

EMX



PROFESSIONAL SCRUBBING MACHINES

USE AND MAINTENANCE MANUAL

 **FIMAP**[®]



TRANSLATION OF THE ORIGINAL INSTRUCTIONS DOC. 10129622 - Ver. AA - 09-2023

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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 or 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 see 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 see the user manual before using the device.
	Covered place symbol: The operations preceded by this symbol must always be carried out in a dry, covered area.
	Information symbol: Indicates additional information for the operator, to improve the use of the device.
	Warning symbol: Carefully see the sections preceded by this symbol meticulously following the instructions indicated for the safety of the operator and the device.
	Danger symbol (moving carriages): Indicates that the packed product should be handled with suitable carriages that conform to legal requirements.
	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.
	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 see the sections marked with this symbol for disposing of the appliance.

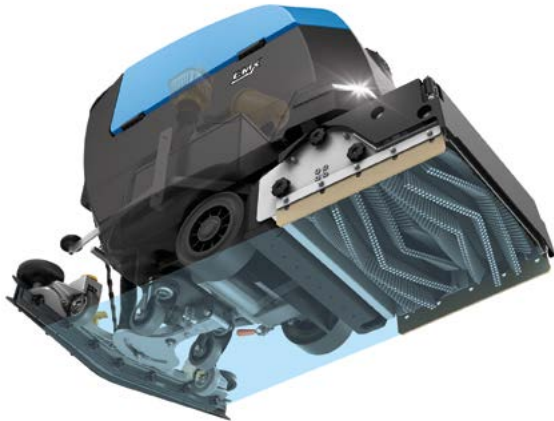
TECHNICAL DESCRIPTION (DISCOID SCRUBBING VERSION)



The **EMX E** or **EMX B** or **EMX BT** machine uses the mechanical action of a disc-shaped brush with the added action of a chemical solution brought to the brush through a water system.

The machine can clean a wide range of flooring and types of dirt, collecting, during its forward motion the dirt removed and the cleaning solution not absorbed by the floor. When the machine moves forward, the squeegee collects the dirt solution from the floor and the suction system transfers it to the recovery tank. **The machine must only be used for this purpose.**

TECHNICAL DESCRIPTION (CYLINDRICAL SCRUBBING VERSION)



The **EMX BTS** machine uses the mechanical action of two cylindrical brushes with the added action of a chemical solution brought to the brushes through a water system. The machine can clean a wide range of flooring and types of dirt, collecting, during its forward motion the dirt removed and the cleaning solution not absorbed by the floor. When the machine moves forward, the squeegee collects the dirt solution from the floor and the suction system transfers it to the recovery tank. **The machine must only be used for this purpose.**

TECHNICAL DESCRIPTION (ORBITAL VERSIONS)



The **EMX BTO** machine uses the mechanical action of an abrasive pad with the added action of a chemical solution brought to the abrasive pad through a water system. The machine can clean a wide range of flooring and types of dirt, collecting, during its forward motion the dirt removed and the cleaning solution not absorbed by the floor. When the machine moves forward, the squeegee collects the dirt solution from the floor and the suction system transfers it to the recovery tank. **The machine must only be used 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 carpet floors.

It is only suitable for use in indoor (or at least covered) environments.



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

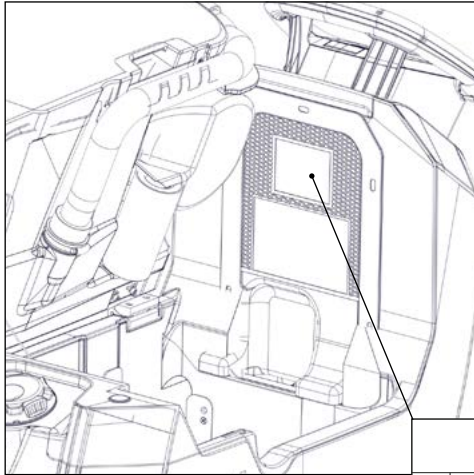


IT IS FORBIDDEN to use the machine in environments with an explosive atmosphere to clean dangerous powders or flammable liquids. In addition, it is not suitable as a means of transport for people or objects.

SAFETY

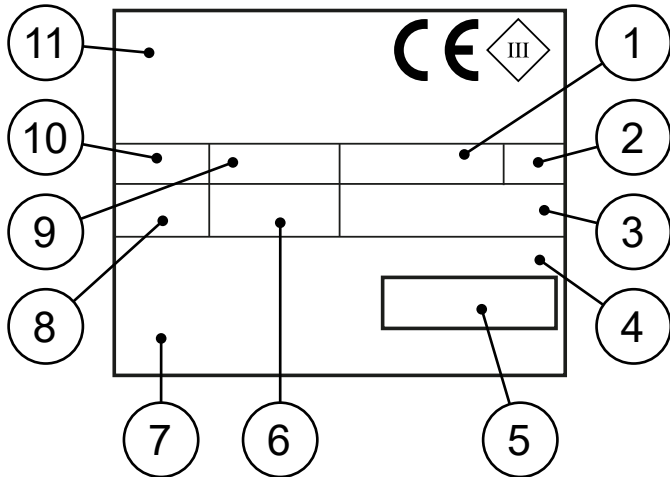
Operator cooperation is paramount for accident prevention. No accident prevention program can be effective without the full cooperation of the person directly responsible for machine operation. The majority of occupational accidents that happen either in the workplace or whilst moving are caused by failure 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 program.

SERIAL NUMBER PLATE



The serial number plate is positioned inside the machine, above the electrical system cover carter. It indicates the general machine characteristics, in particular the 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 value in Kg of the GVW (Gross Vehicle Weight), see ["TECHNICAL DATA" on page 12.](#)
4. The machine ID code.
5. The machine serial number.
6. The machine ID name.
7. The value expressed in W of the nominal power used by the machine, see ["TECHNICAL DATA" on page 12.](#)
8. The value expressed in % of the maximum gradeability during work, see ["TECHNICAL DATA" on page 12.](#)
9. The year of machine manufacture.
10. The value expressed in V of the nominal voltage used by the machine, see ["TECHNICAL DATA" on page 12.](#)
11. The commercial name of the machine, and the manufacturer's address.

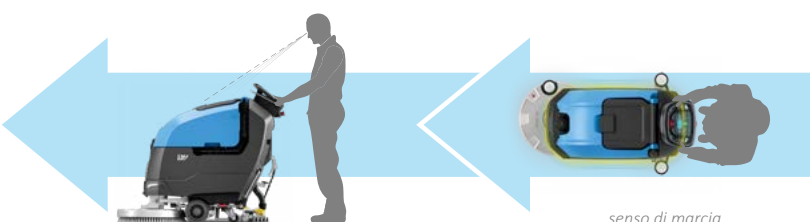


Fill in the following table at the time of delivery and/or installation, so it can be used as a future reference when necessary.

MACHINE ID NAME	
SERIAL NUMBER	
DATE OF DELIVERY AND/OR INSTALLATION	

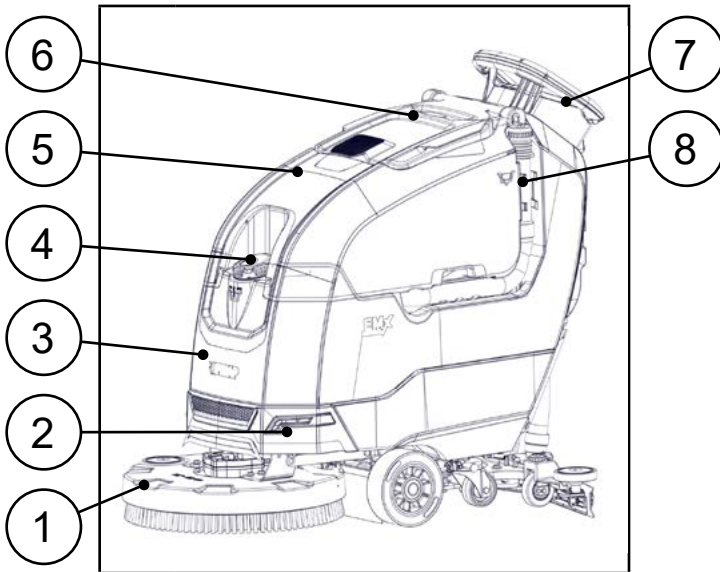
REGULATIONS

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.

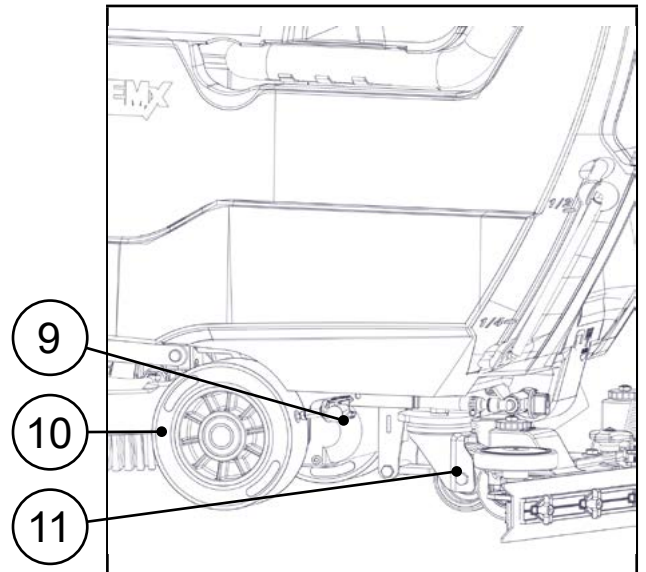


i **N.B.:** in the image opposite with the arrow, forward gear is identified.

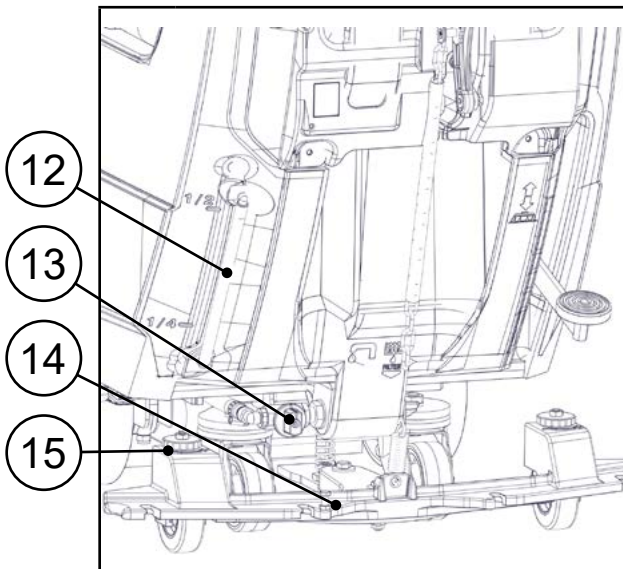
MAIN MACHINE COMPONENTS



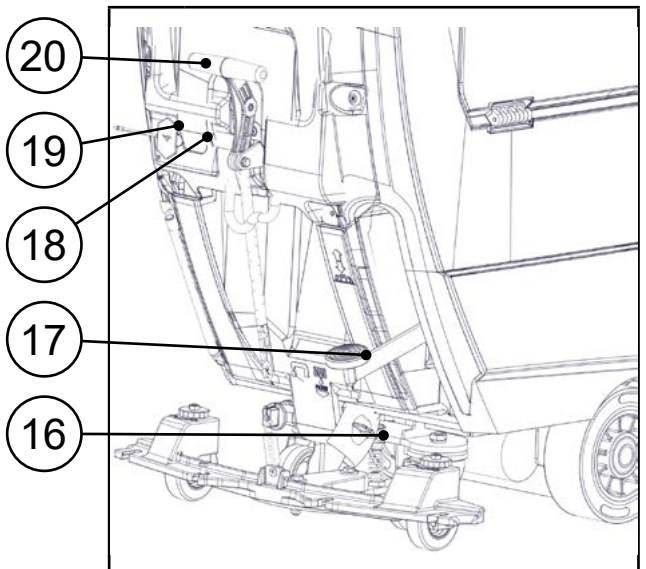
1	Scrubbing brush head
2	Front headlights
3	Solution tank
4	Solution tank inlet cap
5	Recovery tank
6	Recovery tank cover
7	Control handlebar
8	recovery tank drainage tube



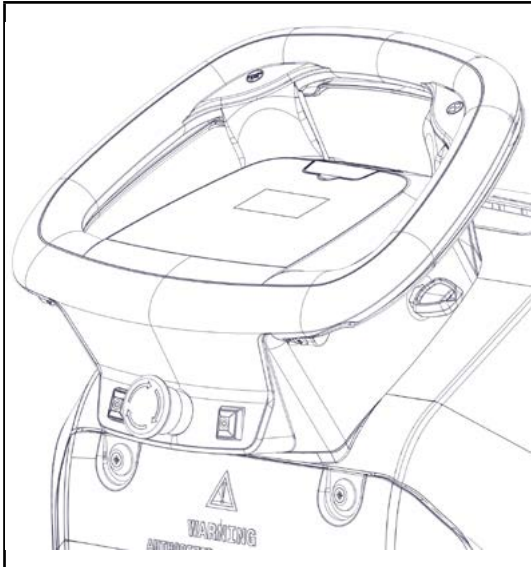
9	Parking brake
10	Front wheels
11	Rear wheels



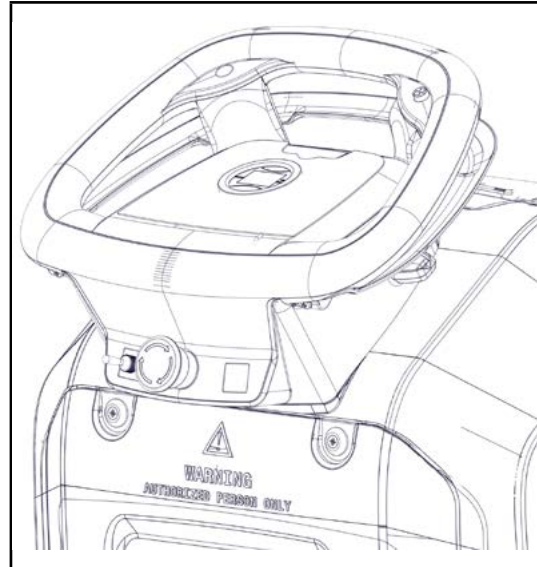
12	Solution tank capacity level hose
13	Detergent solution adjustment tap
14	Adjustment screw for squeegee tilt
15	Knob for adjusting the height of the squeegee unit



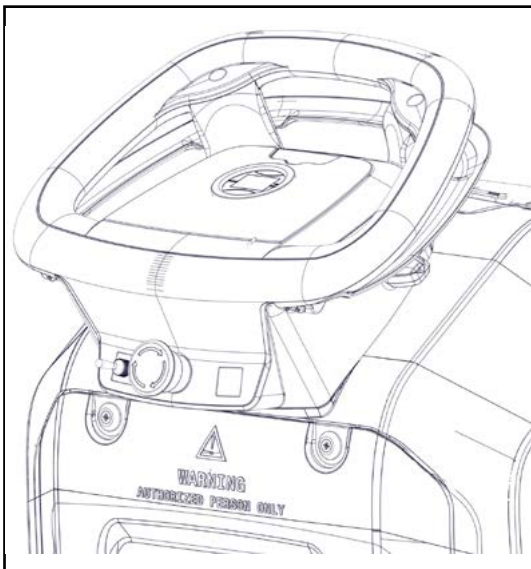
16	Solution tank filter
17	Brush head body control pedal
18	LED lights on-board charger (optional)
19	On-board charger power socket (optional)
20	Squeegee body control lever



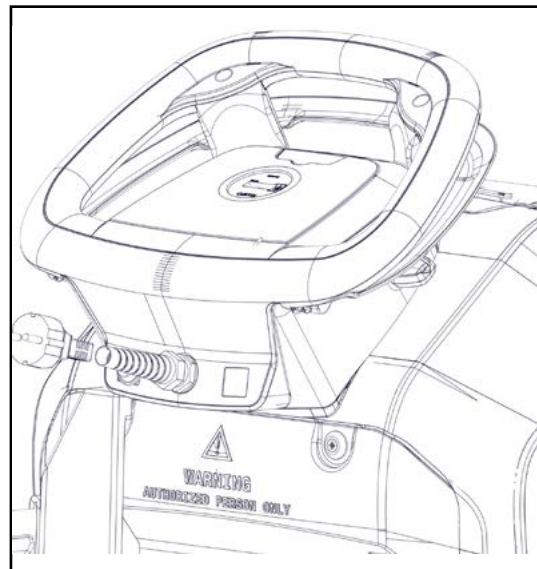
Control handlebar PRO version, see [“DASHBOARD \(PRO VERSION\)”](#) on page 31.



Control handlebar BT BASE version, see [“DASHBOARD \(BASIC VERSION WITH TRACTION\)”](#) on page 31.



Control handlebar B BASE version, see [“DASHBOARD \(BASIC VERSION\)”](#) on page 30.



Control handlebar E BASE version, see [“DASHBOARD \(ELECTRIC VERSION\)”](#) on page 30.

TECHNICAL DATA

i N.B.: for all other technical data, contact the FIMAP service centre of reference or the one closest to you, or visit the website www.fimap.com.

TECHNICAL DATA	IS of U.M. [International System]	EMX 50 E
Rated voltage [IEC 60335-2-72; IEC 62885-9]	V	230
Rated frequency [IEC 60335-2-72; IEC 62885-9]	Hz	50
Nominal input power [IEC 60335-2-72; IEC 62885-9]	KW	0,82
Working gradeability with GVW [IEC 60335-2-72; IEC 62885-9]	%	2
Machine working weight (gross weight - GVW) [IEC 60335-2-72; IEC 62885-9]	kg	114,5
Weight during transport [IEC 60335-2-72; IEC 62885-9]	kg	80
Machine dimensions during working phase (length; height width)	mm	1225 1030 597
Operator station sound pressure level (Lp _A) [IEC 60335-2-72; IEC 62885-9; ISO 11201]	dB (A)	<70
Sound power level (Lw _A) [IEC 60335-2-72; IEC 62885-9; ISO 3744]	dB (A)	<80
Uncertainty Kp _A	dB (A)	±1.5
Hand-arm vibrations [IEC 60335-2-72; IEC 62885-9; ISO 5349-1]	m/s ²	<2.5
Vibration measurement uncertainty		±4%

TECHNICAL DATA	SIB of U.M. [Imperial Measurement System]	EMX 50 E
Rated voltage [IEC 60335-2-72; IEC 62885-9]	V	230
Rated frequency [IEC 60335-2-72; IEC 62885-9]	Hz	50
Nominal input power [IEC 60335-2-72; IEC 62885-9]	KW	0,82
Working gradeability with GVW [IEC 60335-2-72; IEC 62885-9]	%	2
Machine working weight (gross weight - GVW) [IEC 60335-2-72; IEC 62885-9]	lb	252,43
Weight during transport [IEC 60335-2-72; IEC 62885-9]	lb	176,37
Machine dimensions during working phase (length; height width)	in	48,23 40,55 23,50
Operator station sound pressure level (Lp _A) [IEC 60335-2-72; IEC 62885-9; ISO 11201]	dB (A)	<70
Sound power level (Lw _A) [IEC 60335-2-72; IEC 62885-9; ISO 3744]	dB (A)	<80
Uncertainty Kp _A	dB (A)	±1.5
Hand-arm vibrations [IEC 60335-2-72; IEC 62885-9; ISO 5349-1]	m/s ²	<2.5
Vibration measurement uncertainty		±4%

TECHNICAL DATA	IS of U.M. [International System]	EMX 43 B	EMX 50 B	EMX 43 BT	EMX 50 BT
Rated voltage [IEC 60335-2-72; IEC 62885-9]	V	24	24	24	24
Nominal input power [IEC 60335-2-72; IEC 62885-9]	KW	0,92	0,92	1,07	1,07
Working gradeability with GVW [IEC 60335-2-72; IEC 62885-9]	%	2	2	2	2
Machine working weight (gross weight - GVW) [IEC 60335-2-72; IEC 62885-9]	kg	180	184	180	184
Weight during transport [IEC 60335-2-72; IEC 62885-9]	kg	140	144	140	144
Machine dimensions during working phase (length; height width)	mm	1155 1030 591	1225 1030 597	1155 1030 591	1225 1030 597
Operator station sound pressure level (Lp _A) [IEC 60335-2-72; IEC 62885-9; ISO 11201]	dB (A)	66,2	66,2	66,2	66,2
Sound power level (Lw _A) [IEC 60335-2-72; IEC 62885-9; ISO 3744]	dB (A)	78,8	78,8	78,8	78,8
Uncertainty Kp _A	dB (A)	±1.5	±1.5	±1.5	±1.5
Hand-arm vibrations [IEC 60335-2-72; IEC 62885-9; ISO 5349-1]	m/s ²	0,56	0,56	0,56	0,56
Vibration measurement uncertainty		±4%	±4%	±4%	±4%

TECHNICAL DATA	SIB of U.M. [Imperial Measurement System]	EMX 43 B	EMX 50 B	EMX 43 BT	EMX 50 BT
Rated voltage [IEC 60335-2-72; IEC 62885-9]	V	24	24	24	24
Nominal input power [IEC 60335-2-72; IEC 62885-9]	KW	0,92	0,92	1,07	1,07
Working gradeability with GVW [IEC 60335-2-72; IEC 62885-9]	%	2	2	2	2
Machine working weight (gross weight - GVW) [IEC 60335-2-72; IEC 62885-9]	lb	396,83	405,65	396,83	405,65
Weight during transport [IEC 60335-2-72; IEC 62885-9]	lb	308,65	317,47	308,65	317,47
Machine dimensions during working phase (length; height width)	in	45,47 40,55 23,27	48,23 40,55 23,50	45,47 40,55 23,27	48,23 40,55 23,50
Operator station sound pressure level (Lp _A) [IEC 60335-2-72; IEC 62885-9; ISO 11201]	dB (A)	66,2	66,2	66,2	66,2
Sound power level (Lw _A) [IEC 60335-2-72; IEC 62885-9; ISO 3744]	dB (A)	78,8	78,8	78,8	78,8
Uncertainty Kp _A	dB (A)	±1.5	±1.5	±1.5	±1.5
Hand-arm vibrations [IEC 60335-2-72; IEC 62885-9; ISO 5349-1]	m/s ²	0,56	0,56	0,56	0,56
Vibration measurement uncertainty		±4%	±4%	±4%	±4%

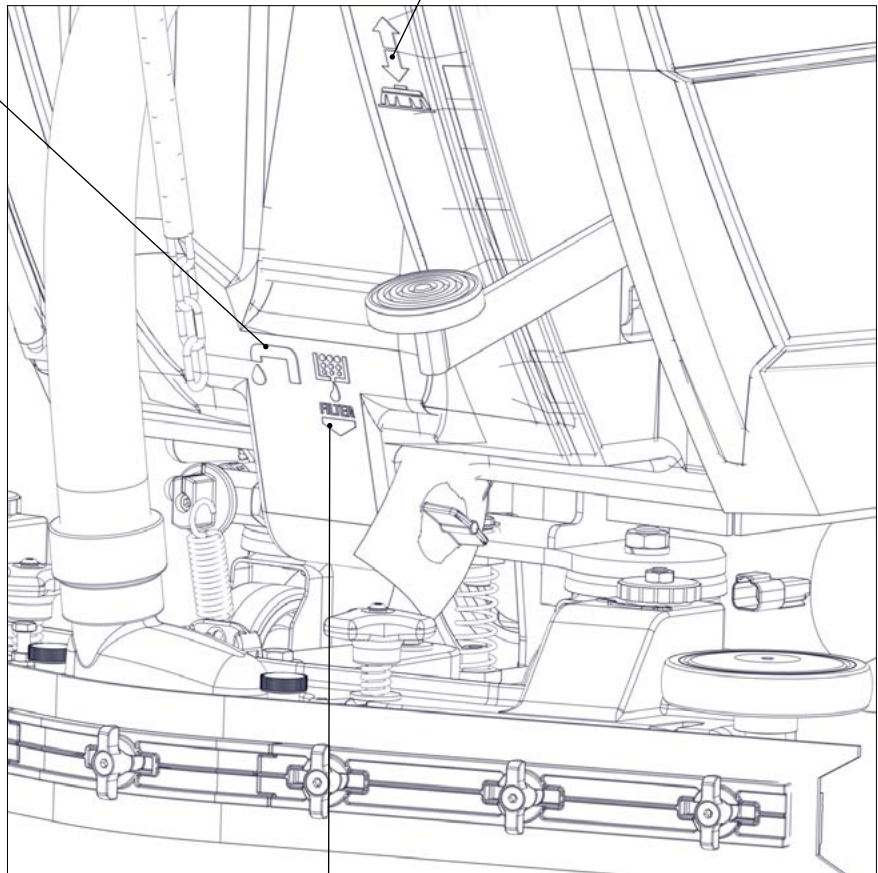
TECHNICAL DATA	IS of U.M. [International System]	EMX PRO 43 BT	EMX PRO 50 BT	EMX PRO 50 BTO	EMX PRO 50 BTS
Rated voltage [IEC 60335-2-72; IEC 62885-9]	V	24	24	24	24
Nominal input power [IEC 60335-2-72; IEC 62885-9]	KW	0,92	0,92	1,25	1,27
Working gradeability with GVW [IEC 60335-2-72; IEC 62885-9]	%	2	2	2	2
Machine working weight (gross weight - GVW) [IEC 60335-2-72; IEC 62885-9]	kg	180	184	178	150
Weight during transport [IEC 60335-2-72; IEC 62885-9]	kg	140	144	213	185
Machine dimensions during working phase (length; height width)	mm	1155 1030 591	1225 1030 597	1163 1030 509	1107 1030 565
Operator station sound pressure level (Lp _A) [IEC 60335-2-72; IEC 62885-9; ISO 11201]	dB (A)	66,2	66,2	<70	<70
Sound power level (Lw _A) [IEC 60335-2-72; IEC 62885-9; ISO 3744]	dB (A)	78,8	78,8	<80	<80
Uncertainty Kp _A	dB (A)	±1.5	±1.5	±1.5	±1.5
Hand-arm vibrations [IEC 60335-2-72; IEC 62885-9; ISO 5349-1]	m/s ²	0,56	0,56	<2.5	<2.5
Vibration measurement uncertainty		±4%	±4%	±4%	±4%

TECHNICAL DATA	SIB of U.M. [Imperial Measurement System]	EMX PRO 43 BT	EMX PRO 50 BT	EMX PRO 50 BTO	EMX PRO 50 BTS
Rated voltage [IEC 60335-2-72; IEC 62885-9]	V	24	24	24	24
Nominal input power [IEC 60335-2-72; IEC 62885-9]	KW	0,92	0,92	1,25	1,27
Working gradeability with GVW [IEC 60335-2-72; IEC 62885-9]	%	2	2	2	2
Machine working weight (gross weight - GVW) [IEC 60335-2-72; IEC 62885-9]	lb	396,83	405,65	392,42	330,69
Weight during transport [IEC 60335-2-72; IEC 62885-9]	lb	308,65	317,47	469,58	407,85
Machine dimensions during working phase (length; height width)	in	45,47 40,55 23,27	48,23 40,55 23,50	45,79 40,55 20,04	43,58 40,55 22,24
Operator station sound pressure level (Lp _A) [IEC 60335-2-72; IEC 62885-9; ISO 11201]	dB (A)	66,2	66,2	<70	<70
Sound power level (Lw _A) [IEC 60335-2-72; IEC 62885-9; ISO 3744]	dB (A)	78,8	78,8	<80	<80
Uncertainty Kp _A	dB (A)	±1.5	±1.5	±1.5	±1.5
Hand-arm vibrations [IEC 60335-2-72; IEC 62885-9; ISO 5349-1]	m/s ²	0,56	0,56	<2.5	<2.5
Vibration measurement uncertainty		±4%	±4%	±4%	±4%

SYMBOLS USED ON THE MACHINE

Position symbol for the brush head control pedal:
It is used at the rear of the solution tank to identify the brush head control pedal.

Position symbol for the detergent solution adjusting tap:
It is used at the back of the solution tank to identify the detergent solution adjustment knob.



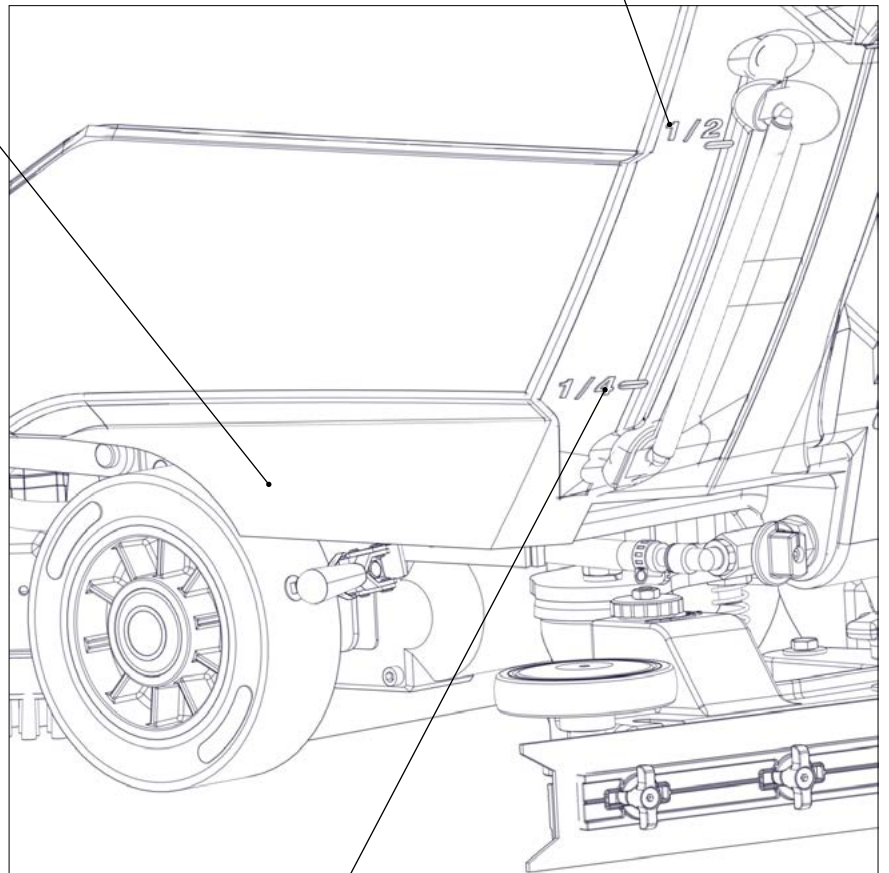
Position symbol for the solution tank cap - filter:
It is used in the back of the solution tank to identify the solution tank cap - filter.

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.

Position symbol for the brake:

It is used on the left side of the solution tank to identify the brake control lever.

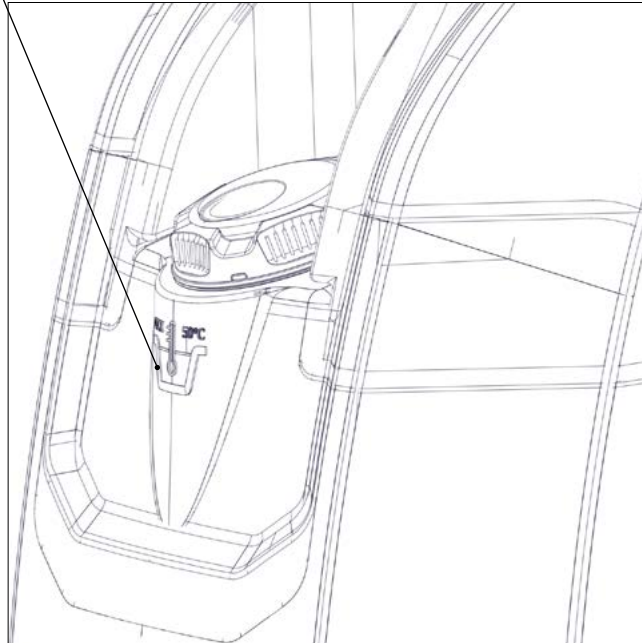


Solution tank filling symbol:

Located on the left side of the machine's solution tank to indicate the amount of water or detergent solution in the tank.

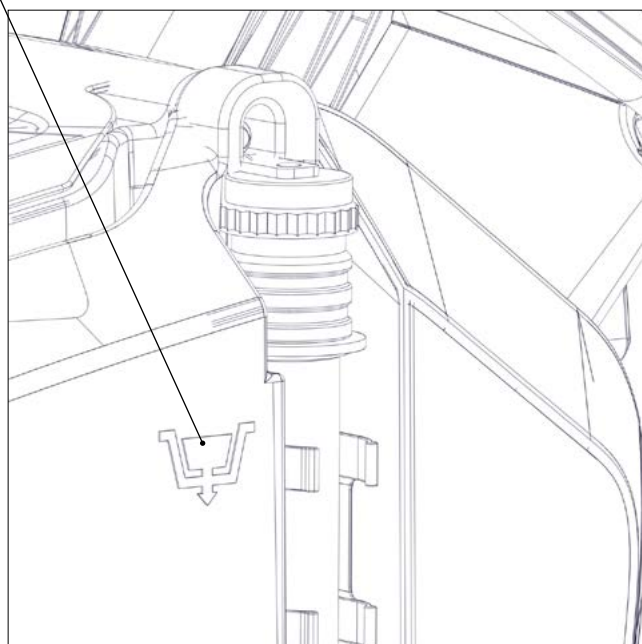
Symbol for maximum temperature for filling the solution tank:

It is used at the front of the solution tank to indicate the maximum temperature the water must have to safely fill the solution tank, see [“FILLING THE SOLUTION TANK” on page 44.](#)



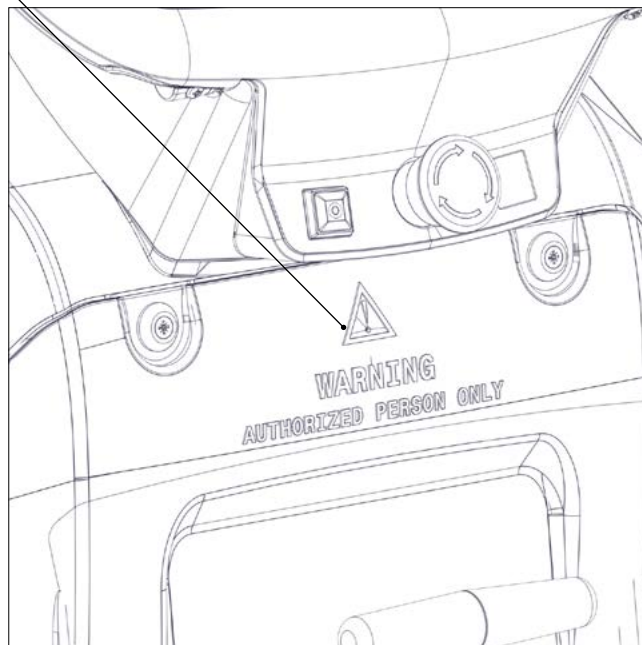
Recovery tank drainage hose symbol:

It is used on the left side of the recovery tank to identify the recovery tank discharge pipe, see [“DRAINING THE RECOVERY TANK” on page 96.](#)



Warning symbol removal only by authorised personnel:

It is used in the electrical system cover carter to warn the operator that removal of the casing should be done only by persons authorised by FIMAP.



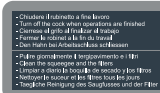
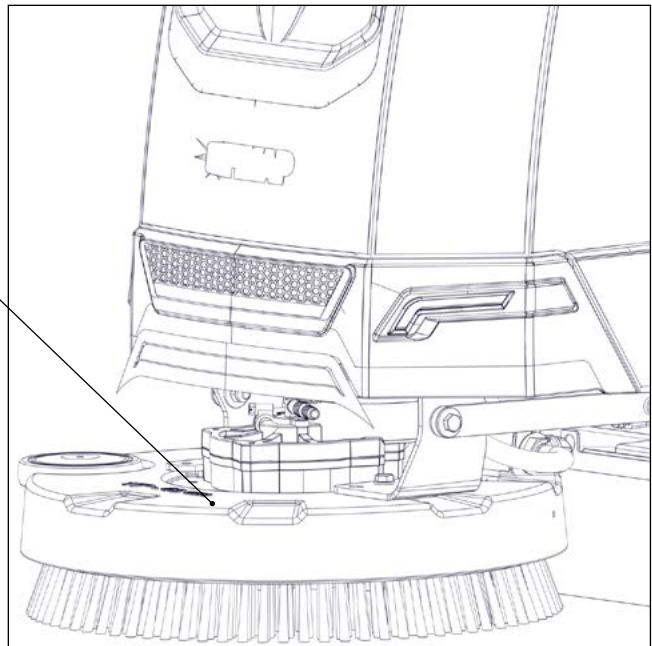
LABELS USED ON THE MACHINE



Do not go next to the brush head while the brush is moving.

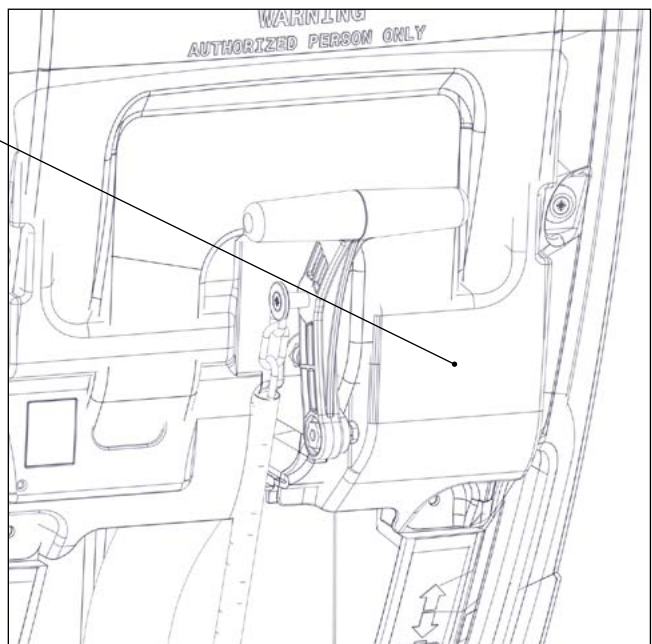
Label indicating that touching the brush when moving is prohibited:

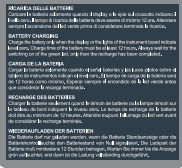
It is used to indicate to the operator that it is forbidden to approach the brush with the hands while it is in motion.



Daily maintenance label:

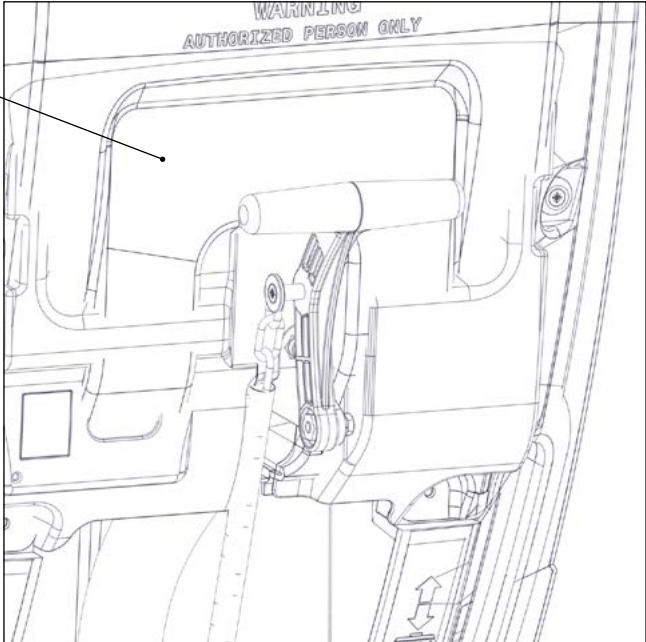
It is used to remind the operator to close the tap at the end of work and to perform daily maintenance on all filters in the machine, see [“MAINTENANCE PLAN” on page 86](#).





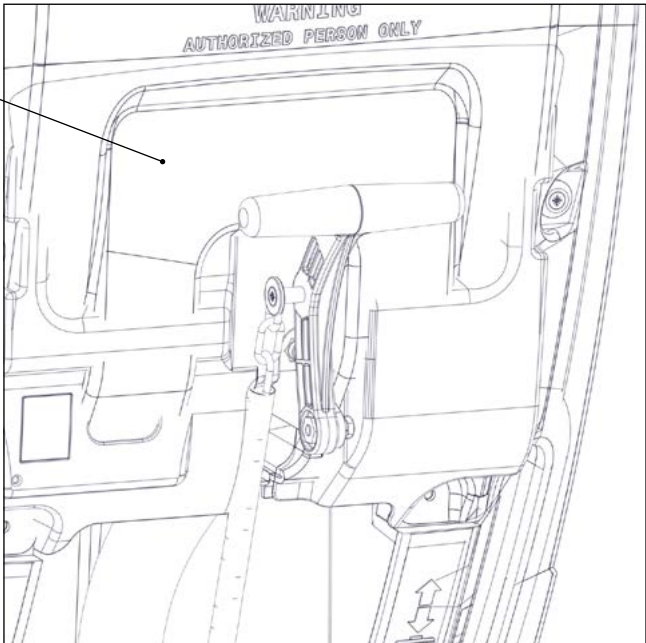
Battery charging instruction label (battery-powered version with on-board charger):

In battery-powered versions, it is used to indicate to the user what procedures should be carried out for proper charging of the battery box, see [“RECHARGING THE BATTERIES \(BATTERY-POWERED VERSIONS\)”](#) on page 41.



Prohibition to vacuum hazardous elements label:

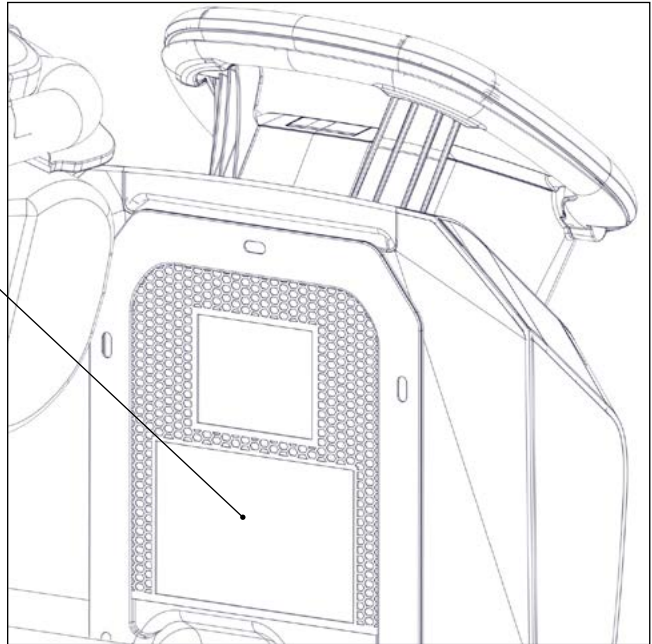
In mains-powered versions, it is used to indicate to the user that it is absolutely forbidden to inhale glowing particles or flammable and/or explosive dust and/or liquids with the machine and to operate in their vicinity.





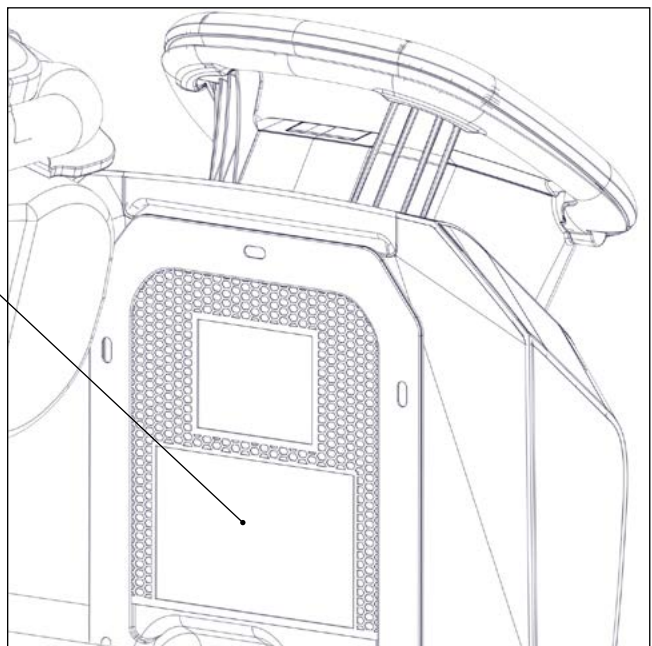
Battery box warning label (battery-powered version):

In battery-powered versions, it is used to indicate to the user that during the charging phase the cells could leak highly flammable hydrogen gas, see the "GENERAL SAFETY RULES" document delivered with the machine documentation.



Warning label - disconnect mains cable before maintenance (electric version):

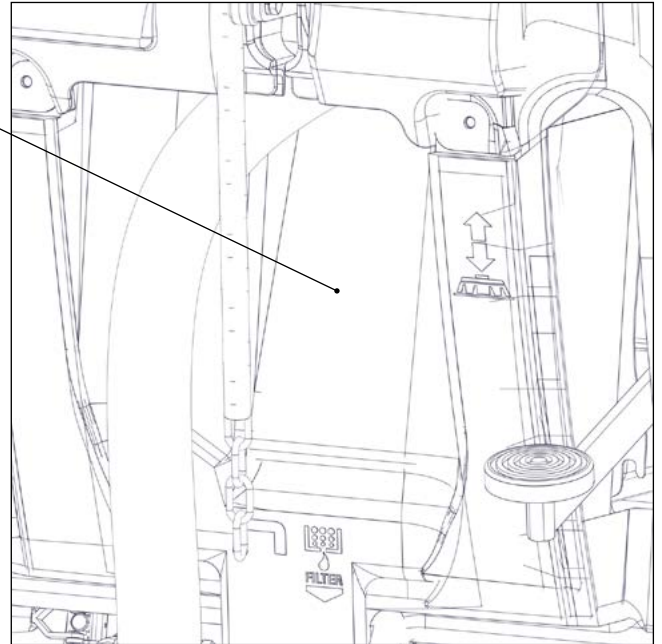
In versions with mains power supply, it is used to indicate to the user that before carrying out any kind of maintenance, the power cable must be disconnected.





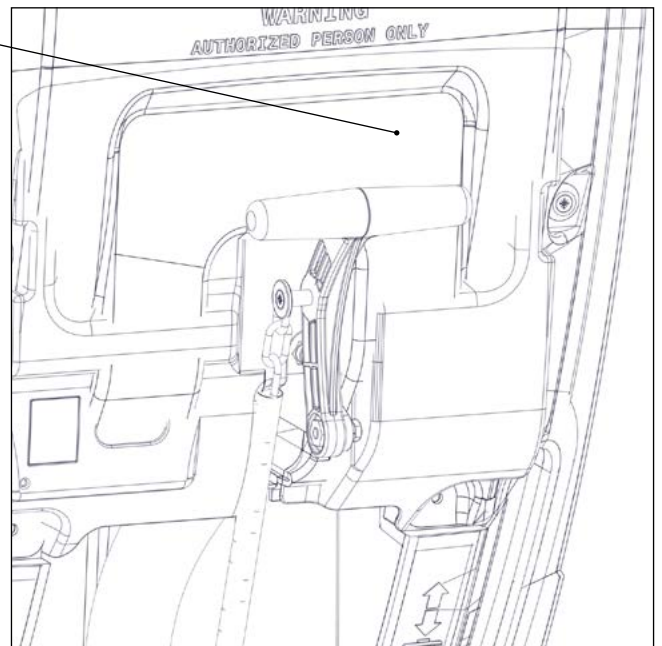
Water system filter maintenance warning label:

It is used to warn the user to service the water system filter each time the machine is used, see [“MAINTENANCE PLAN” on page 86.](#)



Prohibition to vacuum hazardous elements label:

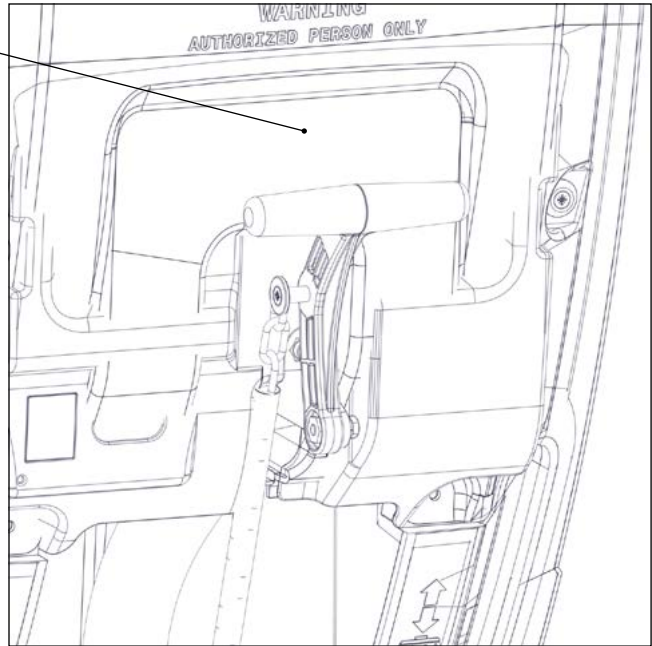
In battery-powered versions, it is used to indicate to the user that it is absolutely forbidden to inhale glowing particles or flammable and/or explosive dust and/or liquids with the machine and to operate in their vicinity.





