury.

**Recycling symbol:**
Tells the operator to carry out the operations in compliance with environmental regulations in force in the place where the appliance is being used.

**Disposal symbol:**
Carefully read the sections marked with this symbol for disposing of the appliance.

## TARGET GROUP

This manual is written both for operators and for qualified machine maintenance technicians.
Operators must not perform operations that should be carried out by qualified technicians.
The manufacturer is not liable for damages resulting from failure to comply with this veto.

## PURPOSE AND CONTENT OF THE USER AND MAINTENANCE MANUAL

The aim of this document is to provide customers with all the information needed to use the machine in the safest, most appropriate and most autonomous way.
This includes information concerning technical aspects, safety, operation, downtime, maintenance, spare parts and scrapping.
The operators and qualified technicians must carefully read the instructions in this manual before carrying out any operations on the machine.
If in doubt about the correct interpretation of instructions, contact your nearest FIMAP Customer Service Centre to obtain the necessary clarifications.

## STORING THE USE AND MAINTENANCE MANUAL

The following document must be stored in its special pouch close to the machine, protected from liquids and anything else that could compromise its legibility.
If the document is lost or becomes illegible with wear, contact the nearest FIMAP service centre to obtain a new one.

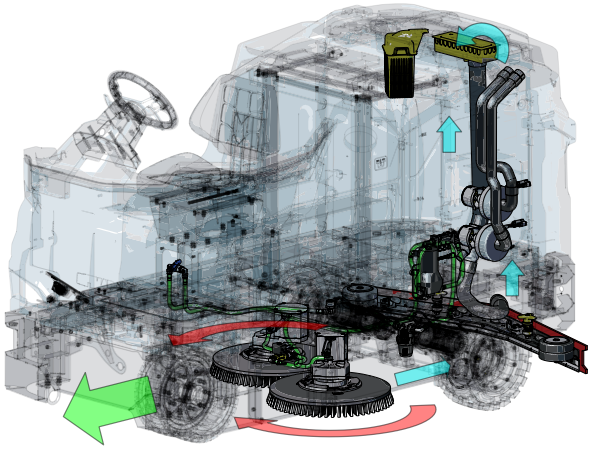
## REGULATIONS

All references to forwards and backwards, front and rear, right and left indicated in this manual should be understood as referring to the operator in a driving position with his hands on the steering wheel.
The term working position is used to indicate when the brush head or the squeegee or both are in contact with the floor to be cleaned.
The term resting position is used to indicate when the brush head, the squeegee, or both are raised above the floor to be cleaned.

## ON CONSIGNMENT OF THE MACHINE

When the machine is delivered to the customer, an immediate check must be performed to ensure all the material mentioned in the shipping documents has been received, as well as to check that the machine has not suffered any damage during transportation.
If this is the case, the shipping agent must ascertain the extent of the damage at once, and notify the nearest FIMAP service centre.
It is only by prompt action of this type that the missing material can be obtained, and compensation for damage successfully claimed.

## TECHNICAL DESCRIPTION



When used with the scrubbing machine working program, which uses the mechanical action of two brushes combined with a chemical solution delivered to the brushes via a pump-controlled water system, the machine is capable of cleaning a wide range of floors and types of dirt. When the machine moves forward, the squeegee collects the dirty solution from the floor, and the suction system transfers the dirty solution into the recovery tank.
**The machine must be used only for this purpose.**

## INTENDED USE

This scrubbing machine was designed and built for the cleaning (scrubbing and drying) of smooth, compact flooring in the commercial, residential and industrial sectors by a qualified operator in proven safety conditions.
The scrubbing machine is not suitable for cleaning rugs or carpets.
It is only suitable for use in indoor (or at least lided) environments.

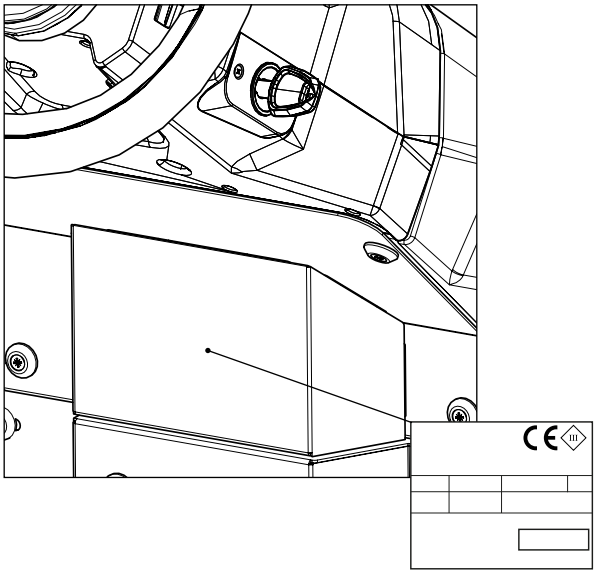
**ATTENTION:** the machine is not suitable for use in the rain, or under water jets.

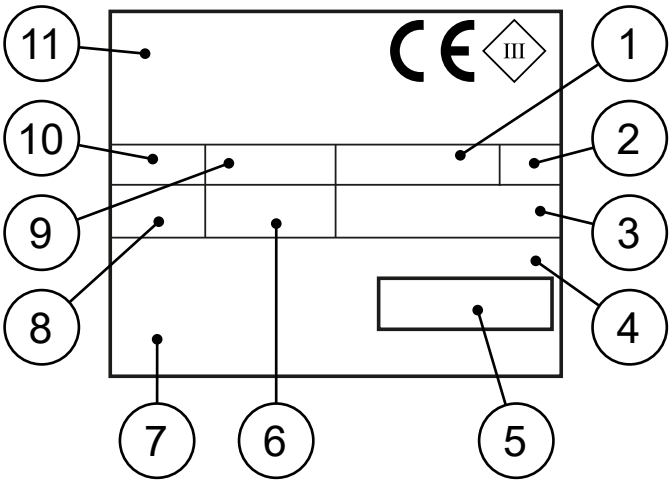
**ATTENTION:** IT IS FORBIDDEN to use the machine for picking up dangerous dusts or inflammable liquids in places with an explosive atmosphere. In addition, it is not suitable as a means of transport for people or objects.

## SAFETY

Operator cooperation is paramount for accident prevention. No accident prevention programme can be effective without the full cooperation of the person directly responsible for machine operation. The majority of occupational accidents that happen either in the workplace or whilst moving are caused by failure to respect the most basic safety rules. An attentive, careful operator is most effective guarantee against accidents and is fundamental in order to implement any prevention programme.

## SERIAL NUMBER PLATE

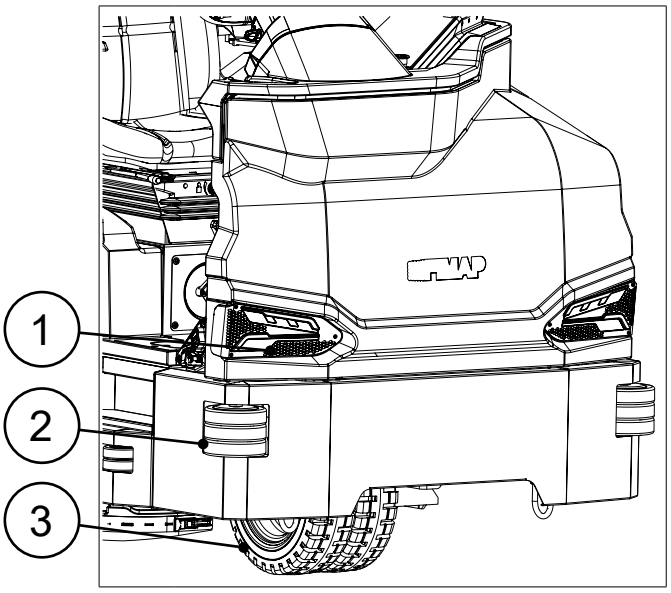




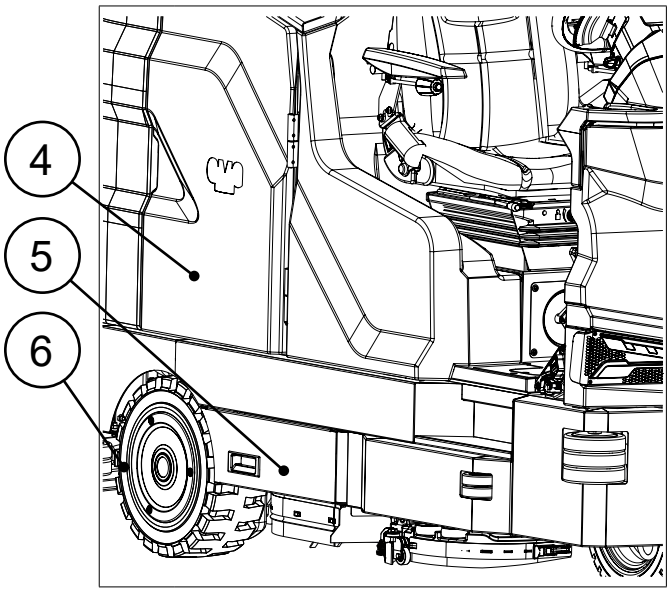

The serial number plate is located near the driver's seat, at the rear of the steering column, and indicates the machine's general characteristics, including its serial number. The serial number is a very important piece of information and should always be provided together with any request for assistance or when purchasing spare parts. The serial number plate contains the following information:

1. The weight of the batteries that power the machine (expressed in kg).
2. The IP protection rating of the machine.
3. The gross weight of the machine (expressed in kg).
4. The machine ID code.
5. The machine serial number.
6. The machine ID name.
7. The nominal power consumed by the machine (expressed in W).
8. The maximum grade that the appliance can handle during work activities (expressed in %).
9. The year of machine manufacture.
10. The nominal voltage of the machine (expressed in V).
11. The commercial name of the machine, and the manufacturer's address.

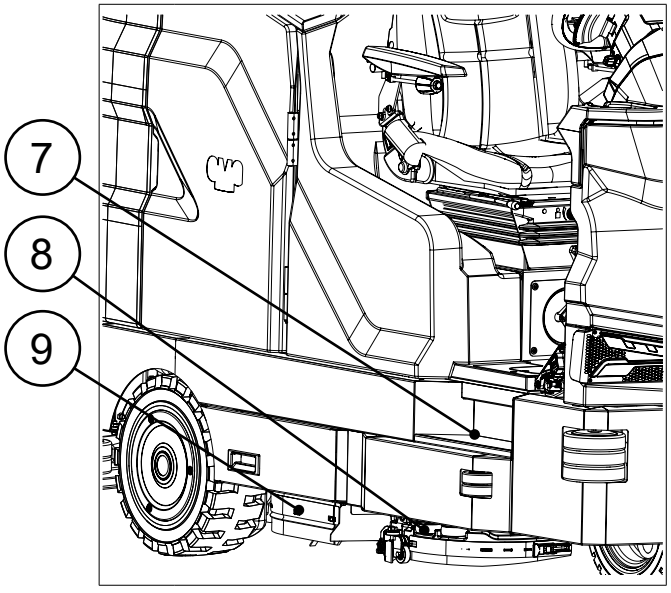
# MAIN MACHINE COMPONENTS



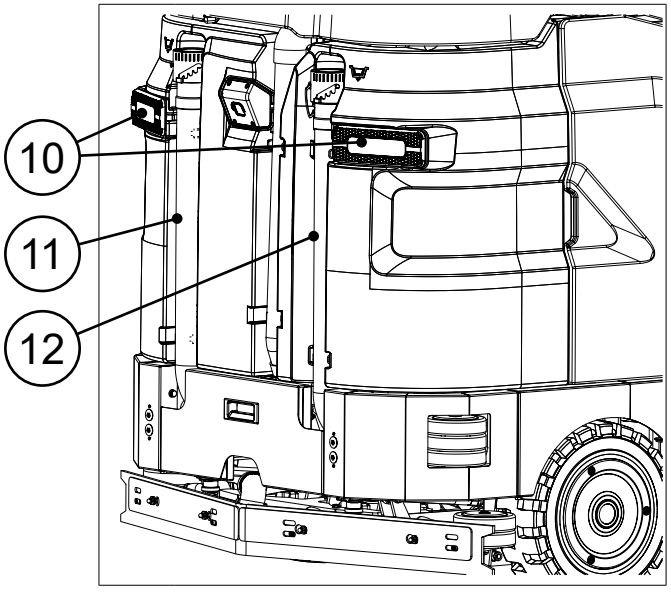

1 Front headlights
2 Front bumper wheels
3 Front wheels



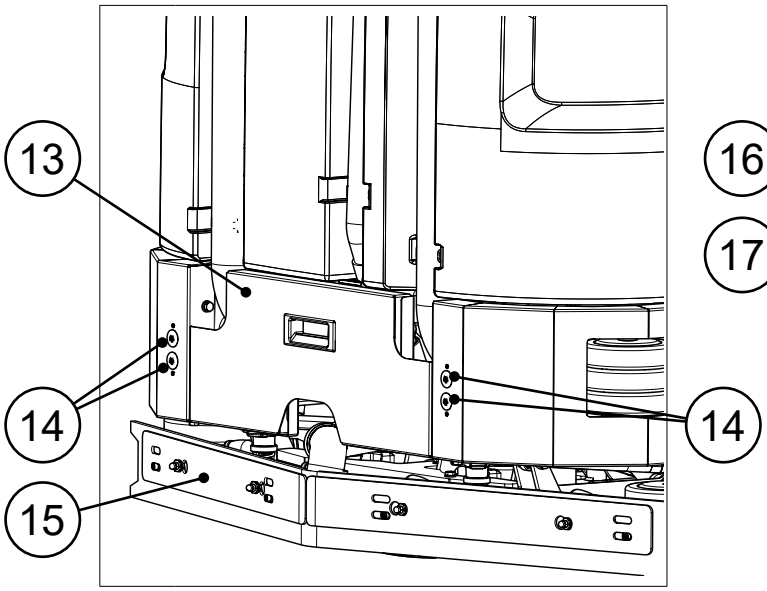

4 Right rear door
5 Brush head inspection door
6 Right rear motorwheel




7 Rung
8 Side brush head (optional)
9 Central brush brush head



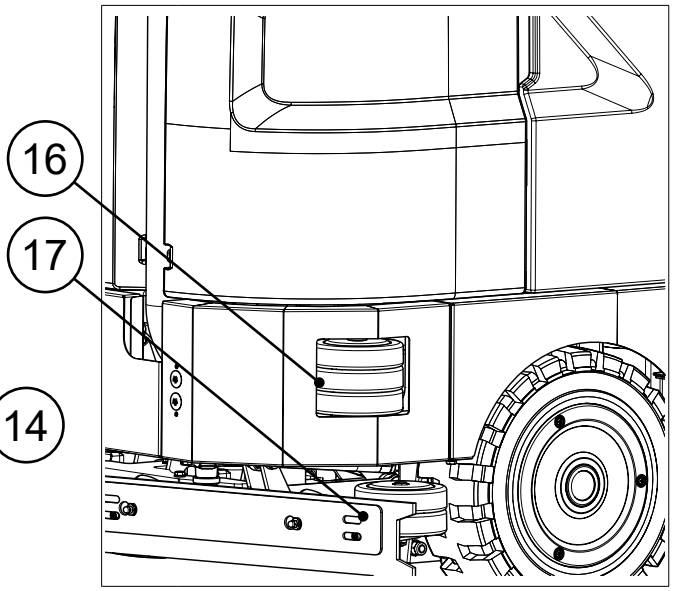

10 Rear headlights
11 Solution tank drain hose
12 recovery tank drainage tube




13 Inspection footboard and recovery tank maintenance.

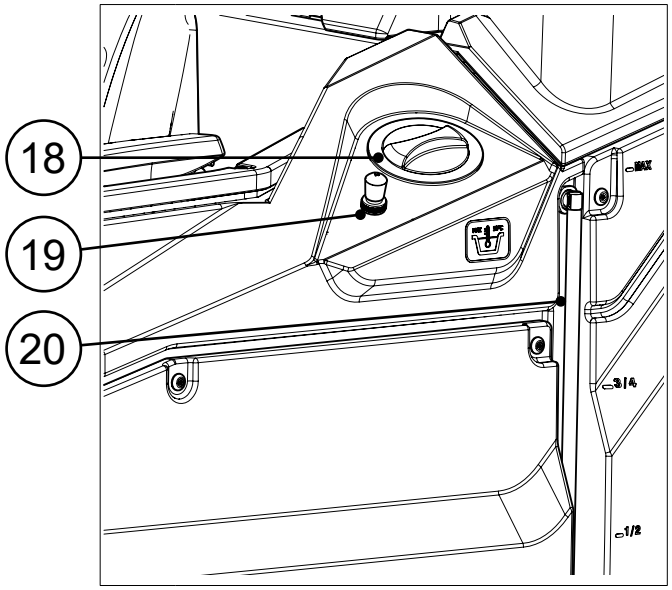
14 Collision avoidance sensor (optional)

15 Squeegee




16 Rear bumper wheels

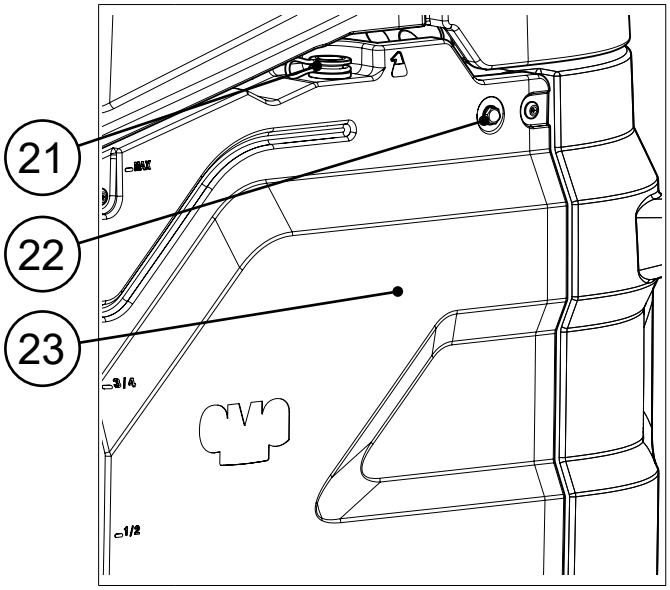
17 Squeegee bumper wheel




18 Solution tank filler cap

19 Solution tank quick filling kit hose connector (optional)

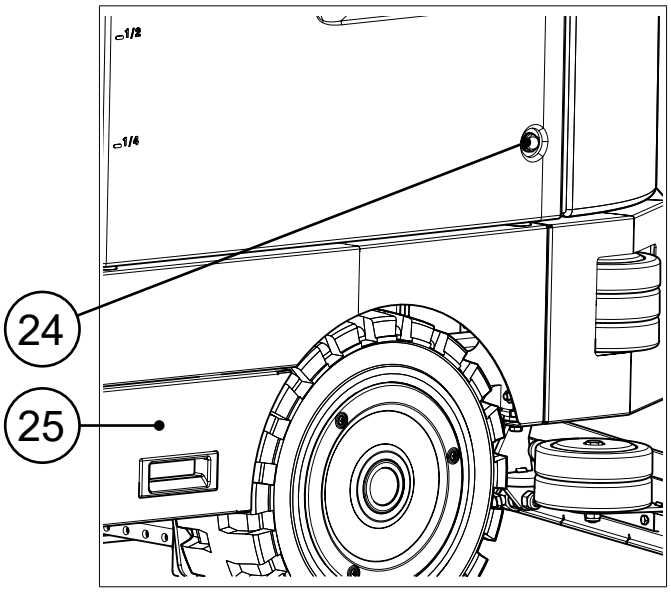
20 Solution tank fill volume level hose.




21 Chemical detergent filler cap (optional)

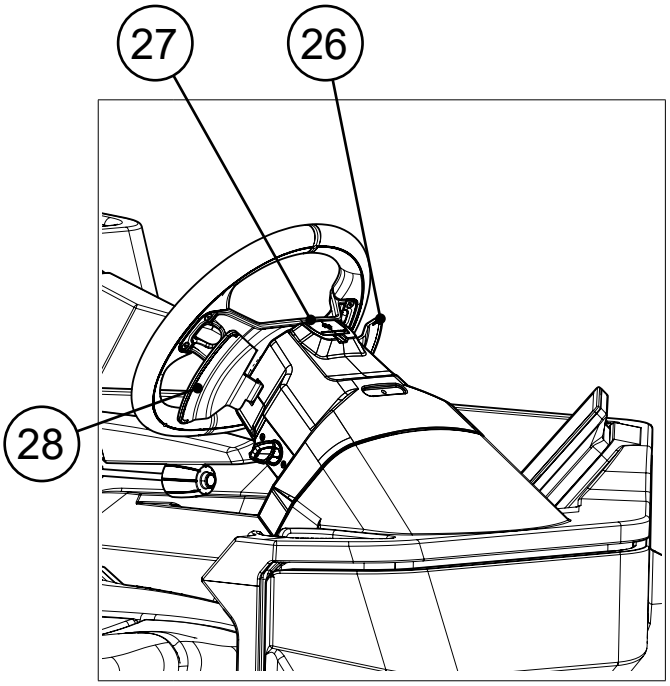
22 Chemical detergent tank MAX level indicator (optional)

23 Chemical detergent tank




24 Chemical detergent tank MIN level indicator (optional)

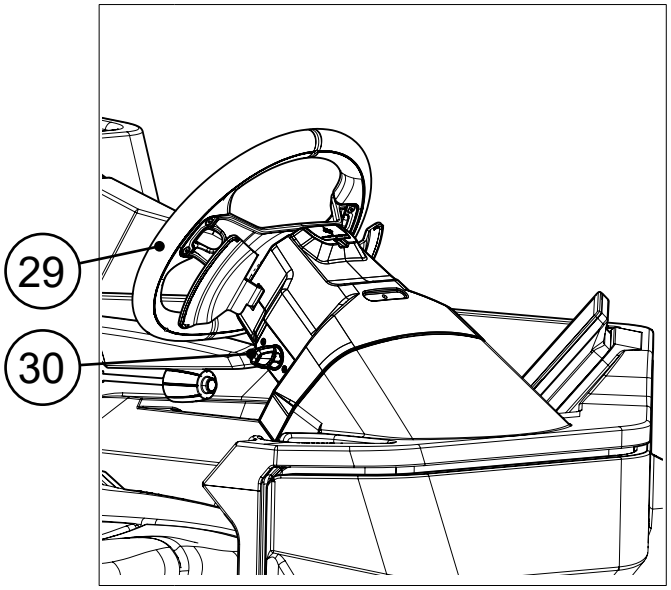
25 Brush head and water system filter inspection door




26 POWER MODE working program activation lever.

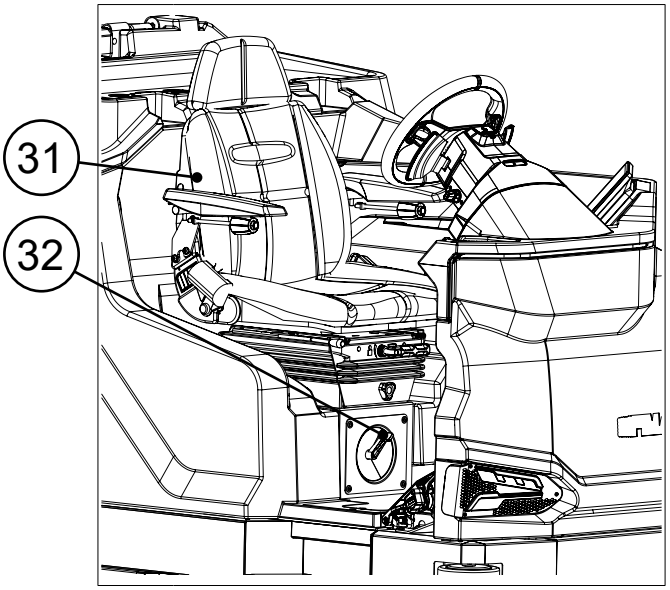
27 Automatic technical assistance request button (optional)

28 Reverse gear function control lever



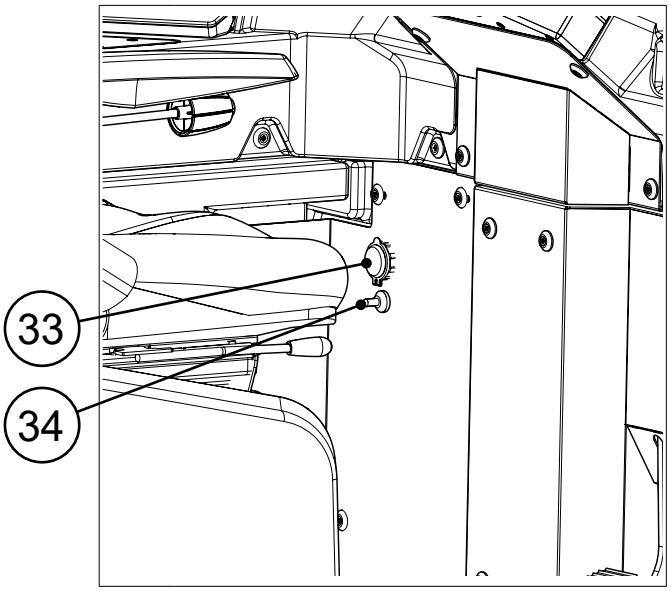

29 Steering wheel

30 Key-operated main switch



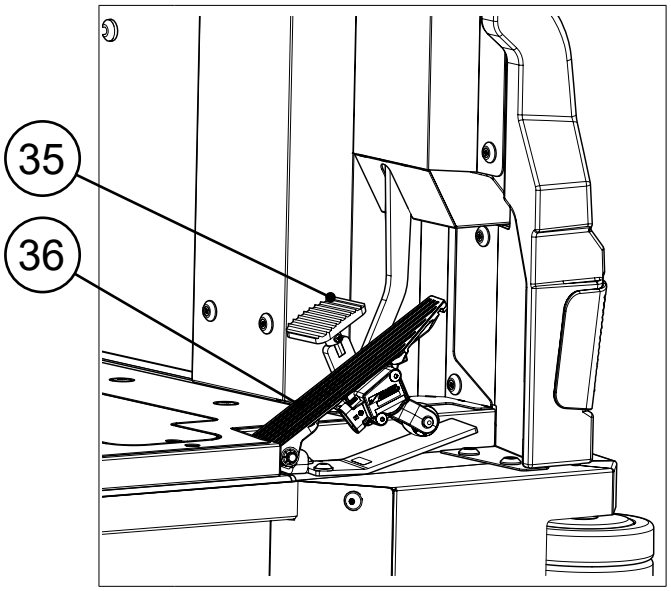

31 Driver's seat

32 Detergent solution delivery control lever.



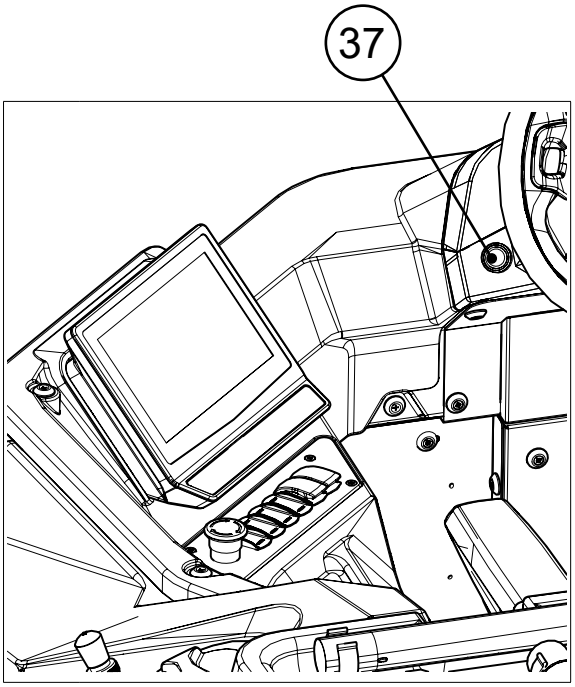

33 USB port

34 Service lights switch (optional)

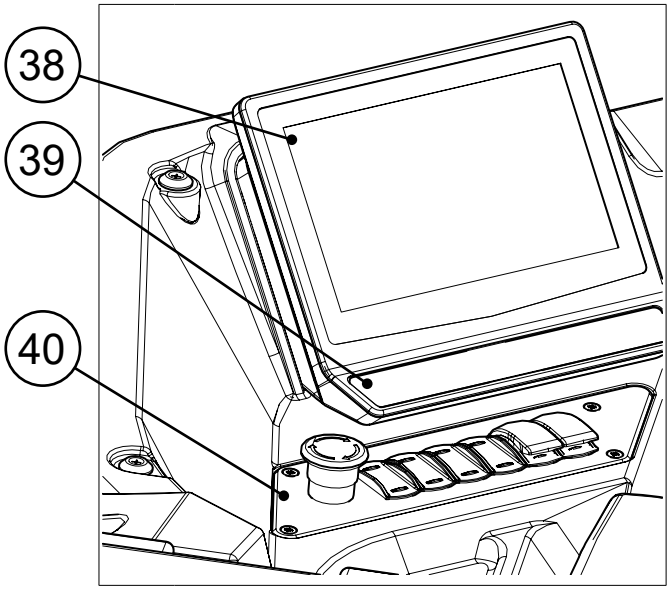



35 Brake pedal

36 accelerator pedal




37 Horn button




38 Command display

39 Membrane panel (Plus version)

40 Control pushbutton panel

# TECHNICAL DATA

| TECHNICAL DATA | UM SI [SI] | GMG B PRO | GMG B PLUS |
|---|---|---|---|
| Rated voltage<br>[IEC 60335-2-72; IEC 62885-9] | V | 36 | 36 |
| Nominal input power<br>[IEC 60335-2-72; IEC 62885-9] | KW | 10,7 | 10,7 |
| Working gradeability GVW<br>[IEC 60335-2-72; IEC 62885-9] | % | 20 | 20 |
| Gross weight GVW<br>[IEC 60335-2-72; IEC 62885-9] | kg | 2215 | 2215 |
| Weight during transport<br>[IEC 60335-2-72; IEC 62885-9] | kg | 1795 | 1795 |
| Machine dimensions during working phase<br>(length; height width) | mm | 2310<br>1510<br>1250 | 2310<br>1510<br>1250 |
| Operator station sound pressure level ($Lp_A$)<br>[IEC 60335-2-72; IEC 62885-9; ISO 11201] | dB (A) | 67 | 67 |
| Sound pressure level ($Lw_A$)<br>[IEC 60335-2-72; IEC 62885-9; ISO 3744] | dB (A) | 88 | 88 |
| Uncertainty $Kp_A$ | dB (A) | ±1.5 | ±1.5 |
| Hand-arm vibrations<br>[IEC 60335-2-72; IEC 62885-9; ISO 5349-1] | $m/s^2$ | 0,5 | 0,5 |
| Whole-body vibrations<br>[IEC 60335-2-72; IEC 62885-9; ISO 2631-1] | $m/s^2$ | 0,4 | 0,4 |
| Vibration measurement uncertainty | | ±4% | ±4% |

**N.B.:** for all other technical data, contact the FIMAP service department by writing to service@fimap.com, or visit the website www.fimap.com.

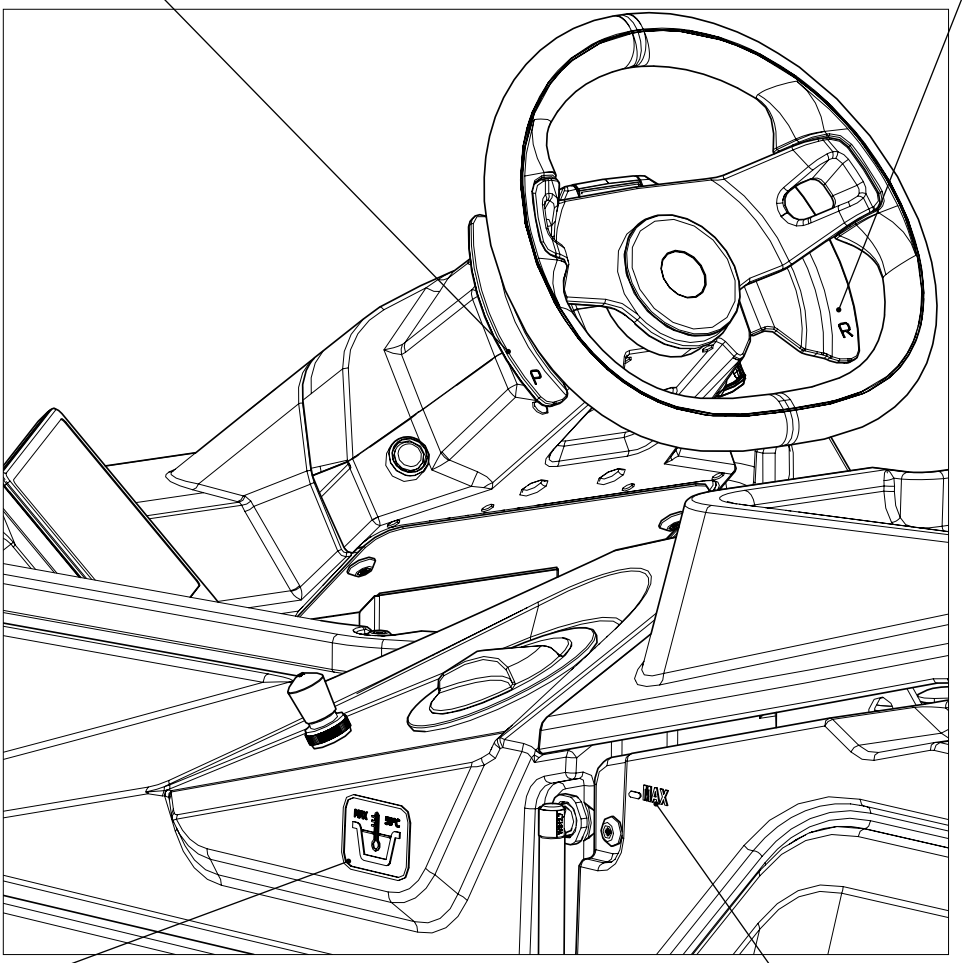
| TECHNICAL DATA | UM SI [SIB] | GMG B PRO | GMG B PLUS |
|---|---|---|---|
| Rated voltage<br>[IEC 60335-2-72; IEC 62885-9] | V | 36 | 36 |
| Nominal input power<br>[IEC 60335-2-72; IEC 62885-9] | KW | 10,7 | 10,7 |
| Working gradeability GVW<br>[IEC 60335-2-72; IEC 62885-9] | % | 20 | 20 |
| Gross weight GVW<br>[IEC 60335-2-72; IEC 62885-9] | lbs | 4883,24 | 4883,24 |
| Weight during transport<br>[IEC 60335-2-72; IEC 62885-9] | lbs | 3957,30 | 3957,30 |
| Machine dimensions during working phase<br>(length; height width) | in | 90,94<br>59,45<br>49,21 | 90,94<br>59,45<br>49,21 |
| Operator station sound pressure level ($Lp_A$)<br>[IEC 60335-2-72; IEC 62885-9; ISO 11201] | dB (A) | 67 | 67 |
| Sound pressure level ($Lw_A$)<br>[IEC 60335-2-72; IEC 62885-9; ISO 3744] | dB (A) | 88 | 88 |
| Uncertainty $Kp_A$ | dB (A) | ±1.5 | ±1.5 |
| Hand-arm vibrations<br>[IEC 60335-2-72; IEC 62885-9; ISO 5349-1] | $m/s^2$ | 0,5 | 0,5 |
| Whole-body vibrations<br>[IEC 60335-2-72; IEC 62885-9; ISO 2631-1] | $m/s^2$ | 0,4 | 0,4 |
| Vibration measurement uncertainty | | ±4% | ±4% |

**N.B.:** for all other technical data, contact the FIMAP service department by writing to service@fimap.com, or visit the website www.fimap.com.

## SYMBOLS USED ON THE MACHINE

| | |
|---|---|
| P | **Extra pressure activation/deactivation lever position symbol:** Applied to the brush head extra pressure activation/deactivation lever. |

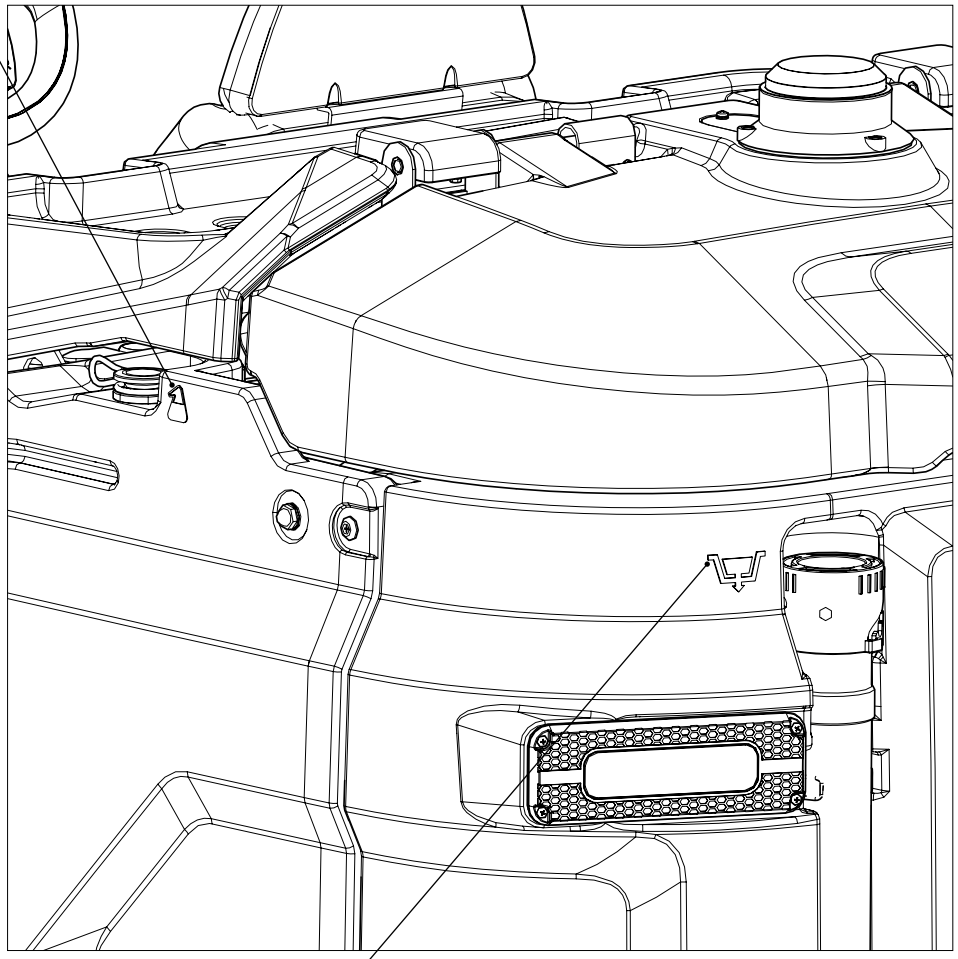
| | |
|---|---|
| R | **Reverse gear activation/deactivation lever position symbol:** Applied to the reverse gear activation/deactivation lever. |




| | |
|---|---|
|  | **Symbol for maximum temperature for filling the solution tank:** Applied to the left-hand side of the machine's solution tank to indicate the maximum temperature of the water that can be used to safely fill the solution tank. |

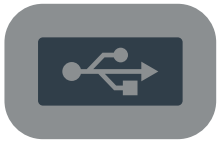
| | |
|---|---|
|  | **Solution tank filling symbol:** Located on the left side of the machine's solution tank to indicate the amount of water or detergent solution in the tank. On the side there are four symbols representing ¼ of the solution tank's total capacity. The image to the side shows that the tank is full. |

| | |
|---|---|
|  | **Chemical detergent symbol:**<br>Applied to the left-hand side of the machine's solution tank to indicate the chemical detergent tank. This symbol is only present on versions equipped with automatic chemical product management. |



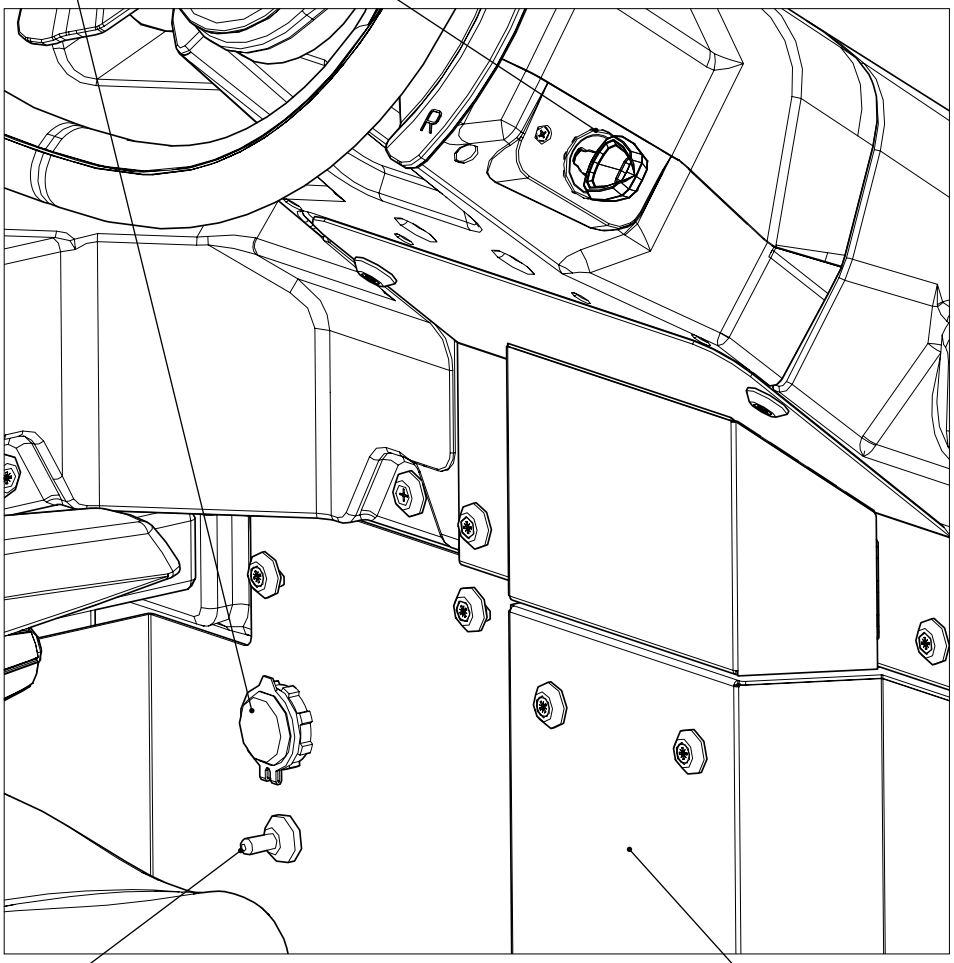
| | |
|---|---|
|  | **recovery tank drainage hose symbol:**<br>Applied to the right rear of the machine to identify the recovery tank drainage hose. |
| | **Solution tank drain pipe symbol:**<br>Applied to the rear left of the machine to identify the solution tank drainage pipe. |

# LABELS USED ON THE MACHINE



**USB port label:**
Applied to the lower part of the steering column to indicate the location of the two USB ports.

**Machine main switch label:**
Applied to the lower part of the steering column to indicate the location of the machine's main switch.

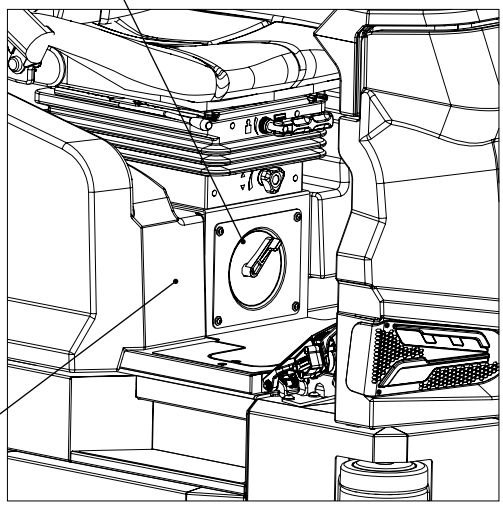




**Service lights control label:**
Applied to the lower part of the steering column to indicate the location of the blinking light switch, see “SERVICE LIGHTS” on page 93

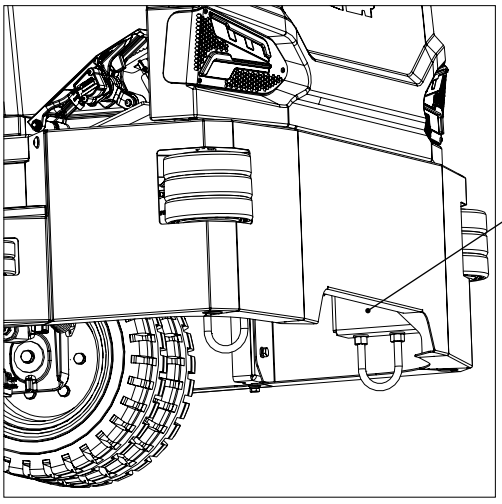

**Prohibition to suction hazardous elements label:**
Applied to the lower part of the steering column to indicate that it is strictly prohibited to suction incandescent particles or flammable and/or explosive powders and/or liquids with the machine, and to operate the machine in their vicinity.


**Tap control lever label:**
Applied to the front of the solution tank to indicate the tap control lever.

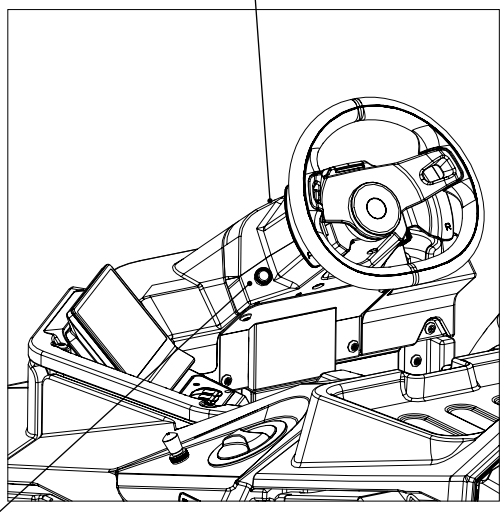


**Daily maintenance label:**
Applied to the front of the solution tank, near the tap control lever, to indicate the need to close the tap at the end of the work activities, and to carry out daily maintenance on the squeegee and the filters present on the machine.

**Anchor hook label:**
Applied to the front of the machine to identify the two hooks used to securely anchor the machine.

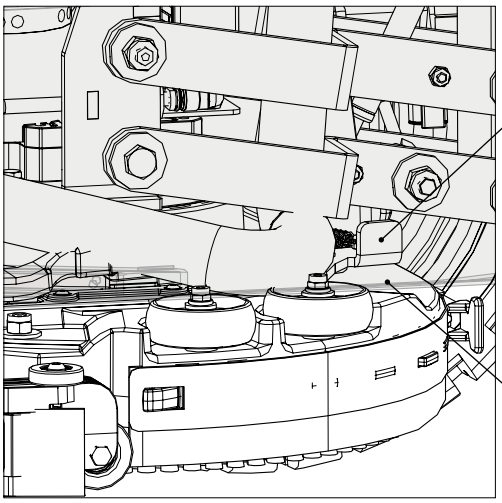


**Label indicating the need to read the Use and Maintenance Manual:**
Applied to the front of the steering column to indicate the need for the user to read the user and maintenance manual before operating the machine.



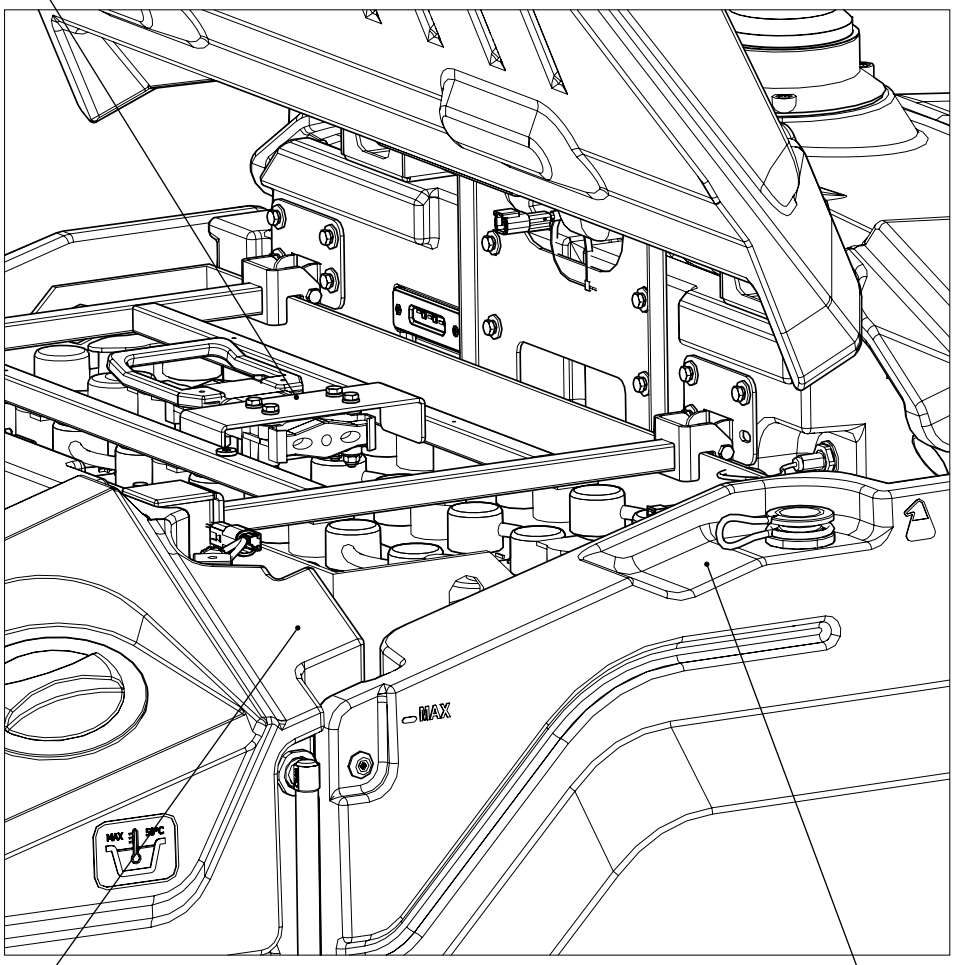
**Horn button label:**
Applied to the left side of the steering column to identify the machine's horn button.

**Lateral brush release lever label (optional):**
Applied to the front of the side brush head to indicate the side brush uncoupling lever.




**Label indicating that touching the brush when moving is prohibited:**
Applied to the side brush head to indicate the prohibition to place your hands in the vicinity of the brush head while the brush is in motion.


**Rated voltage label:**
Applied to the electrical system connector support to indicate the machine's rated voltage value.

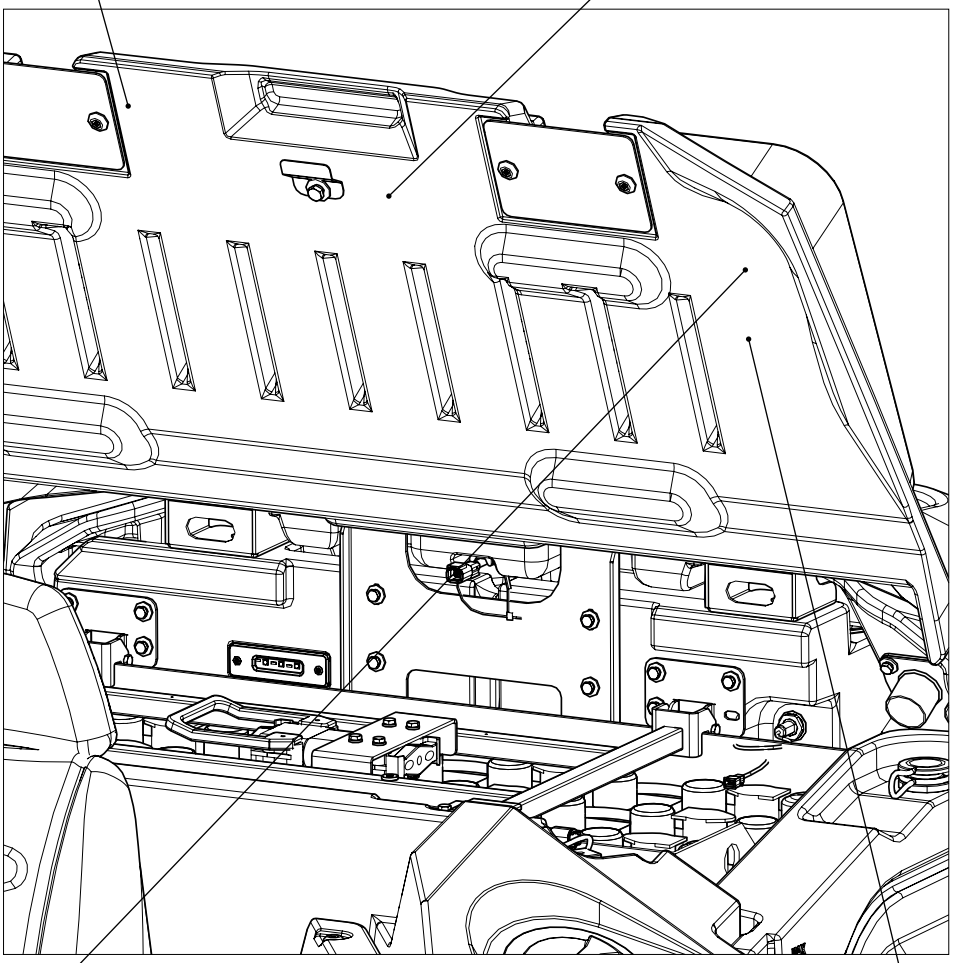


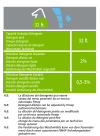

**Label warning about the risk of crushed hands:**
Applied to the solution tank to indicate the areas where hand crushing hazards are present.


**Chemical pH range label (FSS versions):**
Applied near the detergent tank's cap to indicate the chemical product pH range within which the FSS system operates without causing damage to the machine.

**Battery pack warning label:**
Applied to the inside of the battery pack lid to warn that the cells could release highly flammable hydrogen gas during the recharging phase.

**Battery pack charging instructions label:**
Applied to the inside of the battery pack lid to indicate the procedures to be followed in order to properly charge the battery pack.



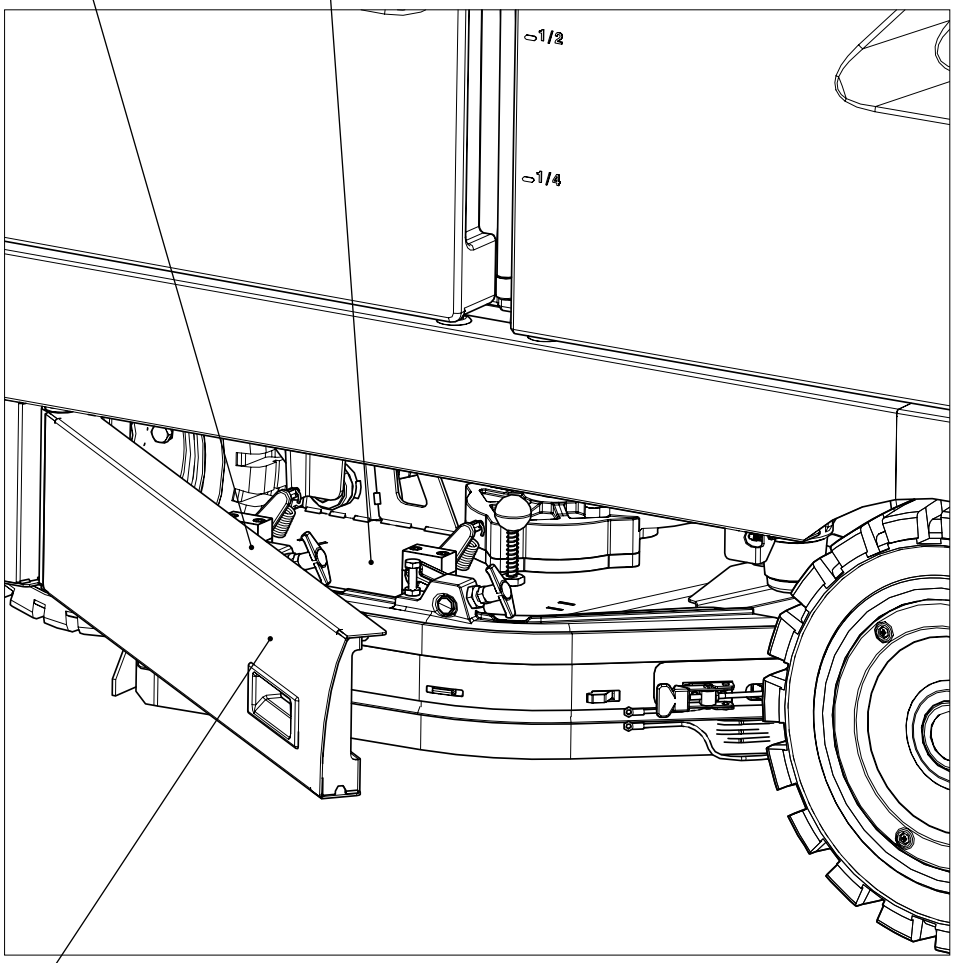


**FSS system technical data label (FSS versions):**
Applied to the inside of the battery pack lid to indicate the technical characteristics of the automatic chemical product dosing system (FSS system).

**Warning label for the automatic chemical product dosing system (FSS versions):**
Applied to the inside of the battery pack lid to indicate the precautions to be taken when using the automatic chemical product dosing system (FSS system).

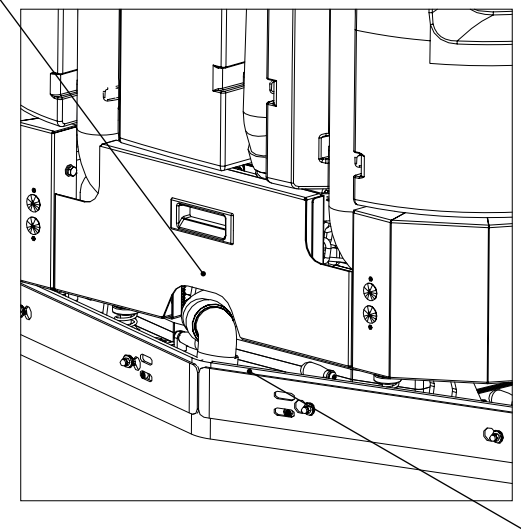
**Treading ban label:**
Applied to the lateral inspection doors to identify the surfaces that must not be trodden upon (risk of personal injury or damage to the machine).

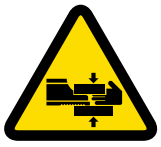

**Label indicating that touching the brush when moving is prohibited:**
Applied to the left and right sides of the brush head to indicate the prohibition to place your hands in the vicinity of the brush head while the brush is in motion.

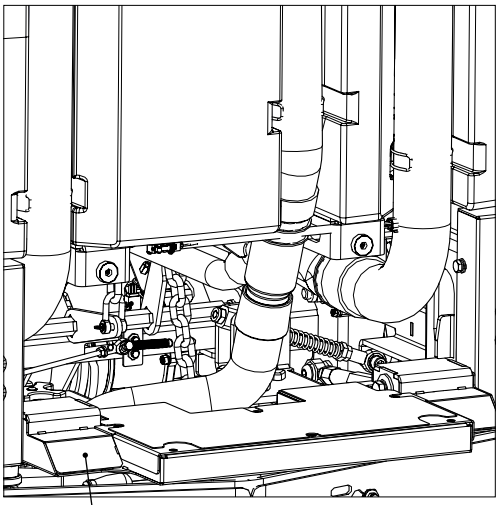



**Water system filter maintenance warning label:**
Applied to the left inspection panel to remind the operator of the need to perform maintenance upon the water system filter each time the machine is utilised.

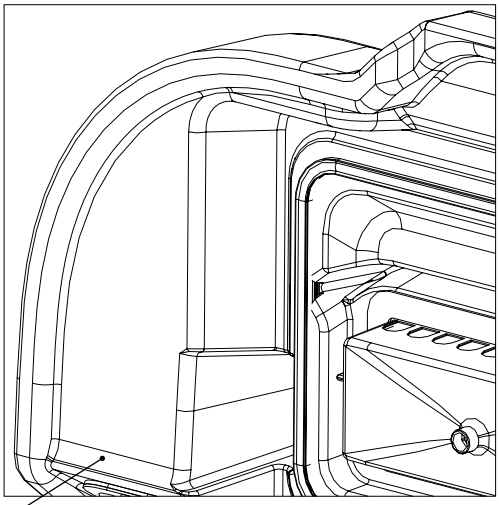
| | |
|---|---|
|  | **Inspection footboard-recovery tank maintenance label:**<br>Applied to the rear of the machine to indicate the platform used to inspect and maintain the recovery tank. |



| | |
|---|---|
|  | **Lower limb and hand crushing hazard label:**<br>Applied at the rear of the machine to warn the user that there is a risk of crushing the lower limbs and hands when the squeegee is in motion. |

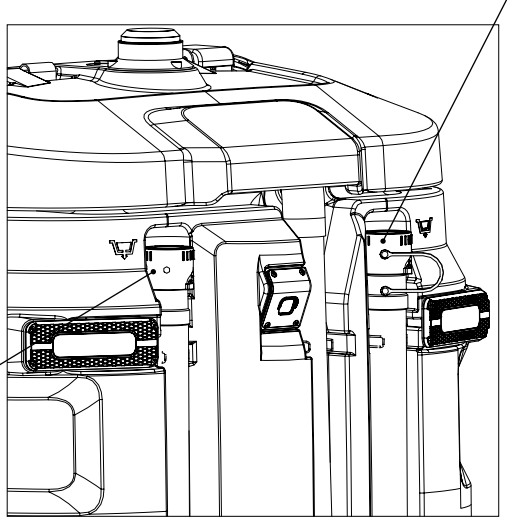


| | |
|---|---|
|  | **Label forbidding the use of the machine as a means of transport:**<br>Applied to the rear of the machine to indicate that the recovery tank inspection footboard should not be used to transport people. |

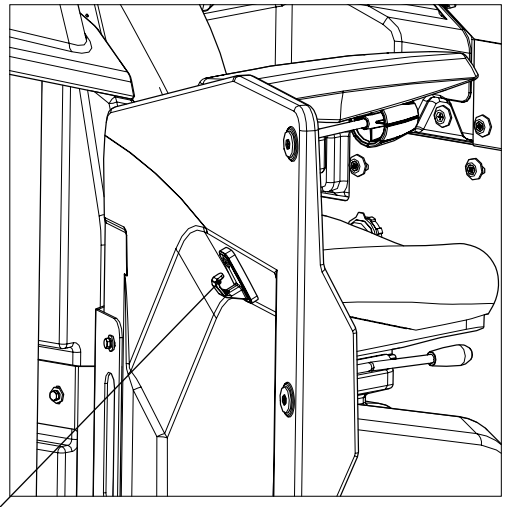


| | |
|---|---|
|  | **Suction motor filter maintenance label:**<br>Applied to the inside of the recovery tank's lid to remind the user to perform maintenance on the suction motor filter after every machine use. |

| | |
|---|---|
|  | **recovery tank drainage tube label:**<br>Applied to the rear of the machine to indicate the recovery tank's drainage tube. |

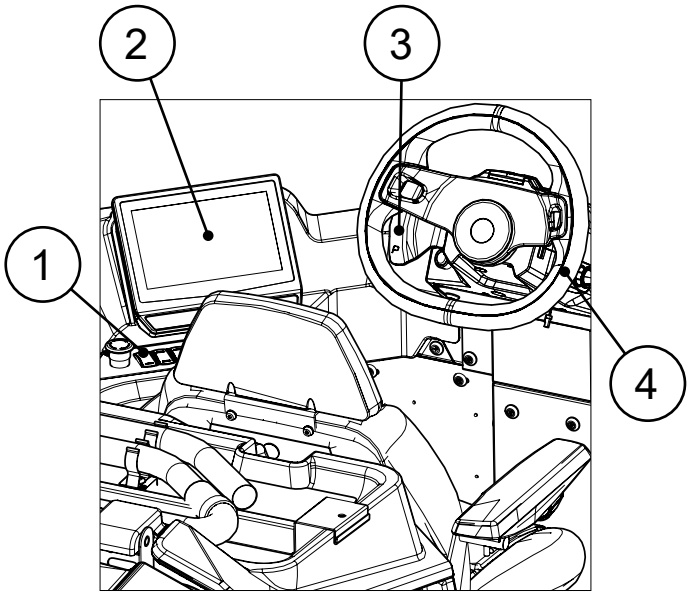


| | |
|---|---|
|  | **Solution tank drainage tube label:**<br>Applied to the rear of the machine to indicate the solution tank's drainage tube. |



| | |
|---|---|
|  | **recovery tank cleaning gun label (optional)**<br>Applied inside the right rear lid to indicate the support hook for the recovery tank's cleaning gun. |

# CONTROL STATION (PRO VERSION)

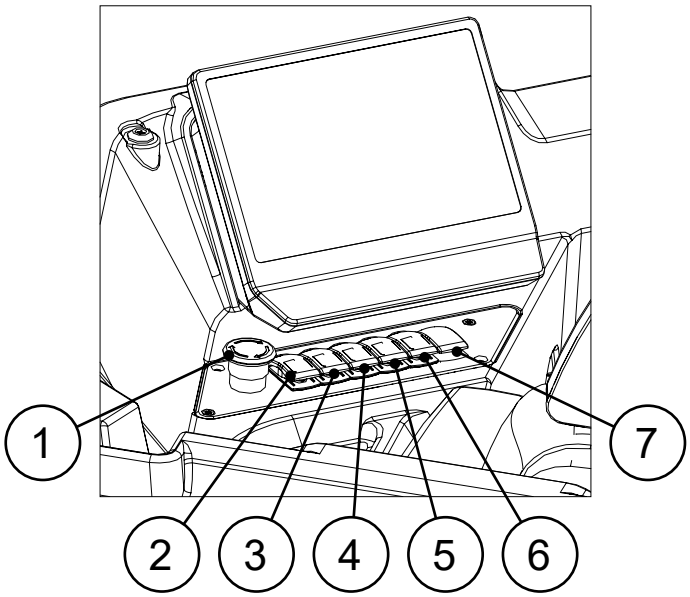



The machine has an easy to use and intuitive control station, it is comprised of mainly the following:

1. Control panel, see “CONTROL PUSHBUTTON PANEL (PRO VERSION)” on page 29.
2. Control panel, see “CONTROL DISPLAY (PRO VERSION)” on page 30.
3. POWER working program activation pad, see “POWER MODE WORKING PROGRAM (PRO VERSION)” on page 62.
4. REVERSE function activation pad, see “REVERSE GEAR” on page 94.

## CONTROL PUSHBUTTON PANEL (PRO VERSION)

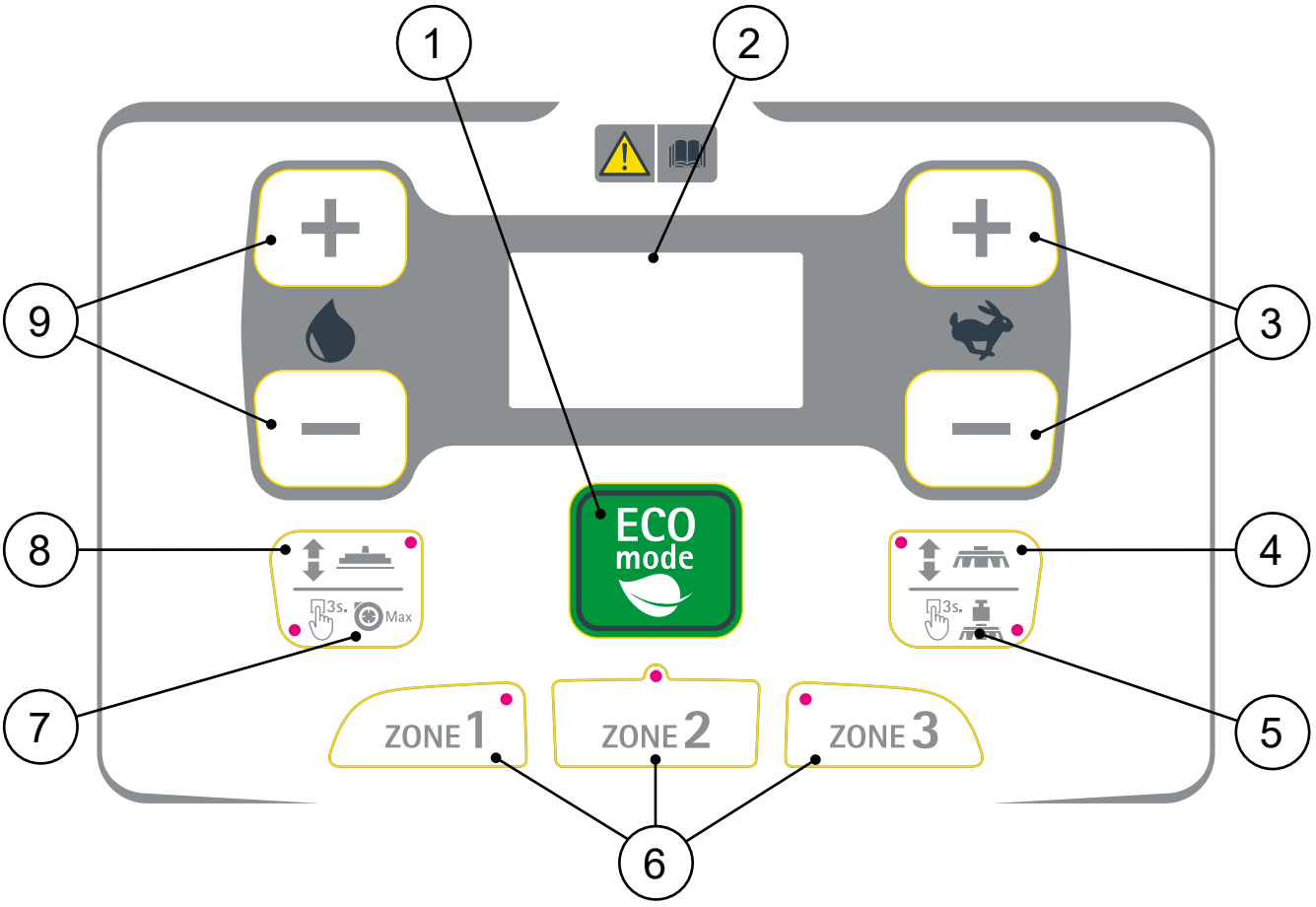
With the control panel, located on the left of the control station, it is possible to activate the optional machine functions, thereby increasing productivity and reducing costs.




The control panel is divided as follows:

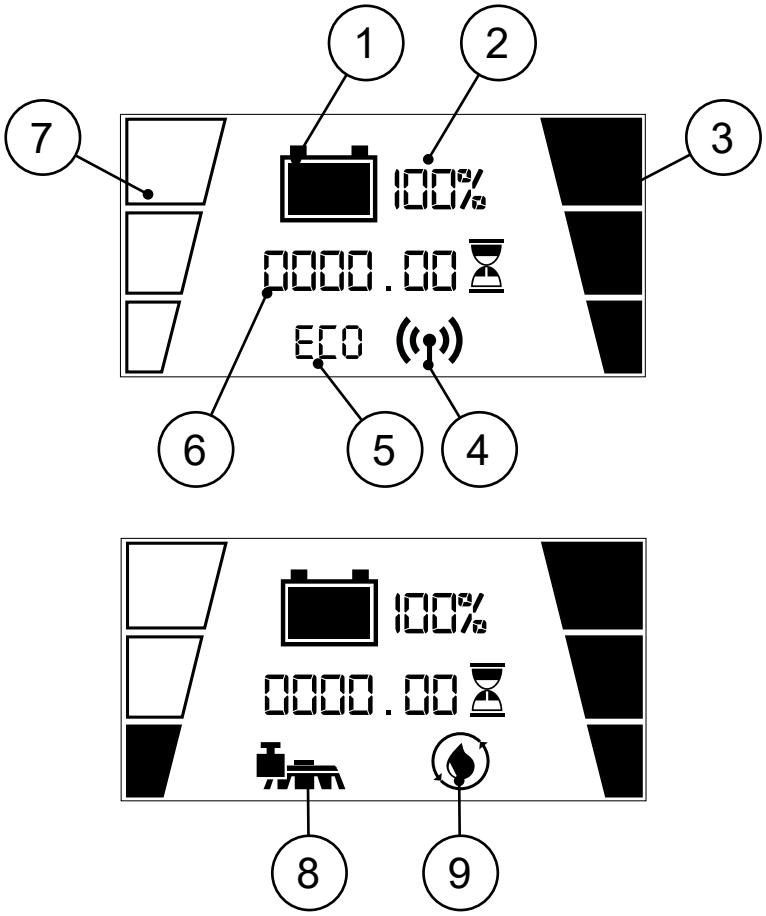
1. Emergency switch, see “EMERGENCY BUTTON (PRO VERSION)” on page 98.
2. Brush uncoupling function activation switch, see “BRUSH UNCOUPLING (PRO VERSION)” on page 99.
3. Working lights activation switch, see WORKING LIGHTS.
4. Scrubbing side brush control switch, see SCRUBBING SIDE BRUSH (PRO VERSION).
5. Automatic chemical detergent management system control switch, (FSS versions), see FSS - AUTOMATIC DETERGENT DOSING SYSTEM (PRO VERSION).
6. Continuous recycling system control switch (FLR versions), see FLR - CONTINUOUS RECYCLING SYSTEM (PRO VERSION).
7. Recovery tank cleaning spray gun control switch, see RECOVERY TANK CLEANING SPRAY GUN (PRO VERSION).
8. Vacuum wand control switch, see vacuum wand (PRO VERSION)

## CONTROL DISPLAY (PRO VERSION)




The control display consists of the following:

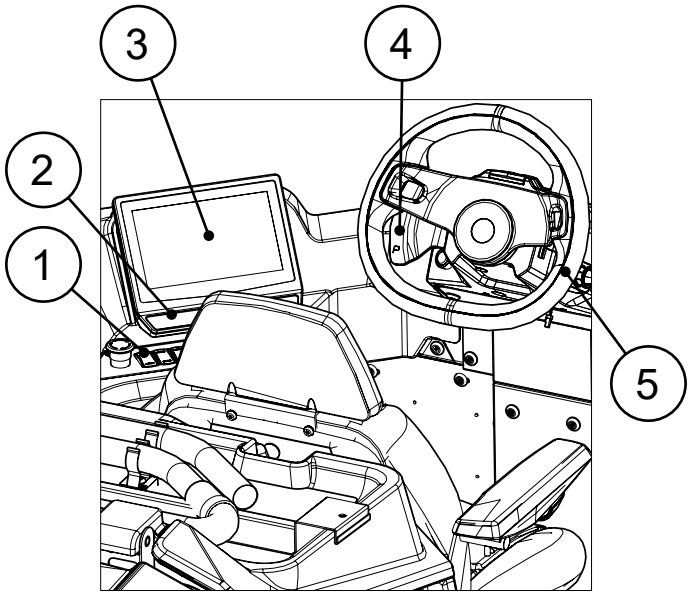
1. ECO-MODE working program control button, see “ECO MODE WORKING PROGRAM (PRO VERSION)” on page 61.
2. Control display.
3. Forward speed performance adjustment button, see “ADJUSTING THE FORWARD SPEED (PRO VERSION)” on page 96.
4. Brush head control button, see “WORKING MODE (PRO VERSIONS)” on page 72.
5. Scrubbing brush head extra-pressure function control button, see “EXTRA BRUSH HEAD PRESSURE (PRO VERSION)” on page 97.
6. Working zone control buttons, see “PROGRAM ZONE WORKING PROGRAM (PRO VERSION)” on page 63.
7. Squeegee noiseless suction function control button, see “NOISELESS SUCTION (PRO VERSION)” on page 97.
8. Squeegee control button, see “WORKING MODE (PRO VERSIONS)” on page 72.
9. Detergent solution performance adjustment buttons, see “ADJUSTING THE DETERGENT SOLUTION FLOW (PRO VERSION)” on page 96.




The control display consists of the following:

1. Graphic symbol used to identify the residual battery charge, see “BATTERY BOX CHARGE LEVEL INDICATOR (PRO VERSION)” on page 85.
2. Numeric symbol used to identify the residual battery charge, see “BATTERY BOX CHARGE LEVEL INDICATOR (PRO VERSION)” on page 85.
3. Graphic symbol used to identify the forward speed performance level, see “ADJUSTING THE FORWARD SPEED (PRO VERSION)” on page 96.
4. Graphic symbol used to indicate that the automatic fleet management system is connected to the data exchange network.
5. Graphic symbol used to indicate that the "ECO" working program is active, see “ECO MODE WORKING PROGRAM (PRO VERSION)” on page 61.
6. Numeric symbol used to identify the machine hour meter, see “HOUR METER (PRO VERSION)” on page 86.
7. Graphic symbol used to indicate the detergent solution performance level, see “ADJUSTING THE DETERGENT SOLUTION FLOW (PRO VERSION)” on page 96.
8. Graphic symbol used to indicate that the "POWER MODE" working program is active, see “POWER MODE WORKING PROGRAM (PRO VERSION)” on page 62.
9. Graphic symbol used to indicate that the detergent solution recirculation system is active, see “FLR - CONTINUOUS RECYCLING SYSTEM (PRO VERSIONS)” on page 116.

# CONTROL STATION (PLUS VERSION)

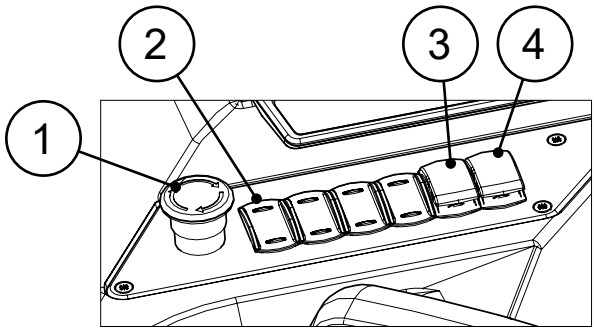



The machine has an easy to use and intuitive control station, it is comprised of mainly the following:

1. Control panel, see “CONTROL PUSHBUTTON PANEL (PLUS VERSION)” on page 32.
2. Membrane pushbutton panel, see “MEMBRANE PUSHBUTTON PANEL (PLUS VERSION)” on page 32.
3. Control panel, see “CONTROL DISPLAY (PLUS VERSION)” on page 33.
4. POWER working program activation pad, see “POWER MODE WORKING PROGRAM (PLUS VERSION)” on page 71.
5. REVERSE function activation pad, see “REVERSE GEAR” on page 94.

## CONTROL PUSHBUTTON PANEL (PLUS VERSION)

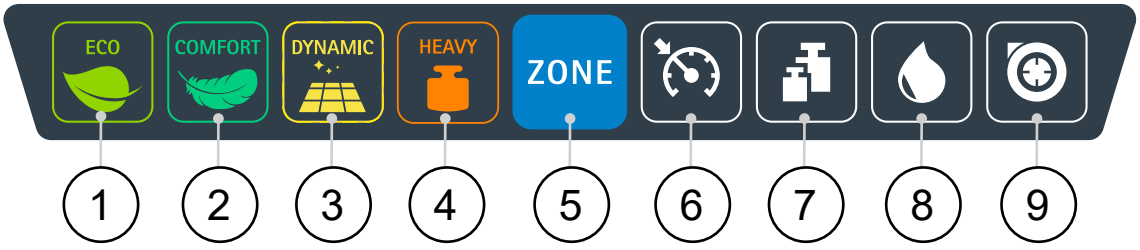
With the control panel, located on the left of the control station, it is possible to activate the optional machine functions, thereby increasing productivity and reducing costs.
The control panel is divided as follows:




1. Emergency switch, see “EMERGENCY BUTTON (PLUS VERSION)” on page 107.
2. Brush uncoupling function activation switch, see “BRUSH UNCOUPLING (PLUS VERSION)” on page 108.
3. Recovery tank cleaning spray gun control switch, see “RECOVERY TANK CLEANING SPRAY GUN (PLUS VERSIONS)” on page 125.
4. Vacuum wand control switch, see “VACUUM WAND (PLUS VERSIONS)” on page 127.

## MEMBRANE PUSHBUTTON PANEL (PLUS VERSION)

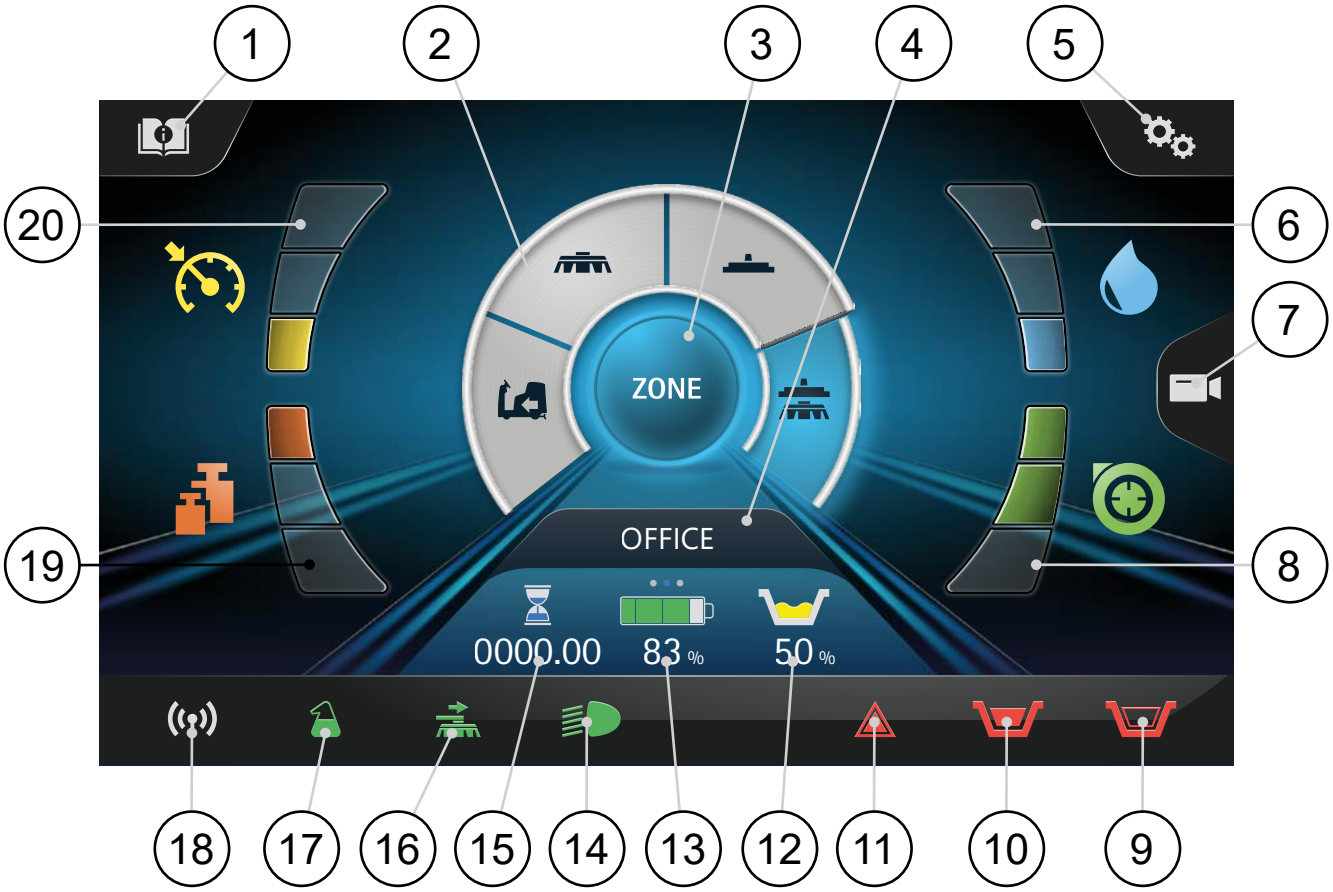
With the membrane pushbutton panel in the machine control panel, it is possible to quickly call up one of the five working programs or access the screen to modify one of the four working parameters, which increases productivity and reduces costs.
All the tasks are managed using a simple user interface where only a dedicated button needs to be pressed.
The membrane pushbutton panel is divided as follows:



1. ECO working program activation button, see “ECO MODE WORKING PROGRAM (PLUS VERSION)” on page 65.
2. COMFORT working program activation button, see COMFORT MODE WORKING PROGRAM.
3. DYNAMIC working program activation button, see DYNAMIC MODE WORKING PROGRAM.
4. HEAVY working program activation button, see “HEAVY MODE WORKING PROGRAM (PLUS VERSION)” on page 68.
5. ZONE working program activation button, see “ZONE MODE WORKING PROGRAM (PLUS VERSION)” on page 69.
6. Forward speed performance level change button, see “MANUAL MODE WORKING PROGRAM (PLUS VERSION)” on page 70.
7. Pressure exercised on the brush head performance level change button, see “MANUAL MODE WORKING PROGRAM (PLUS VERSION)” on page 70.
8. Detergent solution performance level change button, see “MANUAL MODE WORKING PROGRAM (PLUS VERSION)” on page 70.
9. Vacuum system performance level change button, see “MANUAL MODE WORKING PROGRAM (PLUS VERSION)” on page 70.

## CONTROL DISPLAY (PLUS VERSION)

With the control display located on the machine control panel, it is possible to access essential information to make more accurate selections and increase the professionalism of interventions, which increases productivity and reduces costs..
All the tasks are managed using a simple user interface; intuitive and dynamic, simply touch the screen to have the same intuitive sensation as a smartphone.
The “MAIN” screen is divided as follows:




1. Video tutorials screen activation button, see “TUTORIAL (PLUS VERSION)” on page 112.
2. Working mode selector, see “DS SELECTOR (DRIVE SELECT)” on page 78.
3. Working program active icon.

4. Text indicator.
5. Menu screen activation button, see the user interface configuration manual, document number 10114635.
6. Detergent solution performance level indicator, see “MANUAL MODE WORKING PROGRAM (PLUS VERSION)” on page 70.
7. Rear view camera screen activation button, see “REAR VIEW CAMERA (PLUS VERSION)” on page 109.
8. Vacuum system performance level indicator, see “MANUAL MODE WORKING PROGRAM (PLUS VERSION)” on page 70.
9. Water reserve in the solution tank symbol, if displayed fill the detergent solution, see “DETERGENT SOLUTION” on page 47.
10. Recovery tank full symbol, if displayed empty the recovery tank, see “DRAINING THE RECOVERY TANK” on page 146.
11. Generic alarm symbol, if displayed stop the machine and see “ALARM SCREEN (PLUS VERSION)” on page 107.
12. Solution tank level indicator, see “SOLUTION TANK FILLING LEVEL INDICATOR (PLUS VERSIONS)” on page 91.
13. Battery box charge level indicator, see “BATTERY BOX CHARGE LEVEL INDICATOR (PLUS VERSIONS)” on page 90.
14. Working headlights active symbol, see “WORKING HEADLIGHTS (PLUS VERSIONS)” on page 129.
15. Hour meter, see “HOUR METER (PLUS VERSIONS)” on page 90.
16. Side brush in working position symbol, see “SCRUBBING SIDE BRUSH (PLUS VERSIONS)” on page 123.
17. For versions with the FSS system, the symbol  identifies that the automatic detergent dosing system is active, see “FSS - AUTOMATIC DETERGENT DOSING SYSTEM (PLUS VERSIONS)” on page 125. For versions with the FLR system, the symbol  identifies that the automatic detergent dosing system is active, see “FLR - CONTINUOUS RECYCLING SYSTEM (PLUS VERSIONS)” on page 124.
18. FFM system active symbol, see “FFM - TAG INSERTION (PLUS VERSIONS)” on page 128.
19. Pressure exercised on the brush head performance level indicator, see “MANUAL MODE WORKING PROGRAM (PLUS VERSION)” on page 70.
20. Forward speed performance level indicator, see “MANUAL MODE WORKING PROGRAM (PLUS VERSION)” on page 70.

# PREPARATION OF MACHINE

## MACHINE SAFETY

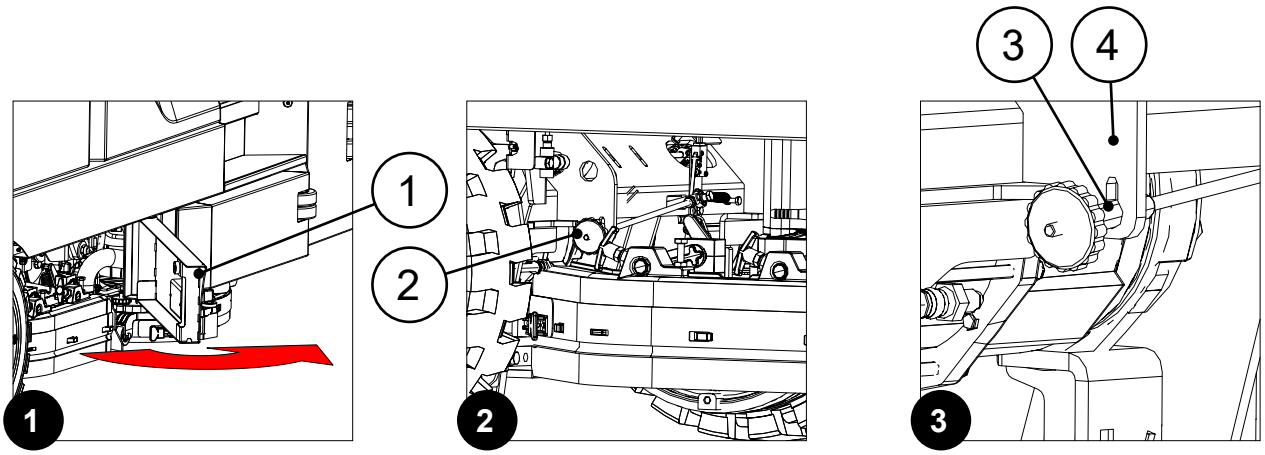
**Machine PRO version:**

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

1. Open the right inspection door (1) (**Fig.1**).
2. Check that the right gearmotor electric brake is activated. The lever (2) must not be in its locked position, otherwise, unlock it by pulling it towards you and moving it downwards (**Fig.2**).

**DANGER:** the electric brake is considered to be engaged when the hexagonal column (3) is free to move within the hole in the bracket (4) located in the frame (**Fig.3**).

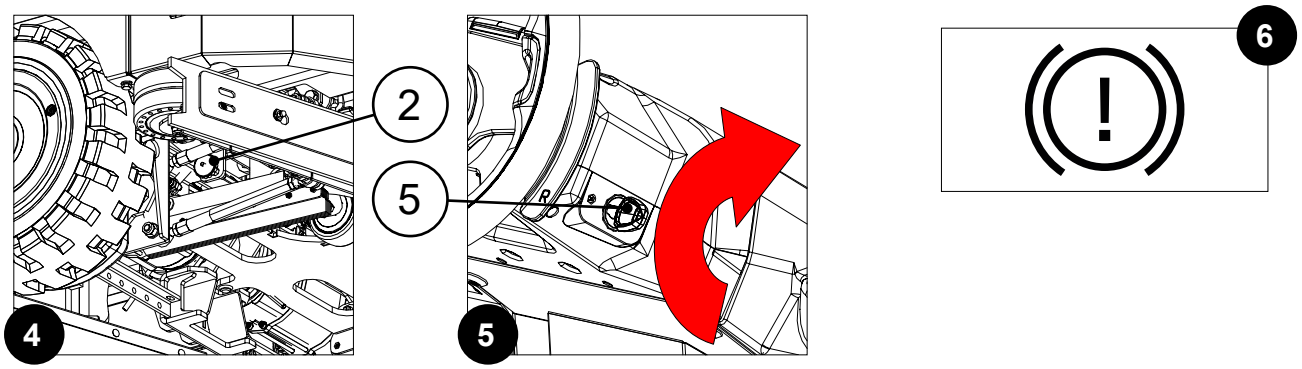
**DANGER:** the electric brake is considered to be disengaged when the hexagonal column (3) is resting on the bracket (4) located in the frame (**Fig.3**).




3. Check that also the right gearmotor electric brake is activated. The lever (2) must not be in its locked position, otherwise, unlock it by pulling it towards you and moving it downwards (**Fig.4**).
4. Make sure the solution tank is empty. If this is not the case, empty it. See “EMPTYING THE SOLUTION TANK” on page 148 on page .
5. Make sure the recovery tank is empty. If this is not the case, empty it. See “DRAINING THE RECOVERY TANK” on page 146.
6. Sit on the driver’s seat.
7. Insert the key (5) into the main switch on the right side of the steering column (**Fig.5**).
8. Set the main switch to "I" by turning the key a quarter turn clockwise (**Fig.5**).

**ATTENTION:** If the electric brake is not properly engaged, the alarm symbol will appear on the control display (**Fig. 6**) and will remain visible until all the electric brakes have been properly engaged.

**N.B.:** when the electric brake is deactivated, traction is inhibited.



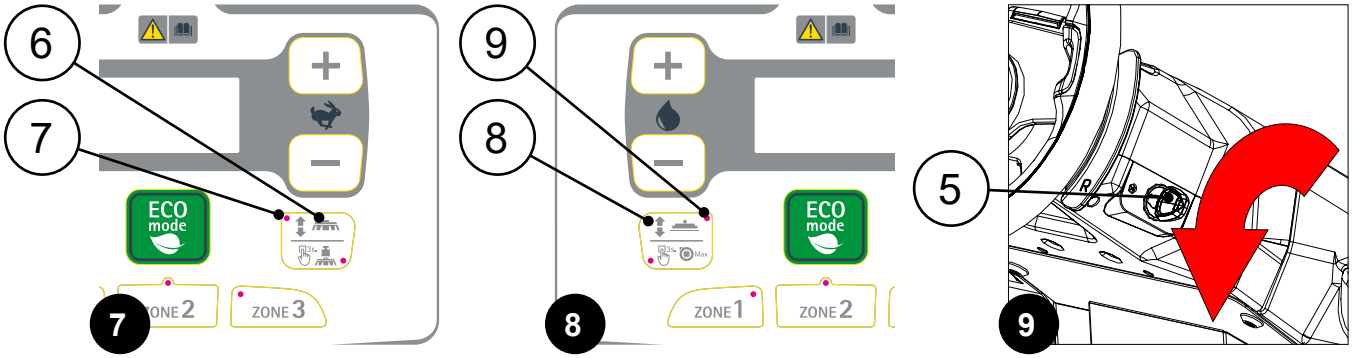

9. Make sure that the brush head is in the rest position; if this is not the case, press the button (6) on the control panel (**Fig.7**).

**N.B.:** when the brush head is in the rest position, the LED (8) on the button (6) is off.

10. Make sure that the squeegee is in the rest position; if this is not the case, press the button (8) on the control panel (**Fig.8**).

**N.B.:** when the squeegee is in the rest position, the LED (9) on the button (8) is off.

11. Bring the main switch to the "0" position by making a quarter turn anti-clockwise with the key (5) (**Fig.9**).

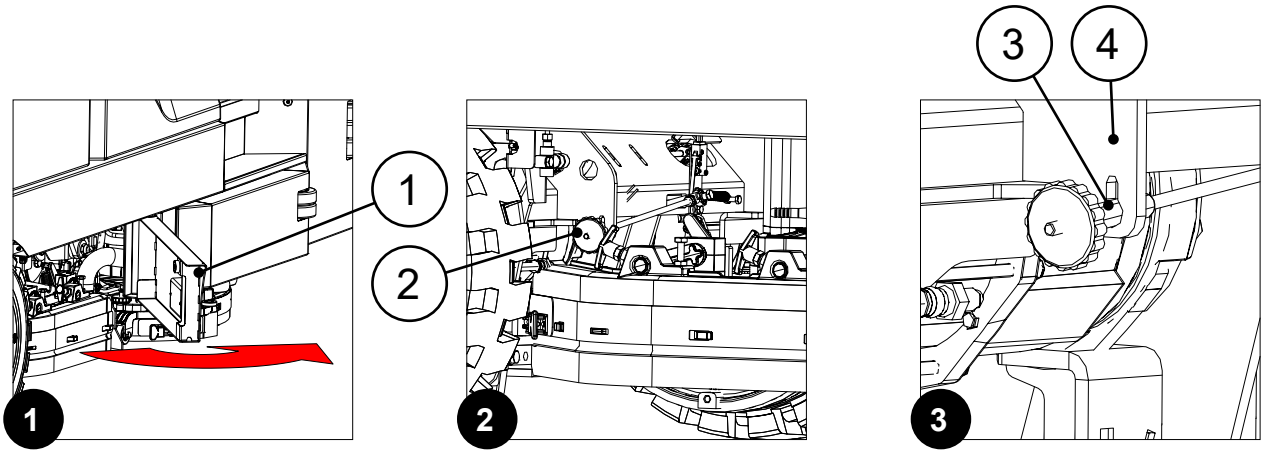



**PLUS machine version:**

1. Open the right inspection door (1) (**Fig.1**).
2. Check that the right gearmotor electric brake is activated. The lever (2) must not be in its locked position, otherwise, unlock it by pulling it towards you and moving it downwards (**Fig.2**).

**DANGER:** the electric brake is considered to be engaged when the hexagonal column (3) is free to move within the hole in the bracket (4) located in the frame (**Fig.3**).

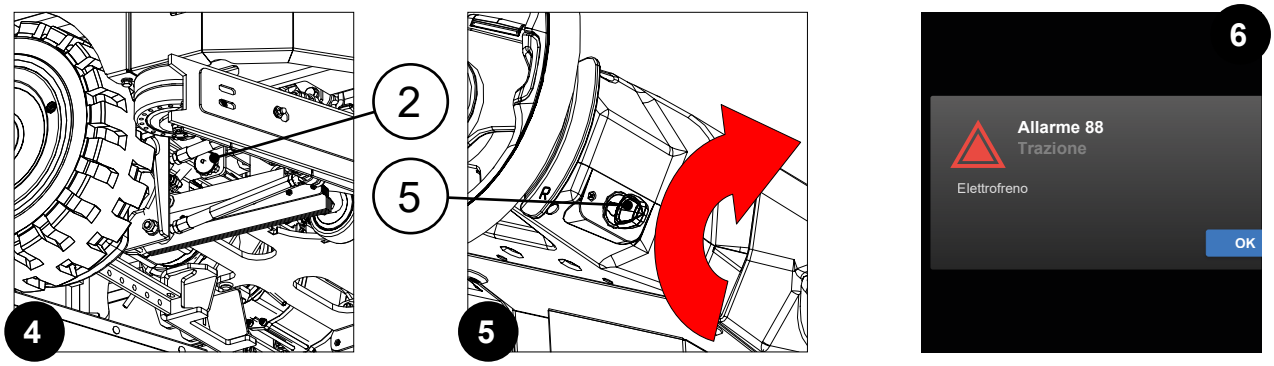
**DANGER:** the electric brake is considered to be disengaged when the hexagonal column (3) is resting on the bracket (4) located in the frame (**Fig.3**).



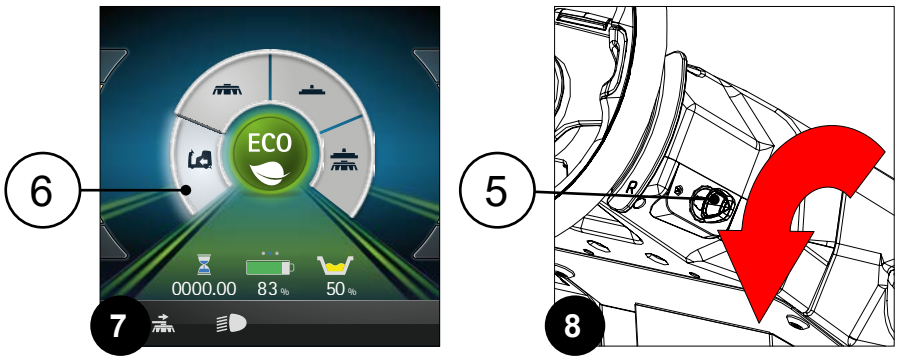

3. Check that also the right gearmotor electric brake is activated. The lever (2) must not be in its locked position, otherwise, unlock it by pulling it towards you and moving it downwards (**Fig.4**).
4. Make sure the solution tank is empty. If this is not the case, empty it. See “EMPTYING THE SOLUTION TANK” on page 148 on page .
5. Make sure the recovery tank is empty. If this is not the case, empty it. See “DRAINING THE RECOVERY TANK” on page 146.
6. Sit on the driver’s seat.
7. Insert the key (5) into the main switch on the right side of the steering column (**Fig.5**).
8. Set the main switch to "I" by turning the key a quarter turn clockwise (**Fig.5**).

**ATTENTION:** If the electric brake is not properly engaged, the alarm symbol will appear on the control display (**Fig. 6**) and will remain visible until all the electric brakes have been properly engaged.

**N.B.:** when the electric brake is deactivated, traction is inhibited.




9. Check that the working mode activated in the machine is TRANSFER, otherwise press the button (6) on the control display (**Fig.7**), see “DS SELECTOR (DRIVE SELECT)” on page 78.
10. Bring the main switch to the "0" position by making a quarter turn anti-clockwise with the key (5) (**Fig.8**).
11. Remove the key from the instrument panel.



**To ensure that work is carried out in the best safety conditions, proceed as follows:**

1. Get off the machine.
2. Remove the key from the instrument panel.
3. Get off the machine.

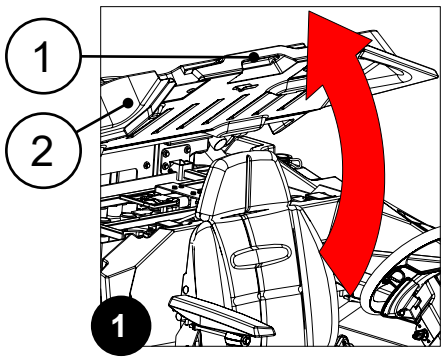
**CAUTION:** do not position your foot above the lateral brush head lid while the machine is descending.

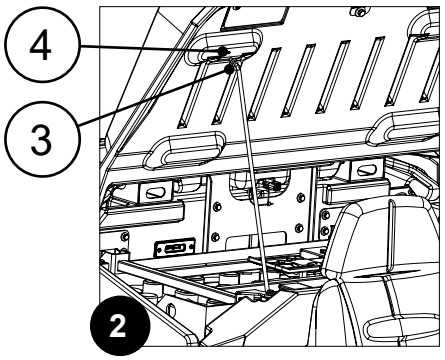
4. Grasp the handle (1) and turn the battery compartment lid (2) to its maintenance position (**Fig.1**).

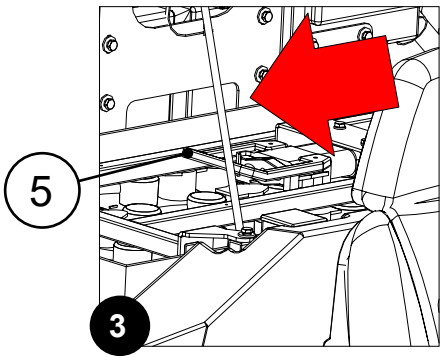
**ATTENTION:** to prevent the lid from turning, insert the retainer (3) into the slot (4) (**Fig.2**).

**ATTENTION:** the following operations must be carried out by qualified personnel. Incorrect operations could result in machine malfunctions.

5. Disconnect the machine's electrical system wiring connector (5) from the connector on the power cable coming from the battery box (**Fig. 3**).



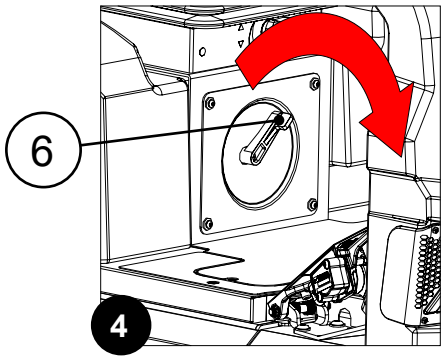




6. Grasp the battery compartment lid and turn it to its working position.

**N.B.:** release the retainer before turning the lid.

7. Set the detergent solution flow to its OFF position by turning the lever (6) under the operator's seat clockwise (**Fig. 4**).



# HOW TO MOVE THE MACHINE

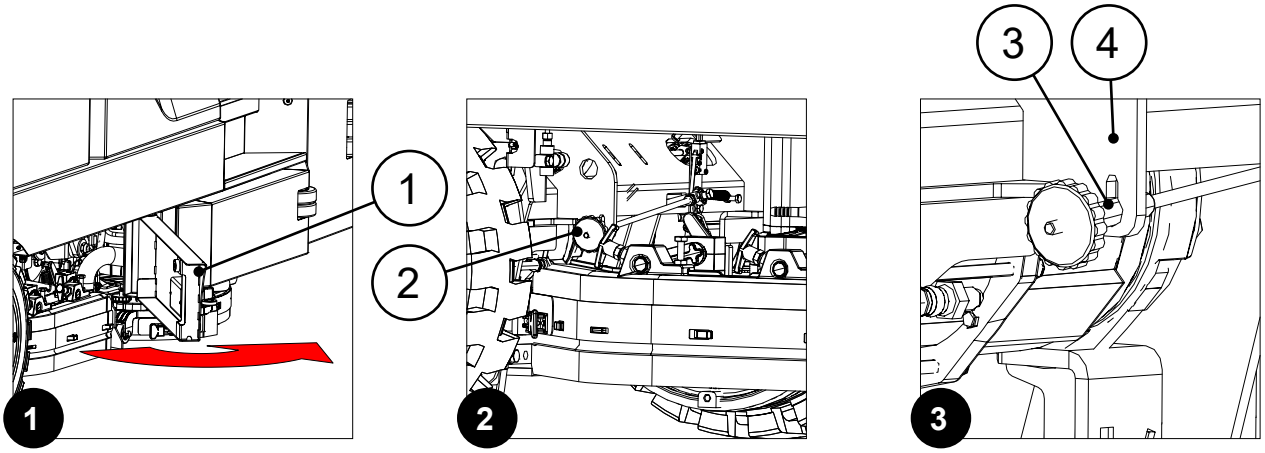
**Machine PRO version:**

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

1. Open the right inspection door (1) (**Fig.1**).
2. Check that the right gearmotor electric brake is activated. The lever (2) must not be in its locked position, otherwise, unlock it by pulling it towards you and moving it downwards (**Fig.2**).

**DANGER:** the electric brake is considered to be engaged when the hexagonal column (3) is free to move within the hole in the bracket (4) located in the frame (**Fig.3**).

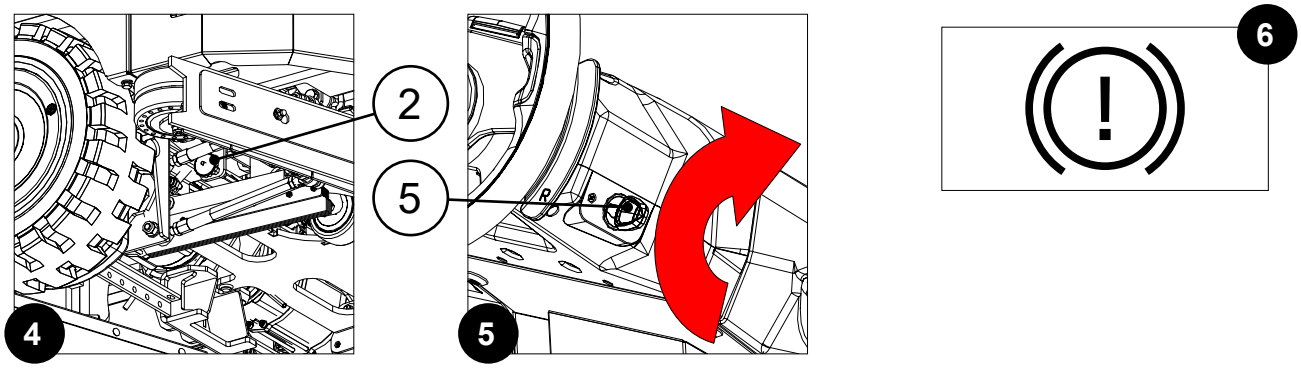
**DANGER:** the electric brake is considered to be disengaged when the hexagonal column (3) is resting on the bracket (4) located in the frame (**Fig.3**).




3. Check that also the right gearmotor electric brake is activated. The lever (2) must not be in its locked position, otherwise, unlock it by pulling it towards you and moving it downwards (**Fig.4**).
4. Make sure the solution tank is empty. If this is not the case, empty it. See “EMPTYING THE SOLUTION TANK” on page 148 on page .
5. Make sure the recovery tank is empty. If this is not the case, empty it. See “DRAINING THE RECOVERY TANK” on page 146.
6. Sit on the driver’s seat.
7. Insert the key (5) into the main switch on the right side of the steering column (**Fig.5**).
8. Set the main switch to "I" by turning the key a quarter turn clockwise (**Fig.5**).

**ATTENTION:** If the electric brake is not properly engaged, the alarm symbol will appear on the control display (**Fig. 6**) and will remain visible until all the electric brakes have been properly activated.

**N.B.:** when the electric brake is deactivated, traction is inhibited.

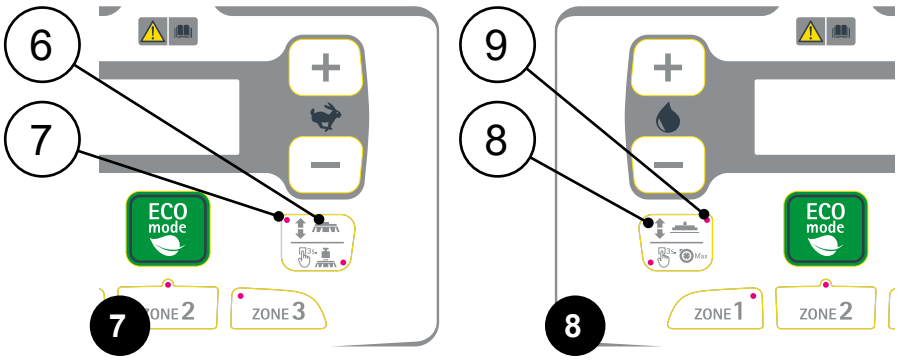


9. Make sure that the brush head is in the rest position; if this is not the case, press the button (6) on the control panel (**Fig.7**).

**N.B.:** when the brush head is in the rest position, the LED (7) on the button (6) is off.

10. Make sure that the squeegee is in the rest position; if this is not the case, press the button (8) on the control panel (**Fig.8**).

**N.B.:** when the squeegee is in the rest position, the LED (9) on the button (8) is off.

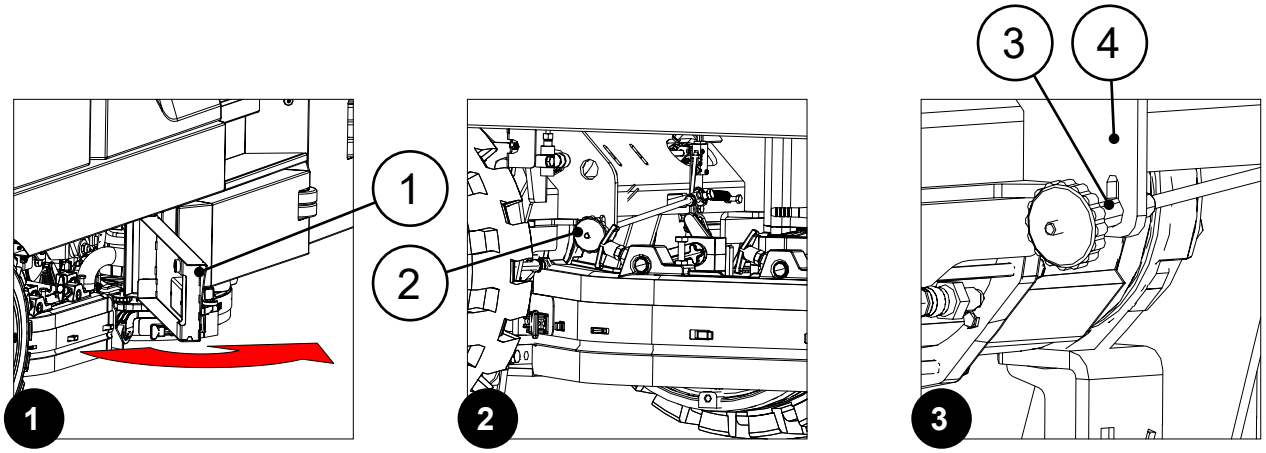



**PLUS machine version:**

1. Open the right inspection door (1) (**Fig.1**).
2. Check that the right gearmotor electric brake is activated. The lever (2) must not be in its locked position, otherwise, unlock it by pulling it towards you and moving it downwards (**Fig.2**).

**DANGER:** the electric brake is considered to be engaged when the hexagonal column (3) is free to move within the hole in the bracket (4) located in the frame (**Fig.3**).

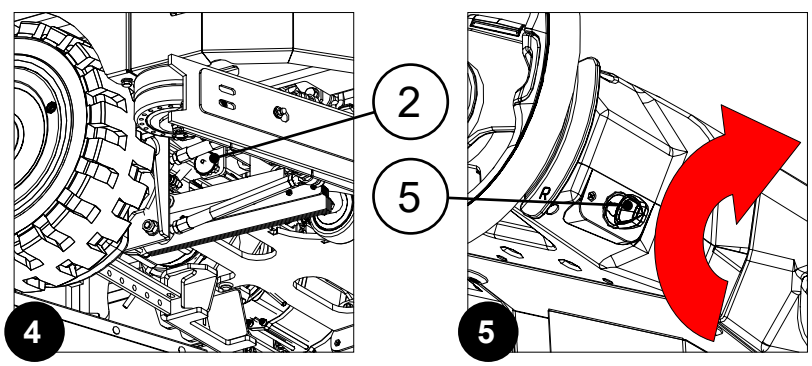
**DANGER:** the electric brake is considered to be disengaged when the hexagonal column (3) is resting on the bracket (4) located in the frame (**Fig.3**).

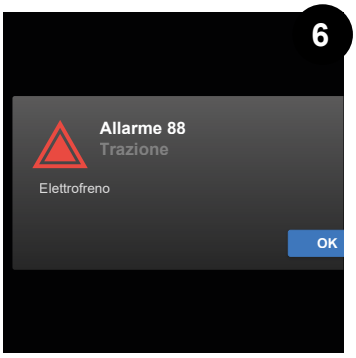



3. Check that also the right gearmotor electric brake is activated. The lever (2) must not be in its locked position, otherwise, unlock it by pulling it towards you and moving it downwards (**Fig.4**).
4. Make sure the solution tank is empty. If this is not the case, empty it. See “EMPTYING THE SOLUTION TANK” on page 148 on page .
5. Make sure the recovery tank is empty. If this is not the case, empty it. See “DRAINING THE RECOVERY TANK” on page 146.
6. Sit on the driver’s seat.
7. Insert the key (5) into the main switch on the right side of the steering column (**Fig.5**).
8. Set the main switch to "I" by turning the key a quarter turn clockwise (**Fig.5**).

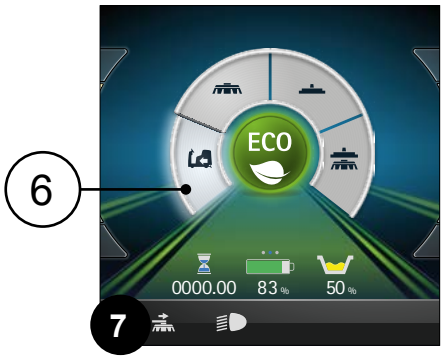
**ATTENTION:** If the electric brake is not properly engaged, the alarm symbol will appear on the control display (**Fig. 6**) and will remain visible until all the electric brakes have been properly engaged.

**N.B.:** when the electric brake is deactivated, traction is inhibited.




9. Check that the working mode activated in the machine is TRANSFER, otherwise press the button (6) on the control display (**Fig.7**), see “DS SELECTOR (DRIVE SELECT)” on page 78.




**The procedure for transporting the machine is as follows:**

**DANGER:** before starting any activities, make sure that all the current transport safety regulations in the machine's country of use have been scrupulously respected.

1. Press the drive pedal (1) (**Fig.1**) to begin moving the machine.
2. Use a ramp to move the machine up onto the transport vehicle.

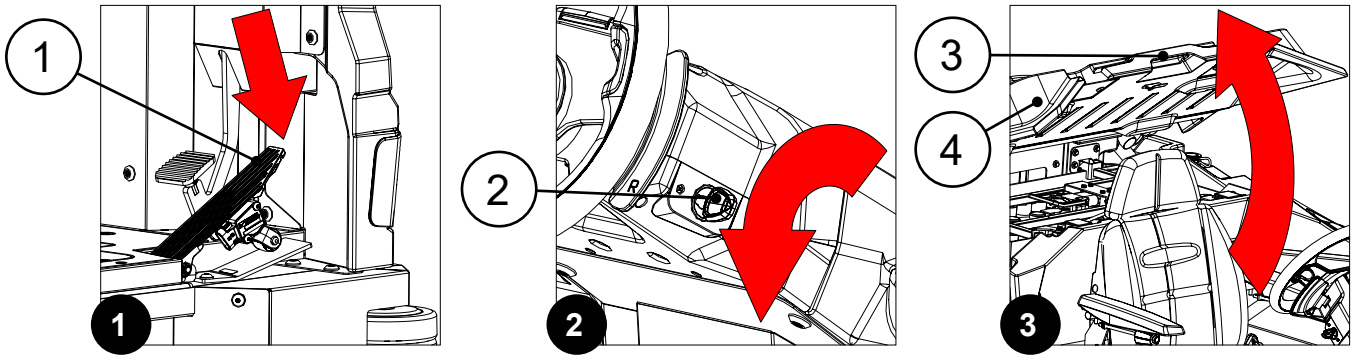
**CAUTION:** during this operation, check there are no people or objects near the machine.

**N.B.:** the ramp gradient must not be such as to cause damage to the machine.

3. Position the machine on the means of transport. Set the main switch to position “0” by turning the key (2) a quarter turn anti-clockwise (**Fig.2**).
4. Remove the key from the main switch.
5. Get off the machine.

**CAUTION:** do not position your foot above the lateral brush head lid while the machine is descending.

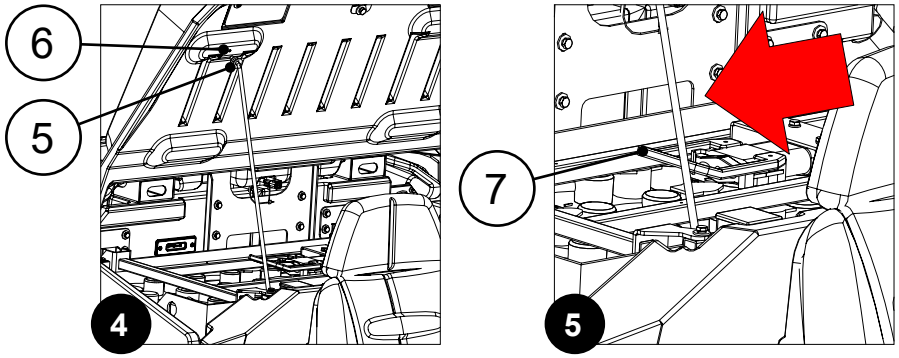
6. Grasp the handle (3) and turn the battery compartment lid (4) to its maintenance position (**Fig.3**).




**ATTENTION:** to prevent the lid from turning, insert the retainer (5) into the slot (6) (**Fig.4**).

**ATTENTION:** the following operations must be carried out by qualified personnel. Incorrect operations could result in machine malfunctions.

7. Disconnect the machine's electrical system wiring connector (7) from the connector on the power cable coming from the battery box (**Fig. 5**).




8. Grasp the battery compartment lid and turn it to its working position.

**N.B.:** release the retainer before turning the lid.

9. Secure the machine to the means of transport using an appropriate number and type of fastening elements, based on its weight and size.

**CAUTION:** secure the machine according to the directives in force in the country of use, so that it cannot slide or tip over.

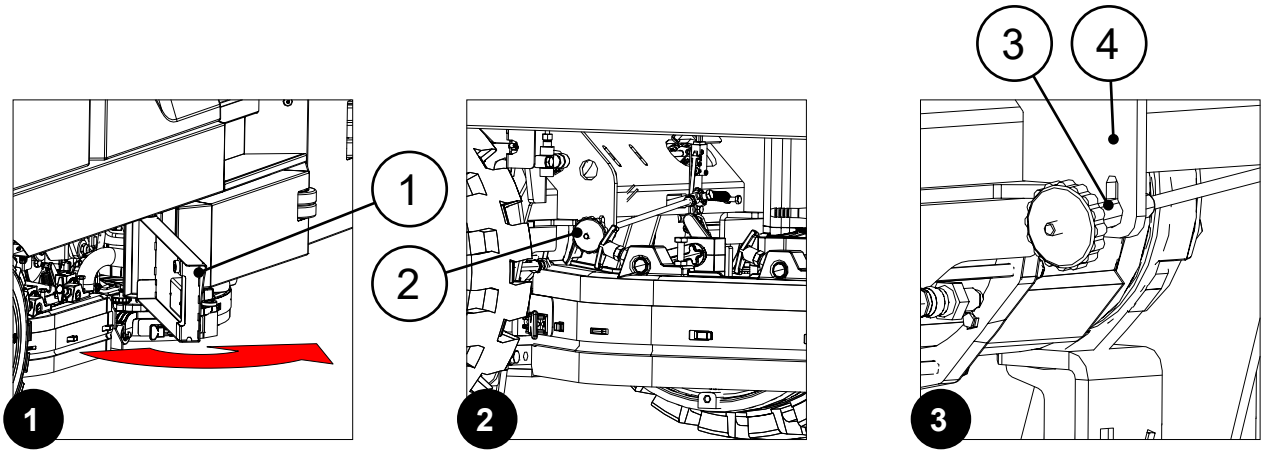
**N.B.:** the anchor points to be used to safely secure the machine are indicated on the machine itself.

## HOW TO MOVE THE MACHINE WITH THE TRACTION IN NEUTRAL

The phases for moving the machine with the traction system in neutral are as follows:

1. Perform all the operations required to secure the machine. See “MACHINE SAFETY” on page 35.
2. Open the right inspection door (1) (**Fig.1**).
3. Deactivate the right gearmotor electric brake, the lever (2) must be in its locked position, otherwise, lock it by pulling it towards you and moving it up (**Fig.2**).

**DANGER:** the electric brake is considered to be disengaged when the hexagonal column (3) is resting on the bracket (4) located in the frame (**Fig.3**).




4. Deactivate the left gearmotor electric brake, the lever (2) must be in its locked position, otherwise, unlock it by pulling it towards you and moving it up (Fig.).

**DANGER:** the electric brake is considered to be disengaged when the hexagonal column (3) is resting on the bracket located in the frame (**Fig.3**).

5. Fix the machine to the drive elements.

**CAUTION:** Use the type of drive element most suitable for the machine weight, see the transport weight parameter in the “TECHNICAL DATA” on page 16.

**N.B.:** the anchor points to be used to safely secure the machine are indicated on the machine itself.

## TRACTION ELECTRIC BRAKE ACTIVATION

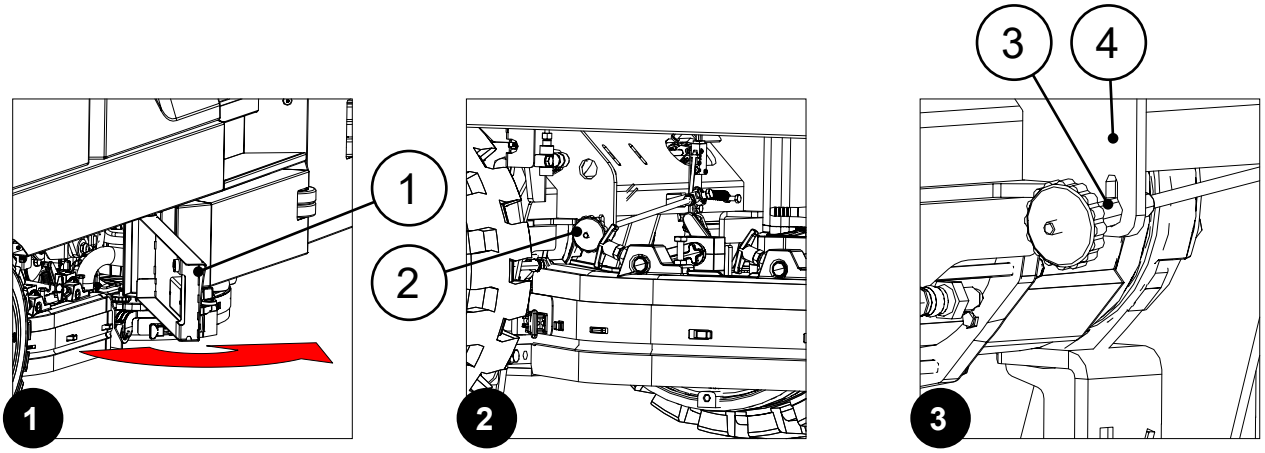
The phases for activating the traction electric brake are as follows:

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

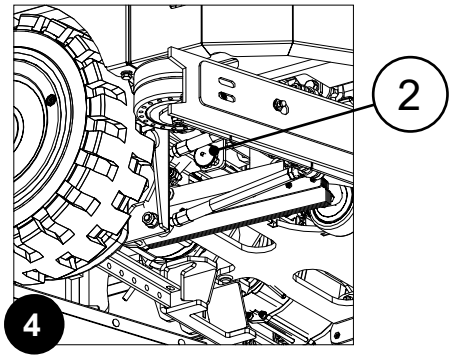
1. Open the right inspection door (1) (**Fig.1**).
2. Activate the right gearmotor electric brake, the lever (2) must not be in its locked position, otherwise, release it by pulling it towards you and moving it down (**Fig.2**).

**DANGER:** the electric brake is considered to be engaged when the hexagonal column (3) is free to move within the hole in the bracket (4) located in the frame (**Fig.3**).

**DANGER:** the electric brake is considered to be disengaged when the hexagonal column (3) is resting on the bracket (4) located in the frame (**Fig.3**).




3. Close the left inspection door (1).
4. Activate the left gearmotor electric brake, the lever (2) must not be in its locked position, otherwise, release it by pulling it towards you and moving it down (**Fig.4**).



## TYPE OF BATTERY PACK TO BE USED

| Code | Type | Voltage (V) | Work ($Ah_{c5}$) |
|---|---|---|---|
| 454282 | traditional lead | 36 | 775 |
| 455908 | pure lead | 36 | 500 |
| 456224 | lithium | 36 | 775 |

For good work performance, the machine must be powered at 36V with a dedicated battery pack. It is recommended to use the traditional lead 36V 775 $Ah_{C5}$ battery pack.

The dimensions of the battery pack are: L=422mm W=913mm H=787mm

**N.B.:** the dimensions refer to the machine's direction of travel.

## BATTERY PACK MAINTENANCE AND DISPOSAL

For battery maintenance and recharging, follow the instructions contained in the document provided by the batteries' manufacturer.
When the battery pack is drained, it must be disconnected by a FIMAP service centre technician or a properly trained and specialised worker; using a suitable lifting device, remove the battery pack from the machine and take it to a suitable disposal centre.

**N.B.:** used batteries, which are classified as hazardous waste, must be returned to a legally authorised waste disposal authority.

## INSERTING THE BATTERY PACK INTO THE MACHINE

To insert the battery pack into the machine, contact a FIMAP service centre technician.

**WARNING:** FIMAP declines all responsibility for any damage to property or injury persons in the event that the batteries are replaced by an unauthorized technician.