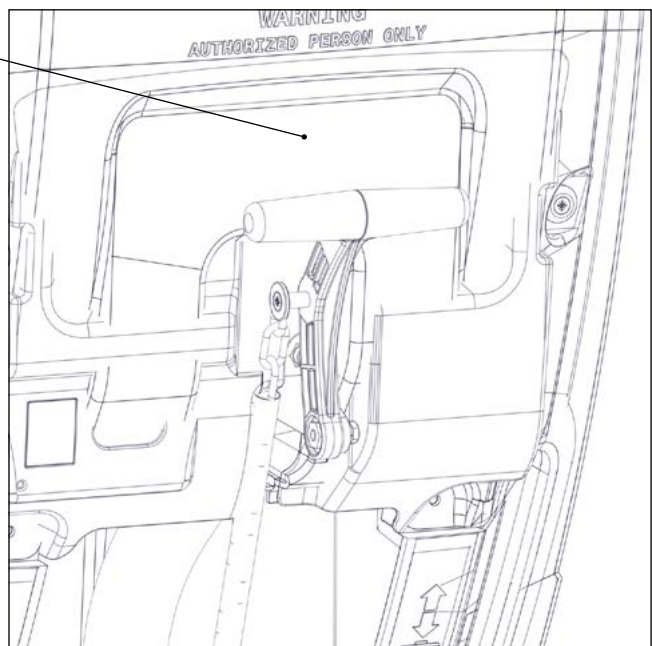
Label indicating the need to see the Use and Maintenance Manual:

Indicates the need to see the use and maintenance manual before using the machine.



Label indicating machine supply voltage:

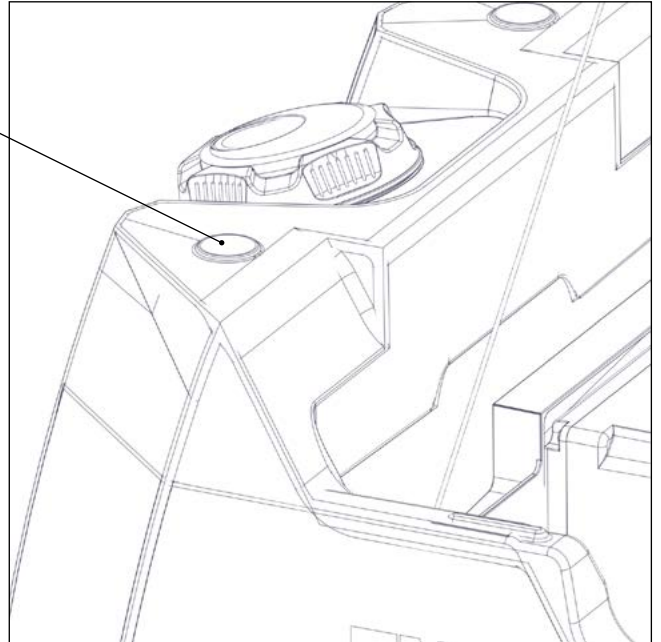
In mains-powered versions, it is used to indicate to the user that there is a danger of electrocution at 220-230 volts.





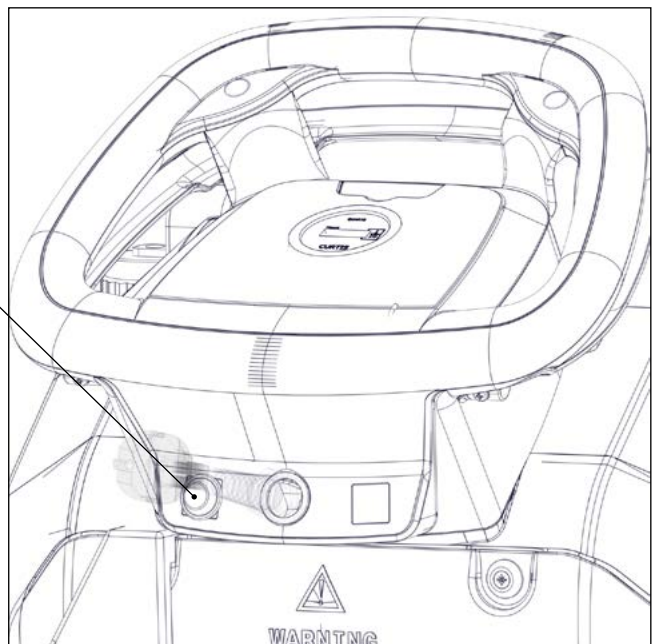
Label warning about the risk of crushed hands:

Applied to the solution tank to indicate the areas where hand crushing hazards are present.



Label for ON-OFF main switch:

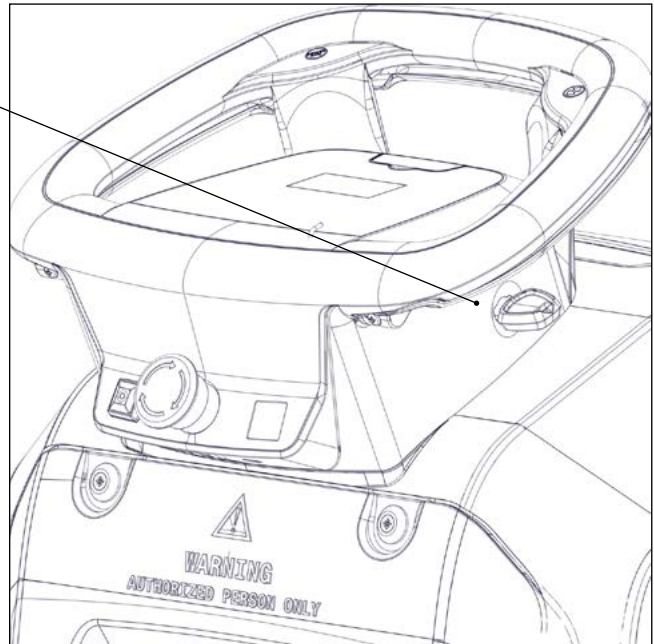
In mains-powered versions, it is used to identify the position of the primary main switch to the user.





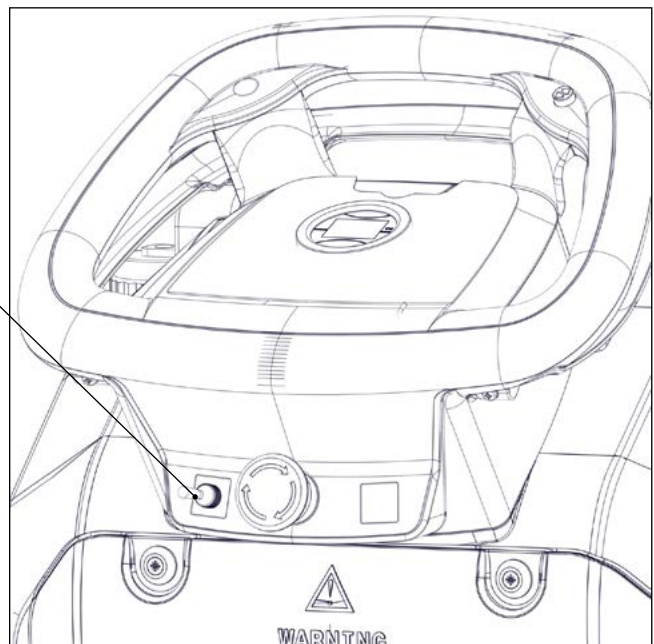
Label for ON-OFF key switch:

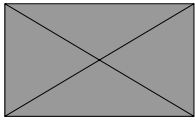
It is used to identify the position of the key switch to the user.



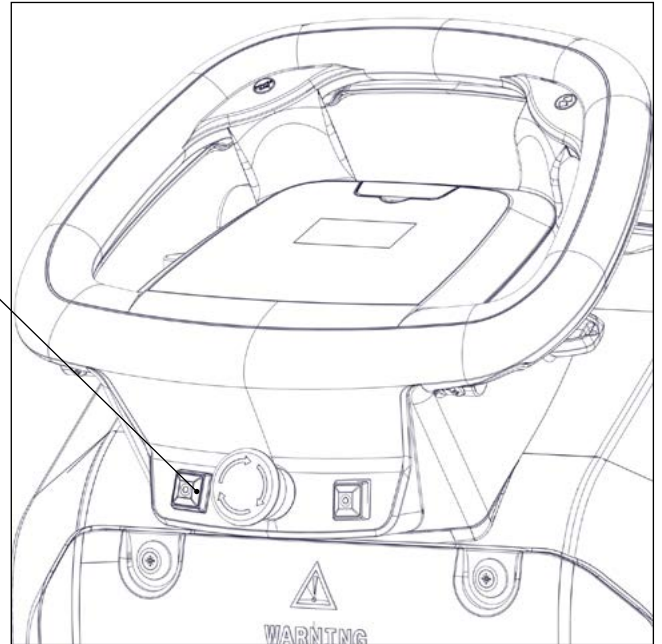
Label for brush uncoupling system:

In the BASIC version machine it is used in the lower left part of the control handlebar to identify the switch that controls the brush uncoupling system, see ["BRUSH UNCOUPLING FUNCTION \(DISCOID SCRUBBING VERSION\)"](#) on page 78.

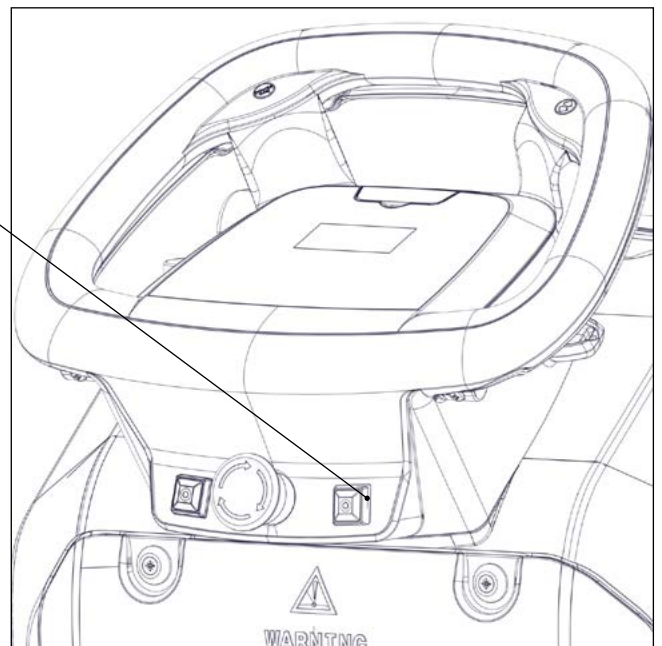


**Label for switch control system cleaning recovery tank (optional):**

In the PRO version machine, it is used in the lower left part of the control handlebar to identify the switch that controls the recovery tank cleaning system through the spray gun, see [“CLEANING GUN SYSTEM \(PRO VERSIONS\)”](#) on page 84.

**Label for switch controlling automatic detergent dosing system (optional):**

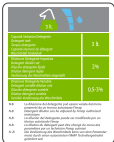
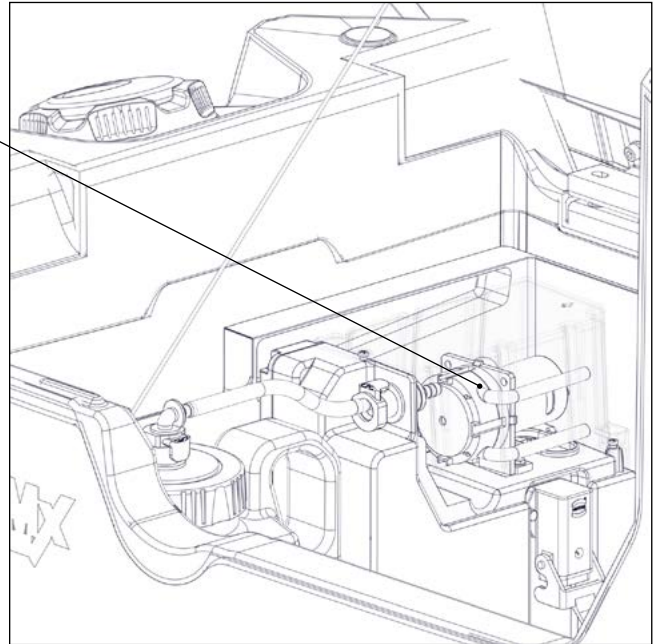
In the PRO version machine, it is used in the lower right part of the control handlebar to identify the switch that controls the automatic detergent dosing system, see [“AUTOMATIC DETERGENT DOSING SYSTEM \(PRO VERSIONS WITH FSS SYSTEM – FIMAP SOLUTION SAVER\)”](#) on page 83.





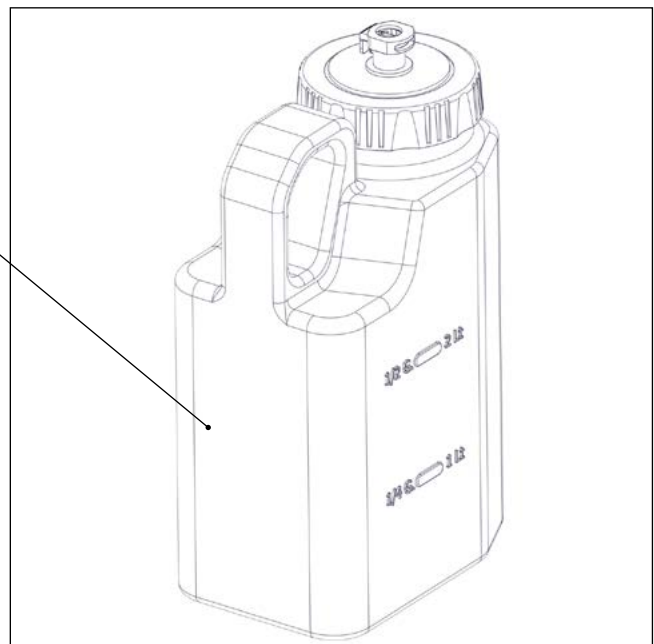
Label for automatic chemical dosing system warning label (optional):

It is used at the top of the pump box, found inside the battery compartment, to indicate to the user what warnings should be taken to take advantage of the automatic chemical dosing system, see [“AUTOMATIC DETERGENT DOSING SYSTEM \(PRO VERSIONS WITH FSS SYSTEM – FIMAP SOLUTION SAVER\)”](#) on page 83.



Technical data label for automatic chemical dosing system (optional):

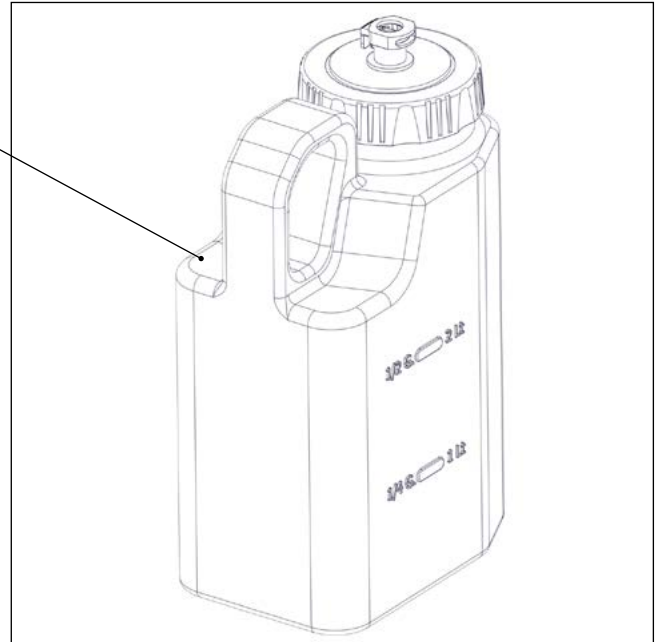
It is used on the detergent canister to indicate to the user what the technical characteristics of the automatic chemical dosing system are, see [“DETERGENT SOLUTION VERSIONS WITH FSS SYSTEM”](#) on page 47.





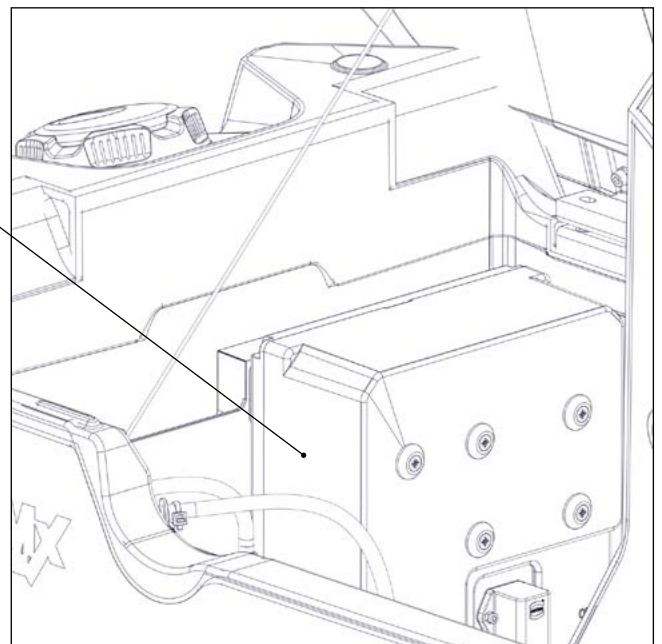
Recommended pH label for the detergent in the automatic chemical dosing system (optional):

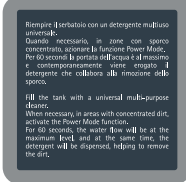
It is used on the detergent canister to indicate to the user the recommended pH range that the detergent should have in order to make best use of the automatic chemical dosing system, see [“DETERGENT SOLUTION VERSIONS WITH FSS SYSTEM” on page 47.](#)



Warning label for cleaning system without chemical cleaners (optional):

It is used on the side of the pump box, found inside the battery compartment, to indicate to the user what warnings should be taken to take advantage of the system that allows cleaning without using chemical cleaners, see [“DETERGENT SOLUTION VERSIONS WITH FSS SYSTEM PAIRED WITH AQUÆ® TECHNOLOGY” on page 49.](#)



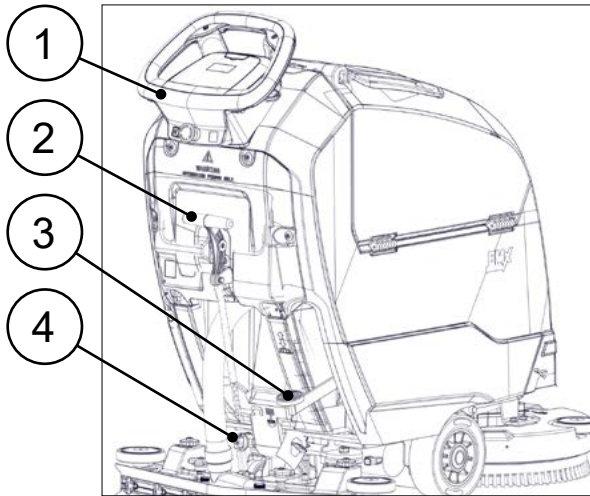


Warning label for cleaning system without chemical cleaners (optional):

It is used on the detergent canister to indicate to the user what warnings should be taken to take advantage of the chemical-free cleaning system, see [“DETERGENT SOLUTION VERSIONS WITH FSS SYSTEM PAIRED WITH AQUÆ® TECHNOLOGY”](#) on page 49.



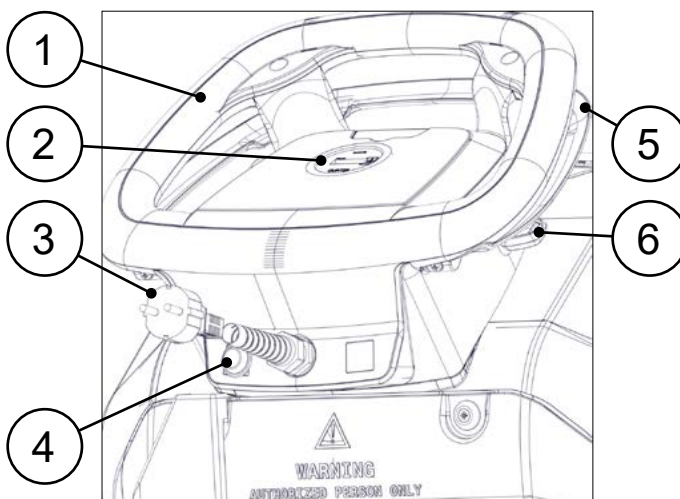
CONTROL STATION



The machine has an easy and user-friendly control station, comprised of mainly the following:

1. Control panel.
2. Squeegee support control lever.
3. Brush head control pedal.
4. Detergent solution regulation tap.

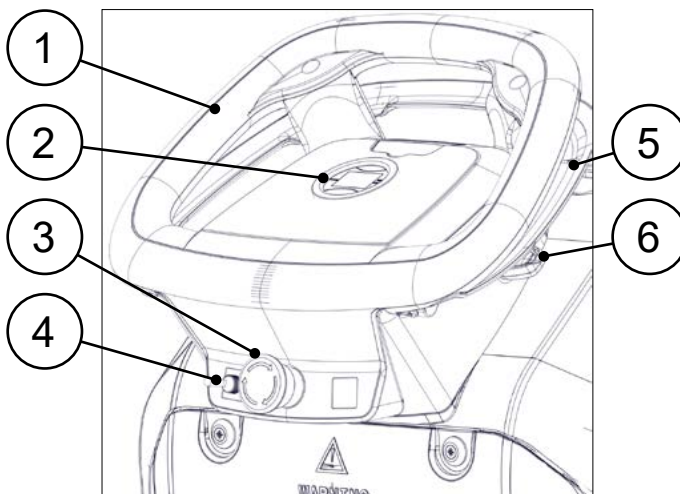
DASHBOARD (ELECTRIC VERSION)



The control panel, in versions with mains power supply, consists mainly of the following:

1. Control handlebars.
2. Hour meter, see [“HOUR METER \(ELECTRIC VERSIONS\)”](#) on page 74.
3. Machine power cable.
4. Primary main switch.
5. User presence lever.
6. Secondary key-operated main switch.

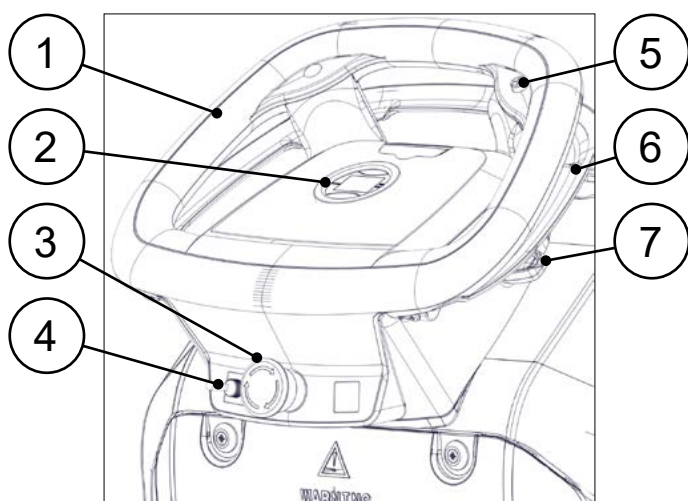
DASHBOARD (BASIC VERSION)



The basic control panel, on battery-powered versions, consists mainly of:

1. Control handlebars.
2. Control display.
3. Emergency switch, see [“EMERGENCY BUTTON”](#) on page 79.
4. Brush uncoupling switch, see [“BRUSH UNCOUPLING FUNCTION \(DISCOID SCRUBBING VERSION\)”](#) on page 78.
5. User presence lever.
6. Main key switch.

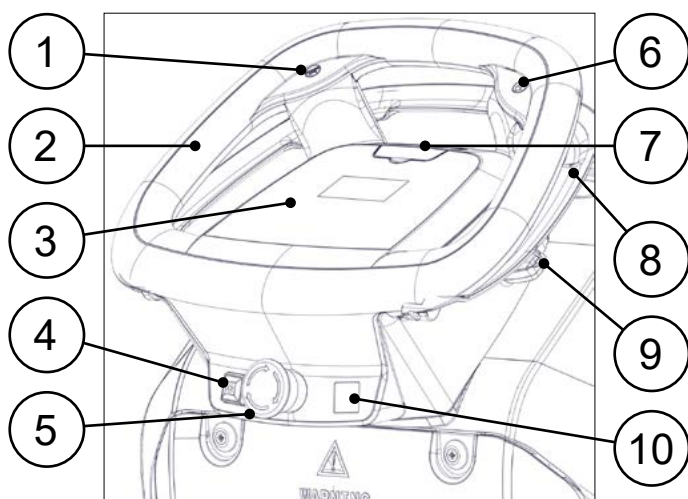
DASHBOARD (BASIC VERSION WITH TRACTION)



The basic control panel with traction, on battery-powered versions, consists mainly of the following:

1. Control handlebars.
2. Control display.
3. Emergency switch, see [“EMERGENCY BUTTON” on page 79.](#)
4. Brush uncoupling switch, see [“BRUSH UNCOUPLING FUNCTION \(DISCOID SCRUBBING VERSION\)” on page 78.](#)
5. Reverse gear activation button, see [“REVERSE \(VERSIONS WITH TRACTION\)” on page 80.](#)
6. User presence lever.
7. Main key switch.

DASHBOARD (PRO VERSION)



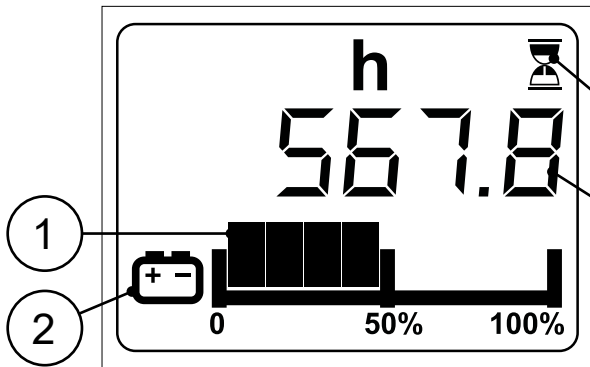
The basic control panel with traction, on battery-powered versions, consists mainly of the following:

1. Power mode working program activation switch, see [“POWER MODE WORKING PROGRAM \(PRO VERSION\)” on page 58.](#)
2. Control handlebars.
3. Control panel.
4. Recovery tank cleaning system on-off switch, see [“CLEANING GUN SYSTEM \(PRO VERSIONS\)” on page 84.](#)
5. Reverse gear activation button, see [“REVERSE \(VERSIONS WITH TRACTION\)” on page 80.](#)
6. Reverse gear activation button, see [“REVERSE \(VERSIONS WITH TRACTION\)” on page 80.](#)
7. Valid only for machine versions with automatic Wifi-GSM fleet management, service message

activation switch, see [“SOS DEVICE \(PRO VERSIONS WITH FFM SYSTEM – FIMAP FLEET MANAGEMENT WI-FI & GSM\)” on page 82.](#)

8. User presence lever.
9. Main key switch.
10. Automatic detergent management system on-off switch, see [“AUTOMATIC DETERGENT DOSING SYSTEM \(PRO VERSIONS WITH FSS SYSTEM – FIMAP SOLUTION SAVER\)” on page 83.](#)

CONTROL DISPLAY (BASIC VERSION)



In battery-powered versions, the basic control display is composed of the following:

1. Battery charge level graphic symbol, see [“BATTERY SYSTEM CHARGE LEVEL INDICATOR \(BATTERY-POWERED BASIC VERSION\)”](#) on page 73.
2. Battery charge level graphic icon, see [“BATTERY SYSTEM CHARGE LEVEL INDICATOR \(BATTERY-POWERED BASIC VERSION\)”](#) on page 73.
3. Hour meter graphic icon, see [“HOUR METER \(BASIC BATTERY-POWERED VERSIONS\)”](#) on page 75.
4. Hour meter graphic symbol, see [“HOUR METER \(BASIC BATTERY-POWERED VERSIONS\)”](#) on page 75.

CONTROL PANEL (PRO VERSION)



The control panel is subdivided as follows:

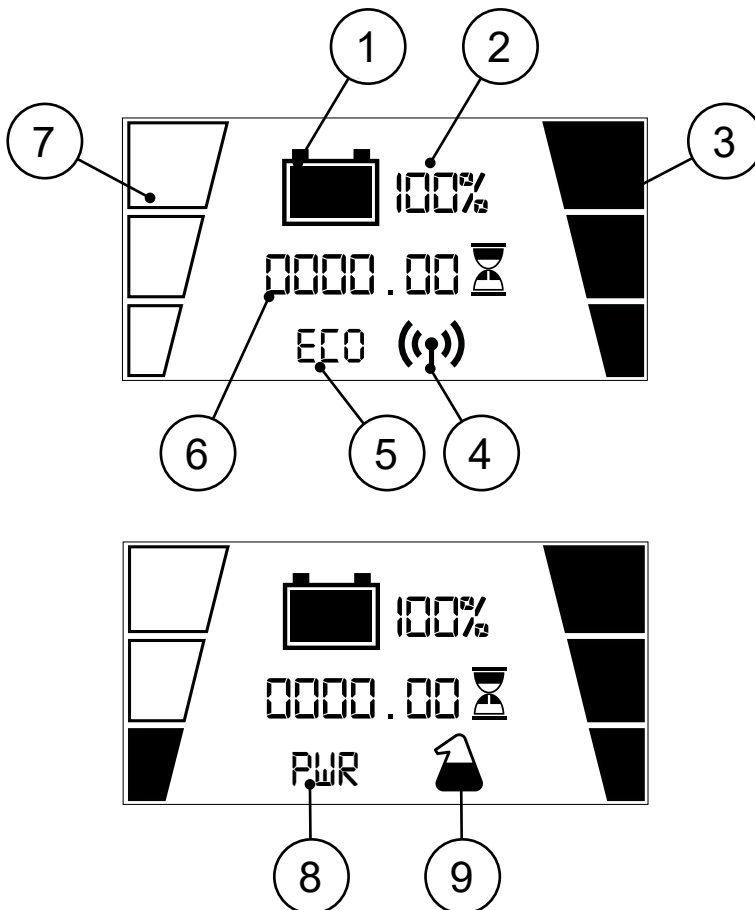
1. Control display, see [“CONTROL DISPLAY \(PRO VERSION\)”](#) on page 33.
2. Detergent solution performance adjustment buttons, see [“REGULATING THE FLOW OF DETERGENT SOLUTION \(PRO VERSIONS\)”](#) on page 76.
3. Squeegee noiseless suction function control button, see [“NOISELESS SUCTION \(PRO VERSIONS\)”](#) on page 77.
4. ECO-MODE working program control button, see [“ECO MODE WORKING PROGRAM \(PRO VERSION\)”](#) on page 57.
5. Reverse activation icon, see [“REVERSE \(VERSIONS WITH TRACTION\)”](#) on page 80.
6. Forward speed adjustment buttons, see [“ADJUSTING THE FORWARD SPEED \(PRO VERSIONS\)”](#) on page 77.

7. Brush uncoupling button, only valid for single disc brush versions, see [“BRUSH UNCOUPLING FUNCTION \(DISCOID SCRUBBING VERSION\)”](#) on page 78.
8. Working zone control buttons, see [“PROGRAM ZONE WORKING PROGRAM \(PRO VERSION\)”](#) on page 59.

CONTROL DISPLAY (PRO VERSION)

The control display consists of the following:

1. Graphic symbol used to identify remaining battery charge, see [“BATTERY SYSTEM CHARGE LEVEL INDICATOR \(PRO BATTERY-POWERED VERSION\)”](#) on page 74.
2. Numeric symbol identifying the percentage of remaining battery charge, see [“BATTERY SYSTEM CHARGE LEVEL INDICATOR \(PRO BATTERY-POWERED VERSION\)”](#) on page 74.
3. Graphic symbol used to identify the performance level of forward speed, see [“ADJUSTING THE FORWARD SPEED \(PRO VERSIONS\)”](#) on page 77.
4. Graphic symbol used to identify that the automatic fleet management system is connected to the data exchange network, see [“SOS DEVICE \(PRO VERSIONS WITH FFM SYSTEM – FIMAP FLEET MANAGEMENT WI-FI & GSM\)”](#) on page 82.
5. Graphic symbol used to indicate that the "ECO" working program is active, see [“ECO MODE WORKING PROGRAM \(PRO VERSION\)”](#) on page 57
6. Numeric symbol used to identify the machine hour counter, see [“HOUR METER \(PRO BATTERY-POWERED VERSION\)”](#) on page 75.
7. Graphic symbol used to identify detergent



solution performance level, see [“REGULATING THE FLOW OF DETERGENT SOLUTION \(PRO VERSIONS\)”](#) on page 76.

8. Graphic symbol used to indicate that the "POWER MODE" working program is active, see [“POWER MODE WORKING PROGRAM \(PRO VERSION\)”](#) on page 58.
9. Graphic symbol used to identify that the automatic detergent dosing system is active, see [“AUTOMATIC DETERGENT DOSING SYSTEM \(PRO VERSIONS WITH FSS SYSTEM – FIMAP SOLUTION SAVER\)”](#) on page 83.

PREPARATION OF MACHINE

HANDLING THE PACKAGED MACHINE

The overall dimensions of the entire package are:

EMX PACKAGING	IS of U.M. [International System]	SIB of U.M. [Imperial Measurement System]
Length	143cm	56.30in
Width	66cm	25.98in
Height	117cm	46.06in

The weight of the packaging is:

PACKING WEIGHT	IS of U.M. [International System]	SIB of U.M. [Imperial Measurement System]
EMX 43 E	110Kg	43.31lb
EMX 43 B-BT-BT PRO	120Kg	47.24lb
EMX 50 B-BT-BT PRO	125Kg	49.21lb
EMX 50 BTS PRO	120Kg	47.24lb
EMX 50 BTO PRO	150Kg	59.05lb

 **N.B.:** it is recommended that all the packaging components be kept for any future machine transportation.




DANGER: Move the packaged product with handling trolleys that comply with legal requirements regarding size and mass of the packaging.

HOW TO UNPACK THE MACHINE

The machine is shipped in specific packaging. To remove it, proceed as follows:

1. Place the lower part of the outer packaging in contact with the floor.

 **N.B.:** use the pictograms printed on the box as a reference.

2. Remove the outer package.



WARNING: the machine is contained in specific packaging materials, whose elements (plastic bags, staples, etc.) can pose potential hazards, and must not be left within reach of children, disabled persons, etc.

3. Remove the boxes containing the disc brushes and squeegee body from the machine.



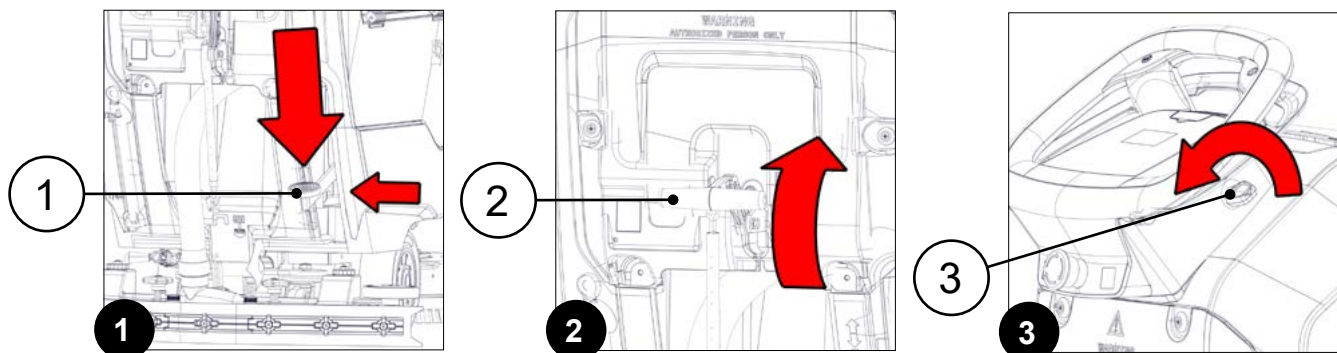
CAUTION: it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

4. Place a descent ramp at the rear of the machine.



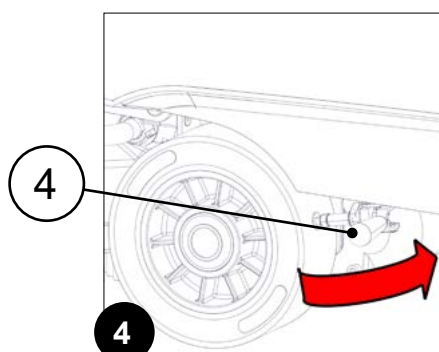
WARNING: the descent ramp must have an inclination and a capacity such as not to damage the machine or be damaged during the transit of the machine, contact the FIMAP service centre technician to obtain the net weight of the machine.

5. The machine is secured to the footboard with wedges that lock the wheels; remove these wedges.
6. Verify that the brush head body is in the home position (raised off the floor), if not, press the pedal (1) to the end of the stroke, slide it to the left, and release it (**Fig.1**).
7. Check that the squeegee body is in the home position (raised off the floor), if not, rotate the lever upward (2) (**Fig.2**).
8. For battery-powered machines, check that the main switch is in the "0" position; if not, turn the key (3) a quarter turn counterclockwise (**Fig.3**).
9. Remove the key from the instrument panel.



10. Check that the brake is off, if not, turn the lever (4) counterclockwise (**Fig.4**).
11. Drive the machine down the ramp.

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

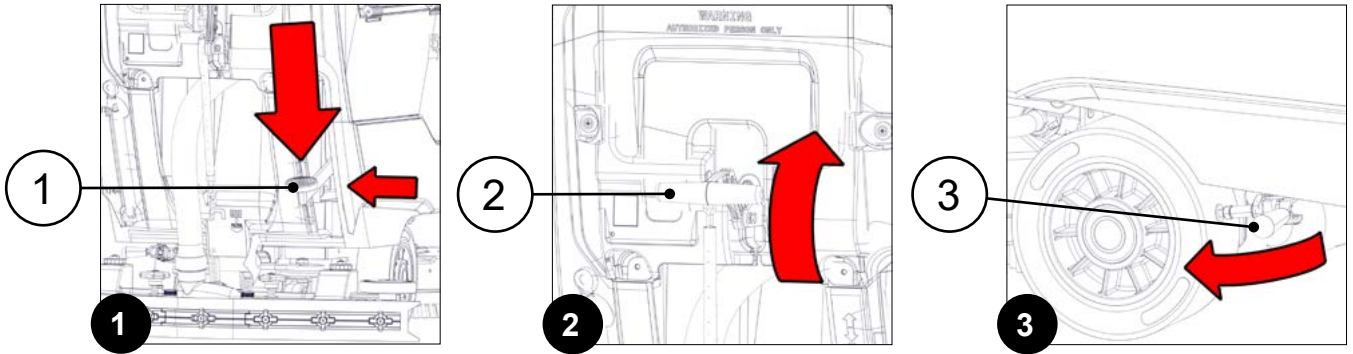


MACHINE SAFETY

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

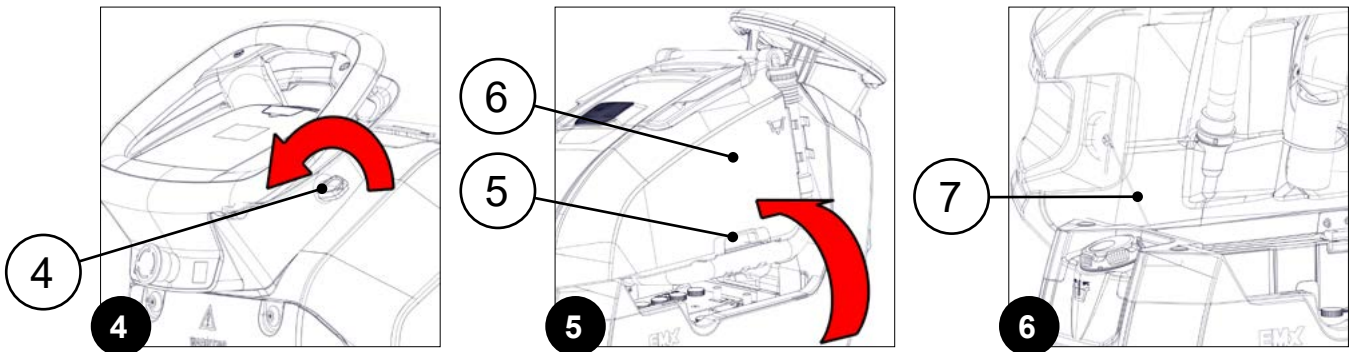
⚠ CAUTION: it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

1. Make sure the recovery tank is empty. If this is not the case, empty it. See [“DRAINING THE RECOVERY TANK” on page 96](#).
2. Make sure the solution tank is empty. If this is not the case, empty it. See [“DRAINING THE SOLUTION TANK” on page 104](#) on page.
3. Stand at the back of the machine.
4. Bring the pedal (1) to the rest position (raised off the floor), press the pedal all the way down, move it to the left and release it(**Fig.1**).
5. Move the squeegee body to the rest position (raised off the floor), turn the lever (2) upwards (**Fig.2**).
6. Set the parking brake to the working position, turn the lever (3) clockwise (**Fig.3**).



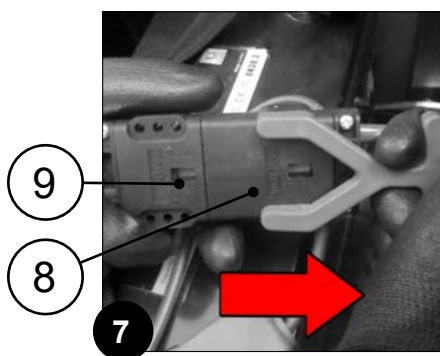
SECURING THE MACHINE (BATTERY-POWERED VERSION)

- Check the main switch is on "0". If it isn't, make a quarter turn anti-clockwise with the key (4) (Fig.4).
- Remove the key from the instrument panel.



- Grasp the handle (5) and turn the recovery tank cover (6) to its maintenance position (Fig.5).

WARNING: to prevent unintentional rotation of the recovery tank, turn it until the rope (7) is fully tensioned (Fig.6).



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

- Disconnect the connector (8) in the machine's electrical system wiring harness from the connector (9) in the power cable coming from the battery box (Fig.7).
- Grasp the handle (6) and turn the recovery tank (6) to its maintenance position.

SECURING THE MACHINE (ELECTRIC VERSION)

- Check that the main switch (10) (Fig.8) is in the '0' position, otherwise press the switch.

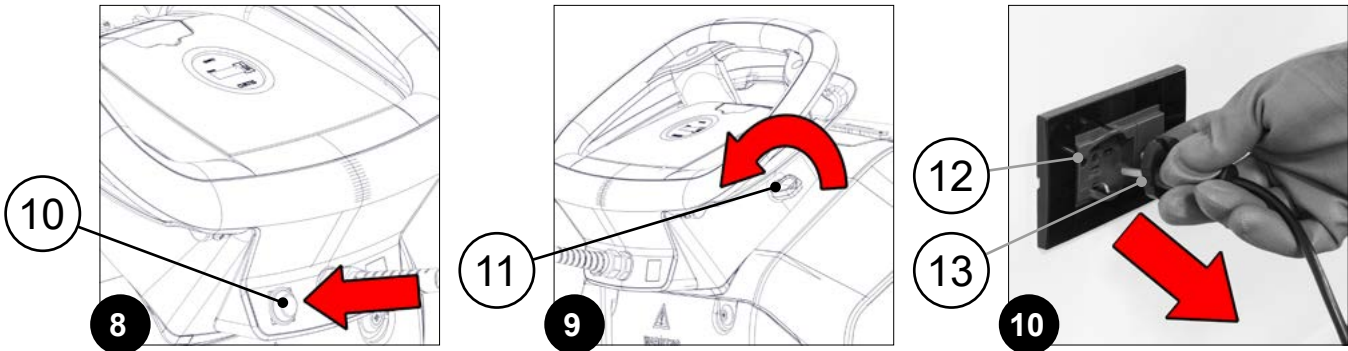
ATTENTION: the primary main switch is set to '0' when the LED light inside it is off.

- Check the secondary main switch is set to "0". If it isn't, make a quarter turn anti-clockwise with the key (11) (Fig.9).

- Remove the key from the instrument panel.
- Disconnect the plug (12) in the power cable from the mains power socket (13) (Fig.10).

⚠ DANGER: to prevent damaging the mains socket, disconnect power cable by pulling the plug directly, and not the cable.

⚠ DANGER: never touch the power plug with wet hands.

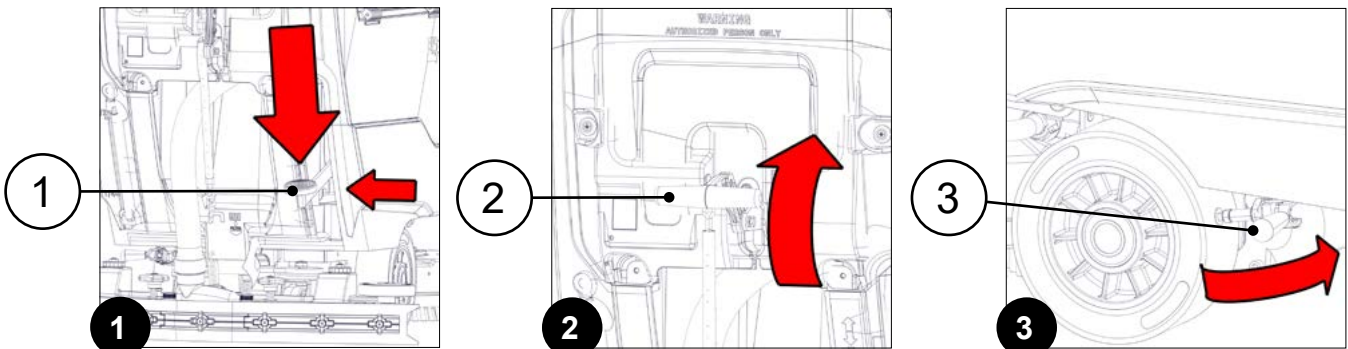


HOW TO MOVE THE MACHINE

The procedure for transporting the machine full safely is as follows:

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

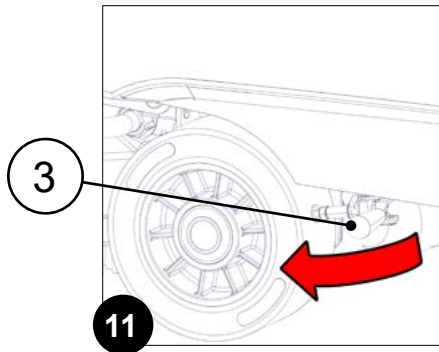
1. Make sure the recovery tank is empty. If this is not the case, empty it. See [“DRAINING THE RECOVERY TANK” on page 96.](#)
2. Make sure the solution tank is empty. If this is not the case, empty it. See [“DRAINING THE SOLUTION TANK” on page 104](#) on page.
3. Stand at the back of the machine.
4. Bring the pedal (1) to the rest position (raised off the floor), press the pedal all the way down, move it to the left and release it (Fig.1).
5. Move the squeegee body to the rest position (raised off the floor), turn the lever (2) upwards (Fig.2).
6. Set the parking brake to the rest position, turn the lever (3) anti-clockwise (Fig.3).



7. Perform all the operations required to secure the machine. See [“MACHINE SAFETY” on page 35.](#)
8. 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.

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



9. Place the machine on the transport vehicle.
10. Remove the key from the main switch.
11. Set the parking brake to the working position, turn the lever (3) clockwise (**Fig.11**).
12. 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.

TYPE OF BATTERY TO BE USED (BATTERY-POWERED VERSIONS)

Battery type	Voltage (V)	Work (Ah _{C5})
NP 75 12 (AGM)	12	75
12 TP 90 (Acid)	12	90
LFP 24 50 (Li-Ion)	24	50

For good working performance, the machine must be powered at 24V, here are the three types of batteries that FIMAP offers to its customers.

FIMAP recommends the use of AGM 12V 75_{C5} batteries.

The dimensions of the battery holder compartment are: 355x240x350 mm (length x height x width).

i N.B.: the height was obtained by measuring from the plane of the battery system base to the HEPA filter, removing 10mm.

i N.B.: the function board in the machine is programmed by the factory to work with the following type of battery: Gel60, to change the selected battery type see the "OPERATOR INTERFACE CONFIGURATION MANUAL" which can be downloaded from www.fimap.com

BATTERY SYSTEM MAINTENANCE AND DISPOSAL (BATTERY-POWERED VERSION)

For battery maintenance and recharging, follow the instructions contained in the document provided by the battery manufacturer.

When the batteries are dead, they must be disconnected by a trained technician from your local FIMAP service center or the one closest to you; using suitable lifting devices, remove the batteries from the machine and take them to a specific disposal centre.

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

INSERTING THE BATTERIES IN THE MACHINE (BATTERY-POWERED VERSION)

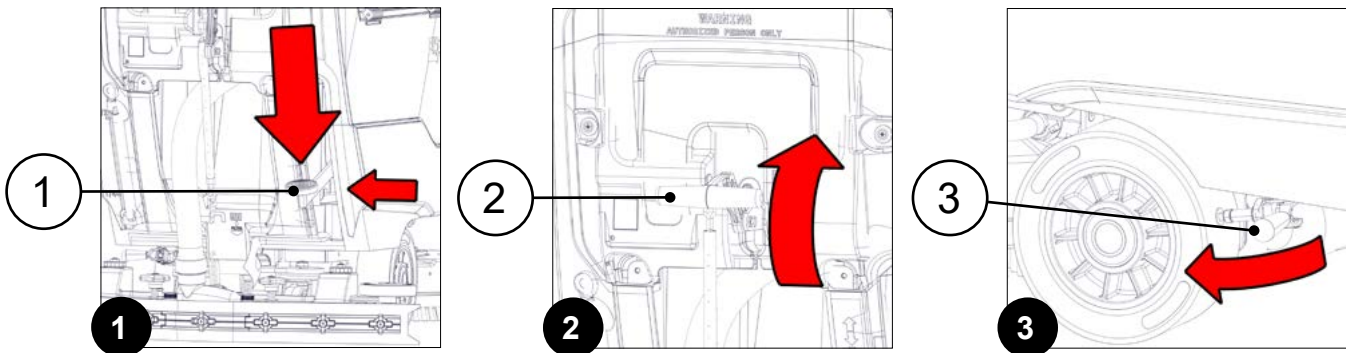
The insertion of the batteries inside the machine must be done by a trained technician from the relevant FIMAP service center or the one closest to you.

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.

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

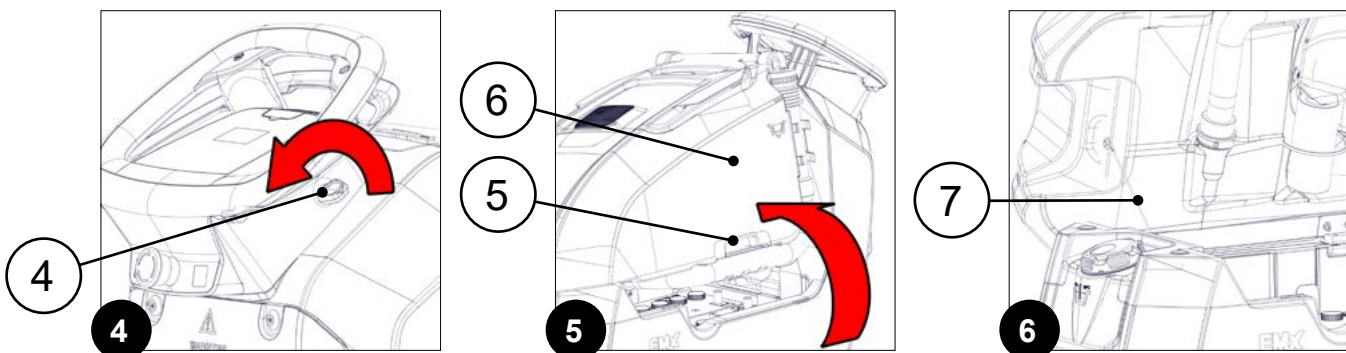
To insert the batteries into the machine, act as follows:

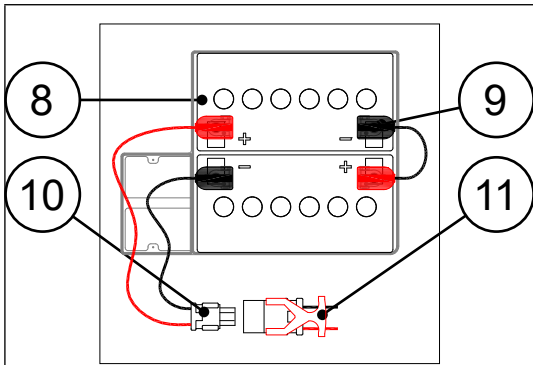
1. Make sure the recovery tank is empty. If this is not the case, empty it. See [“DRAINING THE RECOVERY TANK” on page 96](#).
2. Make sure the solution tank is empty. If this is not the case, empty it. See [“DRAINING THE SOLUTION TANK” on page 104](#) on page.
3. Stand at the back of the machine.
4. Bring the pedal (1) to the rest position (raised off the floor), press the pedal all the way down, move it to the left and release it (**Fig.1**).
5. Move the squeegee body to the rest position (raised off the floor), turn the lever (2) upwards (**Fig.2**).
6. Set the parking brake to the working position, turn the lever (3) clockwise (**Fig.3**).



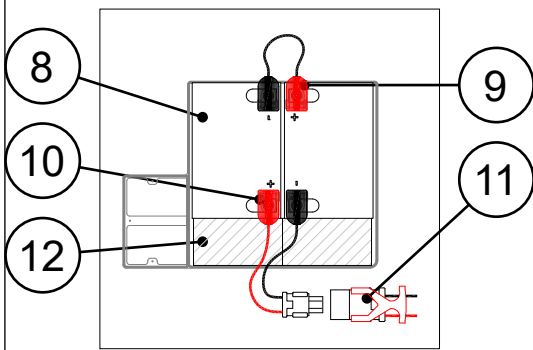
7. Check the main switch is on "0". If it isn't, make a quarter turn anti-clockwise with the key (4) (**Fig.3**).
8. Remove the key from the instrument panel.
9. Grasp the handle (5) and turn the recovery tank cover (6) to its maintenance position (**Fig.5**).

ATTENTION: to prevent unintentional rotation of the recovery tank, turn it until the rope (7) is fully tensioned (**Fig.6**).



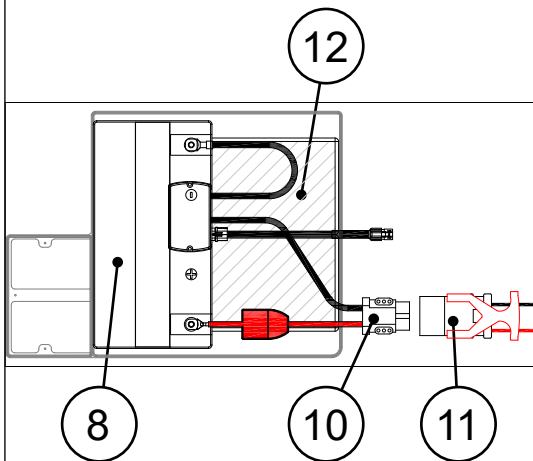


Placement of acid batteries 12-TP-90: place the batteries (8) in the relevant compartment, with the '+' and '-' poles facing each other. Use the jumper cable (9) to connect the two batteries (8) so that the voltage is 24V. Connect the battery cable (10) to the remaining free poles. Connect the male connector on the machine cable (11) to the female connector on the battery system cable (10).



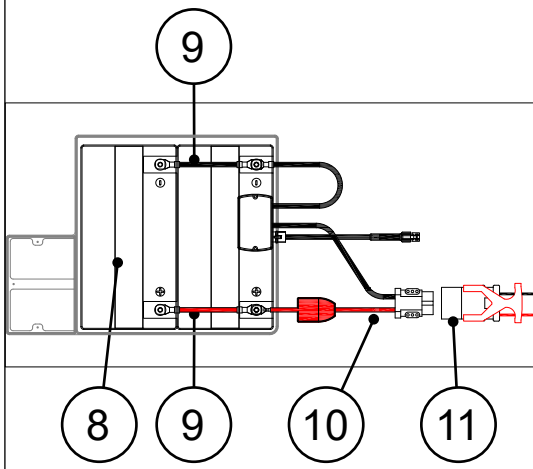
Placement of AGM batteries 12-NP-75: place the batteries (8) in the relevant compartment, with the '+' and '-' poles facing each other. Use the jumper cable (9) to connect the two batteries (8) so that the voltage is 24V. Connect the battery cable (10) to the remaining free poles. Connect the male connector on the machine cable (11) to the female connector on the battery system cable (10).

i N.B.: to prevent the batteries from moving, place the spacers (12) inside the battery compartment as well (12).



Placement of Li-ion 24V 50Ah batteries: place the battery (8) in the battery compartment. Connect the battery cable (10) to the poles in the battery. Connect the male connector on the machine cable (11) to the female connector on the battery system cable (10).

i N.B.: to prevent the battery from moving, also place the spacers (12) inside the battery compartment.



Placement of Li-ion 24V 100Ah batteries: place the batteries (8) in the battery compartment, with the '+' and '-' poles parallel to each other. Use the bridge cable (9) to connect the two batteries (8) so that they have a nominal current of 100Ah. Connect the battery cable (10) to the poles in the battery. Connect the male connector on the machine cable (11) to the female connector on the battery system cable (10).

⚠ ATTENTION: the positive pole of the battery must always be connected to the red cable and the negative pole to the black cable.

RECHARGING THE BATTERIES (BATTERY-POWERED VERSIONS)

The batteries must be charged prior to first use and whenever they no longer provide sufficient power for the job to be carried out.

WARNING: the function board in the machine is programmed by the factory to work with the following type of battery: Gel60, to change the selected battery type see the "OPERATOR INTERFACE CONFIGURATION MANUAL" which can be downloaded from www.fimap.com

N.B.: before recharging, carefully see the Use and Maintenance Manual of the batteries you want to use.

1. Bring the machine to the battery recharging area.

WARNING: 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.

WARNING: 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.

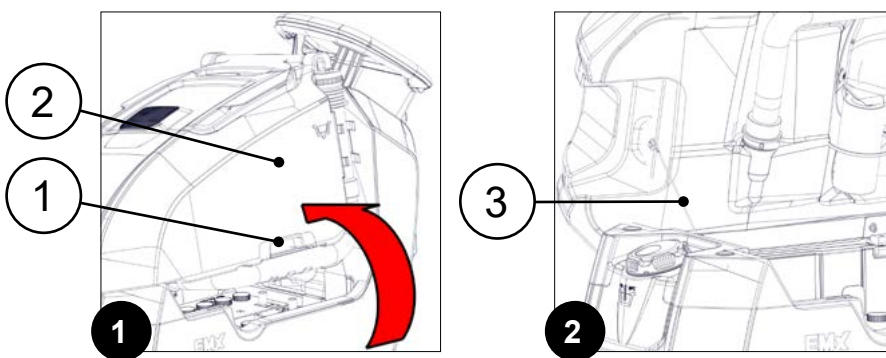
CAUTION: it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

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 recovery tank (2) to its maintenance position (**Fig.1**).

ATTENTION: to prevent unintentional rotation of the recovery tank, turn it until the rope (3) is fully tensioned (**Fig.2**).

WARNING: the following operations must be carried out by specialised personnel from the FIMAP service centre of reference or the one closest to you. An incorrect connection of the connector may cause a malfunction of the device.



RECHARGING WITH EXTERNAL MACHINE CHARGER

N.B.: the connector to be wired into the battery connection cable is delivered in the bag containing this instruction booklet and must be fitted in accordance with the instructions.

WARNING: Before connecting the batteries to the battery charger, make sure it is suitable for the batteries you want to use.



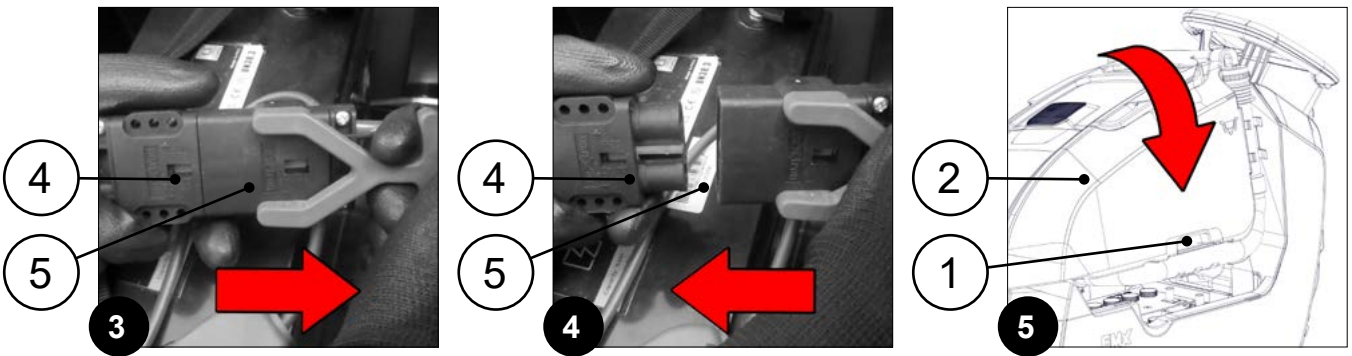
N.B.: before recharging, carefully see the Use and Maintenance Manual of the battery charger you want to use.

- Disconnect the connector in the battery cable (4) from the connector in the electrical system cable (5) (**Fig.3**).
- Connect the connector in the battery connection cable to the connector in the battery cable (4).

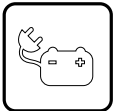


CAUTION: keep the recovery tank open for the duration of the battery box charging cycle to allow gas fumes to escape.

- Read the battery charger manual to carry out the charging cycle.
- After the complete charging cycle, disconnect the connector in the battery connection cable from the connector in the battery cable (4).
- Connect the connector in the battery cable (4) from the connector in the electrical system cable (5) (**Fig.4**).
- Position yourself to the side of the machine, grasp the handle (1) and turn the recovery tank (2) to its working position (**Fig.5**).



RECHARGING WITH AN INTERNAL MACHINE CHARGER



The on-board battery charger ensures maximum performance because it has been specially selected for the scrubbing machine on which it is mounted. The on-board battery charger offers the great convenience of being able to recharge the machine wherever you are at the end of your shift, without necessarily having to return to a specific point on the route.

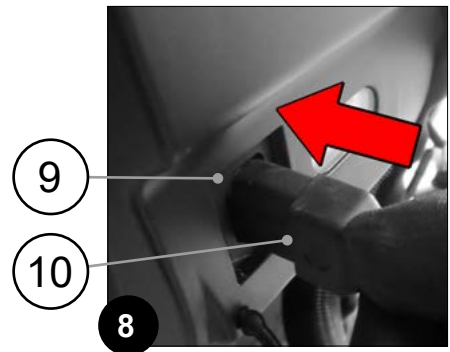
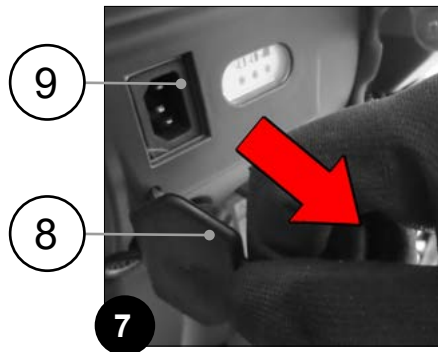
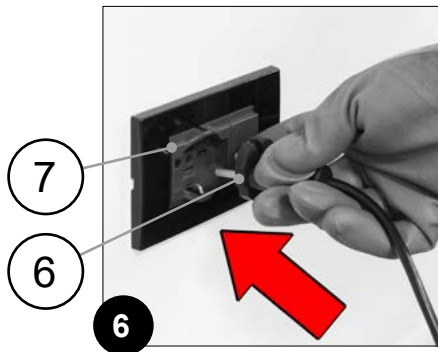


WARNING: before carrying out the battery charging cycle, check that the battery charger is suitable for the batteries you want to use. The battery charger in the machine is programmed by the factory with the following type of charging curve: GelGeneric, to change the type of charging curve contact your local FIMAP service centre or the one nearest to you; Alternatively, you can send an email to service@fimap.com, or visit the website at www.fimap.com



N.B.: carefully see the use and maintenance manual for the battery charger delivered in the bag containing this instruction manual.

- Connect the plug (6) in the battery charger's power cable to the mains socket (7) (**Fig.6**).
- Stand at the rear of the machine and remove the cap (8) covering the socket (9) in the battery charger (**Fig.7**).
- Connect the connector (10) on the battery charger power cable to the socket (9) on the battery charger body (**Fig.8**).



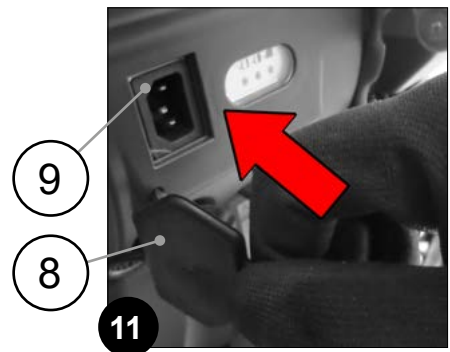
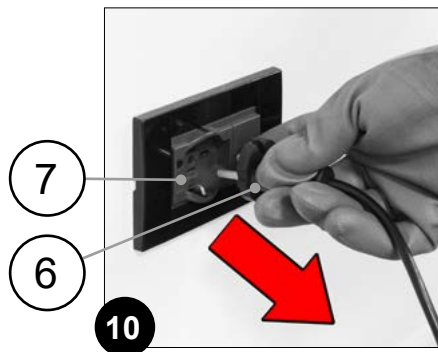
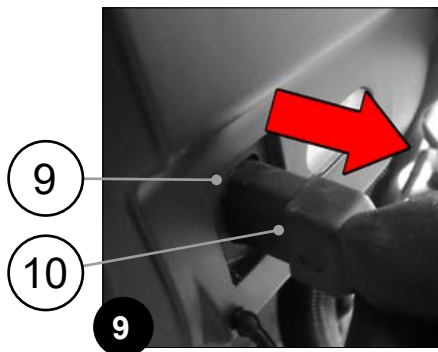
WARNING: Before inserting the battery charger power cable into the socket (15), check that there is no condensate or other forms of liquids.

N.B.: the battery charger power cable is delivered inside the bag containing this instruction booklet.

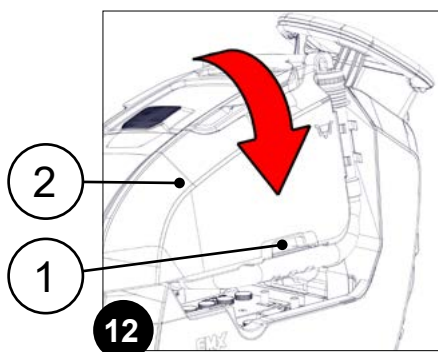
CAUTION: keep the recovery tank open for the duration of the battery box charging cycle to allow gas fumes to escape.

WARNING: if, during the battery charging phase, the LEDs in the battery charger display make a series of non-compliant flashes, stop charging the batteries and contact the relevant FIMAP service centre or the one nearest to you; Alternatively, you can send an email to service@fimap.com, or visit the website at www.fimap.com

- After the complete charging cycle, disconnect the connector (8) in the power cord of the charger from the socket (9) in the body of the battery charger (**Fig.9**).
- Disconnect the plug (7) in the battery charger power cord from the power outlet (**Fig.10**).
- Stand at the rear of the machine and insert the cap (8) covering the socket (9) in the battery charger (**Fig.11**).



- Position yourself to the side of the machine, grasp the handle (1) and turn the recovery tank (2) to its working position (**Fig.12**).



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 cap has been removed.

To insert the filter cap into the solution tank:

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

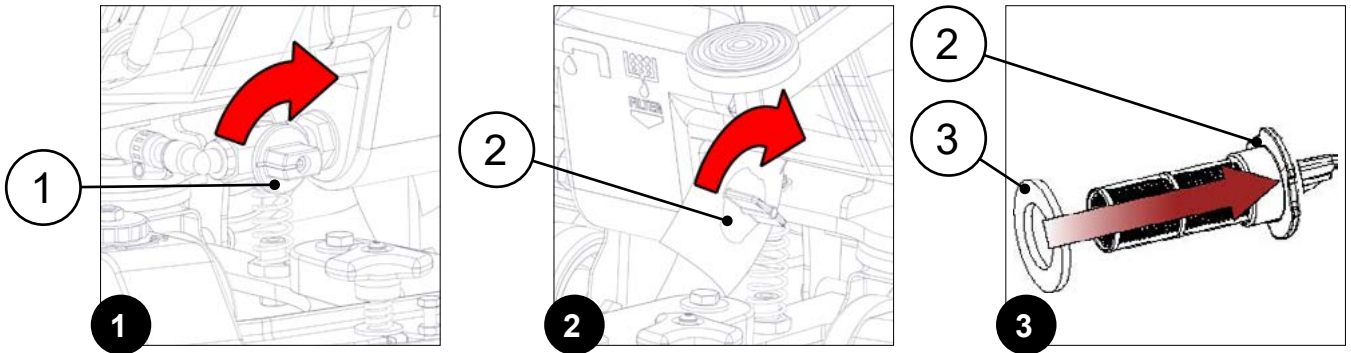


CAUTION: it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Tighten the outlet flow of the tap, turn the knob (1) at the rear of the machine anti-clockwise (**Fig.1**).
4. Screw the cap (2) onto the solution tank (**Fig.2**).



N.B.: before screwing the cap to the solution tank, insert the gasket (3) into the seat in the cap (**Fig.3**).



FILLING THE SOLUTION TANK

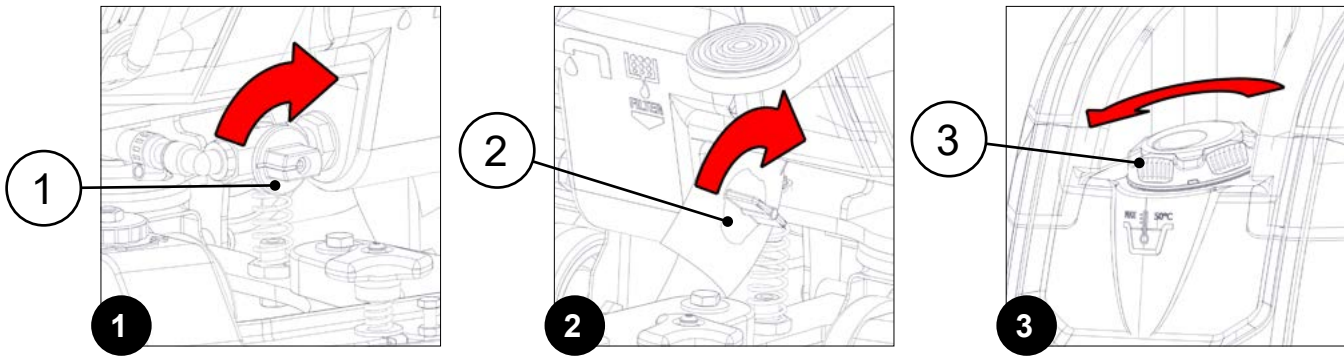
Proceed as follows to fill the solution tank with water:

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. Tighten the outlet flow of the tap, turn the knob (1) at the rear of the machine anti-clockwise (**Fig.1**).
4. Check that the filter cap (2) at the rear of the machine is tightened, otherwise turn it clockwise (**Fig.2**).
5. Turning anti-clockwise, remove the cap (3) from the solution tank inlet (**Fig.3**).

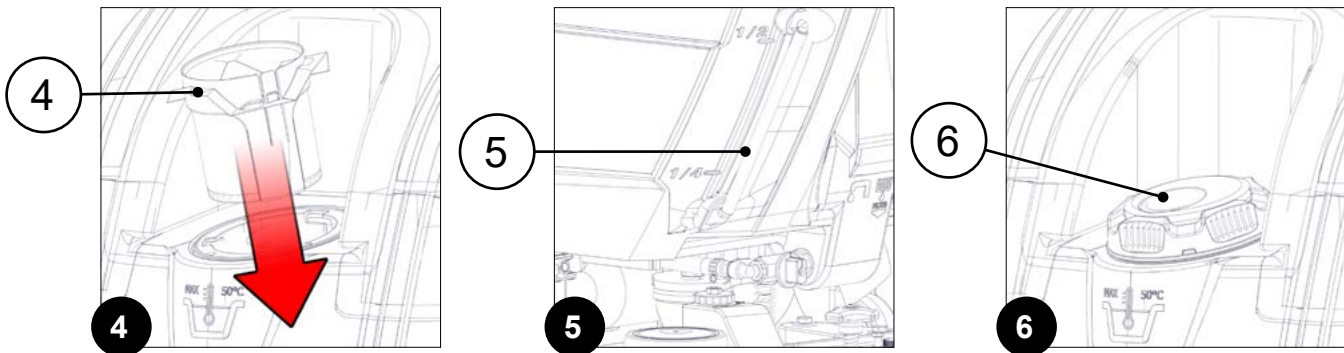


6. Check that the filter (4) under the cap is positioned correctly (**Fig.4**) in order to prevent impurities and dirt from getting inside, which can cause the machine's water system to malfunction.

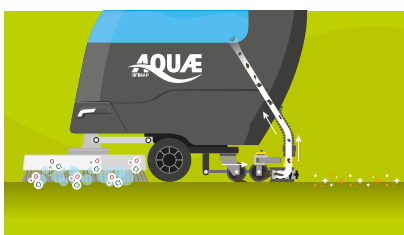
7. Fill the solution tank.

i **N.B.:** the amount of solution inside the tank is indicated by the coloured ball inside the level tube (5) on the left-hand side of the machine (**Fig.5**).

i **N.B.:** you can also fill the solution tank with a hose, insert the water hose into the hole (6) in the cap (3) (**Fig.6**), however, remember to remove the cap (5) for proper air venting.



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



Starting with simple softened tap water, the unique **AQUÆ® technology** activates the chlorine molecules to return an effective cleaning and sanitising solution.

i **N.B.:** **AQUÆ® technology** does not preclude the use of a detergent. You can complete the set-up by adding a specific time-controlled detergent dispenser, which limits the dispensing of the chemical on the rare occasions when you have to deal with particularly heavy soiling.

! **ATTENTION:** for versions with **AQUÆ® technology** fill the solution tank with water with a hardness of <5 °fH (very light water), at a temperature of not more than 50°C (122°F) and not less than 10°C (50°F).

DETERGENT SOLUTION

DETERGENT SOLUTION VERSIONS WITHOUT FSS SYSTEM

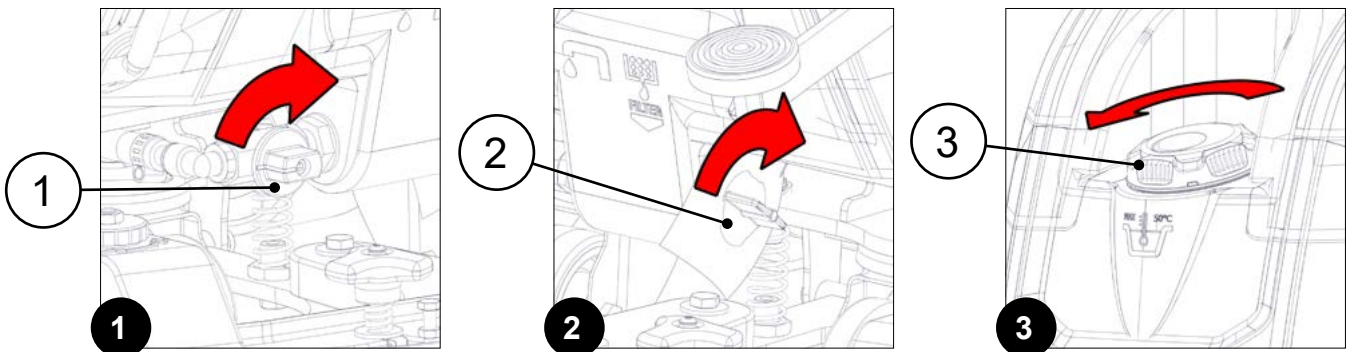
On machine versions without the automatic chemical dosing system after filling the solution tank with clean water, proceed as follows:

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. Tighten the outlet flow of the tap, turn the knob (1) at the rear of the machine anti-clockwise (**Fig.1**).
4. Check that the filter cap (2) at the rear of the machine is tightened, otherwise turn it clockwise (**Fig.2**).
5. Turning anti-clockwise, remove the cap (3) from the solution tank inlet (**Fig.3**).



WARNING: 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.

DETERGENT SOLUTION VERSIONS WITH FSS SYSTEM

The FSS (FIMAP SOLUTION SAVER) system allows the dispensing of water and detergent to be dosed separately. In this way, only the necessary amount of water and the correct percentage of detergent are used according to the type of dirt to be removed, avoiding waste or excessive quantities of solution which can then be difficult to remove.

On machine versions with the automatic chemical dosing system after filling the solution tank with clean water, proceed as follows:



N.B.: (FSS – FIMAP SOLUTION SAVER) with the automatic detergent dosing system results in real savings in money and an increase in environmental friendliness, because water and detergent consumption is managed manually depending on the work to be done. As an example, heavy duty cleaning requires more water and detergent than maintenance cleaning, that usually features non-sticky dirt.

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.](#)

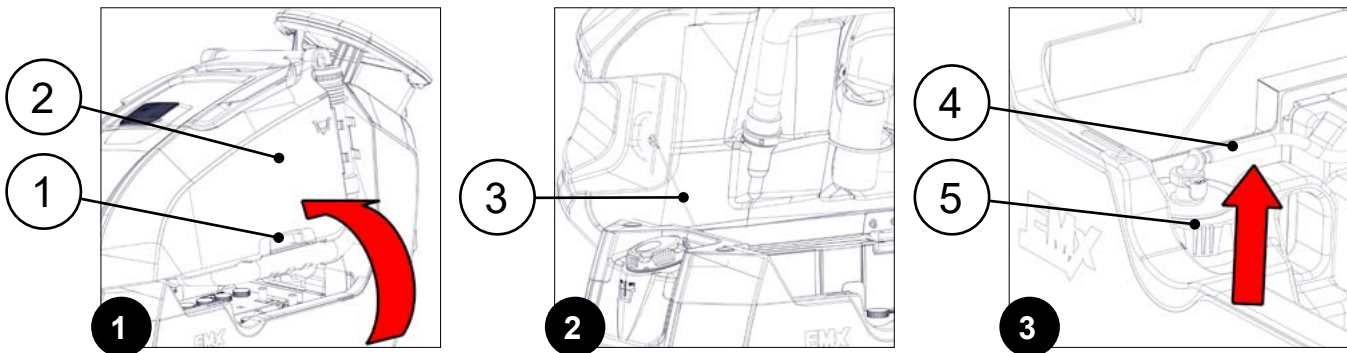
CAUTION: it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

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

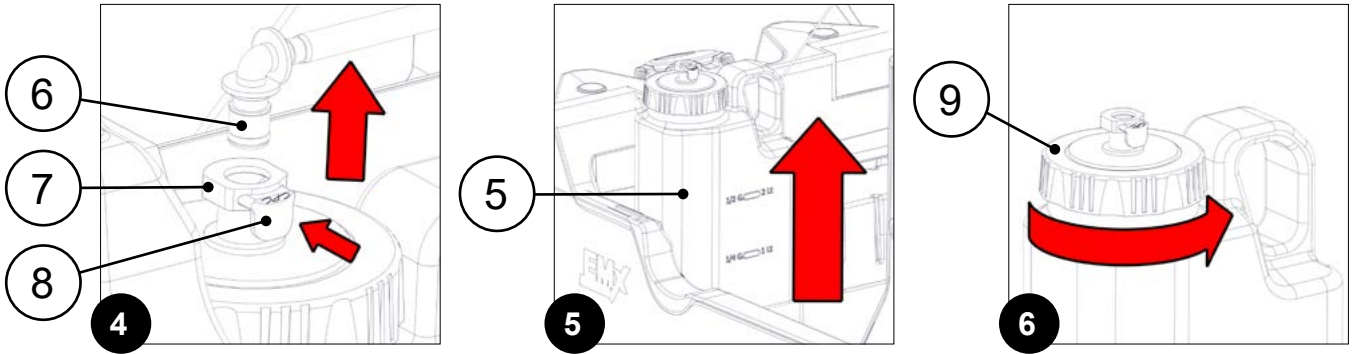
3. Position yourself to the side of the machine, grasp the handle (1) and turn the recovery tank (2) to its maintenance position (**Fig.1**).

WARNING: to prevent unintentional rotation of the recovery tank, turn it until the rope (3) is fully tensioned (**Fig.2**).

4. Disconnect the delivery hose (4) from the detergent canister (5) (**Fig.3**), before removing the male quick coupling (6) from the female quick coupling (7) remember to press the locking lever (8)(**Fig.4**).



5. Remove the detergent canister (5) from the machine (**Fig.5**).
6. Remove the detergent tank cap (9) (**Fig.6**).



7. Fill the canister (5) with the desired cleaning agent.

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.

WARNING: 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.

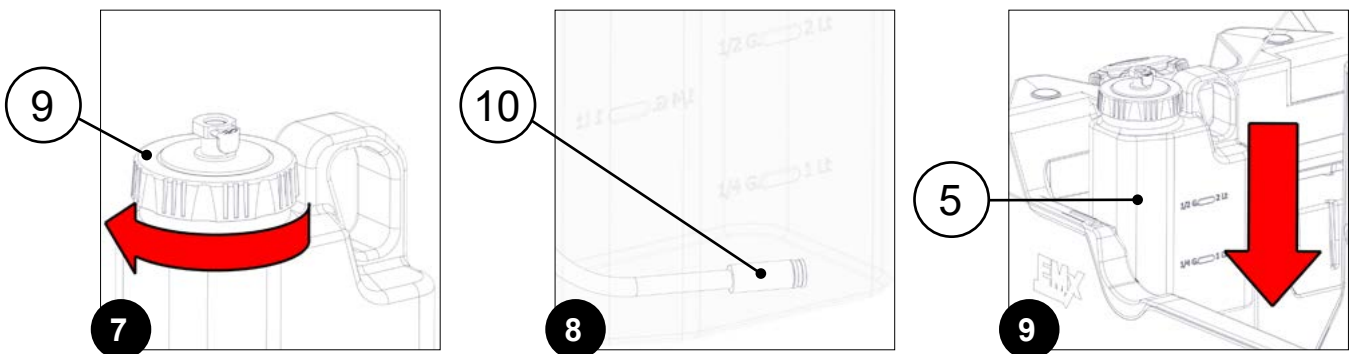
WARNING: Always use low-foam detergent. To avoid the production of foam, put a minimum quantity of antifoam liquid in the recovery tank before starting to clean. Do not use pure acids.

8. Close the cap (5) correctly to prevent liquid leaking out when working (Fig.7).

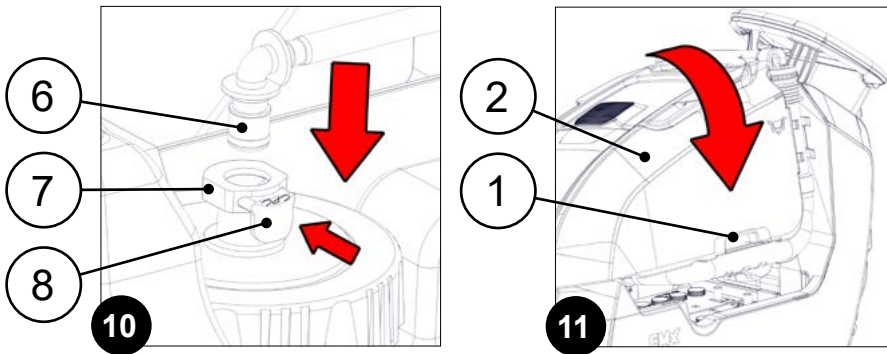
WARNING: Take care that the filter (10) in the suction pipe is correctly placed in the bottom of the canister (Fig.8).

9. Place the detergent canister inside the machine.

10. Connect the delivery hose (4) to the detergent canister (5) (Fig.9), before inserting the male quick coupling (6) into the female quick coupling (8) remember to press the locking lever (7) (Fig.10).



11. Position yourself to the side of the machine, grasp the handle (1) and turn the recovery tank (2) to its working position (Fig.11).



DETERGENT SOLUTION VERSIONS WITH FSS SYSTEM PAIRED WITH AQUAE® TECHNOLOGY



CHEMICAL-FREE CLEANING SOLUTION

In machine versions with the automatic chemical dosing system associated with AQUAE® technology, after filling the solution tank with water hardness <math>< 5 \text{ °fH}</math> (very light water) proceed as follows:

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.

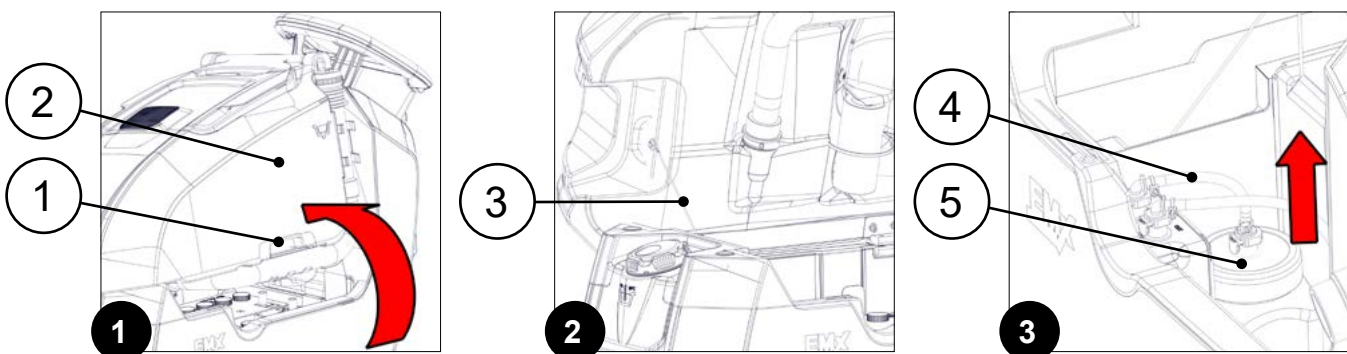
CAUTION: it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

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

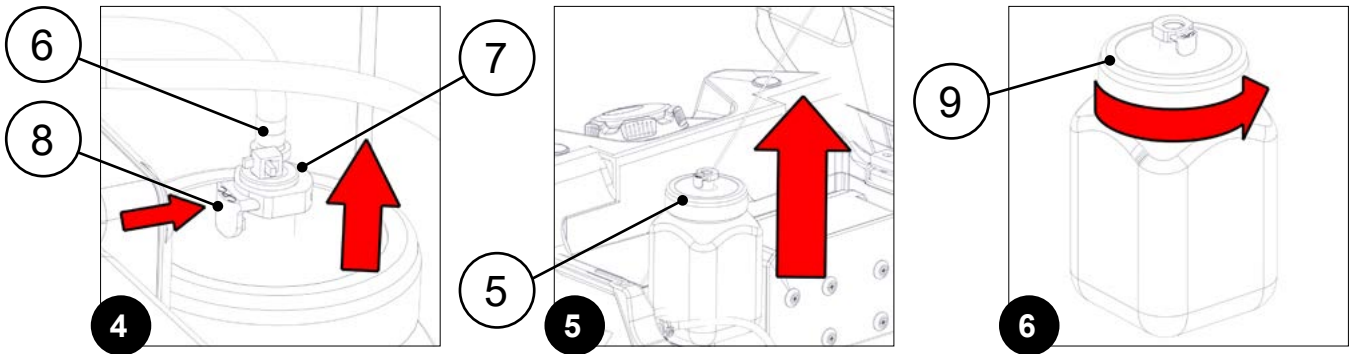
3. Position yourself to the side of the machine, grasp the handle (1) and turn the recovery tank (2) to its maintenance position (**Fig.1**).

WARNING: to prevent unintentional rotation of the recovery tank, turn it until the rope (3) is fully tensioned (**Fig.2**).

4. Disconnect the delivery hose (4) from the detergent canister (5) (**Fig.3**), before removing the male quick coupling (6) from the female quick coupling (7) remember to press the locking lever (8)(**Fig.4**).



5. Remove the detergent canister (5) from the machine (**Fig.5**).
6. Remove the detergent tank cap (9) (**Fig.6**).



7. Fill the canister with the desired all-purpose cleaner.

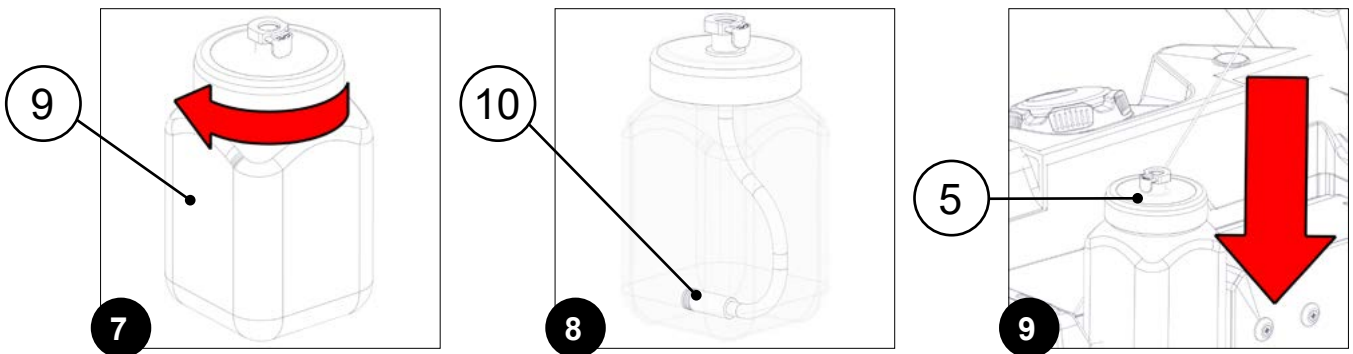
WARNING: FIMAP defines multipurpose detergents as those ordinary cleaning products with a pH between 6 and 8 and that do not contain: oxidising agents, chlorine or bromine, formaldehyde, mineral solvents.

8. Close the cap (5) correctly to prevent liquid leaking out when working (Fig.7).

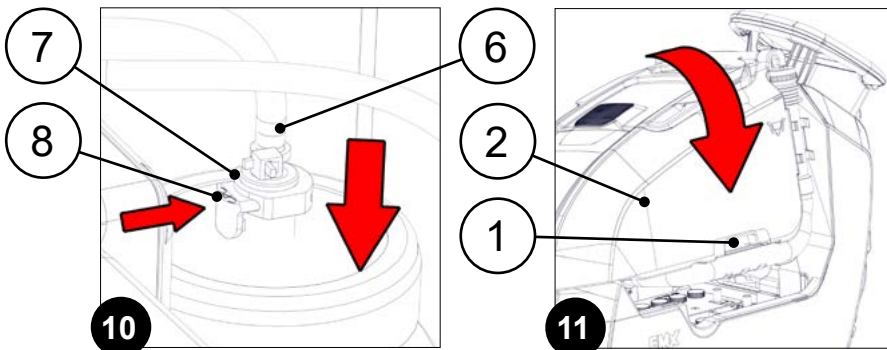
WARNING: Take care that the filter (10) in the suction pipe is correctly placed in the bottom of the canister (Fig.8).

9. Place the detergent canister inside the machine.

10. Connect the delivery hose (4) to the detergent canister (5) (Fig.9), before inserting the male quick coupling (6) into the female quick coupling (8) remember to press the locking lever (7) (Fig.10).




11. Position yourself to the side of the machine, grasp the handle (1) and turn the recovery tank (2) to its working position (Fig.11).



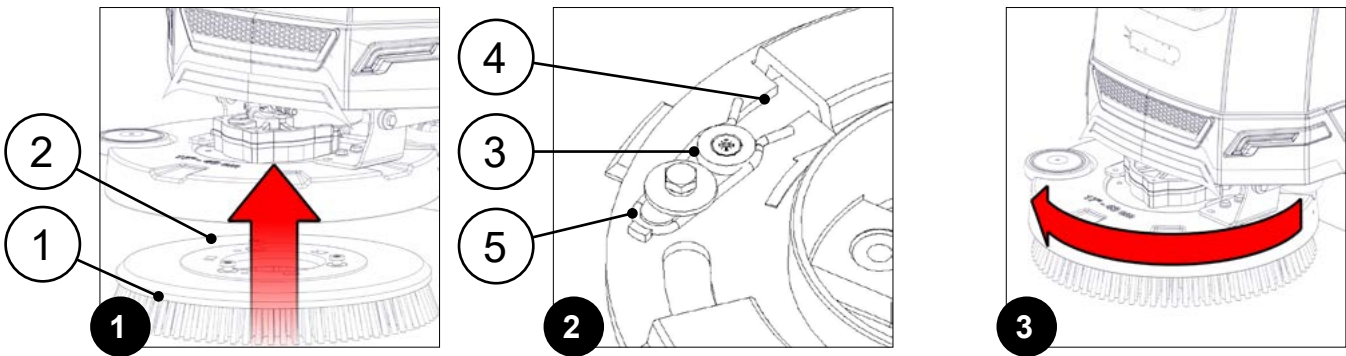
MOUNTING BRUSHES OR DRIVE DISCS (DISCOID SCRUBBING VERSION)

To mount the brush or drive disc in the brush head, follow the steps below:

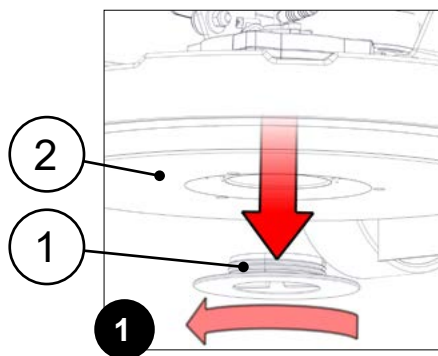
1. Take the machine to the maintenance area.
2. Perform all the operations required to secure the machine. See [“MACHINE SAFETY” on page 35.](#)

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

3. Go to the front of the machine.
4. Insert the brush (1) in the brush holder plate (2) (**Fig.1**).
5. Turn the brush clockwise until the three buttons (3) on the brush enter the notches (4) on the brush holder plate (**Fig.2**).
6. Turn the brush (**Fig.3**) clockwise, snap the button towards the catch spring (5) until it locks (**Fig.2**).




ASSEMBLING THE ABRASIVE PAD (DISCOID SCRUBBING VERSION)



To mount the abrasive pad in the drive disc in the brush head, perform 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. Go to the front of the machine.
4. Remove the male insert (1) of the center lock present in the drive

disc (2) (**Fig.1**).

5. Insert the abrasive pad into the abrasive part present in the center lock.
6. Reassemble the male insert (1) of the center lock present in the drive disc (2).

FITTING BRUSHES (CYLINDRICAL SCRUBBING VERSION)

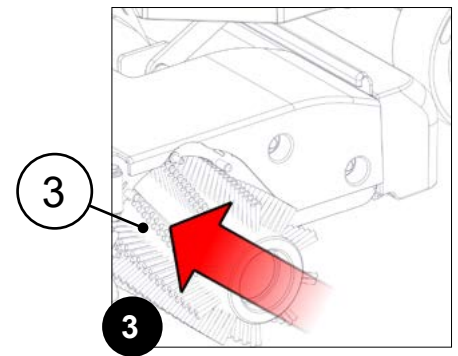
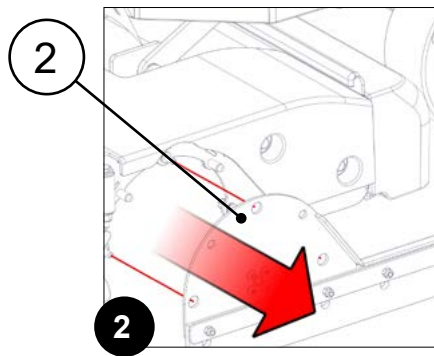
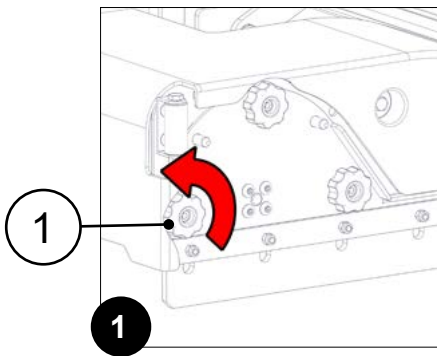
To assemble the brushes on the brush head, proceed as follows:

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

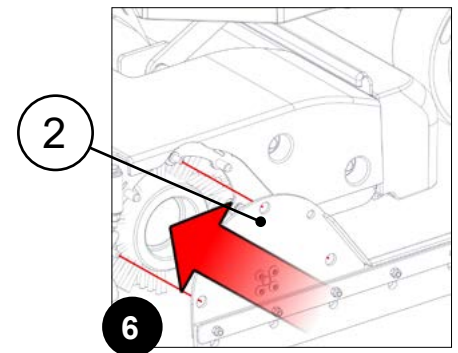
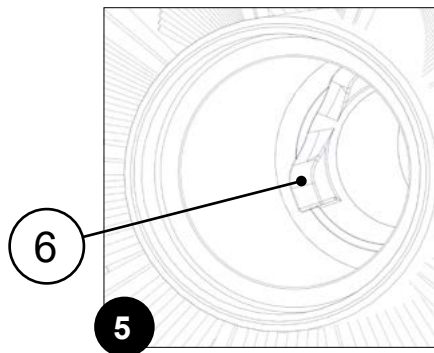
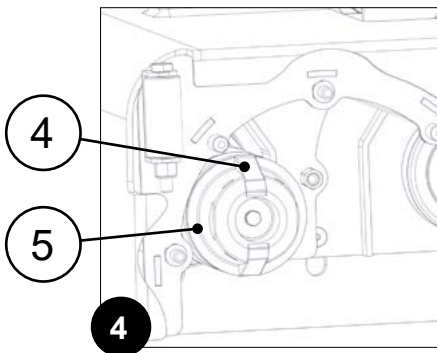


CAUTION: it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Go to the front left-hand side of the machine.
4. Remove the knobs (1) which secure the inspection door (Fig.1).
5. Remove the left inspection door (2) from the brush head (Fig.2).
6. Insert the front brush (3) into the brush head body (Fig.3).



7. Rotate the brush until the fastening hooks (4) present in the tow hook (5) (Fig.4) correctly enter the slots (6) in the brush (Fig.5).
8. Insert the left inspection door (2) from the brush head body (Fig.6).



WARNING: pay particular attention that the fastening hooks (4), present in the tow hook (3) of the inspection hatch (2) (Fig.4), correctly enter the slots (6) in the brush (Fig.5).

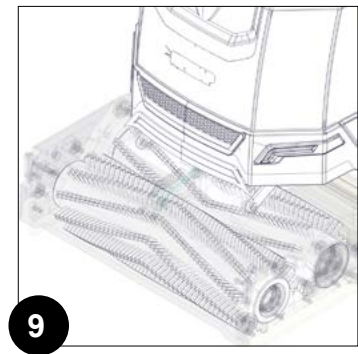
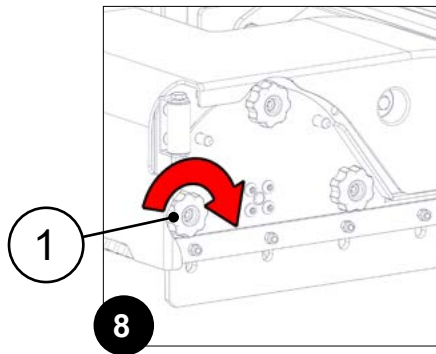
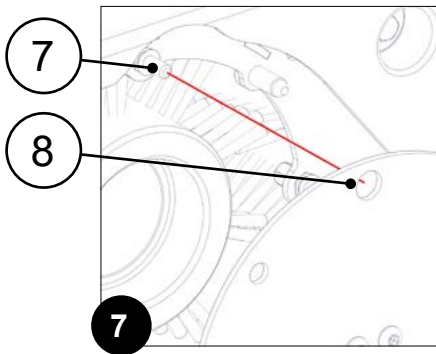


WARNING: pay careful attention to ensure that the centring pins (7), found in the brush head body, are correctly positioned in the holes (8) in the inspection door (Fig.7).

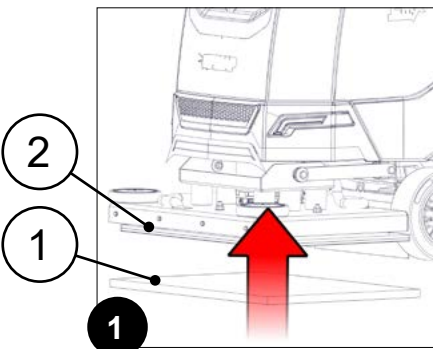
9. Attach the inspection door (2) to the brush head body using the knobs (1) previously removed (Fig.8).
10. Repeat the operations performed above to insert the rear brush.