## RECHARGING THE BATTERY PACK

The battery pack must be charged prior to first use and whenever it no longer provides sufficient power to perform the desired work activities.

**N.B.:** Carefully read the User and Maintenance Manual for the battery pack you wish to use before charging.

1. Bring the machine to the battery recharging area.

**ATTENTION:** Park the machine in an enclosed place, on a flat and level surface; near the machine there must be no objects that could either damage it, or be damaged through contact with it.

**ATTENTION:** the room where the batteries are recharged must be adequately ventilated to prevent the accumulation of gases that leak from batteries.

**WARNING:** the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

2. Perform all the operations required to secure the machine. See “MACHINE SAFETY” on page 35.
3. Position yourself to the side of the machine, grasp the handle (1) and turn the battery compartment lid (2) to its maintenance position (**Fig.1**).

**ATTENTION:** to prevent the lid from turning, insert the retainer (3) into the slot (4) (**Fig.2**).

**ATTENTION:** the following operations must be carried out by qualified personnel. An incorrect connection of the connector may cause a malfunction of the device.

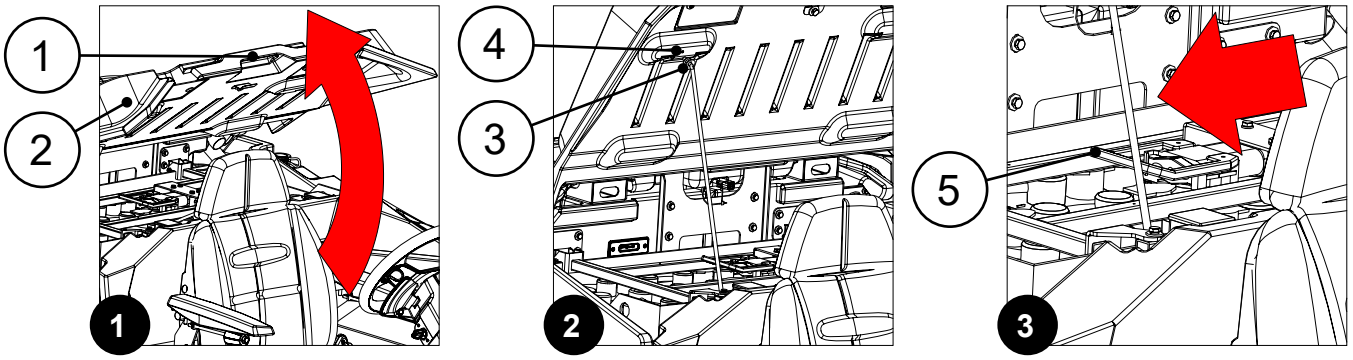
4. Connect the battery charger cable's connector (5) to the connector on the power cable coming from the battery pack (**Fig.3**).

**N.B.:** The battery charger's coupling connector comes inside the bag containing this instruction booklet, and must be assembled on the battery charger's cables as indicated in the instructions.

**ATTENTION:** before connecting the battery box to the battery charger, make sure it is suitable for the battery box you want to charge.

**N.B.:** carefully read the user and maintenance instructions for the battery charger to be used for charging.

**CAUTION:** keep the battery compartment lid open for the entire duration of the battery pack recharging cycle in order to allow any fumes to escape.




5. Once the charging cycle has been completed, disconnect the battery charger cable's connector (5) from the connector on the power cable coming from the battery pack.
6. Connect the connector on the machine's electrical system wiring to the connector on the power cable coming from the battery pack.
7. Grasp the battery compartment lid and turn it to its working position.

**N.B.:** release the retainer before turning the lid.

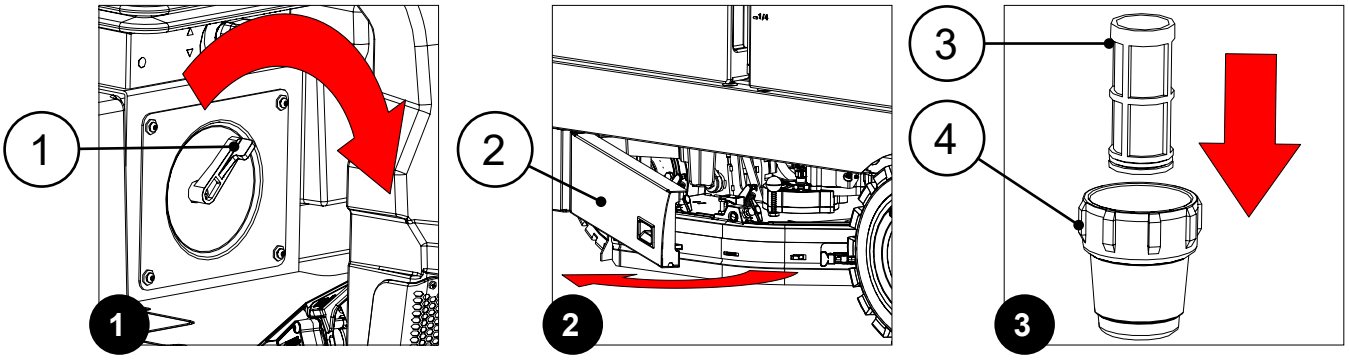
## INSERTING WATER SYSTEM FILTER

Before using the machine for the first time the water system filter needs to be reset, for shipping reasons the filter cartridge and the cap have been removed.
To insert the filter cartridge in the water system filter cap proceed as follows:

1. Take the machine to the maintenance area.
2. Perform all the operations required to secure the machine. See “MACHINE SAFETY” on page 35.

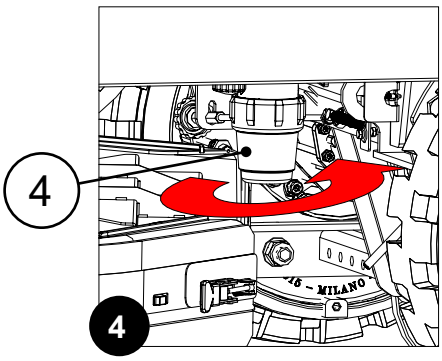
**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Close the tap's outlet flow, and turn the lever (1) on the front of the driver's seat clockwise (**Fig.1**).
4. Stand on the left side of the machine.
5. Open the left lateral inspection door (2) (**Fig.2**).
6. Insert the filter cartridge (3) in the housing on the cap (4) (**Fig.3**).




**N.B.:** The O-ring gasket in the filter cartridge should be inserted into its seat in the cap.

7. Screw the cap (4) onto the body of the detergent solution filter (**Fig.4**).



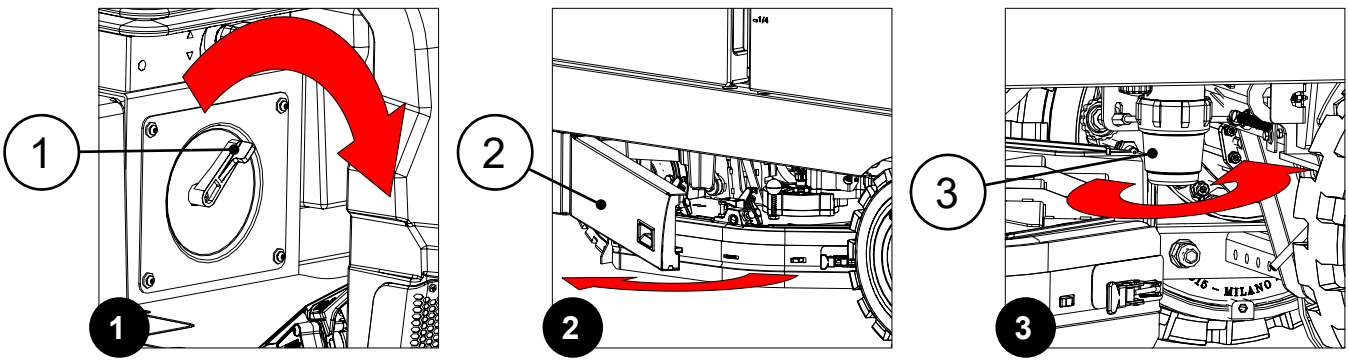

## DETERGENT SOLUTION

Proceed as follows to fill the solution tank with water:

1. Take the machine to the usual place for filling the solution tank.
2. Perform all the operations required to secure the machine. See “MACHINE SAFETY” on page 35.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Close the tap's outlet flow, and turn the lever (1) on the front of the driver's seat clockwise (**Fig.1**).
4. Open the left lateral inspection door (2) (**Fig.2**).
5. Make sure that the cap (3) on the water system filter body (4) is closed. If not, close it (**Fig.3**).

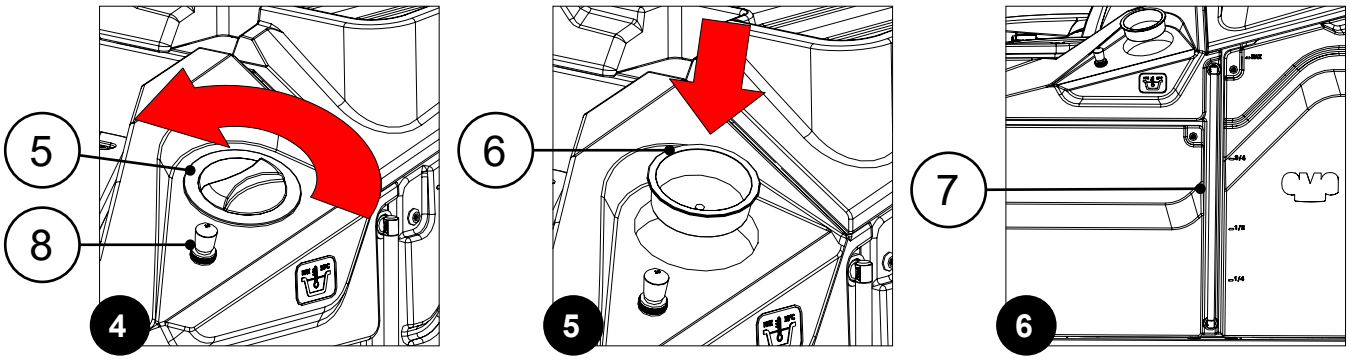



6. Close the left inspection door.
7. Remove the solution tank filler cap (5) (**Fig.4**).
8. Check that the filter (6) under the cap is positioned correctly (**Fig.5**) in order to prevent impurities and dirt from

getting inside, which can cause the machine's water system to malfunction.

9. Fill the solution tank.

**N.B.:** the amount of solution inside the tank is indicated by the coloured ball inside the level tube (7) on the left-hand side of the machine (**Fig.6**).




**N.B.:** the solution tank can also be filled with the quick-fill system (FFF). Simply connect the water hose to the quick-fit hose connector (8) on the machine (**Fig. 4**), and remember to remove the cap (5) to vent the air.

**N.B.:** fill with clean water, at a temperature no higher than 50°C (122°F) and no lower than 10°C (50°F).

**For the versions without the automatic detergent dosing system** (versions without FSS), after filling the solution tank with clean water, add the liquid detergent to the tank in the concentration and manner indicated on the detergent manufacturer's label.

**N.B.:** to prevent an excessive amount of foam from forming, which could damage the suction motor, use the minimum percentage of detergent required.

**CAUTION:** protective gloves should always be worn when handling detergents or acidic or alkaline solutions, to avoid serious hand injuries.

**ATTENTION:** always use detergents which have a manufacturer's label that indicates that they are suitable for use with floor scrubbing machines. Do not use acid or alkaline products or solvents without this indication.

**ATTENTION:** in order to avoid damaging the machine's water system, acidic or alkaline maintenance detergents can be used, as long as they have pH values between 4 and 10, and do not contain: oxidising agents, chlorine or bromine, formaldehyde, mineral solvents.

**ATTENTION:** Always use low-foam detergent. To avoid the production of foam, put a minimum quantity of antifoam liquid in the recovery tank before starting to clean. Do not use pure acids.

**For versions with the automatic detergent dosing system** (versions with the FSS system), fill the solution tank with clean water and then proceed as follows:

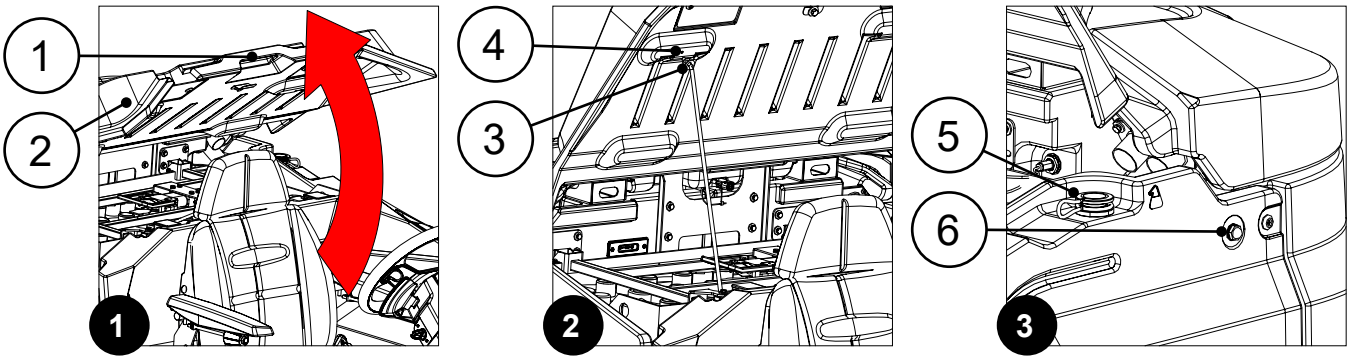
1. Perform all the operations required to secure the machine. See “MACHINE SAFETY” on page 35.

**CAUTION:** protective gloves should always be worn when handling detergents or acidic or alkaline solutions, to avoid serious hand injuries.

2. Grasp the handle (1) and turn the battery compartment lid (2) to its maintenance position (**Fig.1**).

**ATTENTION:** to prevent the lid from turning, insert the retainer (3) into the slot (4) (**Fig.2**).

3. Remove the detergent tank cap (5) (**Fig.3**).
4. Fill the tank with the desired detergent. The amount present in the detergent tank is indicated by the two level bulbs (6) (**Fig.3**).




**N.B.:** The upper bulb indicates the detergent tank's maximum fill level; the lower bulb indicates the minimum level, below which the automatic system will not function properly.

**ATTENTION:** always use detergents which have a manufacturer's label that indicates that they are suitable for use with floor scrubbing machines. Do not use acid or alkaline products or solvents without this indication.

**ATTENTION:** the dosing system is particularly suitable for frequent maintenance cleaning operations. Acidic or alkaline maintenance detergents can be used, as long as they have pH values between 4 and 10, and do not contain: oxidising agents, chlorine or bromine, formaldehyde, mineral solvents.

**N.B.:** the detergents used must be suitable for use with scrubbing machines.

**N.B.:** wash the circuit with water after use if the system is not used daily. The system can be excluded.

**N.B.:** In case of sporadic use of detergents with pH between 1-3 or 11-14, use the floor scrubbing machine in the traditional way by adding the detergent in the clean water tank and excluding the dosing circuit.

**ATTENTION:** Always use low-foam detergent. To avoid the production of foam, put a minimum quantity of antifoam liquid in the recovery tank before starting to clean. Do not use pure acids.

5. Close the cap (5) correctly to prevent liquid coming out when working.

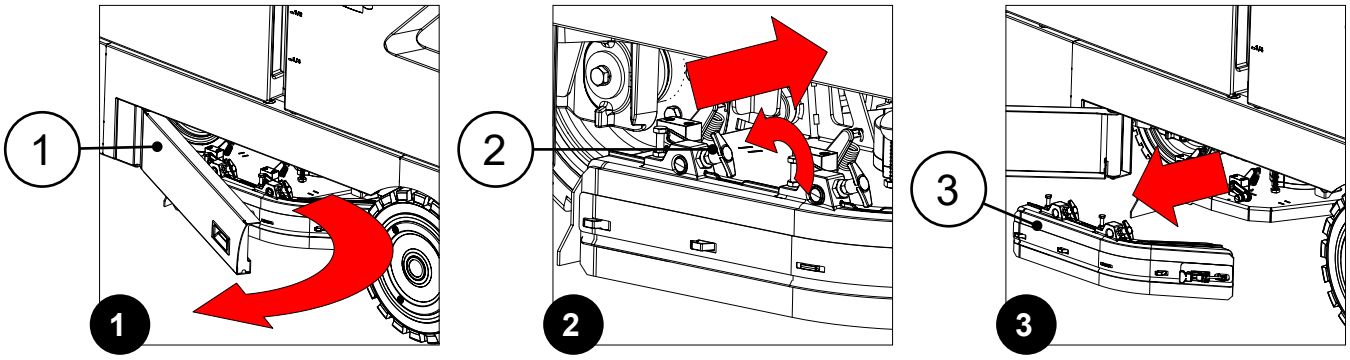
## ASSEMBLING THE BRUSH HEAD BRUSHES OR DRIVE DISCS

To mount the brushes or drive discs on the brush head, do the following:

1. Take the machine to the maintenance area.
2. Perform all the operations required to secure the machine. See “MACHINE SAFETY” on page 35.

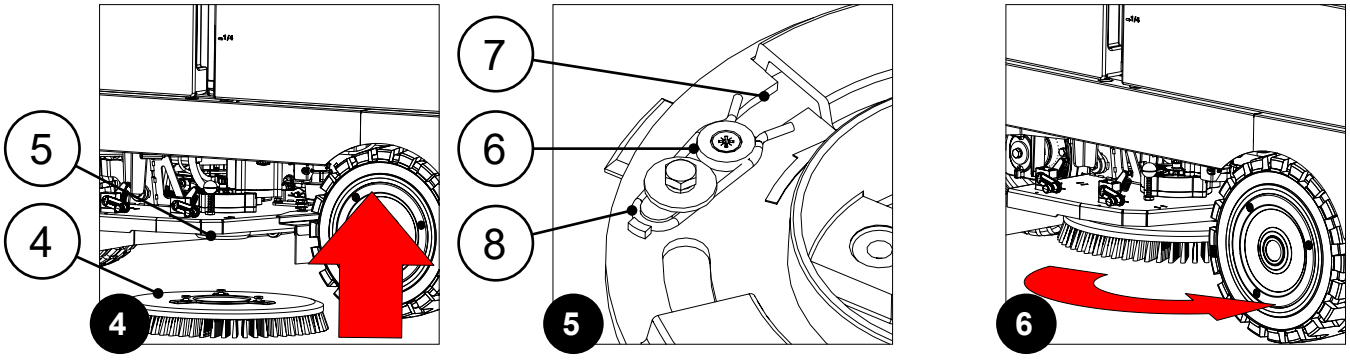
**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Open the left inspection lid (1) (**Fig.1**).
4. Set the fastening anchors (2) on the side splash guard support to their maintenance position, move them upwards, and turn them a quarter turn clockwise (**Fig.2**).
5. Extract the left side splash guard support (3) from the brush head (**Fig.3**).




6. Insert the brush (4) in the brush holder plate (5) (**Fig.4**).
7. Turn the brush anti-clockwise until the three buttons (6) on the brush enter the notches (7) on the brush holder plate (**Fig.5**).
8. Turn the brush quickly and firmly in order to push the button towards the retainer spring (8) and lock it in place (**Fig.5**).

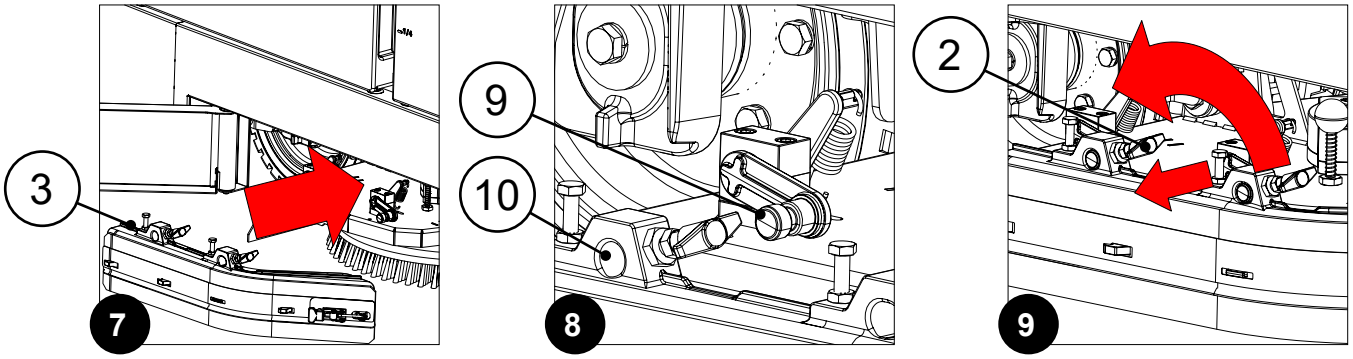
**N.B.:** The image in **Fig.6** indicates the direction of rotation for coupling the left brush; the right brush must be turned in the opposite direction.




9. Insert the left side splash guard support (3) in the brush head (**Fig.7**).

**N.B.:** Insert the pin (9) in the hole (10 of the side splash guard support (**Fig.8**).

10. Set the fastening anchors (2) to their working position, turn them a quarter turn anti-clockwise, and move them downwards (**Fig.9**).




11. Close the left inspection lid.
12. Repeat the operations just carried out for the right lateral splash guard support as well.

**N.B.:** The side splash guard supports come pre-adjusted. However, if they should need to be adjusted, see “BRUSH HEAD SIDE SPLASH GUARD ADJUSTMENT” on page 161.

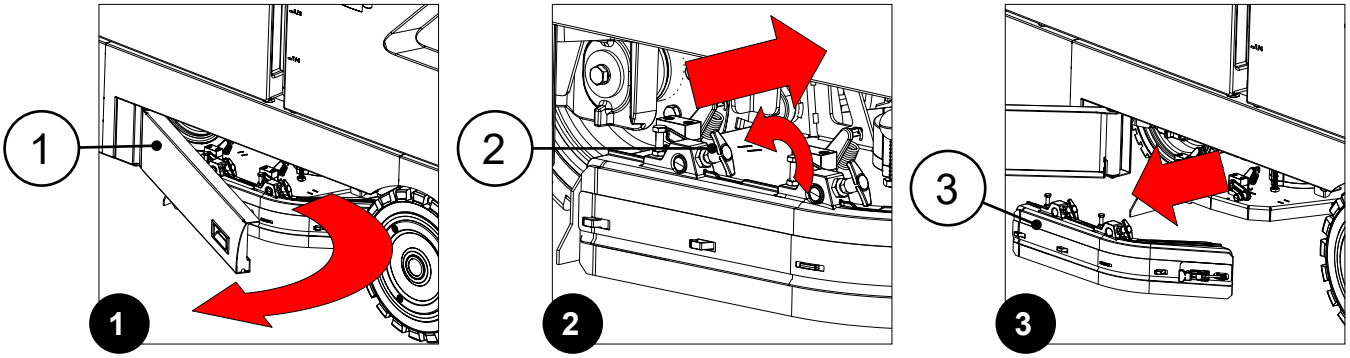
## ASSEMBLING THE BRUSH HEAD ABRASIVE PAD

To mount the abrasive pad on the drive discs on the brush head, do the following:

1. Take the machine to the maintenance area.
2. Perform all the operations required to secure the machine. See “MACHINE SAFETY” on page 35.

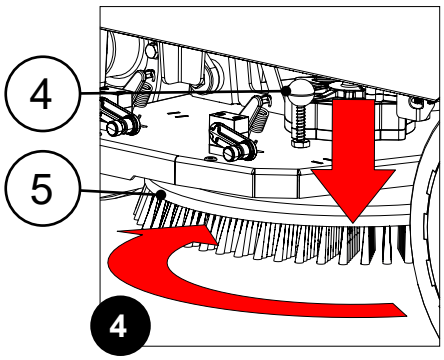
**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Open the left inspection lid (1) (**Fig.1**).
4. Set the fastening anchors (2) on the side splash guard support to their maintenance position, move them upwards, and turn them a quarter turn clockwise (**Fig.2**).
5. Extract the left side splash guard support (3) from the brush head (**Fig.3**).




6. Keeping the pin (4) pressed, turn the drive disc (5) clockwise until it is locked in place (**Fig.4**).

**N.B.:** turn the drive disc quickly and firmly so as to push the button towards the outside of the retainer spring until it releases (**Fig.4**).




7. With the pad holder removed, insert the abrasive pad you want to use into the bottom of the pad holder.
8. Refit the brush head drive disc, see “ASSEMBLING THE BRUSH HEAD BRUSHES OR DRIVE DISCS” on page 49.
9. Close the left inspection lid.
10. Repeat the operation just performed on the right side as well.

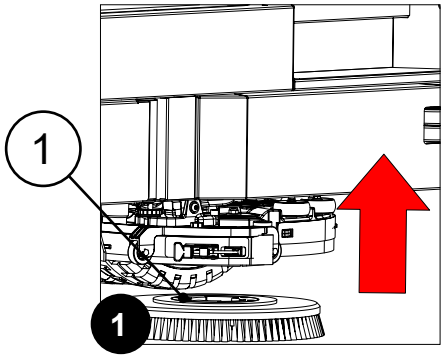
## ASSEMBLY OF THE SIDE BRUSH HEAD BRUSH OR DRIVE DISC (OPTIONAL)

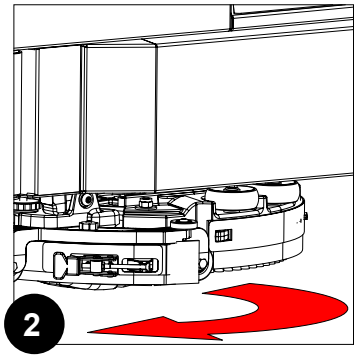
To assemble the lateral brush on the machine, do the following:

1. Take the machine to the maintenance area.
2. Perform all the operations required to secure the machine. See “MACHINE SAFETY” on page 35.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Stand on the right side of the machine.
4. Insert the brush (1) into the brush holder plate (2) on the side brush head (**Fig.1**).
5. Turn the brush clockwise until the brush is secured onto the brush holder plate (**Fig.2**).



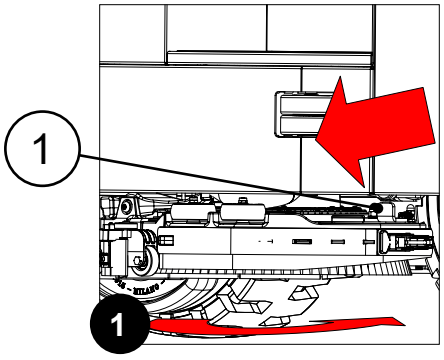



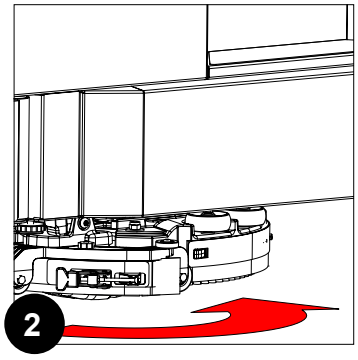

## ASSEMBLY OF THE SIDE BRUSH HEAD ABRASIVE PAD (OPTIONAL)

To mount the abrasive pad on the drive disc of the side brush head, do the following.

1. Stand on the right side of the machine.
2. Moving the brush release lever (1), rotate the drive disc anti-clockwise until it stops (**Fig.1**).

**N.B.:** turn the drive disc quickly and firmly so as to push the button towards the outside of the retainer spring until it releases (**Fig.2**).




3. With the pad holder removed, insert the abrasive pad you want to use into the bottom of the pad holder.
4. Reassemble the drive disc on the side brush head. See the “ASSEMBLY OF THE SIDE BRUSH HEAD BRUSH OR DRIVE DISC (OPTIONAL)” on page 52.

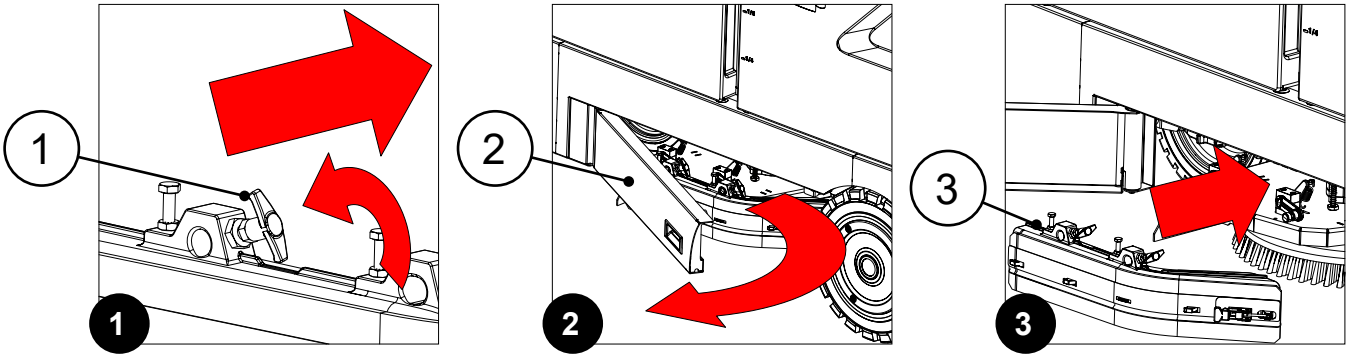
## ASSEMBLY OF THE BRUSH HEAD SIDE SPLASH GUARD SUPPORT

To assemble the brush head side splash guards on the machine, do the following:

1. Take the machine to the maintenance area.
2. Perform all the operations required to secure the machine. See “MACHINE SAFETY” on page 35.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

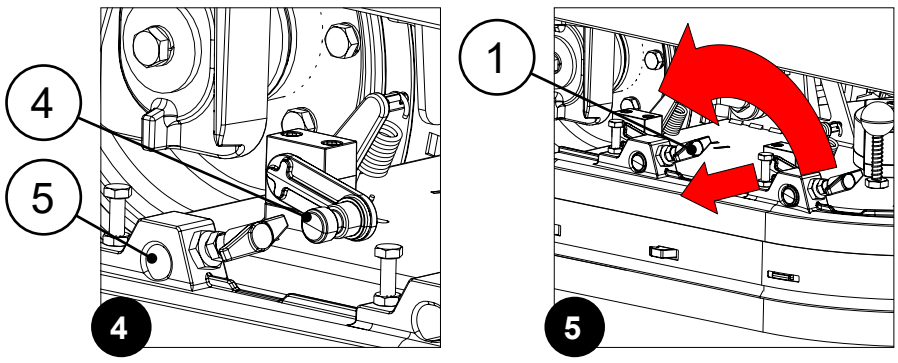
3. Make sure the fastening anchors (1) on the lateral splash guard support are in their maintenance position. If not, move them upwards, and turn them a quarter turn clockwise (**Fig.1**).
4. Open the left inspection lid (2) (**Fig.2**).
5. Insert the left side splash guard support (3) in the brush head (**Fig.3**).




**N.B.:** insert the pin (4) in the brush head into the hole (5) in the side splash guard support (Fig.4).

6. Set the fastening anchors (1) on the lateral splash guard support to their working position, turn them a quarter turn anti-clockwise, and move them downwards (**Fig.5**).
7. Close the left inspection lid.
8. Repeat the operations just carried out for the right lateral splash guard support as well.

**N.B.:** The side splash guard supports come pre-adjusted. However, if they should need to be adjusted, see “BRUSH HEAD SIDE SPLASH GUARD ADJUSTMENT” on page 161.



## ASSEMBLING THE SQUEEGEE

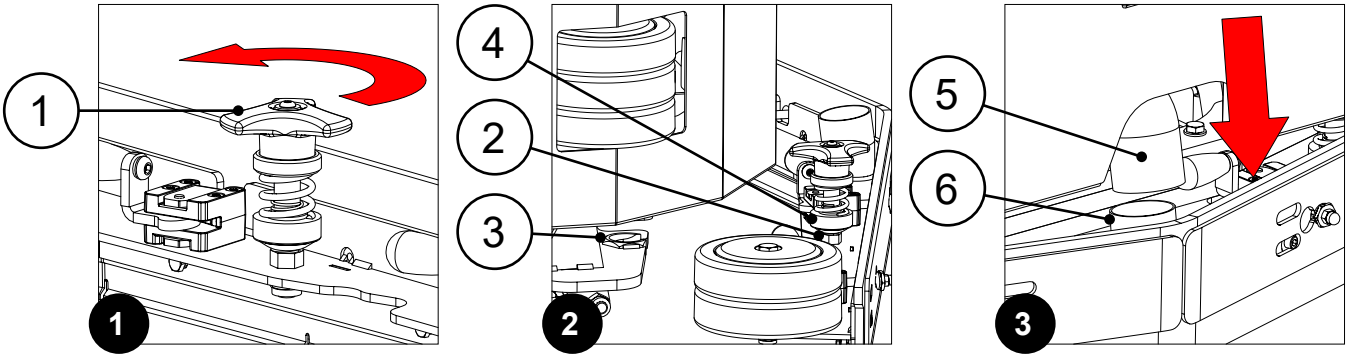
To mount it the squeegee on the machine, do the following:

1. Take the machine to the maintenance area.
2. Perform all the operations required to secure the machine. See “MACHINE SAFETY” on page 35.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Unscrew the knobs (1) in the squeegee pre-assembly (**Fig.1**).
4. First, insert the left pin (2) on the squeegee into the left slot (3) in the squeegee support (**Fig.2**), so that the bushing (4) adheres to the walls of the slot in the squeegee support.
5. Repeat the same operation for the right pin.
6. Insert the vacuum tube (5) in the sleeve (6) in the squeegee (**Fig.3**).

**N.B.:** The squeegee comes pre-adjusted, however if necessary see “ADJUSTING THE SQUEEGEE RUBBER BLADES” on page 158.




## ADJUSTMENT OF THE DRIVER'S SEAT (STANDARD SEAT)

The proper adjustment of the driving position provides a greater sense of comfort when using the machine.

**CORRECT POSITION ON THE SEAT:** make sure you sit upright and that your back and that your lower back and spine are at 90°.

**LONGITUDINAL SEAT ADJUSTMENT:** The seat should always be positioned using the pedals as a reference. To adjust the seat, use the lever located under it.

**N.B.:** the distance should be adjusted so that the knees are slightly bent (about 120°) when the pedals are fully pressed to the floor.

**N.B.:** adjust the distance of the seat so that the brake pedal reaches the end of its stroke when pressed.

**N.B.:** your feet should be positioned keeping your heels on the footboard; the pedals should be pressed using the part of the foot directly behind your toes.

**N.B.:** the ideal position is that which allows you to grip the steering wheel correctly with the palms of your hands slightly below shoulder level. With a good grip on the steering wheel, the elbows should be bent by about 120°. They should be at least 30 cm between the middle of the steering wheel and our breastbone. In any case, this distance should be no more than 45 cm.

**ADJUSTING THE ARMRESTS (OPTIONAL):** the armrests should be inclined to make using the machine comfortable.

**N.B.:** to adjust the armrest, use the runner located under it.

**N.B.:** taking the right armrest as a reference, if the wheel is turned outwards the inclination of the armrest is increased. Taking the left armrest as a reference, if the wheel is turned inwards the inclination of the armrest is increased.

**WEARING THE SAFETY BELT (OPTIONAL) CORRECTLY:** the machine comes equipped with a sub-abdominal safety device, which allows the operator to remain anchored to the driver's seat. To secure the safety belt, you must first be sitting in the driver's seat; take the mobile part of the belt, wrap it round the abdomen and insert the mobile part in the slit in the fixed part.

**N.B.:** adjust the horizontal part of the belt so it is as tight as possible around the pelvis. The belt should be pulled and put as low as possible on the pelvis bone, and not on the belly.

## ADJUSTMENT OF THE DRIVER'S SEAT (COMFORT SEAT)

### WARNINGS:

- The seat's user and maintenance manual is provided along with the machine, and must be retained and kept accessible for the operator's consultation.
- The seat can only be occupied by one person, who must be an adult properly qualified to operate machine.
- Maximum operator weight (seat capacity) 130 daN.
- All assembly and maintenance interventions on the seat must be carried out by specialised personnel in compliance with the regulations established at national level and by the vehicle and seat manufacturers.
- FIMAP assumes no responsibility for the improper assembly, use, and/or maintenance of the seat.
- All seat adjustments must be performed and checked with the operator seated and before starting the machine: Never perform these operations with the machine running.
- Make sure that the area occupied by the seat during operational movements and adjustments is free of any obstructions, and that the surrounding space is sufficient to ensure that there are no crushing hazards present for the operator.
- The seat can slide out from the front: make sure that it is properly secured, as this can result in operator injury.
- If the seat comes with safety belts, always fasten them and make sure they are functioning properly before starting the machine.
- The safety belt must not be modified or altered; if replaced, the new belt must be approved and designed to be installed in the same position as the belt being replaced. The replacement must be carried out by specialised personnel.

- Do not perform any maintenance operations on the safety belt other than regular cleaning.
- Keep the belts, reels and buckles clean, and make sure that there are no foreign objects inside the buckles that could prevent the clip from being properly retained by the buckle.
- The seat belt must be replaced if the machine overturns, if any damage or wear is encountered to the belt itself (fraying or presence of cuts on the belt, damage to the plastic lids), or if the reel and/or safety belt opening/closing mechanism should malfunction.

The proper adjustment of the driving position provides a greater sense of comfort when using the machine.

**CORRECT POSITION ON THE SEAT:** make sure you sit upright and that your back and that your lower back and spine are at 90°.

**ADJUSTING THE OPERATOR'S SEAT:** to adjust the preload of the operator's seat, turn the lever (1) located at the front of the suspension clockwise or anti-clockwise (**Fig.1**).

**ATTENTION:** the adjustment described above should be performed with the operator seated, so that the seat is bearing their weight.

**ATTENTION:** the user's weight must not exceed 130daN.

**N.B.:** the seat has been properly adjusted when its height is brought to half the suspension's travel stroke.

**N.B.:** turning the lever clockwise increases the preload, while turning it anti-clockwise it decreases the preload.

**ADJUSTING THE HEIGHT OF THE OPERATOR'S SEAT:** to adjust the height of the operator's seat, turn the knob (2) located at the front of the suspension clockwise or anti-clockwise (**Fig.2**).

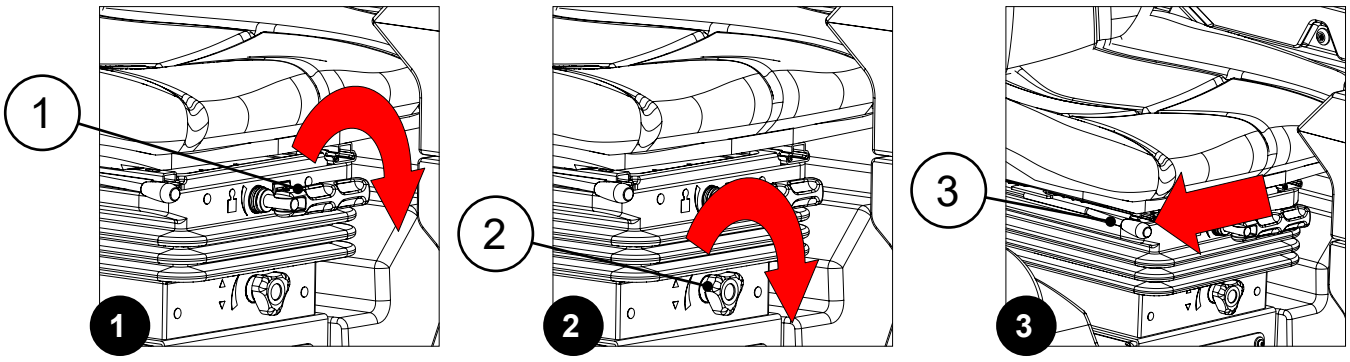
**ATTENTION:** the adjustment described above should be performed with the operator seated, so that the seat is bearing their weight.

**ATTENTION:** The seat should always be positioned using the pedals as a reference.

**N.B.:** adjust the height of the seat so that the brake pedal reaches the end of its stroke when pressed.

**N.B.:** turning the knob clockwise decreases the height, while turning it anti-clockwise it increases the height.

**OPERATOR'S SEAT LONGITUDINAL ADJUSTMENT:** the longitudinal adjustment of the seat is performed using the lever (3) underneath it (**Fig.3**).



**ATTENTION:** the adjustment described above should be performed with the operator seated, so that the seat is bearing their weight.

**ATTENTION:** The seat should always be positioned using the pedals as a reference.

**N.B.:** adjust the distance of the seat so that the brake pedal reaches the end of its stroke when pressed.

**N.B.:** the distance should be adjusted so that the knees are slightly bent (about 120°) when the pedals are fully pressed to the floor.

**N.B.:** your feet should be positioned keeping your heels on the footboard; the pedals should be pressed using the part of the foot directly behind your toes.

**N.B.:** the ideal position is that which allows you to grip the steering wheel correctly with the palms of your hands slightly below shoulder level. With a good grip on the steering wheel, the elbows should be bent by about 120°. They should be at least 30 cm between the middle of the steering wheel and our breastbone. In any case, this distance should be no more than 45 cm.

**N.B.:** Move the lever (3) to the right to release the seat guides' retainers, and release the lever to lock the seat in place.

**ATTENTION:** the seat can slide out from the front. Make sure that it is properly secured during adjustment, as this can result in operator injury.

**OPERATOR SEAT BACKREST ANGLE ADJUSTMENT:** to adjust the angle of the operator seat's backrest, turn the knob (4) on the right side of the backrest itself (**Fig.4**).

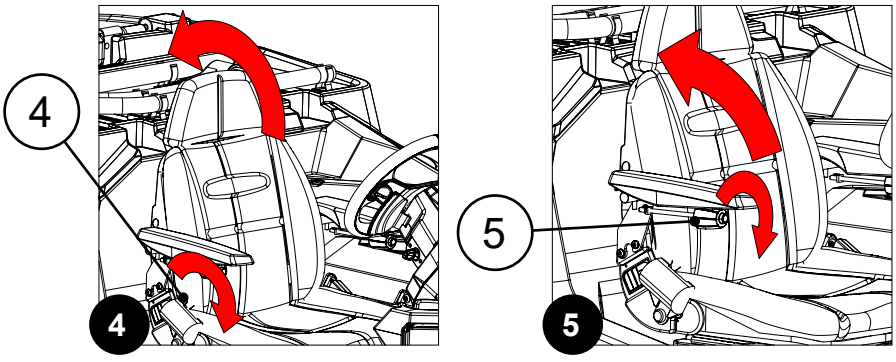
**ATTENTION:** the adjustment described above should be performed with the operator seated, so that the seat is bearing their weight.

**N.B.:** turn the knob clockwise to tilt the backrest towards the rear of the machine (**Fig.4**).

**N.B.:** the distance must be adjusted so that it is straight, with the back and lower back are at a 90° angle with respect to the legs.

**ADJUSTING THE ARMRESTS:** the armrests should be inclined to make using the machine comfortable.

**N.B.:** to adjust the armrest use the runner (5) under it (**Fig.5**).




**N.B.:** taking the right armrest as a reference, if the wheel is turned towards the inside of the machine, the inclination of the armrest is increased. taking the left armrest as a reference, if the wheel is turned outwards the inclination of the armrest is increased.

**WEARING THE SAFETY BELT CORRECTLY:** the machine comes equipped with a sub-abdominal safety device, which allows the operator to remain anchored to the driver's seat. To secure the safety belt, you must first be sitting in the driver's seat; take the mobile part of the belt, wrap it round the abdomen and insert the mobile part in the slit in the fixed part.

**N.B.:** adjust the horizontal part of the belt so it is as tight as possible around the pelvis. The belt should be pulled and put as low as possible on the pelvis bone, and not on the belly.

## WORK PREPARATION CHECKLIST

| | | |
|---|---|---|
| Check for any fluid leaks. | If any fluid leaks are encountered, contact the FIMAP service centre. | ☐ |
| Check the fluid level of the brake system. | If alarm indicator 15 appears on the control display, contact the FIMAP service centre. | ☐ |
| Check the condition of the collection filter tray on the recovery tank. | If the tray is dirty, clean it. See “CLEANING THE COLLECTION FILTER TRAY” on page 144. | ☐ |
| Check the condition of the wave protection tray on the recovery tank. | If the tray is dirty, clean it. See “CLEANING THE WAVE PROTECTION TRAY” on page 145. | ☐ |
| Check the condition of the water system filter. | If the cartridge in the filter body is dirty, clean it. See “CLEANING THE WATER SYSTEM FILTER” on page 147. | ☐ |
| For versions equipped with the automatic detergent dosing system, check the condition of the chemical detergent filter. | If the cartridge in the filter body is dirty, clean it. See the “CLEANING THE FILTER ON THE AUTOMATIC CHEMICAL DETERGENT MANAGEMENT SYSTEM (OPTIONAL)” on page 148. | ☐ |
| For versions equipped with the detergent solution recycling system, check the conditions of the detergent solution recycling system filter in the recovery tank. | If the detergent solution recycling system filter in the recovery tank is dirty, clean it. See “CLEANING THE FILTER ON THE DETERGENT SOLUTION RECYCLING SYSTEM (OPTIONAL)” on page 150. | ☐ |
| Check the condition of the lateral splash guards in the brush head. | If the side splash guards on the brush head are dirty, see “CLEANING THE BRUSH HEAD SPLASH GUARD” on page 137. | ☐ |
| Check the condition of the brushes in the brush head. | If the brushes in the brush head are dirty, see “CLEANING THE SIDE BRUSH HEAD BRUSH - DRIVE DISC” on page 135. | ☐ |
| For versions equipped with the lateral brush, check the condition of the splash guard. | If the splash guard is dirty, clean it. See “CLEANING THE SIDE BRUSH HEAD SPLASH GUARDS (OPTIONAL)” on page 139. | ☐ |
| For versions equipped with the side brush, check the condition of the brush on the side brush head. | If the brush in the lateral brush head is dirty, clean it. See “CLEANING THE SIDE BRUSH HEAD BRUSH - DRIVE DISC (OPTIONAL)” on page 138. | ☐ |
| Check the condition of the squeegee. | If the squeegee is dirty, clean it, see “CLEANING THE SQUEEGEE” on page 139. | ☐ |
| Check the state of wear of the rubber blades in the squeegee. | If the wear of the squeegee rubber blades is unsuitable for the job to be carried out, replace them. See “REPLACING THE SQUEEGEE RUBBERS” on page 155. | ☐ |
| For versions equipped with the side brush head, check the condition of the side squeegee. | If the squeegee is dirty, clean it. See “CLEANING THE SIDE BRUSH HEAD SQUEEGEE (OPTIONAL)” on page 140. | ☐ |
| For versions with the side brush head, check the wear status of the side squeegee rubber blades. | If the wear of the side squeegee rubber blades is unsuitable for the job to be carried out, replace them. See “REPLACING THE SIDE BRUSH HEAD SQUEEGEE RUBBER BLADES (OPTIONAL)” on page 157. | ☐ |
| Check the condition of the squeegee vacuum tube. | If the squeegee vacuum pipe is dirty, clean it, see “CLEANING THE SQUEEGEE VACUUM HOSE” on page 142. | ☐ |
| Check that the gasket on the recovery tank's lid is not damaged or worn. | If the gasket is damaged, contact the FIMAP service centre to have it replaced. | ☐ |
| For versions with the continuous detergent solution recycling system, empty the solution tank. | If the solution tank is full, empty it. See “EMPTYING THE SOLUTION TANK” on page 148. | ☐ |
| For versions with the continuous detergent solution recycling system, empty the recovery tank. | If the recovery tank is full, empty it. See “DRAINING THE RECOVERY TANK” on page 146. | ☐ |

| | | |
|---|---|---|
| For versions with the continuous detergent solution recycling system, check the dirty detergent solution filters inside the recovery tank. | If the dirty detergent solution filters in the recovery tank are dirty, clean them. See “CLEANING THE FILTER ON THE DETERGENT SOLUTION RECYCLING SYSTEM (OPTIONAL)” on page 150. | ☐ |
| Check the horn; the front and rear lights; the safety lights and the alarm (if installed). | If any anomalies are encountered, contact the FIMAP service centre. | ☐ |
| Check that the service brakes and steering are functioning properly. | If any anomalies are encountered, contact the FIMAP service centre. | ☐ |
| Check that the service brakes and steering are functioning properly. | If any anomalies are encountered, contact the FIMAP service centre. | ☐ |
| Check that the electric brake is correctly engaged. | If the electric brake off symbol appears on the display when turning on the machine, see “TRACTION ELECTRIC BRAKE ACTIVATION” on page 44. | ☐ |
| Check the tyres to make sure they are not damaged. | If any anomalies are encountered, contact the FIMAP service centre. | ☐ |
| Check the charge level of the battery pack. | Check the charge level of the battery box on the control display, and recharge it if necessary. See the “RECHARGING THE BATTERY PACK” on page 45. | ☐ |
| Check the level of the detergent solution. | If the level of the detergent solution is not suitable for the job to be carried out, fill the solution tank. See “DETERGENT SOLUTION” on page 47. | ☐ |
| For versions with the standard seat, adjust the driver's seat. | Adjust the driver's seat before starting the work activities. See “ADJUSTMENT OF THE DRIVER’S SEAT (STANDARD SEAT)” on page 54. | ☐ |
| For versions with the comfort seat, adjust the driver's seat. | Adjust the driver's seat before starting the work activities. See “ADJUSTMENT OF THE DRIVER’S SEAT (COMFORT SEAT)” on page 55 | ☐ |

# WORKING PROGRAMS (PRO VERSION)

The machine can be used with the following working programs:

1. ECO MODE: for light maintenance cleaning tasks, using fewer resources and operating at a low noise level (see the “ECO MODE WORKING PROGRAM (PRO VERSION)” on page 61).
2. POWER MODE: for operations requiring the maximum scrubbing power for cleaning particularly dirty environments (see the “POWER MODE WORKING PROGRAM (PRO VERSION)” on page 62).
3. MANUAL MODE: the operator freely evaluates and chooses the parameters based on the cleaning requirements that arise during the course of the intervention (see the “MANUAL MODE WORKING PROGRAM (PRO VERSION)” on page 63).
4. PROGRAM ZONE: for recurring interventions at work sites, there are three working programs stored in the machine's memory that can be easily selected in order to help the operator carry out the intervention correctly (see the “PROGRAM ZONE WORKING PROGRAM (PRO VERSION)” on page 63).

## ECO MODE WORKING PROGRAM (PRO VERSION)

The POWER MODE working program can be used for light maintenance work.
The ECO MODE program is a program which guarantees the best possible performance in terms of consumption and cleaning.

The ECO MODE working program can be enabled:

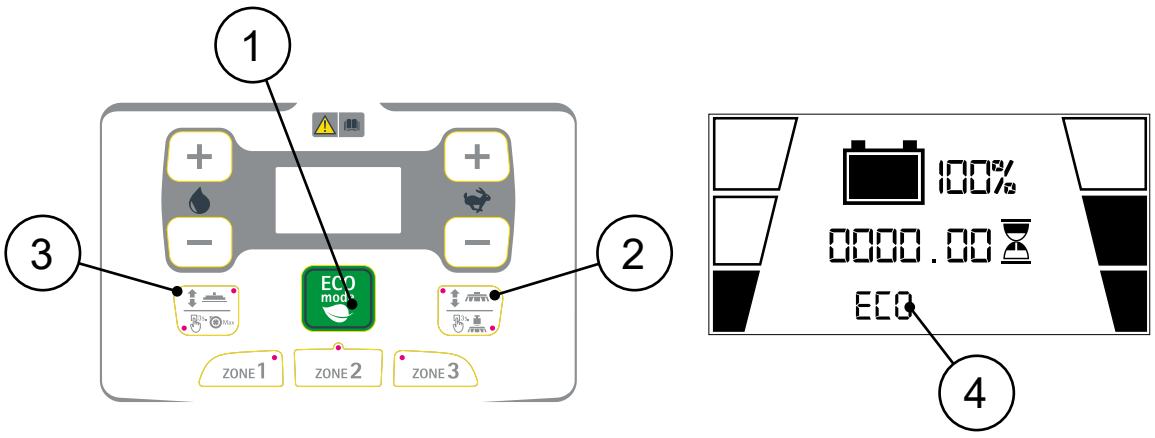
1. By pressing the button (1) on the control panel.
2. With the transfer working mode enabled, by pressing the brush head control button (2) or the squeegee control button (3).

**N.B.:** As soon as the button (1) is pressed, the ECO MODE working program symbol (4) will appear on the control display.

**N.B.:** to deactivate the ECO MODE working program, simply:

- Press the button (1) on the control panel.
- Enable the POWER MODE program. See the “POWER MODE WORKING PROGRAM (PRO VERSION)” on page 62.
- Enable the MANUAL MODE program. See the “MANUAL MODE WORKING PROGRAM (PRO VERSION)” on page 63.
- Enable the PROGRAM ZONE program. See the relative section.

**N.B.:** When the ECO MODE program is not enabled, the relative symbol (4) will not be present in the control display.



**N.B.:** By selecting the ECO MODE working program, the working parameters (machine speed; the force exerted on the brushes; the performance of the suction motor; the flow of the detergent solution) are automatically changed. To modify the parameters of the work program, see the USER INTERFACE CONFIGURATION GUIDE document.

The parameters preset on a scale of 1 to 3, are as follows:

| Speed | Brush | Vacuuming | Detergent Solution |
|---|---|---|---|
| 2 | 1 | 1 | 1 |

## POWER MODE WORKING PROGRAM (PRO VERSION)

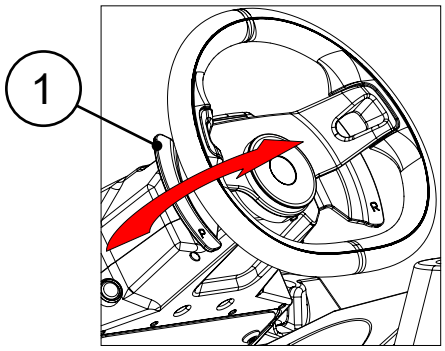
The POWER MODE working program can be used for work in extremely dirty environments, and guarantees maximum machine performance.

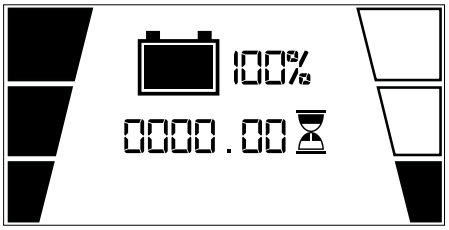
The POWER MODE working program can be activated by moving the lever (1) underneath the steering wheel.

**N.B.:** to deactivate the POWER MODE working program, simply:

- Move the lever (1) underneath the steering wheel to the end of its stroke.
- Enable the ECO MODE program. See the “ECO MODE WORKING PROGRAM (PRO VERSION)” on page 61.
- Enable the MANUAL MODE program. See the “MANUAL MODE WORKING PROGRAM (PRO VERSION)” on page 63.
- Enable the PROGRAM ZONE program. See the “PROGRAM ZONE WORKING PROGRAM (PRO VERSION)” on page 63.

**N.B.:** when the POWER MODE program is not enabled, the relative symbol (2) will not be present in the control display.




**N.B.:** by selecting the POWER MODE working program, the working parameters (machine speed; the force exerted on the brushes; the performance of the suction motor; the flow of the detergent solution) are automatically changed. To modify the parameters of the work program, see the USER INTERFACE CONFIGURATION GUIDE document.

The parameters preset on a scale of 1 to 3, are as follows:

| Speed | Brush | Vacuuming | Detergent Solution |
|---|---|---|---|
| 1 | 3 | 3 | 3 |

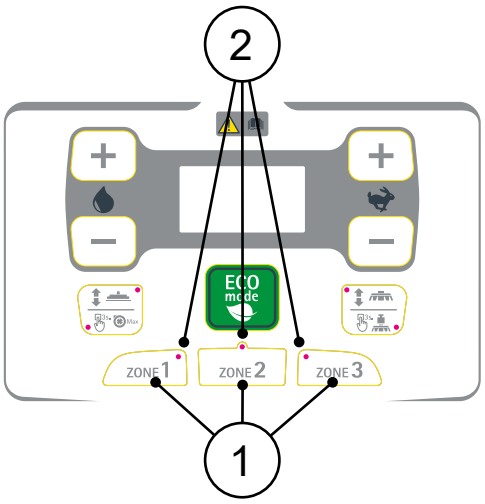
## MANUAL MODE WORKING PROGRAM (PRO VERSION)

With the MANUAL MODE working program, it is the operator who evaluates and chooses the parameters based on the cleaning requirements that arise during the course of the work activities.
To switch from the ECO MODE or POWER MODE or PROGRAM ZONE program to the MANUAL ZONE program, simply change one of the performance levels.

There are two performance levels:

- Forward speed level, see the “ADJUSTING THE FORWARD SPEED (PRO VERSION)” on page 96.
- Detergent solution dispensing level. See the “ADJUSTING THE DETERGENT SOLUTION FLOW (PRO VERSION)” on page 96.

## PROGRAM ZONE WORKING PROGRAM (PRO VERSION)




In order to facilitate the operator's work activities for recurring interventions at work sites, the decision was made to equip the machine with three stored work programs, so that the most appropriate performance levels for each work area are already set.

To select a zone working program, simply press one of the three buttons (1) at the bottom of the control panel.

**N.B.:** When the WORK ZONE program is active, the corresponding LED (2) will be illuminated.

**N.B.:** to deactivate the WORK ZONE working program, simply:

- Enable the ECO MODE program. See the “ECO MODE WORKING PROGRAM (PRO VERSION)” on page 61.
- Enable the MANUAL MODE program. See the “MANUAL MODE WORKING PROGRAM (PRO VERSION)” on page 63.

**N.B.:** If a value for of one of the ZONE programs' performance levels needs to be changed, simply make the desired change, and then hold down the button for the program to be modified for about three seconds. The change will be saved when the corresponding LED flashes.

**N.B.:** by selecting one of the three ZONE programs, the working parameters (machine speed; the force exerted on the brushes; the performance of the suction motor; the flow of the detergent solution) are automatically changed. To modify the parameters of the work program, see the USER INTERFACE CONFIGURATION GUIDE document.

The parameters preset on a scale of 1 to 3, are as follows:

| | Speed | Brush | Vacuuming | Detergent Solution |
|---|---|---|---|---|
| Zone 1 | 2 | 1 | 1 | 1 |
| Zone 2 | 3 | 2 | 3 | 2 |
| Zone 3 | 2 | 3 | 3 | 3 |

# WORKING PROGRAMS (PLUS VERSION)

Six types of programs are already stored in the function board memory, which can be used to facilitate machine use by the operator.
In the working programs, the performance levels of the parameters:

- machine forward speed;
- pressure exerted on the machine brush head;
- detergent solution level in the machine water system;
- machine vacuum system performance level;

are all preset and cannot be changed.

**N.B.:** for machine versions with an automatic detergent dosing system, only the parameter inherent to the percentage of chemical product in the detergent solution can be changed, read the user interface configuration manual, document number 10114635.

**N.B.:** the working programs can be selected quickly using the membrane pushbutton panel in the control point, see “MEMBRANE PUSHBUTTON PANEL (PLUS VERSION)” on page 32.

The machine can be used with the following working programs:

| | |
|---|---|
|  | **ECO MODE**: for light maintenance cleaning tasks, using fewer resources and operating at a low noise level, see “ECO MODE WORKING PROGRAM (PLUS VERSION)” on page 65. |
|  | **COMFORT MODE**: for ordinary, non-aggressive cleaning suitable for daily use, see “COMFORT MODE WORKING PROGRAM (PLUS VERSION)” on page 66. |
|  | **DYNAMIC MODE:** for ordinary cleaning that aims to achieve greater productivity, it permits performing operations quickly, see “DYNAMIC MODE WORKING PROGRAM (PLUS VERSION)” on page 67. |
|  | **HEAVY MODE:** for operations requiring considerable scrubbing power and for cleaning particularly dirty environments (see “HEAVY MODE WORKING PROGRAM (PLUS VERSION)” on page 68. |
|  | **PROGRAM ZONE:** for recurring interventions at work sites, there are three working programs stored in the machine's memory that can be easily selected in order to help the operator carry out the intervention correctly, see “ZONE MODE WORKING PROGRAM (PLUS VERSION)” on page 69. |
| | **MANUAL MODE:** the operator freely evaluates and chooses the parameters based on the cleaning requirements that arise during the course of the intervention (see “MANUAL MODE WORKING PROGRAM (PLUS VERSION)” on page 70. |
| | **POWER MODE:** for temporary operations (max 120 seconds) for which maximum scrubbing power is necessary to clean particularly dirty environments, see “POWER MODE WORKING PROGRAM (PLUS VERSION)” on page 71. |

## ECO MODE WORKING PROGRAM (PLUS VERSION)

The POWER MODE working program can be used for light maintenance work.
The ECO MODE program is a program which guarantees the best possible performance in terms of consumption and cleaning.

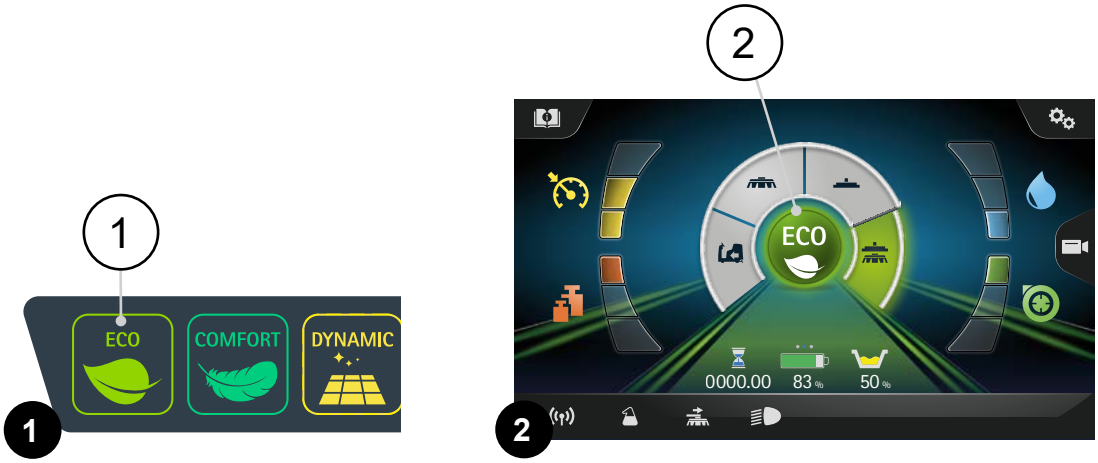
The ECO MODE working program can be activated by pressing the button (1) on the membrane pushbutton panel (**Fig.1**).

**N.B.:** as soon as the button (1) is pressed, the control display (**Fig.2**) shows the screen dedicated to the ECO MODE working program and the program name is displayed in the circular symbol (2).

**N.B.:** to deactivate the ECO MODE program, press one of the four buttons related to the machine performance levels on the membrane pushbuton panel, see “MEMBRANE PUSHBUTTON PANEL (PLUS VERSION)” on page 32.

**N.B.:** to deactivate the ECO MODE program, press one of the four icons related to the machine performance levels on the control display, see “CONTROL DISPLAY (PLUS VERSION)” on page 33.

**N.B.:** by selecting the ECO MODE working program, the values related to the machine performance levels (speed, force exercised on the brushes, vacuum system performance, detergent solution flow) are changed automatically.




The parameters preset on a scale of 1 to 3, are as follows:

| Speed | Brush | Vacuuming | Detergent Solution |
|---|---|---|---|
| 2 | 1 | 1 | 1 |

## COMFORT MODE WORKING PROGRAM (PLUS VERSION)

The COMFORT MODE working program can be used for ordinary, non-aggressive cleaning suitable for daily use.