N.B.: in order to be installed correctly, the brushes must form an X when viewed from above in the forward direction of movement (Fig.9).



ASSEMBLING THE ABRASIVE PAD (ORBITAL VERSIONS)



body.

To mount the abrasive pad in the orbital brush head body, 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. Go to the front of the machine.
4. Insert the abrasive pad into the abrasive part in the brush head

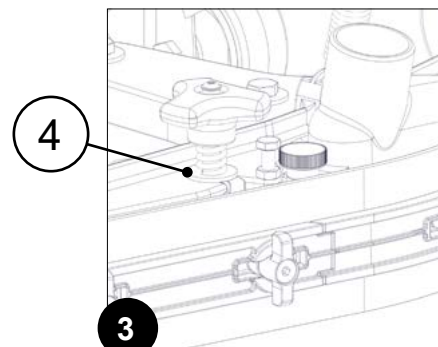
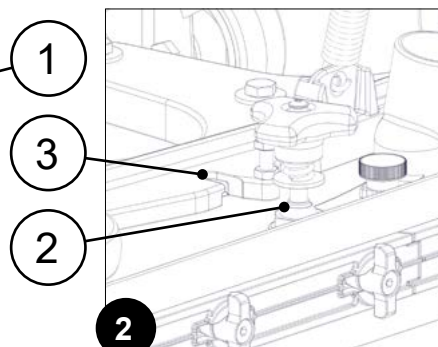
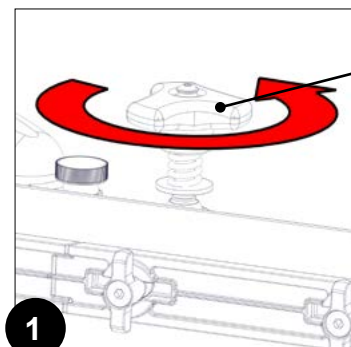
ASSEMBLING THE SQUEEGEE BODY

For packaging reasons, the squeegee body comes disassembled from the machine. In order to mount it on the squeegee support, do the following:

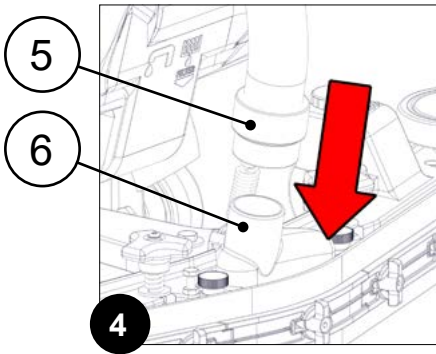
1. Perform the steps to secure the machine, see [“MACHINE SAFETY” on page 35.](#)

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

2. Stand at the back of the machine.
3. Unscrew the knobs (1) in the squeegee body pre-assembly (**Fig.1**).
4. First insert the left pin (2) present in the squeegee body in the left slot (3) present in the squeegee support (**Fig.2**), making sure that the washer (4) rests in the upper part of the squeegee body (**Fig.3**).



5. Insert the vacuum tube (5) in the sleeve (6) in the squeegee body (**Fig.4**).



WARNING: The squeegee comes pre-adjusted, however if necessary see [“ADJUSTING THE SQUEEGEE RUBBER BLADES”](#) on page 115.

WORK PREPARATION CHECKLIST

CHECK	SOLUTION
Check for any fluid leaks	Contact your FIMAP service centre of reference, or that which is closest to you; Alternatively, you can send an email to service@fimap.com , or visit the website at www.fimap.com
Check the correct operation of the parking brake	Contact your FIMAP service centre of reference, or that which is closest to you; Alternatively, you can send an email to service@fimap.com , or visit the website at www.fimap.com
Check the tyres to make sure they are not damaged	Contact your FIMAP service centre of reference, or that which is closest to you; Alternatively, you can send an email to service@fimap.com , or visit the website at www.fimap.com
Check the charge level of the battery box	Check the charge level of the battery box on the control display, recharge if necessary, see “RECHARGING THE BATTERIES (BATTERY-POWERED VERSIONS)” on page 41
Check if the solution tank is full	If the solution tank is empty, arrange to refill it, see “FILLING THE SOLUTION TANK” on page 44 and “DETERGENT SOLUTION” on page 46
Check if the recovery tank is full	If the recovery tank is full, empty it, see “DRAINING THE RECOVERY TANK” on page 96
For scrubbing machine versions with cylindrical brushes, check whether the debris hopper in the brush head body is full	If the debris hopper is full, empty it. See “EMPTYING THE DEBRIS HOPPER (CYLINDRICAL SCRUBBING VERSION)” on page 75
Check the condition of the collection filter tray on the recovery tank	If the tank is found to be dirty, clean it, see “RECOVERY TANK CLEANING” on page 96
Check the condition of the water system filter	If the cartridge in the filter body is dirty, clean it, see “CLEANING THE SOLUTION TANK FILTER-CAP” on page 105
For machine versions equipped with the automatic detergent dosing system, check the condition of the chemical detergent filter	If the cartridge in the filter housing is dirty, clean it, see “CLEANING DETERGENT CANISTER (VERSIONS WITH FSS SYSTEM – FIMAP SOLUTION SAVER)” on page 105
For machine versions with the automatic detergent dosing system paired with AQUÆ® technology, check the condition of the chemical detergent filter	If the cartridge in the filter body is dirty, clean it, see “CLEANING DETERGENT CANISTER (VERSIONS WITH AUTOMATIC DETERGENT DOSING SYSTEM USING AQUÆ® TECHNOLOGY)” on page 107
Check the condition of the brushes in the discoid scrubbing brush head	If the brush present in the brush head is dirty, clean it, see “CLEANING OF BRUSH HEAD DRIVE BRUSH (DISCOID SCRUBBING VERSION)” on page 98
	If the brush present in the brush head is worn or damaged replace it, see “REPLACING BRUSHES OR DRIVE DISCS (DISCOID SCRUBBING VERSION)” on page 110

<p>Check the condition of the brushes in the cylindrical scrubbing brush head</p>	<p>If the brushes in the brush head are dirty, clean them, see “CLEANING BRUSH (CYLINDRICAL SCRUBBING VERSION)” on page 102</p> <p>If the brushes in the brush head are worn or damaged, replace them, see “BRUSH REPLACEMENT (CYLINDRICAL SCRUBBING VERSION)” on page 113</p>
<p>Check the condition of the squeegee</p>	<p>If the squeegee is dirty, clean it, see “CLEANING THE SQUEEGEE” on page 94</p>
<p>Check the state of wear of the rubber blades in the squeegee</p>	<p>If the wear of the squeegee rubber blades is unsuitable for the job to be carried out, replace them. See “REPLACING THE SQUEEGEE RUBBER BLADES” on page 109</p>
<p>Check the condition of the squeegee vacuum tube.</p>	<p>If the squeegee vacuum pipe is dirty, clean it, see “CLEANING THE SQUEEGEE VACUUM HOSE” on page 95</p>
<p>Check that the gasket on the recovery tank cover is not damaged or worn</p>	<p>Contact your FIMAP service centre of reference, or that which is closest to you; Alternatively, you can send an email to service@fimap.com, or visit the website at www.fimap.com</p>

WORKING PROGRAMS (VALID FOR PRO VERSIONS)

The PRO version 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 [“ECO MODE WORKING PROGRAM \(PRO VERSION\)” on page 57](#).
2. POWER MODE: for operations where maximum washing power is required to clean particularly dirty environments, see [“POWER MODE WORKING PROGRAM \(PRO VERSION\)” on page 58](#).
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 paragraph [“MANUAL MODE WORKING PROGRAM \(PRO VERSION\)” on page 59](#)).
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 paragraph [“PROGRAM ZONE WORKING PROGRAM \(PRO VERSION\)” on page 59](#).

ECO MODE WORKING PROGRAM (PRO VERSION)

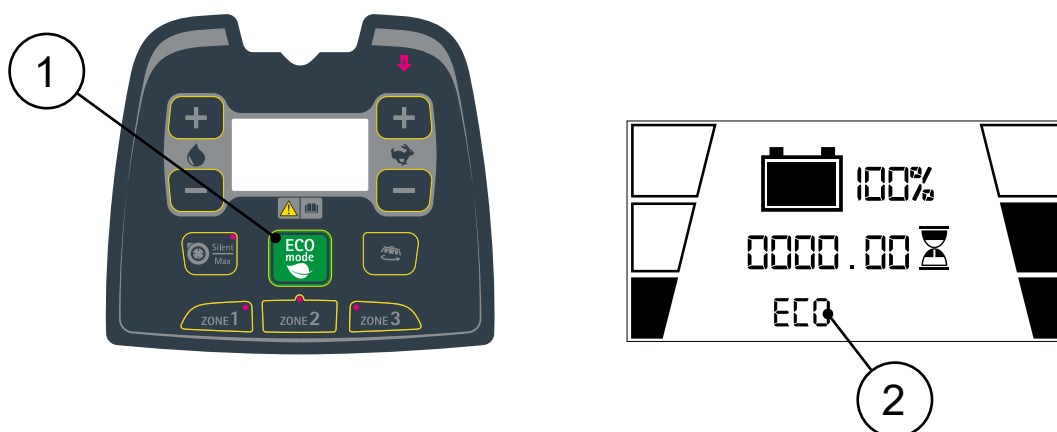
The ECO MODE working program can be used for light maintenance work.

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. With the machine in scrubber-dryer working mode, see, press the button (1) on the control panel to activate the ECO MODE working program.

i **N.B.:** As soon as the button (1) is pressed, the ECO MODE working program symbol (2) will appear on the control display.



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

- Press the button (1) on the control panel.
- Activate the POWER MODE program, see [“POWER MODE WORKING PROGRAM \(PRO VERSION\)” on page 58](#).
- Activate the MANUAL MODE program, see [“MANUAL MODE WORKING PROGRAM \(PRO VERSION\)” on page 59](#).
- Activate the PROGRAM ZONE program, see [“PROGRAM ZONE WORKING PROGRAM \(PRO VERSION\)” on page 59](#).

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

i **N.B.:** By selecting the ECO MODE working program, the working parameters (machine speed; the performance of the suction motor; the detergent solution flow) are automatically changed.

The parameters pre-set on a scale of 1 to 3 are as follows:

Speed	Suction	Detergent Solution
2	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.

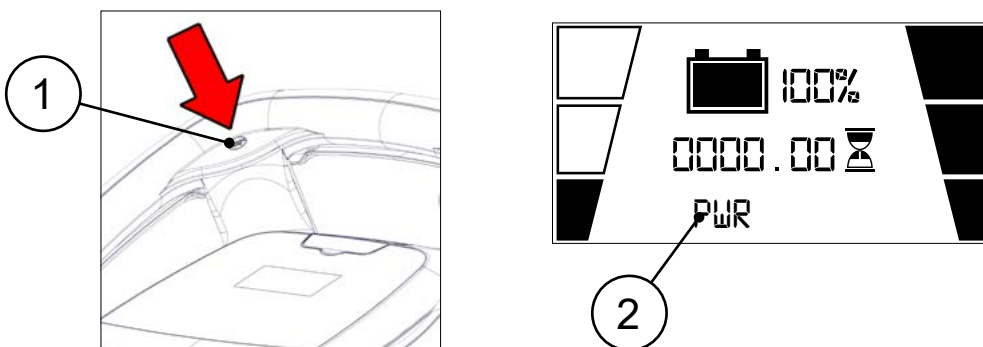
The POWER MODE working program can be activated by pressing the button (1) located on the control handlebar.

i **N.B.:** As soon as the button (1) is pressed, the POWER MODE working program symbol (2) will appear on the control display.

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

- Press the button (1) located on the control handlebar.
- Activate the ECO MODE program, see [“ECO MODE WORKING PROGRAM \(PRO VERSION\)” on page 57.](#)
- Activate the MANUAL MODE program, see [“MANUAL MODE WORKING PROGRAM \(PRO VERSION\)” on page 59.](#)
- Activate the PROGRAM ZONE program, see [“PROGRAM ZONE WORKING PROGRAM \(PRO VERSION\)” on page 59.](#)

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



i **N.B.:** by selecting the POWER MODE working program, the working parameters (machine speed; the performance of the suction motor; the detergent solution flow) are automatically changed.

The parameters pre-set on a scale of 1 to 3 are as follows:

Speed	Suction	Detergent Solution
1	3	3

MANUAL MODE WORKING PROGRAM (PRO VERSION)

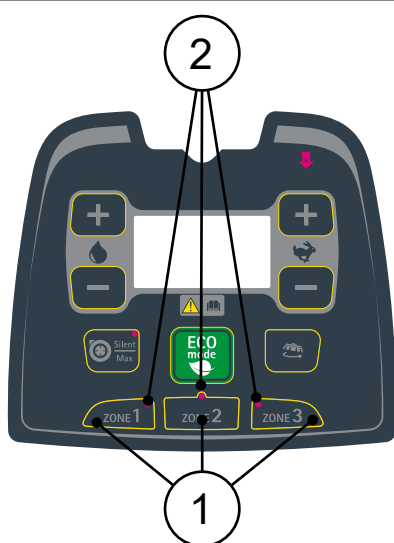
With the MANUAL MODE working program, it is the operator who evaluates and chooses the parameters based on the cleaning requirements that arise during the course of the work activities.

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 [“ADJUSTING THE FORWARD SPEED \(PRO VERSIONS\)”](#) on page 77.
- Detergent solution dosing level, see [“REGULATING THE FLOW OF DETERGENT SOLUTION \(PRO VERSIONS\)”](#) on page 76.

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 working 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.

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

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

- Activate the ECO MODE program, see [“ECO MODE WORKING PROGRAM \(PRO VERSION\)”](#) on page 57.
- Activate the MANUAL MODE program, see [“MANUAL MODE WORKING PROGRAM \(PRO VERSION\)”](#) on page 59.

i **N.B.:** If a value for 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.

i **N.B.:** by selecting one of the three ZONE programs, the working parameters (machine speed; the performance of the suction motor; the detergent solution flow) are automatically changed.

The parameters pre-set on a scale of 1 to 3 are as follows:

	Speed	Suction	Detergent Solution
Zone 1	2	1	1
Zone 2	3	3	2
Zone 3	2	3	3

WORKING MODE

TRANSFER WORKING MODE

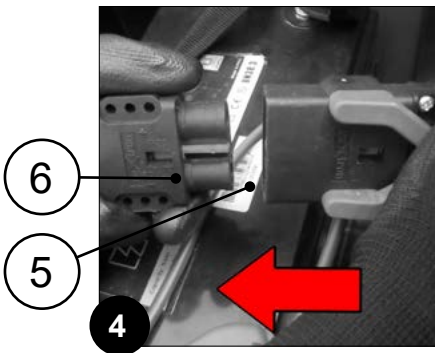
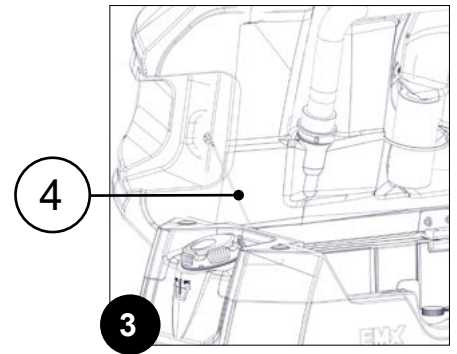
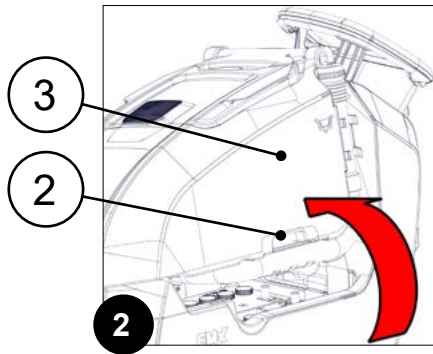
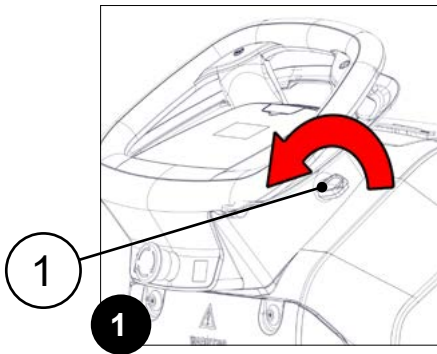
In the TRANSFER working mode, both the brush head and the squeegee are in their resting positions. This working mode is used to transfer the machine from the work site to the maintenance site.

To use the machine in transfer mode, do the following:

1. Carry out all the checks listed in the [“WORK PREPARATION CHECKLIST”](#) on page 55.
2. Stand at the back of the machine.

TRANSFER MODE (BATTERY-POWERED VERSION)

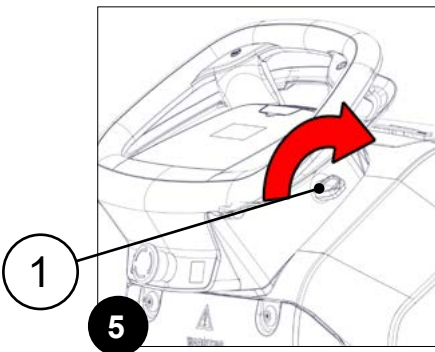
- Check the main switch is on "0". If it isn't, make a quarter turn anti-clockwise with the key (4) (Fig.4).
- Remove the key from the instrument panel.



- Grasp the handle (5) and turn the recovery tank cover (6) to its maintenance position (Fig.5).

WARNING: to prevent unintentional rotation of the recovery tank, turn it until the rope (7) is fully tensioned (Fig.6).

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



- Check that the connector (8) in the wiring of the machine's electrical system is connected to the connector (9) in the power cable coming from the battery box, otherwise connect it (Fig.7).

- Grasp the handle (6) and turn the recovery tank (6) to its maintenance position.

- Insert the key (1) into the slot on the right side of the control handlebar.
- Turn on the machine and turn the key (1) a quarter turn clockwise (Fig.5).
- For PRO versions, when the control display is turned on, screens appear in sequence, the last of which contains the machine programming characteristics.

TRANSFER MODE (ELECTRIC VERSION)

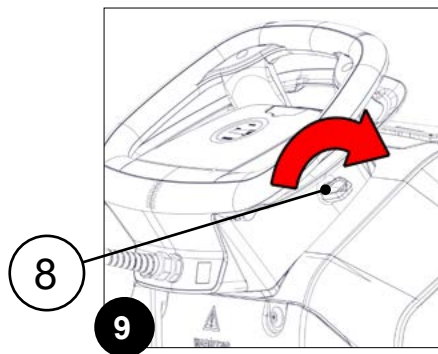
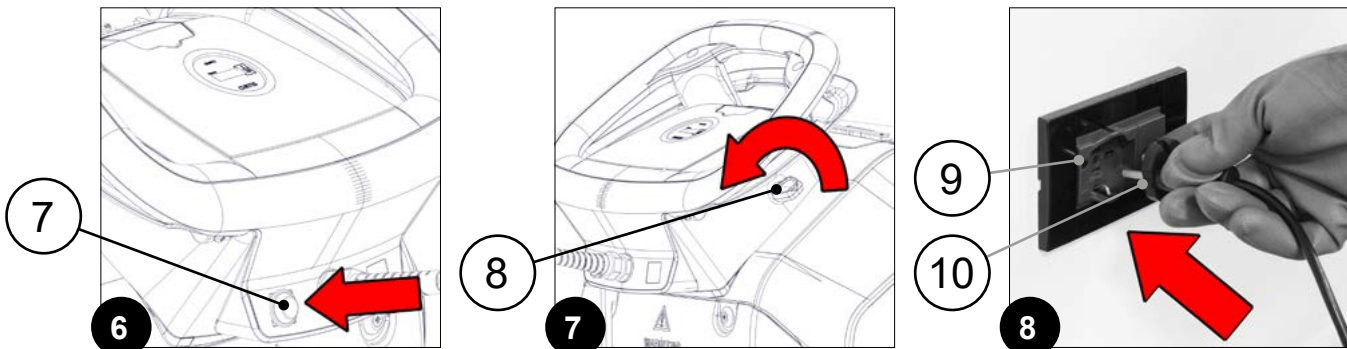
- Check that the main switch (7) (**Fig.6**) is in the '0' position, otherwise press the switch.

! ATTENTION: the primary main switch is set to '0' when the LED light inside it is off.

- Check the secondary main switch is set to "0". If it isn't, make a quarter turn anti-clockwise with the key (8) (**Fig.7**).
- Remove the key from the instrument panel.
- Connect the plug (9) in the power cable from the mains power socket (10) (**Fig.8**).

! DANGER: to prevent damaging the mains socket, disconnect power cable by pulling the plug directly, and not the cable.

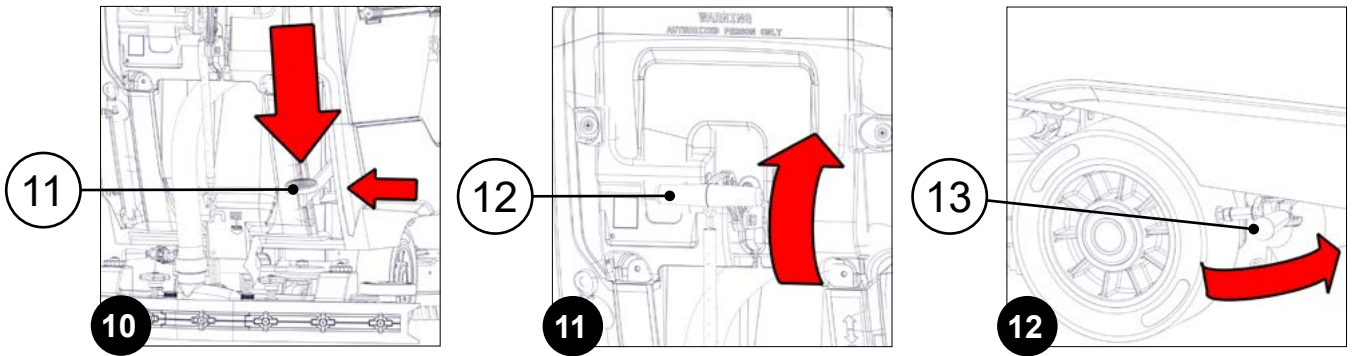
! DANGER: never touch the power plug with wet hands.



- Insert the key (1) into the slot on the right side of the control handlebar.
- Move the secondary main switch to position "I" and turn the key (8) a quarter turn clockwise (**Fig.9**).
- Set the primary main switch (7) (**Fig.6**) to position 'I', otherwise press the switch.

! WARNING: the primary main switch is in position 'I' when the LED light inside it is lit.

3. Bring the pedal (11) to the rest position (raised off the floor), press the pedal all the way down, move it to the left and release it (**Fig.10**).
4. Move the squeegee body to the rest position (raised off the floor), turn the lever (12) upwards (**Fig.11**).
5. Set the parking brake to the rest position, turn the lever (13) anti-clockwise (**Fig.12**).



6. The machine is now in the transfer working mode.

SCRUBBER WORKING MODE

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.

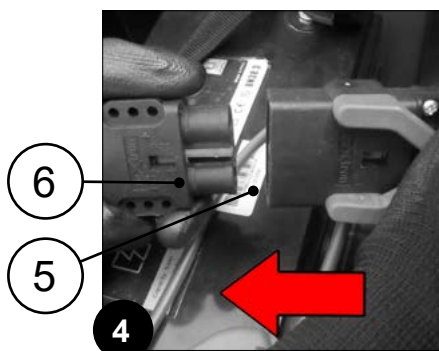
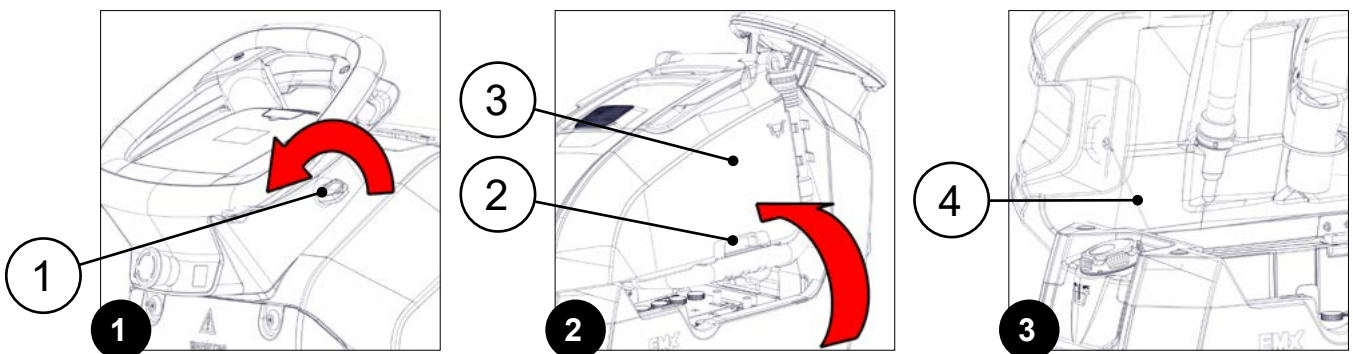
To use the machine in scrubbing machine working mode, do the following:

1. Carry out all the checks listed in the [“WORK PREPARATION CHECKLIST”](#) on page 55.
2. Stand at the back of the machine.

SCRUBBER MODE (BATTERY-POWERED VERSION)

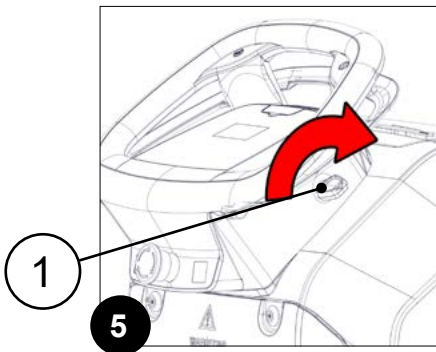
- Check the main switch is on "0". If it isn't, make a quarter turn anti-clockwise with the key (1) (**Fig.1**).
- Remove the key from the instrument panel.
- Grasp the handle (2) and turn the recovery tank cover (3) to its maintenance position (**Fig.2**).

⚠ WARNING: to prevent unintentional rotation of the recovery tank, turn it until the rope (4) is fully tensioned (**Fig.3**).



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

- Check that the connector (5) in the wiring of the machine's electrical system is connected to the connector (6) in the power cable coming from the battery box, otherwise connect it (**Fig.4**).
- Grasp the handle (6) and turn the recovery tank (6) to its maintenance position.



- Insert the key (1) into the slot on the right side of the control handlebar.
- Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.5**).
- For PRO versions, when the control display is turned on, screens appear in sequence, the last of which contains the machine programming characteristics.

SCRUBBER MODE (ELECTRIC VERSION)

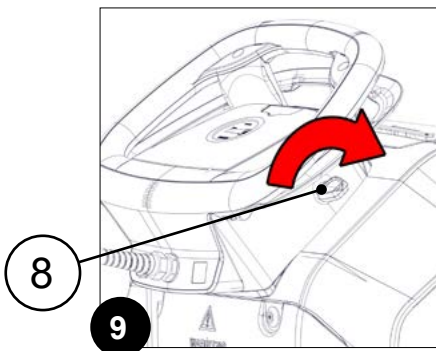
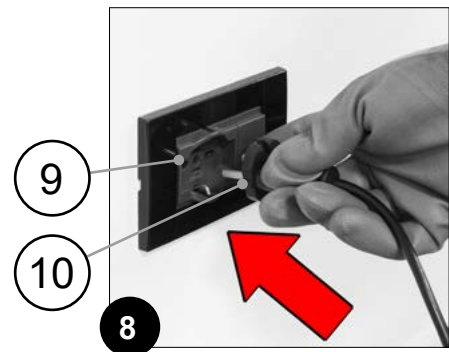
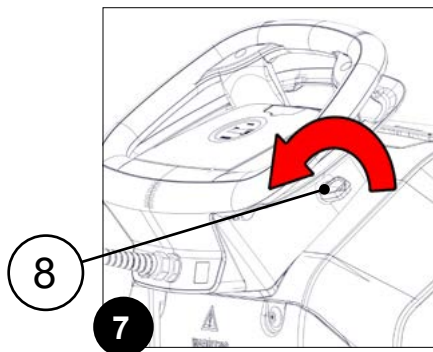
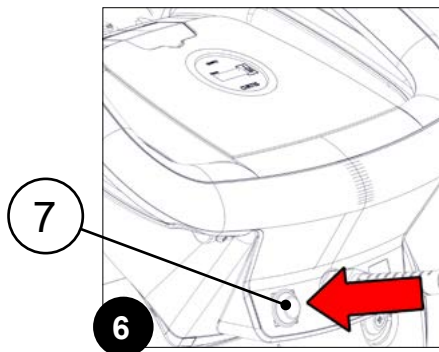
- Check that the main switch (7) (**Fig.6**) is in the '0' position, otherwise press the switch.

WARNING: the primary main switch is set to '0' when the LED light inside it is off.

- Check the secondary main switch is set to "0". If it isn't, make a quarter turn anti-clockwise with the key (8) (**Fig.7**).
- Remove the key from the instrument panel.
- Connect the plug (9) in the power cable from the mains power socket (10) (**Fig.8**).

DANGER: to prevent damaging the mains socket, disconnect power cable by pulling the plug directly, and not the cable.

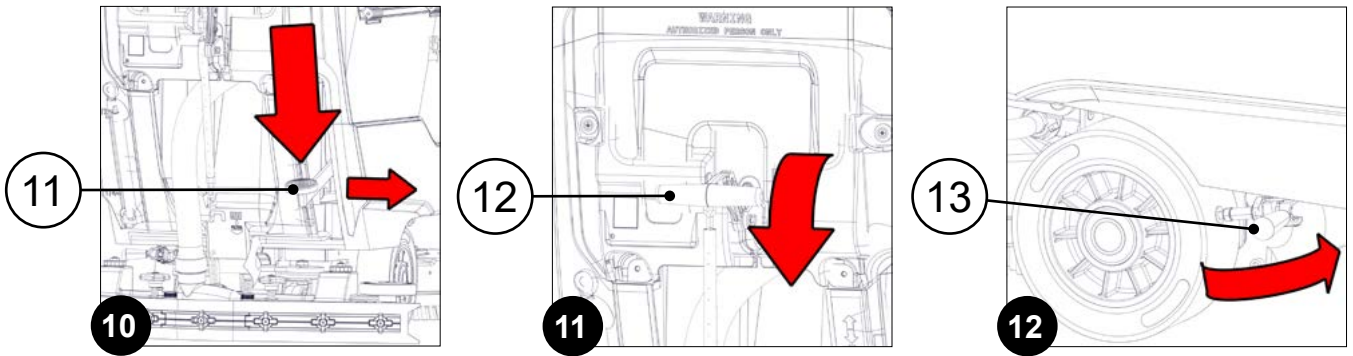
DANGER: never touch the power plug with wet hands.



- Insert the key (1) into the slot on the right side of the control handlebar.
- Move the secondary main switch to position "I" and turn the key (8) a quarter turn clockwise (**Fig.9**).
- Set the primary main switch (7) (**Fig.6**) to position 'I', otherwise press the switch.

WARNING: the primary main switch is in position 'I' when the LED light inside it is lit.

3. Move to the working position (in contact with the floor), press the pedal (11) all the way down, move it to the right and release it (**Fig.10**).
4. Bring the squeegee body into the working position (in contact with the floor), turn the lever (12) downwards (**Fig.11**).
5. Set the parking brake to the rest position, turn the lever (13) anti-clockwise (**Fig.12**).



6. The machine is now in scrubber working mode.

PRE-SCRUB WORKING MODE

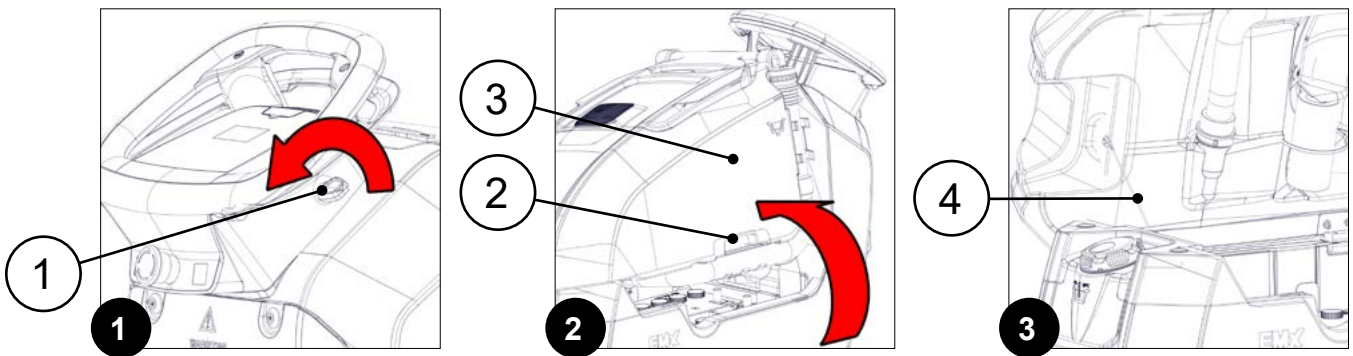
In the PRE-SCRUBBING working mode, only the brush head is in its working position, with the squeegee remaining in its resting position. This working mode is used to thoroughly scrub the floor without drying it. To use the machine in pre-scrub working mode, do the following:

1. Carry out all the checks listed in the [“WORK PREPARATION CHECKLIST”](#) on page 55.
2. Stand at the back of the machine.

PRE-SCRUB MODE (BATTERY-POWERED VERSION)

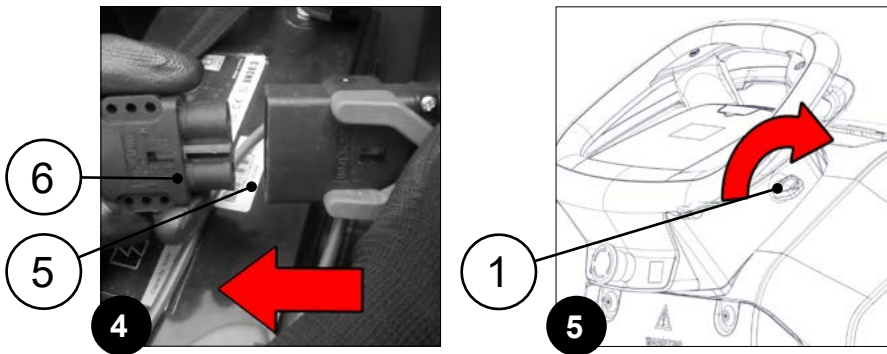
- Check the main switch is on "0". If it isn't, make a quarter turn anti-clockwise with the key (1) (**Fig.1**).
- Remove the key from the instrument panel.
- Grasp the handle (2) and turn the recovery tank cover (3) to its maintenance position (**Fig.2**).

⚠ WARNING: to prevent unintentional rotation of the recovery tank, turn it until the rope (4) is fully tensioned (**Fig.3**).



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

- Check that the connector (5) in the wiring of the machine's electrical system is connected to the connector (6) in the power cable coming from the battery box, otherwise connect it (**Fig.4**).
- Grasp the handle (6) and turn the recovery tank (6) to its maintenance position.
- Insert the key (1) into the slot on the right side of the control handlebar.
- Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.5**).
- For PRO versions, when the control display is turned on, screens appear in sequence, the last of which contains the machine programming characteristics.



PRE-SCRUB MODE (ELECTRIC VERSION)

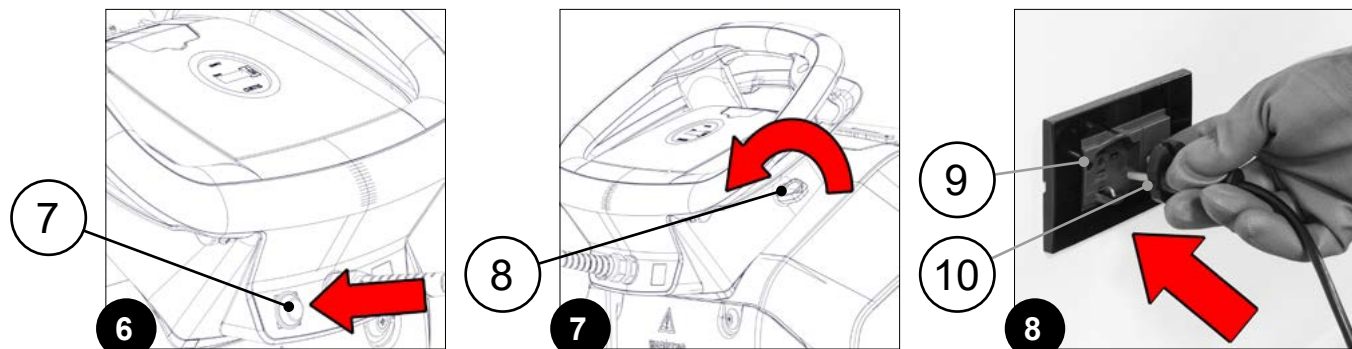
- Check that the main switch (7) (**Fig.6**) is in the '0' position, otherwise press the switch.

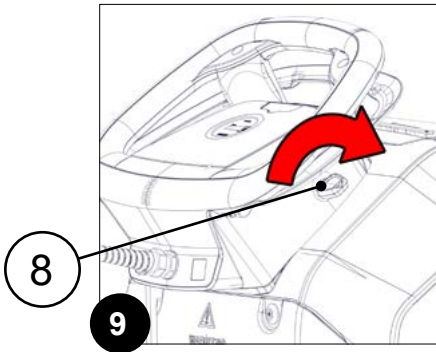
WARNING: the primary main switch is set to '0' when the LED light inside it is off.

- Check the secondary main switch is set to "0". If it isn't, make a quarter turn anti-clockwise with the key (8) (**Fig.7**).
- Remove the key from the instrument panel.
- Connect the plug (9) in the power cable from the mains power socket (10) (**Fig.8**).

DANGER: to prevent damaging the mains socket, disconnect power cable by pulling the plug directly, and not the cable.

DANGER: never touch the power plug with wet hands.

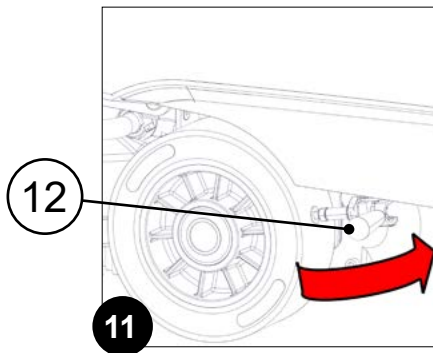
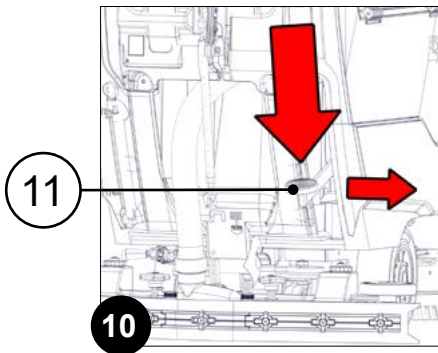




- Insert the key (1) into the slot on the right side of the control handlebar.
- Move the secondary main switch to position "I" and turn the key (8) a quarter turn clockwise (**Fig.9**).
- Set the primary main switch (7) (**Fig.6**) to position 'I', otherwise press the switch.

WARNING: the primary main switch is in position 'I' when the LED light inside it is lit.

3. Move to the working position (in contact with the floor), press the pedal (11) all the way down, move it to the right and release it (**Fig.10**).
4. Set the parking brake to the rest position, turn the lever (12) anti-clockwise (**Fig.11**).



5. The machine is now in pre-scrub mode.

DRYING WORKING MODE

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).

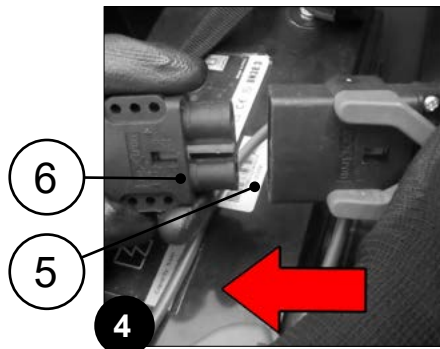
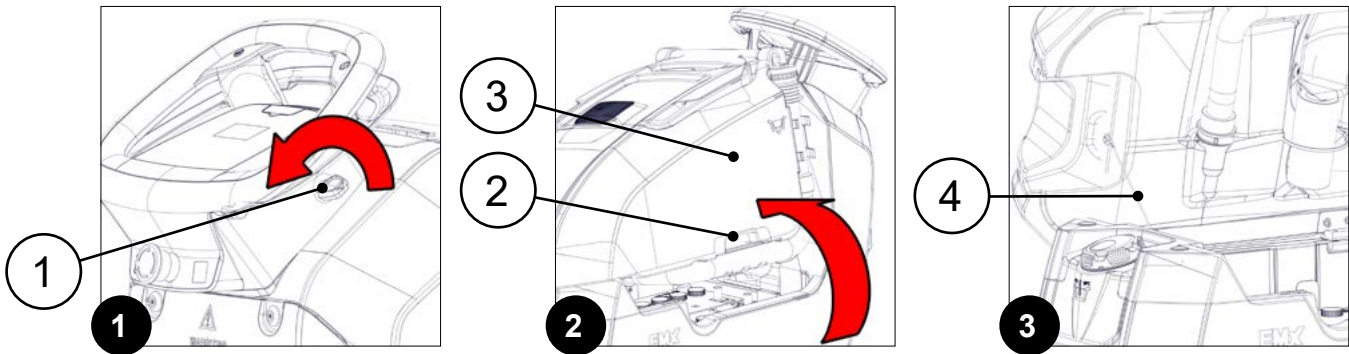
To use the machine in drying working mode, do the following:

1. Carry out all the checks listed in the ["WORK PREPARATION CHECKLIST"](#) on page 55.
2. Stand at the back of the machine.

DRYING MODE (BATTERY-POWERED VERSION)

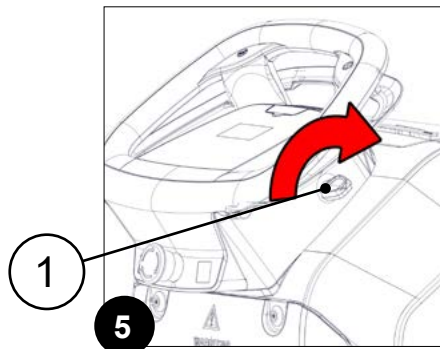
- Check the main switch is on "0". If it isn't, make a quarter turn anti-clockwise with the key (1) (**Fig.1**).
- Remove the key from the instrument panel.
- Grasp the handle (2) and turn the recovery tank cover (3) to its maintenance position (**Fig.2**).

WARNING: to prevent unintentional rotation of the recovery tank, turn it until the rope (4) is fully tensioned (Fig.3).



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

- Check that the connector (5) in the wiring of the machine's electrical system is connected to the connector (6) in the power cable coming from the battery box, otherwise connect it (Fig.4).
- Grasp the handle (6) and turn the recovery tank (6) to its maintenance position.



- Insert the key (1) into the slot on the right side of the control handlebar.
- Turn on the machine and turn the key (1) a quarter turn clockwise (Fig.5).
- For PRO versions, when the control display is turned on, screens appear in sequence, the last of which contains the machine programming characteristics.

DRYING MODE (ELECTRIC VERSION)

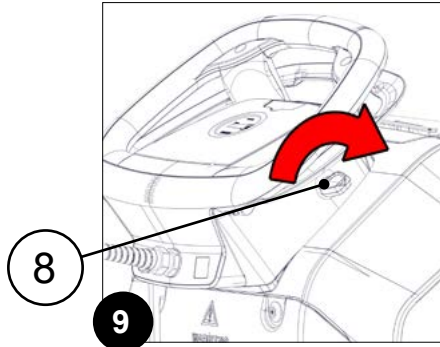
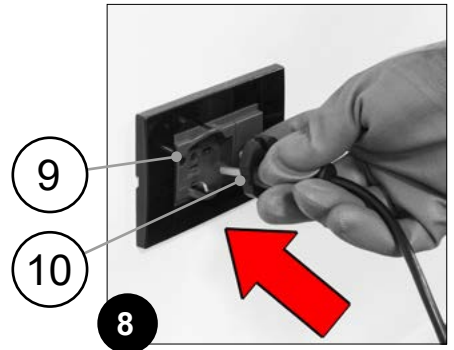
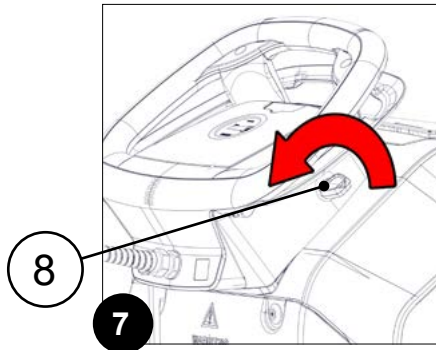
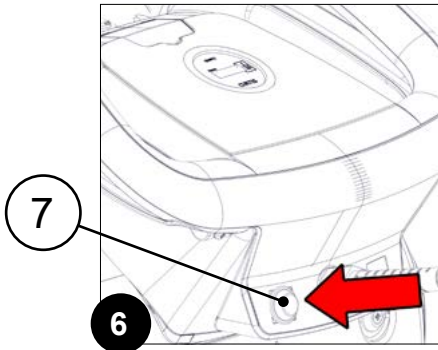
- Check that the main switch (7) (Fig.6) is in the '0' position, otherwise press the switch.

WARNING: the primary main switch is set to '0' when the LED light inside it is off.

- Check the secondary main switch is set to "0". If it isn't, make a quarter turn anti-clockwise with the key (8) (Fig.7).
- Remove the key from the instrument panel.
- Connect the plug (9) in the power cable from the mains power socket (10) (Fig.8).

DANGER: to prevent damaging the mains socket, disconnect power cable by pulling the plug directly, and not the cable.

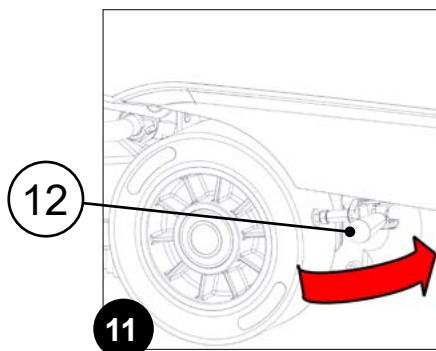
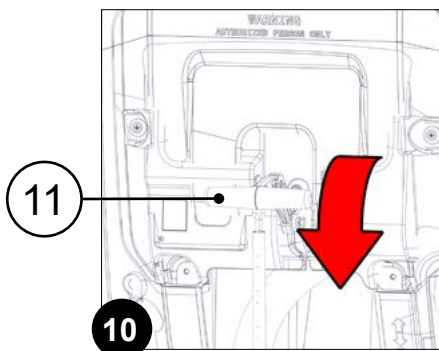
DANGER: never touch the power plug with wet hands.



- Insert the key (1) into the slot on the right side of the control handlebar.
- Move the secondary main switch to position "I" and turn the key (8) a quarter turn clockwise (**Fig.9**).
- Set the primary main switch (7) (**Fig.6**) to position 'I', otherwise press the switch.

⚠ ATTENTION: the primary main switch is in position 'I' when the LED light inside it is lit.

3. Bring the squeegee body into the working position (in contact with the floor), turn the lever (12) downwards (**Fig.10**).
4. Set the parking brake to the rest position, turn the lever (13) anti-clockwise (**Fig.11**).



5. The machine is now in scrubber working mode.

STARTING WORK

SWITCHING ON THE MACHINE (ELECTRIC VERSION)

As an example let's take the scrubbing work mode, therefore scrubbing with drying of the floor, to start work, carry out the following:

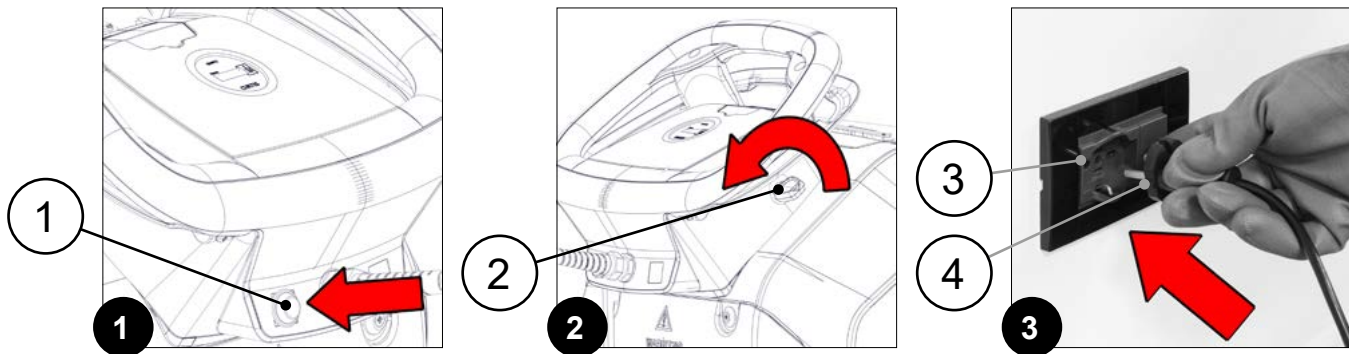
1. Carry out all the checks listed in the ["WORK PREPARATION CHECKLIST" on page 55.](#)
2. Stand at the back of the machine.
3. Check that the main switch (1) (**Fig.1**) is in the '0' position, otherwise press the switch.

WARNING: the primary main switch is set to '0' when the LED light inside it is off.

4. Check the secondary main switch is set to "0". If it isn't, make a quarter turn anti-clockwise with the key (2) (**Fig.2**).
5. Remove the key from the instrument panel.
6. Connect the plug (3) in the power cable from the mains power socket (4) (**Fig.3**).

DANGER: to prevent damaging the mains socket, disconnect power cable by pulling the plug directly, and not the cable.

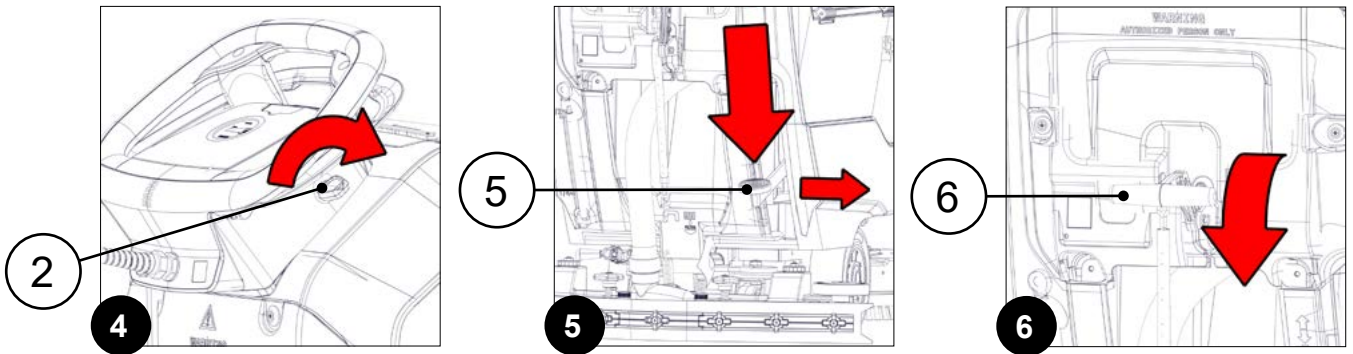
DANGER: never touch the power plug with wet hands.



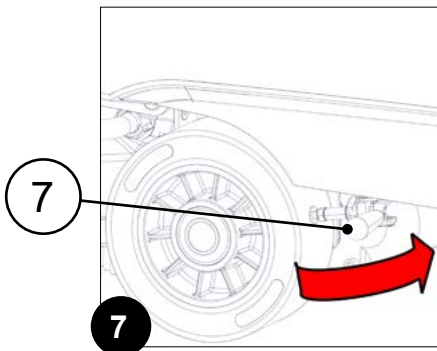
7. Insert the key (1) into the slot on the right side of the control handlebar.
8. Move the secondary main switch to position "I" and turn the key (2) a quarter turn clockwise (**Fig.4**).
9. Set the primary main switch (1) (**Fig.1**) to position 'I', otherwise press the switch.

WARNING: the primary main switch is in position 'I' when the LED light inside it is lit.

10. Move to the working position (in contact with the floor), press the pedal (5) all the way down, move it to the right and release it (**Fig.5**).
11. Bring the squeegee body into the working position (in contact with the floor), turn the lever (6) downwards (**Fig.6**).



12. Set the parking brake to the rest position, turn the lever (7) anti-clockwise (Fig.7).
13. The machine is now in scrubber working mode.

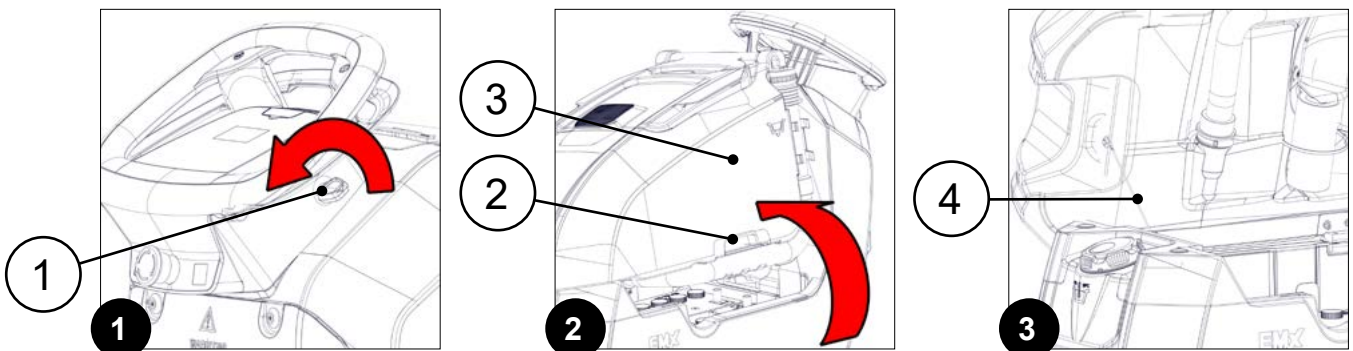


SWITCHING ON THE MACHINE (BATTERY-POWERED VERSION)

As an example let's take the scrubbing work mode, therefore scrubbing with drying of the floor, to start work, carry out the following:

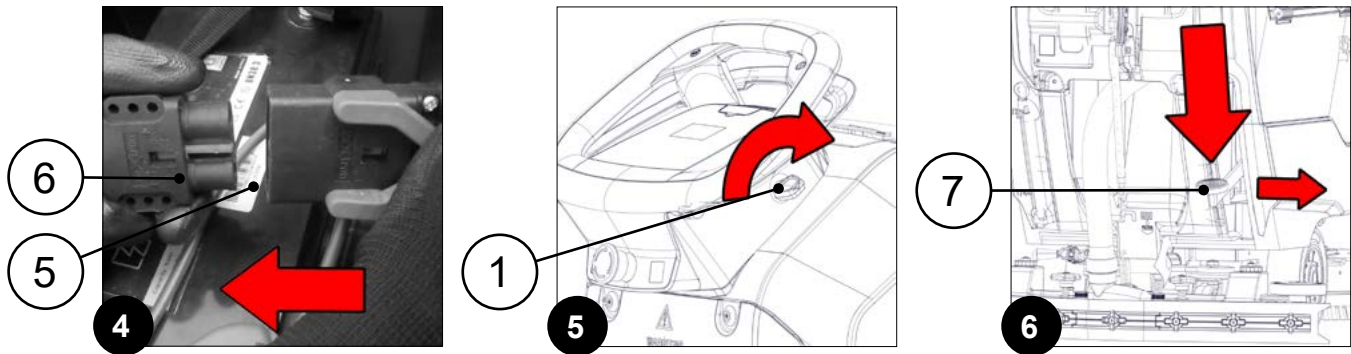
1. Carry out all the checks listed in the ["WORK PREPARATION CHECKLIST" on page 55](#).
2. Stand at the back of the machine.
3. Check the main switch is on "0". If it isn't, make a quarter turn anti-clockwise with the key (1) (Fig.1).
4. Remove the key from the instrument panel.
5. Grasp the handle (2) and turn the recovery tank cover (3) to its maintenance position (Fig.2).

⚠ WARNING: to prevent unintentional rotation of the recovery tank, turn it until the rope (4) is fully tensioned (Fig.3).

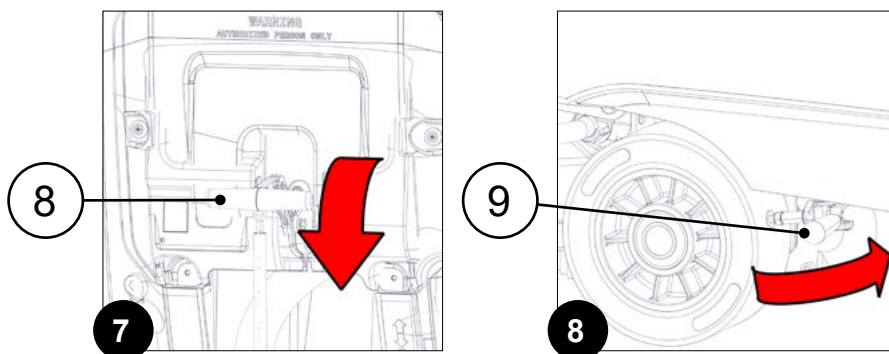


⚠ WARNING: the following operations must be carried out by qualified personnel. Incorrect operations could result in machine malfunctions.

6. Check that the connector (5) in the wiring of the machine's electrical system is connected to the connector (6) in the power cable coming from the battery box, otherwise connect it (**Fig.4**).
7. Grip the handle (2) and turn the recovery tank (3) to its working position.
8. Insert the key (1) into the slot on the right side of the control handlebar.
9. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.5**).
10. Move to the working position (in contact with the floor), press the pedal (7) all the way down, move it to the right and release it (**Fig.6**).



11. Bring the squeegee body into the working position (in contact with the floor), turn the lever (11) downwards (**Fig.8**).
12. Set the parking brake to the rest position, turn the lever (12) anti-clockwise (**Fig.9**).
13. The machine is now operating with the ECO MODE program active and in SCRUBBER working mode.



14. When you push the dead man's lever (15) (**Fig.9**), the machine will begin to operate.

i N.B.: as soon as the lever (15) is pressed, the brush motor; the solenoid valve, and the detergent solution pump only begin functioning once the brush head is in its working position.

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

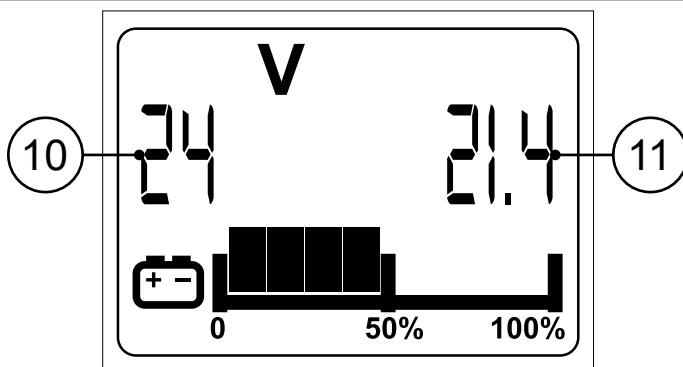
15. The machine will now begin operating at maximum efficiency until the detergent solution is finished or the battery box runs flat.

i N.B.: during the first few meters of work, check that the amount of solution is sufficient to wet the floor, if not, adjust the flow of the cleaning solution.

i N.B.: during the first few meters of work, check that the squeegee dries the floor properly. If not, adjust it. See [“ADJUSTING THE SQUEEGEE RUBBER BLADES” on page 115](#).

- i** **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.
- i** **N.B.:** drive the machine along the most linear path possible. Avoid hitting any obstacles and scratching the sides of the machine. Overlap the working widths by several centimetres.
- i** **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.
- i** **N.B.:** adjust the machine speed, the brush pressure and the flow of the solution based on the type of cleaning to be carried out.
- i** **N.B.:** Drive the machine slowly on inclines and descents. Use the brake pedal to control the machine speed. Where there is a slope, carry out the scrubbing by moving the machine upwards rather than downwards.
- !** **ATTENTION:** slow down on ramps and slippery surfaces.
- !** **WARNING:** do not use the machine in areas where the ambient temperature is higher than 43°C (110°F). Do not use the scrubbing functions in areas where the ambient temperature is less than freezing 0°C (32°F).
- !** **ATTENTION:** in transfer mode, the machine can only drive on ramps not exceeding 2%; while in scrubbing machine working mode (with GVW weight), it can work on slopes not exceeding 2%.
- i** **N.B.:** The machine is not equipped with an overflow device, because the volume of the recovery tank is greater than the capacity of the solution tank. In extraordinary cases, there is a mechanical device (float) under the recovery tank cover that, when the recovery tank is full, shuts off the air to the vacuum motor intake to protect it; the sound of the suction motor will then be deeper. Empty the recovery tank, see [“DRAINING THE RECOVERY TANK” on page 96](#).
- i** **N.B.:** if you run out of cleaning solution in the solution tank during the work, make sure to refill it, see [“FILLING THE SOLUTION TANK” on page 44](#) e [“DETERGENT SOLUTION” on page 46](#).

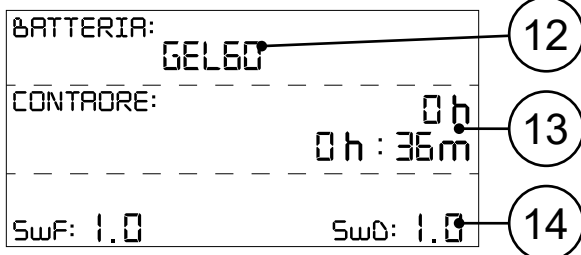
CONTROL DISPLAY (BATTERY-POWERED BASIC VERSION)



For BASIC versions, when they are powered on, the screen relating to the machine's programming features appears on the control display.

- i** **N.B.:** the upper left area of the screen displays the value of the nominal battery voltage (10), while the upper right area displays the minimum permissible inhibit value (11).

CONTROL DISPLAY (PRO BATTERY-POWERED VERSION)



For PRO versions, when the control display is turned on, screens appear in sequence, the last of which contains the machine programming characteristics.

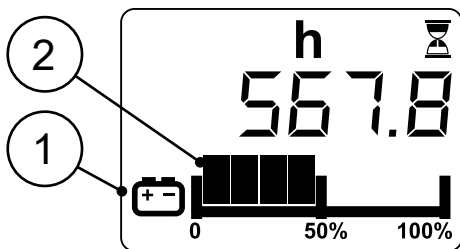
i **N.B.:** the type of battery programmed for the battery control board is shown at the top of the screen (12). The total hour meter and partial hour meter of the machine are shown at the centre of the screen (13), on the upper and lower rows respectively. The software version of the function

board (SwF) and the software version of the display (SwD) are shown at the bottom of the screen (14), on the left and right hand sides respectively.

i **N.B.:** the battery type displayed (12) is the one selected in the function board parameter list, to change the selected battery type see the "OPERATOR INTERFACE CONFIGURATION MANUAL" which can be downloaded from www.fimap.com

i **N.B.:** the hour meter shown in the control display (13) is the one selected in the function board parameter list, to change the battery type see the "OPERATOR INTERFACE CONFIGURATION MANUAL" which can be downloaded from www.fimap.com

BATTERY SYSTEM CHARGE LEVEL INDICATOR (BATTERY-POWERED BASIC VERSION)



The control display is present on the control panel of the machine, the percentage of battery charge is visible in the lower part of the screen. The battery charge percentage indicator consists of two symbols, the first represented by a graphic symbol (1), the second by a battery icon (2).

i **N.B.:** the control display shows the percentage of battery charge with respect to their maximum capacity.

i **N.B.:** the graphic symbol (1) consists of five charge levels, each of which represents approximately 20% of residual battery charge.

i **N.B.:** when the residual charge is at 20% the graphic symbol starts to flash, in these conditions bring the machine to the area used for charging the battery box.

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

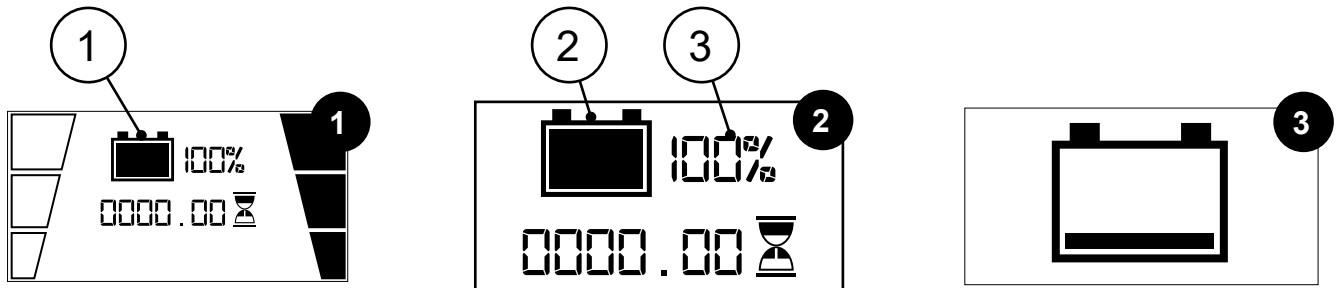
i **N.B.:** a few seconds after the battery charge level reaches 10%, the suction motor switches off automatically. With the remaining charge, it is still possible, however, to move the machine to the designated battery box recharging station.

BATTERY SYSTEM CHARGE LEVEL INDICATOR (PRO BATTERY-POWERED VERSION)

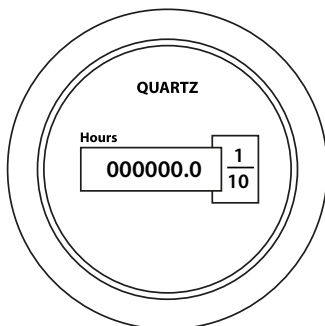
The control display is located on the machine control panel. The central part of the screen displays the battery box charge percentage on the upper row (1) (Fig.1).

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).

- i** **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.
- i** **N.B.:** the graphic symbol (2) consists of five charge levels, each of which represents approximately 20% of residual battery charge.
- i** **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 box recharging station.
- i** **N.B.:** a few seconds after the battery box charge level reaches 20%, the brush motor switches off automatically. The remaining charge is sufficient for completing the drying task before recharging the battery box.
- i** **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 box recharging station.



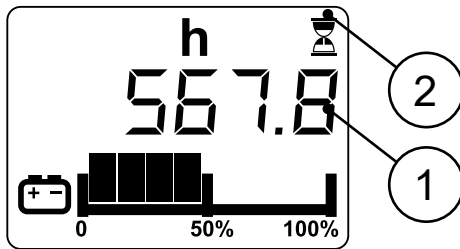
HOUR METER (ELECTRIC VERSIONS)



The machine control panel contains the control display, which shows the total usage time.).

- i** **N.B.:** The numbers before the letter "h" identify the hours, while the numbers before the letter "m" identify the tenths of an hour (a tenth of an hour corresponds to six minutes).
- i** **N.B.:** The flashing ":" symbol indicates that the hour meter is counting the machine functioning time.

HOUR METER (BASIC BATTERY-POWERED VERSIONS)



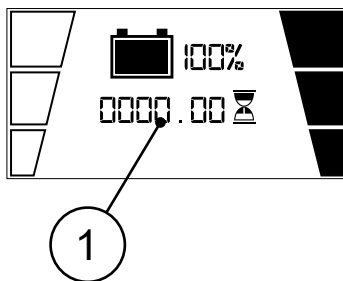
The control display is present on the control panel of the machine, the hour meter (1) is present in the upper part of the screen. The hour meter allows the user to view the machine's total time of use via a series of numbers.

i **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.

i **N.B.:** the hour meter is running when the hourglass symbol (2)

flashes.

HOUR METER (PRO BATTERY-POWERED 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.

i **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

The machine is not equipped with an overflow device, because the volume of the recovery tank is greater than the capacity of the solution tank. In extraordinary cases, there is a mechanical device (float) under the recovery tank cover that, when the recovery tank is full, shuts off the air to the vacuum motor intake to protect it; the sound of the suction motor will then be deeper. Empty the recovery tank, see [“DRAINING THE RECOVERY TANK” on page 96](#).

EMPTYING THE DEBRIS HOPPER (CYLINDRICAL SCRUBBING VERSION)

When cleaning the floor, if you notice that the machine can no longer collect the dirt from the floor, this could be due to the debris hopper in the scrubbing brush head being full.

The careful cleaning of the debris hopper in the scrubbing brush head will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance.

To empty the debris hopper, proceed as follows:

1. Take the machine to the maintenance area.

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

2. Perform the steps to secure the machine, see [“MACHINE SAFETY” on page 35](#).



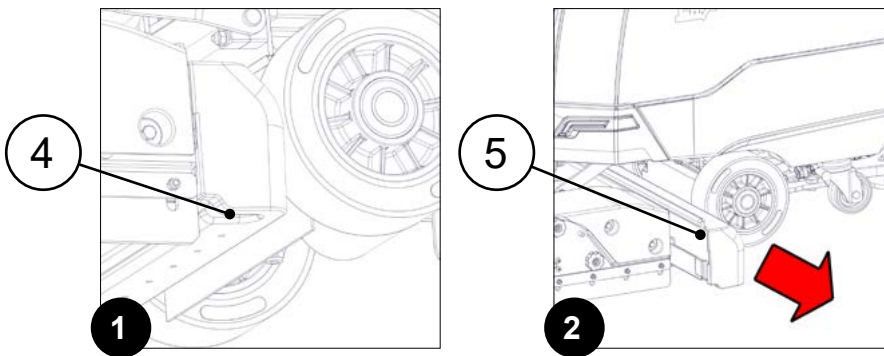
CAUTION: it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Stand on the left side of the machine.
4. Using the handle (1) (**Fig.1**) pull the debris hopper (2) out of the machine (**Fig.2**).
5. Take the debris hopper to the waste disposal site and empty it.



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

6. Clean the inside of the debris hopper with a stream of running water, using a brush to remove any dirt residues if necessary.
7. Proceed in the opposite order to reassemble all the parts.



ADDITIONAL FUNCTIONS

REGULATING THE FLOW OF DETERGENT SOLUTION (PRO VERSIONS)

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.

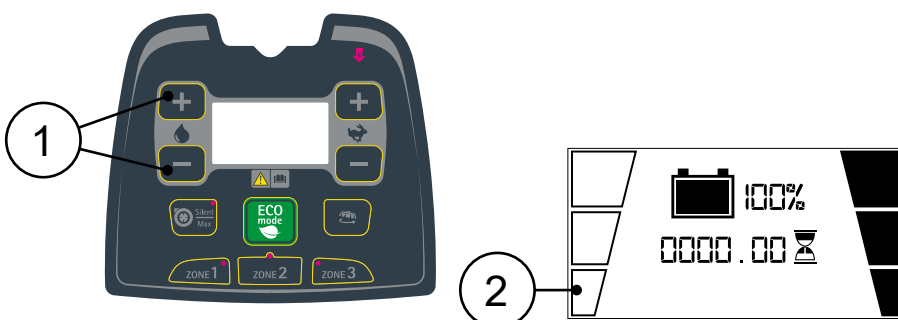
i N.B.: the flow of the detergent solution on the brush can be adjusted to one of four levels, from 0 to 3. The level is shown with the symbol (2) on the control display. To change the values relating to the amount of detergent solution in the machine's water system, contact your local FIMAP service center or the one nearest to you; Alternatively, you can send an email to service@fimap.com, or visit the website at www.fimap.com



N.B.: each press of the button (1) 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.



ADJUSTING THE FORWARD SPEED (PRO VERSIONS)

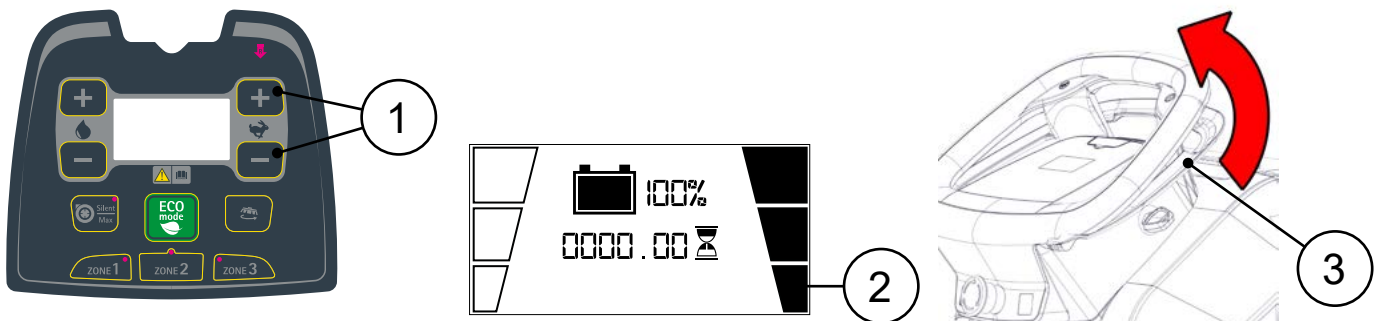
To adjust the machine's forward speed, do the following:

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.

i **N.B.:** the forward speed can be adjusted to three levels, from minimum 1 to maximum 3. The set level is shown by the symbol (2) on the main screen. To change the values relating to the machine's feed rate performance, contact your local FIMAP service center or the one nearest to you; Alternatively, you can send an email to service@fimap.com, or visit the website at www.fimap.com

i **N.B.:** each press of the button (1) cyclically increases the speed level.

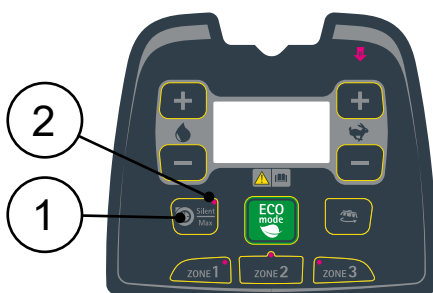
i **N.B.:** the machine's forward speed can also be adjusted by going to the operator presence lever (3). The more you press, the higher the speed (within the limits of the level selected beforehand).



NOISELESS SUCTION (PRO VERSIONS)

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

While working in the SCRUBBING or VACUUM mode, so with the squeegee in contact with the floor, press the "SILENT-MAX" button (1) on the control panel for at least three seconds.



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

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

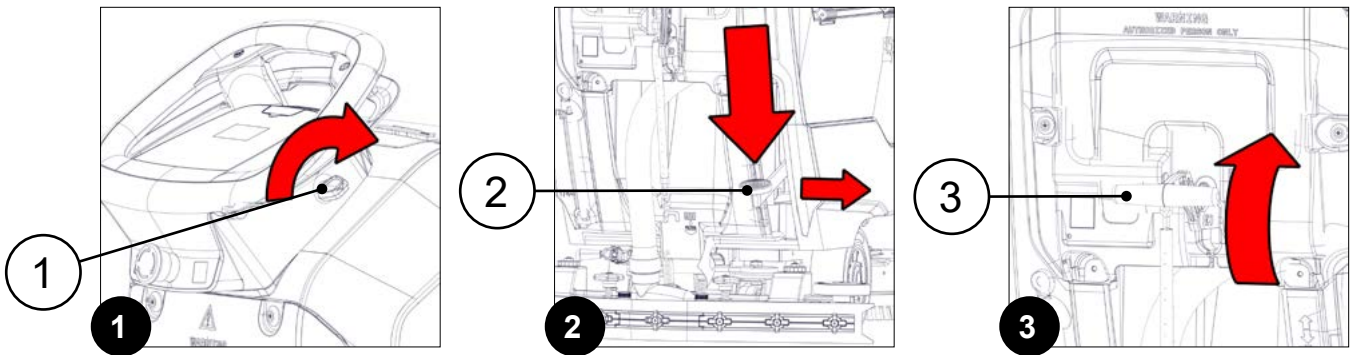
i **N.B.:** As soon as the noiseless suction function is deactivated, the relative LED (2) will activate on the control panel.

BRUSH UNCOUPLING FUNCTION (DISCOID SCRUBBING VERSION)

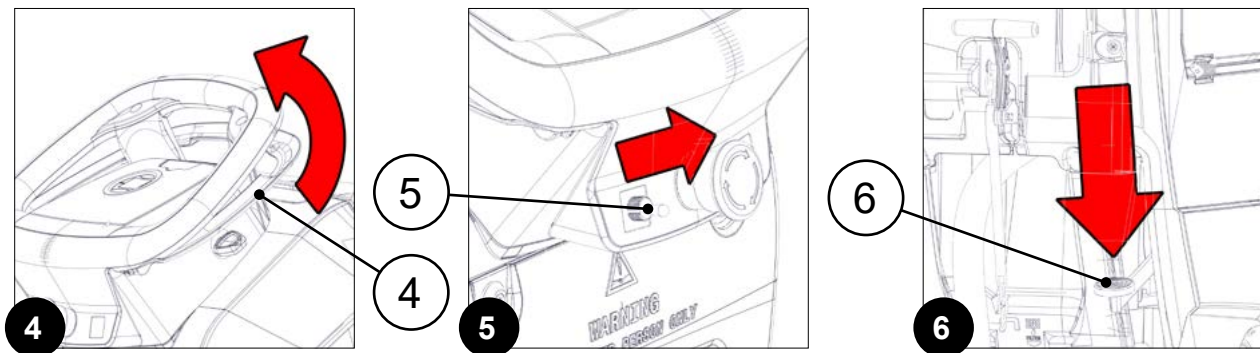
BRUSH UNCOUPLING (BASIC VERSION)

The machine is equipped with a button that activates the brush uncoupling function, when it is necessary to carry out maintenance or replace the brushes in the brush head. To activate the function, proceed as follows:

1. Insert the key (1) into the slot on the right side of the control handlebar.
2. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.1**).
3. Move to the working position (in contact with the floor), press the pedal (2) all the way down, move it to the right and release it (**Fig.2**).
4. Move the squeegee body to the rest position (raised off the floor), turn the lever (3) upwards (**Fig.3**).



5. Slightly press the dead man's lever (4) (**Fig.4A**) until the motor in the brush head (brush rotation) is activated.
6. Move the lever (5) in the brush uncoupling switch (**Fig.5A**) and at the same time press the brush head control pedal (6) (**Fig.6A**) to lift it off the floor.



7. The machine will automatically perform the BRUSH UNCOUPLING function.

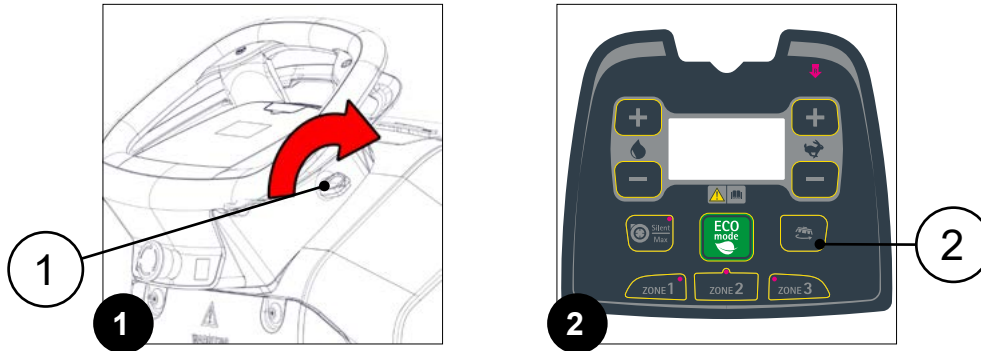
i N.B.: once the brush uncoupling sequence has been activated, it is not possible to activate other functions or move the machine.

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

BRUSH UNCOUPLING (PRO VERSION)

The machine is equipped with a button that activates the brush uncoupling function, when it is necessary to carry out maintenance or replace the brushes in the brush head. To activate the function, proceed as follows:

8. Insert the key (1) into the slot on the right side of the control handlebar.
9. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.1**).
10. Set the machine to TRANSFER mode, see [“TRANSFER WORKING MODE” on page 60](#).
11. Press the BRUSH UNCOUPLING button (2) on the control panel (**Fig.2**).



12. The machine will automatically perform the BRUSH UNCOUPLING function.

i **N.B.:** once the brush uncoupling 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.

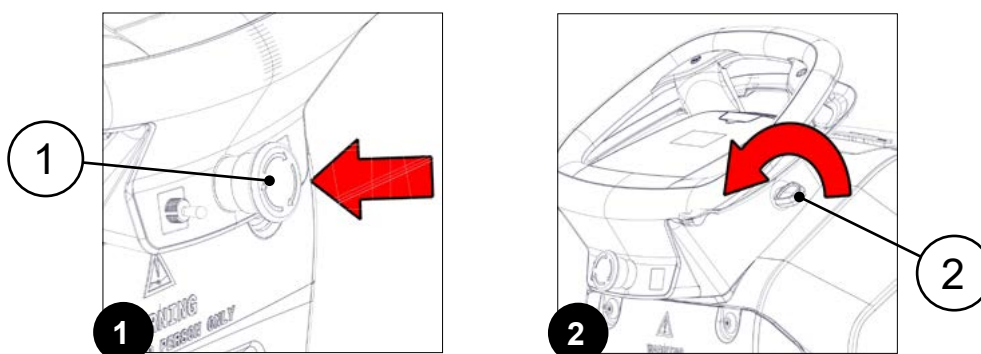
EMERGENCY BUTTON

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.

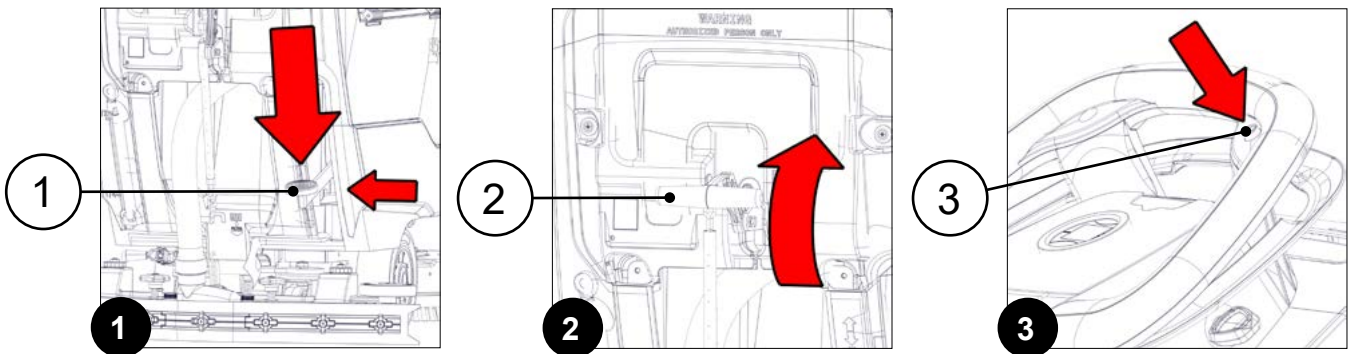
i **N.B.:** if the fault persists, contact the relevant FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com, or visit the website at www.fimap.com

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

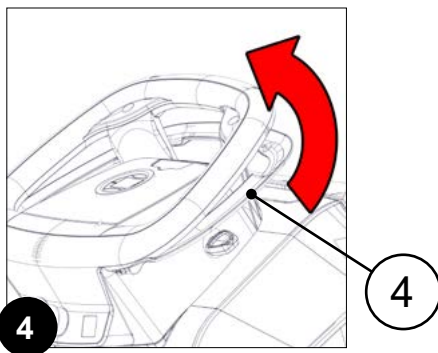
REVERSE (VERSIONS WITH TRACTION)

To reverse, proceed as follows:

1. Stop the machine.
2. Bring the pedal (1) to the rest position (raised off the floor), press the pedal all the way down, move it to the left and release it (**Fig.1**).
3. Move the squeegee body to the rest position (raised off the floor), turn the lever (2) upwards (**Fig.2**).
4. Press the reverse activation button (3) located on the control handlebar (**Fig.3**).



5. Press the dead man's lever (4) (**Fig.4**) to start the machine moving in reverse.



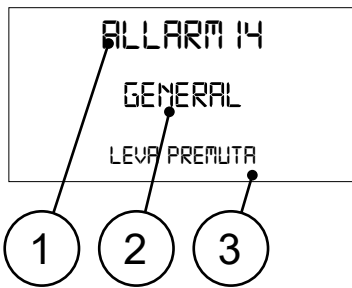
! **CAUTION:** the reverse speed is reduced from the forward speed to comply with current work safety regulations, to change the reverse speed contact your local FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com, or visit the website at www.fimap.com

! **WARNING:** to remove the reverse release the button (3).

i **N.B.:** for basic versions, as soon as the reverse activation button is pressed, the solenoid valve in the machine's water system will be deactivated.

i **N.B.:** for pro versions as soon as the reverse activation button is pressed both the solenoid valve and the pump in the machine's water system will be deactivated.

ALARM SCREEN (PRO VERSIONS)

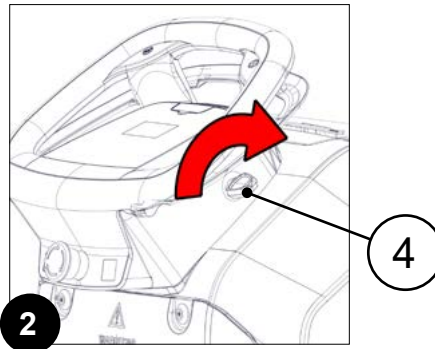
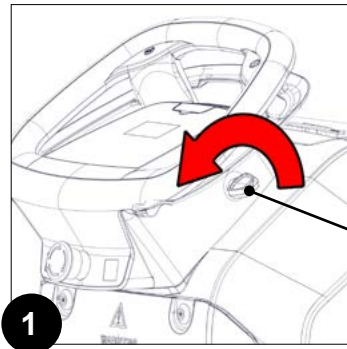


If an error occurs, the control display will show the corresponding alarm screen, which will remain visible until the error has been resolved. It shows:

- the alarm number (1).
- the group it belongs to (2).
- a brief description (3).

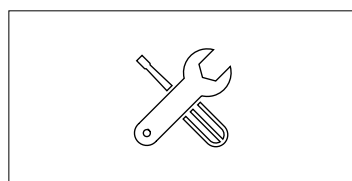
When an error occurs, do as follows:

1. Stop the machine immediately.
2. Shut off the machine by turning the main switch to the "0" position, and make a quarter turn anti-clockwise with the key (4) (**Fig.1**).
3. Wait at least ten seconds, then turn the machine on by bringing the main switch to the "I" position and making a quarter turn clockwise with the key (4) (**Fig.2**).
1. If the error persists, contact your FIMAP service centre of reference or the one closest to you. Alternatively, you can send an email to service@fimap.com or visit the website www.fimap.com



i **N.B.:** the error screen will remain visible until the error has been resolved.

i **N.B.:** if the machine is equipped, upon request, with the automatic SOS device perform the procedure to send a request for action, see "[SOS DEVICE \(PRO VERSIONS WITH FFM SYSTEM – FIMAP FLEET MANAGEMENT WI-FI & GSM\)](#)" on page 82.



! **WARNING:** if the SCHEDULED MAINTENANCE EXPIRED alarm (see the figure alongside) appears on the control display while you are using the machine, contact your FIMAP service centre of reference or the one closest to you. Alternatively, send an email to service@fimap.com or visit the website www.fimap.com to program the maintenance tasks.

i **N.B.:** the scheduled maintenance alarm will remain visible for the period of time identified by the "Service Time" parameter, after which the alarm screen will automatically switch off.

i **N.B.:** if the scheduled maintenance is overdue, each time the machine is switched on, the alarm for this will appear on the control display for the period of time identified by the "Service Time" parameter, after which the alarm screen will automatically switch off.

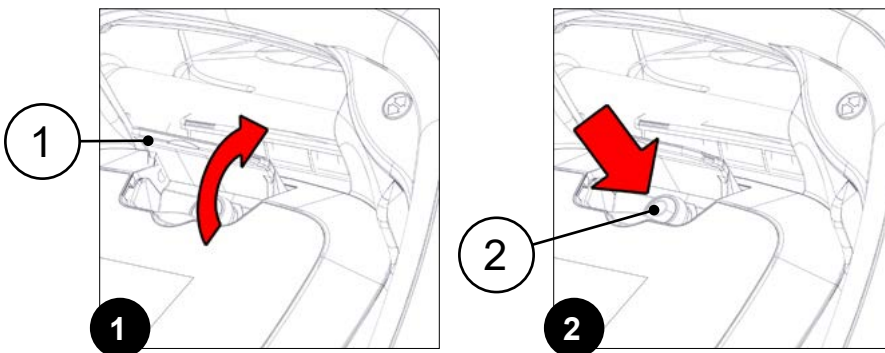
i **N.B.:** the overdue scheduled maintenance alarm can only be reset by a service technician at the FIMAP service centre.

OPTIONAL FUNCTIONS

SOS DEVICE (PRO VERSIONS WITH FFM SYSTEM – FIMAP FLEET MANAGEMENT WI-FI & GSM)

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 service agreements), 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) covering the SOS button, located near the steering wheel (**Fig.1**).
3. Press the SOS button (2) (**Fig.2**).



i N.B.: in order to activate the SOS device, the machine must be equipped with the automatic fleet management kit (FFM – FIMAP FLEET MANAGEMENT).

i 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 coverage.

i N.B.: the FFM system contains a device that transmits machine operation data to FIMAP. Data does not include personal data. FIMAP uses this machine operational data, among other things, to provide service and maintenance.

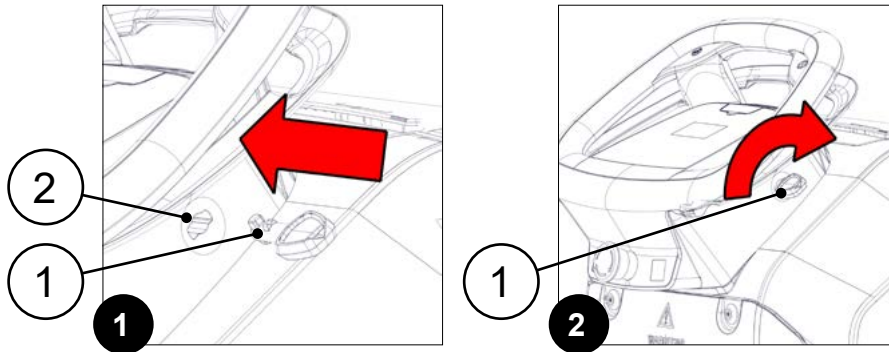
TAG INSERTION



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 – FIMAP FLEET MANAGEMENT) 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.

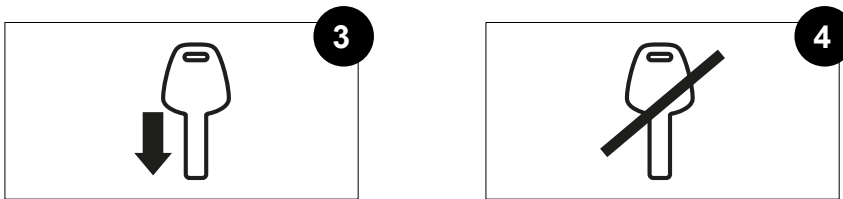
To activate automatic fleet management data logging, do the following:

1. Stand at the back of the machine.
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).



i **N.B.:** If the key just inserted is not equipped with a TAG, the alarm 10 will appear on the control display (Fig.3).

i **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 begin the work operations, see the [“STARTING WORK” on page 69](#).

AUTOMATIC DETERGENT DOSING SYSTEM (PRO VERSIONS WITH FSS SYSTEM – FIMAP SOLUTION SAVER)

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

i **N.B.:** with the automatic dosing system installed on the machine, the user can be sure 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.

i **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.

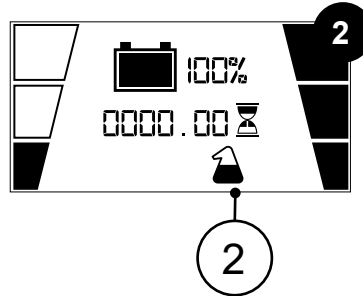
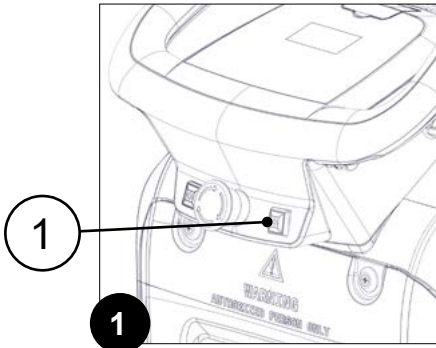
If the machine being used has an automatic dosing system, after turning on the machine press the AUTOMATIC DOSING SYSTEM CONTROL switch (1), on the control display (Fig.1).

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

i **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).

i **N.B.:** at the end of each work cycle carry out daily maintenance of the machine, see [“MAINTENANCE PLAN” on page 86.](#)

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



CLEANING GUN SYSTEM (PRO VERSIONS)



Upon request, the machine can be equipped with a recovery tank spray cleaning gun kit. The recovery tank spray 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.

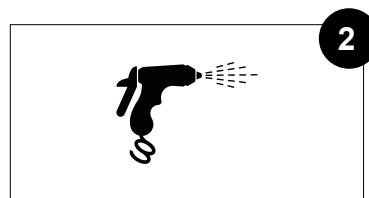
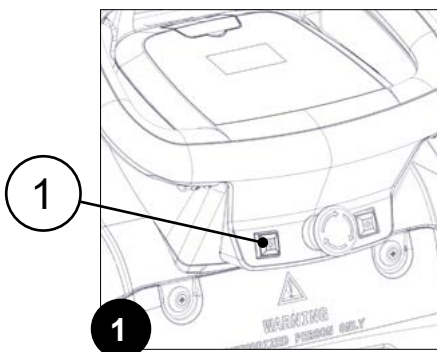
To use the kit, do the following:

1. Take the machine to the maintenance area.

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

2. Stop the machine.
3. Set the machine to TRANSFER mode, see [“TRANSFER WORKING MODE” on page 60.](#)
4. Activate the gun kit by pressing the switch (1) located under the control handlebar (**Fig.1**).

i **N.B.:** when the kit is functioning, the dedicated screen appears on the control display (**Fig.2**) and the LED in the switch (1) is on (**Fig.1**).



i **N.B.:** if you want to turn the kit off, press the switch (1). When the system is deactivated, the LED in the switch (1) will be off.

- N.B.:** when the kit is deactivated the screen (**Fig.2**) will no longer be visible on the control display.
- N.B.:** the kit is only in function when the machine is stopped and the solution tank is not empty.
- N.B.:** with the kit active, the traction and work functions are deactivated.
- CAUTION:** it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

5. Remove the gun from the holder at the rear of the machine.
6. To clean the inside of the recovery tank, see [“DRAINING THE RECOVERY TANK” on page 96.](#)
7. 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 (2) on the accessory itself (**Fig.3**).

N.B.: To adjust the intensity of the solution jet from the tank cleaning accessory, turn the knob (3) on the accessory itself (**Fig.4**).

N.B.: To stop the solution jet, use the lever (4) on the tank cleaning accessory (**Fig.5**).



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. Set the machine to TRANSFER mode, see [“TRANSFER WORKING MODE” on page 60.](#)
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. Carry out all the daily maintenance procedures on the machine. See [“MAINTENANCE PLAN” on page 86.](#)
5. Once the daily maintenance operations are complete, take the machine to the designated storage location.

WARNING: 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

The importance of machine maintenance should not be underestimated.

By ensuring the machine is inspected regularly, we can replace all parts that become worn in a timely manner.

In addition, we can also recognise faults quickly, thus increasing the useful life of our machine.

i N.B.: through its network of certified service centres, FIMAP proposes special offers on maintenance services, like those available in car repair shops. See <https://www.fimap.com/it/fimap/22/maintenance-and-repair.html>

First, it is important to understand the difference between the various types of maintenance:

- routine maintenance is an activity designed to keep the machine in good working order.
- extraordinary maintenance regards work carried out to implement substantial updates on the machine.

i N.B.: the primary purpose of routine maintenance is to maintain the performance of the machine's various functions, checking for any worn or faulty elements. A fault that is not fixed or an excessively worn part could cause damage to the machine or injure persons in the vicinity.

i N.B.: The main purpose of extraordinary maintenance is to replace any worn or defective elements.

i N.B.: In addition, maintenance enables the operator to use the machine in a safer manner, in the knowledge that the risk of unforeseen events has been reduced as far as possible.

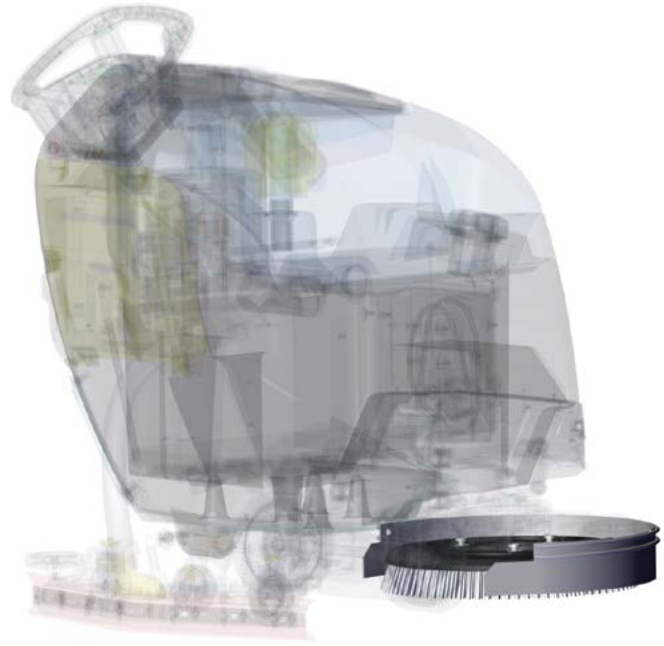
i N.B.: The use and maintenance manual contains all the procedures to be carried out during routine maintenance of the machine. By following these instructions, even individuals with no particular expertise in this area can check the machine and replace any parts necessary, taking a DIY approach. However, it is essential to remember the importance of entrusting the work to genuine professionals. An experienced specialist may notice details that could escape the notice of a less observant and expert eye.

i N.B.: A dilemma may arise during maintenance: which spare parts are best? FIMAP supplies original spare parts which are exactly identical to the parts on a given machine that need replacing; these are the best choice because they are durable and long-lasting, and help to maintain the performance of the machine.

i N.B.: FIMAP service centres use these spare parts; in an unauthorised workshop, however, we recommend explicitly asking the technicians to use only these genuine FIMAP products. Using official spare parts extends the longevity of your machine.