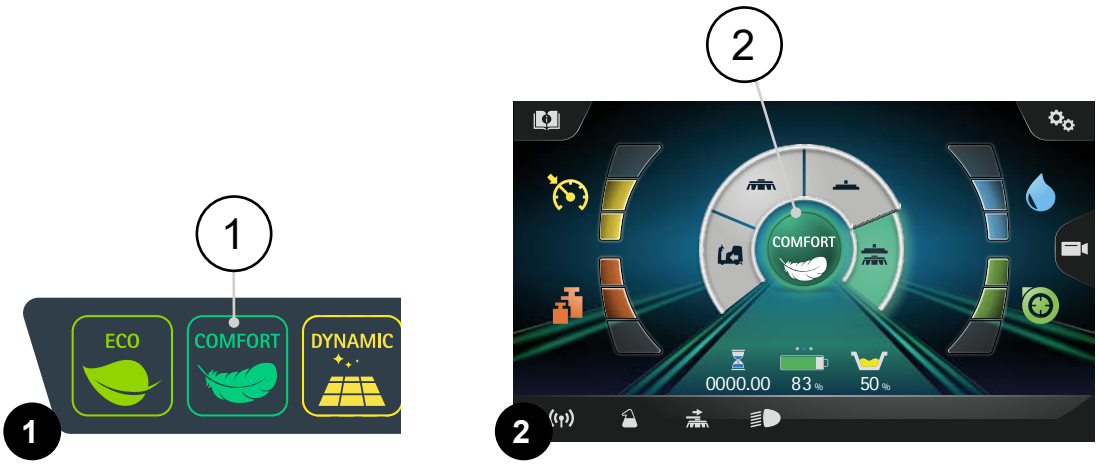
The COMFORT MODE working program can be activated by pressing the button (1) on the membrane pushbutton panel (**Fig.1**).

**N.B.:** as soon as the button (1) is pressed, the control display (**Fig.2**) shows the screen dedicated to the COMFORT MODE working program and the program name is displayed in the circular symbol (2).

**N.B.:** to deactivate the COMFORT MODE program, press one of the four buttons related to the machine performance levels on the membrane pushbuton panel, see “MEMBRANE PUSHBUTTON PANEL (PLUS VERSION)” on page 32.

**N.B.:** to deactivate the COMFORT MODE program, press one of the four icons related to the machine performance levels on the control display, see “CONTROL DISPLAY (PLUS VERSION)” on page 33.

**N.B.:** by selecting the COMFORT MODE working program, the values related to the machine performance levels (speed, force exercised on the brushes, vacuum system performance, detergent solution flow) are changed automatically.




The parameters preset on a scale of 1 to 3, are as follows:

| Speed | Brush | Vacuuming | Detergent Solution |
|---|---|---|---|
| 2 | 2 | 2 | 2 |

## DYNAMIC MODE WORKING PROGRAM (PLUS VERSION)

The DYNAMIC MODE working program can be used for ordinary cleaning that aims to achieve greater productivity, it permits performing daily cleaning operations quickly.

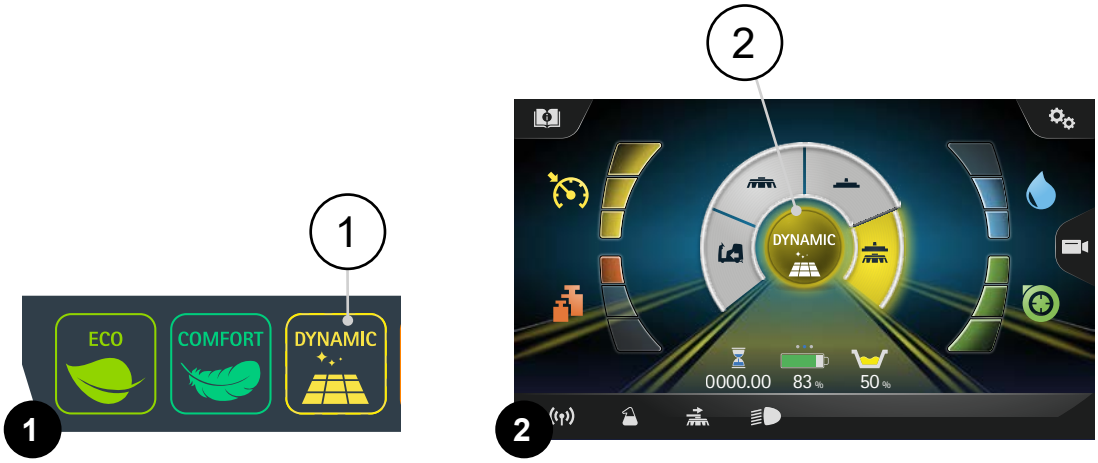
The DYNAMIC MODE working program can be activated by pressing the button (1) on the membrane pushbutton panel (**Fig.1**).

**N.B.:** as soon as the button (1) is pressed, the control display (**Fig.2**) shows the screen dedicated to the DYNAMIC MODE working program and the program name is displayed in the circular symbol (2).

**N.B.:** to deactivate the DYNAMIC MODE program, press one of the four buttons related to the machine performance levels on the membrane pushbuton panel, see “MEMBRANE PUSHBUTTON PANEL (PLUS VERSION)” on page 32.

**N.B.:** to deactivate the DYNAMIC MODE program, press one of the four icons related to the machine performance levels on the control display, see “CONTROL DISPLAY (PLUS VERSION)” on page 33.

**N.B.:** by selecting the DYNAMIC MODE working program, the values related to the machine performance levels (speed, force exercised on the brushes, vacuum system performance, detergent solution flow) are changed automatically.




The parameters preset on a scale of 1 to 3, are as follows:

| Speed | Brush | Vacuuming | Detergent Solution |
|---|---|---|---|
| 3 | 1 | 3 | 2 |

## HEAVY MODE WORKING PROGRAM (PLUS VERSION)

The HEAVY MODE working program can be used for operations requiring considerable scrubbing power and for cleaning particularly dirty environments .

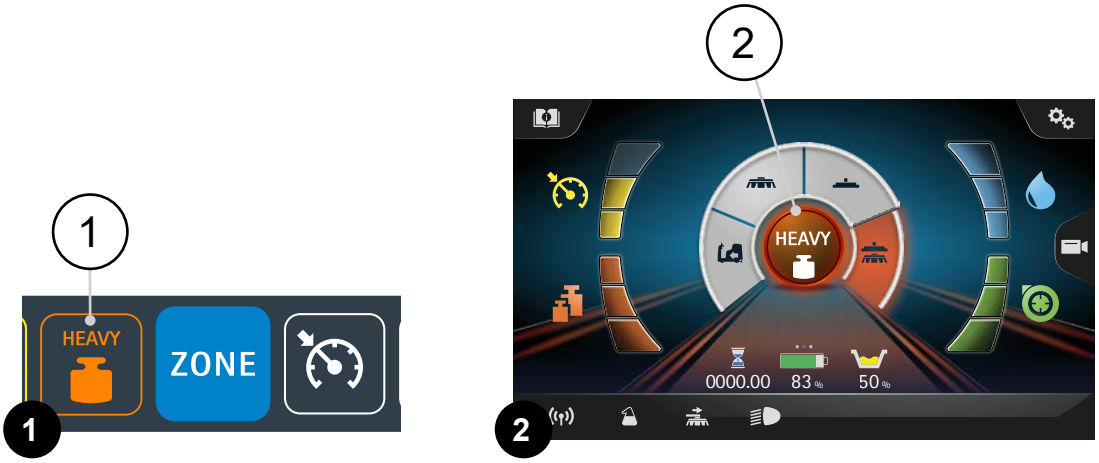
The HEAVY MODE working program can be activated by pressing the button (1) on the membrane pushbutton panel (**Fig.1**).

**N.B.:** as soon as the button (1) is pressed, the control display (**Fig.2**) shows the **screen** dedicated to the HEAVY MODE working program and the program name is displayed in the circular symbol (2).

**N.B.:** to deactivate the HEAVY MODE program, press one of the four buttons related to the machine performance levels on the membrane pushbuton panel, see “MEMBRANE PUSHBUTTON PANEL (PLUS VERSION)” on page 32.

**N.B.:** to deactivate the HEAVY MODE program, press one of the four icons related to the machine performance levels on the control display, see “CONTROL DISPLAY (PLUS VERSION)” on page 33.

**N.B.:** by selecting the POWER working program, the values related to the machine performance levels (speed, force exercised on the brushes, vacuum system performance, detergent solution flow) are changed automatically.




The parameters preset on a scale of 1 to 3, are as follows:

| Speed | Brush | Vacuuming | Detergent Solution |
|---|---|---|---|
| 2 | 3 | 3 | 3 |

## ZONE MODE WORKING PROGRAM (PLUS VERSION)

The ZONE MODE working program can be used to help the operator carry out the intervention correctly .

To activate the ZONE MODE working program, proceed as follows:

1. Press the button (1) on the membrane pushbutton panel (**Fig.1**).
2. Select the working zone to be loaded (**Fig.2**), press “OFFICE”, for example, on the control display (2).

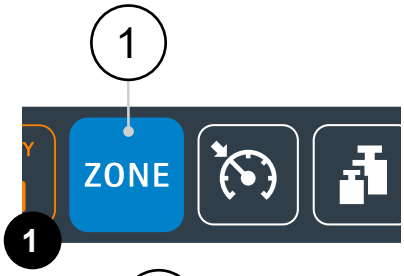
**N.B.:** as soon as the button (1) is pressed, the control display (**Fig.2**) the screen dedicated to the selection of the previously selected work zone appears.

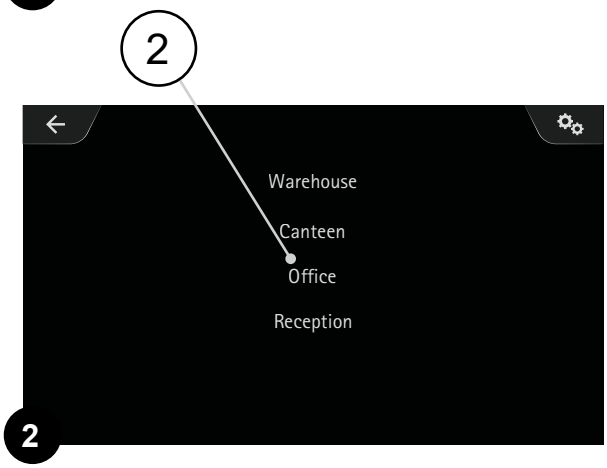
**N.B.:** as soon as the working zone is selected, the control display (**Fig.3**) shows the screen dedicated to the ZONE MODE working program and the program name is displayed in the circular symbol (3), whereas the text indicator shows the name of the selected program (4).

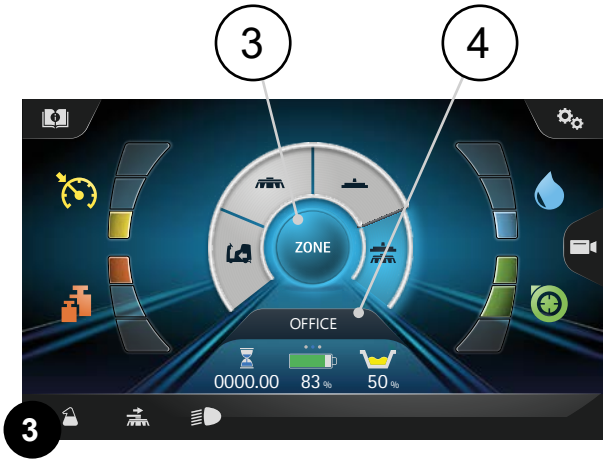
**N.B.:** deactivate the ZONE MODE program, select another working program on the membrane pushbutton panel, see “MEMBRANE PUSHBUTTON PANEL (PLUS VERSION)” on page 32.

**N.B.:** to deactivate the ZONE MODE program, press one of the four icons related to the machine performance levels on the control display, see “CONTROL DISPLAY (PLUS VERSION)” on page 33.

**N.B.:** by selecting the working zone to be used, the values related to the machine performance levels (speed, force exercised on the brushes, vacuum system performance, detergent solution flow) are changed automatically.



## MANUAL MODE WORKING PROGRAM (PLUS VERSION)

The MANUAL MODE program is a program where it is the operator who freely evaluates and chooses the parameters based on the cleaning requirements that arise during the course of the operation.

There are two ways to switch to the ZONE MODE working program while working:

1. By pressing the membrane pushbutton panel (**Fig.1**), pressing one of the four buttons:

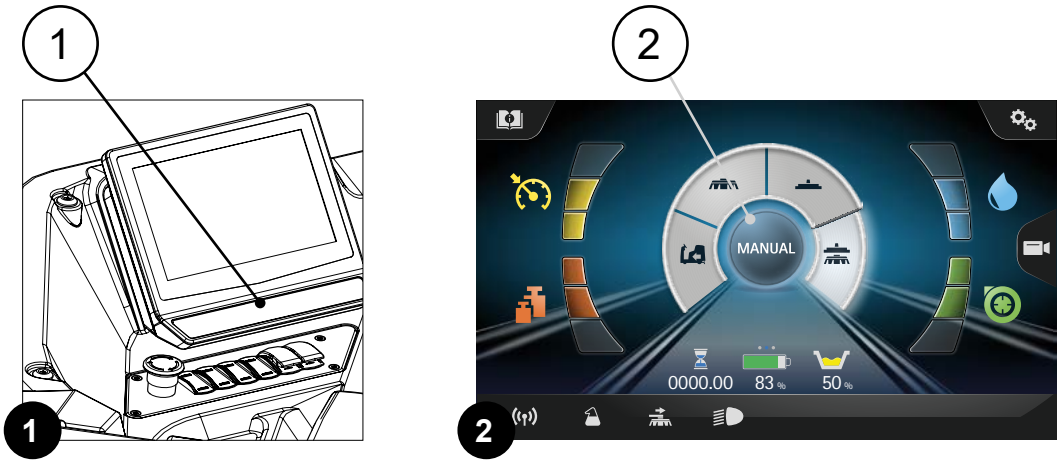
| | |
|---|---|
|  | Forward speed performance level change button, see “ADJUSTING THE FORWARD SPEED (PLUS VERSION)” on page 102. |
|  | Pressure exercised on the brush head performance level change button, see “ADJUSTMENT OF PRESSURE EXERTED ON THE BRUSH HEAD (PLUS VERSION)” on page 101. |
|  | Detergent solution performance level change button, see “ADJUSTING THE DETERGENT SOLUTION FLOW (PLUS VERSION)” on page 103. |
|  | Vacuum system performance level change button, see “VACUUM SYSTEM PERFORMANCE ADJUSTMENT (PLUS VERSION)” on page 104. |

**N.B.:** as soon as the one of the four buttons indicated above is pressed, the control display **(Fig.2)** shows the screen dedicated to the MANUAL MODE working program and the program name is displayed in the circular symbol (2).

2. Via the control display (**Fig.2**), by pressing one of the four icons:

| | |
|---|---|
|  | Forward speed performance level change icon, see “ADJUSTING THE FORWARD SPEED (PLUS VERSION)” on page 102. |
|  | Pressure exercised on the brush head performance level change icon, see “ADJUSTMENT OF PRESSURE EXERTED ON THE BRUSH HEAD (PLUS VERSION)” on page 101. |
|  | Detergent solution performance level change icon, see “ADJUSTING THE DETERGENT SOLUTION FLOW (PLUS VERSION)” on page 103. |
|  | Vacuum system performance level change icon, see “VACUUM SYSTEM PERFORMANCE ADJUSTMENT (PLUS VERSION)” on page 104. |

**N.B.:** as soon as the one of the four buttons indicated above is pressed, the control display **(Fig.2)** shows the screen dedicated to the MANUAL MODE working program and the program name is displayed in the circular symbol (2).




## POWER MODE WORKING PROGRAM (PLUS VERSION)

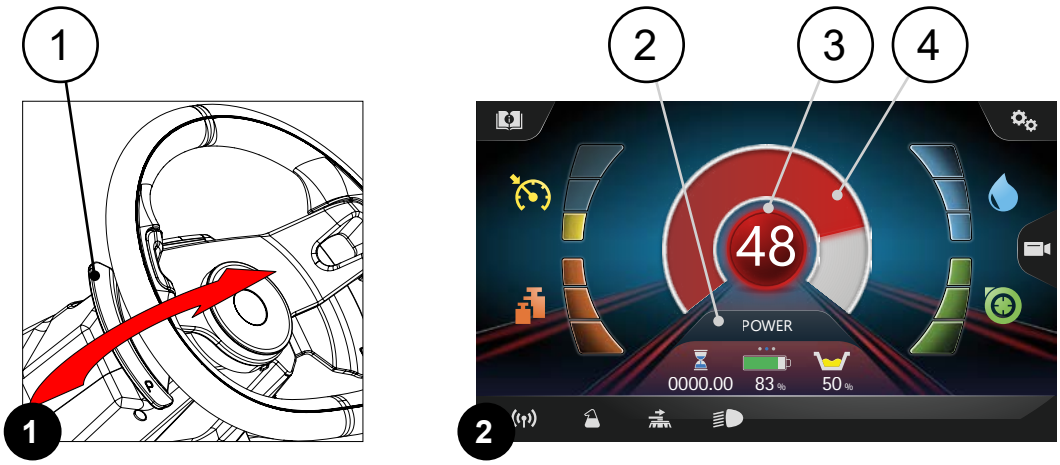
The POWER MODE working program can be used if small areas with stubborn dirt are found during an intervention, therefore it is useful to temporarily leave the configuration that is being used in order to use maximum scrubbing force to remove the localised dirt.
The POWER MODE working program can be activated by moving the lever (1) underneath the steering wheel.

**N.B.:** The POWER MODE working program remains active for 120 seconds. To deactivate it wait until the end of the 120 seconds.

**N.B.:** as soon as the level activates on the control display (**Fig.2**) shows the screen dedicated to the POWER MODE working program and the program name is displayed in the circular symbol (2).

**N.B.:** the centre of the screen (**Fig.2**) displays a graphic symbol (4) and a numerical value (3). They display a countdown, at the end of which the screen returns to the work screen previously used and the pressure exercised on the brush head returns to the standard pressure.

**N.B.:** by selecting the POWER working program, the work parameters (speed, force exercised on the brushes, vacuum motor performance, detergent solution flow) are changed automatically.




The parameters preset on a scale of 1 to 3, are as follows:

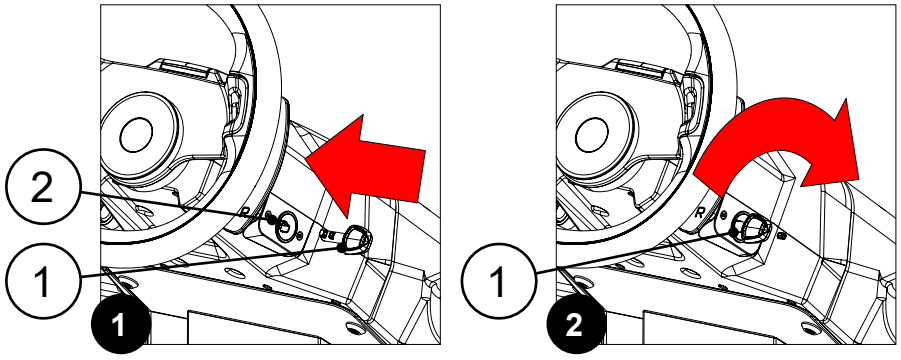
| Speed | Brush | Vacuuming | Detergent Solution |
|---|---|---|---|
| 1 | 3 | 3 | 3 |

# WORKING MODE (PRO VERSIONS)

## TRANSFER WORKING MODE (PRO VERSION)

In the TRANSFER working mode, both the brush head and the squeegee are in their resting positions. This working mode is used to transfer the machine from the work site to the maintenance site.
To use the machine in transfer mode, do the following:

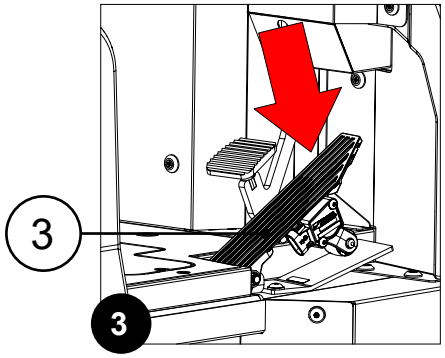
1. Carry out all the checks listed in the “WORK PREPARATION CHECKLIST” on page 59.
2. Sit on the driver’s seat.
3. Insert the key (1) into the slot (2) on the right side of the column (**Fig.1**).
4. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.2**).
5. When the control display is turned on, screens appear in sequence, the last of which contains the machine programming characteristics.




**N.B.:** when the machine is turned on, the TRANSFER working mode is enabled.

**N.B.:** the detergent solution performance levels is reset automatically.

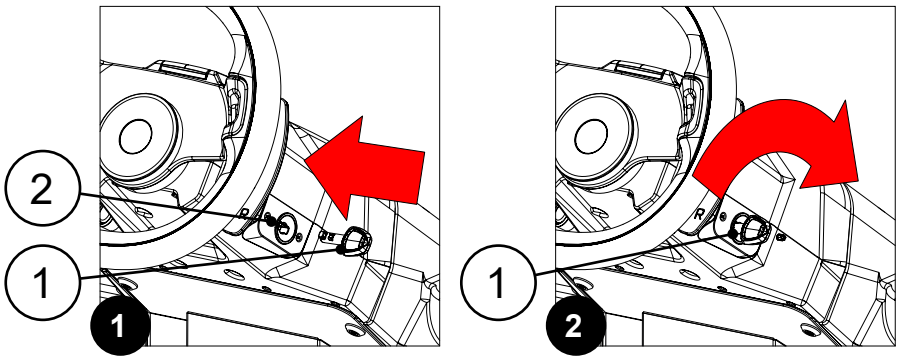
6. The machine is now in the transfer working mode.
7. Press the drive pedal (3) (**Fig.3**) to begin moving the machine.



## SCRUBBING MACHINE WORKING MODE (PRO VERSION)

In the SCRUBBING MACHINE working mode, the brush head and squeegee are in their working positions. This working mode is used to scrub and dry the floor at the same time.
To use the machine in scrubbing machine working mode, do the following:

1. Carry out all the checks listed in the “WORK PREPARATION CHECKLIST” on page 59.
2. Sit on the driver’s seat.
3. Insert the key (1) into the slot (2) on the right side of the column (**Fig.1**).
4. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.2**).
5. When the control display is turned on, screens appear in sequence, the last of which contains the machine programming characteristics.




**N.B.:** when the machine is turned on, the TRANSFER working mode is enabled.

**N.B.:** the detergent solution performance levels is reset automatically.

6. The machine is now in the transfer working mode.
7. By selecting one of the working programs like ECO MODE; POWER MODE; or PROGRAM ZONE, the SCRUBBING MACHINE working mode will be enabled.

**N.B.:** for more information on the working program types, see the “WORKING PROGRAMS (PRO VERSION)” on page 61.

8. Let's take the ECO MODE working program as an example: press the button (3) on the control panel (**Fig. 3**).

**N.B.:** by selecting the ECO MODE working program on the control display (**Fig. 4**), the relative symbol (4) will appear at the bottom of the screen.

**N.B.:** by selecting the ECO MODE working program, the preset performance levels are automatically loaded, based on those selected on the function card's parameters list. To modify them, see the USER INTERFACE CONFIGURATION GUIDE document.

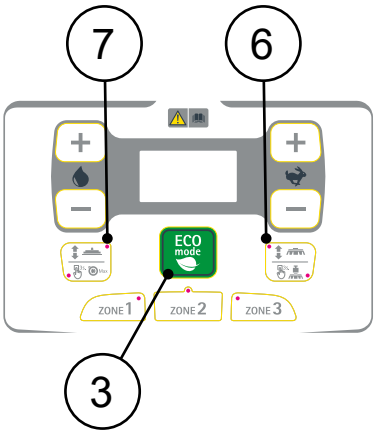
9. Press the drive pedal (5) (**Fig.5**) to begin moving the machine.

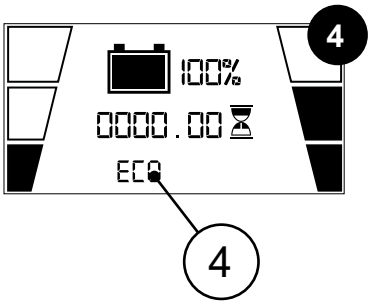
**N.B.:** as soon as the drive pedal is pressed, the brush head is automatically moved to the working position.

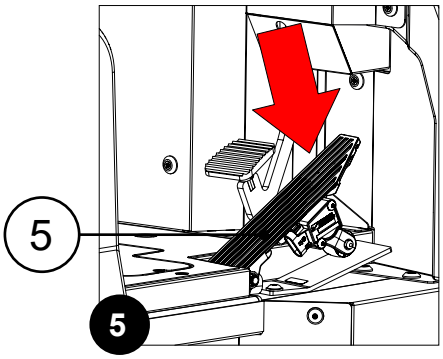
**N.B.:** as soon as the brush head reaches its working position, the brush head positioning LED (6) will light up on the control panel (**Fig. 3**).

**N.B.:** as soon as the drive pedal is pressed, the squeegee is automatically moved to the working position.

**N.B.:** as soon as the squeegee reaches its working position, the squeegee positioning LED (7) will light up on the control panel (**Fig. 3**).




**N.B.:** the brush motors; the solenoid valve, and the detergent solution pump only begin functioning once the brush head is in its working position.

**N.B.:** the suction motors are only activated once the squeegee is in its working position.

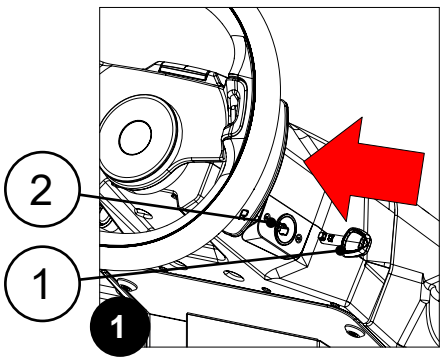
**N.B.:** if the drive pedal (5) is released while working, once the reset delay time has elapsed, both the brush head as well as the squeegee are automatically moved to the intermediate rest position. During the squeegee re-ascent phase, the suction motors remain on for the reset delay time, in order to ensure that they suction up the solution present inside them.

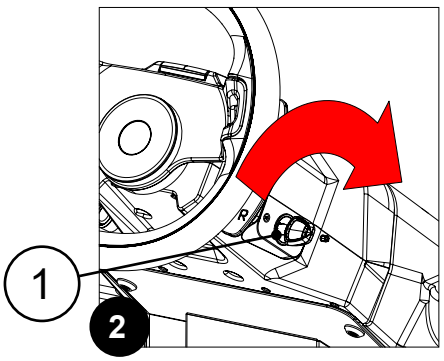
**N.B.:** the value for the reset delay time is selected on the function card's parameter list.

## PRESCRUBBING WORKING MODE (PRO VERSION)

In the PRE-SCRUBBING working mode, only the brush head is in its working position, with the squeegee remaining in its resting position. This working mode is used to thoroughly scrub the floor without drying it.
To use the machine in pre-scrub working mode, do the following:

1. Carry out all the checks listed in the “WORK PREPARATION CHECKLIST” on page 59.
2. Sit on the driver’s seat.
3. Insert the key (1) into the slot (2) on the right side of the column (**Fig.1**).
4. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.2**).
5. When the control display is turned on, screens appear in sequence, the last of which contains the machine programming characteristics.




**N.B.:** when the machine is turned on, the TRANSFER working mode is enabled.

**N.B.:** the detergent solution performance levels is reset automatically.

6. The machine is now in the transfer working mode.
7. By selecting one of the working programs like ECO MODE; POWER MODE; or PROGRAM ZONE, the SCRUBBING MACHINE working mode will be enabled.

**N.B.:** for more information on the working program types, see the “WORKING PROGRAMS (PRO VERSION)” on page 61.

8. Let's take the ECO MODE working program as an example: press the button (3) on the control panel (**Fig. 3**).

**N.B.:** by selecting the ECO MODE working program on the control display (**Fig. 4**), the relative symbol (4) will appear at the bottom of the screen.

**N.B.:** by selecting the ECO MODE working program, the preset performance levels are automatically loaded, based on those selected on the function card's parameters list. To modify them, see the USER INTERFACE CONFIGURATION GUIDE document.

9. Press the drive pedal (5) (**Fig.5**) to begin moving the machine.

**N.B.:** as soon as the drive pedal is pressed, the brush head is automatically moved to the working position.

**N.B.:** as soon as the brush head reaches its working position, the brush head positioning LED (6) will light up on the control panel (**Fig. 3**).

**N.B.:** as soon as the drive pedal is pressed, the squeegee is automatically moved to the working position.

**N.B.:** as soon as the squeegee reaches its working position, the squeegee positioning LED (7) will light up on the control panel (**Fig. 3**).

**N.B.:** the brush motors; the solenoid valve, and the detergent solution pump only begin functioning once the brush head is in its working position.

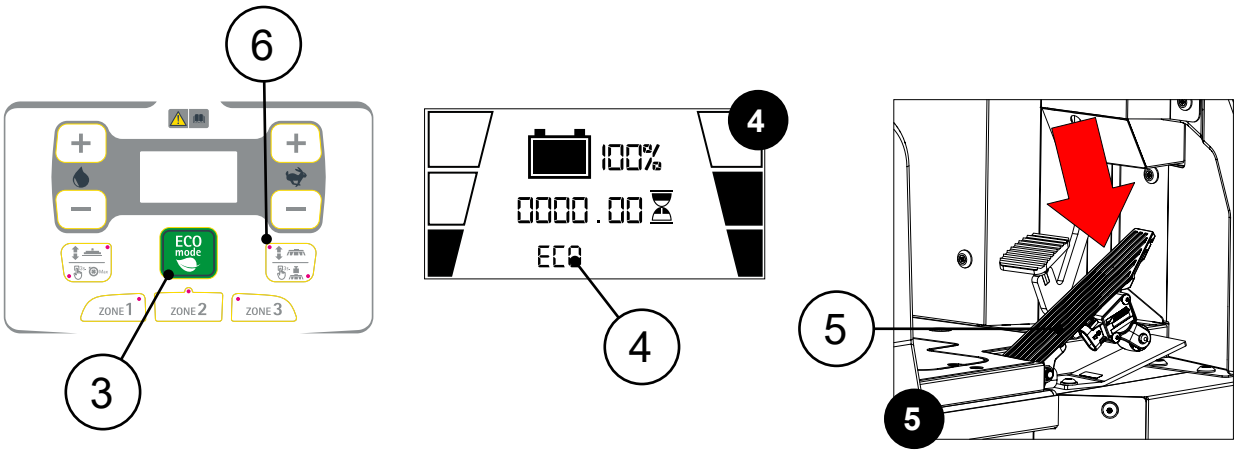
10. Press the SQUEEGEE CONTROL button (8) on the control panel (**Fig.3**).

**N.B.:** as soon as the button (8) is pressed, the squeegee control jack is engaged, causing the squeegee to be automatically brought to it rest position.

**N.B.:** as soon as the squeegee arrives to the rest position, the LED (7) on the control panel related to squeegee positioning (**Fig.3**) turns off.

**N.B.:** as soon as the button (8) at the bottom of the control display (**Fig. 4**) is pressed, the ECO MODE working program symbol (4) will disappear.

**N.B.:** if the drive pedal (5) is released while working, once the reset delay time has elapsed, the brush head is automatically moved to the intermediate rest position.



**N.B.:** the value for the reset delay time is selected on the function card's parameter list.

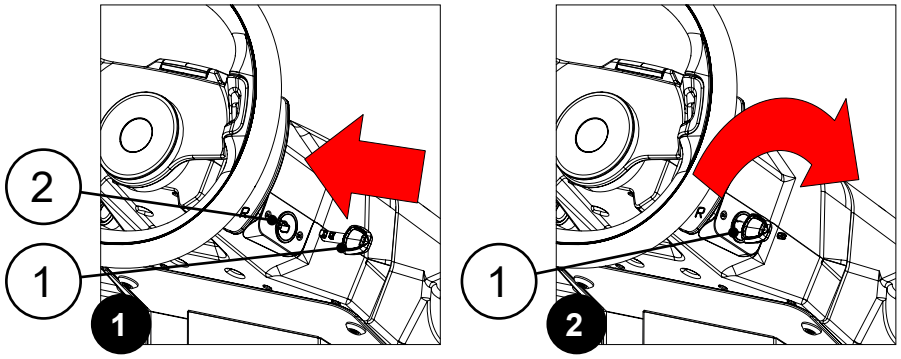
## DRYING WORKING MODE (PRO VERSION)

In the DRYING working mode, only the squeegee is in its working position, with the brush head remaining in its resting position. This working mode is used to dry the floor after having performed a pre-scrub.

**ATTENTION: The drying without scrubbing operation (drying) should only be carried out if the machine was used beforehand to carry out a scrubbing without drying operation (pre-scrub).**

To use the machine in drying working mode, do the following:

1. Carry out all the checks listed in the “WORK PREPARATION CHECKLIST” on page 59.
2. Sit on the driver’s seat.
3. Insert the key (1) into the slot (2) on the right side of the column (**Fig.1**).
4. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.2**).
5. When the control display is turned on, screens appear in sequence, the last of which contains the machine programming characteristics.




**N.B.:** when the machine is turned on, the TRANSFER working mode is enabled.

**N.B.:** the detergent solution performance levels is reset automatically.

6. The machine is now in the transfer working mode.
7. By selecting one of the working programs like ECO MODE; POWER MODE; or PROGRAM ZONE, the SCRUBBING MACHINE working mode will be enabled.

**N.B.:** for more information on the working program types, see the “WORKING PROGRAMS (PRO VERSION)” on page 61.

8. Let's take the ECO MODE working program as an example: press the button (3) on the control panel (**Fig. 3**).

**N.B.:** by selecting the ECO MODE working program on the control display (**Fig. 4**), the relative symbol (4) will appear at the bottom of the screen.

**N.B.:** by selecting the ECO MODE working program, the preset performance levels are automatically loaded, based on those selected on the function card's parameters list. To modify them, see the USER INTERFACE CONFIGURATION GUIDE document.

9. Press the drive pedal (5) (**Fig.5**) to begin moving the machine.

**N.B.:** as soon as it is pressed, the brush head is automatically moved to the working position.

**N.B.:** as soon as the brush head reaches its working position, the brush head positioning LED (6) will light up on the control panel (**Fig. 3**).

**N.B.:** as soon as the drive pedal is pressed, the squeegee is automatically moved to the working position.

**N.B.:** as soon as the squeegee reaches its working position, the squeegee positioning LED (7) will light up on the control panel (**Fig. 3**).

**N.B.:** the brush motors; the solenoid valve, and the detergent solution pump only begin functioning once the brush head is in its working position.

**N.B.:** the suction motors are only activated once the squeegee is in its working position.

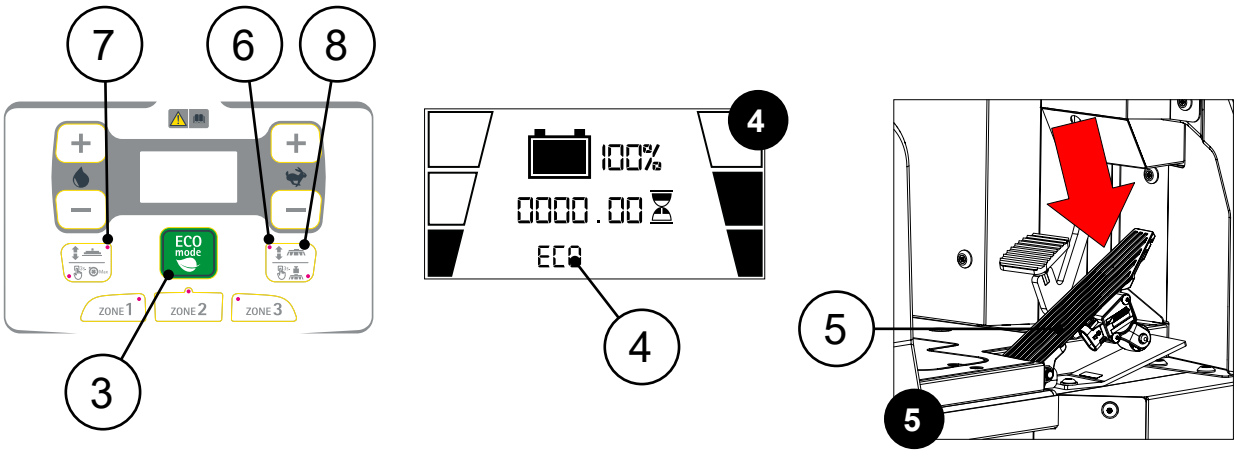
10. Press the BRUSH HEAD CONTROL button (8) on the control panel (**Fig.3**).

**N.B.:** as soon as the button (14) is pressed, the brush head is automatically moved to the working position.

**N.B.:** as soon as the brush head reaches its rest position, the brush head positioning LED (6) will turn off on the control panel (**Fig. 3**).

**N.B.:** as soon as the button (8) at the bottom of the control display (**Fig. 4**) is pressed, the ECO MODE working program symbol (4) will disappear.

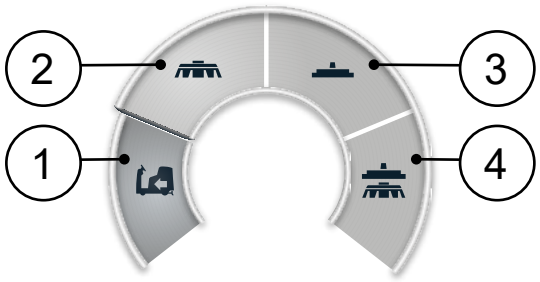
**N.B.:** if the drive pedal (5) is released while working, once the reset delay time has elapsed, the squeegee is automatically moved to the intermediate rest position.




**N.B.:** the value for the reset delay time is selected on the function card's parameter list. During the squeegee re-ascent phase, the suction motors remain on for the reset delay time, in order to ensure that they suction up the solution present inside them.

# WORKING MODE (PLUS VERSION)

## DS SELECTOR (DRIVE SELECT)




The DS selector can be used to select one of the following working modes:

1. Transfer: to transfer the machine from the work site to the maintenance site, see “TRANSFER WORKING MODE (PLUS VERSIONS)” on page 78.
2. Pre-scrub: to pre-scrub the floor where the dirt is more stubborn, see “PRESCRUBBING WORKING MODE (PLUS VERSION)” on page 79.
3. Drying: to dry the previously scrubbed floor, see “DRYING WORKING MODE (PLUS VERSION)” on page 80.
4. Scrubbing: to clean the floor at the same time as drying it, see “SCRUBBING MACHINE WORKING MODE (PLUS VERSION)” on page 81.

**N.B.:** to select one of the above indicated working modes, simply press one of the DS selector icons on the control screen **Fig.1**.

**N.B.:** switching from one working mode to another does not change the working program used up to that moment

**ATTENTION: if changing from one working mode with scrubbing (prescrubbing or scrubbing machine) to the transfer working mode, the machine activates the smart drying function, see “SMART DRYING MODE (PLUS VERSION)” on page 105.**

## TRANSFER WORKING MODE (PLUS VERSIONS)


By selecting the "TRANSFER” program, the command display screen will appear as in the adjacent figure.

**N.B.:** In the TRANSFER working mode, both the brush head and the squeegee are not in contact with the floor. This working mode is used to transfer the machine from the work site to the maintenance site.

The icons that may be visible on the control panel display are:

1. Machine partial hour meter symbol, see “HOUR METER (PLUS VERSIONS)” on page 90.
2. Working mode selector, see “DS SELECTOR (DRIVE SELECT)” on page 78.
3. Symbol identifying the type of working program, see the chapter “WORKING PROGRAMS (PLUS VERSION)” on page 64.
6. Setting menu activation symbol, see the user interface configuration manual, document number 10114635.
7. Rear view camera activation button, see REAR VIEW CAMERA.
8. recovery tank full symbol, if visible empty the tank, referring to the section “DRAINING THE RECOVERY TANK” on page 146.

9. Solution tank empty symbol, if visible fill the tank, referring to the section “DETERGENT SOLUTION” on page 47.
10. General alarm symbol, if visible stop the machine and contact technical service, see “ALARM SCREEN (PLUS VERSION)” on page 107.
12. Battery box charge level symbol, see “BATTERY BOX CHARGE LEVEL INDICATOR (PLUS VERSIONS)” on page 90.
13. Working headlights activation button, see “WORKING HEADLIGHTS (PLUS VERSIONS)” on page 129.
16. FFM system activation symbol, see “FFM - TAG INSERTION (PLUS VERSIONS)” on page 128.
18. Forward speed adjustment button, see “ADJUSTING THE FORWARD SPEED (PLUS VERSION)” on page 102.
19. Tutorial menu activation symbol, see the TUTORIAL chapter.

## PRESCRUBBING WORKING MODE (PLUS VERSION)


By selecting the "PRESCRUBBING ” program, the control display screen will appear as in the adjacent figure.

**N.B.:** In the PRE-SCRUBBING working mode, only the brush head is in its working position, with the squeegee remaining in its resting position. This working mode is used to thoroughly scrub the floor without drying it.

The icons that may be visible on the control panel display are:

1. Machine partial hour meter symbol, see “HOUR METER (PLUS VERSIONS)” on page 90.
2. Working mode selector, see “DS SELECTOR (DRIVE SELECT)” on page 78.
3. Symbol identifying the type of working program, see the chapter “WORKING PROGRAMS (PLUS VERSION)” on page 64.
5. Detergent solution flow regulation in the machine water system symbol, see “ADJUSTING THE DETERGENT SOLUTION FLOW (PLUS VERSION)” on page 103.
6. Setting menu activation symbol, see the user interface configuration manual, document number 10114635.
7. Rear view camera activation button, see REAR VIEW CAMERA.
8. recovery tank full symbol, if visible empty the tank, referring to the section “DRAINING THE RECOVERY TANK” on page 146.
9. Solution tank empty symbol, if visible fill the tank, referring to the section “DETERGENT SOLUTION” on page 47.
10. General alarm symbol, if visible stop the machine and contact technical service, see “ALARM SCREEN (PLUS VERSION)” on page 107.
11. Solution tank level symbol, see “SOLUTION TANK FILLING LEVEL INDICATOR (PLUS VERSIONS)” on page 91.
12. Battery box charge level symbol, see “BATTERY BOX CHARGE LEVEL INDICATOR (PLUS VERSIONS)” on page 90.
13. Working headlights activation button, see “WORKING HEADLIGHTS (PLUS VERSIONS)” on page 129.
14. Side brush activation symbol, see “SCRUBBING SIDE BRUSH (PLUS VERSIONS)” on page 123.
15. Chemical production in the machine's water system automatic management system activation symbol (applies to versions with the FSS system), see “FSS - AUTOMATIC DETERGENT DOSING SYSTEM (PLUS VERSIONS)” on page 125.
    Continuous detergent solution recycling system activation system (applies for versions with the FLR system), see “FLR - CONTINUOUS RECYCLING SYSTEM (PLUS VERSIONS)” on page 124.
16. FFM system activation symbol, see “FFM - TAG INSERTION (PLUS VERSIONS)” on page 128.
17. Pressure exercised on the brush head regulation symbol, see ADJUSTMENT OF PRESSURE EXERTED ON THE BRUSH HEAD.

18. Forward speed adjustment button, see “ADJUSTING THE FORWARD SPEED (PLUS VERSION)” on page 102.
19. Tutorial menu activation symbol, see the TUTORIAL chapter.

## DRYING WORKING MODE (PLUS VERSION)


By selecting the "DRYING” program, the command display screen will appear as in the adjacent figure.

**N.B.:** In the DRYING working mode, only the squeegee is in its working position, with the brush head remaining in its resting position. This working mode is used to dry the floor after having performed a pre-scrub.

The icons that may be visible on the control panel display are:

1. Machine partial hour meter symbol, see “HOUR METER (PLUS VERSIONS)” on page 90.
2. Working mode selector, see “DS SELECTOR (DRIVE SELECT)” on page 78.
3. Symbol identifying the type of working program, see the chapter “WORKING PROGRAMS (PLUS VERSION)” on page 64.
4. Machine vacuum system performance adjustment symbol, see VACUUM SYSTEM PERFORMANCE ADJUSTMENT .
6. Setting menu activation symbol, see the user interface configuration manual, document number 10114635.
7. Rear view camera activation button, see REAR VIEW CAMERA.
8. recovery tank full symbol, if visible empty the tank, referring to the section “DRAINING THE RECOVERY TANK” on page 146.
10. General alarm symbol, if visible stop the machine and contact technical service, see “ALARM SCREEN (PLUS VERSION)” on page 107.
12. Battery box charge level symbol, see “BATTERY BOX CHARGE LEVEL INDICATOR (PLUS VERSIONS)” on page 90.
13. Working headlights activation button, see “WORKING HEADLIGHTS (PLUS VERSIONS)” on page 129.
16. FFM system activation symbol, see “FFM - TAG INSERTION (PLUS VERSIONS)” on page 128.
18. Forward speed adjustment button, see “ADJUSTING THE FORWARD SPEED (PLUS VERSION)” on page 102.
19. Tutorial menu activation symbol, see the TUTORIAL chapter.

**ATTENTION: The drying only operation should only be carried out if the machine was used beforehand to carry out a prescrubbing operation.**

## SCRUBBING MACHINE WORKING MODE (PLUS VERSION)


By selecting the "SCRUBBING MACHINE" program, the control display screen will appear as in the adjacent figure.

**N.B.:** In the SCRUBBING MACHINE working mode, the brush head and squeegee are in their working positions. This working mode is used to scrub and dry the floor at the same time.

The icons that may be visible on the control panel display are:

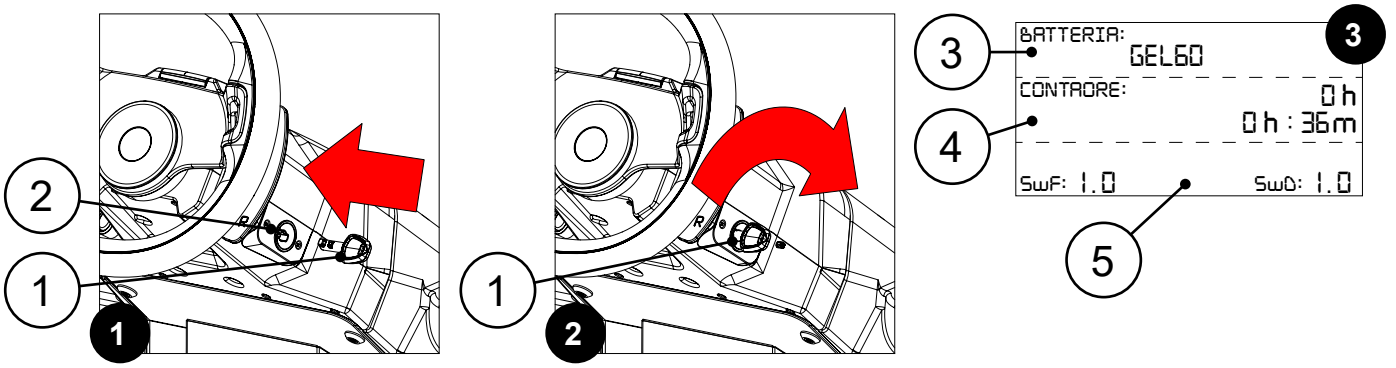
1. Machine partial hour meter symbol, see "HOUR METER (PLUS VERSIONS)" on page 90.
2. Working mode selector, see "DS SELECTOR (DRIVE SELECT)" on page 78.
3. Symbol identifying the type of working program, see the chapter "WORKING PROGRAMS (PLUS VERSION)" on page 64.
4. Machine vacuum system performance adjustment symbol, see VACUUM SYSTEM PERFORMANCE ADJUSTMENT .
5. Detergent solution flow regulation in the machine water system symbol, see "ADJUSTING THE DETERGENT SOLUTION FLOW (PLUS VERSION)" on page 103.
6. Setting menu activation symbol, see the user interface configuration manual, document number 10114635.
7. Rear view camera activation button, see REAR VIEW CAMERA.
8. recovery tank full symbol, if visible empty the tank, referring to the section "DRAINING THE RECOVERY TANK" on page 146.
9. Solution tank empty symbol, if visible fill the tank, referring to the section "DETERGENT SOLUTION" on page 47.
10. General alarm symbol, if visible stop the machine and contact technical service, see "ALARM SCREEN (PLUS VERSION)" on page 107.
11. Solution tank level symbol, see "SOLUTION TANK FILLING LEVEL INDICATOR (PLUS VERSIONS)" on page 91.
12. Battery box charge level symbol, see "BATTERY BOX CHARGE LEVEL INDICATOR (PLUS VERSIONS)" on page 90.
13. Working headlights activation button, see "WORKING HEADLIGHTS (PLUS VERSIONS)" on page 129.
14. Side brush activation symbol, see "SCRUBBING SIDE BRUSH (PLUS VERSIONS)" on page 123.
15. Chemical production in the machine's water system automatic management system activation symbol (applies to versions with the FSS system), see "FSS - AUTOMATIC DETERGENT DOSING SYSTEM (PLUS VERSIONS)" on page 125.
    Continuous detergent solution recycling system activation system (applies for versions with the FLR system), see "FLR - CONTINUOUS RECYCLING SYSTEM (PLUS VERSIONS)" on page 124.
16. FFM system activation symbol, see "FFM - TAG INSERTION (PLUS VERSIONS)" on page 128.
17. Pressure exercised on the brush head regulation symbol, see ADJUSTMENT OF PRESSURE EXERTED ON THE BRUSH HEAD.
18. Forward speed adjustment button, see "ADJUSTING THE FORWARD SPEED (PLUS VERSION)" on page 102.
19. Tutorial menu activation symbol, see the TUTORIAL chapter.

## STARTING WORK (PRO VERSION)

By way of example, let's say we want to use the scrubbing machine working mode (i.e. scrubbing and drying the floor) with the ECO MODE working program. To begin the work activities, do the following:

1. Carry out all the checks listed in the “WORK PREPARATION CHECKLIST” on page 59.
2. Sit on the driver’s seat.
3. Insert the key (1) into the slot (2) on the right side of the column (**Fig.1**).
4. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.2**).
5. After ignition, the display will show a series of screens in sequence. **Fig.3** shows the screen with the machine programming characteristics.

**N.B.:** the type of battery programmed for the battery control board is shown at the top of the screen (3) (**Fig.3**).
The total machine hours and partial machine hours meters are shown at the centre of the screen (4), on the upper and lower rows respectively (**Fig.3**).
The software version of the function card (SwF) and the software version of the display (SwD) are shown at the bottom of the screen (5), on the left and right hand sides respectively (**Fig. 3**).




**N.B.:** the type of battery displayed (3) is that selected on the function card's parameter list. To change it, see the USER INTERFACE CONFIGURATION GUIDE document.

**N.B.:** the partial and total hour meters displayed (4) are those selected on the function card's parameter list. To change them, see the USER INTERFACE CONFIGURATION GUIDE document.

**N.B.:** the work screen **Fig. 4** will appear after the screen containing the machine's programming characteristics. The detergent solution level is shown on the left side of the screen (6) (see “ADJUSTING THE DETERGENT SOLUTION FLOW (PRO VERSION)” on page 96). The battery charge percentage and the hour meter are shown at the centre of the screen (7), on the upper and lower rows respectively (for more information, see the “BATTERY BOX CHARGE LEVEL INDICATOR (PRO VERSION)” on page 85). The machine's forward speed is shown on the right side of the screen (8) (see the “ADJUSTING THE FORWARD SPEED (PRO VERSION)” on page 96).

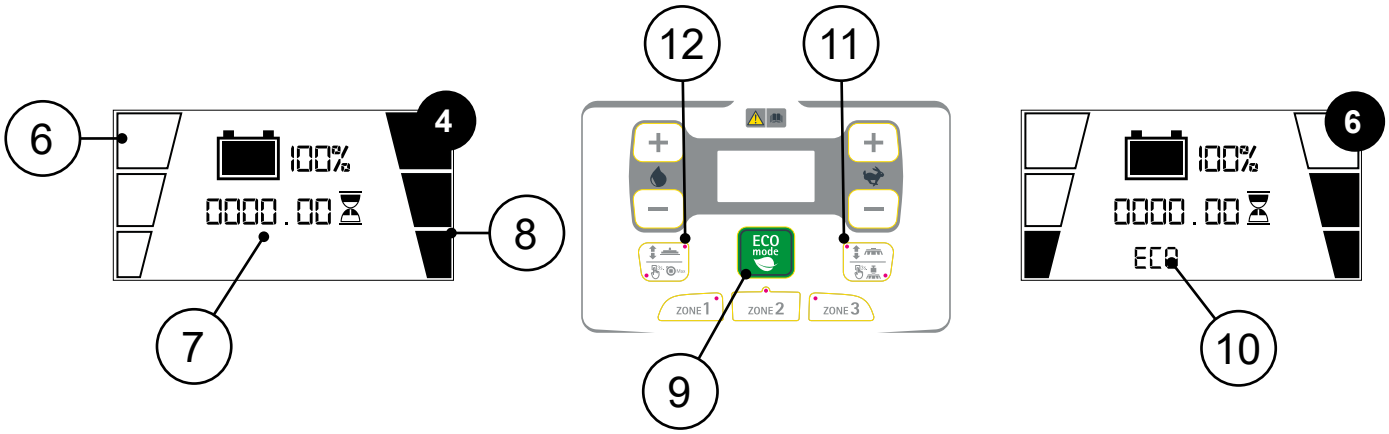
**N.B.:** when the machine is turned on, the TRANSFER working mode is enabled.

**N.B.:** the detergent solution performance levels is reset automatically.

6. The machine is now in the transfer working mode.
7. Press the button (9) on the control panel (**Fig. 5**) to activate the ECO MODE working program.

**N.B.:** by selecting the ECO MODE working program on the control display (**Fig. 6**), the relative symbol (10) will appear at the bottom of the screen.

**N.B.:** by selecting the ECO MODE working program, the preset performance levels are automatically loaded, based on those selected on the function card's parameters list. To modify them, see the USER INTERFACE CONFIGURATION GUIDE document.




8. Press the drive pedal (13) (**Fig.7**) to begin moving the machine.

**N.B.:** as soon as the brush head and squeegee pedal is pressed, the brush head and squeegee are automatically moved to the working position.

**N.B.:** the brush motors; the solenoid valve, and the detergent solution pump only begin functioning once the brush head is in its working position.

**N.B.:** the suction motors are only activated once the squeegee is in its working position.

**N.B.:** if the drive pedal (13) is released while working, after a few seconds, both the brush head as well as the squeegee are automatically moved to the intermediate rest position. During the squeegee re-ascent phase, the suction motors remain on in order to ensure that they suction up the solution present inside them.

**N.B.:** to change the reset delay time related to the brush head control actuator, read the user interface configuration manual, document number 10114635.

**N.B.:** to change the reset delay time related to the suction motors, read the user interface configuration manual, document number 10114635.

**N.B.:** to change the reset delay time related to the squeegee control actuator, read the user interface configuration manual, document number 10114635.

9. The machine will now begin operating at maximum efficiency until the detergent solution is finished or the battery runs flat.

**N.B.:** during the first meters of work, check that the quantity of solution dispensed is sufficient to wet the floor. If not, adjust the detergent solution flow. See the “ADJUSTING THE DETERGENT SOLUTION FLOW (PRO VERSION)” on page 96.

**N.B.:** during the first meters of work, check that the squeegee dries the floor properly. If not, adjust it. See the “ADJUSTING THE SQUEEGEE RUBBER BLADES” on page 158.

**N.B.:** during the first meters of work, check that the two side splash guards on the brush body properly convey the detergent solution on the floor towards the squeegee. If not, adjust them. See the “BRUSH HEAD SIDE SPLASH GUARD ADJUSTMENT” on page 161.

**N.B.:** pick up any large pieces of waste before performing the cleaning operations; pick up wire, tape, string, large pieces of wood, or any other types of refuse that could wrap around the brushes or become entangled.

**N.B.:** drive the machine along the most linear path possible. Avoid hitting any obstacles and scratching the sides of the machine. Overlap the tracts of cleaned flooring by several centimetres.

**N.B.:** avoid turning the steering wheel too sharply while the machine is in motion. The machine reacts quickly to the steering wheel's movements.

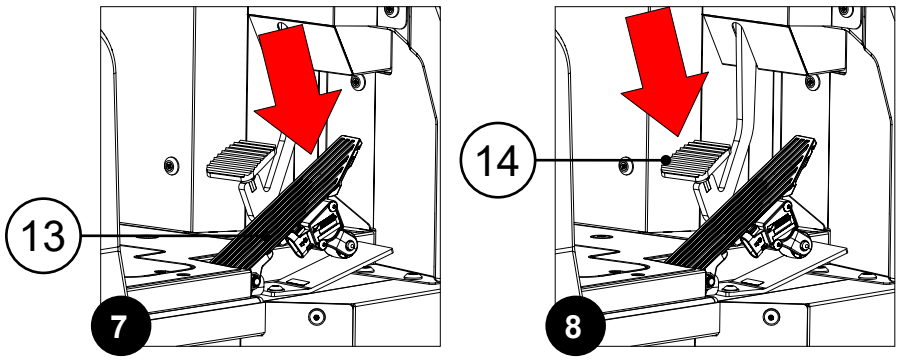
**N.B.:** adjust the speed of the machine, the pressure of the brushes and the flow of the solution based on the type of cleaning to be carried out.

**N.B.:** The machine's service brake pedal (14), which is used to stop the machine when required (**Fig.8**), is located to the right of the footboard.

**N.B.:** when the service brake pedal (8) is pressed, the red rear lights become brighter to indicate that the service brake pedal has been pressed.

**N.B.:** the machine has an encoder to assist with braking, as well as a mechanical brake. If the machine is moving and the accelerator pedal (13) is released, the machine brakes, decelerating gently, until it stops the encoder. Only when the encoder has stopped is the electric brake engaged. If the machine is moving and the brake pedal (14) (**Fig.8**) is pressed, the machine brakes with the braking force applied by the mechanical system. Only when the encoder has stopped is the electric brake engaged.

**ATTENTION:** when the ALARM 15 alarm appears on the control display, this means that the brake fluid level in the braking system is low. Stop the machine and contact a FIMAP service centre.




**N.B.:** Drive the machine slowly on inclines and descents. Use the brake pedal to control the machine speed. Where there is a slop, carry out the scrubbing by moving the machine upwards rather than downwards.

**ATTENTION:** Slow down on ramps and slippery surfaces.

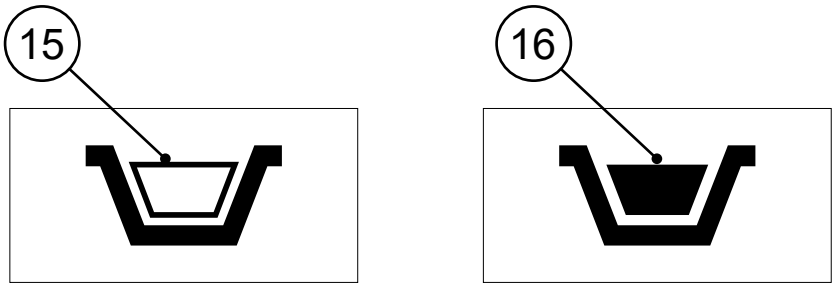
**ATTENTION:** do not use the machine in areas where the ambient temperature is greater than 43°C (110°F). Do not use the scrubbing functions in areas where the ambient temperature is below freezing 0°C (32°F).

**ATTENTION:** in working mode, the machine can only drive on ramps not exceeding 25%; while operating in the scrubbing machine working mode with GVW weight, the machine can drive on inclines no greater than 20 %, see “TECHNICAL DATA” on page 16.

**N.B.:** if the solution in the recovery tank should reach the critical level during the work activities, the critical level symbol (15) will appear in the of the control display. To continue working, see “OVERFLOW DEVICE (PRO VERSION)” on page 86.

**N.B.:** the alarm symbol (15) will only disappear once the machine has been turned off and the recovery tank has been emptied.

**N.B.:** if the detergent solution in the solution tank finishes while working, the critical level symbol (16) will appear on the main screen. To continue working, see “DETERGENT SOLUTION” on page 47.




## BATTERY BOX CHARGE LEVEL INDICATOR (PRO VERSION)

The control display is located on the machine control panel. The central part of the screen displays the battery box charge percentage on the upper row (1) (**Fig.1**).
The battery box charge percentage indicator consists of two charge level symbols, the first being a graphic symbol (2), and the second being a number indicating the charge percentage (3) (**Fig.2**).

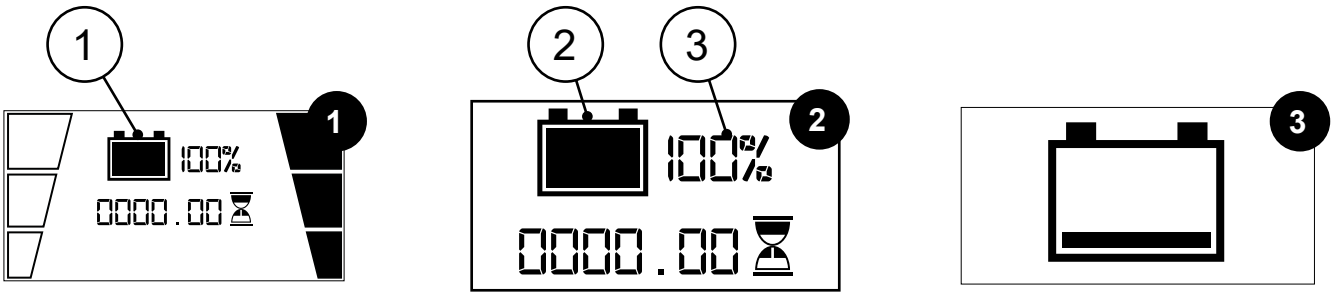
**N.B.:** the control display shows the batteries' charge percentage with respect to their maximum capacity, and the function board transforms the batteries' voltage value into a percentage value.

**N.B.:** the graphic symbol (2) consists of 5 charge levels, each of which represents approximately 20% of residual battery charge.

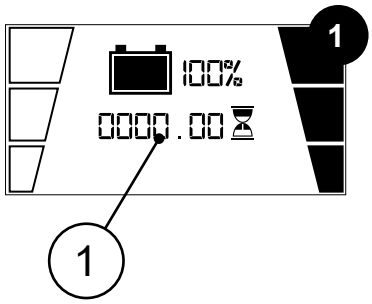
**N.B.:** with a residual charge of 20%, the graphic symbol starts to flash. After a few seconds, it appears larger at the centre of the screen (**Fig.3**); at this point, the machine must be taken to the designated battery pack recharging station.

**N.B.:** a few seconds after the battery pack's charge level reaches 20%, the brush motor switches off automatically. The remaining charge is sufficient for completing the drying task before recharging the battery pack.

**N.B.:** a few seconds after the battery charge level reaches 10%, the suction motor switches off automatically. With the remaining charge, it is still possible, however, to move the machine to the designated battery pack recharging station.



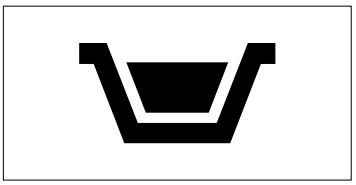
## HOUR METER (PRO VERSION)




The control display is located on the machine control panel. The central part of the screen displays the hour meter on the upper row (1) (**Fig.1**).
The hour meter (1) allows the user to view the machine's total time of use via a series of numbers.

**N.B.:** the digits preceding the (“.”) identify the hours, while the digits that come after the “.” identify the tenths of an hour, a tenth of an hour corresponds to six minutes.