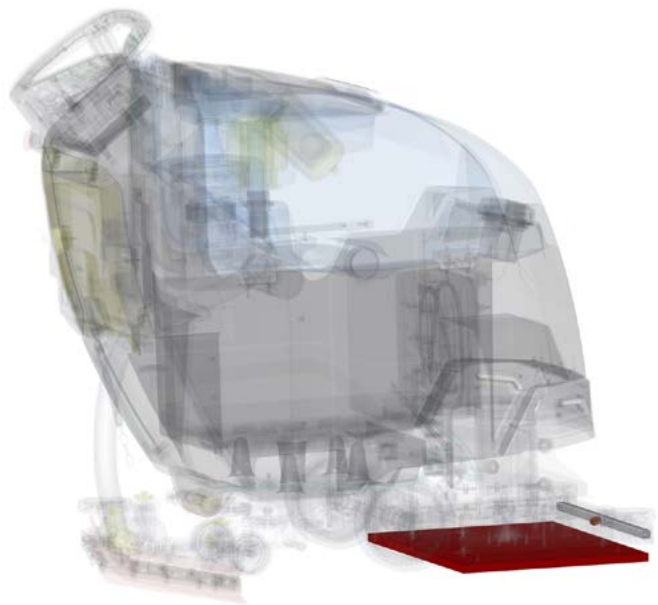
1 - SUCTION SYSTEM



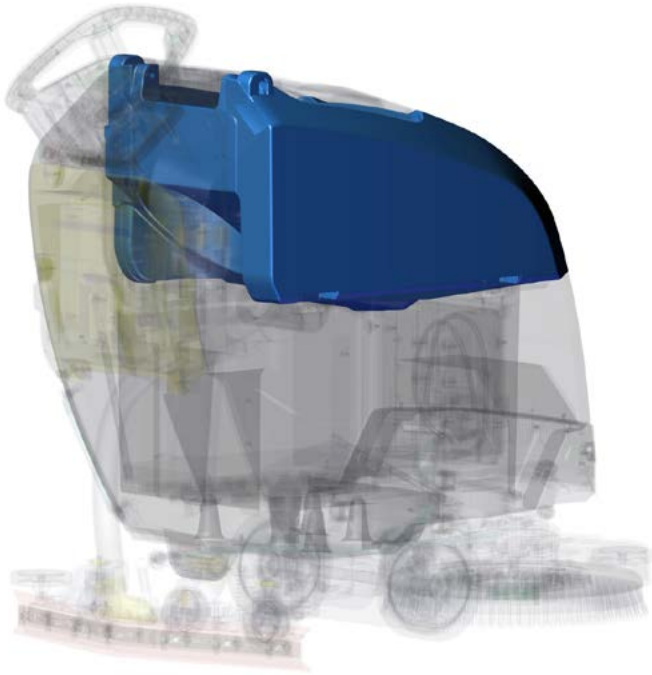
2A - SCRUBBING SYSTEM (DISCOID VERSION)



2B - SCRUBBING SYSTEM (CYLINDRICAL VERSION)



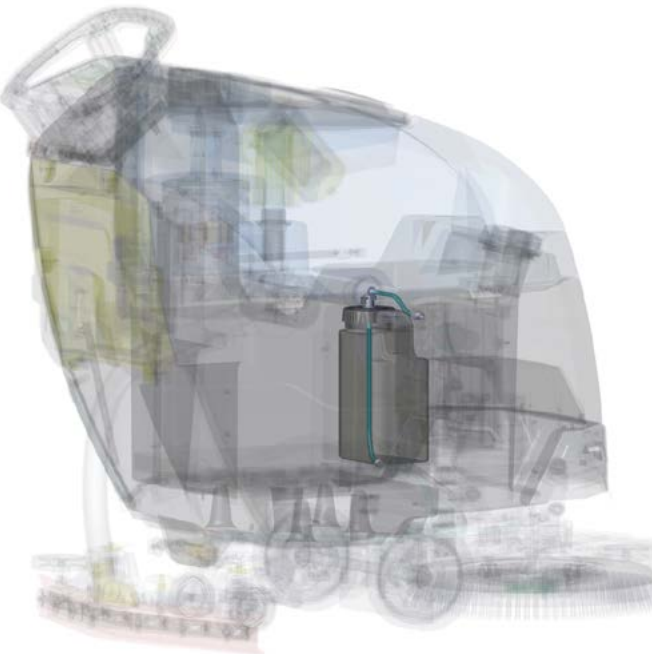
2C - SCRUBBING SYSTEM (ORBITAL VERSION)



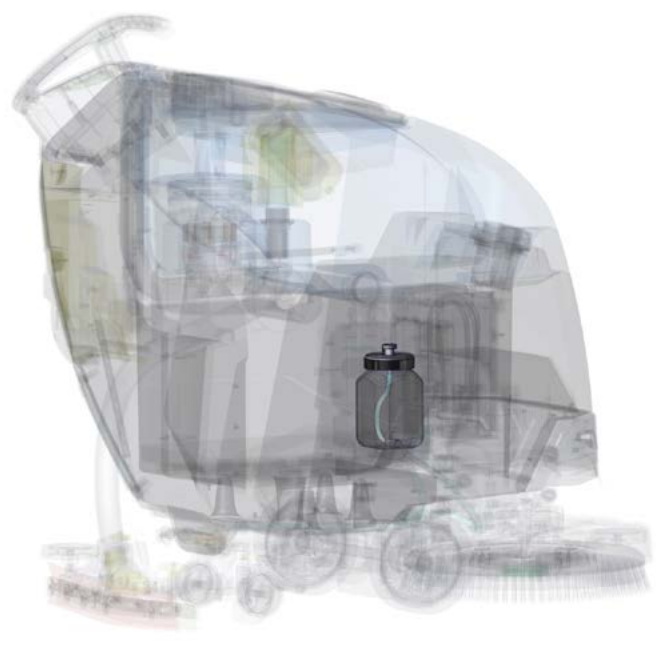
3 - RECOVERY TANK



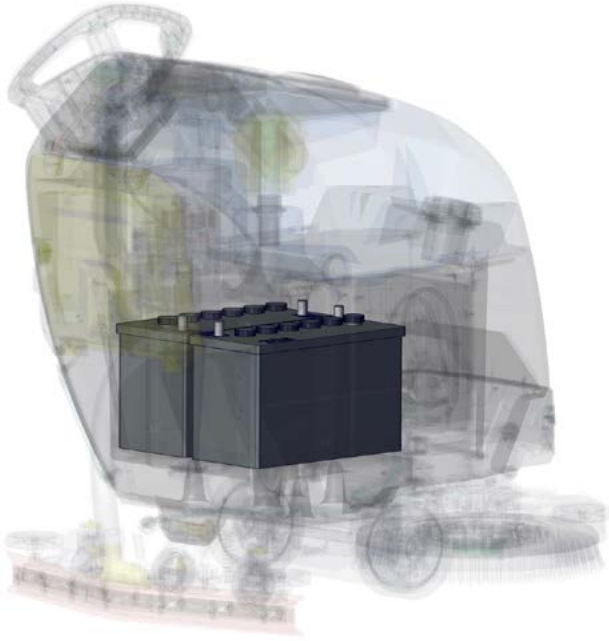
4 - SOLUTION TANK



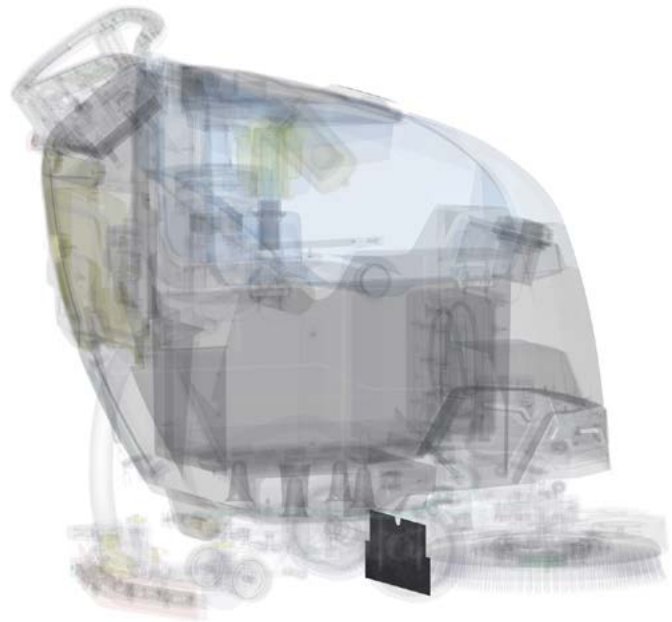
5 - CHEMICAL PRODUCT TANK AUTOMATIC DETERGENT MANAGEMENT SYSTEM (FSS Technology.)



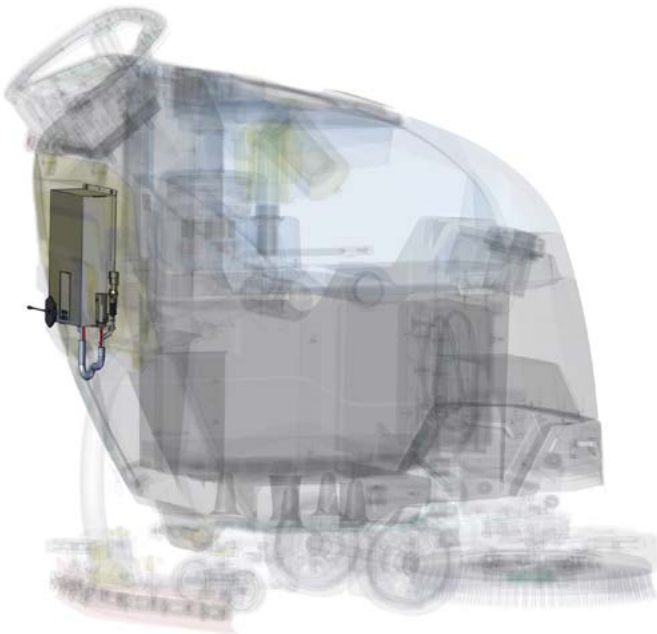
6 - CHEMICAL PRODUCT TANK CLEANING SYSTEM WITH ELECTROLYSIS (AQUÆ® technology)



7 - BATTER- POWERED SYSTEM



8 - RUBBER SPLASH GUARD TRACTION MOTOR PROTECTION



9 - ON-BOARD BATTERY CHARGER

ROUTINE MAINTENANCE INTERVAL TABLE (NORMAL WORKER)

i **N.B.:** "general worker" means someone able to handle tasks for which physical effort is required to carry out specific but simple job-related procedures, or responsible for tasks or services calling for aptitude or for knowledge that can be acquired in a few days.

i **N.B.:** "specialised operator" means someone able to handle specific tasks requiring special practical skills obtained via technical-practical preparation organised by FIMAP service centre technicians.

DAILY MAINTENANCE















Reference	Description	Calculation	Paragraph
1	Clean squeegee rubber blades	Clean the inner and outer surface of the rubber blades present in the squeegee of the machine	"CLEANING THE SQUEEGEE" on page 94
	Clean squeegee suction chamber	Clean the inner surface of the suction chamber present in the squeegee body of the machine	
	Clean the squeegee nozzle	Clean the inner surface of the suction nozzle present in the squeegee body of the machine	
	Clean the squeegee suction hose	Clean the inside of the suction hose that connects the squeegee to the recovery tank	"CLEANING THE SQUEEGEE VACUUM HOSE" on page 95
	Clean the waste collection tray present in the recovery tank	Clean the waste tray of any dirt or fouling, the tray is inside the recovery tank	"RECOVERY TANK CLEANING" on page 96
	Clean the suction motor inlet air filter	Clean the inlet air filter of any impurities or fouling, the filter is located inside the recovery tank	"CLEANING OF THE SUCTION MOTOR AIR INTAKE FILTER" on page 97
2A	Clean the brush (discoid scrubbing version)	Remove impurities and waste from the bristles, clean the bristles under a jet of water	"CLEANING OF BRUSH HEAD DRIVE BRUSH (DISCOID SCRUBBING VERSION)" on page 98
	Clean the splash guard rubber blade (discoid scrubbing version)	Clean the inner and outer surface of the splash guard rubber blade	"CLEANING BRUSH HEAD SPLASH GUARD (DISCOID SCRUBBING VERSION)" on page 101
2B	Clean the brush (cylindrical scrubbing version)	Remove impurities and waste from the bristles, clean the bristles under a jet of water	"CLEANING BRUSH (CYLINDRICAL SCRUBBING VERSION)" on page 102
	Clean the splash guard rubber blade (cylindrical scrubbing version)	Clean the inner and outer surface of the side splash guard rubber blade	"CLEANING BRUSH HEAD SPLASH GUARD (CYLINDRICAL SCRUBBING VERSION)" on page 102
	Clean the collection tray (cylindrical scrubbing version)	Clean the inside of the collection box from any dirt or fouling, the box is located at the rear of the brush head tunnel	"CLEANING DEBRIS HOPPER (CYLINDRICAL SCRUBBING VERSION)" on page 103
2C	Clean the abrasive pad (orbital scrubbing version)	Clean the abrasive surface of the pad	"CLEANING ABRASIVE PAD (ORBITAL VERSIONS)" on page 104
3	Empty the recovery tank	Using the drain hose, empty the recovery tank	"DRAINING THE RECOVERY TANK" on page 96
4	Clean the solution tank filter - cap	Clean the water system filter of any dirt or fouling, the cap - filter located at the rear of the machine	"CLEANING THE SOLUTION TANK FILTER-CAP" on page 105

MAINTENANCE AFTER 50 WORKING HOURS



Reference	Description	Calculation	Paragraph
1	Clean the guard of the suction motor inlet air filter	Clean the guard of the suction motor inlet air filter present inside the recovery tank	“CLEANING OF THE SUCTION MOTOR AIR INTAKE FILTER” on page 97
3	Clean the recovery tank	Empty and clean the inside of the recovery tank	“DRAINING THE RECOVERY TANK” on page 96
4	Clean the solution tank	Empty and clean the inside of the solution tank	“DRAINING THE SOLUTION TANK” on page 104
5	Clean the detergent tank automatic chemical dosing system (FSS system)	Clean the inside of the detergent canister of the FSS system	“CLEANING DETERGENT CANISTER (VERSIONS WITH FSS SYSTEM – FIMAP SOLUTION SAVER)” on page 105
	Clean the filter of the automatic chemical dosing system (FSS system)	Clean the filter inside the detergent canister of the FSS system	“CLEANING DETERGENT CANISTER (VERSIONS WITH FSS SYSTEM – FIMAP SOLUTION SAVER)” on page 105
6	Clean the AQUÆ® system detergent tank	Clean the inside of the detergent canister of the AQUÆ® system	“CLEANING DETERGENT CANISTER (VERSIONS WITH AUTOMATIC DETERGENT DOSING SYSTEM USING AQUÆ® TECHNOLOGY)” on page 107
	Clean the filter of the AQUÆ® system	Clean the filter inside the detergent canister of the AQUÆ® system	“CLEANING DETERGENT CANISTER (VERSIONS WITH AUTOMATIC DETERGENT DOSING SYSTEM USING AQUÆ® TECHNOLOGY)” on page 107

ROUTINE MAINTENANCE INTERVAL TABLE (SPECIALIST WORKER)


MAINTENANCE AFTER 50 WORKING HOURS

Ref.	Description	Notes
1	Check the state of wear of the rubber blades in the squeegee	 WARNING: if the wear condition of the rubber blades does not allow for proper drying, contact your local FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to replace it
	Check the integrity of the suction nozzle present in the squeegee	 WARNING: if the suction nozzle is damaged and does not ensure proper suction of the cleaning solution, contact your local FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to replace it
	Check the integrity of the squeegee suction hose	 WARNING: if the squeegee suction hose is damaged and does not ensure proper suction of the cleaning solution, contact your local FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to replace it
	Check the integrity of the waste tray present in the recovery tank	 WARNING: If the waste tray in the recovery tank is damaged and does not ensure efficient filtration of the sucked solution contact your local FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to replace it
	Check the integrity of the suction motor inlet air filter	 WARNING: If the inlet air filter of the suction motor is damaged and does not ensure the blockage of the intake solution, contact your local FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to replace it
	Check the integrity of the guard at the suction motor inlet air filter	 WARNING: if the air filter guard at the inlet of the suction motor is damaged and does not ensure the blockage of the intake solution, contact your local FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to replace it
2A	Check the wear condition of the bristles in the brush (discoïd scrubbing version)	 WARNING: If the height of the bristles in the brush does not allow proper scrubbing of the floor, contact your local FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to replace it
	Check the wear condition of the splash guard rubber blade (discoïd scrubbing version)	 WARNING: if the integrity of the splash guard does not allow the cleaning solution to be contained and conveyed to the machine, contact your nearest FIMAP service centre or the one nearest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to replace it
2B	Check the wear condition of the bristles in the brush (cylindrical scrubbing version)	 WARNING: If the height of the bristles in the brush does not allow proper scrubbing, contact your local FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to replace it
	Check the wear condition of the splash guard rubber blade (cylindrical scrubbing version)	 WARNING: if the integrity of the splash guard does not allow the cleaning solution to be contained and conveyed to the machine, contact your nearest FIMAP service centre or the one nearest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to replace it
2C	Check the wear condition of the abrasive pad (orbital scrubbing version)	 WARNING: If the integrity of the abrasive pad does not allow proper scrubbing of the floor, contact your local FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to replace it
3	Check the condition of the discharge pipe of the recovery tank	 WARNING: If the integrity of the recovery tank discharge pipe does not meet the standard (there are leaks or cuts), contact your local FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to replace it
4	Check the condition of the solution tank cap - filter	 ATTENTION: if the integrity of the solution tank cap - filter does not meet the standard, contact your local FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to replace it
7	Battery-powered supply system	 WARNING: refer to the owner's manual of the supplier of the batteries used for battery maintenance.

MAINTENANCE AFTER 100 WORKING HOURS

Ref.	Description	Notes
8	Check the wear condition of the traction motor protection splash guard rubber blade	 WARNING: If the wear condition of the rubber blade does not provide splash protection, contact your local FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to replace it
9	On-board battery charger system	 WARNING: for maintenance of the on-board battery charger refer to the on-board battery charger use and maintenance manual, this document is delivered with the machine documentation, or contact your local FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to have it sent to you

MAINTENANCE AFTER 500 WORKING HOURS

Ref.	Description	Notes
1	Check the integrity of the air filter at the outlet of the suction motor (Hepa version)	 WARNING: if the suction motor inlet air filter is damaged and no longer provides proper air filtration, contact your local FIMAP service center or the one closest to you; Alternatively, you can send an email to service@fimap.com , or go to www.fimap.com to replace it

ROUTINE MAINTENANCE

Before carrying out any routine maintenance operations, proceed as follows:

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.

2. Make sure the machine is in a safe condition, see [“MACHINE SAFETY” on page 35](#)).

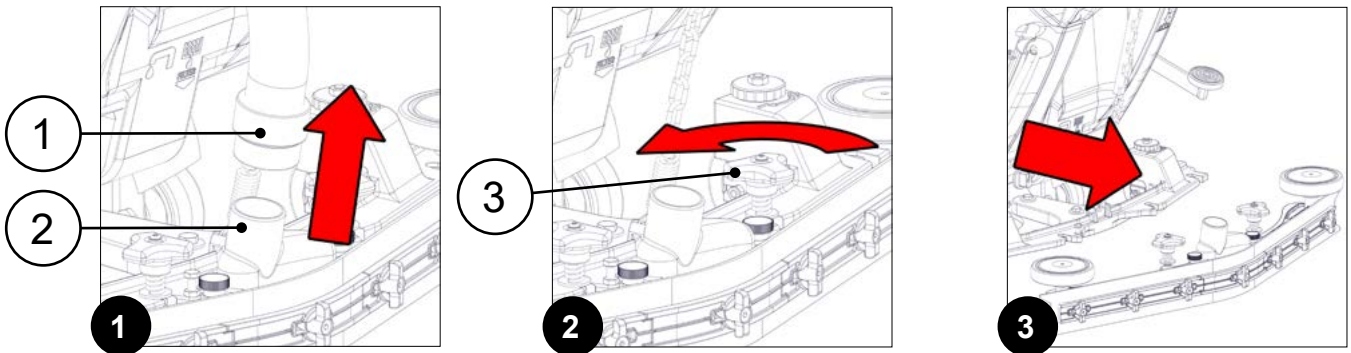
CAUTION: it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

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**).

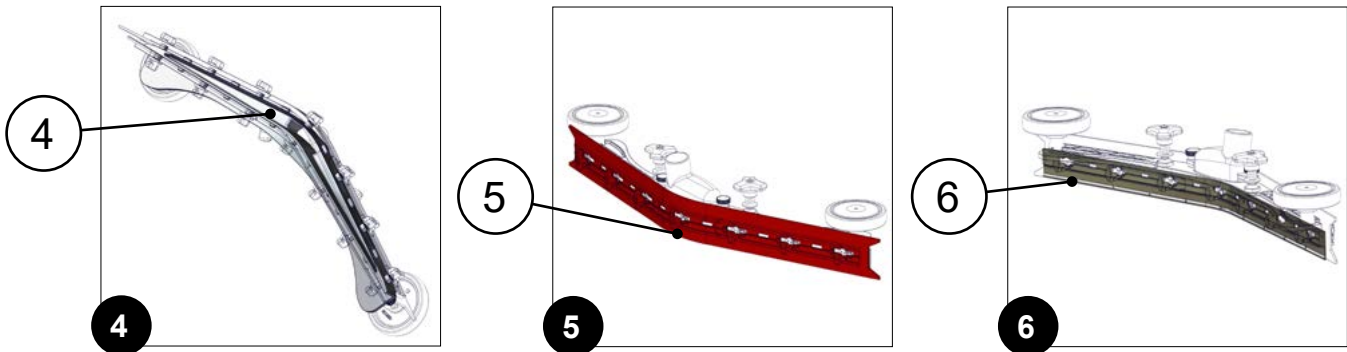


4. Use a jet of water and then a damp cloth to thoroughly clean the vacuum chamber (4) (**Fig.4**).

i N.B.: the vacuum chamber is to be understood as the portion of the squeegee unit located between the front squeegee rubber blade and the rear squeegee rubber blade.

i 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.6**).

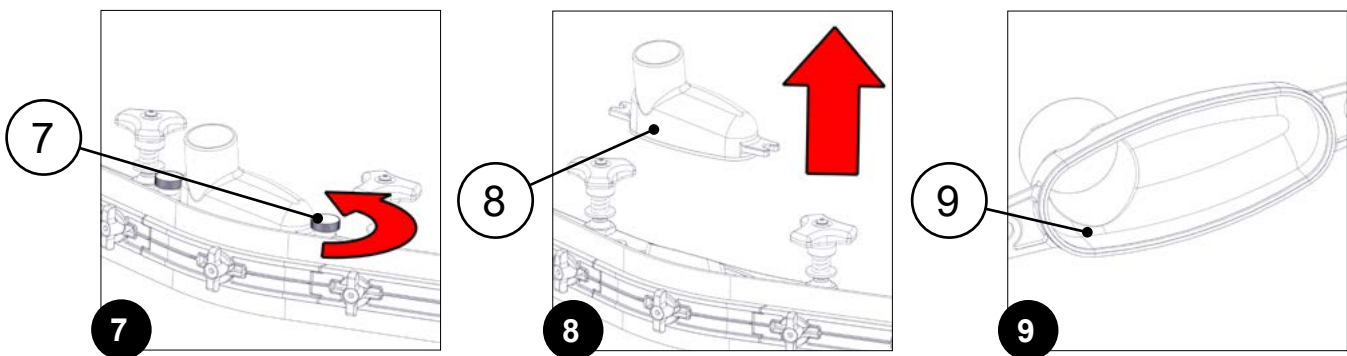


i **N.B.:** Check that the two rubber blades are in good condition; if necessary, replace the squeegee rubber blades, refer to.

7. Completely unscrew the knobs (7) in the squeegee pre-assembly (Fig.7).
8. Remove the vacuum nozzle (8) from the squeegee unit (Fig.8).
9. Clean the suction chamber (9) of the suction nozzle (8) well with a jet of water and then with a damp cloth (Fig.9).

i **N.B.:** if the dirt persists, use a brush with medium hardness bristles.

10. Proceed in the opposite order to reassemble all the parts.

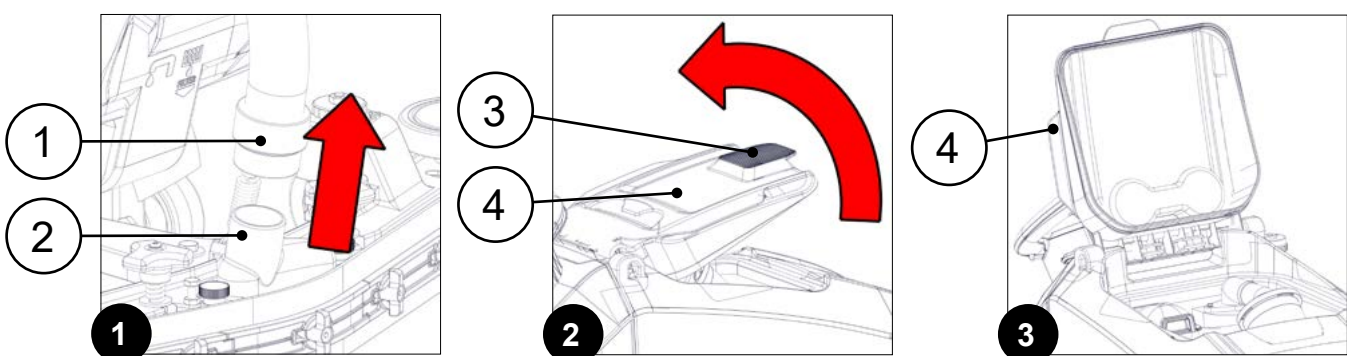


CLEANING THE SQUEEGEE VACUUM HOSE

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:

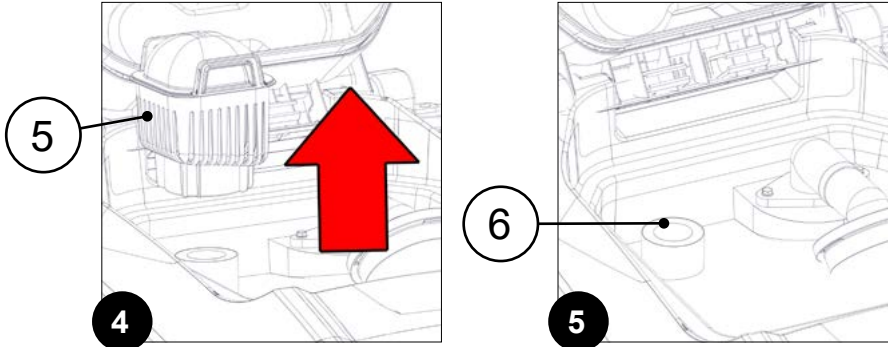
1. Remove the squeegee vacuum hose (1) from the nozzle (2) in the squeegee (Fig.1).
2. Grip the handle (3) on the recovery tank cover (4) (Fig.2), turn the cover (4) to the maintenance position (Fig.3).



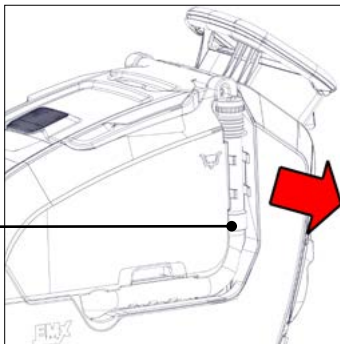
3. Remove the waste tray (5) (Fig.4).
4. Clean the inside of the vacuum hose with a stream of running water.

i **N.B.:** the water jet must be directed inside the duct (6) present inside the recovery tank (Fig.5).

5. 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.
2. Place the hose over the drain pan.

i **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. Bend the end of the drainage tube, so as to create a choke and prevent the contents from coming out, put the tube on the discharge surface, unscrew the cap and gradually release the tube.
4. Gradually unscrew the plug in the discharge pipe.
5. Clean the inside of the recovery tank well with a jet of water).

i **N.B.:** if dirt persists, use a spatula.

6. Proceed in the opposite order to reassemble all the parts.

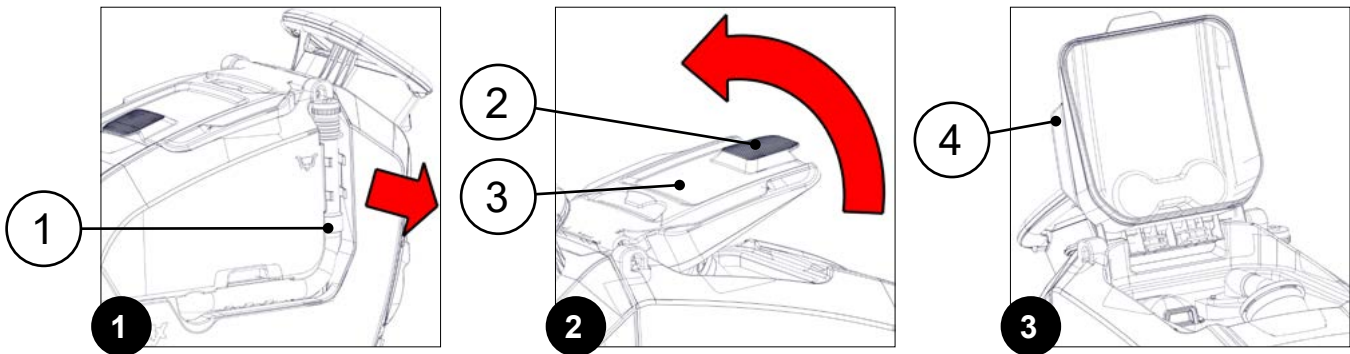
RECOVERY TANK CLEANING

Careful cleaning of the waste collector tray inside the recovery tank helps to reduce the formation of unpleasant odours inside it. To carry out the cleaning of the waste tray carry out the following:

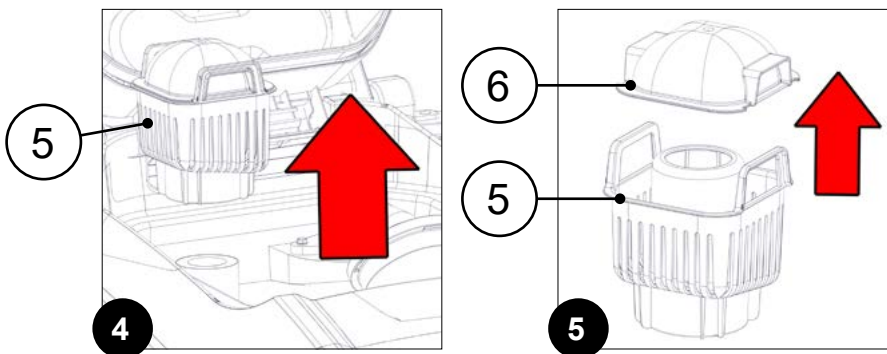
1. Remove the recovery tank drain hose (1) from the retainers (Fig.1).
2. Place the hose over the drain pan.

i **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. Bend the end of the drainage tube, so as to create a choke and prevent the contents from coming out, put the tube on the discharge surface, unscrew the cap and gradually release the tube.
4. Gradually unscrew the plug in the discharge pipe.
5. Grip the handle (2) on the recovery tank cover (3) (Fig.2), turn the cover (3) to the maintenance position (Fig.3).



6. Remove the waste tray (5) (Fig.4).
7. Remove the waste tray cover (6) (Fig.5).



8. Clean the tray and cover under a stream of running water.

i N.B.: Use a spatula or a brush with medium hardness bristles to eliminate any dirt that is particularly difficult to remove.

9. Use a cloth to dry the collection filter tray and cover, and place them back inside the recovery tank.
10. Repeat the operations in reverse order to reassemble all the parts.

CLEANING OF THE SUCTION MOTOR AIR INTAKE FILTER

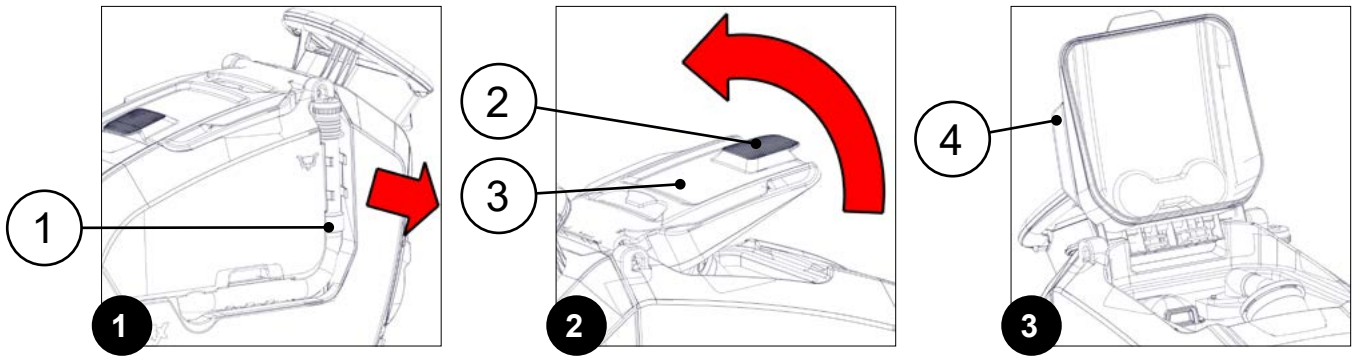
Thorough cleaning of the suction motor air inlet filter ensures better functionality and duration of the suction motor. To clean the suction motor air inlet filter, proceed as follows:

1. Remove the recovery tank drain hose (1) from the retainers (Fig.1).
2. Place the hose over the drain pan.

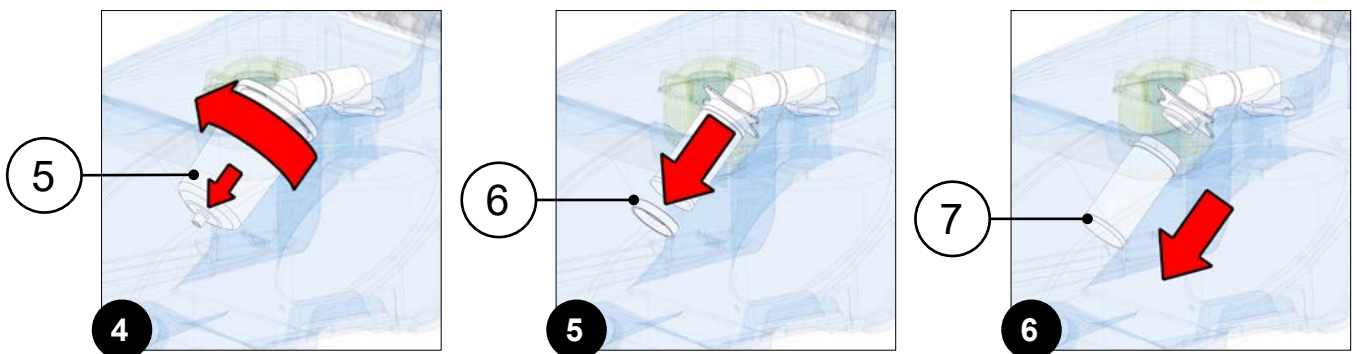


N.B.: discharges into the subsoil resulting from any work activities must only be carried out in designated areas; they must also be performed in compliance with the environmental regulations in force in the machine's country of use.

3. Bend the end of the drainage tube, so as to create a choke and prevent the contents from coming out, put the tube on the discharge surface, unscrew the cap and gradually release the tube.
4. Gradually unscrew the plug in the discharge pipe.
5. Grip the handle (2) on the recovery tank cover (3) (Fig.2), turn the cover (3) to the maintenance position (Fig.3).



6. Remove the filter protection (5) (**Fig.4**), before removing it from its seat, remember to turn it anticlockwise.
7. Remove the snap-on collar (6) that fastens the filter to its holder (**Fig.5**).
8. Slide the filter (7) out of its holder (**Fig.6**).



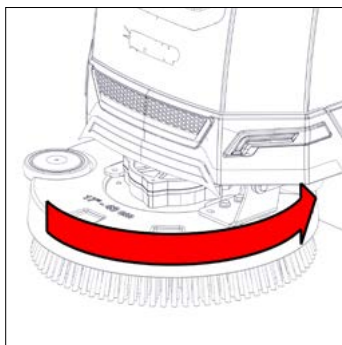
9. Clean the suction motor inlet air filter with a stream of running water.
10. Clean the filter protection with a stream of running water.

i **N.B.:** if the dirt persists, use a brush with medium hardness bristles.

11. Repeat the operations in reverse order to reassemble all the parts.

CLEANING OF BRUSH HEAD DRIVE BRUSH (DISCOID SCRUBBING VERSION)

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, without using the brush uncoupling function, perform the following.:

1. Go to the front of the machine.
2. Rotate the brush anti-clockwise so that it comes out of the brush holder plate seat.
3. After removing the brush or drive discs, clean them under a stream of running water to eliminate any impurities from the bristles.

i **N.B.:** check the wear of the bristles and replace the brushes if they are excessively worn (the bristle length must not be less than 10 mm; this measurement is indicated on the brush by the yellow band), see

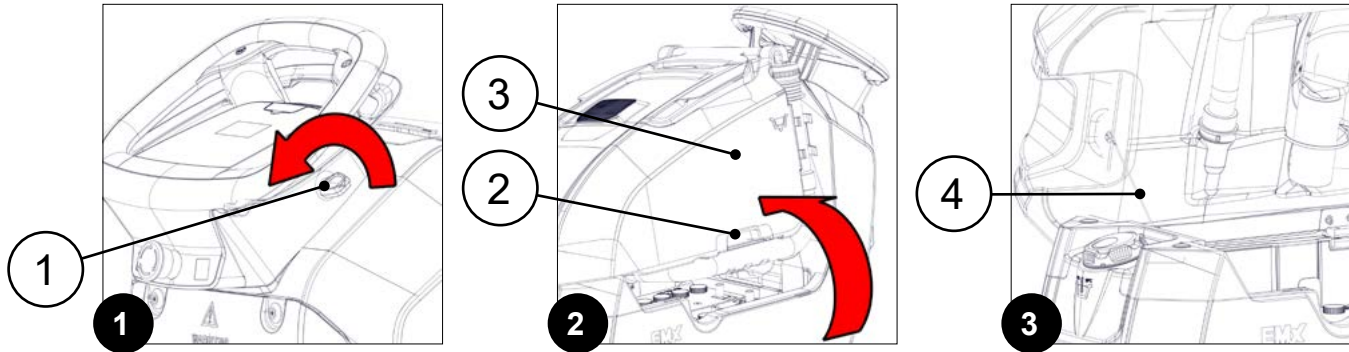
[“REPLACING BRUSHES OR DRIVE DISCS \(DISCOID SCRUBBING VERSION\)” on page 110.](#)

4. After cleaning, refit the brush, see "[MOUNTING BRUSHES OR DRIVE DISCS \(DISCOID SCRUBBING VERSION\)](#)" on page 51.

To clean the brush, using the brush uncoupling function, perform the following.:

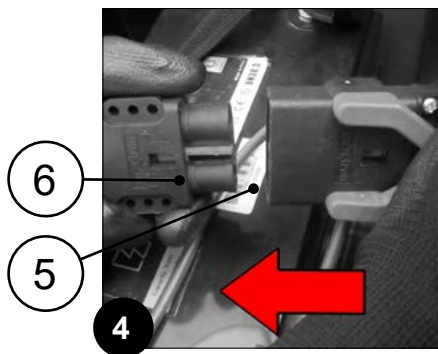
1. Stand at the back of the machine.
2. Check the main switch is on "0". If isn't, make a quarter turn anti-clockwise with the key (1) (**Fig.1**).
3. Remove the key from the instrument panel.
4. Grasp the handle (2) and turn the recovery tank cover (3) to its maintenance position (**Fig.2**).

⚠ WARNING: to prevent unintentional rotation of the recovery tank, turn it until the rope (4) is fully tensioned (**Fig.3**).



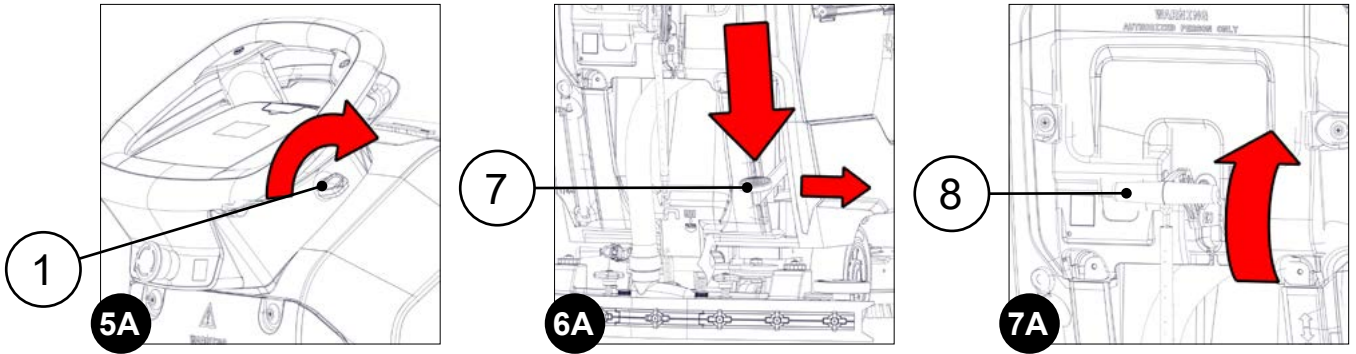
⚠ WARNING: the following operations must be carried out by qualified personnel. Incorrect operations could result in machine malfunctions.

5. Check that the connector (5) in the wiring of the machine's electrical system is connected to the connector (6) in the power cable coming from the battery box, otherwise connect it (**Fig.4**).
6. Grip the handle (2) and turn the recovery tank (3) to its working position.

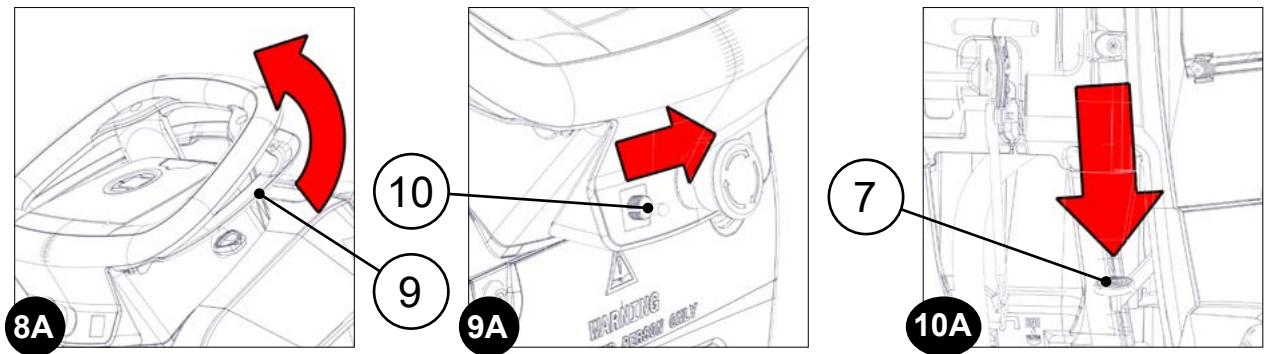


CLEANING OF BRUSH HEAD DRIVE BRUSH (BASIC VERSIONS)

- Insert the key into the slot on the right side of the control handlebar.
- Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.5A**).
- Move to the working position (in contact with the floor), press the pedal (7) all the way down, move it to the right and release it (**Fig.6A**).
- Move the squeegee body to the rest position (raised off the floor), turn the lever (8) upwards (**Fig.7A**).



- Slightly press the dead man's lever (9)(Fig.8A) until the motor in the brush head (brush rotation) is activated.
- Move the lever (10) in the brush uncoupling switch (Fig.9A) and at the same time press the brush head control pedal (7) (Fig.10A) to lift it off the floor.



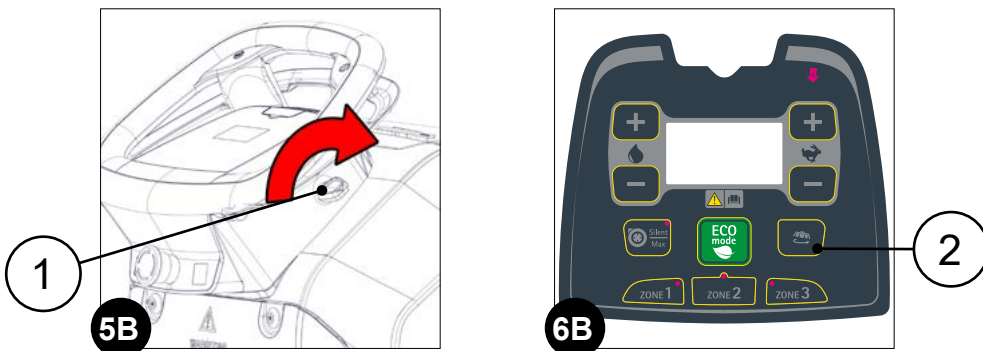
- The machine will automatically perform the BRUSH UNCOUPLING function.

i N.B.: once the brush uncoupling 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.

CLEANING OF BRUSH HEAD DRIVE BRUSH (PRO VERSIONS)

- Insert the key into the slot on the right side of the control handlebar.
- Turn on the machine and turn the key (1) a quarter turn clockwise (Fig.5B).
- Set the machine to TRANSFER mode, see "[TRANSFER WORKING MODE](#)" on page 60.
- Press the BRUSH UNCOUPLING button (2) on the control panel (Fig.6B).



- The machine will automatically perform the BRUSH UNCOUPLING function.

i **N.B.:** once the brush uncoupling 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.

7. Make sure the machine is in a safe condition, see [“MACHINE SAFETY” on page 35](#)).
8. After removing the brush or drive discs, clean them under a stream of running water to eliminate any impurities from the bristles.

i **N.B.:** check the wear of the bristles and replace the brushes if they are excessively worn (the bristle length must not be less than 10 mm; this measurement is indicated on the brush by the yellow band), see [“REPLACING BRUSHES OR DRIVE DISCS \(DISCOID SCRUBBING VERSION\)” on page 110](#).

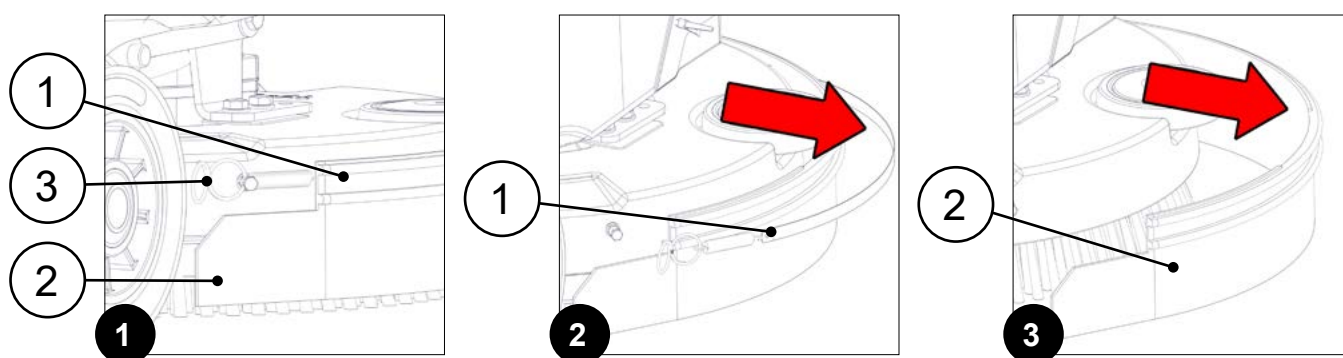
9. After cleaning, refit the brush, see [“MOUNTING BRUSHES OR DRIVE DISCS \(DISCOID SCRUBBING VERSION\)” on page 51](#).

CLEANING BRUSH HEAD SPLASH GUARD (DISCOID SCRUBBING VERSION)

The thorough cleaning of the brush head splash guard allows the cleaning solution to be better directed towards the centre of the machine so that it can be collected by the squeegee, thereby increasing cost savings and increasing environmental sustainability.

To clean the brush head squeegee, proceed as follows:

1. Go to the front right of the machine.
2. Unhook the slat (1) that allows you to lock the splash guard (2), to facilitate the operation use the hook (3) (Fig.1).
3. Remove the slat (1) from the machine (Fig.2).
4. Remove the splash guard (2) from the machine (Fig.3).
5. Thoroughly clean the splash guard with a stream of running water, and then with a damp cloth.
6. To refit, repeat the operations for removal but in the reverse order.

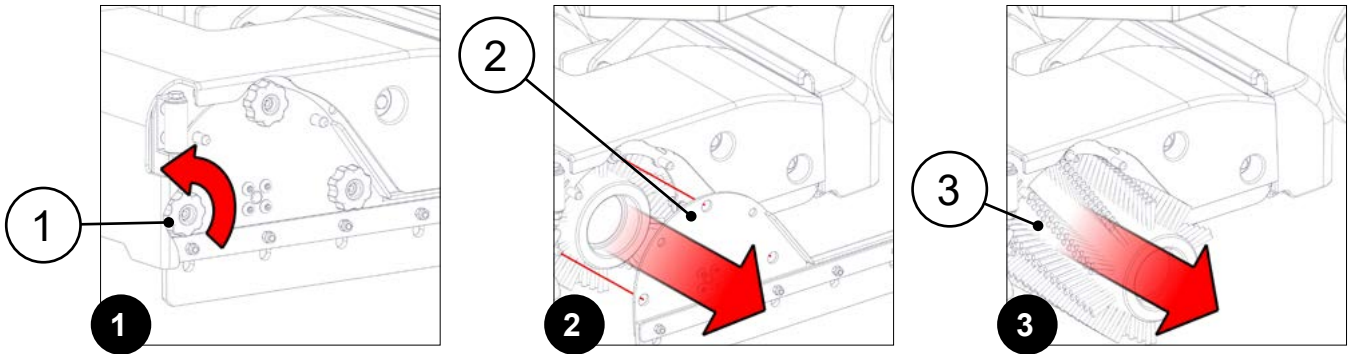


CLEANING BRUSH (CYLINDRICAL SCRUBBING VERSION)

The careful cleaning of the brush 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, proceed as follows:

1. Go to the front left-hand side of the machine.
2. Remove the knobs (1) which secure the inspection door (**Fig.1**).
3. Remove the left inspection door (2) from the brush head (**Fig.2**).
4. Extract the front brush (3) from the brush head body (**Fig.3**).



5. Repeat the steps indicated above also for the rear brush. The inspection door is located on the right side of the machine.
6. Clean the brushes under a stream of running water to remove any impurities from the bristles.

i **N.B.:** check the wear of the bristles and replace the brushes if they are excessively worn (the bristle length must not be less than 15 mm; this measurement is indicated on the brush by the yellow band), see [“BRUSH REPLACEMENT \(CYLINDRICAL SCRUBBING VERSION\)” on page 113](#).

i **N.B.:** you are advised to invert the front and rear brushes every day.

! **WARNING:** If the brushes are not new, and have deformed bristles, it is better to reassemble them in the same position in order to prevent the different inclination of the bristles from overloading the brush motor, as well as to prevent excessive vibrations.