## OVERFLOW DEVICE (PRO VERSION)



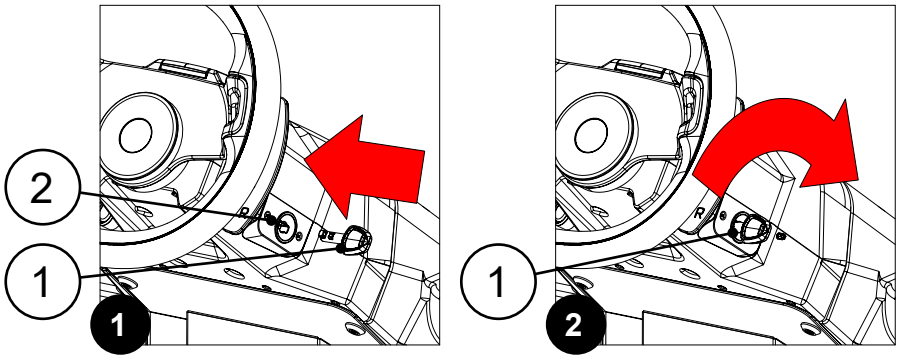
The machine is equipped with an overflow device, when the solution level inside the recovery tank reaches a critical level, the icon will appear here on the control display to the side. As soon as the alarm appears, do the following:

1. Stop the machine.
2. Set the machine to TRANSFER mode. See the “TRANSFER WORKING MODE (PRO VERSION)” on page 72.
3. Take the machine to the designated maintenance area.
4. Perform the recovery tank emptying procedure. See the “DRAINING THE RECOVERY TANK” on page 146.

## STARTING WORK (PLUS VERSION)

By way of example, let's say we want to use the scrubbing machine working mode (i.e. scrubbing and drying the floor) with the ECO MODE working program. To begin the work activities, do the following:

1. Carry out all the checks listed in the “WORK PREPARATION CHECKLIST” on page 59.
2. Sit on the driver’s seat.
3. Insert the key (1) into the slot (2) on the right side of the column (**Fig.1**).
4. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.2**).




5. When turning on the display, machine animation and then the machine logo is loaded, after a few seconds the working screen appears automatically.

**N.B.:** in the settings menu it is possible to enable the access PIN code request, if active after the logo screen, the login screen appears. To continue it is necessary to enter the numerical release code, read the user interface configuration manual, document number 10114635.

**N.B.:** the machine can be used when entering the correct PIN code, if an incorrect PIN code is entered the machine cannot be used.

**N.B.:** after the machine logo screen, the main screen appears (**Fig.3**), which shows the machine performance levels and the activation buttons for the optional functions, see “CONTROL DISPLAY (PLUS VERSION)” on page 33.


6. Activate the “SCRUBBING MACHINE” working mode, DS selector, press the button (3) (**Fig.3**).

**N.B.:** after pressing the scrubbing machine (3) button on the main screen, the screen **Fig.4** appears.

**N.B.:** by selecting the ECO MODE working program, the preset performance levels are automatically loaded, based on those selected on the function board parameters list.

7. If the machine has an automatic detergent dosing system (FSS), or the continuous dosing system recycling system (FLR), press the button (4) on the main screen (**Fig.4**).

**N.B.:** the FSS function is active when the symbol (4)  is green, see “FSS - AUTOMATIC DETERGENT DOSING SYSTEM (PLUS VERSIONS)” on page 125.

**N.B.:** the FLR function is active when the symbol (4)  is green, see “FLR - CONTINUOUS RECYCLING SYSTEM (PLUS VERSIONS)” on page 124.

8. If the work is performed in poorly illuminated areas, turn on the working headlights by pressing the button (5) on the main screen (**Fig.4**)

**N.B.:** the working headlights function is active when the symbol (5)  is green, see “WORKING HEADLIGHTS (PLUS VERSIONS)” on page 129.

9. If the machine has a side brush, press the button (6) on the main screen (**Fig.4**).

**N.B.:** the side brush is active when the symbol (6)  is green, see “SCRUBBING SIDE BRUSH (PLUS VERSIONS)” on page 123.

10. Press the drive pedal (7) (**Fig.5**) to begin moving the machine.

**N.B.:** as soon as the brush head and squeegee pedal is pressed, the brush head and squeegee are automatically moved to the working position.

**N.B.:** the brush motors; the solenoid valve, and the detergent solution pump only begin functioning once the brush head is in its working position.

**N.B.:** the suction motors are only activated once the squeegee is in its working position.

**N.B.:** if the drive pedal (7) is released while working, after a few seconds, both the brush head as well as the squeegee are automatically moved to the intermediate rest position. During the squeegee re-ascent phase, the suction motors remain on in order to ensure that they suction up the solution present inside them.

**N.B.:** to change the reset delay time related to the brush head control actuator, read the user interface configuration manual, document number 10114635.

**N.B.:** to change the reset delay time related to the suction motors, read the user interface configuration manual, document number 10114635.

**N.B.:** to change the reset delay time related to the squeegee control actuator, read the user interface configuration manual, document number 10114635.

11. The machine will now begin operating at maximum efficiency until the detergent solution is finished or the battery runs flat.

**N.B.:** during the first meters of work, check that the quantity of solution dispensed is sufficient to wet the floor. If not, adjust the detergent solution flow. See the “ADJUSTING THE DETERGENT SOLUTION FLOW (PLUS VERSION)” on page 103.

**N.B.:** during the first meters of work, check that the squeegee dries the floor properly. If not, adjust it. See the “ADJUSTING THE SQUEEGEE RUBBER BLADES” on page 158.

**N.B.:** during the first meters of work, check that the two side splash guards on the brush body properly convey the detergent solution on the floor towards the squeegee. If not, adjust them. See the “BRUSH HEAD SIDE SPLASH GUARD ADJUSTMENT” on page 161.

**N.B.:** pick up any large pieces of waste before performing the cleaning operations; pick up wire, tape, string, large pieces of wood, or any other types of refuse that could wrap around the brushes or become entangled.

**N.B.:** drive the machine along the most linear path possible. Avoid hitting any obstacles and scratching the sides of the machine. Overlap the tracts of cleaned flooring by several centimetres.

**N.B.:** avoid turning the steering wheel too sharply while the machine is in motion. The machine reacts quickly to the steering wheel's movements.

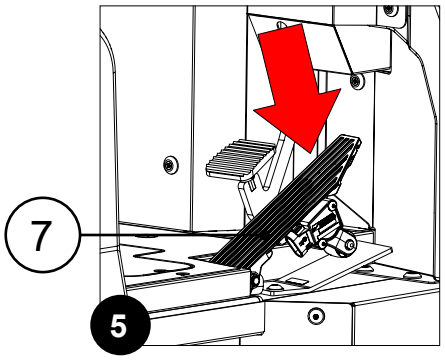
**N.B.:** adjust the speed of the machine, the pressure of the brushes and the flow of the solution based on the type of cleaning to be carried out.

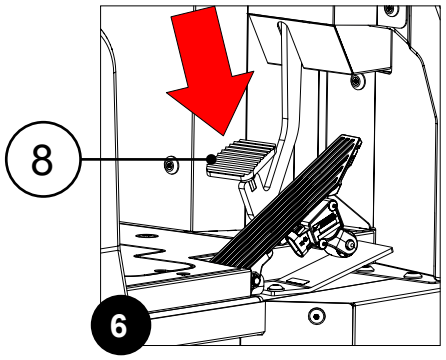
**N.B.:** The machine's service brake pedal (8), which is used to stop the machine when required (**Fig.6**), is located to the right of the footboard.

**N.B.:** when the service brake pedal (8) is pressed, the red rear lights become brighter to indicate that the service brake pedal has been pressed.

**N.B.:** the machine has an encoder to assist with braking, as well as a mechanical brake. If the machine is moving and the accelerator pedal (7) is released, the machine brakes, decelerating gently, until it stops the encoder. Only when the encoder has stopped is the electric brake engaged. If the machine is moving and the brake pedal (8) (**Fig.6**) is pressed, the machine brakes with the braking force applied by the mechanical system. Only when the encoder has stopped is the electric brake engaged.

**ATTENTION:** when the alarm symbol (11) appears on the main screen (**Fig.4**) in addition to the pop-up window (**Fig.7**), this means that the level of oil in the braking system is low, stop the machine and contact a FIMAP service centre.





**ATTENTION:** when the alarm symbol (9) appears on the main screen (**Fig.4**), stop the machine and contact a FIMAP service centre, see “ALARM SCREEN (PLUS VERSION)” on page 107.

**N.B.:** Drive the machine slowly on inclines and descents. Use the brake pedal to control the machine speed. Where there is a slop, carry out the scrubbing by moving the machine upwards rather than downwards.

**ATTENTION:** Slow down on ramps and slippery surfaces.

**ATTENTION:** do not use the machine in areas where the ambient temperature is greater than 43°C (110°F). Do not use the scrubbing functions in areas where the ambient temperature is below freezing 0°C (32°F).

**ATTENTION:** in working mode, the machine can only drive on ramps not exceeding 25%; while operating in scrubbing machine working mode with GVW weight, the machine can drive on inclines no greater than 20 %, see “TECHNICAL DATA” on page 16.

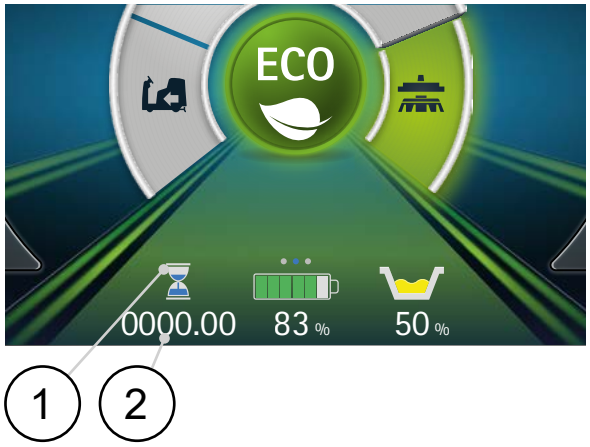
**N.B.:** if the solution in the recovery tank should reach the critical level during the work activities, the critical level symbol (9) will appear on the main screen (**Fig.4**). To continue working, see “OVERFLOW DEVICE (PLUS VERSIONS)” on page 92.

**N.B.:** the alarm symbol (9) will only disappear once the machine has been turned off and the recovery tank has been emptied.

**N.B.:** if the detergent solution in the solution tank finishes while working, the critical level symbol (10) will appear on the main screen (**Fig.4**). To continue working, see “DETERGENT SOLUTION” on page 47.

**N.B.:** the alarm symbol (10) will disappear as soon as the solution tank is filled.

## HOUR METER (PLUS VERSIONS)

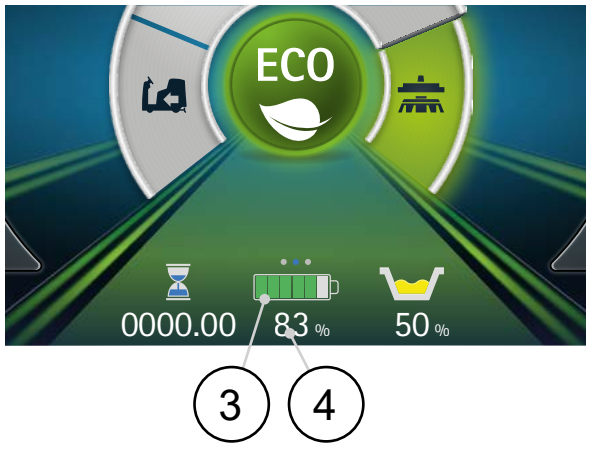



The lower left section of the main screen displays the hour meter, which consists of a symbol (1) and the number value (2).

**N.B.:** The number value (2) allows the user to view the machine's total time of use via a series of numbers.

**N.B.:** the digits preceding the (“.”) identify the hours, while the digits that come after the “.” identify the tenths of an hour, a tenth of an hour corresponds to six minutes.

## BATTERY BOX CHARGE LEVEL INDICATOR (PLUS VERSIONS)




The lower central section of the main screen displays the battery box level represented by a symbol (3) in the shape of a AA battery (4) that identifies the percentage of charge.

**N.B.:** the battery state of charge percentage is calculated with respect to their maximum capacity, and the function board transforms the voltage value of the batteries into a percentage value.

**N.B.:** the battery level icon (3) is composed of six charge levels, each of which represents about 16% of residual charge.

**N.B.:** the graphic symbol (3) turns green when the residual charge is in the following value range 100% - 51%.

**N.B.:** the graphic symbol (3) turns yellow when the residual charge is in the following value range 50% - 17%.

**N.B.:** the graphic symbol (3) turns red when the residual charge is in the following value range 16% - 01%.

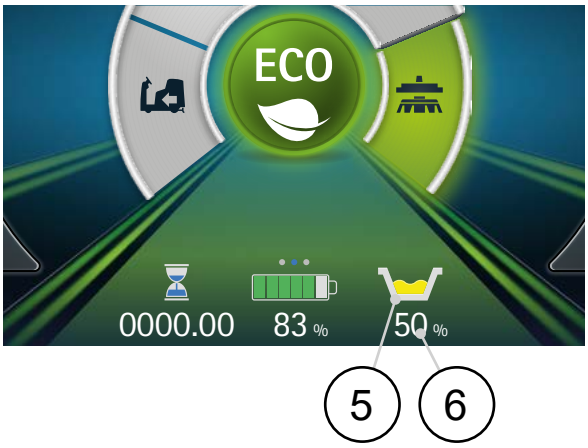
**N.B.:** the graphic symbol (3) turns red when the residual charge is 00%.

**N.B.:** with a residual charge of 16%, the graphic symbol will start to flash and after a few seconds it will turn red. In these conditions, take the machine to the place where the battery box can be charged.

**N.B.:** after a few seconds, the residual charges reaches 20%, the brush motor switches off automatically. The remaining charge is sufficient for completing the drying task before recharging the battery pack.

**N.B.:** a few seconds after the battery charge level reaches 10%, the suction motor switches off automatically. With the remaining charge, it is still possible, however, to move the machine to the designated battery pack recharging station.

## SOLUTION TANK FILLING LEVEL INDICATOR (PLUS VERSIONS)




The lower right section of the main screen displays the solution tank filling level, represented by a graphic symbol (5) and a numerical value (6) that identifies the percentage of filling.

**N.B.:** the solution tank filling percentage is calculated with respect to the maximum capacity the function board transforms the value received from the electric float into a percentage value.

**N.B.:** the graphic symbol (6) turns green when the filling percentage is in the following value range 100% - 51%.

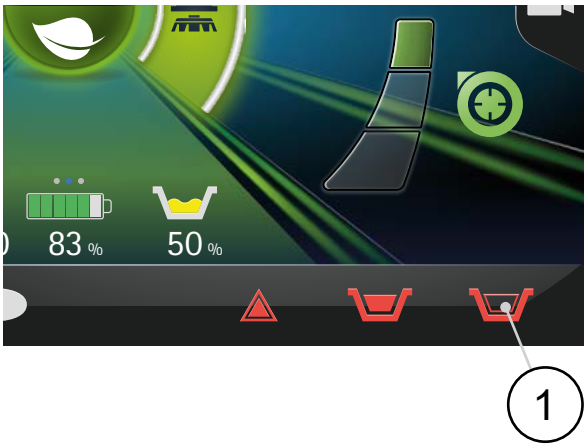
**N.B.:** the graphic symbol (6) turns yellow when the filling percentage is in the following value range 50% - 21%.

**N.B.:** the graphic symbol (6) turns red when the filling percentage is in the following value range 20% - --%.

**N.B.:** the graphic symbol (6) will have only a red silhouette when the residual filling percentage is -- %.

**N.B.:** when the capacity arrives at a percentage below 20%, the main screen displays the reserve symbol , which will disappear only when filling the solution tank, see “DETERGENT SOLUTION” on page 47.

## OVERFLOW DEVICE (PLUS VERSIONS)



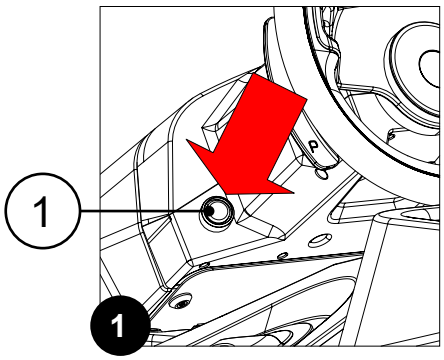

The machine has an overflow device, when the level of solution in the recovery tank arrives at a critical level, the alarm (1) appears on the control display.

As soon as the alarm appears, do the following:

1. Stop the machine.
2. Set the machine to TRANSFER mode. See “TRANSFER WORKING MODE (PLUS VERSIONS)” on page 78.
3. Take the machine to the designated maintenance area.
4. Perform the recovery tank emptying procedure. See “DRAINING THE RECOVERY TANK” on page 146.

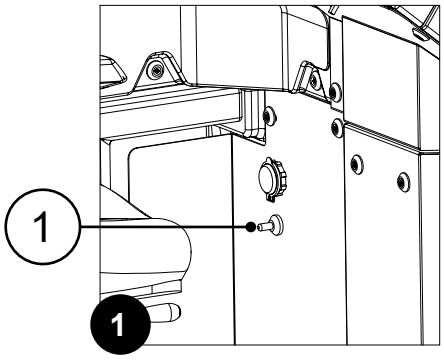
# ADDITIONAL FUNCTIONS

## BUZZER




The machine is equipped with a buzzer. if you need to sound a warning, just press the button (1) on the steering column (**Fig.1**).

## SERVICE LIGHTS




Upon request, the machine can be equipped with the exclusive service lights pack.
The service lights package offers increased visibility of the parts which could require operator inspection, illuminating the relative zones with LED lights.

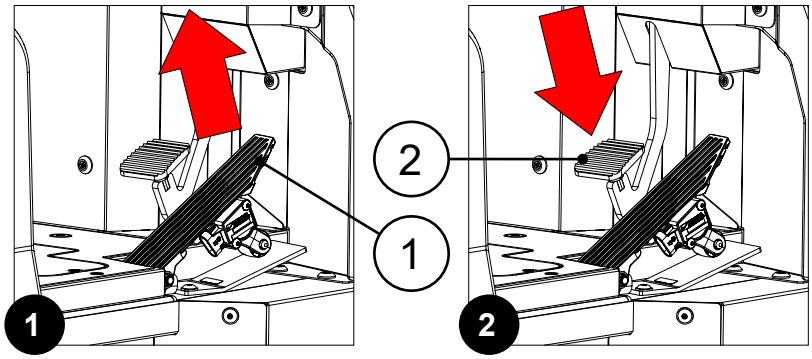
To activate the service lights, use the switch (1) under the control panel (**Fig.1**). This switch has three working positions:

• ON: set the switch to this position when you want the service lights to remain on, regardless of the status of the microswitches in the various doors.

- OFF: set the switch to this position when you want the service lights to remain off.
- AUTOMATIC: set the switch to this position when you want the service lights to only turn on when the microswitches in the various doors are engaged.

## BRAKING CONTROL

The machine has an encoder to assist with braking, as well as a mechanical brake. If the machine is moving and the accelerator pedal (1) (**Fig.1**) is released, la the machine brakes decelerating softly, until it stops the encoder.



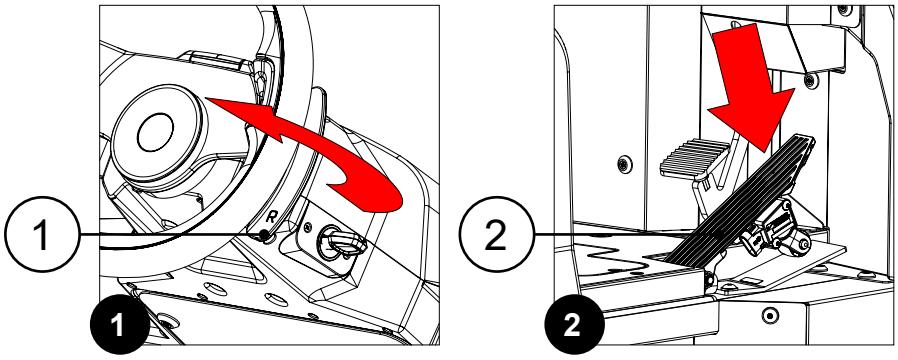

**N.B.:** If the machine is moving and the brake pedal (2) (**Fig.2**) is pressed, the machine brakes with the braking force applied by the mechanical system.

**WARNING:** Only when the encoder has stopped is the electric brake engaged.

## REVERSE GEAR

This machine is equipped with electronic traction control. To engage the reverse gear, do the following:

1. Stop the machine.
2. Engage the “REVERSE GEAR ACTIVATION/DEACTIVATION” lever (1) underneath the steering wheel (**Fig.1**).
3. Press the drive pedal (2) (**Fig.2**) to start the machine moving in reverse.




**CAUTION:** the reverse speed is lower than the forward speed to comply with current health and safety standards.

**N.B.:** in order to disengage the reverse gear, move the lever (1) underneath the steering wheel again.

**N.B.:** Once the lever has been engaged (1), the acoustic signalling device will be activated in order to signal that the machine's reverse gear has been engaged.

**N.B.:** if reverse is engaged with the squeegee in its working position, once the drive pedal is pressed, the machine will begin to move in reverse and the squeegee will be raised off the floor.

**N.B.:** If reverse is engaged with the brush head in its working position, once the drive pedal is pressed, the machine will begin to move in reverse and the brush head will remain in its working position, but the solenoid valve will stop dispensing detergent solution to the brushes.

**N.B.:** if reverse is engaged with the side brush head in its working position, once the drive pedal is pressed, the machine will begin to move in reverse and the side brush head will return to its resting position.

**N.B.:** if reverse is engaged, the display of the main screen will replaced by the full screen image of the connected camera (applies to PLUS versions).

**N.B.:** the camera provides visual assistance during reverse manoeuvres (applies for PLUS versions).

**DANGER:** the rear view camera system does not relive the driver from their responsibility to drive carefully and with due diligence (applies for PLUS versions).

**N.B.:** keep the camera free of dirt. Do not clean with sharp objects, degreasers, wax or biological based products. Only use a soft cloth (applies for PLUS versions).

**ATTENTION:** the distances shown on the display could differ from the effective ones (applies for PLUS versions).

**WARNING:** do not place objects in front of the camera (applies for PLUS versions).

**N.B.:** during operation, the display (**Fig.3**) shows the guide lines (3) that represent the vehicle path and the approximate distance of the objects behind it (applies for PLUS versions).

**N.B.:** the guide lines (3) indicate the trajectory foreseen for the overall dimensions of the machine with the steering wheel in the current position. the guide lines (3) are projected on the screen as if they were on the ground behind the machine and depend directly on the movement of the steering wheel to show the driver the trajectory, also in a curve. The guide lines (3) define the overall dimensions of the most protruding parts of the machine (applies for PLUS versions).

**ATTENTION:** remember that when the rear view camera is selected, the central display only shows the area behind the machine, therefore pay attention to the sides and to the front when turning in reverse (applies for PLUS versions).

**N.B.:** the left part of the screen (**Fig.3**) displays a coloured distance bar (4), which shows the distance between the rear bumper and the detected obstacle (applies for PLUS versions).

**N.B.:** the colour codes for the distance bars (4) are: green has the range from 0.8 meters to 1.5 meters; amber has the range from 0.3 meters to 0.8 meters; red has the range below 0.3 meters (applies for PLUS versions).

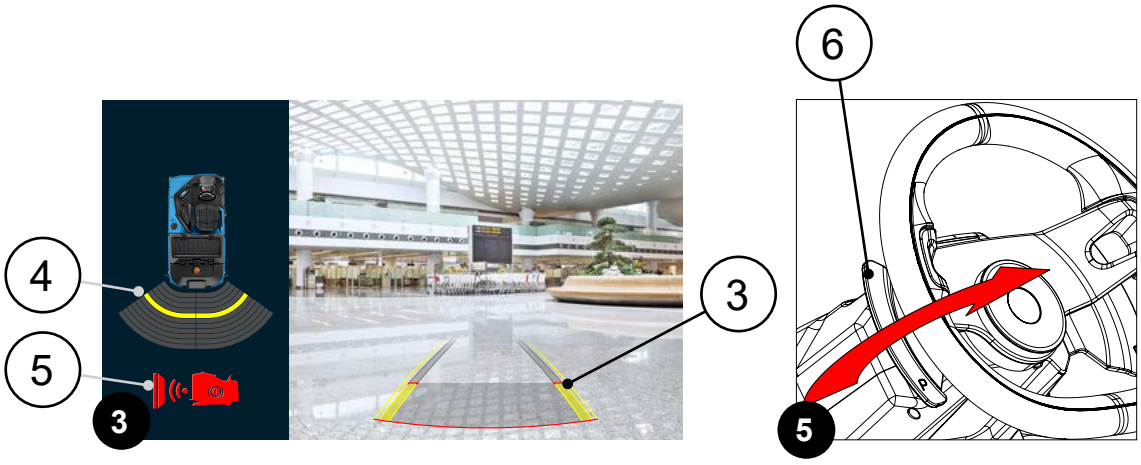
**N.B.:** during reverse, in addition to the distance bar (4), the anti-collision sensors manage the special function that modulates the ON/OFF frequency of the buzzer.

**N.B.:** The anti-collision sensors' operating principle is based on the emission and reception of high frequency ultrasound waves. The return wave allows the sensor to detect the presence of an object and to measure its distance from the machine.

**N.B.:** if the "Brake" function in the "Anticollision" parameter is active, by moving the lever (1), the function will start to slow the machine down automatically once a certain distance (set in the parameters) is reached. If the "Brake" function is active, the red symbol (5) will be visible in the control display. (**Fig.3**) (applies for PLUS versions).

**N.B.:** if the "Brake" function in the "Anticollision" parameter is active, moving the "EXTRA-PRESSURE ACTIVATION/DEACTIVATION" lever (6) under the steering wheel (**Fig.4**) for more than three seconds will temporarily deactivate the "Brake" function; however, the function will be active and when approaching an obstacle, the machine will emit a sound (applies for PLUS versions).

**N.B.:** if the symbol (5) is red, this means that the "Brake" function is active; if the symbol (5) is grey, this means that the "Brake" function is not active (applies for PLUS versions).



# ADDITIONAL FUNCTIONS (PRO VERSION)

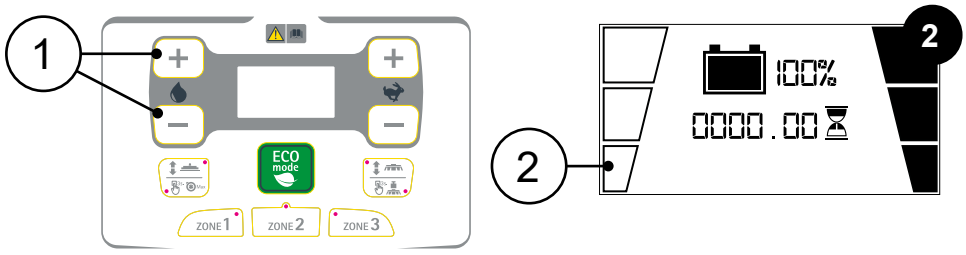
## ADJUSTING THE DETERGENT SOLUTION FLOW (PRO VERSION)

To adjust the flow of detergent solution during work, proceed as follows:

1. During the first few working meters check that the amount of solution is sufficient to wet the floor, but not excessive to exit the splash guard.
2. To adjust the flow of the detergent solution, press the buttons “+” and “-” (1) located on the control panel (**Fig.1**).

**N.B.:** The flow of detergent solution on the brush can be adjusted to one of four levels, from 0 to 3. The level is shown with the symbol (2) on the control display (**Fig.2**).

**N.B.:** If the flow is set to 0, there is no emission of detergent solution.



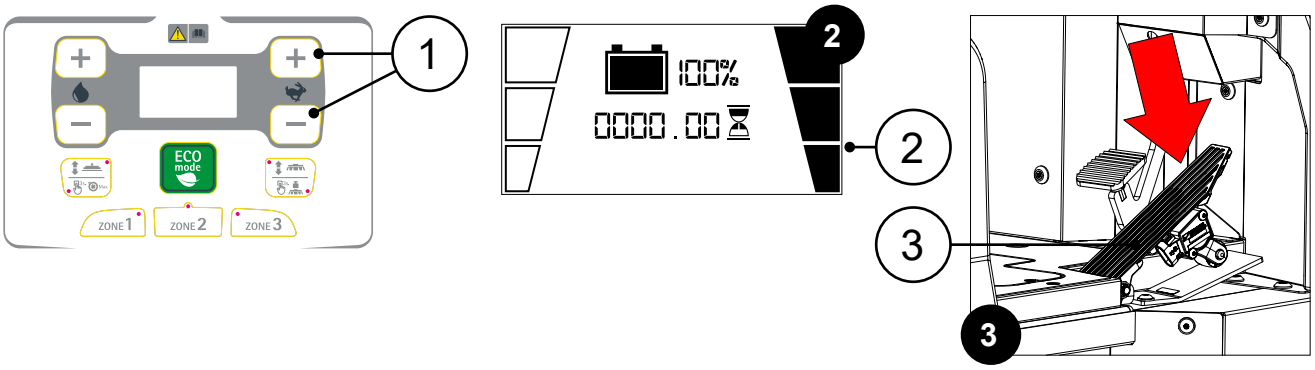

## ADJUSTING THE FORWARD SPEED (PRO VERSION)

To adjust the machine's forward speed, do the following:

1. During the first few metres, check that the forward speed is adequate to the grip conditions.
2. To adjust the forward speed, press the buttons “+” and “-” (1) on the control panel (**Fig.1**).

**N.B.:** the forward speed can be adjusted to three levels, from 1 to 3. The level is shown with the symbol (2) on the control display (**Fig. 2**).

**N.B.:** The machine's forward speed can also be adjusted by regulating the potentiometer in the drive pedal. To do this, press the pedal (3) (**Fig.3**) to the required degree. The more you press, the higher the speed (within the limits of the level selected beforehand).



## EXTRA BRUSH HEAD PRESSURE (PRO VERSION)

This machine can increase the pressure exerted on the brush during the work cycle. To do this:

While working in PRE-SCRUBBING or SCRUBBING MACHINE mode, and therefore with the brush head in contact with the floor, press the "BRUSH HEAD CONTROL" button (1) on the control panel for at least three seconds (**Fig.1**).

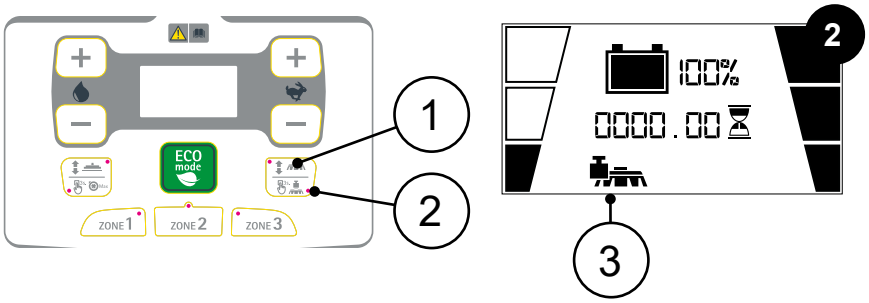
**N.B.:** As soon as the extra pressure function is activated, the relative LED (2) will light up on the control panel (**Fig.1**).

**N.B.:** As soon as the extra pressure function is activated, the symbol (3) “EXTRA BRUSH HEAD PRESSURE ACTIVE (**Fig.2**) will appear on the control display panel.

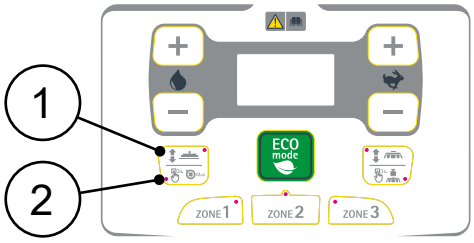
**N.B.:** To deactivate the brush head extra-pressure function, press the button (1) on the control panel again for at least three seconds (**Fig.1**).

**N.B.:** As soon as the extra pressure function is deactivated, the relative LED (2) will turn off on the control panel (**Fig.1**).

**N.B.:** As soon as the extra pressure function is deactivated, the symbol (3) “EXTRA BRUSH HEAD PRESSURE ACTIVE (**Fig.2**) will disappear from the control display panel.




## NOISELESS SUCTION (PRO VERSION)




This machine can reduce the noise generated by the suction process during the work cycle. To do this:

While working in SCRUBBING MACHINE or SUCTION mode, and therefore with the squeegee in contact with the floor, press the "SQUEEGEE CONTROL" button (1) on the control panel for at least three seconds (**Fig.1**).

**N.B.:** As soon as the silent suction function is activated, the relative LED (2) will turn off on the control panel (**Fig.1**).

**N.B.:** To deactivate the silent suction function, press the button (1) on the control panel again for at least three seconds (**Fig.1**).

**N.B.:** As soon as the silent suction function is deactivated, the relative LED (2) will light up on the control panel (**Fig.1**).

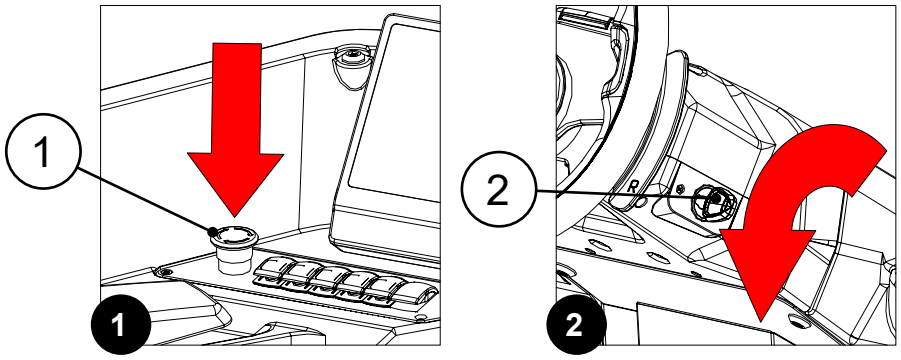
## EMERGENCY BUTTON (PRO VERSION)

The machine is equipped with an emergency button. If any problems are encountered during the work activities, do the following:

1. Press the emergency button (1) on the control panel (**Fig.1**).

**CAUTION:** This command interrupts the electrical circuit between the batteries and the machine system.

2. Once the machine has stopped, turn the main switch to its “0" position by turning the key (2) a quarter turn anti-clockwise (**Fig.2**).




3. Disengage the emergency button (1) by turning it in the direction indicated by the arrows printed on it.
4. Eliminate the anomaly that caused the problem.

**N.B.:** If the anomaly persists, contact a technician at the FIMAP service centre.

5. Carry out all the procedures for turning on the machine.

## ALARM SCREEN (PRO VERSION)

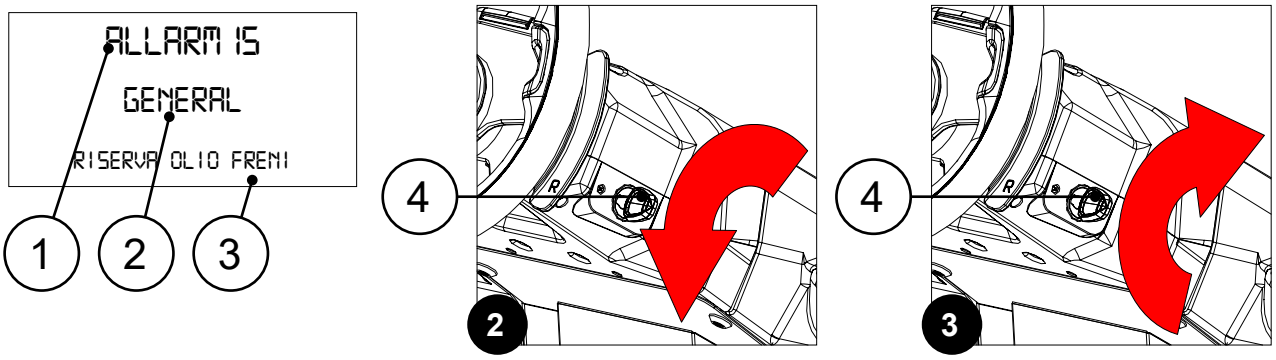
When an error occurs, the corresponding alarm screen will appear on the control display.

**N.B.:** the display of the alarm consists of a first blinking line showing the code (1) and the source of the error (2), while the second line displays a summary (3) of the error's description (**Fig.1**).

**N.B.:** the alarm screen will remain visible until the error is resolved.

When an error occurs, do as follows:

1. Stop the machine immediately.
2. Shut off the machine by turning the main switch (4) to its “0" position, and turn the key a quarter turn anti-clockwise (**Fig.2**).
3. Wait at least ten seconds, then turn the machine on by turning the main switch to its "I" position, and turn the key (4) a quarter turn clockwise (**Fig.3**).
4. If the error persists contact the FIMAP service centre.

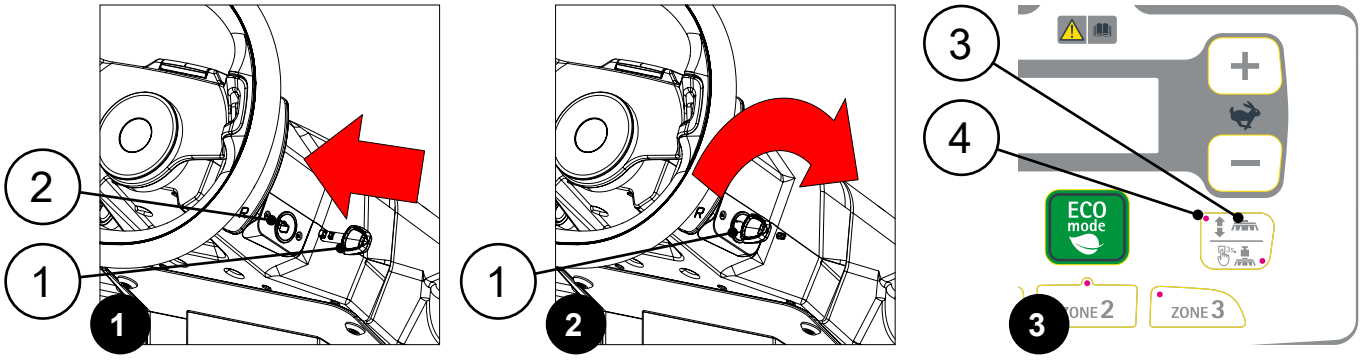



## BRUSH UNCOUPLING (PRO VERSION)

The machine comes equipped with a brush release button. If you need to remove the brushes automatically, do the following:

1. Sit on the driver's seat.
2. Insert the key (1) into the slot (2) on the right side of the column (**Fig.1**).
3. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.2**).
4. Make sure that the brush head is in the rest position; if this is not the case, press the button (3) on the control panel (**Fig.3**).

**N.B.:** when the brush head is in its resting position, the LED (4) on the control panel will turn off (**Fig.3**).

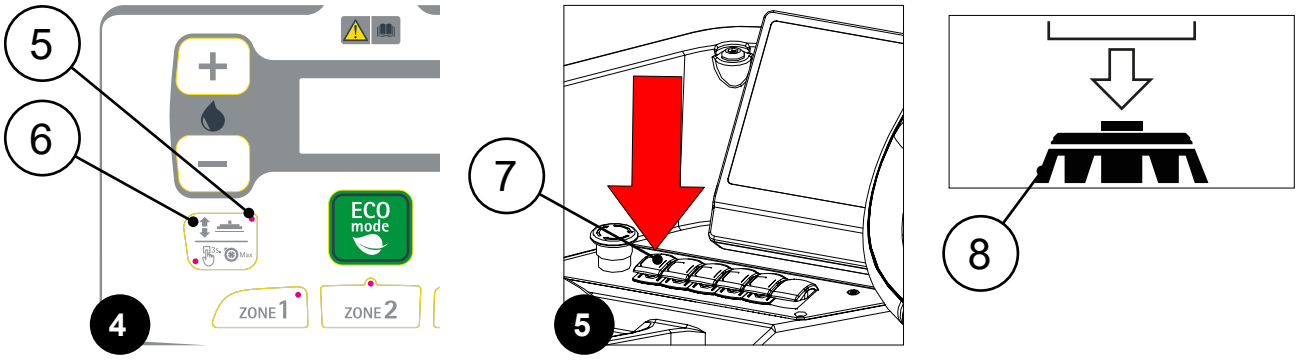



5. Make sure that the squeegee is in its resting position, it must be lifted off the floor. If not, press the button (5) on the control panel (**Fig.4**).

**N.B.:** when the squeegee is in its resting position, the LED (6) on the control panel will turn off (**Fig.4**).

6. Press the BRUSH RELEASE button (7) on the control panel two times (**Fig.5**).

**N.B.:** during the brush release operation, the symbol (8) will appear full screen on the control display (**Fig.7**).




**N.B.:** once the release sequence has been activated, it is not possible to activate other functions or move the machine.

**CAUTION:** make sure that no people or objects are in the machine's vicinity during this operation.

# ADDITIONAL FUNCTIONS (PLUS VERSION)

## ADJUSTMENT OF PRESSURE EXERTED ON THE BRUSH HEAD (PLUS VERSION)

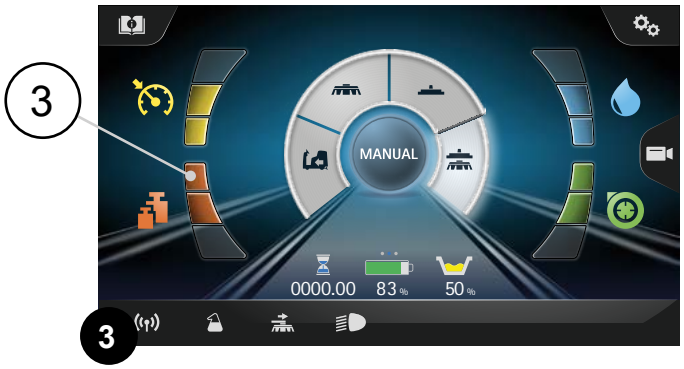
To adjust the pressure exercised on the brush head during work, proceed as follows:

1. During the first meters of work, check that the pressure exercised on the brush head is enough to remove the dirt on the floor, but not too much to ruin the floor itself.
2. To adjust the pressure exercised on the brushes, press the button (1) on the membrane pushbutton panel (**Fig.1**) or press the symbol (2) on the main screen (**Fig.2**).

**N.B.:** pressing the button (1) or the symbol (2) switches to the manual program (**Fig.3**), see “MANUAL MODE WORKING PROGRAM (PLUS VERSION)” on page 70.

**N.B.:** the exercised pressure can be adjusted to three levels, from 1 to 3. The level is shown with the symbol (3) on the main screen (**Fig. 3**).

**N.B.:** each press of the button (1) or the symbol (2), cyclically increases the level of detergent solution in the machine's water system.

## ADJUSTING THE FORWARD SPEED (PLUS VERSION)

To adjust the forward speed during work, proceed as follows:

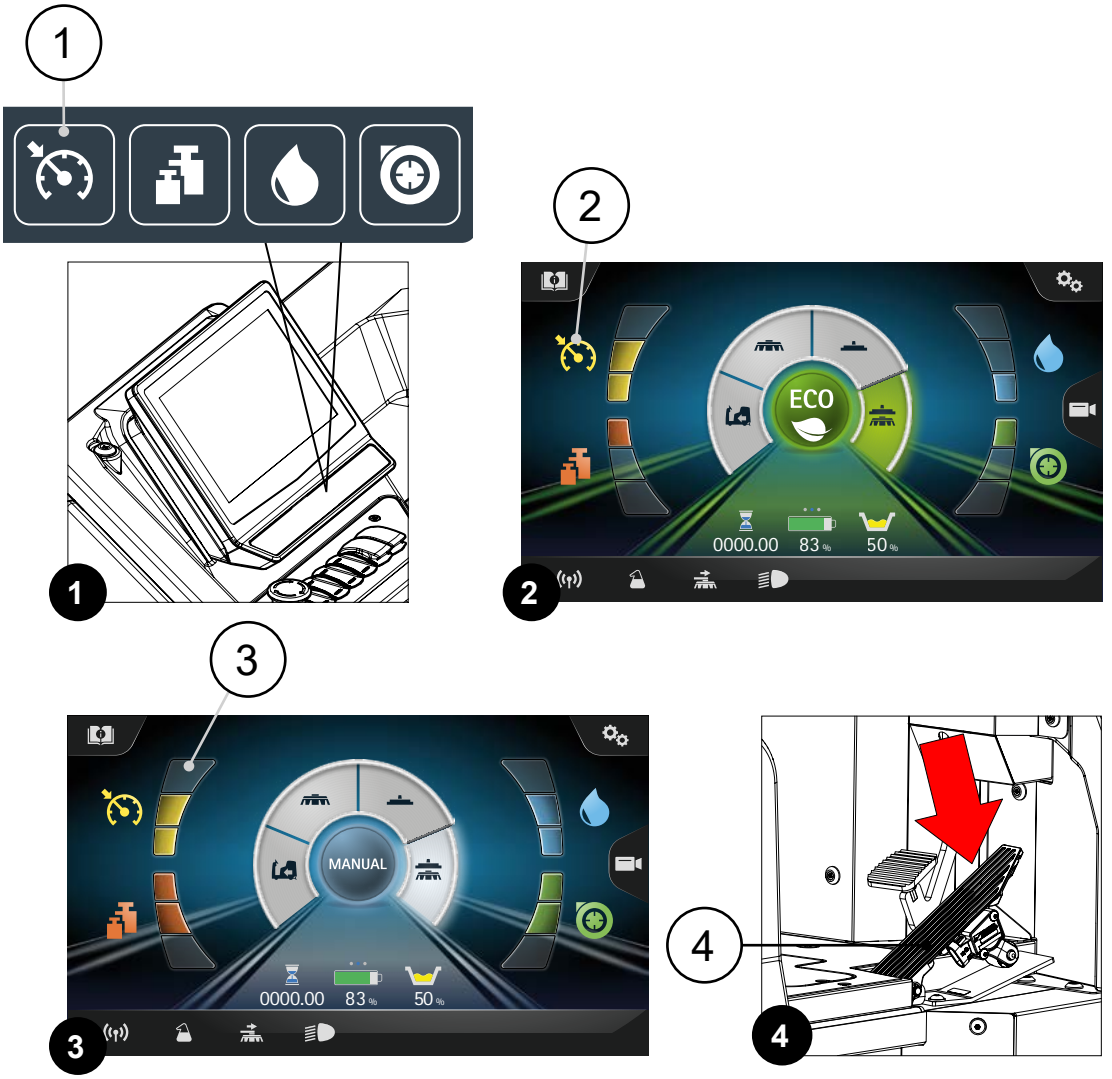
1. During the first few metres, check that the forward speed is adequate to the grip conditions.
2. To adjust the speed, press the button (1) on the membrane pushbutton panel (**Fig.1**) or press the symbol (2) on the main screen (**Fig.2**).

**N.B.:** pressing the button (1) or the symbol (2) switches to the manual program (**Fig.3**), see “MANUAL MODE WORKING PROGRAM (PLUS VERSION)” on page 70.

**N.B.:** the forward speed can be adjusted to three levels, from 1 to 3. The level is shown with the symbol (3) on the main screen (**Fig. 3**).

**N.B.:** each press of the button (1) or the symbol (2), cyclically increases the speed level.

**N.B.:** the machine forward speed can be adjusted by pressing the pedal (4) more or less (**Fig.4**). The more you press, the higher the speed (within the limits of the level selected beforehand).



## ADJUSTING THE DETERGENT SOLUTION FLOW (PLUS VERSION)

To adjust the flow of detergent solution during work, proceed as follows:

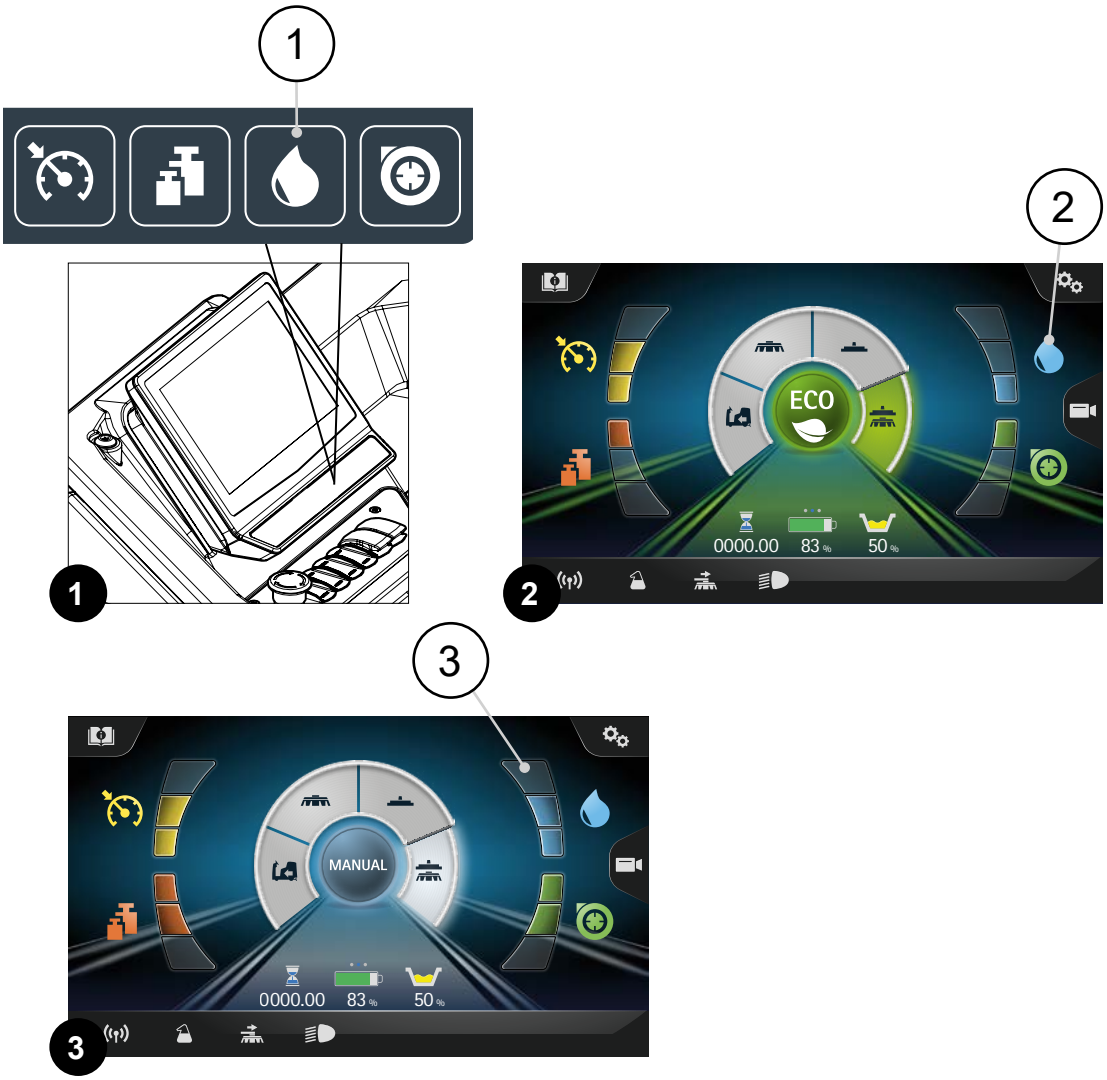
1. During the first few working meters check that the amount of solution is sufficient to wet the floor, but not excessive to exit the splash guard.
2. To adjust the quantity of detergent solution, press the button (1) on the membrane pushbutton panel (**Fig.1**) or press the symbol (2) on the main screen (**Fig.2**).

**N.B.:** pressing the button (1) or the symbol (2) switches to the manual program (**Fig.3**), see “MANUAL MODE WORKING PROGRAM (PLUS VERSION)” on page 70.

**N.B.:** The flow of detergent solution on the brush can be adjusted to one of four levels, from 0 to 3. The level is shown with the symbol (3) on the main screen (**Fig.3**).

**N.B.:** each press of the button (1) or the symbol (2), cyclically increases the level of detergent solution in the machine's water system.

**N.B.:** If the flow is set to 0, there is no emission of detergent solution.



## VACUUM SYSTEM PERFORMANCE ADJUSTMENT (PLUS VERSION)

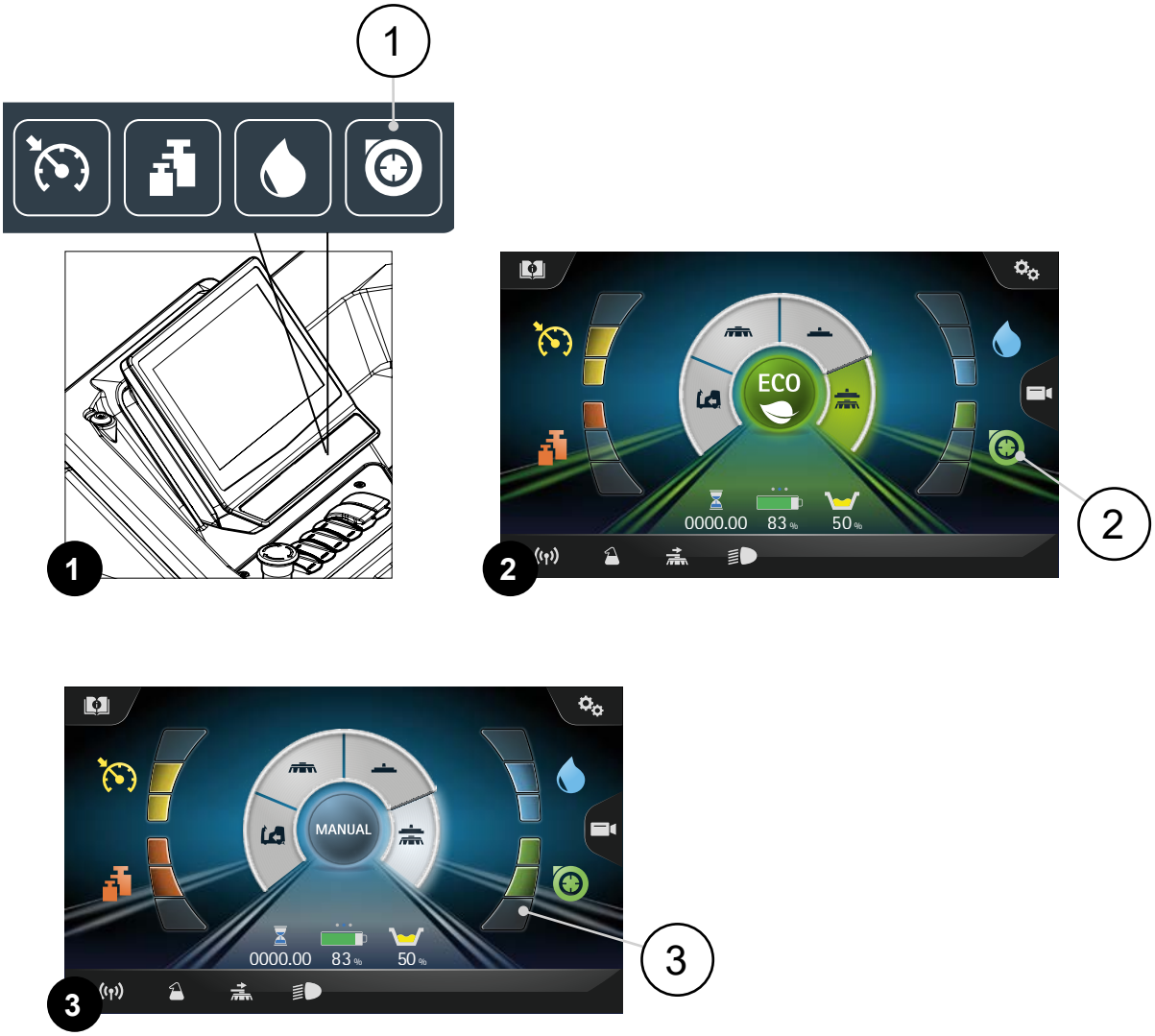
To operate the vacuum system, during work, proceed as follows:

1. during the first meters of work, check that the vacuum system collects the solution on the floor perfectly.
2. To adjust the performance of the vacuum system, press the button (1) on the membrane pushbutton panel (**Fig.1**) or press the symbol (2) on the main screen (**Fig.2**).

**N.B.:** pressing the button (1) or the symbol (2) switches to the manual program (**Fig.3**), see “MANUAL MODE WORKING PROGRAM (PLUS VERSION)” on page 70.

**N.B.:** the performance of the vacuum system can be adjusted to three levels, from 1 to 3. The level is shown with the symbol (3) on the main screen (**Fig. 3**).

**N.B.:** each press of the button (1) or the symbol (2), cyclically increases the level of detergent solution in the machine's water system.



## SMART DRYING MODE (PLUS VERSION)


1

2

When switching from the scrubbing machine program to the transfer program, the drying function is delayed for a set period of time.

**N.B.:** While the function is active, the image in **Fig.1** will be displayed on the control panel.

**N.B.:** the delay time is displayed by the countdown on the screen **Fig.1**.

At the end of the preset time, the squeegee is moved to the rest position and the suction motor is switched off with its set delay time.

**N.B.:** it is possible in any case to cancel this function in advance by pressing the “X” symbol as seen in **Fig.1**.

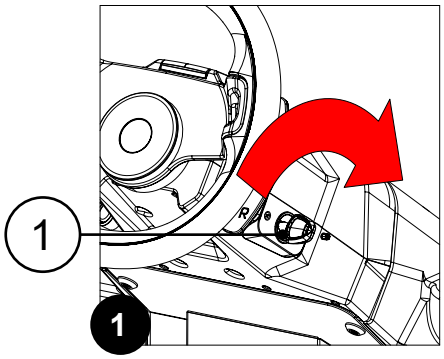
**N.B.:** at the end of the smart drying function, the image in **Fig.2** will be displayed on the control panel.

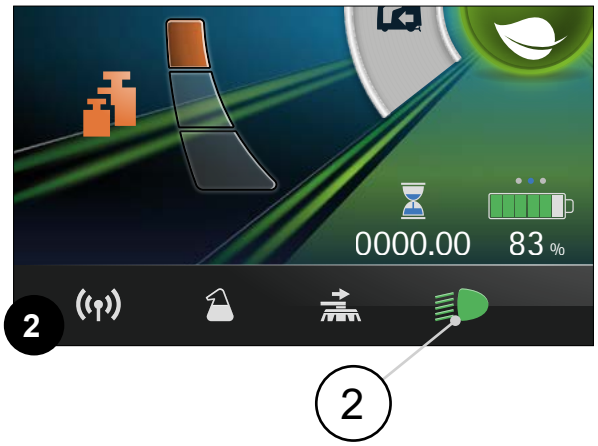
## WORKING HEADLIGHTS (PLUS VERSION)

Upon request, the machine can be equipped with front and rear lights. When the machine is turned on using the ignition switch (1), located on the right side of the steering column (**Fig.1**), the front position lights and the tail lights will turn on.
To activate the front working lights, use the icon (2) on the main screen (**Fig.2**).

**N.B.:** when the working headlights are functioning, the icon (1) turns green.

**N.B.:** if you want to turn off the working headlights, press the icon (1), when the working headlights are turned off, the button turns grey again.



## SCRUBBING SIDE BRUSH (PLUS VERSION)

The machine can be equipped with a side brush head upon request.
The side brush head is an essential tool when the areas to be cleaned feature shelves or other similar furniture.
The side brush moves 20 cm sideways, thus cleaning along walls and under shelves. In this way the entire room is cleaned, and nothing is left behind.
If you need to use the side brush while working in scrubbing machine mode, press the SIDE BRUSH CONTROL icon (1). The icon is on the control display (**Fig.1**).

**N.B.:** when the side brush head is in the working position, the icon (1) turns green.

**N.B.:** when the icon (1) is pressed, the side brush head will start to move towards the outside of the machine.

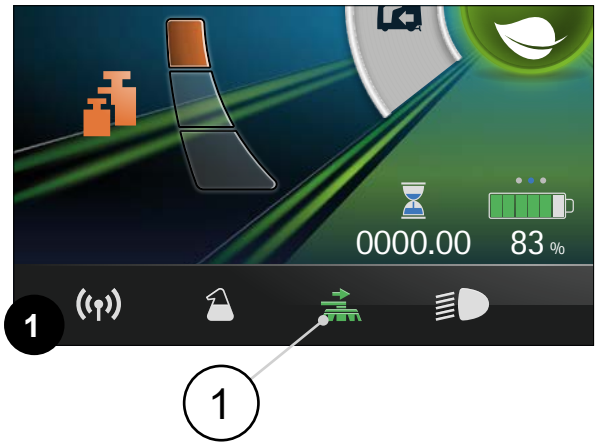
**N.B.:** the gearmotor in the side brush head will start to work at the same time as the gearmotors in the brush head.

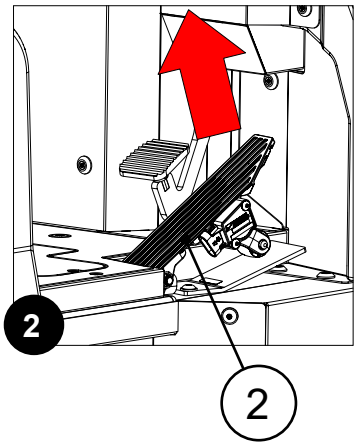
**N.B.:** the solenoid valve in the side brush head will start to dispense detergent solution together with the solenoid valve in the brush head.

**N.B.:** if you want to bring the side brush head back to its resting position, press the icon (1). When the side brush head body is in its resting position, the icon (1) turns grey.

**N.B.:** if the drive pedal (2) is released when working (**Fig.2**), after a few seconds the side brush head is automatically positioned in the rest position.

**N.B.:** If the brush head is raised when the side brush head is in the working position, the side brush head will also be moved into the resting position.



## ALARM SCREEN (PLUS VERSION)


When an error occurs the symbol (1) is displayed in the information field (**Fig. 1**), it remains visible until the error is resolved.
The “ERROR” window will also be displayed in superimposition” (**Fig.2**), it describes the following:

- the alarm number (2).
- the group it belongs to (3).
- a brief description (4).

When an error occurs, do as follows:

1. Stop the machine and close the error screen by pressing the OK button on the screen (**Fig.2**).
2. If the error persists, switch off the machine, wait for at least ten seconds and switch on the machine.
3. If the error persists contact the nearest service centre.

**N.B.:** the symbol (1) (**Fig.1**) remains visible until the error is resolved.

**N.B.:** if the machine is equipped, upon request, with the automatic SOS device, perform the procedure to deliver a request for intervention, see “SOS DEVICE” on page 114.

## EMERGENCY BUTTON (PLUS VERSION)

The machine is equipped with an emergency button. If any problems are encountered during the work activities, do the following:

1. Press the emergency button (1) on the control panel (**Fig.1**).

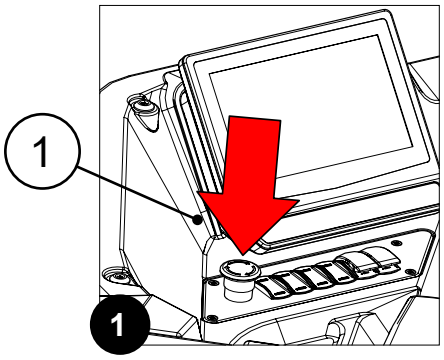
**CAUTION:** this command interrupts the electrical circuit that goes from the batteries to the machine system.

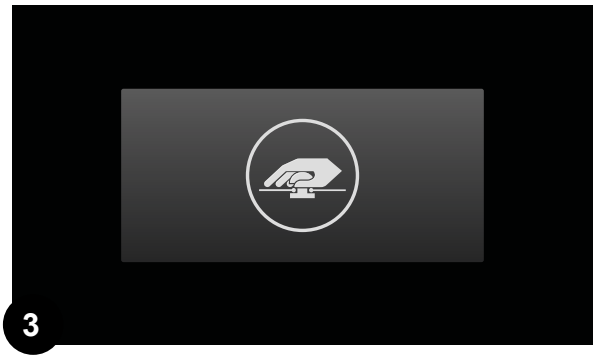
2. Once the machine has stopped, turn the main switch to its “0" position by turning the key (2) a quarter turn anti-clockwise (**Fig.2**).
3. Disengage the emergency button (1) by turning it in the direction indicated by the arrows printed on it.
4. Eliminate the anomaly that caused the problem.