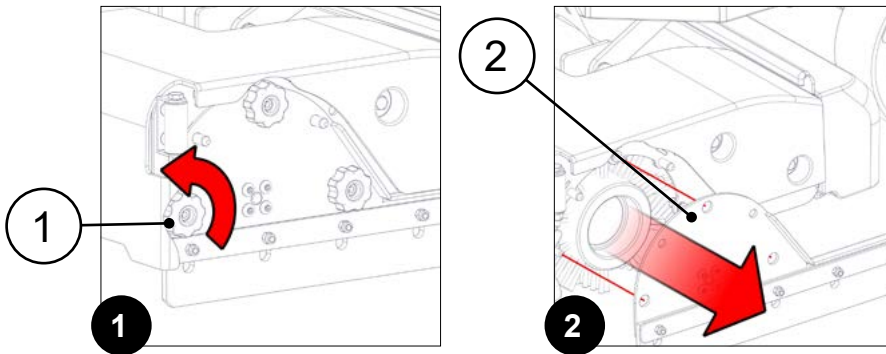
7. Repeat the steps described above but in the reverse order to reassemble everything, for the assembly of the brushes see [“FITTING BRUSHES \(CYLINDRICAL SCRUBBING VERSION\)” on page 52](#)

CLEANING BRUSH HEAD SPLASH GUARD (CYLINDRICAL SCRUBBING VERSION)

The thorough cleaning of the brush head splash guard allows the cleaning solution to be better directed towards the centre of the machine so that it can be collected by the squeegee, thereby increasing cost savings and increasing environmental sustainability.

To clean the brush head squeegee, proceed as follows:

1. Go to the front left-hand side of the machine.
2. Remove the knobs (1) which secure the inspection door (**Fig.1**).
3. Remove the left inspection door (2) from the brush head (**Fig.2**).



4. Thoroughly clean the splash guard with a stream of running water, and then with a damp cloth.
5. Repeat the steps indicated above also for the rear brush. The inspection door is located on the right side of the machine.
6. To refit, repeat the operations for removal but in the reverse order.

CLEANING DEBRIS HOPPER (CYLINDRICAL SCRUBBING VERSION)

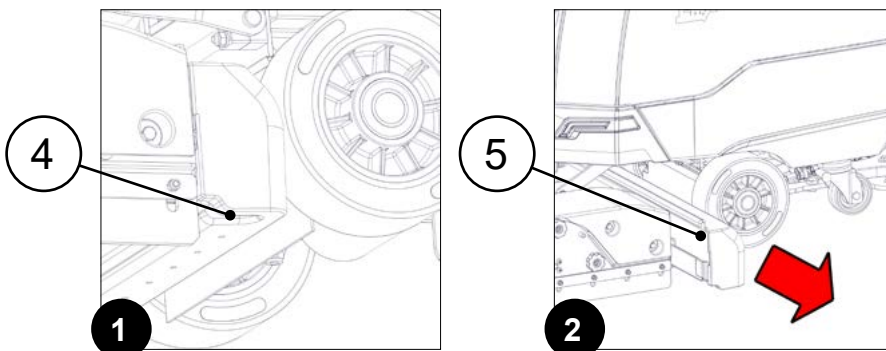
Thorough cleaning of the debris hopper ensures better floor cleaning, if the hopper is clean it collects more impurities inside, thereby increasing cost savings and an increase in environmental eco-sustainability.

To clean the brush, proceed as follows:

1. Stand on the left side of the machine.
2. Using the handle (1) (**Fig.1**) pull the debris hopper (2) out of the machine (**Fig.2**).
3. Take the debris hopper to the waste disposal site and empty it.

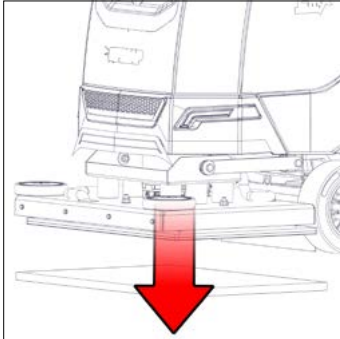
N.B.: the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

4. Clean the inside of the debris hopper with a stream of running water, using a brush to remove any dirt residues if necessary.
5. Proceed in the opposite order to reassemble all the parts.



CLEANING ABRASIVE PAD (ORBITAL VERSIONS)

Thorough cleaning of the abrasive pad ensures better floor cleaning thereby increasing cost savings and an increase in environmental eco-sustainability.



To carry out the cleaning of the abrasive pad, perform the following:

1. Go to the front of the machine.
2. Remove the abrasive pad from the brush head support.
3. After removing the abrasive pad, clean it under a stream of water and remove any impurities present.
4. Repeat the operations in reverse order to reassemble all the parts.

i **N.B.:** check the wear of the abrasive pad, if it is excessively worn, replace it, see [“REPLACING ABRASIVE PAD \(ORBITAL VERSIONS\)” on page 113.](#)

i **N.B.:** it is recommended to rinse in lukewarm water if washing in a machine: quick washes without wringing. Max. temperature 40 °C. Avoid high alkaline and bleaching products.

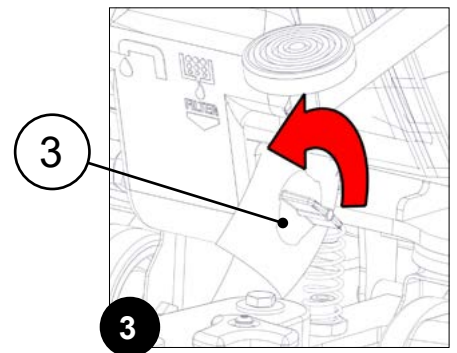
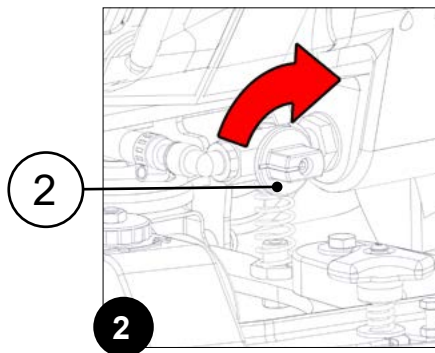
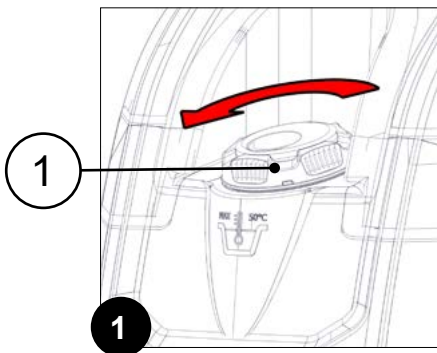
DRAINING THE SOLUTION TANK

Thoroughly cleaning the solution tank will prevent unpleasant odours from forming inside. To clean the tank, do the following:

1. Remove the filling plug (1) at the front of the machine (**Fig.1**).
2. Tighten the detergent solution tap (2) (**Fig.2**).
3. Remove the filter cap (3) at the rear of the machine (**Fig.3**).

♻️ 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.

4. Clean the inside of the debris hopper with a stream of running water.
5. Repeat the operations in reverse order to reassemble all the parts.



i **N.B.:** before screwing the cap onto the solution tank, check that the gasket is positioned correctly in the cap.

CLEANING THE SOLUTION TANK FILTER-CAP

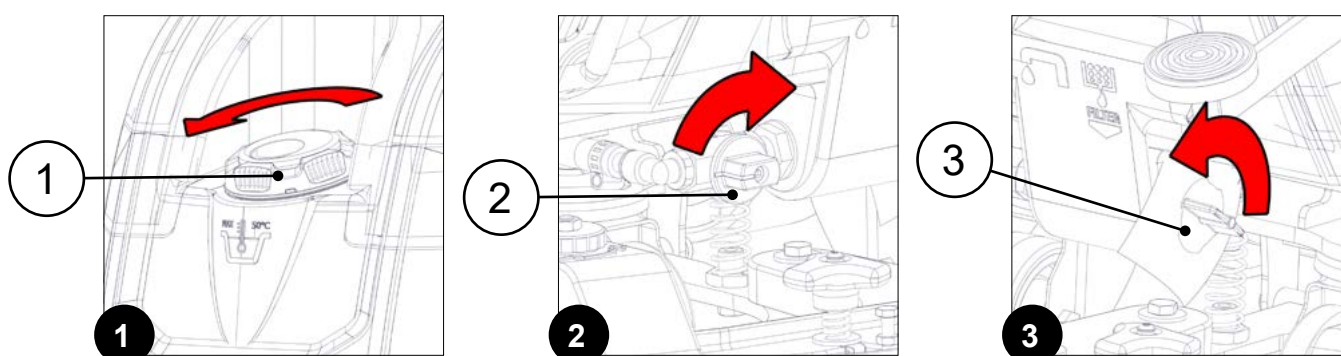
Thorough cleaning of the solution tank cap - filter ensures better cleaning of the floor, if the cap - filter is clogged the cleaning solution does not circulate in the water system of the machine, thereby increasing cost savings and an increase in environmental eco sustainability.

To carry out the cleaning of the solution tank filter - cap, proceed as follows:

1. Remove the filling plug (1) at the front of the machine (**Fig.1**).
2. Tighten the detergent solution tap (2) (**Fig.2**).
3. Remove the filter cap (3) at the rear of the machine (**Fig.3**).
4. Clean the cap - filter with a stream of running water.

i **N.B.:** if the dirt persists, use a brush with medium hardness bristles.

5. Repeat the operations in reverse order to reassemble all the parts.



i **N.B.:** before screwing the cap onto the solution tank, check that the gasket is positioned correctly in the cap.

CLEANING DETERGENT CANISTER (VERSIONS WITH FSS SYSTEM – FIMAP SOLUTION SAVER)

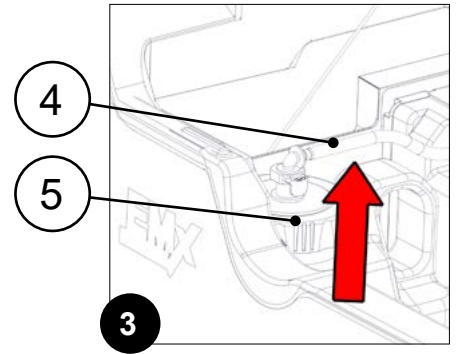
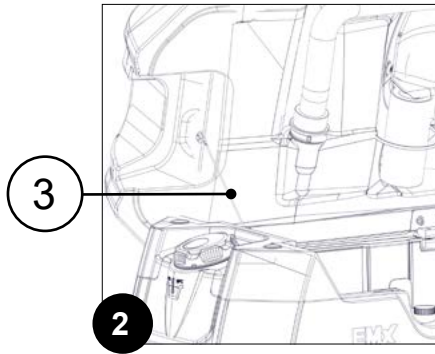
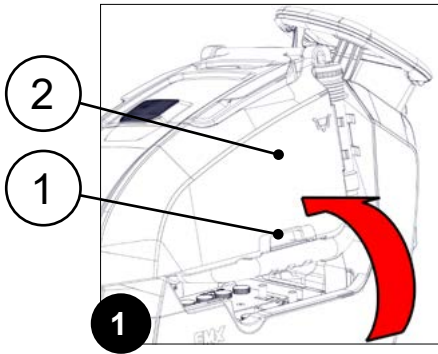
A thoroughly cleaning of the detergent canister will ensure a cleaner floor, thereby reducing costs and increasing environmental sustainability.

To carry out the cleaning of the solution tank filter - cap, proceed as follows:

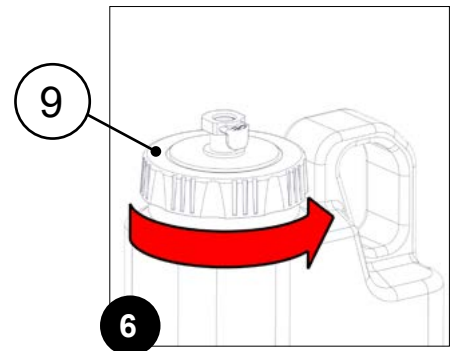
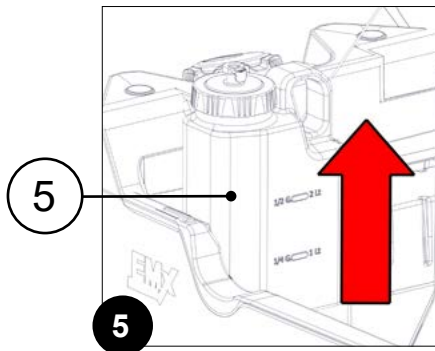
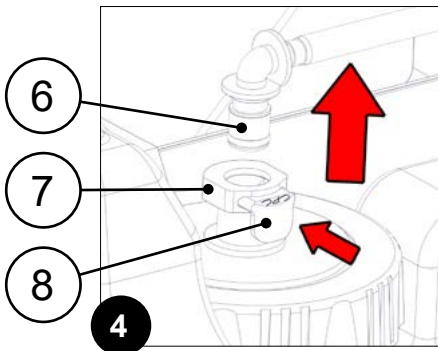
1. Position yourself to the side of the machine, grasp the handle (1) and turn the recovery tank (2) to its maintenance position (**Fig.1**).

! **WARNING:** to prevent unintentional rotation of the recovery tank, turn it until the rope (3) is fully tensioned (**Fig.2**).

2. Disconnect the delivery hose (4) from the detergent canister (5) (**Fig.3**), before removing the male quick coupling (6) from the female quick coupling (7) remember to press the locking lever (8)(**Fig.4**).



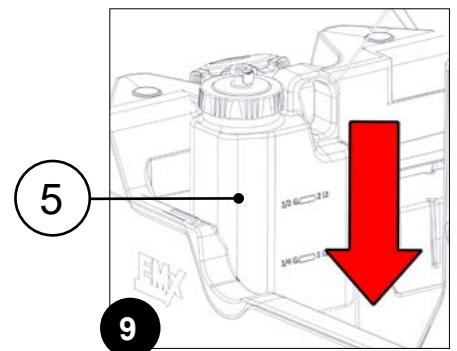
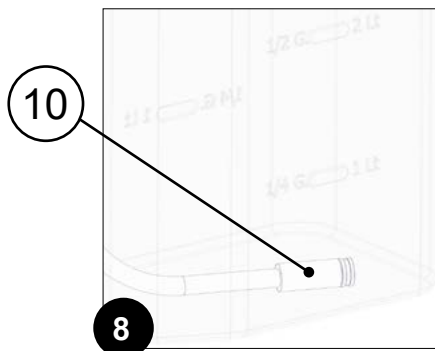
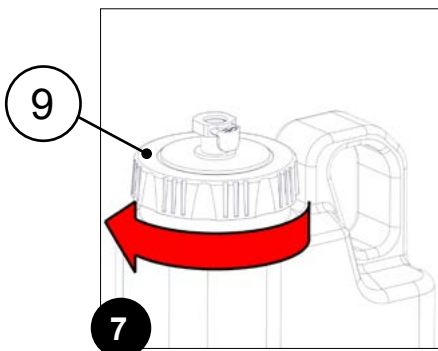
3. Remove the detergent canister (5) from the machine (Fig.5).
4. Remove the detergent tank cap (9) (Fig.6).



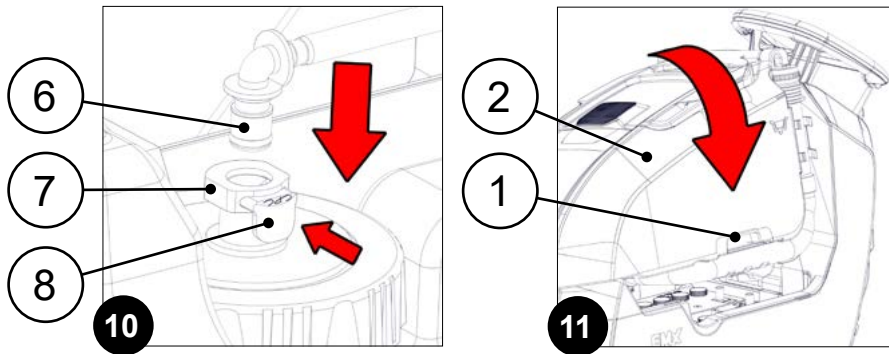
5. Clean the inside of the canister.
6. Clean the suction filter (10) with a stream of running water and then with a damp cloth (Fig.8).
7. Close the cap (5) correctly to prevent liquid leaking out when working (Fig.7).

WARNING: Take care that the filter (10) in the suction pipe is correctly placed in the bottom of the canister (Fig.8).

8. Place the detergent canister inside the machine.
9. Connect the delivery hose (4) to the detergent canister (5) (Fig.9), before inserting the male quick coupling (6) into the female quick coupling (8) remember to press the locking lever (7) (Fig.10).



10. Position yourself to the side of the machine, grasp the handle (1) and turn the recovery tank (2) to its working position (Fig.11).



CLEANING DETERGENT CANISTER (VERSIONS WITH AUTOMATIC DETERGENT DOSING SYSTEM USING AQUÆ® TECHNOLOGY)

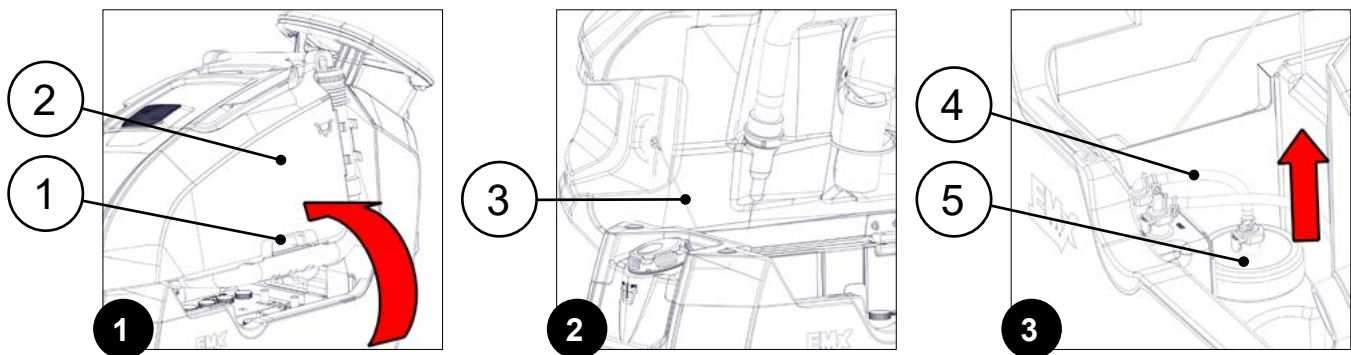
A thoroughly cleaning of the detergent canister will ensure a cleaner floor, thereby reducing costs and increasing environmental sustainability.

To carry out the cleaning of the solution tank filter - cap, proceed as follows:

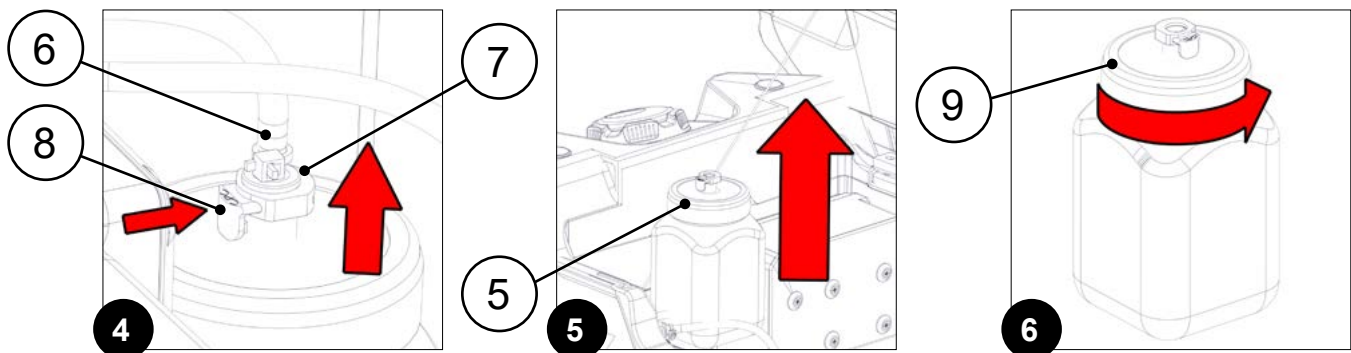
1. Position yourself to the side of the machine, grasp the handle (1) and turn the recovery tank (2) to its maintenance position (Fig.1).

⚠ WARNING: to prevent unintentional rotation of the recovery tank, turn it until the rope (3) is fully tensioned (Fig.2).

2. Disconnect the delivery hose (4) from the detergent canister (5) (Fig.3), before removing the male quick coupling (6) from the female quick coupling (7) remember to press the locking lever (8)(Fig.4).



3. Remove the detergent canister (5) from the machine (Fig.5).
4. Remove the detergent tank cap (9) (Fig.6).



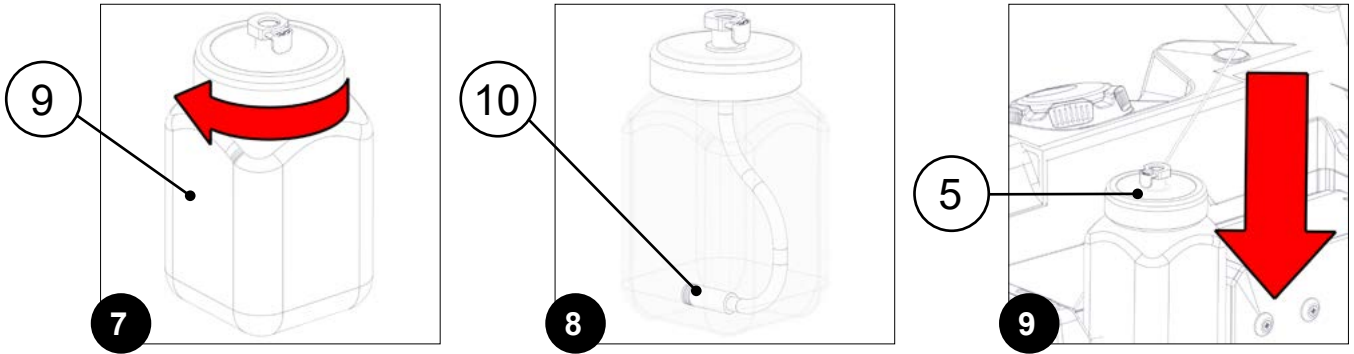
5. Clean the inside of the canister.
6. Clean the suction filter (10) with a stream of running water and then with a damp cloth (Fig.8).

7. Close the cap (5) correctly to prevent liquid leaking out when working (**Fig.7**).

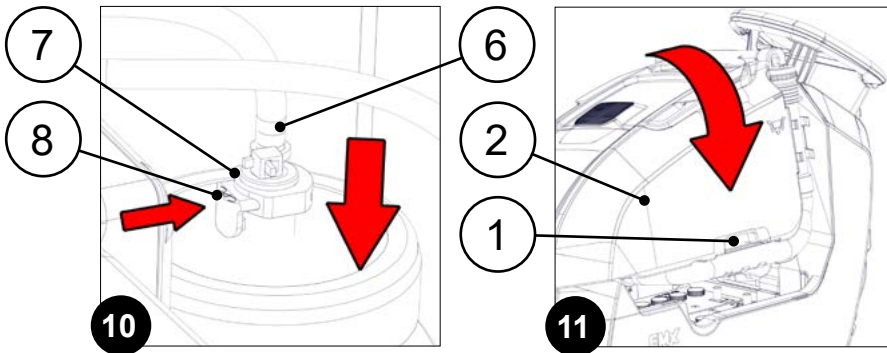
⚠ WARNING: Take care that the filter (10) in the suction pipe is correctly placed in the bottom of the canister (**Fig.8**).

8. Place the detergent canister inside the machine.

9. Connect the delivery hose (4) to the detergent canister (5) (**Fig.9**), before inserting the male quick coupling (6) into the female quick coupling (8) remember to press the locking lever (7) (**Fig.10**).



10. Position yourself to the side of the machine, grasp the handle (1) and turn the recovery tank (2) to its working position (**Fig.11**).



EXTRAORDINARY MAINTENANCE WORK

Before carrying out any extraordinary maintenance operations, proceed as follows:

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.

2. Make sure the machine is in a safe condition, 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.

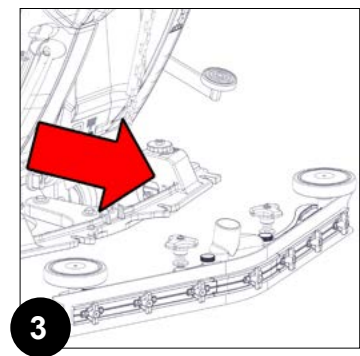
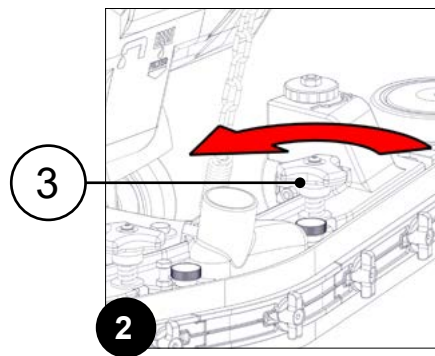
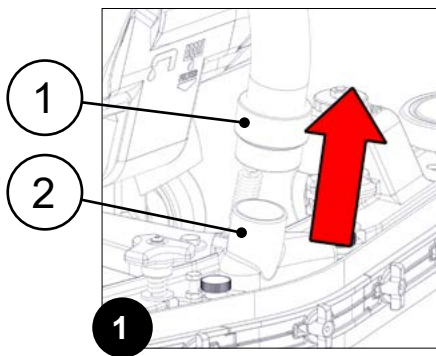
REPLACING THE SQUEEGEE RUBBER BLADES

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:

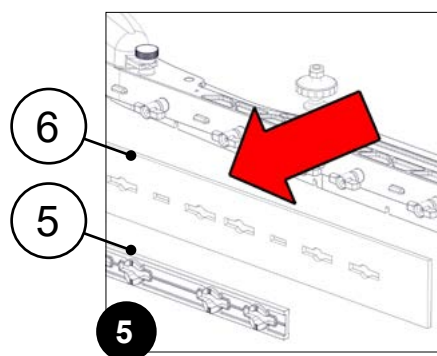
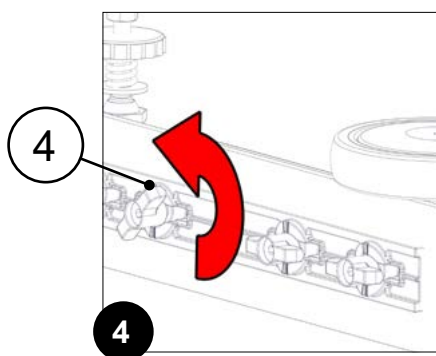
1. Remove the vacuum hose (1) from the sleeve (2) in the squeegee (**Fig.1**).
2. Unscrew the knobs (3) in the squeegee pre-assembly (**Fig.2**).
3. Extract the squeegee body the support on the machine (**Fig.3**).

i **N.B.:** it is advised to replace both squeegee rubber blades in order to ensure good results when drying the floor.



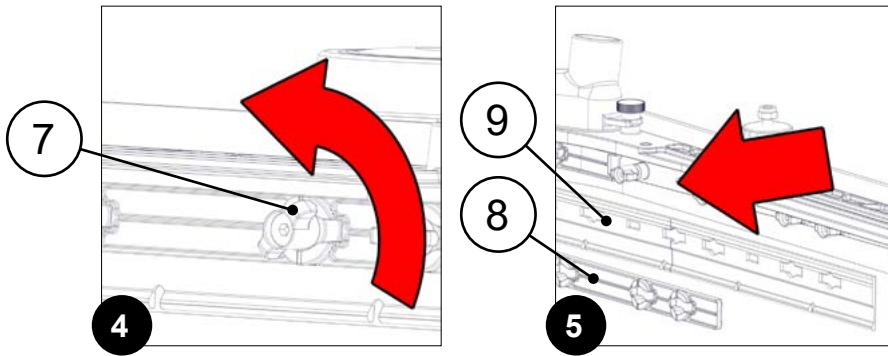
REPLACING REAR RUBBER BLADE

- Turn the knob (4) to the horizontal position (**Fig.4**).
- Remove the rubber blade compression plate (5) and the rear rubber blade (6) from the squeegee (**Fig.5**).
- Replace the worn rear rubber blade with the new one.
- Position the new rear rubber blade (6) in the squeegee and secure it in place using the rubber blade compression plate (5).
- Lock the rubber retaining blade by turning the knobs (4) to the vertical position.



REPLACING FRONT RUBBER BLADE

- Turn the knob (7) to the horizontal position (**Fig.6**).
- Remove the rubber blade compression plate (8) and the front rubber blade (9) from the squeegee (**Fig.7**).
- Replace the worn front rubber blade with the new one.
- Position the new front rubber blade (9) in the squeegee and secure it in place using the rubber blade compression plate (8).
- Lock the rubber retaining blade by turning the knobs (7) to the vertical position.



4. After both squeegee rubber blades have been replaced, attach the squeegee to the squeegee holder in the machine, see [“ASSEMBLING THE SQUEEGEE BODY” on page 53.](#)

i **N.B.:** check the adjustment of the rubber blades in the squeegee, if necessary see [“ADJUSTING THE SQUEEGEE RUBBER BLADES” on page 115.](#)

i **N.B.:** it is advised to replace both squeegee rubber blades in order to ensure good results when drying the floor.

REPLACING BRUSHES OR DRIVE DISCS (DISCOID SCRUBBING VERSION)

Ensuring the brush or the drive disc on the brush head is intact will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance.

To replace the brushes in the brush head, proceed as follows:

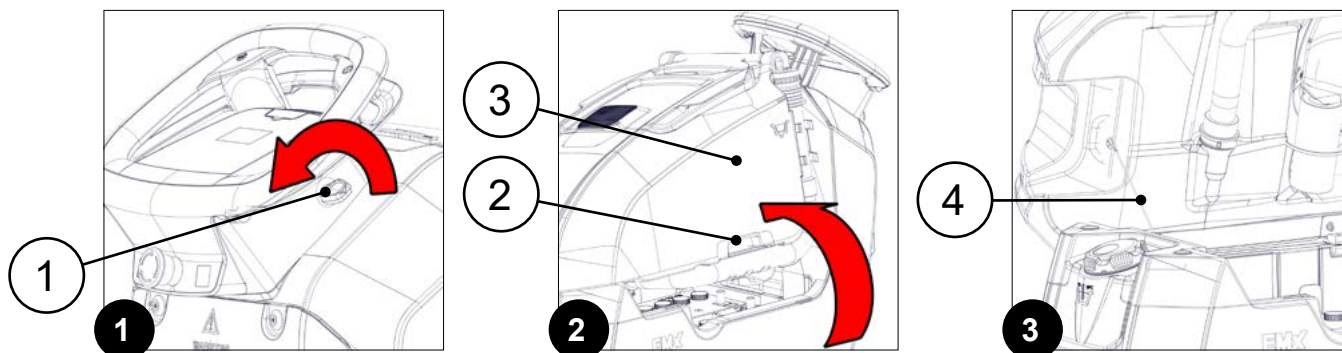
BRUSH REPLACEMENT (VERSIONS WITHOUT THE BRUSH UNCOUPLING FUNCTION)

1. Go to the front of the machine.
2. Rotate the brush anti-clockwise so that it comes out of the brush holder plate seat.
3. After removing the brush or drive disc, replace it with the new one, see [“MOUNTING BRUSHES OR DRIVE DISCS \(DISCOID SCRUBBING VERSION\)” on page 51.](#)

BRUSH REPLACEMENT (VERSIONS WITH THE BRUSH UNCOUPLING FUNCTION)

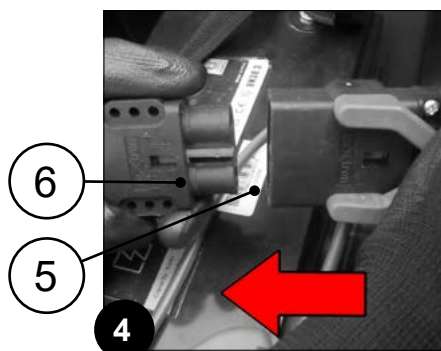
1. Stand at the back of the machine.
2. Check the main switch is on "0". If it isn't, make a quarter turn anti-clockwise with the key (1) (**Fig.1**).
3. Remove the key from the instrument panel.
4. Grasp the handle (2) and turn the recovery tank cover (3) to its maintenance position (**Fig.2**).

⚠ WARNING: to prevent unintentional rotation of the recovery tank, turn it until the rope (4) is fully tensioned (**Fig.3**).



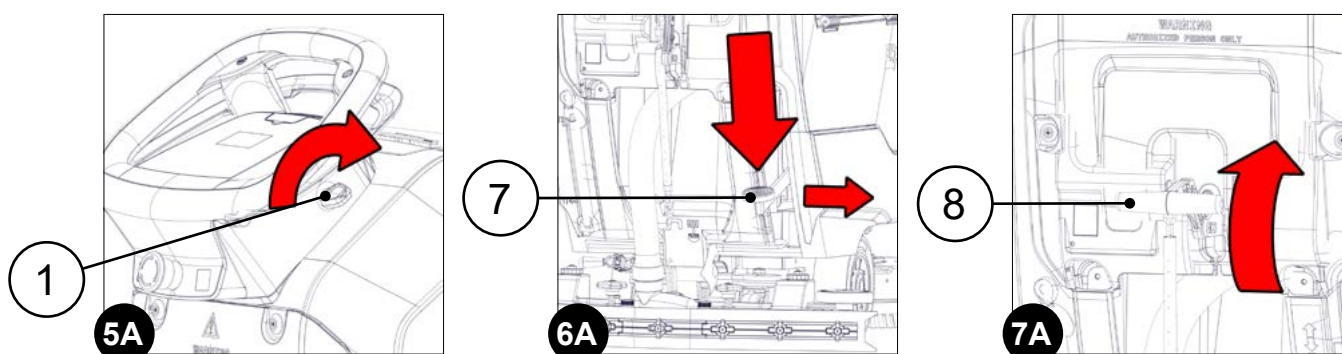
WARNING: the following operations must be carried out by qualified personnel. Incorrect operations could result in machine malfunctions.

5. Check that the connector (5) in the wiring of the machine's electrical system is connected to the connector (6) in the power cable coming from the battery box, otherwise connect it (**Fig.4**).
6. Grip the handle (2) and turn the recovery tank (3) to its working position.

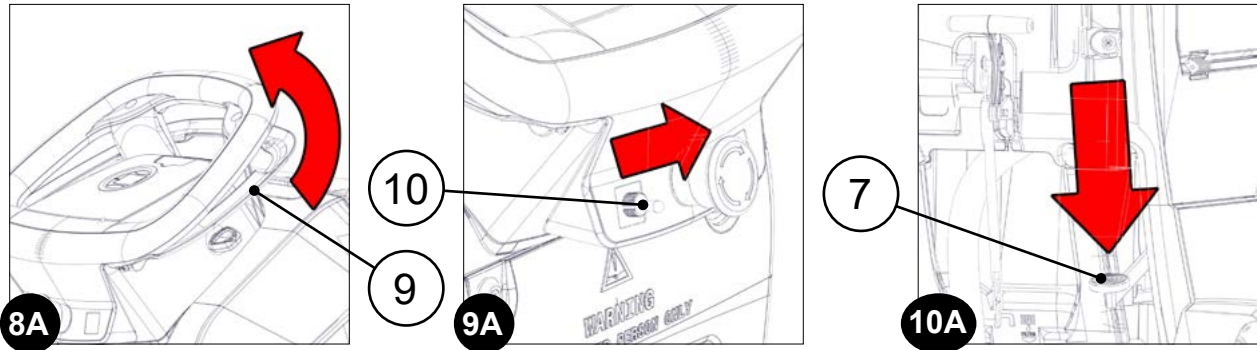


WITH THE BRUSH UNCOUPLING FUNCTION (BASIC VERSIONS)

- Insert the key into the slot on the right side of the control handlebar.
- Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.5A**).
- Move to the working position (in contact with the floor), press the pedal (7) all the way down, move it to the right and release it (**Fig.6A**).
- Move the squeegee body to the rest position (raised off the floor), turn the lever (8) upwards (**Fig.7A**).



- Slightly press the dead man's lever (9) (**Fig.8A**) until the motor in the brush head (brush rotation) is activated.
- Move the lever (10) in the brush uncoupling switch (**Fig.9A**) and at the same time press the brush head control pedal (7) (**Fig.10A**) to lift it off the floor.



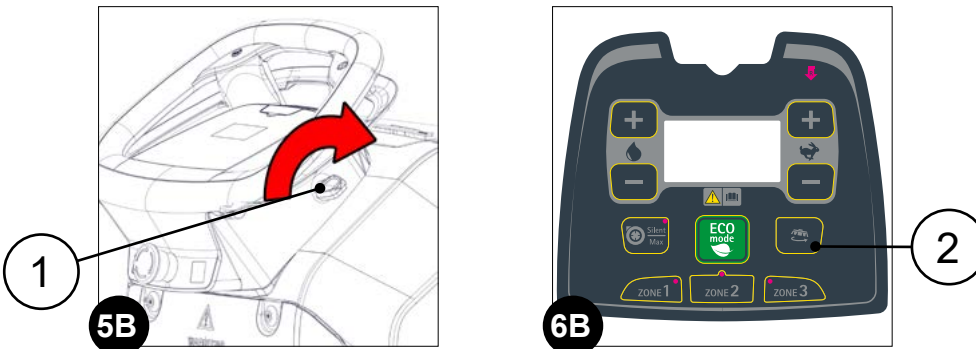
- The machine will automatically perform the BRUSH UNCOUPLING function.

i **N.B.:** once the brush uncoupling 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.

WITH THE BRUSH UNCOUPLING FUNCTION (PRO VERSIONS)

- Insert the key into the slot on the right side of the control handlebar.
- Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.5B**).
- Set the machine to TRANSFER mode, see [“TRANSFER WORKING MODE” on page 60](#).
- Press the BRUSH UNCOUPLING button (2) on the control panel (**Fig.6B**).



- The machine will automatically perform the BRUSH UNCOUPLING function.

i **N.B.:** once the brush uncoupling 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.

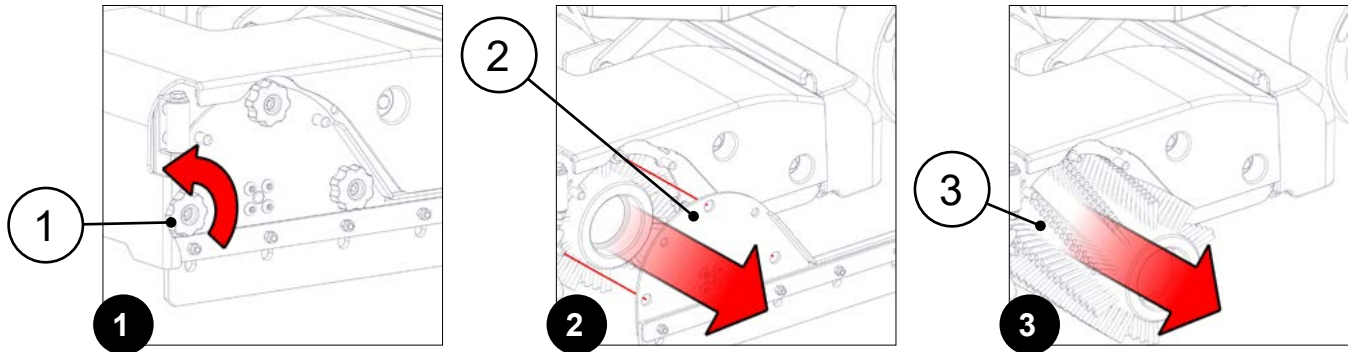
7. Make sure the machine is in a safe condition, see [“MACHINE SAFETY” on page 35](#)).
8. After removing the brush or drive disc, replace it with the new one, see [“MOUNTING BRUSHES OR DRIVE DISCS \(DISCOID SCRUBBING VERSION\)” on page 51](#).

BRUSH REPLACEMENT (CYLINDRICAL SCRUBBING VERSION)

Ensuring the brush or the drive disc on the brush head is intact will ensure better floor cleaning, thus decreasing costs while at the same time improving environmental sustainability and performance.

To replace the brushes in the brush head, proceed as follows:

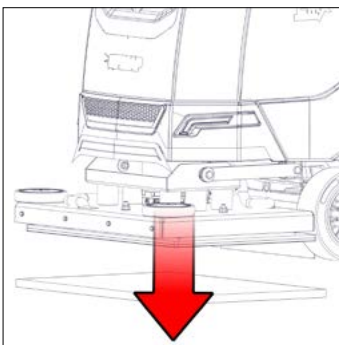
1. Go to the front left-hand side of the machine.
2. Remove the knobs (1) which secure the inspection door (**Fig.1**).
3. Remove the left inspection door (2) from the brush head (**Fig.2**).
4. Extract the front brush (3) from the brush head body (**Fig.3**).



5. Repeat the steps indicated above also for the rear brush. The inspection door is located on the right side of the machine.
6. After removing the brushes, replace them with new ones, see [“FITTING BRUSHES \(CYLINDRICAL SCRUBBING VERSION\)”](#) on page 52.

REPLACING ABRASIVE PAD (ORBITAL VERSIONS)

Full integrity of the abrasive pad ensures better floor cleaning thereby increasing cost savings and an increase in environmental eco-sustainability.



To carry out the cleaning of the abrasive pad, perform the following:

1. Go to the front of the machine.
2. Remove the abrasive pad from the brush head support.
3. After removing the abrasive pad, replace it with the new one, see [“ASSEMBLING THE ABRASIVE PAD \(ORBITAL VERSIONS\)”](#) on page 53.

REPLACING SUCTION MOTOR OUTLET AIR FILTER (HEPA VERSION)



The accurate integrity of the Hepa filter air outlet ensures proper filtration of fine particulate matter in the air that is fed back from the machine (air at the suction motor outlet).

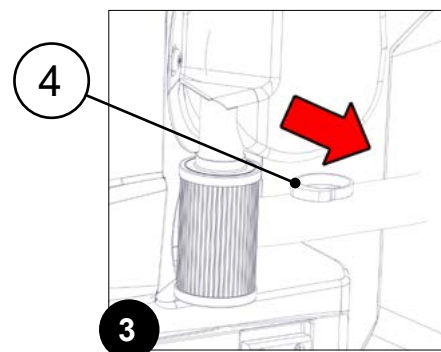
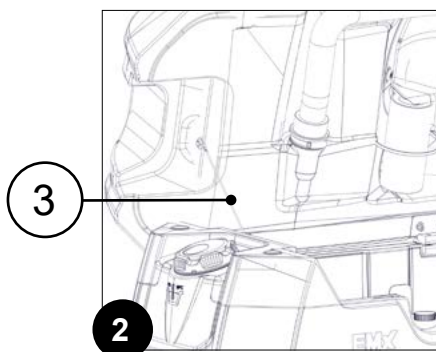
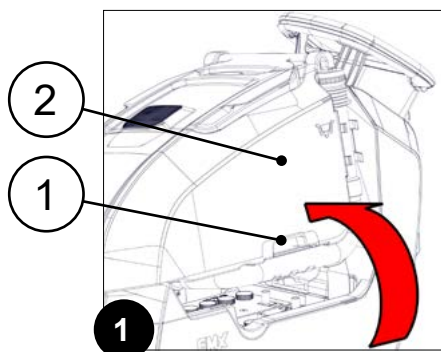
To replace the suction motor outlet air filter:

1. Grasp the handle (1) and turn the recovery tank cover (2) to its maintenance position (**Fig.1**).

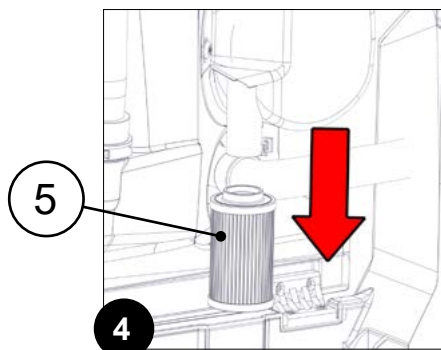


WARNING: to prevent unintentional rotation of the recovery tank, turn it until the rope (3) is fully tensioned (**Fig.2**).

2. Remove the snap-on collar (6) that fastens the filter to its holder (**Fig.5**).



3. Remove the filter (5) from its holder (**Fig.4**) and replace it.
4. Repeat the operations in reverse order to reassemble all the parts.



ADJUSTMENT INTERVENTIONS

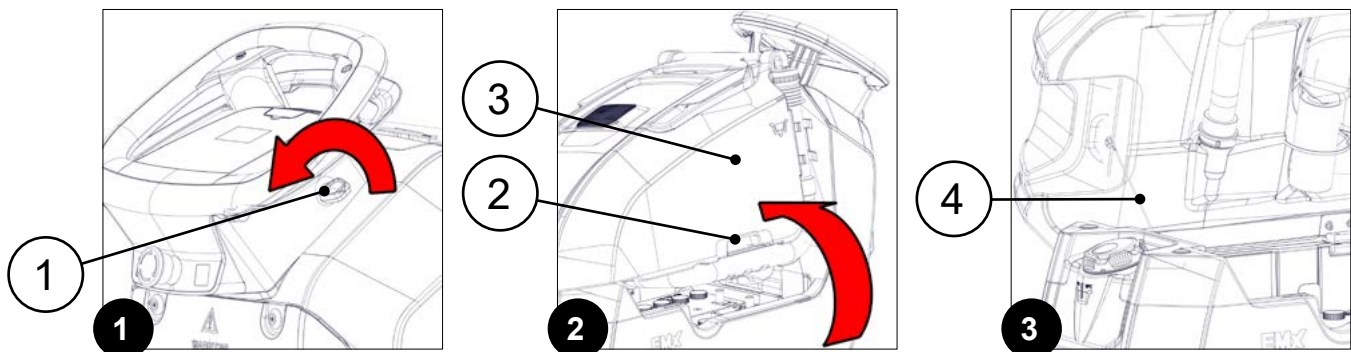
ADJUSTING THE SQUEEGEE RUBBER BLADES

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 blades, proceed as follows:

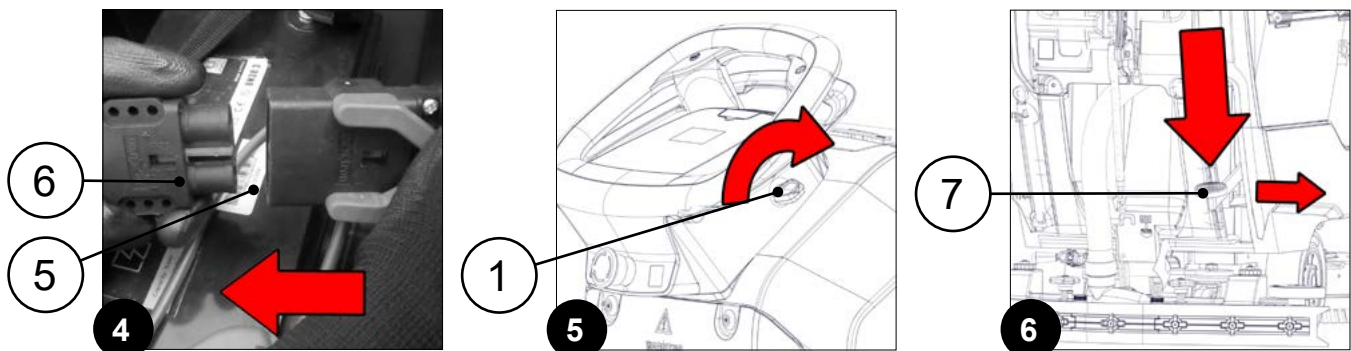
1. Check the main switch is on "0". If it isn't, make a quarter turn anti-clockwise with the key (1) (**Fig.1**).
2. Remove the key from the instrument panel.
3. Grasp the handle (2) and turn the recovery tank cover (3) to its maintenance position (**Fig.2**).

WARNING: to prevent unintentional rotation of the recovery tank, turn it until the rope (4) is fully tensioned (**Fig.3**).

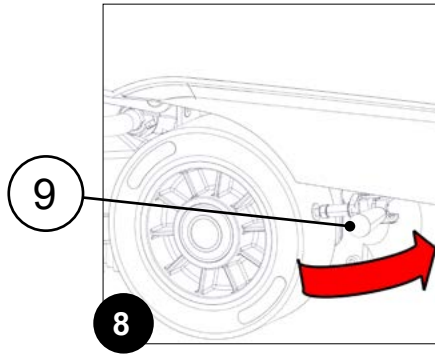
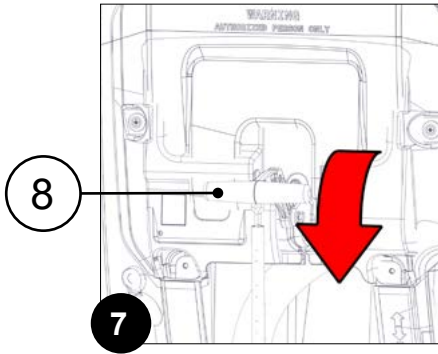


WARNING: the following operations must be carried out by qualified personnel. Incorrect operations could result in machine malfunctions.

4. Check that the connector (5) in the wiring of the machine's electrical system is connected to the connector (6) in the power cable coming from the battery box, otherwise connect it (**Fig.4**).
5. Grasp the handle (6) and turn the recovery tank (6) to its maintenance position.
6. Insert the key (1) into the slot on the right side of the control handlebar.
7. Turn on the machine and turn the key (1) a quarter turn clockwise (**Fig.5**).
8. For PRO versions, when the control display is turned on, screens appear in sequence, the last of which contains the machine programming characteristics.
9. Move to the working position (in contact with the floor), press the pedal (7) all the way down, move it to the right and release it (**Fig.6**).



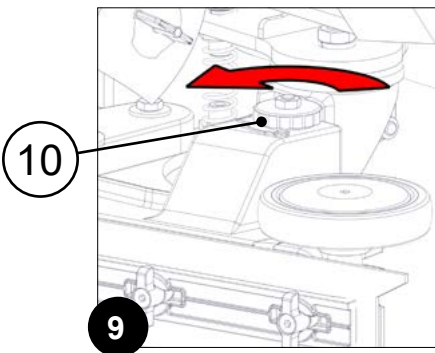
10. Bring the squeegee body into the working position (in contact with the floor), turn the lever (12) downwards (**Fig.11**).
11. Set the parking brake to the rest position, turn the lever (13) anti-clockwise (**Fig.12**).
12. The machine is now in scrubber working mode.