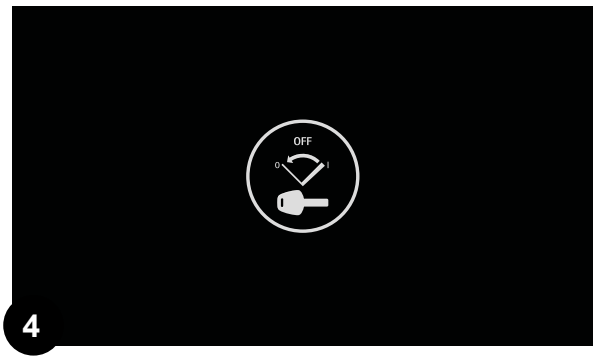
**N.B.:** If the anomaly persists, contact a technician at the FIMAP service centre.

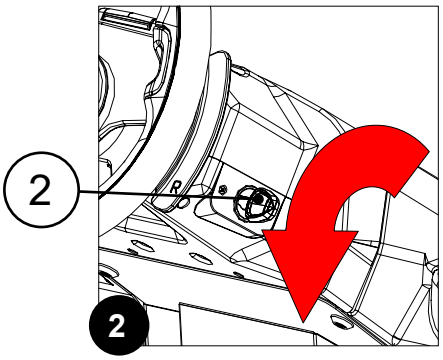
5. Carry out all the procedures for turning on the machine.

**N.B.:** as soon as the button (1) is pressed on the main screen, the pop-up alarm shown in **Fig.3** appears alternating with the alarm pop-up shown in **Fig.4**.



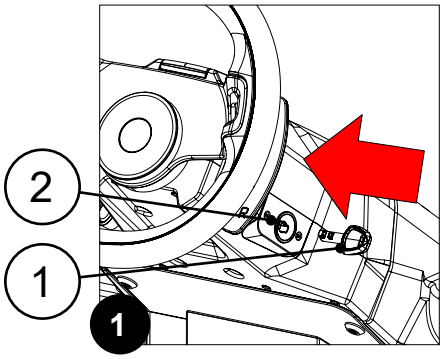



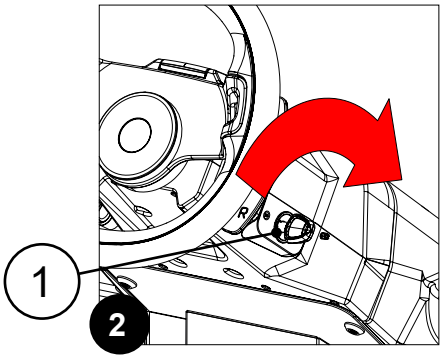



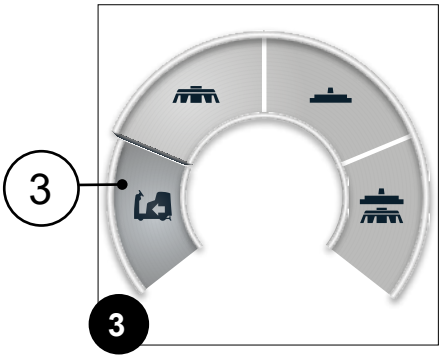

## BRUSH UNCOUPLING (PLUS VERSION)

The machine comes equipped with a brush release button. If you need to remove the brushes automatically, do the following:

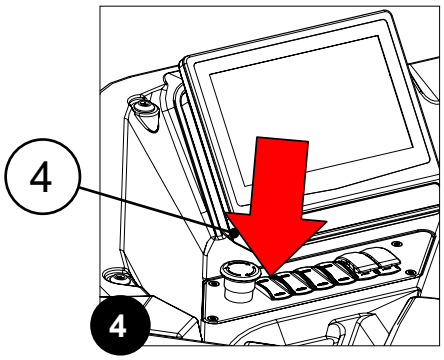
1. Sit on the driver's seat.
2. Insert the key (1) into the slot (2) on the right side of the column (**Fig.1**).
3. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.2**).
4. Check that the selected working mode is TRANSPORT. Otherwise press the button (3) located in the centre of the main screen (**Fig.3**), see "DS SELECTOR (DRIVE SELECT)" on page 78.



5. Press the BRUSH RELEASE button (4) on the control panel two times (**Fig.4**).



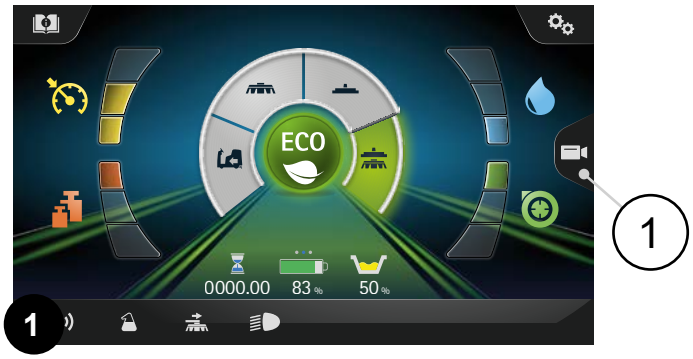

**N.B.:** once the release sequence has been activated, it is not possible to activate other functions or move the machine.

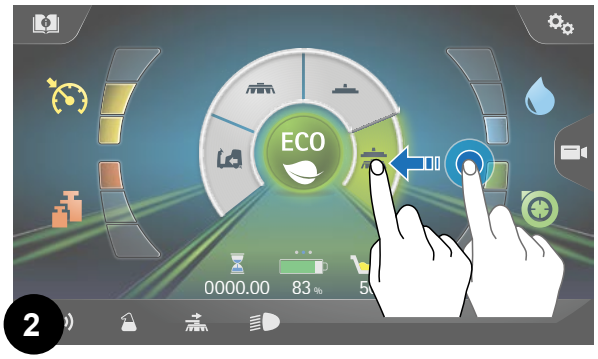
**CAUTION:** make sure that no people or objects are in the machine's vicinity during this operation.

## REAR VIEW CAMERA (PLUS VERSION)

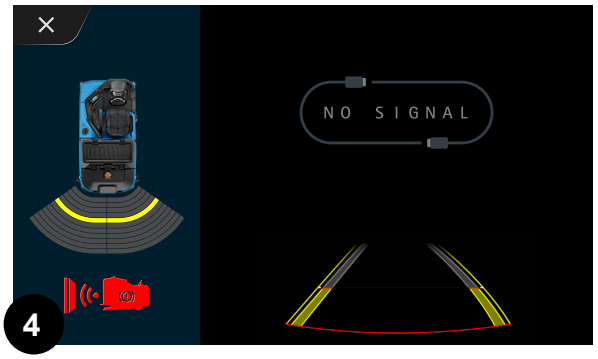
The machine is fitted with a rear video camera, which allows you to view the condition of the floor where you have just passed over, and it also helps when reversing, allowing to identify any obstacles.
If it is necessary to view the floor that was just scrubbed, press the button (1) located on the right side of the main screen (**Fig.1**) or touch any part of the screen and drag it from right to left (**Fig.2**), as soon as this operation is performed, the image of the connected camera is displayed (**Fig.3**).

**N.B.:** if the rear view camera is not connected correctly, the screen will appear on the control display (**Fig.4**).







## USAGE DATA (PLUS VERSION)

When working, it is possible to view the usage data regarding the work being performed. To display the on-board screens, touch any part of the screen and drag your finger from the left to the right (**Fig.1**).


**N.B.:** the usage data is reset each time the machine is turned off.


The DS selector can be used to select one of the following working modes:

1. Battery data.
2. Telemetry data.
3. Last intervention data.
4. Autonomy data.

**N.B.:** the centre of the DS selector displays the instantaneous speed of the machine.

**N.B.:** the text indicator shows the name of the displayed data group.

**Battery data group:**


1.1 Battery state: shows the percentage of charge of the battery box.
1.2 Complete charge: indicates the count of charges with a complete cycle performed.
1.3 Partial charges: indicates the count of charges with a partial cycle performed.
1.4 Total charges: indicates the sum of charges with a continuous cycle and the charges with partial cycle (1.2 + 1.3).

**Telemetry data group:**


2.1 Traction motors: used to display the instantaneous absorbed current of the traction motors.
2.2 Brush motors: used to display the instantaneous absorbed current of the suction motors.
2.3 Total consumption: corresponds to the sum of the three consumptions (2.1 + 2.2 + 2.4).
2.4 Brush motors: used to display the instantaneous absorbed current of the brush motors.

**Last intervention data group:**


3.1 Total use: used to display the total usage time of the machine during the last work performed.
3.2 Cleaned surface: used to display the work surface performed with the last work performed.
3.3 Utilised water: used to display the quantity of water used with the last work performed.
3.4 Usage working time: used to display the total usage time of the machine while working during the last work performed.

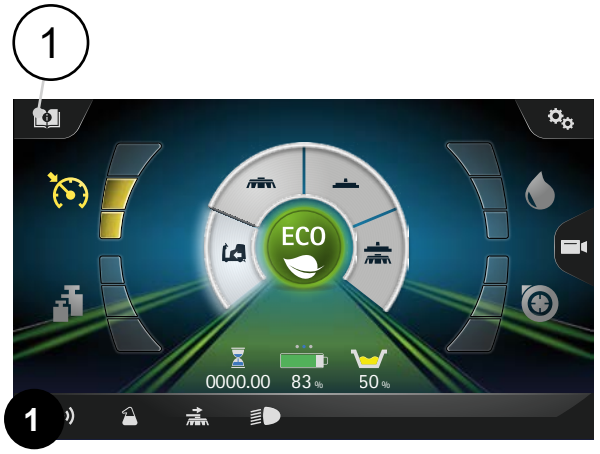
**Autonomy data group:**

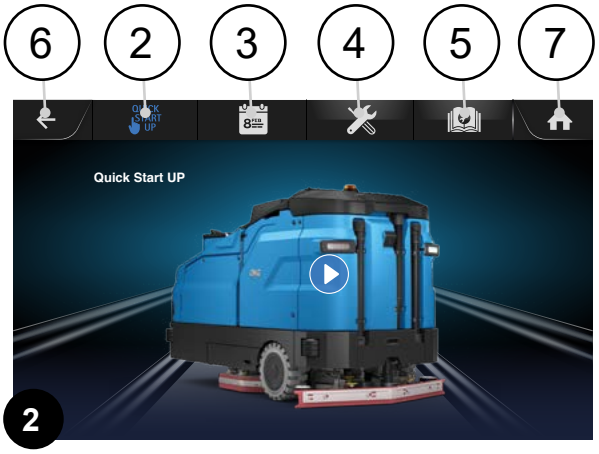

4.1 Battery residual: used to display the residual charge time calculated based on the program and the settings currently in use.
4.2 Battery saved: used to display the charge time that is saved if switching to the ECO MODE working program.
4.3 Water saved: used to display the autonomy time of the detergent solution if switching to the ECO MODE working program.
4.4 Residual water: used to display the autonomy time of the detergent solution based on the program and the settings currently in use.

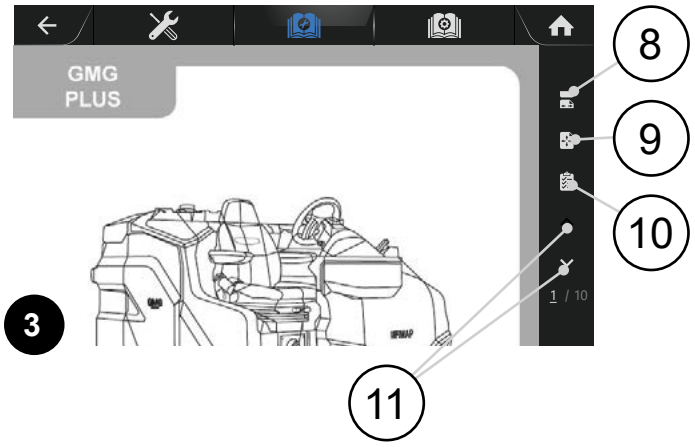
## TUTORIAL (PLUS VERSION)

On the main screen, selecting the Tutorial button (1) (**Fig.1**) accesses the TUTORIAL menu, from where the following screens can be viewed:

- Pressing the button (2) accesses the QUICK START UP video tutorials screen, where it is possible to view the machine start up video (**Fig.2**).
- Pressing the button (3) accesses the DAILY MAINTENANCE video tutorials screen, where it is possible to view the video for the daily maintenance to perform on the machine (**Fig.2**).
- Pressing the button (4) accesses the EXTRAORDINARY MAINTENANCE video tutorials screen, where it is possible to view the video for the extraordinary maintenance to perform on the machine (**Fig.2**).
- Pressing the button (5) accesses the screen dedicated to the USE AND MAINTENANCE MANUAL, where it is possible to view the machine's use and maintenance manual (**Fig.2**).







**N.B.:** when navigating the tutorial menu, all the machine's working functions are disabled, including traction.

**N.B.:** when navigating the TUTORIAL menu, to return to the previous screen, press the button (6) (**Fig.2**).

**N.B.:** when navigating the TUTORIAL menu, to return to the main screen, press the button (7) (**Fig.2**).

**N.B.:** if it is necessary to view the use and maintenance manual, adapting the display of the page to the width of the screen, press the button (8) (**Fig.3**).

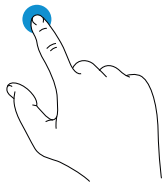
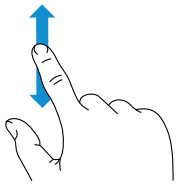
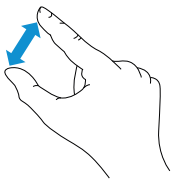
**N.B.:** if it is necessary to view the use and maintenance manual, adapting the display of the entire page inside the screen, press the button (9) (**Fig.3**).

**N.B.:** if it is necessary to view the summary when viewing the use and maintenance manual, press the button (10) (**Fig.3**).

**N.B.:** if it is necessary to scroll the pages of the use and maintenance manual, press the button ^ to go back or press v to go forward with the pages (11) (**Fig.3**).

## TOUCH SCREEN USE (PLUS VERSION)

With the control panel, located on the left of the control station, it is possible to activate the optional machine functions, thereby increasing productivity and reducing costs.
The control panel is divided as follows:

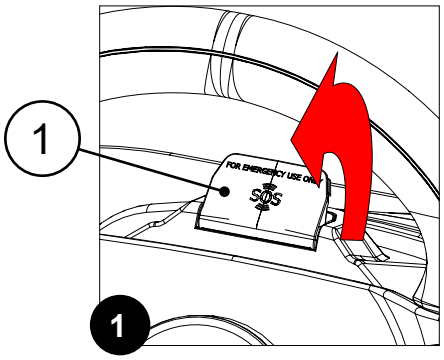
| | ACTION | MOVEMENTS |
|---|---|---|
|  | Select an element | Touch the screen |
|  | Scroll | Place a finger on the screen and scroll horizontally or vertically |
|  | Zoom forwards or backwards | Place two fingers on the screen and move them closer or further apart. |

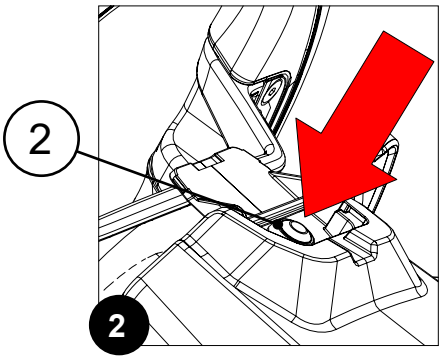
# OPTIONAL FUNCTIONS

## SOS DEVICE

Upon request, the machine can be equipped with an automatic SOS device that allows the user to automatically request technical assistance. When the SOS button is pressed, the machine sends a report directly to the Designated Authorised Workshop (valid only for those who have signed up for one of the maintenance contracts), which will immediately perform a diagnostic check on the machine to determine the type of fault encountered. The SOS device can reduce waiting times for maintenance and machine downtime, thus increasing productivity.
To activate the SOS device, do the following:

1. When an anomaly occurs, stop the machine.
2. Open the door (1) liding the SOS button, located near the steering wheel (**Fig.1**).
3. Press the SOS button (2) (**Fig.2**).

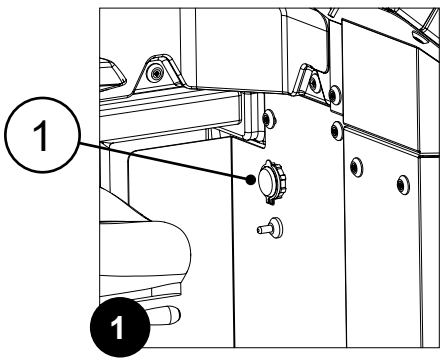



**N.B.:** In order to activate the SOS device, the machine must be equipped with the automatic fleet management kit (FFM).

**N.B.:** in order to send a technical assistance request the machine needs to be on and should be in a zone with data traffic lidage.

## USB PORT




The machine is equipped with two USB ports (1), positioned under the control panel (**Fig.1**), which can be used for recharging electrical devices, such as mobile phones or tablet computers.

# OPTIONAL FUNCTIONS (PRO VERSION)

## SCRUBBING SIDE BRUSH (PRO VERSION)

The machine can be equipped with a side brush head upon request.
The side brush head is an essential tool when the areas to be cleaned feature shelves or other similar furniture.
The side brush moves 20 cm sideways, thus cleaning along walls and under shelves. In this way the entire room is cleaned, and nothing is left behind.
If you need to use the lateral brush while working in scrubbing machine mode, press the SIDE BRUSH CONTROL switch (1). The switch is on the control panel (**Fig.1**).

**N.B.:** when the side brush head base is in its working position, the LED in the switch (1) will turn on.

**N.B.:** when the switch (1) is pressed, the side brush head will start to move towards the outside of the machine.

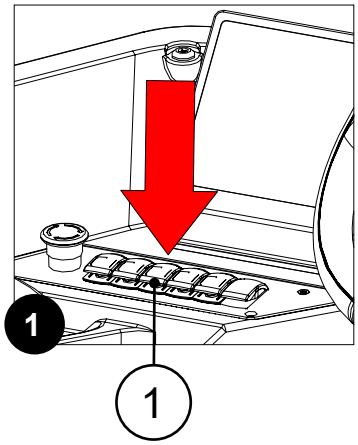
**N.B.:** the gearmotor in the side brush head will start to work at the same time as the gearmotors in the brush head.

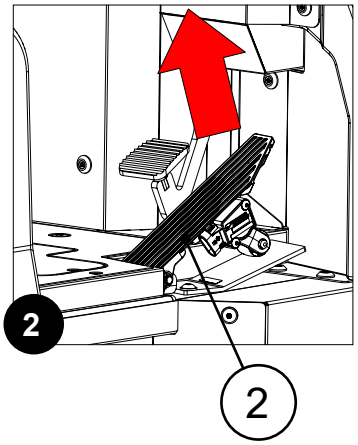
**N.B.:** the solenoid valve in the side brush head will start to dispense detergent solution together with the solenoid valve in the brush head.

**N.B.:** if you want to bring the side brush head back to its resting position, press the switch (1). When the side brush head is in its resting position, the LED in the switch (1) will turn off.

**N.B.:** if the drive pedal (2) is released when working (**Fig.2**), after a few seconds the side brush head is automatically positioned in the rest position.

**N.B.:** If the brush head is raised when the side brush head is in the working position, the side brush head will also be moved into the resting position.



## FLR - CONTINUOUS RECYCLING SYSTEM (PRO VERSIONS)

Upon request, the machine can be equipped with a continuous detergent solution recycling system.

**N.B.:** The continuous detergent solution recycling system is a system that filters and cleans the detergent solution collected from the squeegee, thus making it available again for use.

**N.B.:** the use of the continuous detergent solution recycling system results in decreased water and detergent use, thus increasing safety for the operator, who comes into contact with the chemical products less frequently, and reducing costs.

**N.B.:** reusing the water increases the working autonomy, allows for more $m^2$ to be cleaned using the same amount of resources, for a reduction in detergent solution consumption per intervention of up to 66% (savings calculated on a triple recycling cycle), and increases productivity up to 70%, as the number of stops required for emptying and filling the tanks are considerably reduced.

**N.B.:** the continuous recycling system is ideal for areas that are cleaned frequently and don't get very dirty.

If the machine you are using is equipped with the detergent solution recycling system, once the machine has been turned on, press the RECYCLING SYSTEM CONTROL switch (1) on the control panel (**Fig.1**).

**N.B.:** when the recycling system is in function, the relative icon (2) will appear on the control display (**Fig.2**).

**N.B.:** if you want to turn the recycling system off, press the switch (1). When the system is deactivated, the icon will no longer be visible on the control display (2).

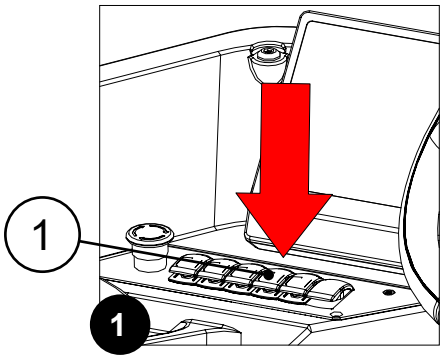
**N.B.:** at the end of each work cycle, perform all the procedures listed in the “DAILY MAINTENANCE” on page 131.

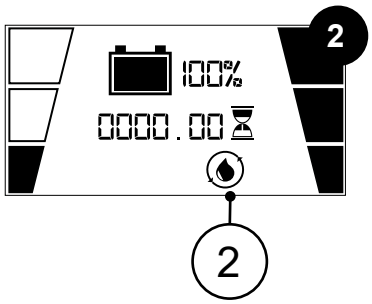
**N.B.:** the continuous recycling system includes a solenoid valve for the solution tank (referred to herein as ELE-01) and a solenoid valve for the recovery tank (referred to herein as ELE-02).

**N.B.:** with the continuous recycling system, the solenoid valve present in the scrubbing brush head is powered together with solenoid valve ELE-01 or ELE-02, based on the cases indicated below.

**N.B.:** with the continuous recycling system off, or until the solution tank is empty, the machine's electrical system will power solenoid valve ELE-01.

**N.B.:** with the continuous recycling system enabled, or with the solution tank empty, the machine's electrical system will power solenoid valve ELE-02.



## FSS - AUTOMATIC DETERGENT DOSING SYSTEM (PRO VERSION)

Upon request, the machine can be equipped with an automatic detergent dosing system.

**N.B.:** with the automatic dosing system installed on the machine, the user can be sue that they're dispensing the right amount of solution based on the actual needs. For example, heavy duty cleaning requires more water and detergent than maintenance cleaning, for which the dirt typically is non very stubborn.

**N.B.:** One of the greatest strengths of the machine's built-in automatic dosing system is its ability to save water whenever possible, and to avoid using more detergent than necessary.

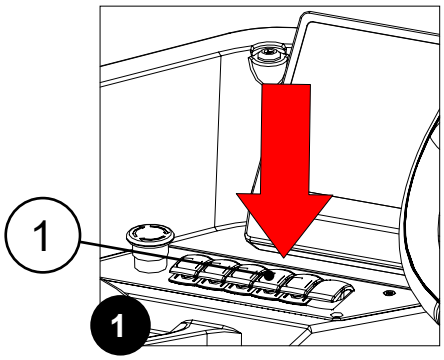
If the machine being used has an automatic dosing system, after turning on the machine press the AUTOMATIC DOSING SYSTEM CONTROL switch (1), on the control display (**Fig.1**).

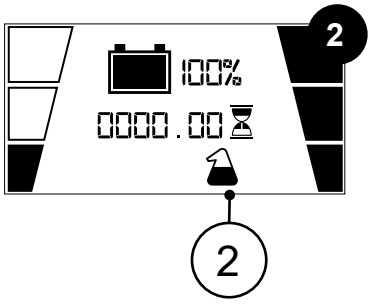
**N.B.:** when the automatic dosing system is in function, the relative icon (2) is visible on the control display (**Fig.2**).

**N.B.:** if you want to turn the automatic dosing system off, press the switch (1). When the system is deactivated, the icon will no longer be visible on the control display (2).

**N.B.:** at the end of each work cycle, perform all the procedures listed in the “DAILY MAINTENANCE” on page 131.

**N.B.:** when the automatic dosing system is in function, the chemical dosing pump is powered together with the water pump.




## RECOVERY TANK CLEANING SPRAY GUN (PRO VERSIONS)

Upon request, the machine can be equipped with a recovery tank cleaning gun kit. The recovery tank cleaning gun kit allows the user to utilise the water in the solution tank to clean the recovery tank, thus saving time and ensuring greater environmental sustainability.
To use the kit, do the following:

1. Take the machine to the maintenance area.
2. Stop the machine.

**WARNING:** the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

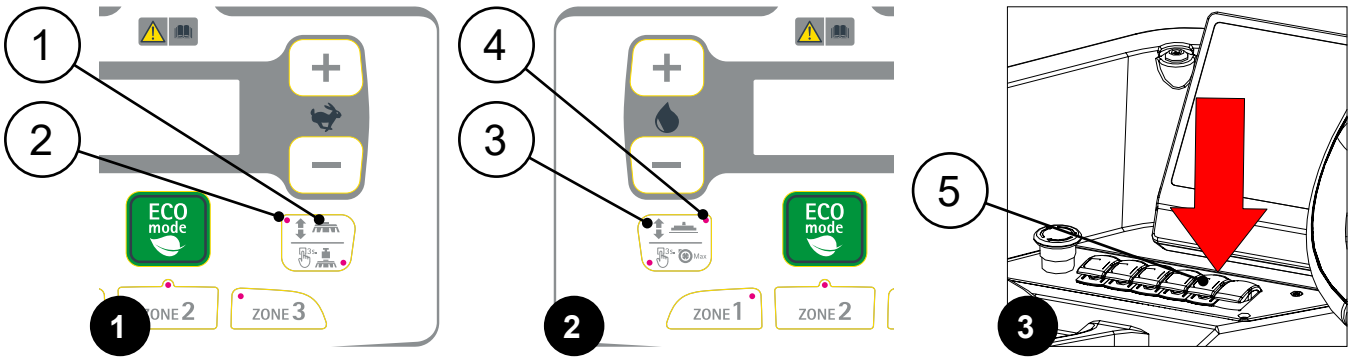
3. Make sure that the brush head is in the rest position; if this is not the case, press the button (1) on the control display (**Fig.1**).

**N.B.:** when the brush head is in its resting position, the LED (2) on the control switch will be off (**Fig.1**).

4. Make sure that the squeegee is in the rest position; if this is not the case, press the button (3) on the control display (**Fig.2**).

**N.B.:** when the squeegee is in its resting position, the LED (4) on the control switch will be off (**Fig.2**).

5. Activate the kit by pressing the RECOVERY TANK CLEANING GUN CONTROL switch (5) on the control pushbutton panel (**Fig.3**).



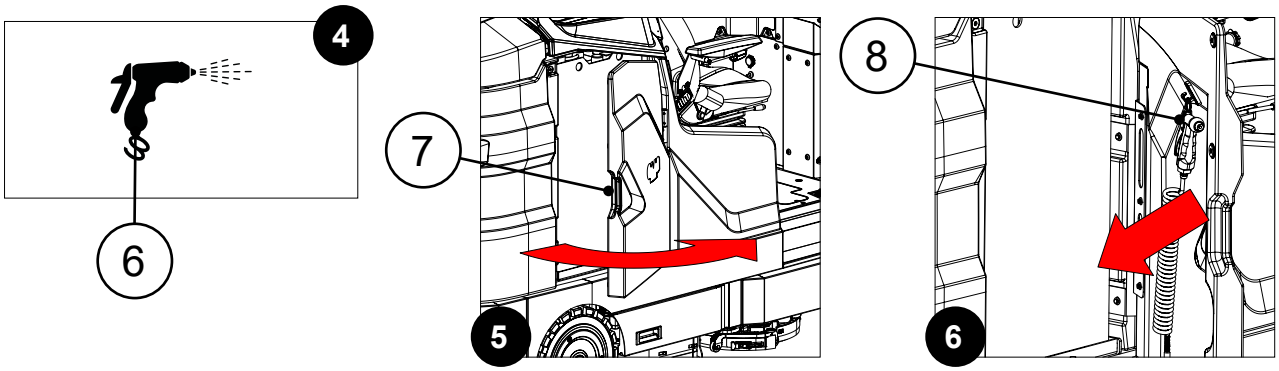

**N.B.:** when the recovery tank cleaning kit is in function, the LED in the switch (5) will be on.

**N.B.:** when the recovery tank cleaning kit is in function, the relative symbol (6) will appear on the control display (**Fig.4**).

**N.B.:** if you want to turn the automatic dosing system off, press the switch (5). When the system is deactivated, the LED in the switch will be off.

**N.B.:** the recovery tank cleaning kit is only in function when the machine is stopped and the solution tank is not empty.

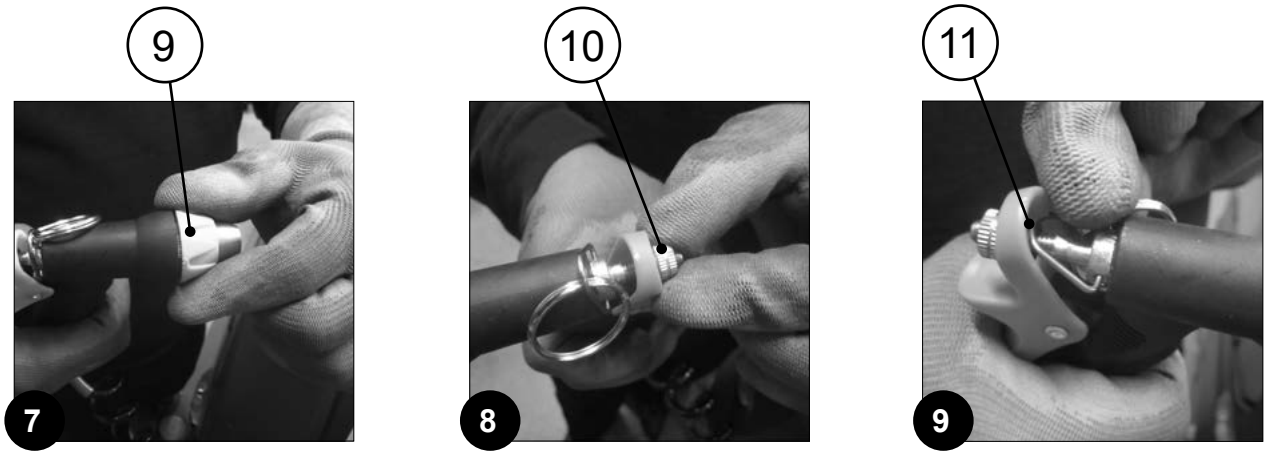
6. Open the lateral door (7) (**Fig.5**)
7. Remove the recovery tank cleaning gun (8) (**Fig.6**).
8. To clean the recovery tank, perform the procedure described in the “DRAINING THE RECOVERY TANK” on page 146.




**N.B.:** To adjust the solution jet from the tank cleaning accessory, turn the knob (9) on the accessory itself (**Fig.7**).

**N.B.:** To adjust the intensity of the solution jet from the tank cleaning accessory, turn the knob (10) on the accessory itself (**Fig.8**).

**N.B.:** To stop the solution jet, use the lever (11) on the tank cleaning accessory (**Fig.9**).




## VACUUM WAND (PRO VERSIONS)

Upon request, the machine can be equipped with a vacuum wand kit, which can be used to dry areas that are difficult to reach with the machine itself.

**N.B.:** the rubber blade on the tip of the nozzle perfectly dries the surface to which is applied thanks to the machine's highly efficient suction system.

To use the kit, do the following:

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

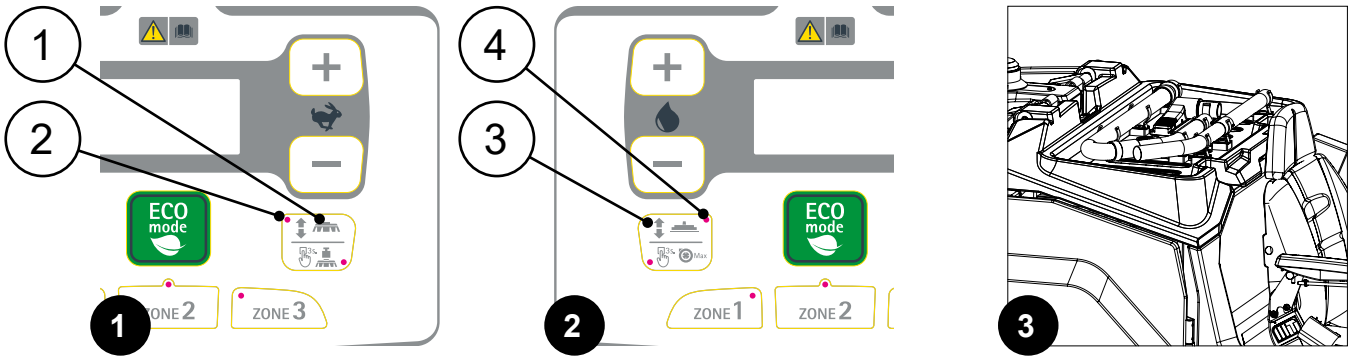
1. Stop the machine.
2. Make sure that the brush head is in the rest position; if this is not the case, press the button (1) on the control panel (**Fig.1**).

**N.B.:** when the brush head is in its resting position, the LED (2) on the control switch will turn off (**Fig.1**).

3. Make sure that the squeegee is in its resting position, it must be lifted off the floor. If not, press the button (3) on the control panel (**Fig.2**).

**N.B.:** when the squeegee is in its resting position, the LED (4) on the control switch will turn off (**Fig.2**).

4. Remove all the suction nozzle kit components from the storage compartment in the battery pack's lid (**Fig.3**).

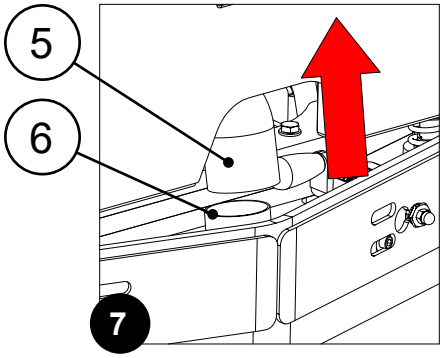


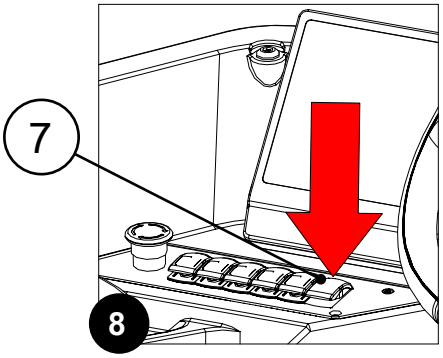

5. Assemble the steel extension tube (**Fig.4**).
6. Insert the vacuum brush into the extension tube (**Fig.5**).

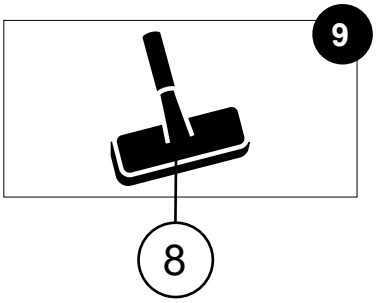
7. Connect the vacuum tube to the extension tube (**Fig.6**).




8. Remove the squeegee vacuum tube (5) from the sleeve (6) in the squeegee (**Fig.7**).
9. Connect the suction hose contained in the suction nozzle kit to the squeegee suction pipe.
10. Activate the vacuum wand by pressing the VACUUM WAND CONTROL switch (7) on the control pushbutton panel (**Fig.8**).




**N.B.:** when the vacuum wand kit is in function, the LED in the switch (7) will be on.

**N.B.:** when the suction nozzle kit is in function, the relative symbol (8) will appear on the control display (**Fig.9**).

**N.B.:** if you want to turn the vacuum wand kit off, press the switch (7). When the system is deactivated, the LED in the switch (8) will be off.

**N.B.:** the suction nozzle kit is only in function when the machine is stopped and the recovery tank is not full.

**N.B.:** when the suction nozzle kit is in function, the suction motor is powered at maximum.

**WARNING:** never pick up solid matter such as dust, cigarette stubs, paper, etc.

**WARNING:** Never collect gases, explosive/inflammable liquids or powders, nor acids and solvents! These include gasoline, paint thinners and fuel oil (which, when mixed with the vacuum air, can form explosive vapours or mixtures), and also non-diluted acids and solvents, acetones, aluminium and magnesium powders. These substances may also corrode the materials used to construct the machine.

**WARNING:** if the machine is used in dangerous areas (e.g. petrol stations), the relative safety standards must be observed. It is forbidden to use the machine in environments with a potentially explosive atmosphere.

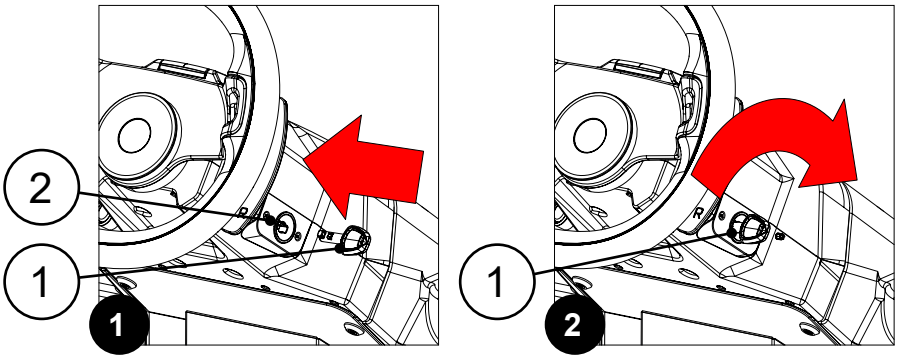
11. Carry out the suction operations.
12. When the work is finished, remove the kit and place it in the storage compartment.

## FFM - TAG INSERTION (PRO VERSIONS)

Upon request, the machine can be equipped with an integrated system that allows the machine fleet to be fully monitored. In order to check that the machines are carrying out the planned work activities correctly, one would always have to be present at the work site. The automatic fleet management system (FFM) allows the status of each machine, the workload, the consumption values, and the maintenance requirements to be constantly monitored, thus ensuring improved fleet management and reduced costs. The FFM system is connected to the data network, which in turn transfers all the information that the user wants to know about each machine in their fleet, in real time.

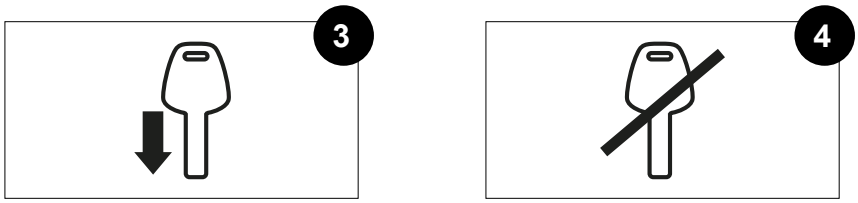
To activate automatic fleet management data logging, do the following:

1. Sit on the driver's seat.
2. Insert the key (1) into the slot (2) on the right side of the column (**Fig.1**).
3. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.2**).




**N.B.:** If the key just inserted is not equipped with a TAG, the symbol shown in the image will appear on the control display (**Fig.3**).

**N.B.:** If the owner of the TAG just inserted is not enabled to use it, the symbol shown in the image will appear on the control display (**Fig.4**).



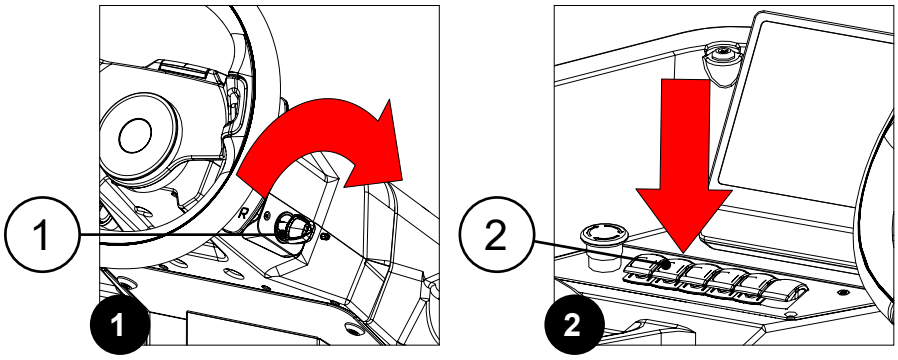

4. The machine is now in the transfer mode.
5. To start to work, read the chapter "STARTING WORK (PRO VERSION)" on page 82.

## WORKING HEADLIGHTS (PRO VERSIONS)

Upon request, the machine can be equipped with front and rear lights. When the machine is turned on using the ignition switch (1), located on the right side of the steering column (**Fig.1**), the front position lights and the tail lights will turn on.
To activate the front working lights, use the switch (2) on the control panel (**Fig.2**).

**N.B.:** when the working headlights are in function, the LED in the switch (2) will be on.

**N.B.:** if you want to turn off the working headlights, press the switch (2), when the working headlights are turned off, the LED in the switch will be off.



# OPTIONAL FUNCTIONS (PLUS VERSIONS)

## SCRUBBING SIDE BRUSH (PLUS VERSIONS)

The machine can be equipped with a side brush head upon request.
The side brush head is an essential tool when the areas to be cleaned feature shelves or other similar furniture.
The side brush moves 20 cm sideways, thus cleaning along walls and under shelves. In this way the entire room is cleaned, and nothing is left behind.
If you need to use the side brush while working in scrubbing machine mode, press the SIDE BRUSH CONTROL icon (1). The icon is on the control display (**Fig.1**).

**N.B.:** when the side brush head is in the working position, the icon (1) turns green.

**N.B.:** when the icon (1) is pressed, the side brush head will start to move towards the outside of the machine.

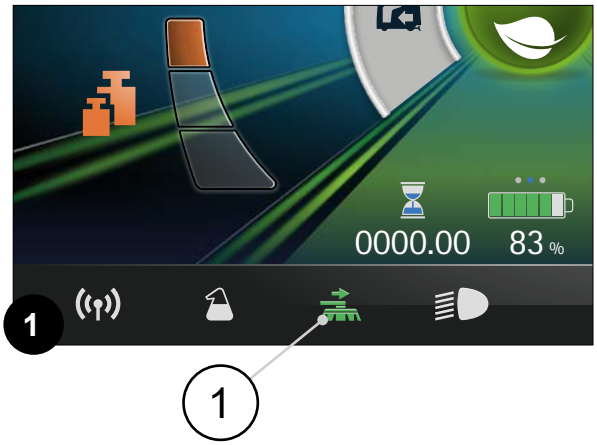
**N.B.:** the gearmotor in the side brush head will start to work at the same time as the gearmotors in the brush head.

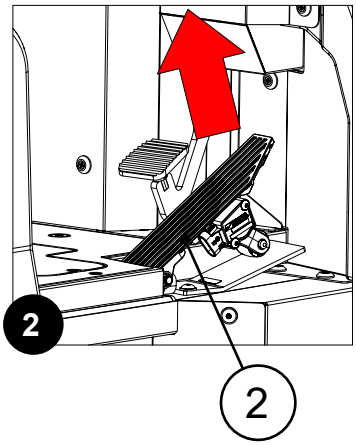
**N.B.:** the solenoid valve in the side brush head will start to dispense detergent solution together with the solenoid valve in the brush head.

**N.B.:** if you want to bring the side brush head back to its resting position, press the icon (1). When the side brush head body is in its resting position, the icon (1) turns grey.

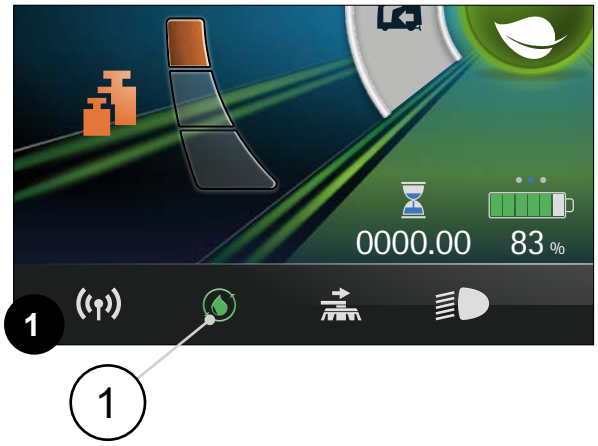
**N.B.:** if the drive pedal (2) is released when working (**Fig.2**), after a few seconds the side brush head is automatically positioned in the rest position.

**N.B.:** If the brush head is raised when the side brush head is in the working position, the side brush head will also be moved into the resting position.



## FLR - CONTINUOUS RECYCLING SYSTEM (PLUS VERSIONS)




Upon request, the machine can be equipped with a continuous detergent solution recycling system.

**N.B.:** The continuous detergent solution recycling system is a system that filters and cleans the detergent solution collected from the squeegee, thus making it available again for use.

**N.B.:** the use of the continuous detergent solution recycling system results in decreased water and detergent use, thus increasing safety for the operator, who comes into contact with the chemical products less frequently, and reducing costs.

**N.B.:** reusing the water increases the working autonomy, allows for more $m^2$ to be cleaned using the same amount of resources, for a reduction in detergent solution consumption per intervention of up to 66% (savings calculated on a triple recycling cycle), and increases productivity up to 70%, as the number of stops required for emptying and filling the tanks are considerably reduced.

**N.B.:** the continuous recycling system is ideal for areas that are cleaned frequently and don't get very dirty.

If the machine you are using is equipped with the detergent solution recycling system, once the machine has been turned on, press the RECYCLING SYSTEM CONTROL icon (1) on the control display (**Fig.1**).

**N.B.:** when the recycling system is functioning, the icon (1) turns green.

**N.B.:** if you want to turn the recycling system off, press the switch (1), when the system is deactivated, the icon turns grey.

**N.B.:** at the end of each work cycle, perform all the procedures listed in the “DAILY MAINTENANCE” on page 131.

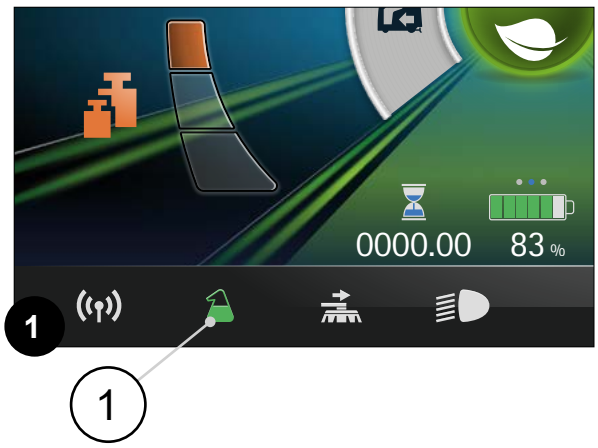
**N.B.:** the continuous recycling system includes a solenoid valve for the solution tank (referred to herein as ELE-01) and a solenoid valve for the recovery tank (referred to herein as ELE-02).

**N.B.:** with the continuous recycling system, the solenoid valve present in the scrubbing brush head is powered together with solenoid valve ELE-01 or ELE-02, based on the cases indicated below.

**N.B.:** with the continuous recycling system off, or until the solution tank is empty, the machine's electrical system will power solenoid valve ELE-01.

**N.B.:** with the continuous recycling system enabled, or with the solution tank empty, the machine's electrical system will power solenoid valve ELE-02.

## FSS - AUTOMATIC DETERGENT DOSING SYSTEM (PLUS VERSIONS)




Upon request, the machine can be equipped with an automatic detergent dosing system.

**N.B.:** with the automatic dosing system installed on the machine, the user can be sue that they're dispensing the right amount of solution based on the actual needs. For example, heavy duty cleaning requires more water and detergent than maintenance cleaning, for which the dirt typically is non very stubborn.

**N.B.:** One of the greatest strengths of the machine's built-in automatic dosing system is its ability to save water whenever possible, and to avoid using more detergent than necessary.

If the machine being used has an automatic dosing system, after turning on the machine press the AUTOMATIC DOSING SYSTEM CONTROL icon (1), on the control display (**Fig.1**).

**N.B.:** when the automatic dosing system is functioning, the icon (1) turns green.

**N.B.:** if you want to turn the automatic dosing system off, press the icon (1), when the system is deactivated, the icon (1) is deactivated.

**N.B.:** at the end of each work cycle, perform all the procedures listed in the “DAILY MAINTENANCE” on page 131.

**N.B.:** when the automatic dosing system is in function, the chemical dosing pump is powered together with the water pump.

## RECOVERY TANK CLEANING SPRAY GUN (PLUS VERSIONS)

Upon request, the machine can be equipped with a recovery tank cleaning gun kit. The recovery tank cleaning gun kit allows the user to utilise the water in the solution tank to clean the recovery tank, thus saving time and ensuring greater environmental sustainability.
To use the kit, do the following:

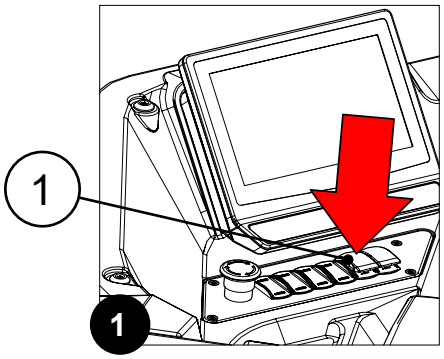
1. Activate the TRANSFER working mode, see “DS SELECTOR (DRIVE SELECT)” on page 78.
2. Take the machine to the maintenance area.
3. Stop the machine.

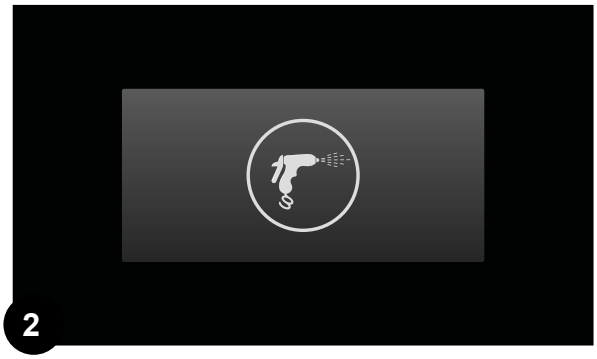
**WARNING:** the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

4. Activate the recovery tank cleaning spray gun kit switch (1) located on the control panel (**Fig.1**).

**N.B.:** when the recovery tank cleaning spray gun is functioning, the dedicated screen appears on the control display (**Fig.2**) and the LED in the switch (1) is on (**Fig.1**).



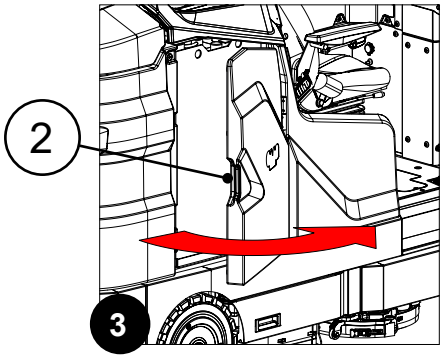



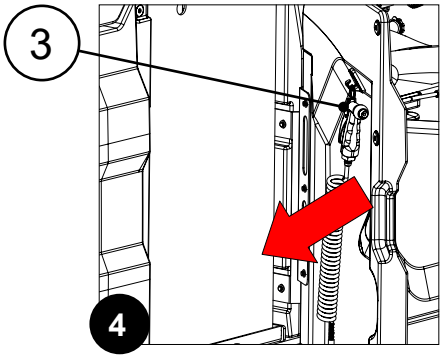

**N.B.:** if you want to turn off the recovery tank cleaning spray gun, press the switch (1), when the function is deactivated, the screen (**Fig.2**) will no longer be visible on the control display.

**N.B.:** the recovery tank cleaning spray gun functions only when the machine is stopped and the solution tank is not empty.

**N.B.:** with the recovery tank cleaning spray gun active, the traction and working functions are deactivated.

5. Get off the machine.
6. Open the lateral door (2) (**Fig.3**)
7. Remove the recovery tank cleaning gun (3) (**Fig.4**).
8. To clean the recovery tank, perform the procedure described in the “DRAINING THE RECOVERY TANK” on page 146.
9. Activate the solution jet by pressing the lever in the tank cleaning accessory. Make sure the jet is pointing into the tank before pressing the lever.

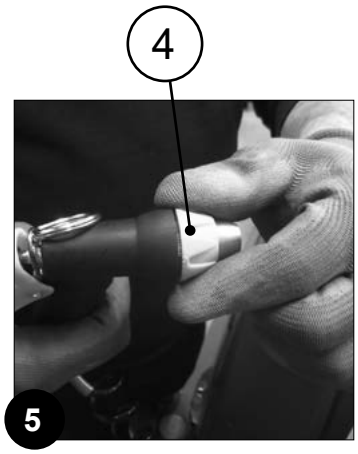


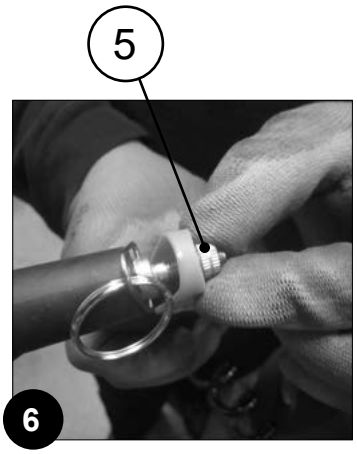



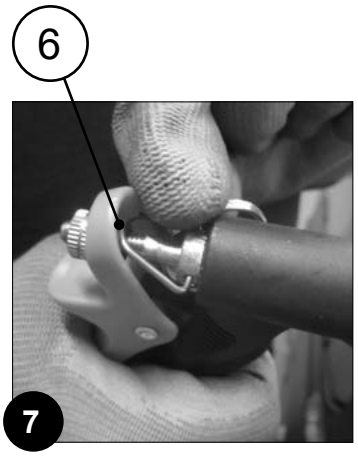

**N.B.:** To adjust the solution jet from the tank cleaning accessory, turn the knob (4) on the accessory itself (**Fig.5**).

**N.B.:** To adjust the intensity of the solution jet from the tank cleaning accessory, turn the knob (5) on the accessory itself (**Fig.6**).

**N.B.:** To stop the solution jet, use the lever (6) on the tank cleaning accessory (**Fig.7**).




## VACUUM WAND (PLUS VERSIONS)

Upon request, the machine can be equipped with a vacuum wand kit, which can be used to dry areas that are difficult to reach with the machine itself.

**N.B.:** the rubber blade on the tip of the nozzle perfectly dries the surface to which is applied thanks to the machine's highly efficient suction system.

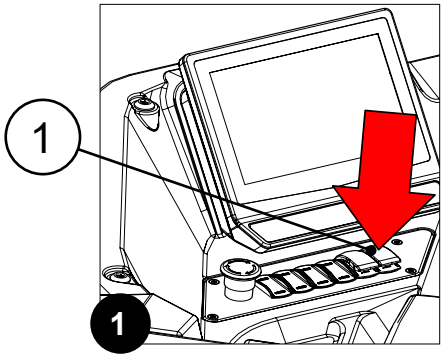
To use the kit, do the following:

1. Activate the TRANSFER working mode, see “DS SELECTOR (DRIVE SELECT)” on page 78.
2. Stop the machine.

**WARNING:** the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

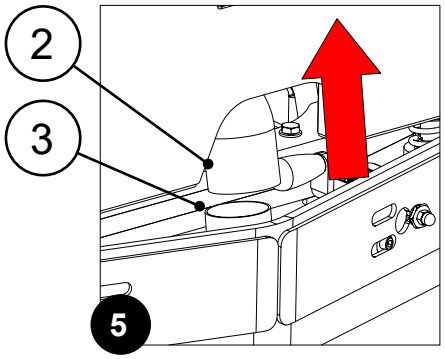
3. Activate the vacuum wand kit by pressing the switch (1) on the control panel (**Fig.1**).
4. Get off the machine.
5. Remove all the vacuum wand kit components from the storage compartment in the battery box lid (Fig.).
6. Assemble the steel extension tube (**Fig.2**).
7. Insert the vacuum brush into the extension tube (**Fig.3**).

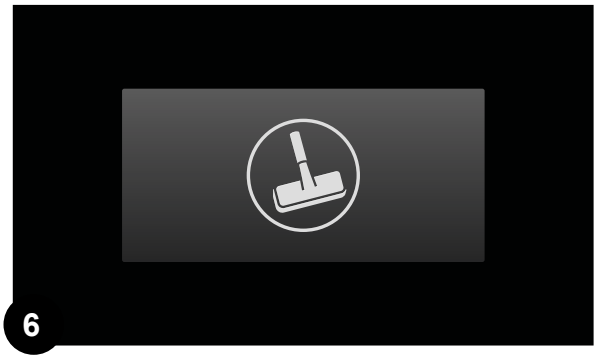





8. Connect the vacuum tube to the extension tube (**Fig.4**).
9. Remove the squeegee vacuum tube (2) from the sleeve (3) in the squeegee (**Fig.5**).
10. Connect the suction hose contained in the suction nozzle kit to the squeegee suction pipe.

**N.B.:** when the vacuum wand is functioning, the dedicated screen appears on the control display (**Fig.6**) and the LED in the switch (3) is on (**Fig.5**).


**N.B.:** if you want to turn the vacuum wand kit off, press the switch (3). When the system is deactivated, the LED in the switch (3) will be off.

**N.B.:** the suction nozzle kit is only in function when the machine is stopped and the recovery tank is not full.

**N.B.:** when the suction nozzle kit is in function, the suction motor is powered at maximum.

**WARNING:** never pick up solid matter such as dust, cigarette stubs, paper, etc.

**WARNING:** Never collect gases, explosive/inflammable liquids or powders, nor acids and solvents! These include gasoline, paint thinners and fuel oil (which, when mixed with the vacuum air, can form explosive vapours or mixtures), and also non-diluted acids and solvents, acetones, aluminium and magnesium powders. These substances may also corrode the materials used to construct the machine.

**WARNING:** if the machine is used in dangerous areas (e.g. petrol stations), the relative safety standards must be observed. It is forbidden to use the machine in environments with a potentially explosive atmosphere.

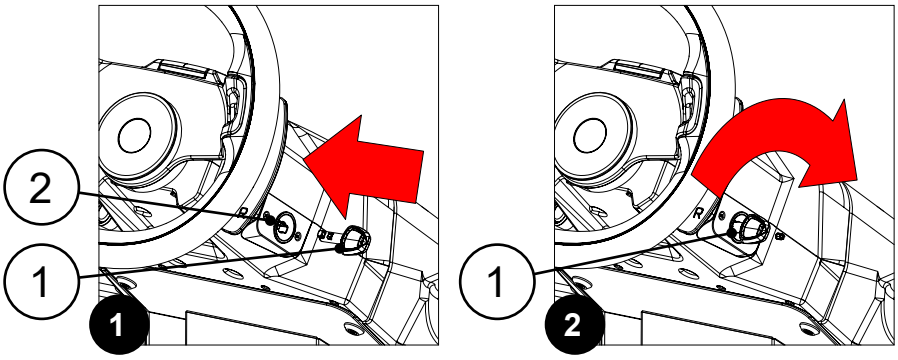
11. Carry out the suction operations.
12. When the work is finished, remove the kit and place it in the storage compartment.

## FFM - TAG INSERTION (PLUS VERSIONS)

Upon request, the machine can be equipped with an integrated system that allows the machine fleet to be fully monitored. In order to check that the machines are carrying out the planned work activities correctly, one would always have to be present at the work site. The automatic fleet management system (FFM) allows the status of each machine, the workload, the consumption values, and the maintenance requirements to be constantly monitored, thus ensuring improved fleet management and reduced costs. The FFM system is connected to the data network, which in turn transfers all the information that the user wants to know about each machine in their fleet, in real time.

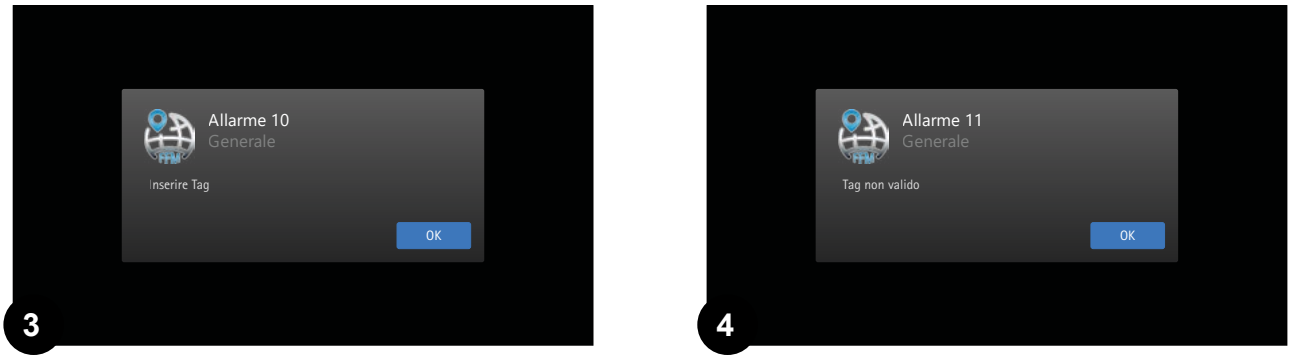
To activate automatic fleet management data logging, do the following:

1. Sit on the driver's seat.
2. Insert the key (1) into the slot (2) on the right side of the column (**Fig.1**).
3. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.2**).




**N.B.:** If the key just inserted is not equipped with a TAG, the alarm 10 will appear on the control display (**Fig.3**).

**N.B.:** If the owner of the TAG just inserted is not enabled to use it, the AL_11 alarm will appear on the control display (**Fig.4**).



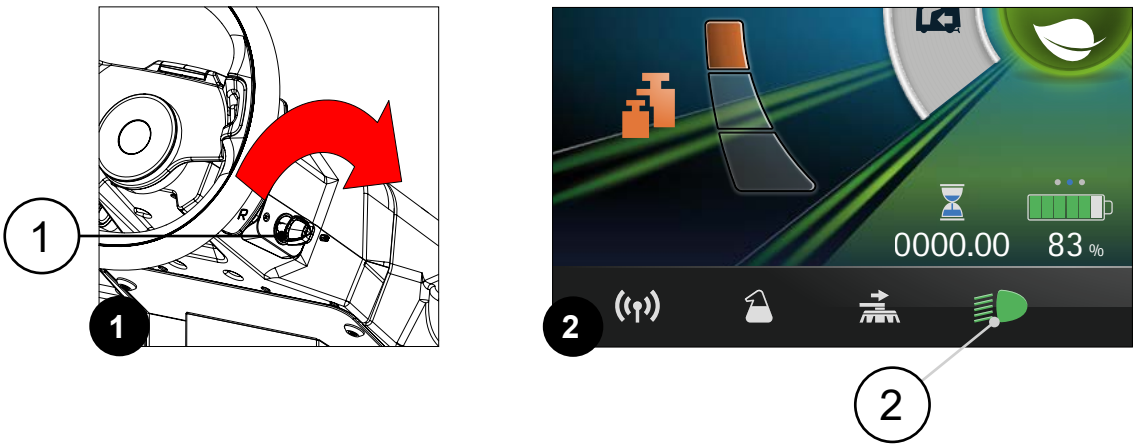

4. The machine is now in the transfer mode.
5. To start to work, read the chapter “STARTING WORK (PLUS VERSION)” on page 87.

## WORKING HEADLIGHTS (PLUS VERSIONS)

Upon request, the machine can be equipped with front and rear lights. When the machine is turned on using the ignition switch (1), located on the right side of the steering column (**Fig.1**), the front position lights and the tail lights will turn on.
To activate the front working lights, use the icon (2) on the main screen (**Fig.2**).

**N.B.:** when the working headlights are functioning, the icon (1) turns green.

**N.B.:** if you want to turn off the working headlights, press the icon (1), when the working headlights are turned off, the button turns grey again.



## AT THE END OF THE WORK

At the end of the work, and before carrying out any type of maintenance, perform the following operations:

1. Activate the TRANSFER working mode, see the paragraph “TRANSFER WORKING MODE (PRO VERSION)” on page 72 or “TRANSFER WORKING MODE (PLUS VERSIONS)” on page 78.
2. Take the appliance to the dedicated dirty water drainage area.

**WARNING:** the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Make sure the machine is in a safe condition, see “MACHINE SAFETY” on page 35).
4. Perform all the daily maintenance procedures on the machine, see “DAILY MAINTENANCE” on page 131.
5. Once the daily maintenance operations are complete, take the machine to the designated storage location.

**ATTENTION:** Park the machine in an enclosed place, on a flat surface; near the machine there must be no objects that could either damage it, or be damaged through contact with it.

6. Secure the machine, see “MACHINE SAFETY” on page 35.

# MAINTENANCE PLAN

## DAILY MAINTENANCE

| MACHINE COMPONENTS | PROCEDURE |
|---|---|
| Vacuum group | At the end of every work day, clean the squeegee, see “CLEANING THE SQUEEGEE” on page 139. |
| | At the end of every work day, clean the squeegee vacuum tube, see “CLEANING THE SQUEEGEE VACUUM HOSE” on page 142. |
| | Clean the collection filter tray in the recovery tank at the end of each work day. See “CLEANING THE COLLECTION FILTER TRAY” on page 144. |
| | Clean the wave protection tray in the recovery tank at the end of each work day. See “CLEANING THE WAVE PROTECTION TRAY” on page 145. |
| | At the end of every work day, clean the side brush head squeegee, see “CLEANING THE SIDE BRUSH HEAD SQUEEGEE (OPTIONAL)” on page 140. |
| Brush base assembly | Clean the brushes in the brush head at the end of each work day, see “CLEANING THE SIDE BRUSH HEAD BRUSH - DRIVE DISC” on page 135. |
| | Clean the brush head splash guard rubber blades at the end of each work day, see “CLEANING THE BRUSH HEAD SPLASH GUARD” on page 137. |
| | Clean the brush in the side brush head at the end of each work day. See the “CLEANING THE SIDE BRUSH HEAD BRUSH - DRIVE DISC (OPTIONAL)” on page 138. |
| | At the end of every work day, clean the side brush head splash guard rubber blade, see “CLEANING THE SIDE BRUSH HEAD SPLASH GUARDS (OPTIONAL)” on page 139. |
| recovery tank | Empty the recovery tank at the end of each work day, see “DRAINING THE RECOVERY TANK” on page 146. |
| | At the end of each work day, empty the recovery tank and clean inside the recovery tank, see “DRAINING THE RECOVERY TANK” on page 146. |
| | At the end of each work day, after emptying and cleaning the recovery tank, clean the detergent solution recycling system filters. See the “CLEANING THE FILTER ON THE DETERGENT SOLUTION RECYCLING SYSTEM (OPTIONAL)” on page 150. |
| Solution tank | Empty the solution tank at the end of each work day, see “EMPTYING THE SOLUTION TANK” on page 148. |
| | At the end of each work day, after emptying the solution tank, clean inside the solution tank, see “EMPTYING THE SOLUTION TANK” on page 148. |
| Battery power supply system | For the maintenance of the batteries utilised, follow the instructions contained in the document provided by the batteries' manufacturer. |

## WEEKLY MAINTENANCE

| MACHINE COMPONENTS | PROCEDURE |
|---|---|
| Machine water system | Every week, clean the filter of the machine water system, see “CLEANING THE WATER SYSTEM FILTER” on page 147. |
| | Check the integrity of the machine's water system filter every week. If it needs to be replaced, contact your FIMAP dealer. |
| Automatic chemical detergent management system | Clean the automatic chemical detergent management system filter every week, see “CLEANING THE FILTER ON THE AUTOMATIC CHEMICAL DETERGENT MANAGEMENT SYSTEM (OPTIONAL)” on page 148. |
| | Check the integrity of the automatic chemical detergent management system filter every week. If it needs to be replaced, contact your FIMAP dealer. |
| Vacuum group | Check the integrity of the rubber blades on the squeegee, if necessary replace them and see the “REPLACING THE SQUEEGEE RUBBERS” on page 155. |
| | Check the integrity of the squeegee vacuum tube every week. If it needs to be replaced, contact your FIMAP dealer. |
| | Check the integrity of the recovery tank wave protection tray every week. If it needs to be replaced, contact your FIMAP dealer. |
| | Check the integrity of the recovery tank collection filter every week. If it needs to be replaced, contact your FIMAP dealer. |
| | Check the integrity of the rubber blades on the side brush head brush squeegee every week. If they need to be replaced, see the “REPLACING THE SIDE BRUSH HEAD SQUEEGEE RUBBER BLADES (OPTIONAL)” on page 157. |
| | Check the integrity of the side brush head brush squeegee vacuum tube every week. If it needs to be replaced, contact your FIMAP dealer. |
| Brush base assembly | Check the integrity of the brushes on the brush head body every week. If they need to be replaced, see “REPLACING THE BRUSH HEAD BRUSHES OR DRIVE DISCS” on page 151. |
| | Check the integrity of the rubber blades on the central brush head splash guard every week. If they need to be replaced, see the “REPLACING THE BRUSH HEAD SIDE SPLASH GUARDS” on page 152. |
| | Check the integrity of the brush in the side brush head every week. If it needs to be replaced, see the “REPLACING THE SIDE BRUSH HEAD BRUSH OR DRIVE DISC (OPTIONAL)” on page 153. |
| | Check the integrity of the side brush head splash guard rubber blade every week. If it needs to be replaced, see “REPLACING THE SIDE BRUSH HEAD SPLASH GUARD RUBBER BLADE (OPTIONAL)” on page 154. |
| recovery tank | Check the integrity of the recovery tank drain hose every week. If it needs to be replaced, contact your FIMAP dealer. |
| | every week, after having drained and cleaned the recovery tank, check the integrity of the detergent solution recycling system filters every week. If they need to be replaced, contact your FIMAP dealer. |
| Solution tank | Check the integrity of the solution tank drain hose every week. If it needs to be replaced, contact your FIMAP dealer. |
| | every week, after having emptied and cleaned the recovery tank, check the integrity of the machine water system filter. If it needs to be replaced, contact your FIMAP. |
| Battery power supply system | For the maintenance of the batteries utilised, follow the instructions contained in the document provided by the batteries' manufacturer. |

## MONTHLY MAINTENANCE

| MACHINE COMPONENTS | PROCEDURE |
|---|---|
| Vacuum group | Check the correct levelling of the rubber blades in the squeegee every month, if they need to be adjusted see “ADJUSTING THE SQUEEGEE RUBBER BLADES” on page 158. |
| Brush base assembly | Check the correct levelling of the rubber blades in the scrubbing brush head every month, if they need to be adjusted see “BRUSH HEAD SIDE SPLASH GUARD ADJUSTMENT” on page 161. |
| Battery power supply system | For the maintenance of the batteries utilised, follow the instructions contained in the document provided by the batteries' manufacturer. |

## MAINTENANCE PRIOR TO EXTENDED PERIODS OF DOWNTIME

| MACHINE COMPONENTS | PROCEDURE |
|---|---|
| Vacuum group | Clean the squeegee before extended periods of machine downtime, see “CLEANING THE SQUEEGEE” on page 139. |
| | Clean the vacuum tube before extended periods of machine downtime, see “CLEANING THE SQUEEGEE VACUUM HOSE” on page 142. |
| | Clean the wave protection tray in the recovery tank before extended periods of machine downtime, see “CLEANING THE WAVE PROTECTION TRAY” on page 145. |
| | Clean the collection filter in the recovery tank before extended periods of machine downtime, see “CLEANING THE COLLECTION FILTER TRAY” on page 144. |
| | Clean the side brush head squeegee before extended periods of machine downtime, see “CLEANING THE SIDE BRUSH HEAD SQUEEGEE (OPTIONAL)” on page 140. |
| | Clean the side brush head squeegee vacuum tube before extended periods of machine downtime, see “CLEANING THE SQUEEGEE VACUUM HOSE” on page 142. |
| Brush base assembly | Clean the brushes in the brush head before extended periods of machine downtime, see “CLEANING THE SIDE BRUSH HEAD BRUSH - DRIVE DISC” on page 135. |
| | Clean the brushes in the brush head splash guard rubber blades before extended periods of machine downtime, see “CLEANING THE BRUSH HEAD SPLASH GUARD” on page 137. |
| | Clean the brush in the side brush head before extended periods of machine downtime, see “CLEANING THE SIDE BRUSH HEAD BRUSH - DRIVE DISC (OPTIONAL)” on page 138. |
| | Clean the side brush head side guard rubber blade before extended periods of machine downtime, see “CLEANING THE SIDE BRUSH HEAD SPLASH GUARDS (OPTIONAL)” on page 139. |
| recovery tank | Empty the recovery tank before extended periods of machine downtime see “DRAINING THE RECOVERY TANK” on page 146. |
| | After emptying the recovery tank, clean its interior before extended periods of machine downtime, see “DRAINING THE RECOVERY TANK” on page 146. |
| | Before extended periods of machine downtime, after having emptied and cleaned the recovery tank, clean the detergent solution recycling system filters, see “CLEANING THE FILTER ON THE DETERGENT SOLUTION RECYCLING SYSTEM (OPTIONAL)” on page 150. |
| Solution tank | Empty the solution tank before extended periods of machine downtime, see “EMPTYING THE SOLUTION TANK” on page 148. |
| | After emptying the solution tank, clean its interior before extended periods of machine downtime, see “EMPTYING THE SOLUTION TANK” on page 148. |

| MACHINE COMPONENTS | PROCEDURE |
|---|---|
| Machine water system | Clean the machine water system filter before extended periods of machine downtime, see “CLEANING THE WATER SYSTEM FILTER” on page 147. |
| Automatic chemical detergent management system | Clean the automatic chemical detergent management system filter before extended periods of machine downtime, see “CLEANING THE FILTER ON THE AUTOMATIC CHEMICAL DETERGENT MANAGEMENT SYSTEM (OPTIONAL)” on page 148. |
| | Empty the detergent tank on the automatic chemical detergent management system before extended periods of machine downtime, see “CHEMICAL DETERGENT TANK EMPTYING (OPTIONAL)” on page 149. |
| | Clean the detergent tank on the automatic chemical detergent management system before extended periods of machine downtime, see “CHEMICAL DETERGENT TANK EMPTYING (OPTIONAL)” on page 149. |
| Battery power supply system | For the maintenance of the batteries utilised, follow the instructions contained in the document provided by the batteries' manufacturer. |

# ROUTINE MAINTENANCE

Before carrying out any routine maintenance operations, proceed as follows:

1. Take the machine to the maintenance area.

**N.B.:** the place designated for this operation must comply with current environmental protection regulations.

2. Carry out the steps to ensure the machine is in a safe condition; read the paragraph entitled “MACHINE SAFETY” on page 35.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

## CLEANING THE SIDE BRUSH HEAD BRUSH - DRIVE DISC

The thorough cleaning of the brush or the drive disc on the brush head will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance.

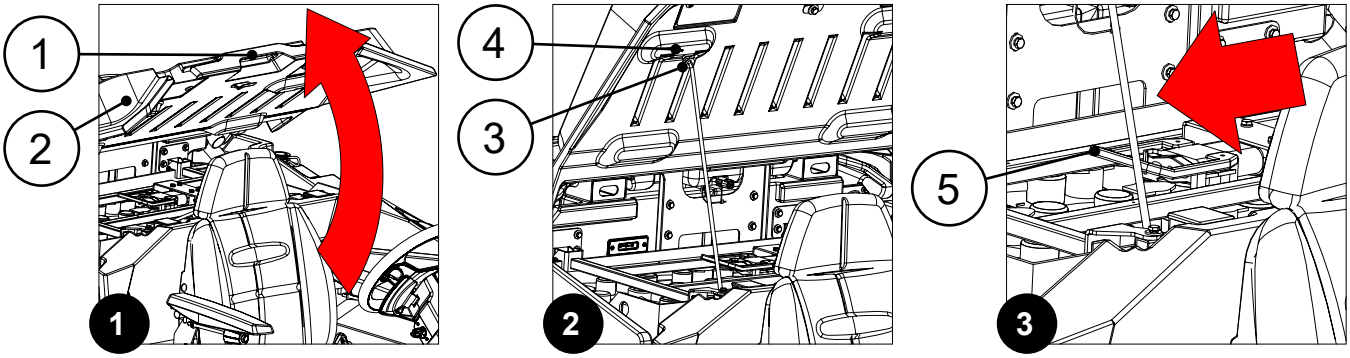
**To clean the brush or the drive disc on the brush head, using the brush uncoupling button, do the following:**

1. Grasp the handle (1) and turn the battery compartment lid (2) to its maintenance position (**Fig.1**).

**ATTENTION:** to prevent the lid from turning, insert the retainer (3) into the slot (4) (**Fig.2**).

**ATTENTION:** the following operations must be carried out by qualified personnel. An incorrect connection of the connector may cause a malfunction of the device.

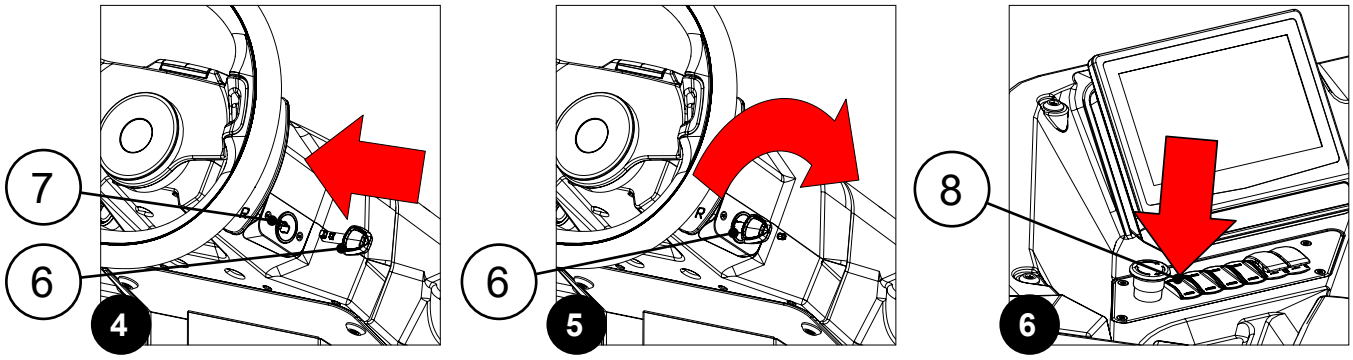
2. Connect the battery charger cable's connector (5) to the connector on the power cable coming from the battery pack (**Fig.3**).




3. Grasp the battery compartment lid and turn it to its working position.

**N.B.:** release the retainer before turning the lid.

4. Sit on the driver’s seat.
5. Insert the key (6) into the slot (7) on the right side of the column (**Fig.4**).
6. Turn on the machine and turn the key (6) a quarter turn clockwise (**Fig.5**).
7. Activate the TRANSFER working mode, see “TRANSFER WORKING MODE (PRO VERSION)” on page 72 or “TRANSFER WORKING MODE (PLUS VERSIONS)” on page 78.
8. Press the brush uncoupling button (8) on the control panel two times (**Fig.6**).




**ATTENTION:** during this operation, check there are no people or objects near the machine.

9. After removing the brushes or drive discs, clean them under a stream of running water to eliminate any impurities from the bristles.

**N.B.:** check the wear status of the bristles and replace the brushes if they are excessively consumed (the bristle length must not be less than 10 mm; this distance is indicated on the brush by the yellow band). See “REPLACING THE BRUSH HEAD BRUSHES OR DRIVE DISCS” on page 151 to replace the brushes.

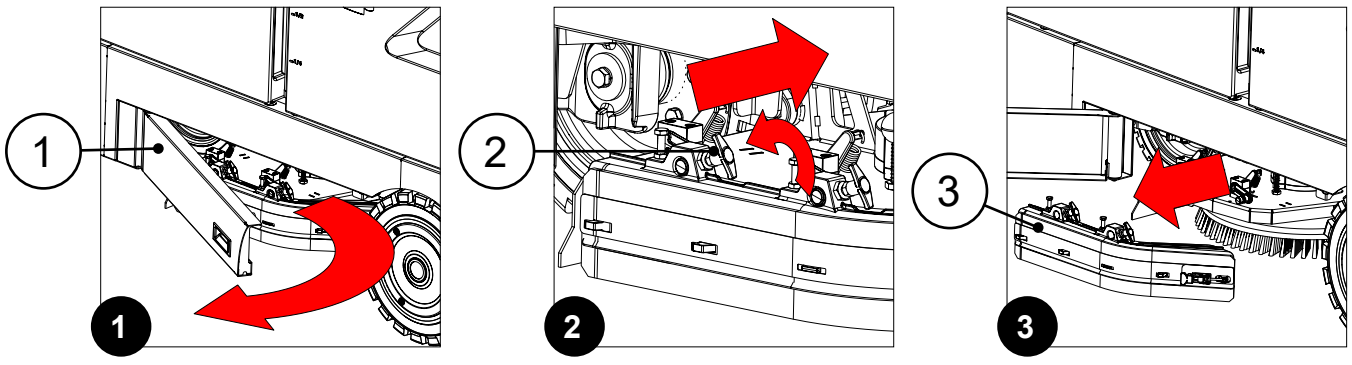
10. When cleaning is complete, refit the brushes.

**N.B.:** You are advised to invert the right and left-hand brushes every day.

**ATTENTION:** If the brushes are not new and have deformed bristles, it is better to reassemble them in the same position (the right-hand one on the right, and the left-hand one on the left), to prevent the different inclination of the bristles from producing an overload on the brush motor as well as excessive vibrations.

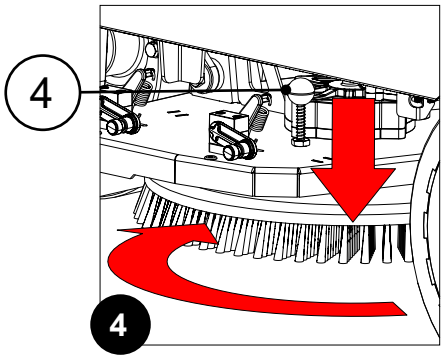
**To clean the brush or the drive disc on the brush head, if not using the brush uncoupling button, do the following:**

1. Open the left inspection lid (1) (**Fig.1**).
2. Set the fastening anchors (2) on the lateral splash guard support to their maintenance position, move them upwards, and turn them a quarter turn clockwise (**Fig.2**).
3. Remove the left side splash guard support (3) located in the brush head (**Fig.3**).




4. Keeping the pin (4) pressed, turn the brush (5) clockwise until it is locked in place (**Fig.4**).

**N.B.:** turn the brush quickly and firmly so as to push the button on the retainer spring outward until it releases (**Fig.4**).




5. With the brush or drive disc removed, clean it under a stream of running water to eliminate any impurities from its bristles.

**N.B.:** check the wear status of the bristles and replace the brushes if they are excessively consumed (the bristle length must not be less than 10 mm; this distance is indicated on the brush by the yellow band). See “REPLACING THE BRUSH HEAD BRUSHES OR DRIVE DISCS” on page 151 to replace the brushes.

6. When cleaning is complete, refit the brushes.

**N.B.:** You are advised to invert the right and left-hand brushes every day.

**ATTENTION:** If the brushes are not new and have deformed bristles, it is better to reassemble them in the same position (the right-hand one on the right, and the left-hand one on the left), to prevent the different inclination of the bristles from producing an overload on the brush motor as well as excessive vibrations.

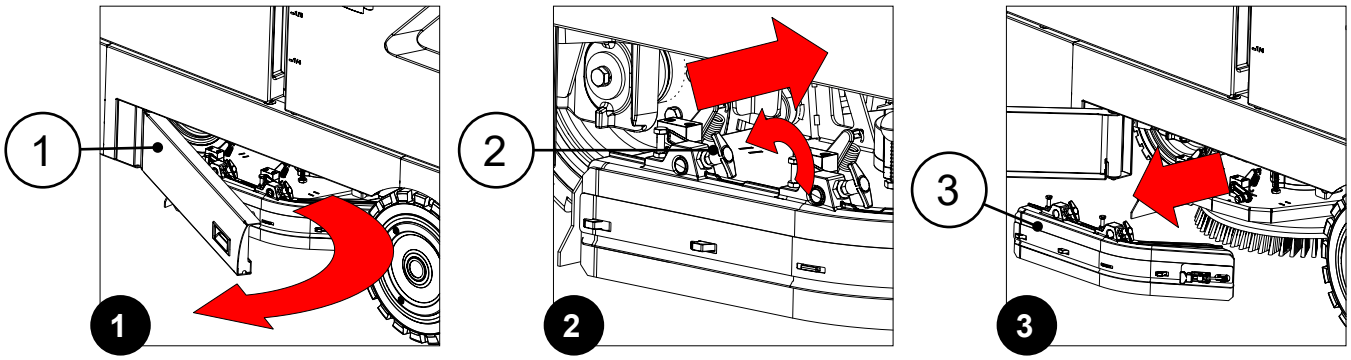
7. Close the left inspection lid.
8. Repeat the operation just performed on the right side as well.

## CLEANING THE BRUSH HEAD SPLASH GUARD

The careful cleaning of the splash guards in the brush head will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance.

To clean the brush head splash guards, proceed as follows:

1. Open the left inspection lid (1) (**Fig.1**).
2. Set the fastening anchors (2) on the lateral splash guard support to their maintenance position, move them upwards, and turn them a quarter turn clockwise (**Fig.2**).
3. Remove the left side splash guard support (3) located in the brush head (**Fig.3**).




4. With the lateral splash guard support removed from the machine, clean the rubber splash guard with a damp cloth to eliminate any impurities present.

**N.B.:** check the wear of the splash guard rubber blade, if there is excessive wear replace it with a new one, see “REPLACING THE BRUSH HEAD SIDE SPLASH GUARDS” on page 152.

5. Repeat the operation just performed on the right side as well.

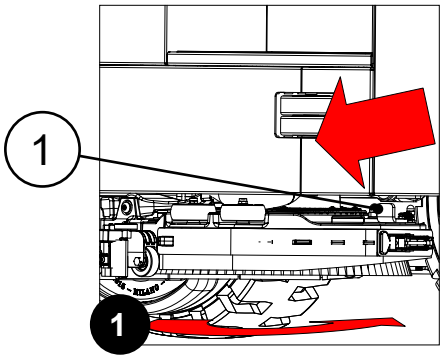
## CLEANING THE SIDE BRUSH HEAD BRUSH - DRIVE DISC (OPTIONAL)

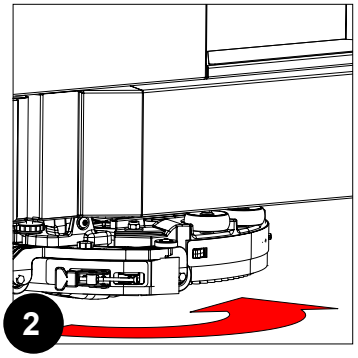
The thorough cleaning of the brush or the drive disc on the side brush head will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance.

To replace the brush or drive disc on the side brush head, do the following:

1. Stand on the right side of the machine.
2. Moving the brush release lever (1), rotate the brush anti-clockwise until it stops (**Fig.1**).

**N.B.:** turn the brush quickly and firmly so as to push the button on the retainer spring outward until it releases (**Fig.2**).




3. Clean it under a stream of running water to eliminate any impurities.

**N.B.:** check the wear status of the bristles and replace the brushes if they are excessively consumed (the bristle length must not be less than 10 mm; this distance is indicated on the brush by the yellow band). See “REPLACING THE SIDE BRUSH HEAD BRUSH OR DRIVE DISC (OPTIONAL)” on page 153 for brush replacement.

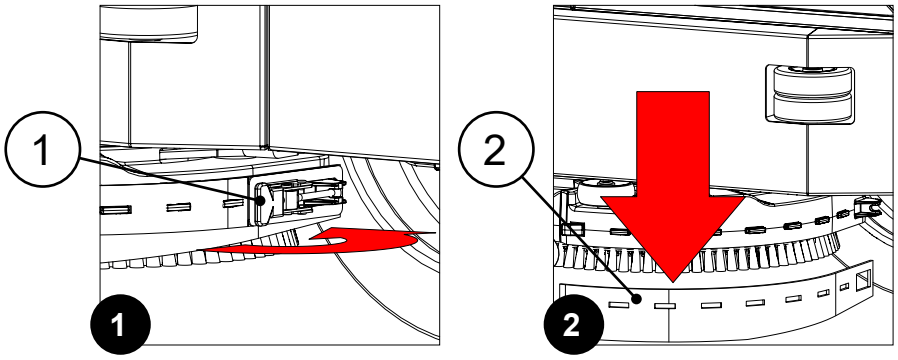
4. When cleaning is complete, refit the brush.

## CLEANING THE SIDE BRUSH HEAD SPLASH GUARDS (OPTIONAL)

The careful cleaning of the splash guards in the side brush head will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance.

To clean the side brush head splash guards, do the following:

1. Stand on the right side of the machine.
2. Remove the rubber blade compression plate on the side brush head, and release the retainer (1) at the front of the brush head (**Fig.1**).
3. Remove the side brush head splash guard rubber blade (2) from the side brush head (**Fig.2**).




4. Clean the rubber splash guard with a damp cloth to eliminate any impurities present.

**N.B.:** check the wear of the splash guard rubber blade, in the case of excessive wear replace it with a new one, see “REPLACING THE SIDE BRUSH HEAD SQUEEGEE RUBBER BLADES (OPTIONAL)” on page 157.

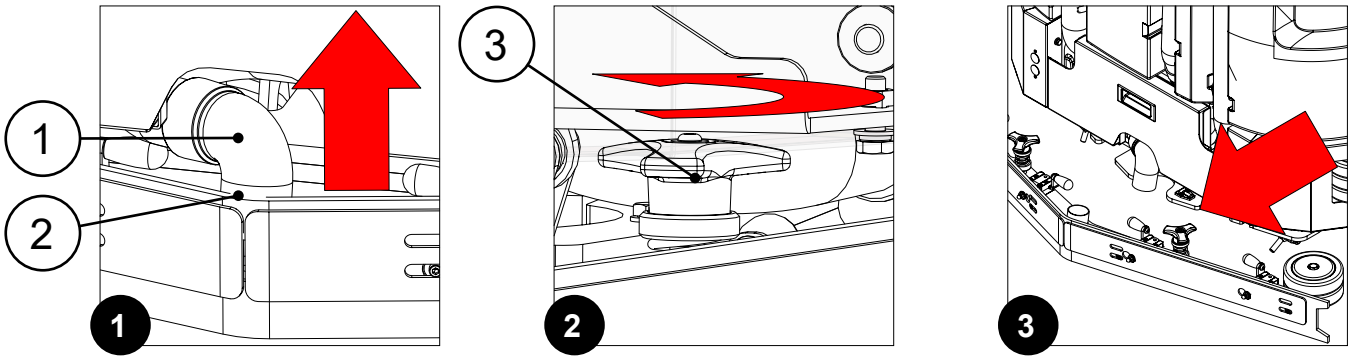
5. Repeat the operations described above in reverse order to reassemble all the parts.

## CLEANING THE SQUEEGEE

The careful cleaning of the whole vacuum unit ensures better drying and cleaning of the floor as well as a longer vacuum motor life.

To clean the squeegee, proceed as follows:

1. Remove the squeegee vacuum hose (1) from the nozzle (2) in the squeegee (**Fig.1**).
2. Completely unscrew the knobs (3) in the squeegee pre-assembly (**Fig.2**).
3. Remove the squeegee from the slits in the squeegee connector (**Fig. 3**).




4. Use a jet of water and then a damp cloth to thoroughly clean the suction chamber (4) (**Fig.4**).

**N.B.:** the suction chamber is to be understood as the portion of the squeegee unit enclosed between the front squeegee rubber blade and the squeegee rubber blade.

**N.B.:** if the dirt persists, use a brush with medium hardness bristles.

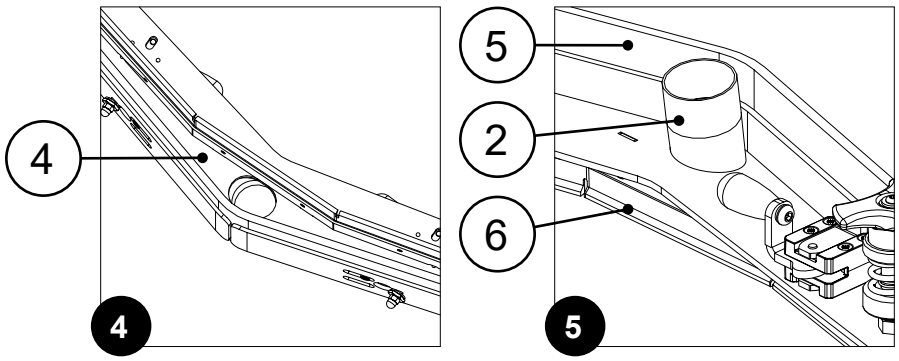
5. Use a jet of water and then a damp cloth to thoroughly clean the rear rubber blade (5) (**Fig.5**).
6. Use a jet of water and then a damp cloth to thoroughly clean the front rubber blade (6) (**Fig.5**).

**N.B.:** Check the integrity of the two rubber blades, and replace the squeegee rubber blades if necessary, see “REPLACING THE SQUEEGEE RUBBERS” on page 155.

7. Use a jet of water and then a damp cloth to thoroughly clean the suction nozzle (2) (**Fig.5**).

**N.B.:** if the dirt persists, use a brush with medium hardness bristles.

8. Proceed in the opposite order to reassemble all the parts.

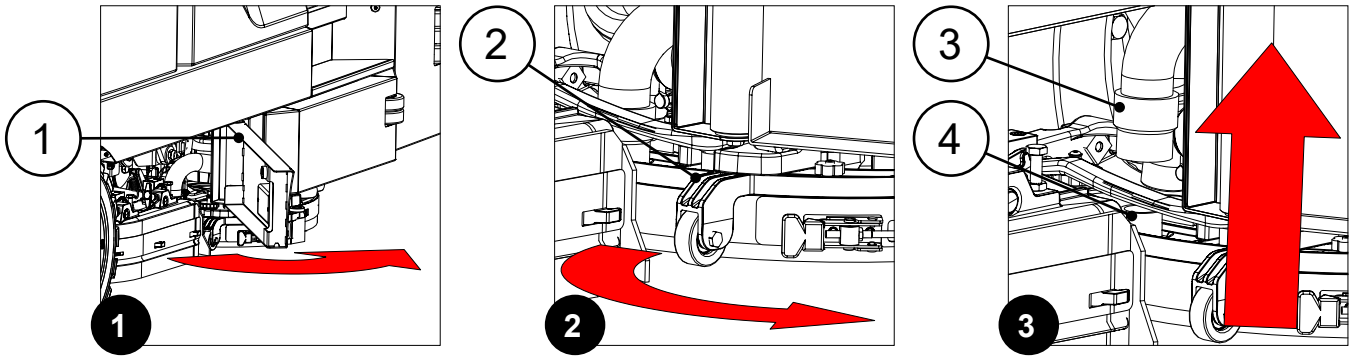



## CLEANING THE SIDE BRUSH HEAD SQUEEGEE (OPTIONAL)

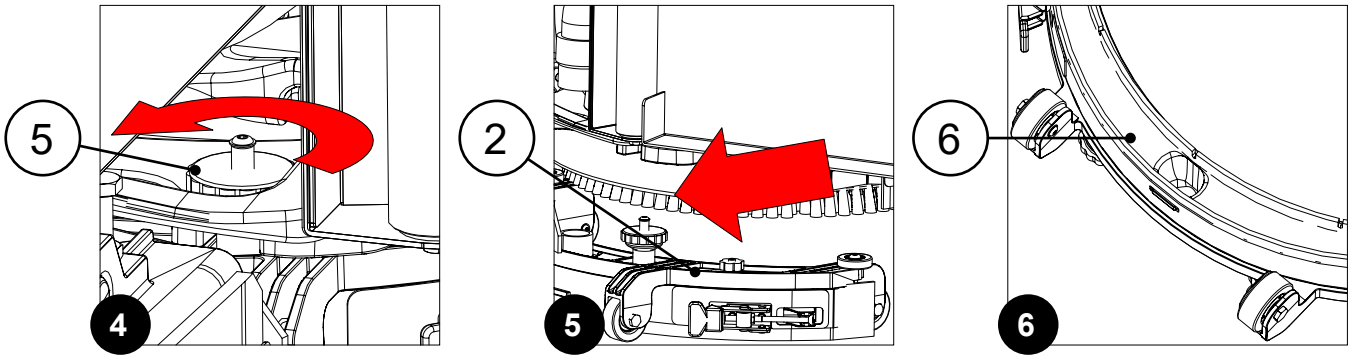
The careful cleaning of the whole vacuum unit ensures better drying and cleaning of the floor as well as a longer vacuum motor life.

To clean the squeegee in the side brush head, proceed as follows:

1. Open the right inspection lid (1) (**Fig.1**).
2. Turn the squeegee support (2) anti-clockwise (**Fig.2**).
3. Remove the squeegee vacuum hose (3) from the nozzle (4) in the squeegee (**Fig.3**).




4. Completely unscrew the knobs (5) in the squeegee pre-assembly (**Fig.4**).
5. Remove the squeegee from the slits in the squeegee connector (**Fig. 5**).
6. Use a jet of water and then a damp cloth to thoroughly clean the suction chamber (6) (**Fig.6**).




**N.B.:** the suction chamber is to be understood as the portion of the squeegee unit enclosed between the front squeegee rubber blade and the squeegee rubber blade.

**N.B.:** if the dirt persists, use a brush with medium hardness bristles.

7. Use a jet of water and then a damp cloth to thoroughly clean the rear rubber blade (7) (**Fig.7**).
8. Use a jet of water and then a damp cloth to thoroughly clean the front rubber blade (8) (**Fig.7**).

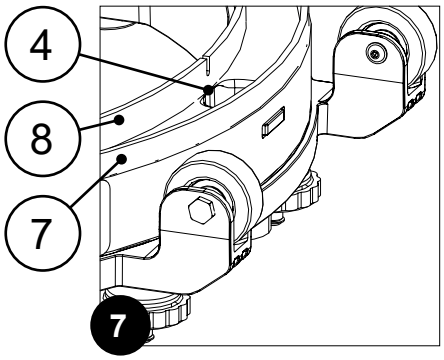
**N.B.:** Check the integrity of the two rubber blades, and replace the squeegee rubber blades if necessary, see “REPLACING THE SIDE BRUSH HEAD SQUEEGEE RUBBER BLADES (OPTIONAL)” on page 157.

**N.B.:** if the dirt persists, use a brush with medium hardness bristles.

9. Use a jet of water and then a damp cloth to thoroughly clean the suction nozzle (4) (**Fig.7**).

**N.B.:** if the dirt persists, use a brush with medium hardness bristles.

10. Proceed in the opposite order to reassemble all the parts.



## CLEANING THE SQUEEGEE VACUUM HOSE

The thorough cleaning of the squeegee vacuum hose guarantees better cleaning and drying of the floor, as well as a longer life for the suction motor.

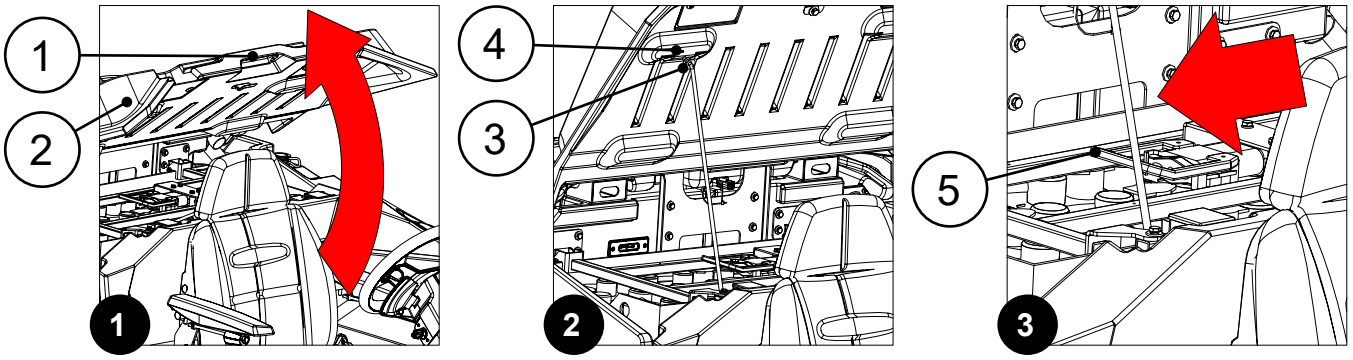
To clean the squeegee vacuum hose, do the following:

1. Grasp the handle (1) and turn the battery compartment lid (2) to its maintenance position (**Fig.1**).

**ATTENTION:** to prevent the lid from turning, insert the retainer (3) into the slot (4) (**Fig.2**).

**ATTENTION:** the following operations must be carried out by qualified personnel. An incorrect connection of the connector may cause a malfunction of the device.

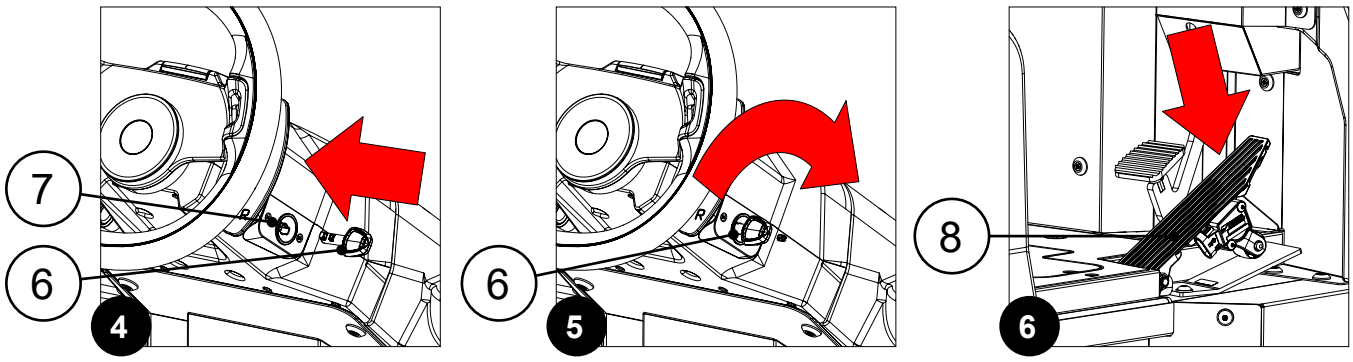
2. Connect the connector (5) in the battery box cable to the connector on the machine power cable (**Fig.3**).




3. Grasp the battery compartment lid and turn it to its working position.

**N.B.:** release the retainer before turning the lid.

4. Sit on the driver's seat.
5. Insert the key (6) into the slot (7) on the right side of the column (**Fig.4**).
6. Turn on the machine and turn the key (6) a quarter turn clockwise (**Fig.5**).
7. The machine is now operating with the ECO working program TRANSFER working mode.
8. Activate the SCRUBBING MACHINE working mode, see "TRANSFER WORKING MODE (PRO VERSION)" on page 72 or "TRANSFER WORKING MODE (PLUS VERSIONS)" on page 78.
9. Activate the side brush, see "SCRUBBING SIDE BRUSH (PRO VERSION)" on page 115 or "SCRUBBING SIDE BRUSH (PLUS VERSIONS)" on page 123.
10. Press the drive pedal (8) (**Fig.6**) to begin moving the machine.




11. After about 30 seconds, turn off the machine and turn the key (6) a quarter turn anti-clockwise (**Fig.7**).
12. Remove the key from the slot on the right hand side of the steering column.
13. Position yourself to the side of the machine, grasp the handle (1) and turn the battery compartment lid (2) to its maintenance position (**Fig.1**).

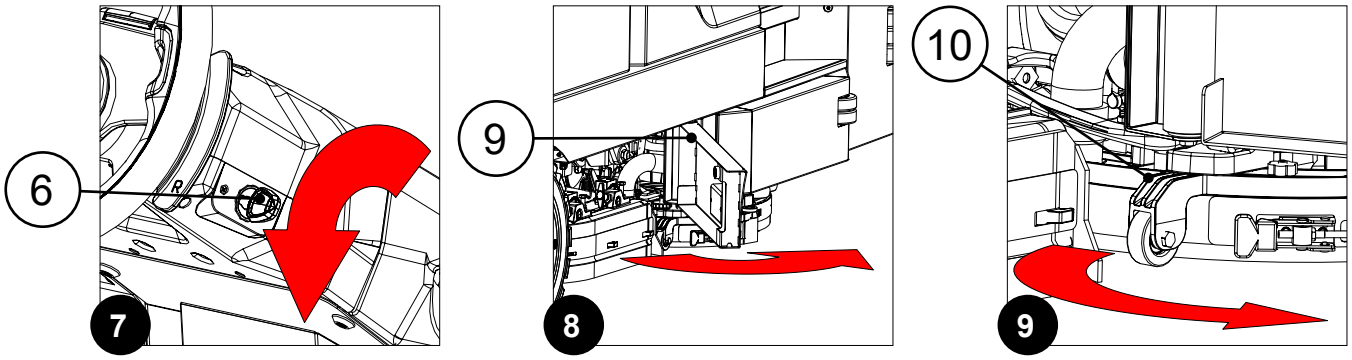
**ATTENTION:** to prevent the lid from turning, insert the retainer (3) into the slot (4) (**Fig.2**).

**ATTENTION:** the following operations must be carried out by qualified personnel. An incorrect connection of the connector may cause a malfunction of the device.

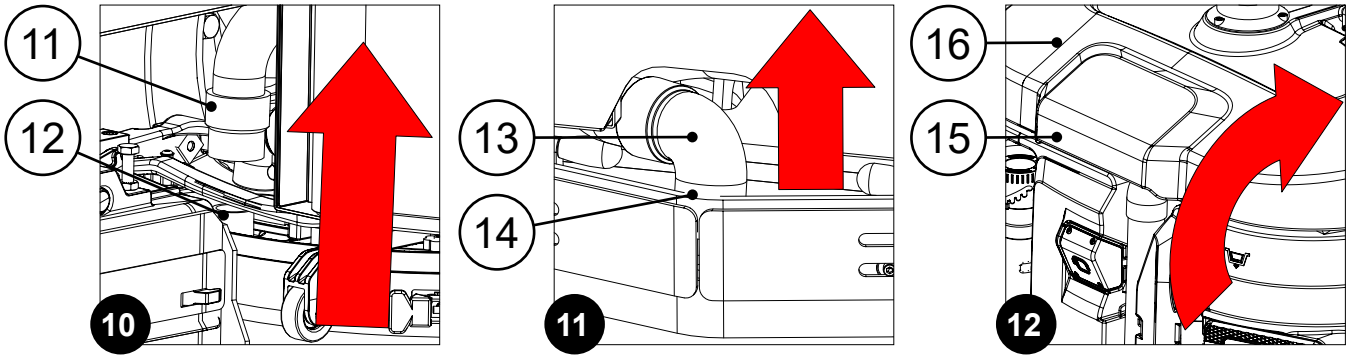
14. Disconnect the connector (5) in the connector battery box cable on the machine power cable.
15. Grasp the battery compartment lid and turn it to its working position.

**N.B.:** release the retainer before turning the lid.

16. Open the right inspection lid (9) (**Fig.8**).
17. Turn the squeegee support (10) anti-clockwise (**Fig.9**).

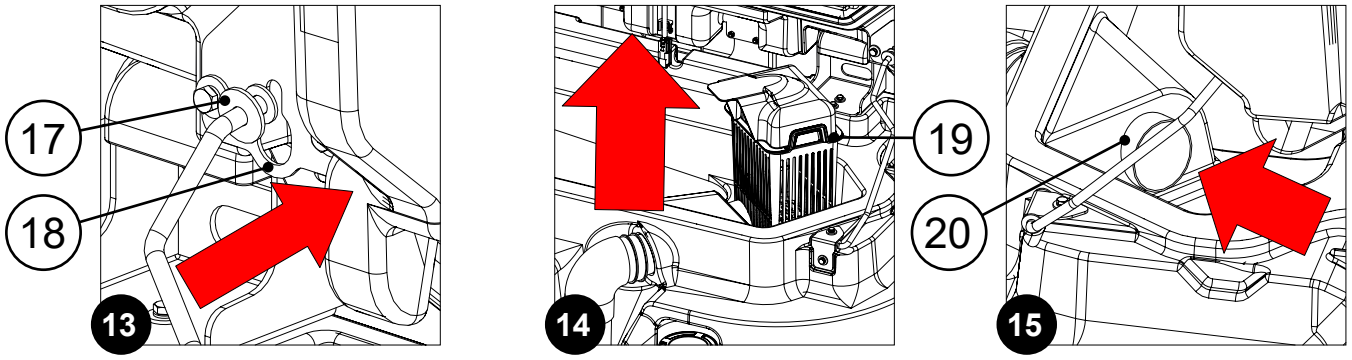



18. Remove the squeegee vacuum hose (11) from the nozzle (12) on the squeegee (**Fig.10**) and place it on the dirty water drain pan.
19. Stand at the back of the machine.
20. Remove the squeegee vacuum hose (13) from the nozzle (14) on the squeegee (**Fig.11**) and place it on the dirty water drain pan.
21. Position yourself at the rear of the machine, grasp the handle (15), and turn the recovery tank lid (16) to its maintenance position (**Fig.12**).




**ATTENTION:** to prevent the lid from turning, insert the retainer (17) into the slot (18) (**Fig.13**).

22. Remove the COLLECTION FILTER TRAY (19) (**Fig.14**).
23. Clean the inside of the vacuum hose (20) with a jet of running water (**Fig.15**).
24. Repeat the operations in reverse order to reassemble all the parts.




## CLEANING THE COLLECTION FILTER TRAY

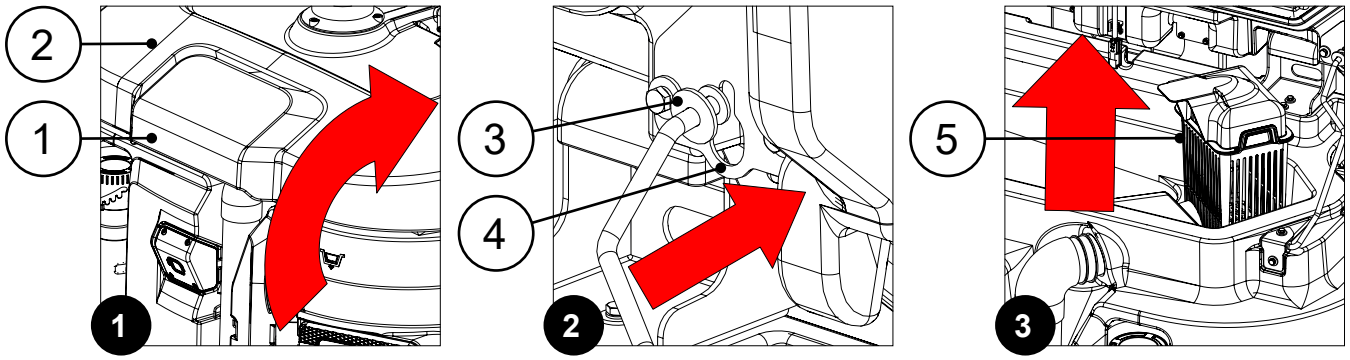
The thorough cleaning of the collection filter tray guarantees better drying and cleaning of the floor, as well as a longer life for the suction motor.

To clean the collection filter tray, do the following:

1. Grasp the handle (1) and turn the recovery tank's lid (2) to its maintenance position (**Fig.1**).

**ATTENTION:** to prevent the lid from turning, insert the retainer (3) into the slot (4) (**Fig.2**).

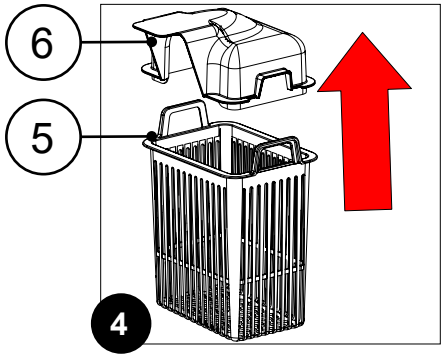
2. Remove the COLLECTION FILTER TRAY (5) (**Fig.3**).




3. Remove the COLLECTION FILTER TRAY LID (6) (**Fig.4**).
4. Clean the collection filter tray and lid under a jet of running water.

**N.B.:** Use a spatula or a brush with medium hardness bristles to eliminate any dirt that is particularly difficult to remove.

5. Use a cloth to dry the collection filter tray and lid, and place them back inside the recovery tank.
6. Repeat the operations in reverse order to reassemble all the parts.



## CLEANING THE WAVE PROTECTION TRAY

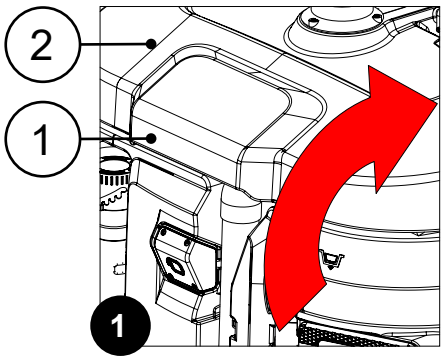
The thorough cleaning of the wave protection tray ensures better functionality and a longer working life for the suction motor.

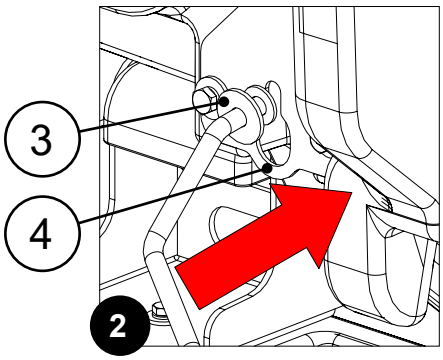
To clean the wave protection tray, do the following:

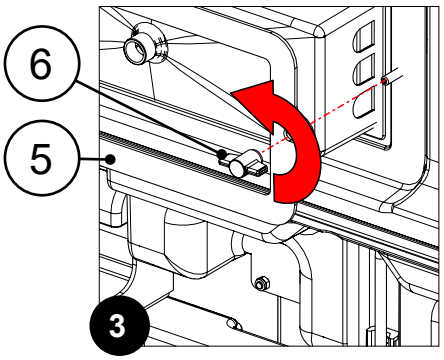
1. Grasp the handle (1) and turn the recovery tank's lid (2) to its maintenance position (**Fig.1**).

**ATTENTION:** to prevent the lid from turning, insert the retainer (3) into the slot (4) (**Fig.2**).

2. Remove the wave protection tray SUPPORT (5), remembering to unscrew the knobs (6) before removing the support (**Fig.3**).



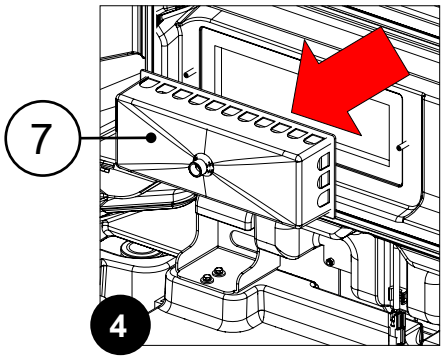




3. Remove the Wave protection tray (7) (**Fig.4**).
4. Clean the wave protection tray under a stream of running water.

**N.B.:** Use a spatula or a brush with medium hardness bristles to eliminate any dirt that is particularly difficult to remove.

5. Use a cloth to dry the wave protection tray, and place it back inside the recovery tank.
6. Repeat the operations in reverse order to reassemble all the parts.



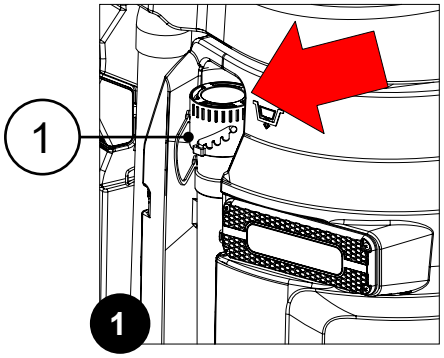
## DRAINING THE RECOVERY TANK

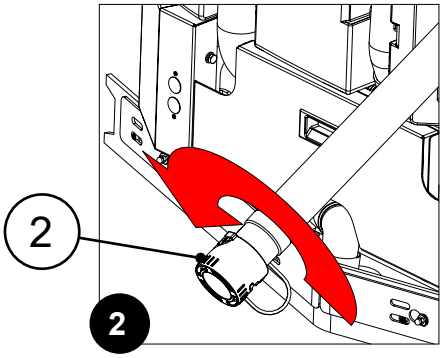
Thoroughly cleaning the recovery tank will prevent unpleasant odours from forming inside. To clean the tank, do the following:

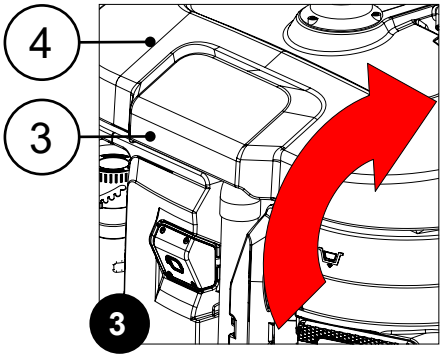
1. Remove the recovery tank drain hose (1) from the retainers (**Fig.1**).
2. Place the hose over the drain pan.

**N.B.:** discharges into the subsoil resulting from any work activities must only be carried out in designated areas; they must also be performed in compliance with the environmental regulations in force in the machine's country of use.

3. Gradually unscrew the cap (2) on the drainage hose (**Fig.2**).
4. Grasp the handle (3) and turn the recovery tank's lid (4) to its maintenance position (**Fig.3**).



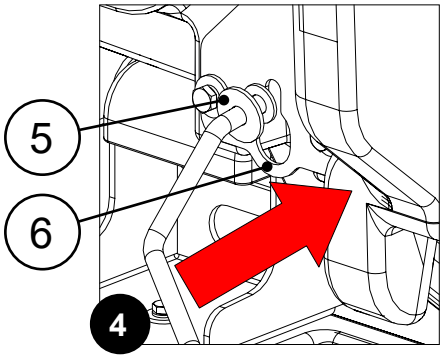



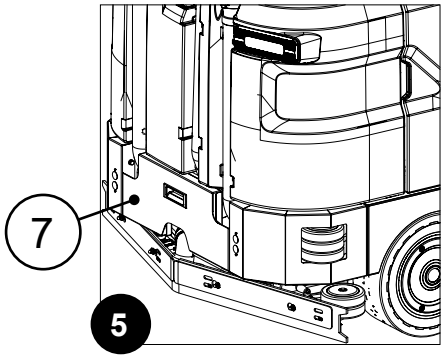



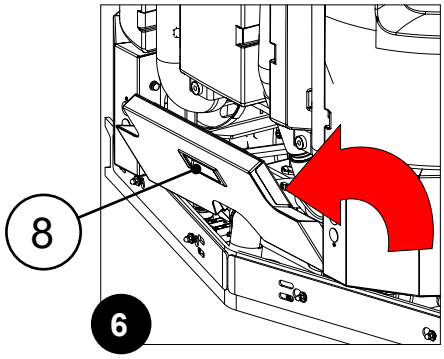

**ATTENTION:** to prevent the lid from turning, insert the retainer (5) into the slot (6) (**Fig.4**).

5. If necessary use the inspection footboard (7) at the back of the machine (**Fig.5**).

**N.B.:** to open the inspection footboard, grasp the handle (8), and rotate the footboard towards the outside of the machine (**Fig. 6**).



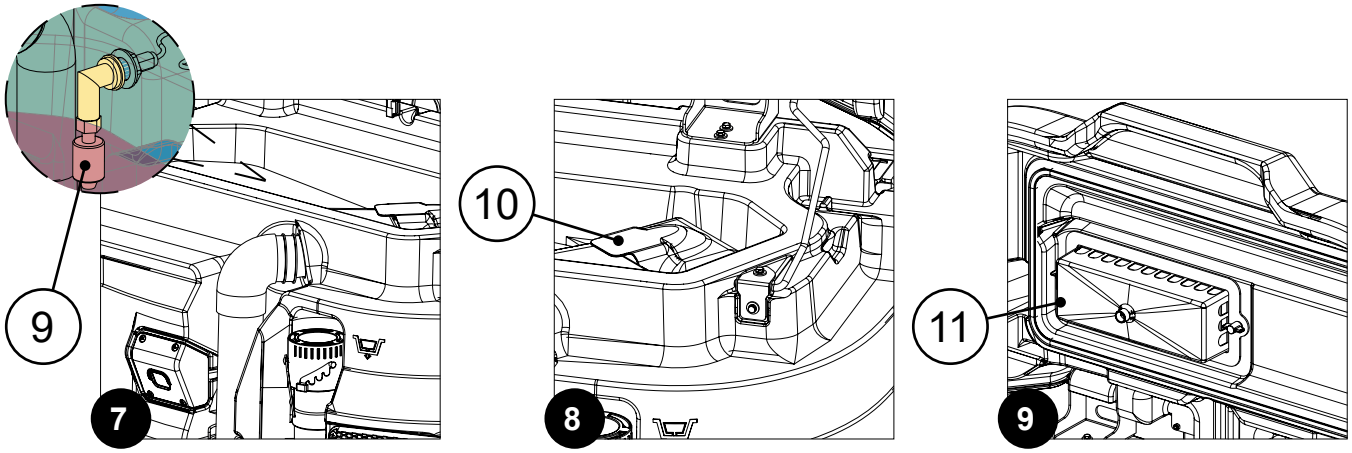

6. Rinse the inside of the recovery tank with a jet of running water.

**N.B.:** If necessary, use a spatula to remove any sludge that may have accumulated at the bottom of the tank.

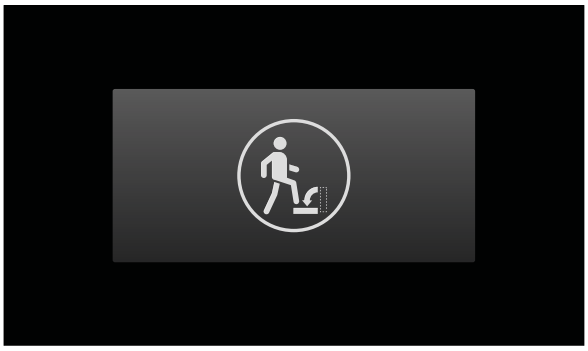
**N.B.:** it is possible to clean inside the tank using the optional recovery tank cleaning spray gun kit, if the machine does not have one see “RECOVERY TANK CLEANING SPRAY GUN (PRO VERSIONS)” on page 117 or “RECOVERY TANK CLEANING SPRAY GUN (PLUS VERSIONS)” on page 125.

7. Gently rinse the float switch (9) inside the recovery tank (**Fig.7**).
8. Clean the collection tray (10) (**Fig.8**), see “CLEANING THE COLLECTION FILTER TRAY” on page 144.

9. Clean the wave protection tray (11) (**Fig.9**), see “CLEANING THE WAVE PROTECTION TRAY” on page 145.




10. Repeat the operations in reverse order to reassemble all the parts.



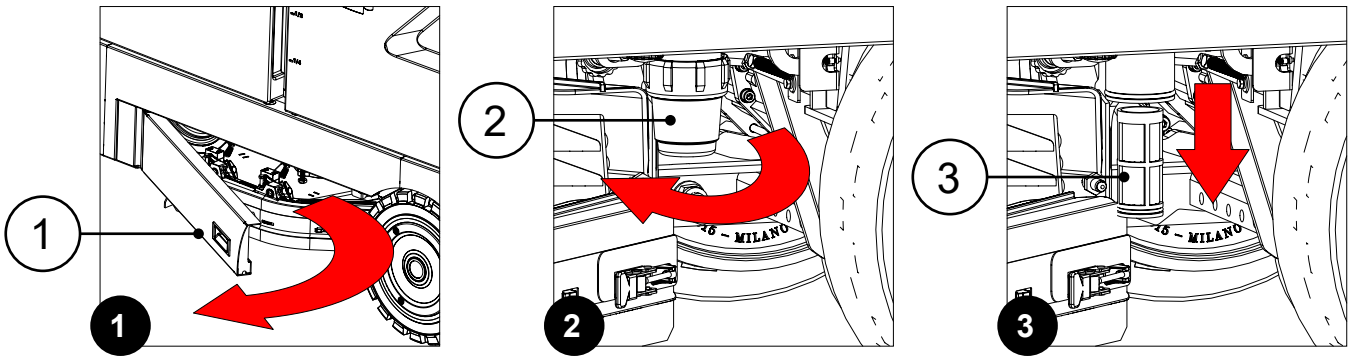
**N.B.:** if the inspection footboard (7) is left open, the alarm message shown to the side will appear on the control display once the machine has been turned on (applies for PLUS versions).

**N.B.:** with the inspection footboard open (7), the machine's functions will remain blocked until the footboard is closed.

## CLEANING THE WATER SYSTEM FILTER

The thorough cleaning of the water system filter guarantees a more effective delivery to the brushes by the detergent solution delivery system, which in turn will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance. To clean the water system filter, do the following:

1. Open the inspection lid (1) (**Fig.1**).
2. Remove the cap from the filter body (2) (**Fig.2**).
3. Remove the filter cartridge from the filter body (3) (**Fig.3**).



4. Rinse the filter cartridge under a jet of water, and use a brush to eliminate any impurities, if necessary.
5. Once the filter cartridge is clean, repeat the operations in the opposite order to reassemble all the parts.

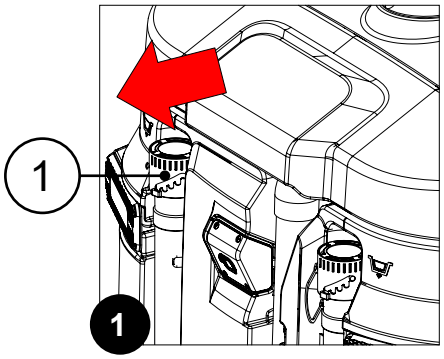
## EMPTYING THE SOLUTION TANK

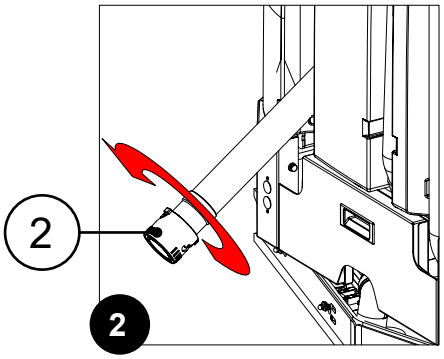
Thoroughly cleaning the solution tank will prevent unpleasant odours from forming inside. To clean the tank, do the following:

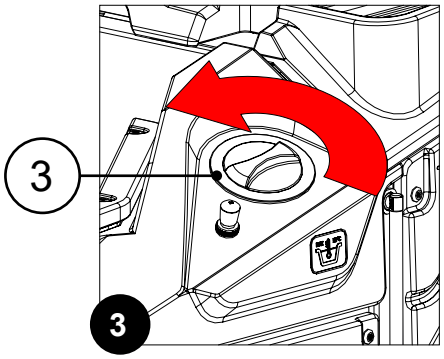
1. Remove the solution tank drain hose (1) from the retainers (**Fig.1**).
2. Place the hose over the drain pan.

**N.B.:** discharges into the subsoil resulting from any work activities must only be carried out in designated areas; they must also be performed in compliance with the environmental regulations in force in the machine's country of use.

3. Gradually unscrew the cap (2) on the drainage hose (**Fig.2**).
4. Remove the filler cap (3) (**Fig.3**).



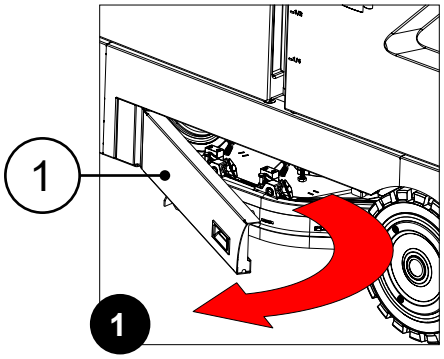

5. Clean the inside of the tank with a jet of running water.
6. Once the work has been completed, repeat the operations in reverse order to reassemble all the parts.

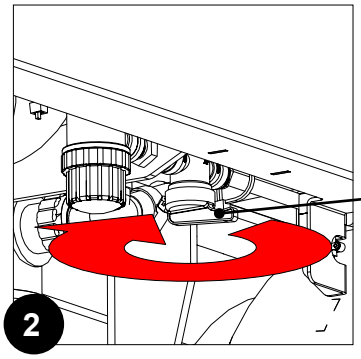
## CLEANING THE FILTER ON THE AUTOMATIC CHEMICAL DETERGENT MANAGEMENT SYSTEM (OPTIONAL)

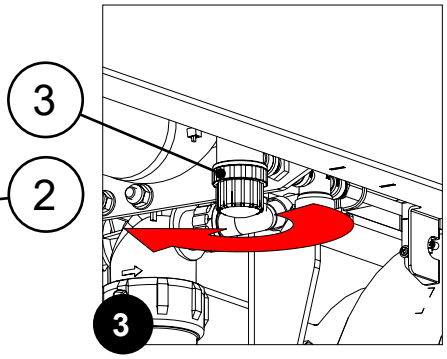
The thorough cleaning of the automatic chemical detergent management system filter guarantees a more effective delivery to the brushes by the detergent solution delivery system, which in turn will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance.

To clean the automatic chemical detergent management system filter, do the following:

1. Open the left inspection lid (1) (**Fig.1**).
2. Close the automatic detergent management system's outlet flow tap by turning the lever (2) on the tap's body clockwise (**Fig.2**).
3. Remove the cap from the filter body (3) (**Fig.3**).



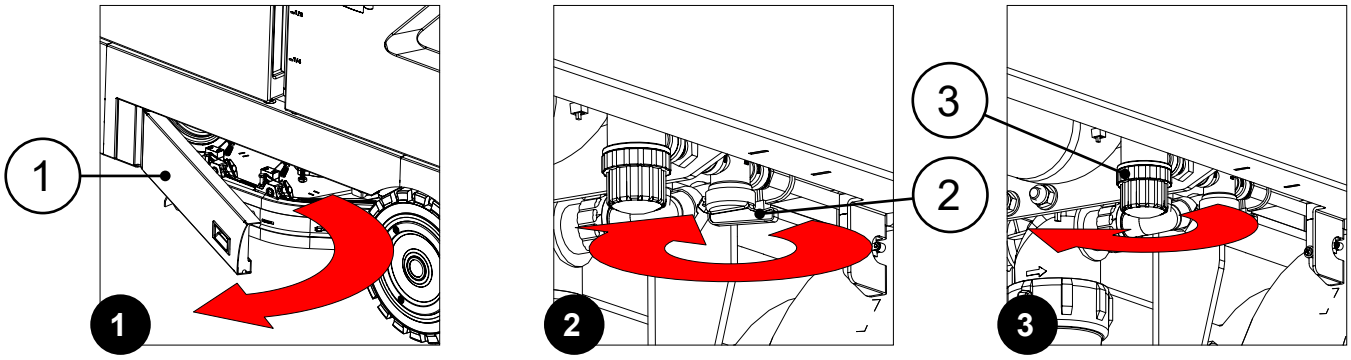



4. Remove the filter cartridge from the filter body.
5. Rinse the filter cartridge under a jet of water, and use a brush to eliminate any impurities, if necessary.
6. Once the filter cartridge is clean, repeat the operations in the opposite order to reassemble all the parts.

## CHEMICAL DETERGENT TANK EMPTYING (OPTIONAL)

Thoroughly cleaning the chemical detergent tank will prevent unpleasant odours from forming inside. To clean the tank, do the following:

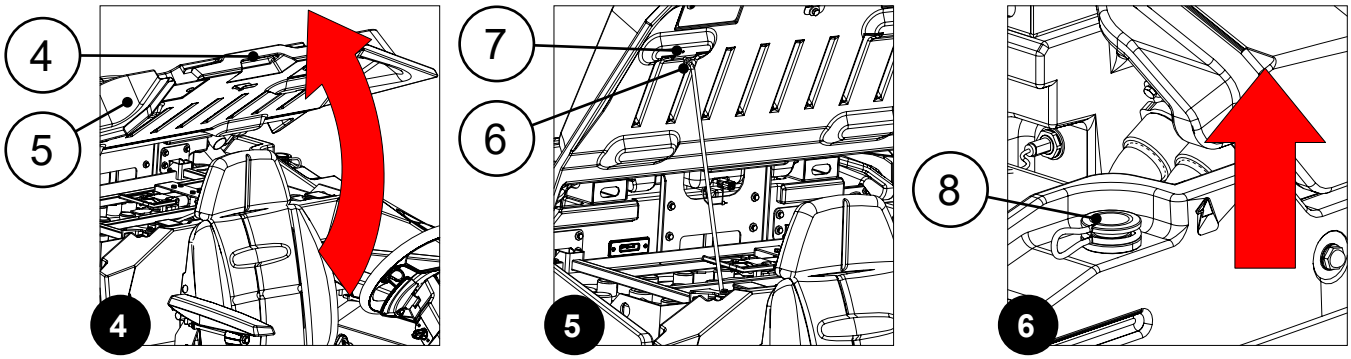
1. Open the left inspection lid (1) (**Fig.1**).
2. Close the automatic detergent management system's outlet flow tap by turning the lever (2) on the tap's body clockwise (**Fig.2**).
3. Remove the cap from the filter body (3) (**Fig.3**).




4. Remove the filter cartridge from the filter body.
5. Grasp the handle (4) and turn the battery compartment lid (5) to its maintenance position (**Fig.4**).

**ATTENTION:** to prevent the lid from turning, insert the retainer (6) into the slot (7) (**Fig.5**).

6. Remove the cap (8) on the top of the chemical detergent tank (**Fig. 6**).




7. Open the automatic detergent management system's outlet flow tap by turning the lever (2) on the tap's body anti-clockwise.
8. Clean the inside of the chemical detergent tank with a jet of running water.
9. Once the work has been completed, repeat the operations in reverse order to reassemble all the parts.

## CLEANING THE FILTER ON THE DETERGENT SOLUTION RECYCLING SYSTEM (OPTIONAL)

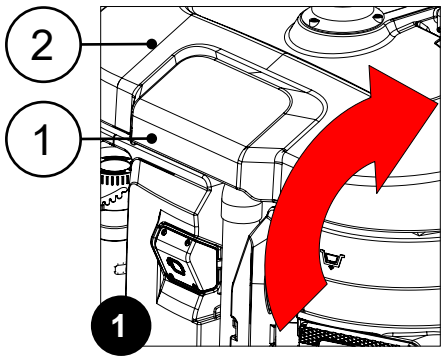
The thorough cleaning of the detergent solution recycling system filter guarantees a more effective delivery to the brushes by the detergent solution delivery system, which in turn will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance.

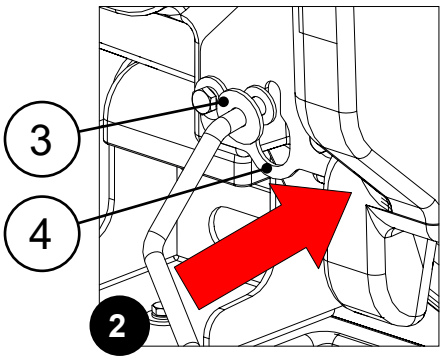
To clean the detergent solution recycling system filter, do the following:

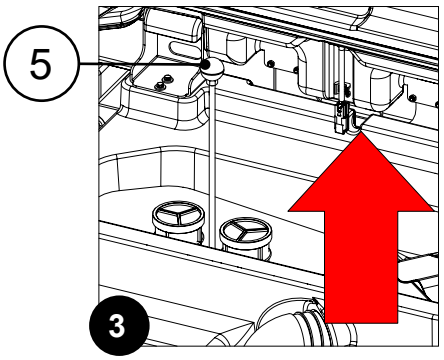
1. Grasp the handle (1) and turn the recovery tank's lid (2) to its maintenance position (**Fig.1**).

**ATTENTION:** to prevent the lid from turning, insert the retainer (3) into the slot (4) (**Fig.2**).

2. Remove the DETERGENT SOLUTION RECYCLING SYSTEM FILTER SUPPORT (5) (**Fig.3**).




3. Clean the two filters under a stream of running water.

**N.B.:** Use a spatula or a brush with medium hardness bristles to eliminate any dirt that is particularly difficult to remove.

4. Repeat the operations in reverse order to reassemble all the parts.

# EXTRAORDINARY MAINTENANCE

## REPLACING THE BRUSH HEAD BRUSHES OR DRIVE DISCS

An intact brush will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance.

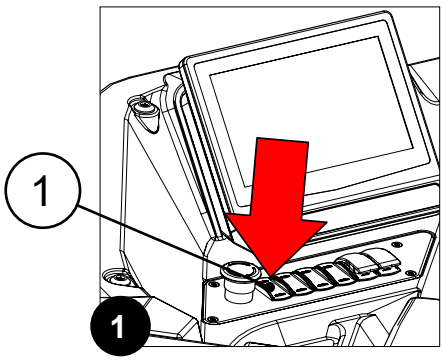
**To replace the brush or the drive disc on the brush head, using the brush uncoupling button, do the following:**

1. Activate the TRANSFER working mode, see “TRANSFER WORKING MODE (PRO VERSION)” on page 72 or “TRANSFER WORKING MODE (PLUS VERSIONS)” on page 78.
2. Take the machine to the maintenance area.

**WARNING:** the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Press the brush uncoupling button (1) on the control panel two times (**Fig.1**).




**ATTENTION:** during this operation, check there are no people or objects near the machine.

4. Replace the worn brush with the new one, see the “ASSEMBLING THE BRUSH HEAD BRUSHES OR DRIVE DISCS” on page 49.

**To replace the brush or the drive disc on the brush head, not using the brush uncoupling button, do the following:**

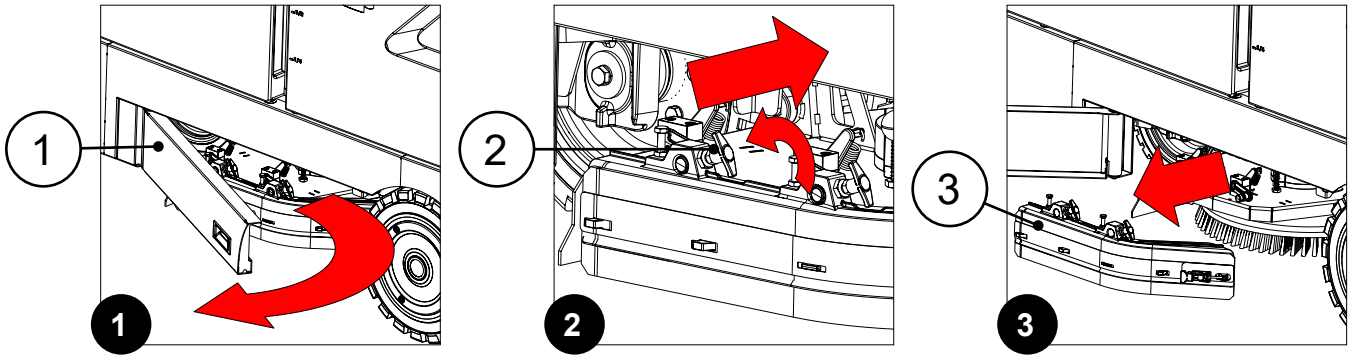
1. Activate the TRANSFER working mode, see “TRANSFER WORKING MODE (PRO VERSION)” on page 72 or “TRANSFER WORKING MODE (PLUS VERSIONS)” on page 78.
2. Take the machine to the maintenance area.

**WARNING:** the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

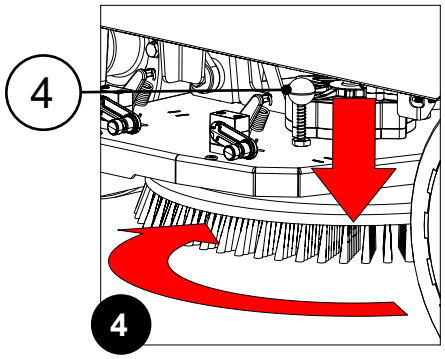
**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Perform all the operations required to secure the machine. See “MACHINE SAFETY” on page 35.
4. Open the left inspection lid (1) (**Fig.1**).

5. Set the fastening anchors (2) on the lateral splash guard support to their maintenance position, move them upwards, and turn them a quarter turn clockwise (**Fig.2**).
6. Remove the left side splash guard support (3) located in the brush head (**Fig.3**).




7. Keeping the pin (4) pressed, turn the brush clockwise until it is locked (**Fig.4**).




**N.B.:** Turn the brush quickly and firmly until the button is pushed towards the outside of the coupling spring until it is uncoupled..

8. Replace the worn brush with the new one, see the “ASSEMBLING THE BRUSH HEAD BRUSHES OR DRIVE DISCS” on page 49.
9. Close the left inspection lid.
10. Repeat the operations just carried out for the right lateral splash guard support as well.

## REPLACING THE BRUSH HEAD SIDE SPLASH GUARDS

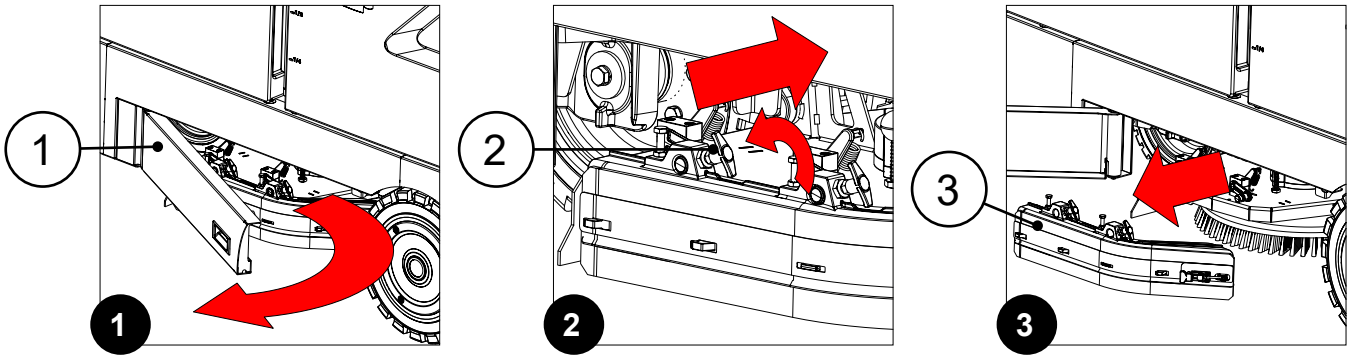
Intact lateral splash guards will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance. To replace the lateral splash guards, do the following:

1. Take the machine to the maintenance area.

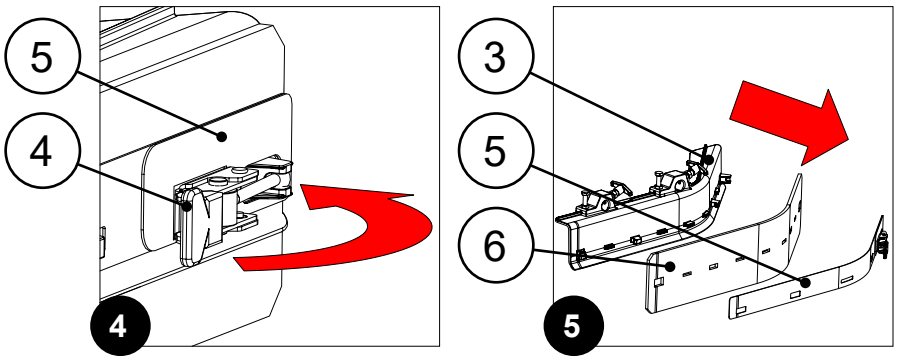
**WARNING:** the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

2. Perform all the operations required to secure the machine. See “MACHINE SAFETY” on page 35.
3. Open the left inspection lid (1) (**Fig.1**).
4. Set the fastening anchors (2) on the side splash guard support to their maintenance position, move them upwards, and turn them a quarter turn clockwise (**Fig.2**).
5. Remove the left side splash guard support (3) located in the brush head (**Fig.3**).




6. Release the retainer (4) on the rubber blade compression plate (5) (**Fig.4**).
7. Remove the rubber blade compression plate (5) and the splash guard (6) from the splash guard support (3) (**Fig.5**).
8. Replace the worn splash guard with the new one.
9. Position the splash guard (6) on the splash guard support (3) and secure it with the rubber blade compression plate (5).
10. Lock the rubber blade compression plate in place by fastening its retainer (4).




11. Insert the left side splash guard support in the brush head, see “ASSEMBLY OF THE BRUSH HEAD SIDE SPLASH GUARD SUPPORT” on page 53.
12. Close the left inspection lid.
13. Repeat the operations just carried out for the right lateral splash guard support as well.

## REPLACING THE SIDE BRUSH HEAD BRUSH OR DRIVE DISC (OPTIONAL)

An intact brush will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance. To replace the lateral brush, do the following:

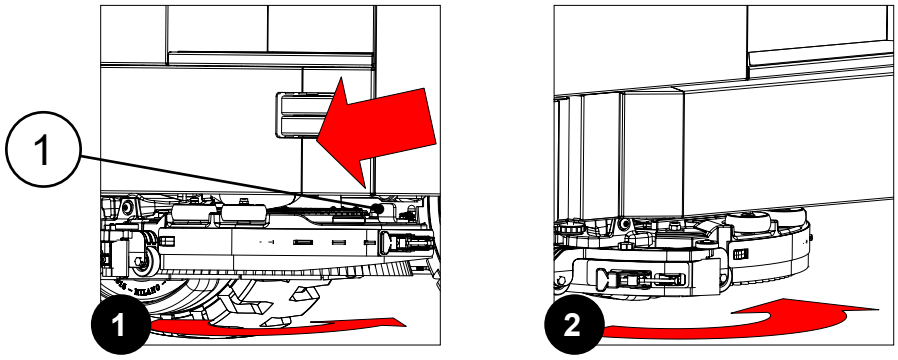
1. Take the machine to the maintenance area.

**WARNING:** the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

2. Perform all the operations required to secure the machine. See “MACHINE SAFETY” on page 35.
3. Moving the brush release lever (1), rotate the brush anti-clockwise until it stops (**Fig.1**).

**N.B.:** turn the brush quickly and firmly so as to push the button on the retainer spring outward until it releases (**Fig.2**).




4. Replace the worn brush with the new one, see the “ASSEMBLY OF THE SIDE BRUSH HEAD BRUSH OR DRIVE DISC (OPTIONAL)” on page 52.

## REPLACING THE SIDE BRUSH HEAD SPLASH GUARD RUBBER BLADE (OPTIONAL)

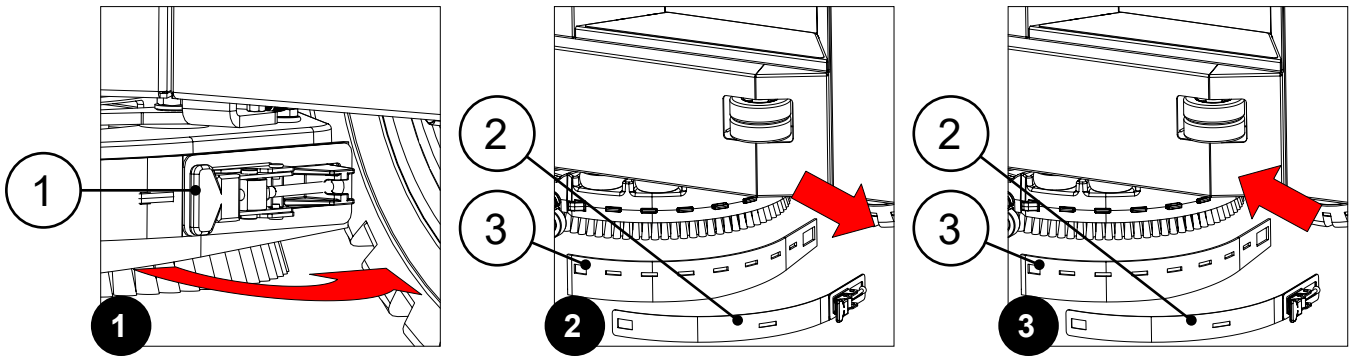
An intact splash guard will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance. To replace the lateral brush head splash guard, do the following:

1. Take the machine to the maintenance area.

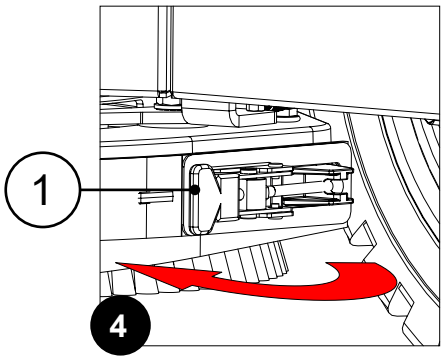
**WARNING:** the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

2. Perform all the operations required to secure the machine. See “MACHINE SAFETY” on page 35.
3. Release the retainer (1) on the rubber blade compression plate (2) (**Fig.1**).
4. Remove the rubber blade compression plate (2) and the splash guard from the splash guard support (3) (**Fig.2**).
5. Replace the worn splash guard with the new one.
6. Position the splash guard (3) on the splash guard support and secure it with the rubber blade compression plate (2) (**Fig.3**).



7. Lock the rubber blade compression plate in place by fastening its retainer (1) (**Fig.4**).




## REPLACING THE SQUEEGEE RUBBERS

Intact squeegee rubber blades will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance.

To replace the squeegee rubber blades, do the following:

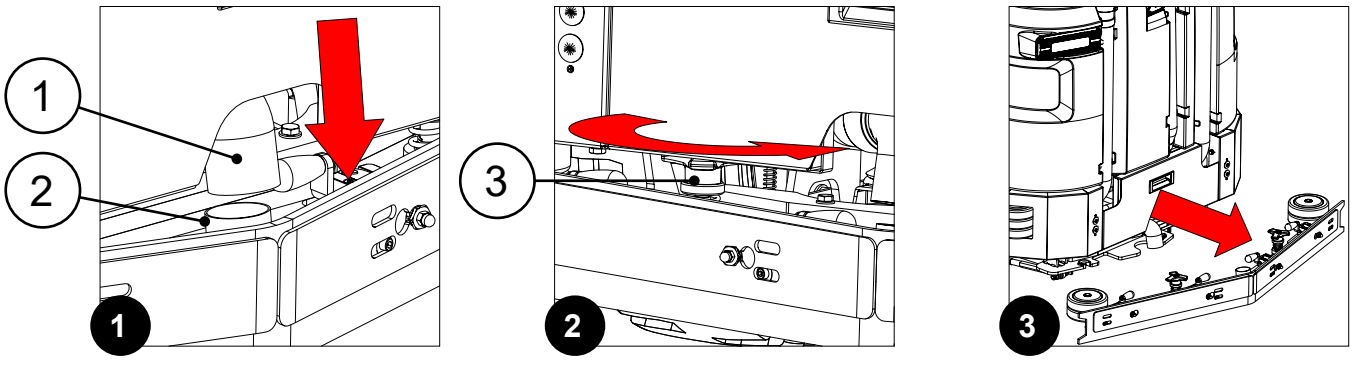
1. Take the machine to the maintenance area.

**WARNING:** the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

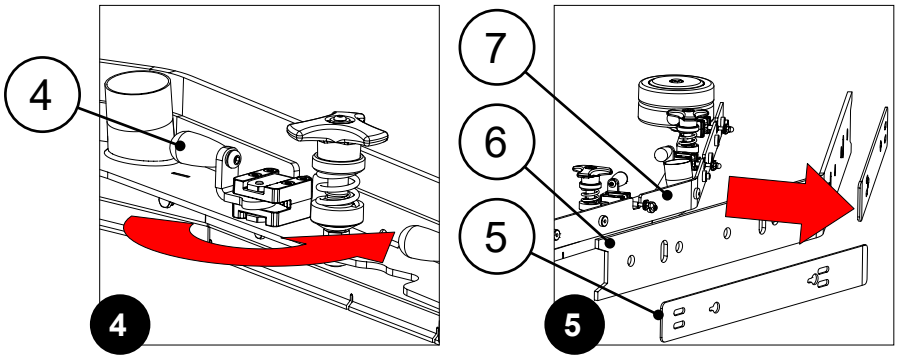
2. Perform all the operations required to secure the machine. See “MACHINE SAFETY” on page 35.
3. Remove the suction hose (1) from the sleeve (2) in the squeegee (**Fig.1**).
4. Unscrew the knobs (3) in the squeegee pre-assembly (**Fig.2**).
5. Extract the squeegee body the support on the machine (**Fig.3**).

**N.B.:** it is advised to replace both squeegee rubber blades in order to ensure good results when drying the floor.



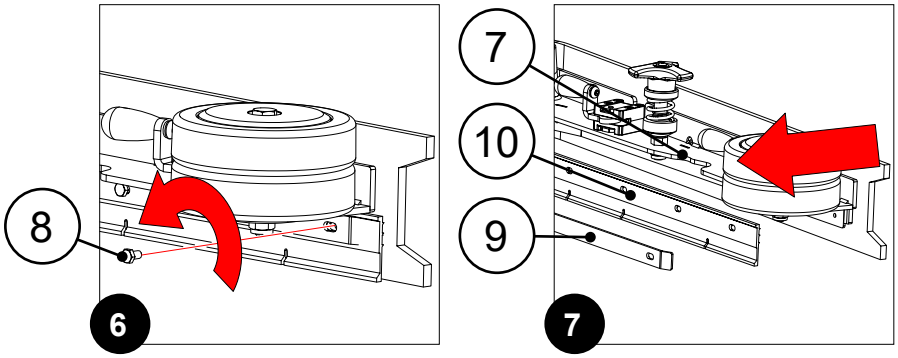

**To replace the rear rubber blade, do the following:**

- Release the squeegee retainer (4) (**Fig.4**).
- Remove the rubber blade compression plate (5) and the rear rubber blade (6) from the squeegee (7) (**Fig.5**).
- Replace the worn rear rubber blade with the new one.
- Position the rear rubber blade in the squeegee and secure it in place using the rubber blade compression plate (5).
- Block the rubber blade compression plate (5) by fixing the squeegee retainer (4).




**To replace the front rubber blade, do the following:**

- Using the appropriate tools, not supplied along with the machine, unscrew the screws (8) securing the rubber blade compression plate (9) to the squeegee (7) (**Fig.6**).
- Remove the rubber blade compression plate (9) and the front rubber blade (10) from the squeegee (7) (**Fig.7**).
- Replace the worn front rubber blade with the new one.
- Position the front rubber blade (10) in the squeegee (7) and secure it in place using the rubber blade compression plate (9).
- Secure the rubber blade compression plate in place by inserting and tightening the screws (8) previously removed.




6. Insert the squeegee in the machine, see “ASSEMBLING THE SQUEEGEE” on page 54.

**N.B.:** check the adjustment of the rubber blades in the squeegee, if necessary see “ADJUSTING THE SQUEEGEE RUBBER BLADES” on page 158.

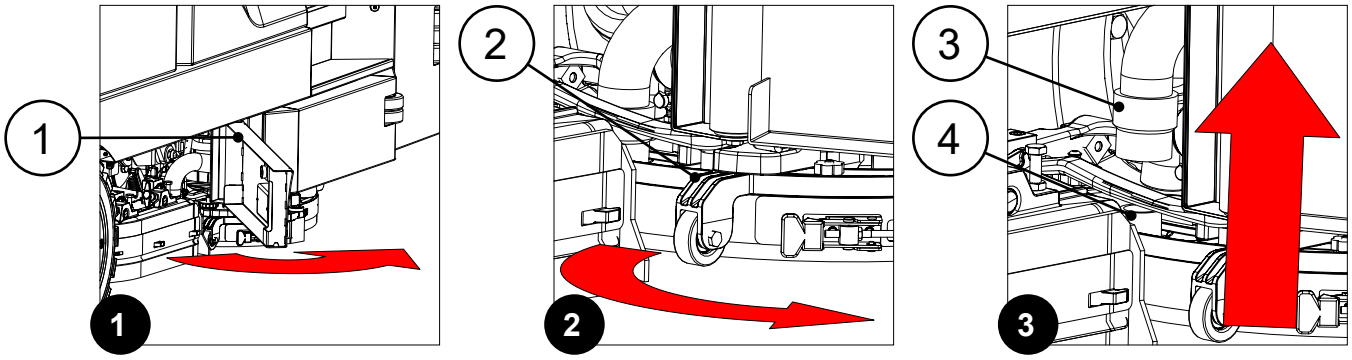
**N.B.:** it is advised to replace both squeegee rubber blades in order to ensure good results when drying the floor.

## REPLACING THE SIDE BRUSH HEAD SQUEEGEE RUBBER BLADES (OPTIONAL)

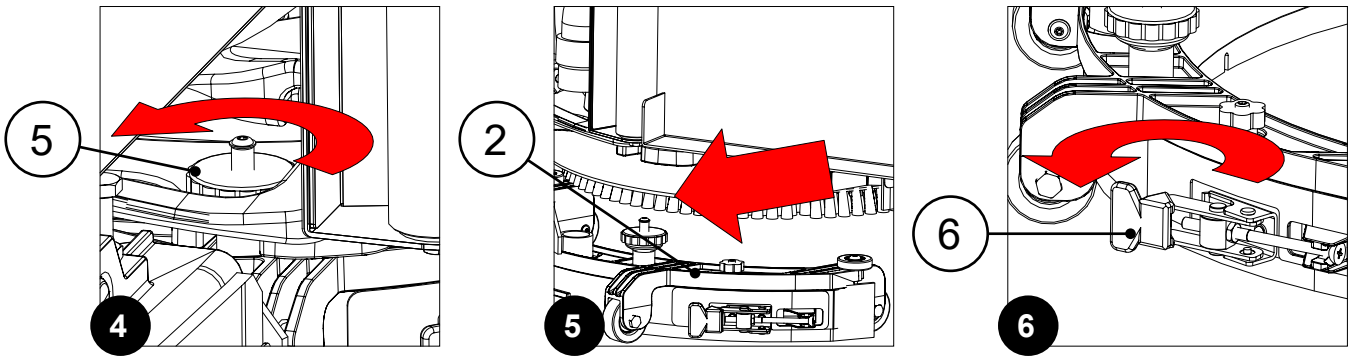
Intact side brush head squeegee rubber blades will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance.

To replace the side brush head squeegee rubber blades, do the following:

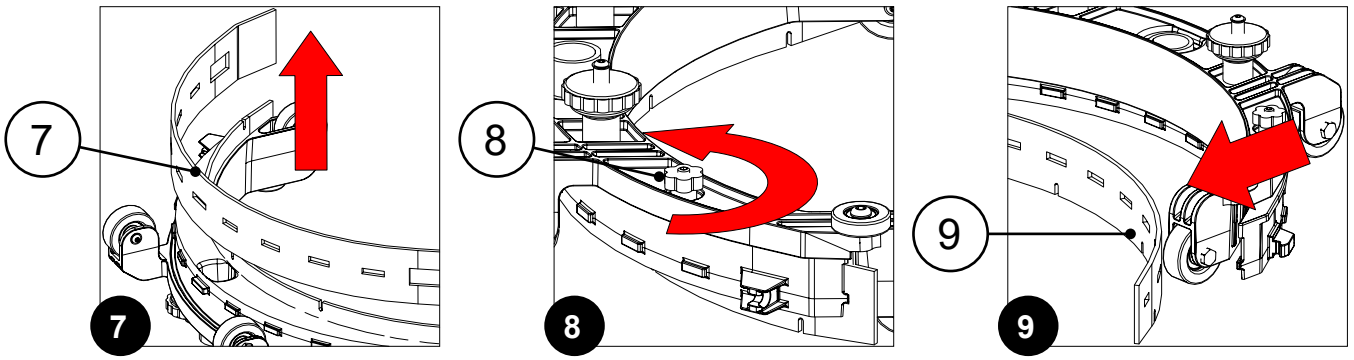
1. Open the right inspection lid (1) (**Fig.1**).
2. Turn the squeegee support (2) anti-clockwise (**Fig.2**).
3. Remove the squeegee vacuum hose (3) from the nozzle (4) in the squeegee (**Fig.3**).




4. Completely unscrew the knobs (5) in the squeegee pre-assembly (**Fig.4**).
5. Remove the squeegee pre-assembly (2) from the slits in the squeegee connector (**Fig. 5**).
6. Remove the rear rubber blade compression plate, and release the retainer (6) at the rear of the squeegee (**Fig.6**).




7. Remove the rear rubber blade (7) from the squeegee (**Fig.7**) and replace it with the new one.
8. Completely unscrew the knobs (8) in the squeegee pre-assembly (**Fig.8**).
9. Remove the front rubber blade (9) from the squeegee body's interior (**Fig.9**) and replace it with the new one.




10. Repeat the operations in reverse order to reassemble all the parts.

**N.B.:** it is advised to replace both squeegee rubber blades in order to ensure good results when drying the floor.

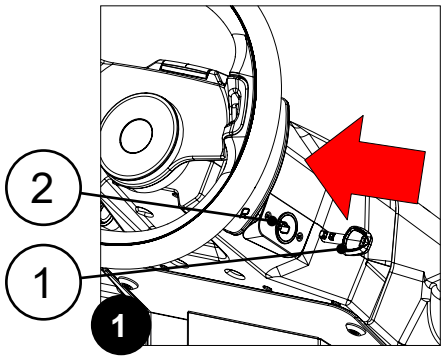
# ADJUSTMENT INTERVENTIONS

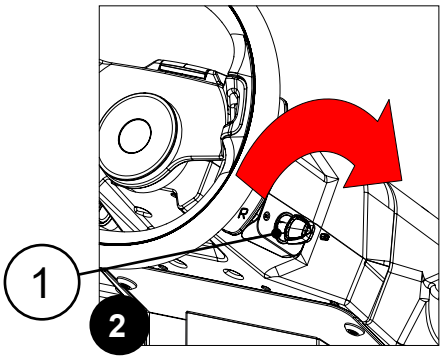
## ADJUSTING THE SQUEEGEE RUBBER BLADES

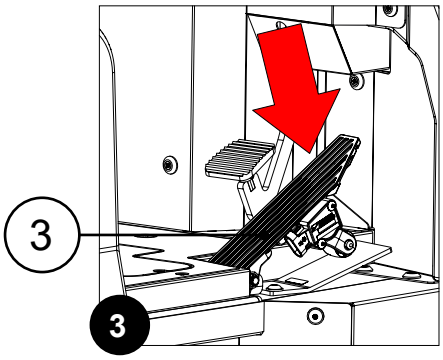
The precise adjustment of the squeegee rubber blades will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance.

To regulate the squeegee rubber proceed as follows:

1. Sit on the driver's seat.
2. Insert the key (1) into the slot (2) on the right side of the column (**Fig.1**).
3. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.2**).
4. The machine is now operating with the ECO working program TRANSFER working mode.
5. Activate the SCRUBBING MACHINE working mode, see "TRANSFER WORKING MODE (PRO VERSION)" on page 72 or "TRANSFER WORKING MODE (PLUS VERSIONS)" on page 78.
6. Press the drive pedal (3) (**Fig.3**) to begin moving the machine.



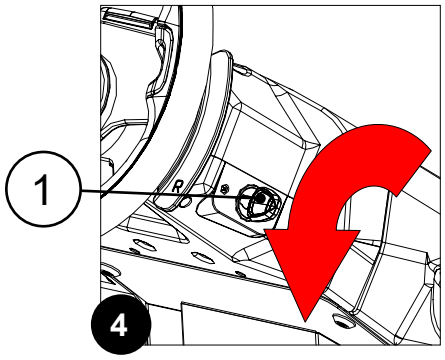

7. Once the brush head and squeegee are in their working positions, set the main switch to its "0" position by turning the key (1) a quarter of a turn anti-clockwise (**Fig.4**).
8. Remove the key from the instrument panel.
9. Get off the machine.

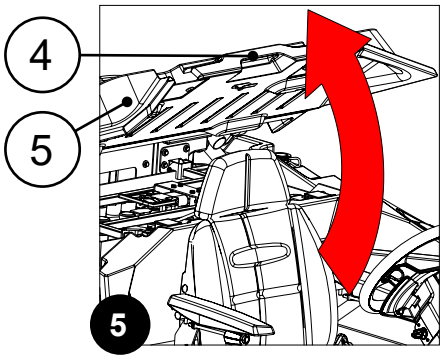
**CAUTION:** do not position your foot above the lateral brush head lid while the machine is descending.

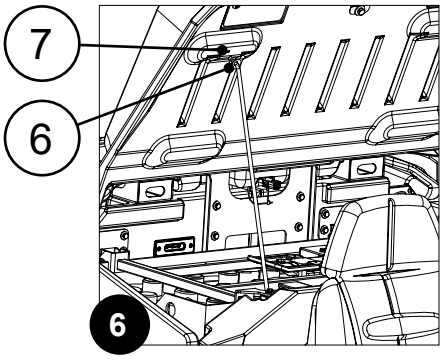
10. Grasp the handle (4) and turn the battery compartment lid (5) to its maintenance position (**Fig.5**).

**ATTENTION:** to prevent the lid from turning, insert the retainer (6) into the slot (7) (**Fig.6**).

**ATTENTION:** the following operations must be carried out by qualified personnel. Incorrect operations could result in machine malfunctions.



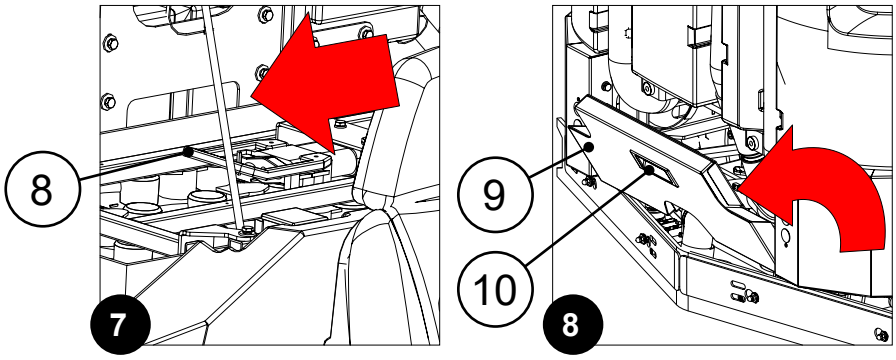



11. Disconnect the machine's electrical system wiring connector (8) from the connector on the power cable coming from the battery box (**Fig. 7**).
12. Grasp the battery compartment lid and turn it to its working position.

**N.B.:** release the retainer before turning the lid.

**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

13. Stand at the back of the machine.
14. Open the inspection platform (9) (**Fig. 8**), grasp the handle (10), and rotate the platform towards the outside of the machine.




**Adjusting the height of the squeegee:**

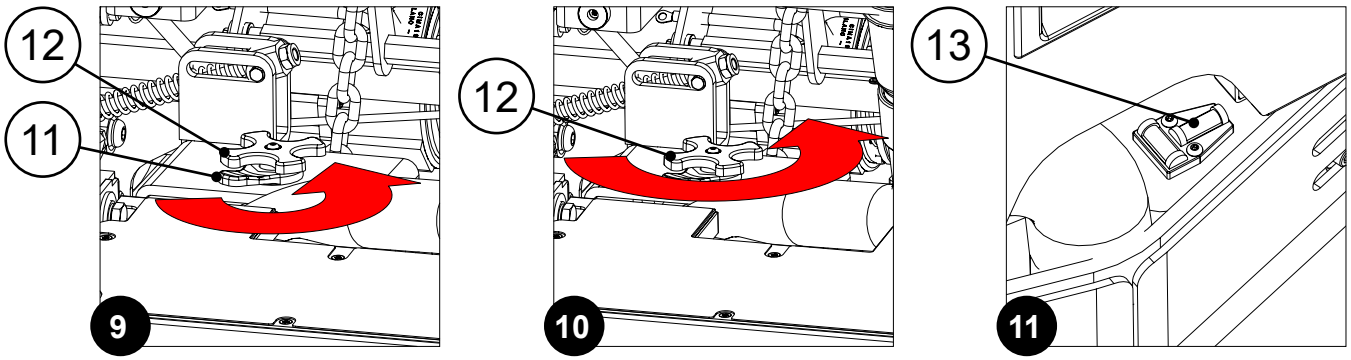
- Release the stopper lever (11) for the squeegee height adjustment knob (12) (**Fig.9**).
- Adjust the height of the rubber blade in relation to the floor by loosening or tightening the knobs (12) (**Fig.10**).

**N.B.: Fig.10** indicates the rotation direction for decreasing the distance between the squeegee support and the floor. This distance can be increased by turning it in the opposite direction.

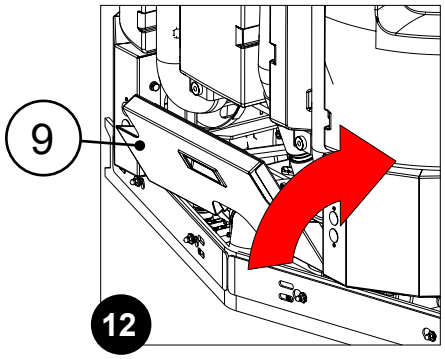
**N.B.:** By decreasing the distance between the squeegee support and the floor, the rubber blades present in the squeegee move closer to the floor.

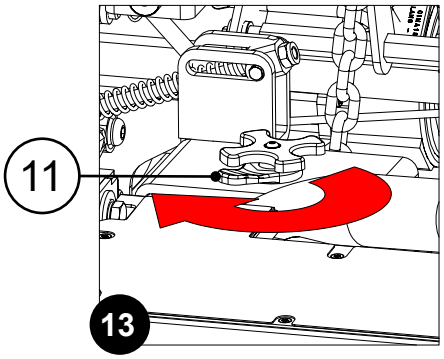
**N.B.:** The right-hand and left-hand knobs must be rotated the same number of times, so that the squeegee is parallel to the floor when it is working.

**N.B.:** visually check for proper adjustment by looking at the horizontal level gauge (13) on the squeegee (**Fig.11**). To see the horizontal level gauge (13) close the footboard (9) (**Fig.12**).



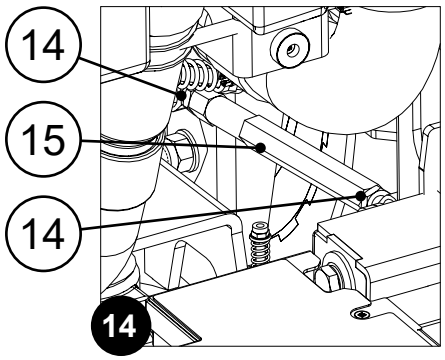

- Once the adjustment has been completed, tighten the retainer lever (11) (**Fig.13**).

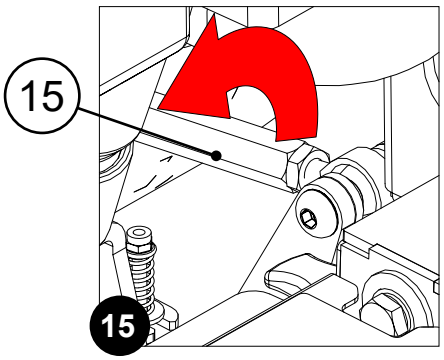


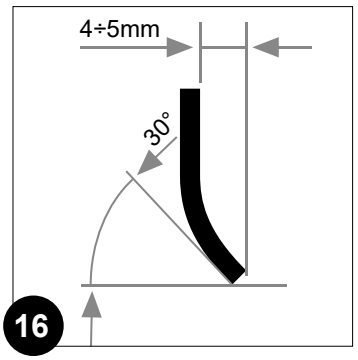




**Adjusting the tilt of the squeegee:**

- Using the appropriate tools, not included with the machine, loosen the retainer nuts (14) for the squeegee tilt adjustment tie-rod (15) (**Fig.14**).
- To adjust the inclination of the squeegee rubber blades with respect to the floor, tighten or loosen the tie-rod (15) (**Fig.15**) until the squeegee rubber blades are slanted towards the outside evenly along the entire length by about 30° with respect to the floor (**Fig.16**).



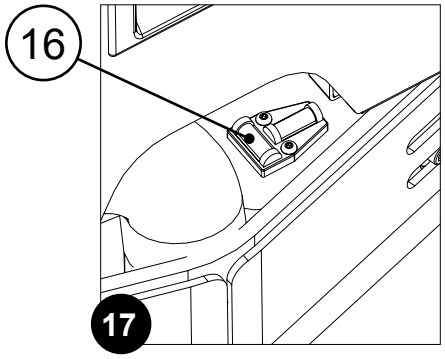




**N.B.: Fig.15** indicates the direction of rotation for tilting the squeegee towards the rear of the machine. Turn it in the opposite direction to rotate the squeegee towards the front of the machine.

**N.B.:** Check that the adjustment is correct by looking at the horizontal bubble gauge (16) on the squeegee (**Fig.17**).

- Once the adjustment has been completed, tighten the retainer nuts (14) (**Fig.14**).

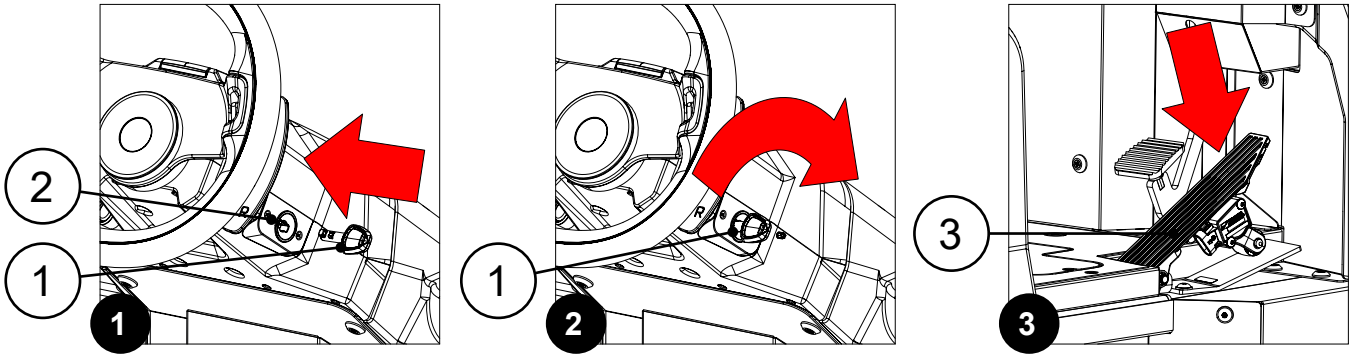


## BRUSH HEAD SIDE SPLASH GUARD ADJUSTMENT

If the side splash guards of the brush head are not positioned correctly with respect to the floor, they cannot convey the dirty detergent solution towards the squeegee, therefore the height of the splash guard needs to be adjusted.

This operation must be done with the brush head in the work position, proceeding as follows:

1. Sit on the driver's seat.
2. Insert the key (1) into the slot (2) on the right side of the column (**Fig.1**).
3. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.2**).
4. The machine is now operating with the ECO working program TRANSFER working mode.
5. Activate the SCRUBBING MACHINE working mode, see "TRANSFER WORKING MODE (PRO VERSION)" on page 72 or "TRANSFER WORKING MODE (PLUS VERSIONS)" on page 78.
6. Press the drive pedal (3) (**Fig.3**) to begin moving the machine.

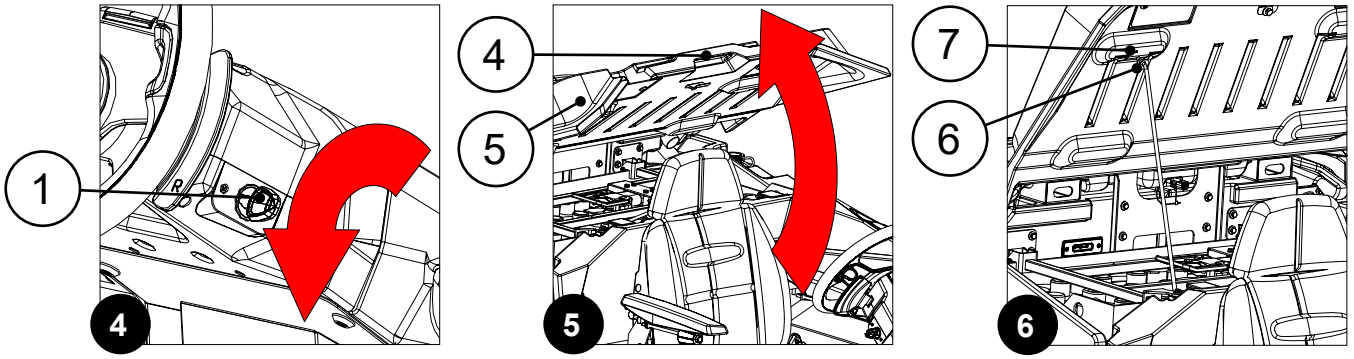



7. Once the brush head and squeegee are in their working positions, set the main switch to its "0" position by turning the key (1) a quarter of a turn anti-clockwise (**Fig.4**).
8. Remove the key from the instrument panel.
9. Get off the machine.

**CAUTION:** do not position your foot above the lateral brush head lid while the machine is descending.

10. Grasp the handle (4) and turn the battery compartment lid (5) to its maintenance position (**Fig.5**).

**ATTENTION:** to prevent the lid from turning, insert the retainer (6) into the slot (7) (**Fig.6**).




**ATTENTION:** the following operations must be carried out by qualified personnel. Incorrect operations could result in machine malfunctions.

11. Disconnect the machine's electrical system wiring connector (8) from the connector on the power cable coming from the battery box (**Fig. 7**).
12. Grasp the battery compartment lid and turn it to its working position.

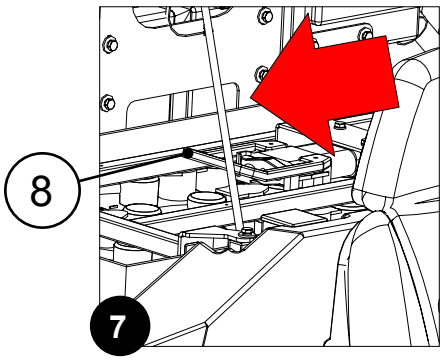
**N.B.:** release the retainer before turning the lid.

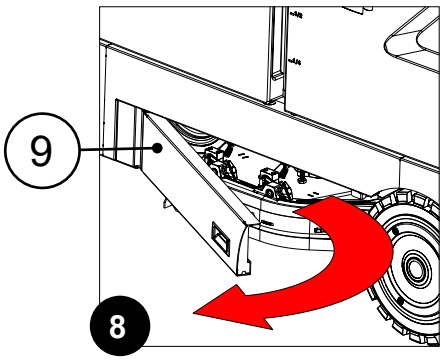
**CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

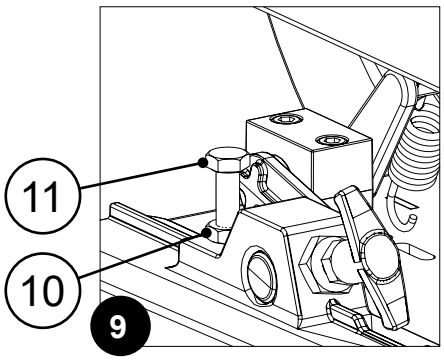
13. Open the left inspection lid (9) (**Fig.8**).
14. Using the appropriate tools, not included along with the machine, loosen the retainer nut (10) for the adjustment screw (11) (**Fig.9**).
15. By tightening or loosening the adjustment screw (11), adjust the height of the splash guard in relation to the floor until the splash guard's rubber blade is slanted outwards to the same degree along its entire length, at an angle of about 30° in relation to the floor.

**N.B.:** Both the front and rear of the splash guard need to be at the same height off the floor.

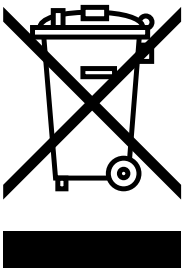
16. When finished, repeat the operations just carried out for the right lateral splash guard support as well.



# DISPOSAL



Fimap is committed to creating its products by respecting the environment, investing in the development of sustainable solutions and technologies, seeking materials that can easily be recycled, and ensuring that the entire production process has a low environmental impact.

At the end of the machine's life cycle, the Fimap provides the RECYCLING MANUAL (to be downloaded from the link https://www.fimap.com/it/fimap/ambiente/33/riciclabilita.html) to supply some simple information on the methods for disposing of the materials that make up your scrubbing machine.
Before proceeding with disposal, it is essential to contact your nearest authorised collection centres directly, in accordance with the legislation in force in the country where the machine is used.

# CHOOSING AND USING BRUSHES

All the brushes are comprised of a body to which the various tufts of bristles are fixed.

The brush bodies can be made of the following materials:

- plastic
- cardboard
- wood

**N.B.:** the plastic brush body guarantees greater reliability because it does not deform even if it gets wet.

**N.B.:** when the bristle starts to be consumed, it comes closer to the brush and increases its rigidity, losing its flexibility characteristics that allows it to collect and remove dirt. For this reason it is important to replace them at the right moment.

The most common types of bristles are:

- PPL bristles, for scrubbing delicate surfaces;
- coated bristles, for polishing waxes surfaces;
- nylon bristles, for heavy duty maintenance cleaning;
- tynex bristles, for removing thick dirt;
- metal bristles, for scrubbing irregular cement surfaces ;
- bristles in different types of materials, for very aggressive and polishing interventions.

Legend: $Ø_E$= external bristle diameter; $Ø_F$= external tank diameter (brush body)

**BRUSH HEAD BRUSH TYPE**

| CODE | QTY | Ø EXTERNAL | TYPE OF BRISTLE | Ø BRISTLES | NOTES |
|---|---|---|---|---|---|
| 405552 | 2 | 507 mm | PPL | 0,3 mm | BRUSH $Ø_E$ 507mm $Ø_F$ 485mm PPL 0.3mm (BLUE) |
| 405553 | 2 | 507 mm | PPL | 0,6 mm | BRUSH $Ø_E$ 507mm $Ø_F$ 485mm PPL 0.6mm (WHITE) |
| 405554 | 2 | 507 mm | PPL | 0,9 mm | BRUSH $Ø_E$ 507mm $Ø_F$ 485mm PPL 0.9mm (BLACK) |
| 405555 | 2 | 507 mm | ABRASIVE | | BRUSH $Ø_E$ 507mm $Ø_F$ 485mm |
| 405556 | 2 | 507 mm | NYLON | 0,9 mm | BRUSH $Ø_E$ 507mm $Ø_F$ 485mm |
| 405517 | 2 | 505 mm | | | PAD HOLDER WITH CENTER LOCK |

**LATERAL BRUSH HEAD BRUSH TYPE**

| CODE | QTY | Ø EXTERNAL | TYPE OF BRISTLE | Ø BRISTLES | NOTES |
|---|---|---|---|---|---|
| 451751 | 1 | 355 mm | PPL | 0,35 mm | BRUSH $Ø_E$ 355mm $Ø_F$ 340mm PPL 0.35mm (GREEN) |
| 451752 | 1 | 355 mm | PPL | 0,6 mm | BRUSH $Ø_E$ 355mm $Ø_F$ 340mm PPL 0.6mm (WHITE) |
| 451753 | 1 | 355 mm | PPL | 0,9 mm | BRUSH $Ø_E$ 355mm $Ø_F$ 340mm PPL 0.9mm (BLACK) |
| 451754 | 1 | 355 mm | ABRASIVE | 1 mm | BRUSH $Ø_E$ 355mm $Ø_F$ 340mm ABRASIVE 1mm (GREY) |
| 451755 | 1 | 340 mm | | | PAD HOLDER WITH CENTER LOCK |

# TROUBLESHOOTING

This chapter lists the most common problems linked with the use of the machine. If you are unable to resolve the problems with the information given here, please contact your nearest assistance centre.

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| THE MACHINE DOES NOT START | The main switch is set to “0”. | Make sure that the main switch is in its "I" position, otherwise turn the key a quarter turn clockwise. |
| | Check that when switched on there are no alarm messages on the command display. | Contact the technician at the FIMAP service centre. |
| | Make sure the battery pack is correctly connected and that the battery pack connector is connected to the electrical system's connector. | Make sure the batteries are properly connected together, contact the technician at the FIMAP service centre. |
| | | Make sure the batteries are properly connected to the machine's electrical system, contact the technician at the FIMAP service centre. |
| | Check the charge level of the battery pack. | If the battery box charge level is critical, perform a complete charging cycle, see “RECHARGING THE BATTERY PACK” on page 45). |
| THE BATTERY PACK IS NOT COMPLETELY CHARGED | The battery charger's cable connector is not properly inserted into the battery pack connector. | Connect the battery charger cable connector to the battery pack connector again. |
| | The plug on the battery charger's power cable is not correctly inserted into the electrical outlet. | Check that the battery charger power supply cable plug is connected to the mains socket. |
| | The characteristics of the mains power supply do not correspond to those required by the battery charger. | Check that the characteristics in the battery charger plate are the same as those of the mains supply. |
| | The LEDs of the battery charger blink repeatedly. | Referring to the battery charger use and maintenance manual, check the meaning of the flashing signals that the battery charger emits dung the battery recharge stage. |
| | The electrolyte level in the battery pack's cells is low. | See the battery pack's user and maintenance manual to perform a top up. This document is supplied along with the battery pack itself, or else can be obtained by contacting the battery pack's supplier. |
| THE MACHINE HAS A VERY LOW WORK AUTONOMY | Check the battery pack's charge level (check the symbol on the control display). | If the battery charge level is critical, perform a complete charging cycle, see “RECHARGING THE BATTERY PACK” on page 45). |
| THE MACHINE DOES NOT MOVE | The machine does not start. | Read the section “THE MACHINE DOES NOT START”. |
| | The electric brakes in the traction gearmotors are not activated. | Activate both electric brakes in the traction gearmotors, see “TRACTION ELECTRIC BRAKE ACTIVATION” on page 44. |
| | There is an issue on the drive pedal. | Contact the technician at the FIMAP service centre. |

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| INSUFFICIENT DETERGENT SOLUTION ON THE BRUSHES | The quantity of detergent solution in the water system is not sufficient for the work to be carried out. | Check that the amount of detergent solution present in the machine's water system is sufficient for the work to be carried out. If it is insufficient, see “DETERGENT SOLUTION” on page 47. |
| | The amount of detergent solution delivered to the brushes is insufficient for the work that needs to be carried out. | Check that the quantity of the detergent solution dispensed on the brushes is suitable for the work to perform, if it is not enough see “ADJUSTING THE DETERGENT SOLUTION FLOW (PRO VERSION)” on page 96 or “ADJUSTING THE DETERGENT SOLUTION FLOW (PLUS VERSION)” on page 103. |
| | Detergent solution filter obstructed. | Check the detergent solution filter is not obstructed, otherwise clean it, see “CLEANING THE WATER SYSTEM FILTER” on page 147. |
| | | Make sure that the automatic chemical detergent management system filter is not obstructed, otherwise clean it, see “CLEANING THE FILTER ON THE AUTOMATIC CHEMICAL DETERGENT MANAGEMENT SYSTEM (OPTIONAL)” on page 148. |
| | | Make sure that the detergent solution recycling system filter is not obstructed, otherwise clean it, see “CLEANING THE FILTER ON THE DETERGENT SOLUTION RECYCLING SYSTEM (OPTIONAL)” on page 150. |
| THE MACHINE DOES NOT CLEAN CORRECTLY | The machine does not start. | Read the section “THE MACHINE DOES NOT START”. |
| | Not enough detergent solution comes out. | Read the section “INSUFFICIENT DETERGENT SOLUTION ON THE BRUSHES”. |
| | The brushes or drive discs being used are not properly inserted into the machine. | Check that the brushes are properly inserted into the machine, if necessary see “ASSEMBLING THE BRUSH HEAD BRUSHES OR DRIVE DISCS” on page 49. |
| | | Check that the side brush is properly inserted into the machine, if necessary see “ASSEMBLY OF THE SIDE BRUSH HEAD BRUSH OR DRIVE DISC (OPTIONAL)” on page 52. |
| | The type of brush used is not suitable for the dirt to be cleaned. | Check that the brushes on the machine are adequate for the work to be carried out, contact the technician at the FIMAP service centre. |
| | The brush bristles are excessively worn. | Check the state of wear of the brushes and replace them if necessary, see “REPLACING THE BRUSH HEAD BRUSHES OR DRIVE DISCS” on page 151. |
| | | Check the state of wear of the side brush, and replace it if necessary, see “REPLACING THE SIDE BRUSH HEAD BRUSH OR DRIVE DISC (OPTIONAL)” on page 153. |

| PROBLEM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| THE SQUEEGEE DOES NOT DRY PERFECTLY | The vacuum unit is obstructed. | Make sure the squeegee is free of obstructions, see “CLEANING THE SQUEEGEE” on page 139. |
| | | Make sure the squeegee is free of obstructions, see “CLEANING THE SIDE BRUSH HEAD SQUEEGEE (OPTIONAL)” on page 140. |
| | | Make sure the vacuum tube is free of obstructions, see the “CLEANING THE SQUEEGEE VACUUM HOSE” on page 142. |
| | | Check that the collection filter tray is free of obstructions. See the “CLEANING THE COLLECTION FILTER TRAY” on page 144. |
| | | Check that the wave protection tray is free of obstructions. See the “CLEANING THE WAVE PROTECTION TRAY” on page 145. |
| | The cap on the recovery tank drainage tube is not properly positioned. | Check that the cap on the recovery tank drainage tube is positioned properly. |
| | The recovery tank lid is not positioned correctly. | Check that the recovery tank lid is properly positioned on the machine. |
| EXCESSIVE FOAM PRODUCTION | The detergent being used is not suitable. | Check that a low foam detergent has been used. If necessary, add a small quantity of anti-foam liquid to the recovery tank. |
| | The floor is not very dirty. | Dilute the detergent more. |
| THE MACHINE DOES NOT VACUUM CORRECTLY | The recovery tank is full. | Empty the recovery tank, see “DRAINING THE RECOVERY TANK” on page 146. |
| | The vacuum device is obstructed | Read the section "THE SQUEEGEE DOES NOT DRY PERFECTLY". |

# EC DECLARATION OF CONFORMITY

The undersigned manufacturer:

**FIMAP S.p.A.**
Via Invalidi del Lavoro, 1
37059 Santa Maria di Zevio (VR)

declares under its sole responsibility that the products

**FLOOR SCRUBBING MACHINES**

mod. GMG B PLUS; GMG B PRO

comply with the requirements of the following Directives:

- 2006/42/EC: Machinery Directive.
- 2014/30/EU: Electromagnetic compatibility directive.

They also comply with the following standards:

- EN 60335-1:2012/A1:2019/A2:2019/A14:2019
- EN 60335-2-72:2012
- EN 12100:2010
- EN 61000-6-2:2005/AC:2005
- EN 61000-6-3:2007/A1:2011/AC:2012
- EN 62233:2008/AC:2008

The person authorized to compile the technical file:

Mr. Giancarlo Ruffo
Via Invalidi del Lavoro, 1
37059 Santa Maria di Zevio (VR) - ITALY

Santa Maria di Zevio (VR), 18/03/2022

FIMAP S.p.A.
Legal representative
Giancarlo Ruffo

# UKCA DECLARATION OF CONFORMITY

The undersigned manufacturer:

**FIMAP S.p.A.**
Via Invalidi del Lavoro, 1
37059 Santa Maria di Zevio (VR)

declares under its sole responsibility that the products

**FLOOR SCRUBBING MACHINES**

mod. GMG B PLUS; GMG B PRO

comply with the requirements of the following Directives:

- Supply of Machinery (Safety) Regulations 2008.
- Electromagnetic Compatibility Regulations 2016.

They also comply with the following standards:

- BS EN 60335-1:2012+A2:2019
- BS EN 60335-2-72:2012
- BS EN 12100:2010
- BS EN IEC 61000-6-2:2019
- BS EN 61000-6-3:2007+A1:2011
- BS EN 62233:2008

The person authorized to compile the technical file:

Mr. Giancarlo Ruffo
Via Invalidi del Lavoro, 1
37059 Santa Maria di Zevio (VR) - ITALY

Santa Maria di Zevio (VR), 18/03/2022

FIMAP S.p.A.
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Giancarlo Ruffo

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