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.

ADJUSTING THE SQUEEGEE HEIGHT



• Adjust the height of the rubber blade in relation to the floor by loosening or tightening the knobs (10) (Fig.9).



N.B.: Fig.9 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.



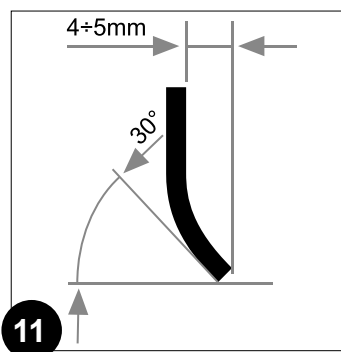
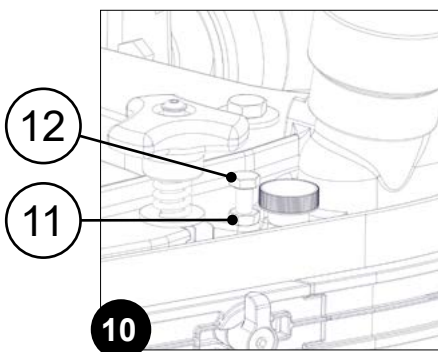
N.B.: By decreasing the distance between the squeegee support and the floor, the rubber blades present in the squeegee move closer to the floor.



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.

ADJUSTING THE SQUEEGEE INCLINATION

- Using the appropriate tools, not included along with the machine, loosen the retainer nut (11) of the squeegee tilt angle adjustment screw (12) (Fig.10).
- To adjust the inclination of the squeegee rubber blades with respect to the floor, tighten or loosen the screw (12) until the squeegee body rubber blades are bent towards the outside evenly along the entire length (they must be tilted by about 30° with respect to the floor (Fig.11)).



- Once the adjustment has been completed, tighten the lock nut (11).

ADJUSTING BRUSH HEAD SPLASH GUARD RUBBER BLADES (CYLINDRICAL SCRUBBING VERSION)

Careful adjustment of the splash guard rubber blades in the scrubbing brush head with cylindrical brush, ensures better cleaning of the floor thereby increasing cost savings and an increase in environmental eco-sustainability.

To regulate the squeegee rubber blades, proceed as follows:

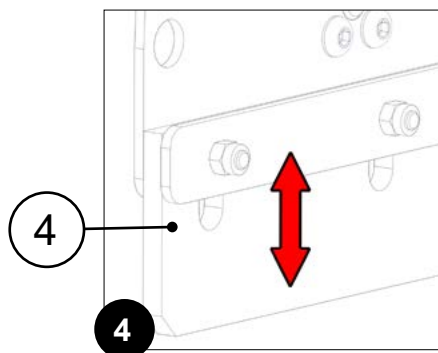
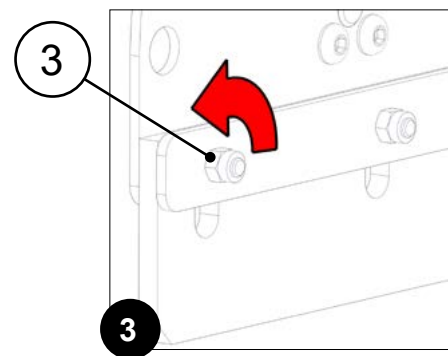
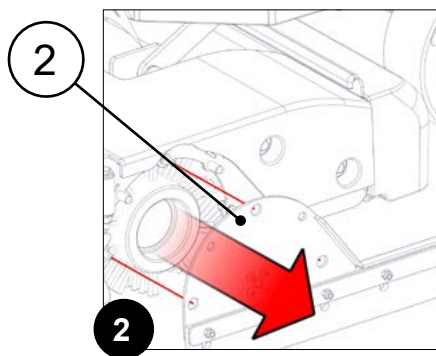
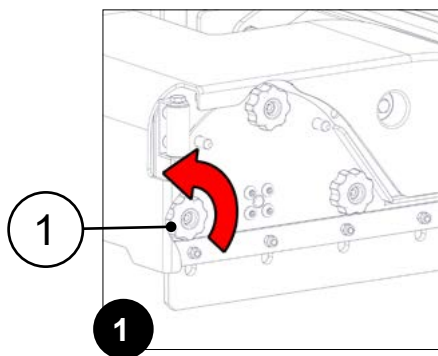
1. Take the machine to the maintenance area.

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

2. Make sure the machine is in a safe condition, see [“MACHINE SAFETY” on page 35.](#)

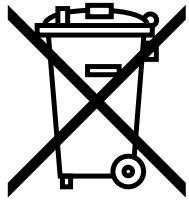
CAUTION: it is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Go to the front left-hand side of the machine.
4. Remove the knobs (1) which secure the inspection door (**Fig.1**).
5. Remove the left inspection door (2) from the brush head (**Fig.2**).
6. Using the appropriate tool, not included with the machine packaging, loosen the retaining nut (3) (**Fig.3**).



7. Make the height adjustment of the splash guard rubber blade (4) in relation to the floor (**Fig.4**), raise or lower the rubber blades until they are level and aligned with the floor.
8. Once the adjustment has been completed, tighten the lock nut (3).
9. Repeat the steps indicated above also for the rear brush. The inspection door is located on the right side of the machine.
10. To refit, repeat the operations for removal but in the reverse order.

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, FIMAP offers the RECYCLING MANUAL (which can be downloaded from the link <https://www.fimap.com/it/fimap/sostenibilita/75/riciclabilita.html>), in order to provide some simple information on how to dispose 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 are generally made of plastic, as this is a material that ensures higher levels of reliability, in that it does not become damaged when wet.

i 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 type of brushes for scrubbing machines can be chosen according to the material the bristles are made of; the most common bristle materials are as follows:

POLYPROPYLENE (PPL)	NYLON (PA)	TYNEX
Synthetic polymer	Synthetic polymer	Very durable abrasive material
Bristles with varying level of abrasion and thickness (0.3÷1.5 mm)	Can be used as an alternative to PPL	Can be used for deep cleaning on industrial surfaces
Can be used on any type of flooring		
Can be used for routine or deep cleaning		

UNION MIX	STEEL
Compound based on natural products	Suitable for industrial floors with stubborn dirt
Can be used for polishing and scrubbing activities	Alternative to Tynex
Resistant to very high temperatures	
Subject to rapid wear, shorter life than the PPL version	
Must be used with non-aggressive detergents	
Suitable for flooring types such as: marble; granite; porphyry cobbles; terracotta	
Not suitable for cleaning heavy soiling	

As an alternative to brushes, drive discs can be used. They consist of the rigid brush body without the bristles, which are replaced by pads.

PADS
Ideal for both regular and non-routine cleaning
Perfect for porcelain floors; tuff or microporous surfaces
Ideal for resin floors; cement floors; polishing operations
Not suitable for uneven floors with joints

PAD colour according to the work to be done

COLOUR	TYPE OF WORK
White	The white abrasive pad, is ideal for dry polishing of unprotected floors with standard speed machines, Also suitable for spray cleaning operations. They improve shine without scratching or damaging protected pavements.
Yellow/white	The yellow/white abrasive pad restores shine to dulled floors in a single pass. They optimize the action of high-speed machinery on a wide range of finishes, minimizing the effect of abrasion.
Brown	The brown abrasive pad is suitable for both dry de-waxing of protected floors and wet de-waxing with a standard chemical de-waxer. The open weave structure of these washable and reusable discs prevents clogging and material build-up. The combination of highly adaptable, individually separated and coated fibres promotes maximum contact between disc and floor, ensuring excellent cleaning results at low cost.
Black	The black abrasive pad is suitable for total wet de-waxing of hard surfaces with de-waxing chemicals and standard speed machines. The open weave structure of these washable and reusable discs prevents clogging and material build-up. The even distribution of the mineral abrasives over the entire disc, and not only on the surface, guarantees outstanding performance and a long product life. The combination of highly adaptable, individually separated and coated fibres promotes maximum contact between disc and floor, ensuring excellent cleaning results at low cost.
Ochre	The ochre-coloured abrasive pad is designed to reduce imperfections on damaged marble and resilient surfaces.
Red	The red abrasive pad is designed for spray cleaning and regular maintenance operations on protected surfaces. These discs exert a cleaning action when wet and an abrasive action when used dry. The open weave structure of these washable and reusable discs prevents clogging and material build-up. The even distribution of the mineral abrasives over the entire disc, and not only on the surface, guarantees outstanding performance and a long product life. The combination of highly adaptable, individually separated and coated fibres promotes maximum contact between disc and floor, ensuring excellent cleaning results at low cost. For use with standard-speed or high-speed machines.
Green	The green abrasive pad is suitable for partial wet debinding of unprotected hard surfaces. They can also be used to prepare hard surfaces before re-waxing and to completely de-wax flooring such as lino or vinyl. The open weave structure of these washable and reusable discs prevents clogging and material build-up. The combination of highly adaptable, individually separated and coated fibres promotes maximum contact between disc and floor, ensuring excellent cleaning results at low cost.
Burgundy	The burgundy-coloured abrasive pad is suitable for quick abrasive action to prepare a variety of surfaces for application of finishes.

BRUSHES OR DRIVE DISCS (DISCOID SCRUBBING VERSION)

Legend: \varnothing_E = external bristle diameter; \varnothing_F = external tank diameter (brush body)



Disc brush



Pad holder

EMX 43 B; EMX 43 BT; EMX PRO 43 BT

CODE	QTY	\varnothing EXTERNAL	TYPE OF BRISTLE	\varnothing BRISTLES	NOTES
452403	1	430mm	PPL	0.3mm	BLUE DISCOID BRUSH ($\varnothing_E=430\text{mm}$ $\varnothing_F=410\text{mm}$)
452404	1	430mm	PPL	0.6mm	WHITE DISCOID BRUSH ($\varnothing_E=430\text{mm}$ $\varnothing_F=410\text{mm}$)
452405	1	430mm	PPL	0.9mm	BLACK DISCOID BRUSH ($\varnothing_E=430\text{mm}$ $\varnothing_F=410\text{mm}$)
452406	1	430mm	TYNEX	1mm	DISCOID BRUSH ($\varnothing_E=430\text{mm}$ $\varnothing_F=410\text{mm}$)
452407	1	430mm	TAMPICO		DISCOID BRUSH ($\varnothing_E=430\text{mm}$ $\varnothing_F=410\text{mm}$)
452414	1	410 mm	-	-	DRIVE DISC $\varnothing_E=410\text{mm}$ (410575 - CENTER LOCK H=20 GREEN SCREW)

EMX 50 E; EMX 50 B; EMX 50 BT; EMX PRO 50 BT

CODE	QTY	\varnothing EXTERNAL	TYPE OF BRISTLE	\varnothing BRISTLES	NOTES
404654	1		PPL	0.3mm	LIGHT BLUE DISCOID BRUSH ($\varnothing_E=508\text{mm}$ $\varnothing_F=495\text{mm}$)
405631	1		PPL	0.6mm	WHITE DISCOID BRUSH ($\varnothing_E=508\text{mm}$ $\varnothing_F=495\text{mm}$)
404653	1		PPL	0.9mm	BLACK DISCOID BRUSH ($\varnothing_E=508\text{mm}$ $\varnothing_F=495\text{mm}$)
405632	1		TYNEX	1mm	DISCOID BRUSH ($\varnothing_E=508\text{mm}$ $\varnothing_F=495\text{mm}$)
449908	1		TAMPICO		DISCOID BRUSH ($\varnothing_E=508\text{mm}$ $\varnothing_F=495\text{mm}$)
405527	1		-	-	DRIVE DISC $\varnothing_E=495\text{mm}$ (495575 - CENTER LOCK H=20 GREEN SCREW)

BRUSHES OR DRIVE DISCS (CYLINDRICAL SCRUBBING VERSION)

Legend: \varnothing_E = external bristle diameter; \varnothing_F = external tank diameter (brush body); L_E = maximum brush width (bristle reference); L_F = maximum brush width (tank reference);

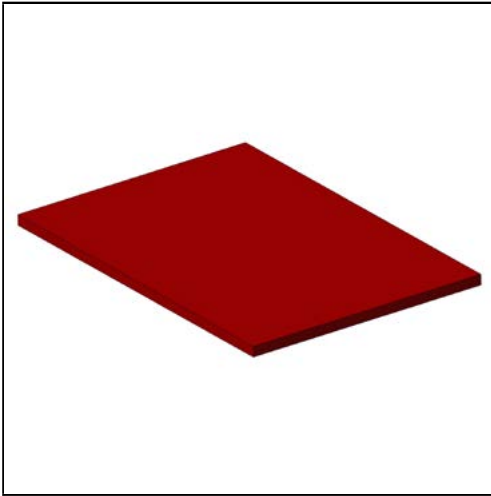


EMX PRO 50 BTS

CODE	QTY	\varnothing EXTERNAL	TYPE OF BRISTLE	\varnothing BRISTLES	NOTES
458991	2	150mm	PPL	0.3	LIGHT BLUE CYLINDRICAL BRUSH ($\varnothing_E=150\text{mm}$ $\varnothing_F=90\text{mm}$ $L_E=455\text{mm}$ $L_F=506\text{mm}$)
458992	2	150mm	PPL	0.6	WHITE CYLINDRICAL BRUSH ($\varnothing_E=150\text{mm}$ $\varnothing_F=90\text{mm}$ $L_E=455\text{mm}$ $L_F=506\text{mm}$)
458993	2	150mm	PPL	0.9	BLACK CYLINDRICAL BRUSH ($\varnothing_E=150\text{mm}$ $\varnothing_F=90\text{mm}$ $L_E=455\text{mm}$ $L_F=506\text{mm}$)
458994	2	150mm	TYNEX		
458995	2	150mm	TAMPICO		

ABRASIVE PADS (ORBITAL VERSIONS)

Legend: L= maximum width of the abrasive pad; P= maximum depth of the abrasive pad (measurements refer to the working direction of the machine)



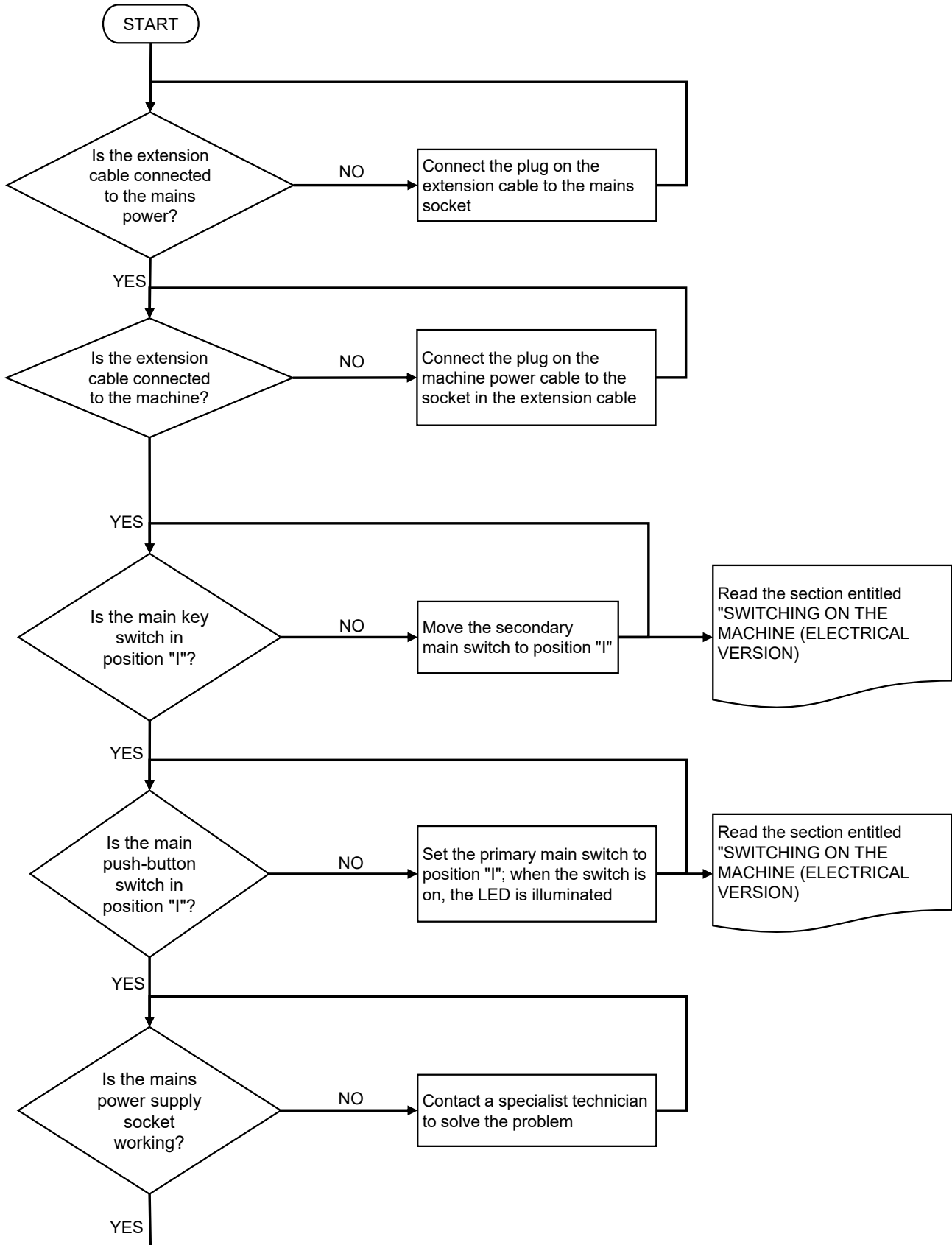
Rectangular Abrasive Pad

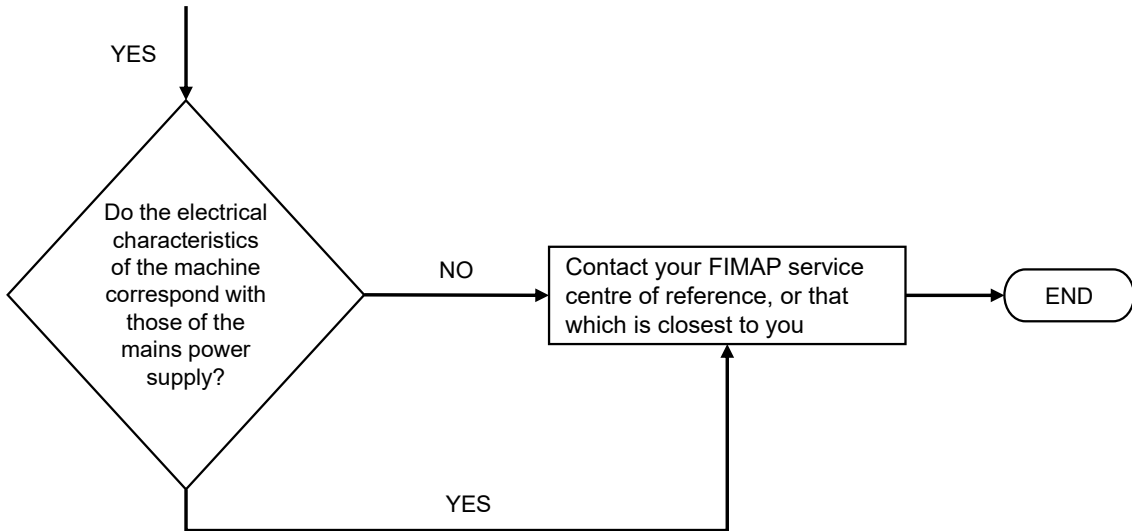
EMX PRO 50 BTO

CODE	QTY	WIDTH (L)	DEPTH (P)	COLOUR	NOTES
442005	1	508	355	RED	
442661	1	508	355	GREEN	
442662	1	508	355	BLACK	
443711	1	508	355	WHITE	
443712	1	508	355	BROWN	

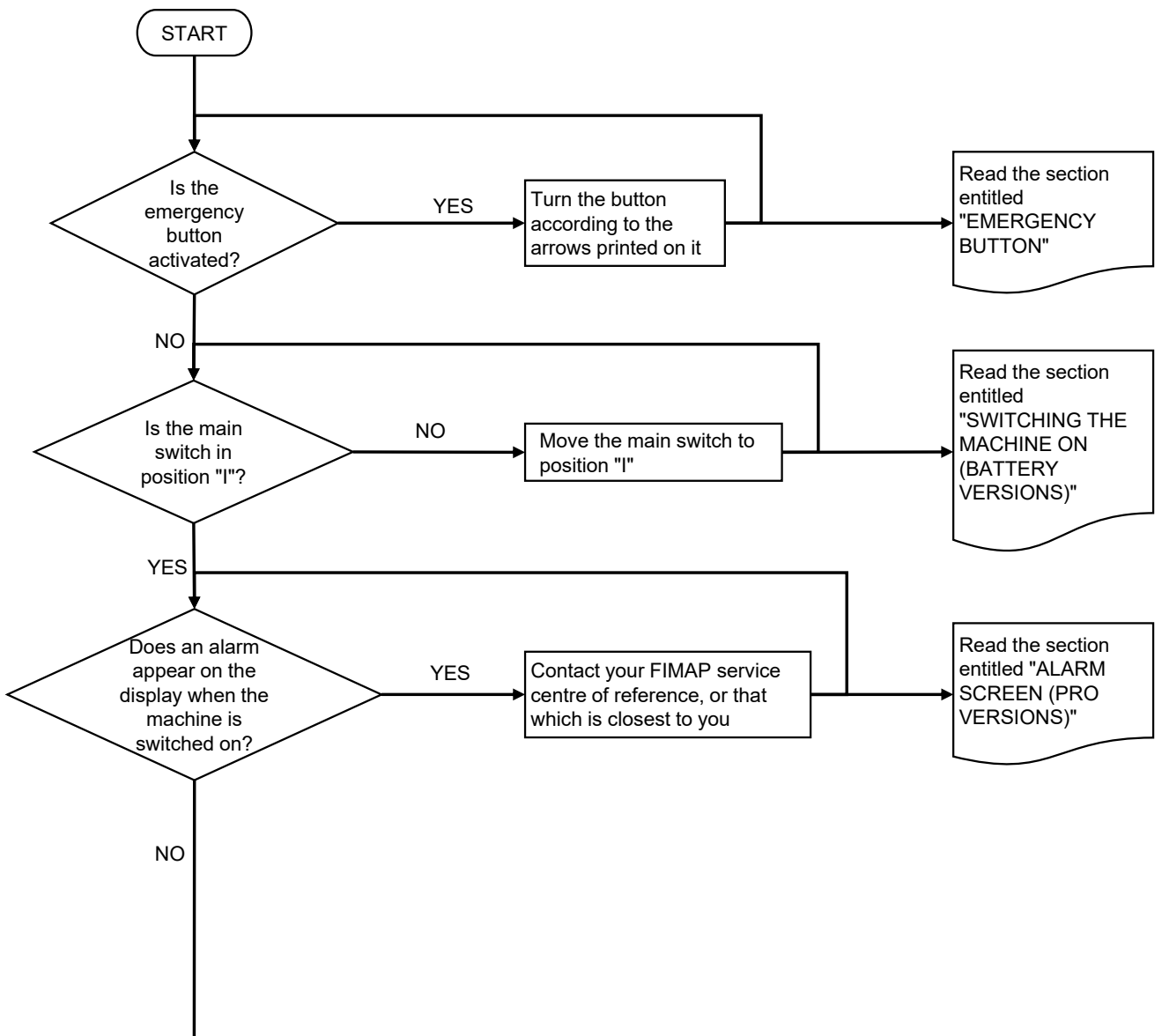
TROUBLESHOOTING

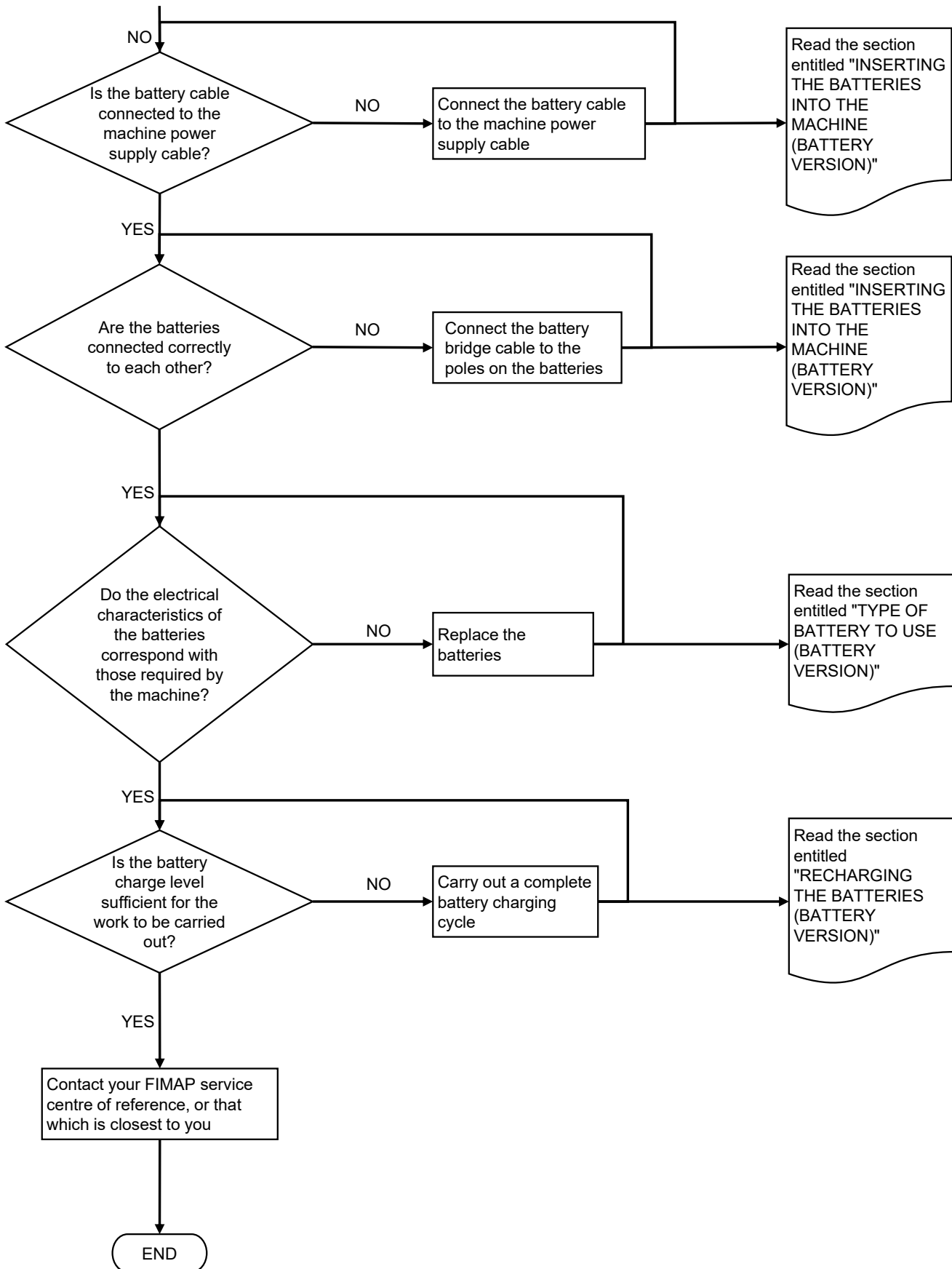
MACHINE DOES NOT START (ELECTRIC VERSION)



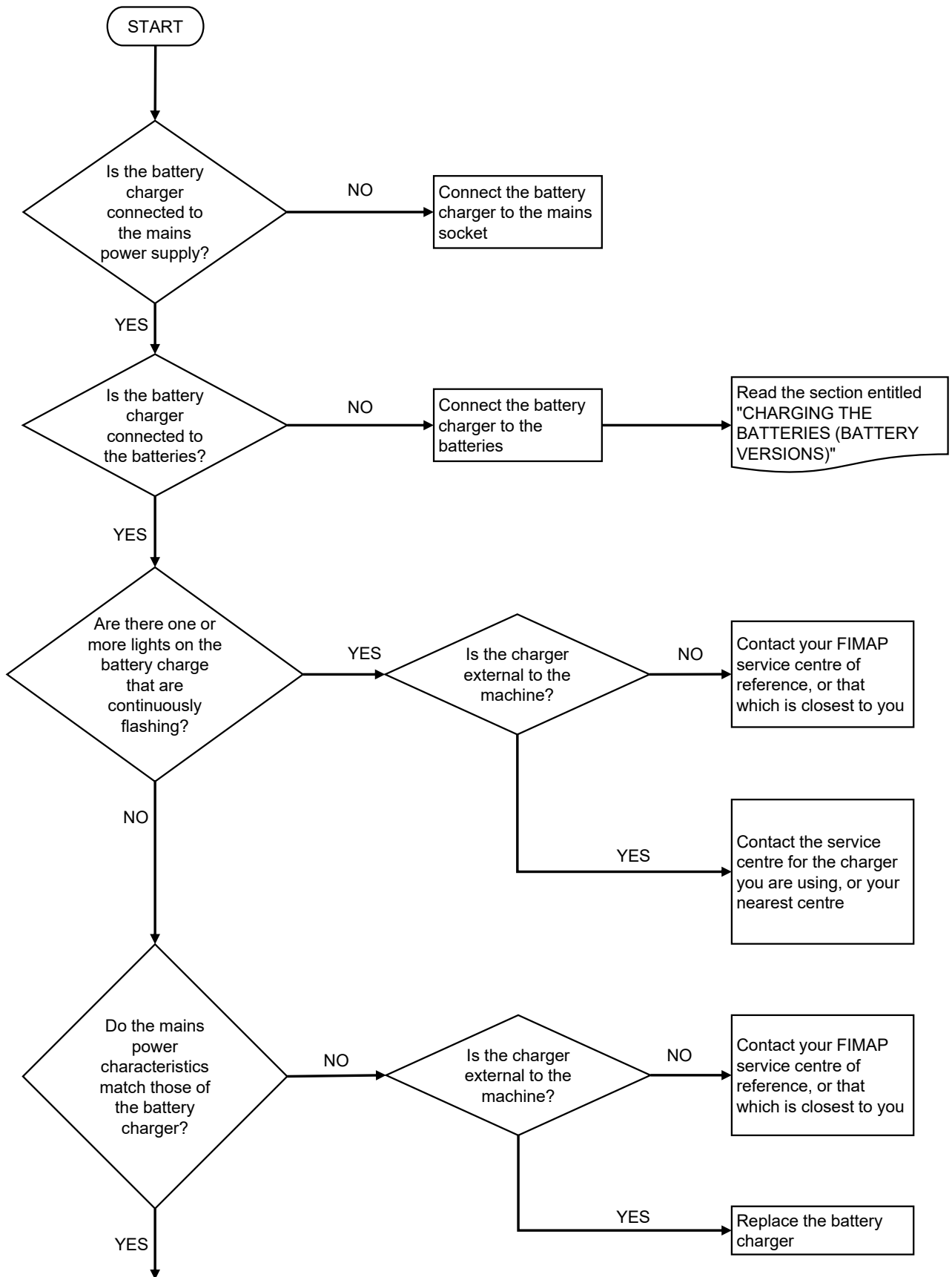


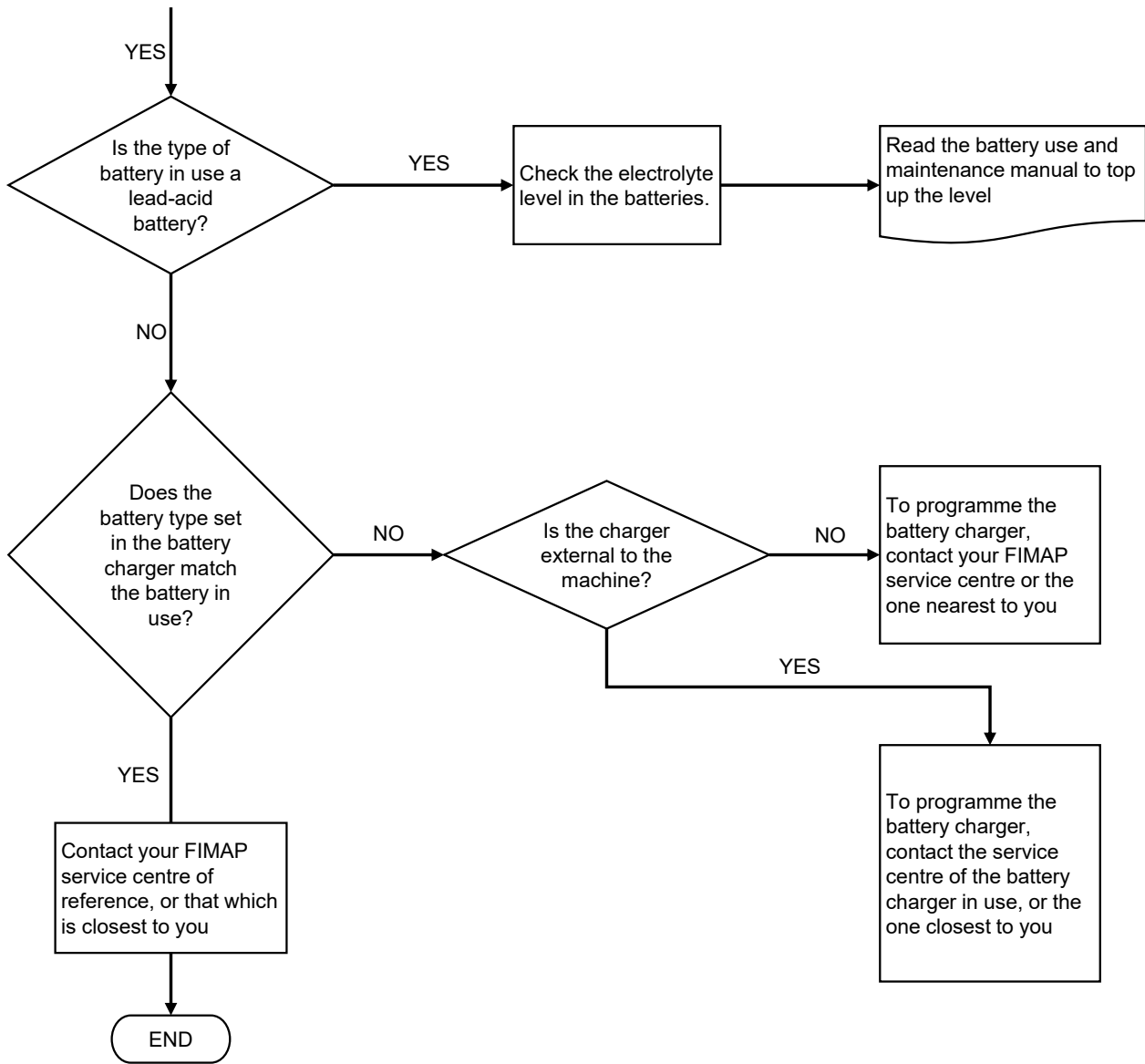
MACHINE DOES NOT START (BATTERY-POWERED VERSION)



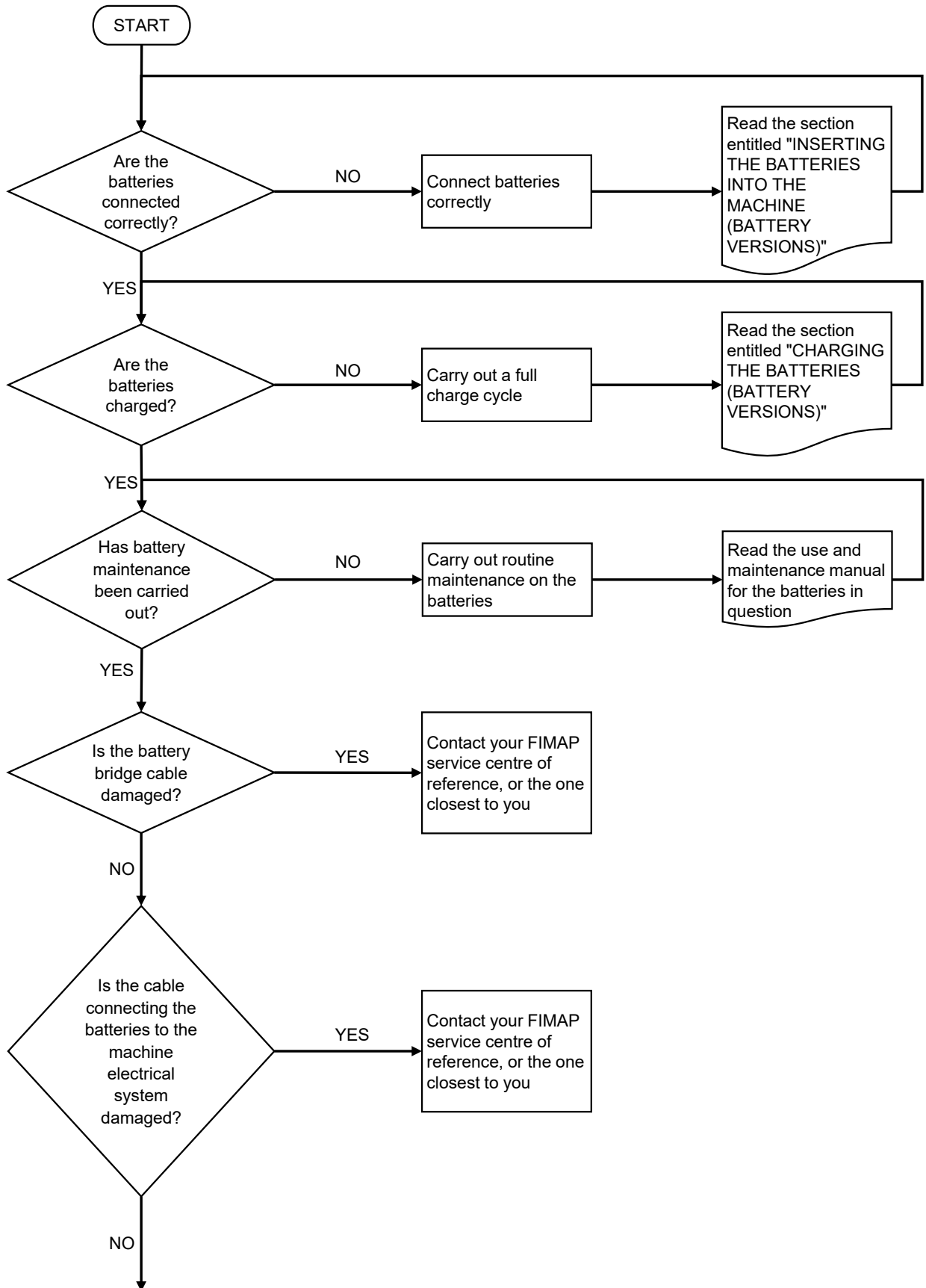


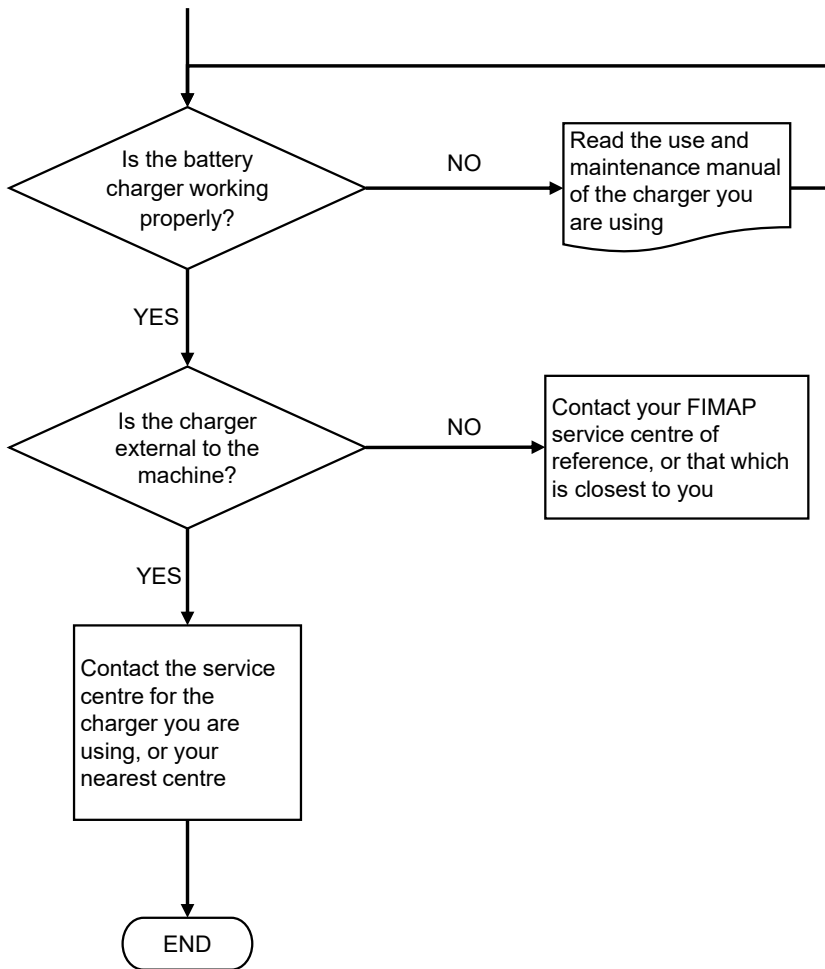
THE BATTERIES ARE NOT FULLY CHARGED (BATTERY-POWERED VERSION)



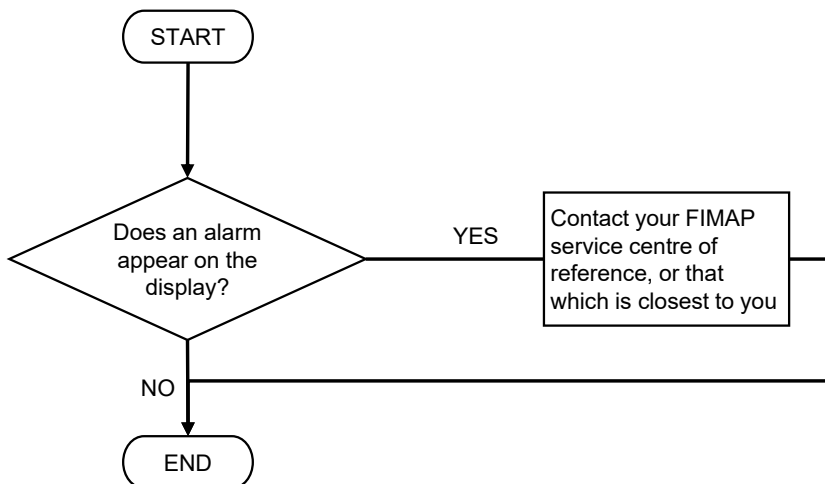


BATTERIES DO NOT FUNCTION PROPERLY (BATTERY-POWERED VERSION)

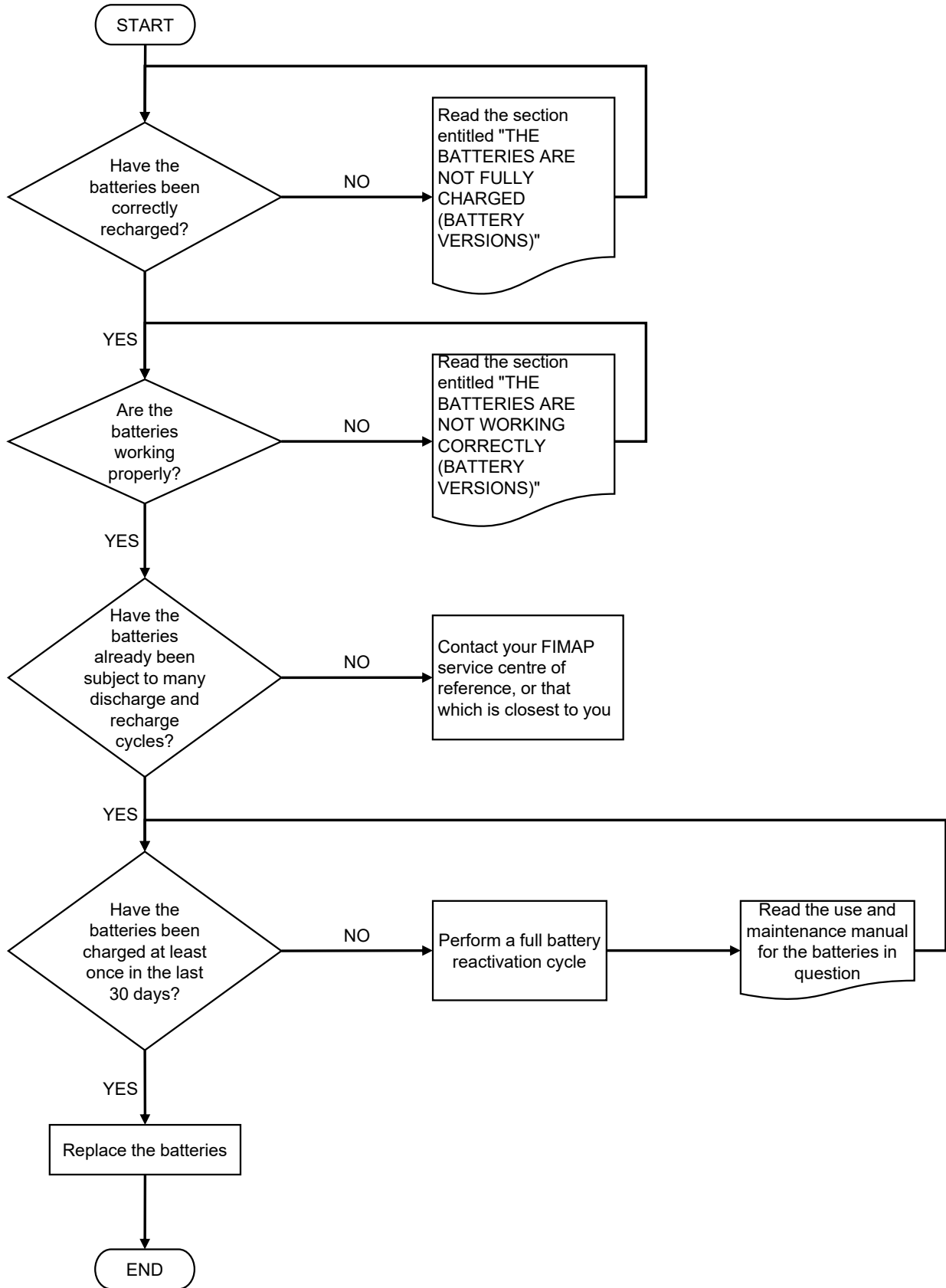




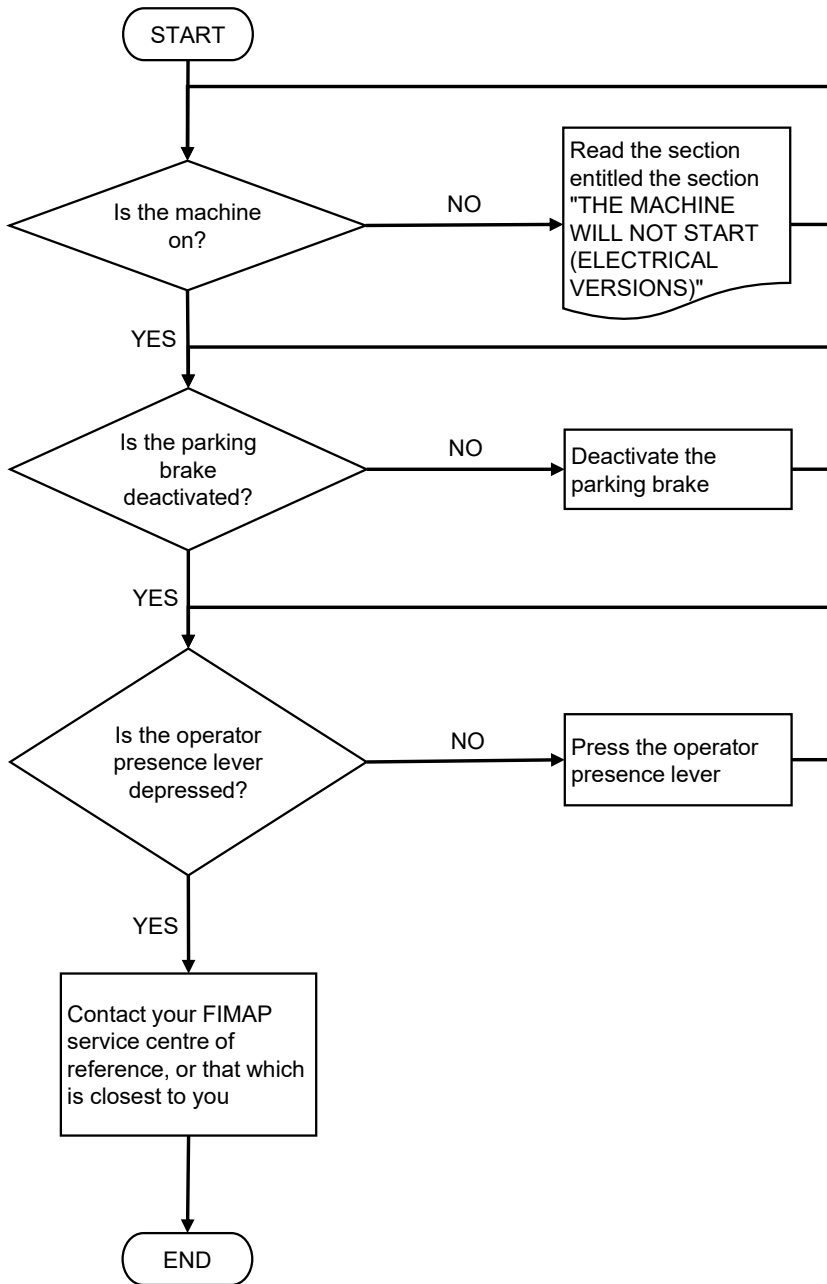
AN ERROR APPEARS IN THE CONTROL DISPLAY (BATTERY-POWERED VERSION PRO)



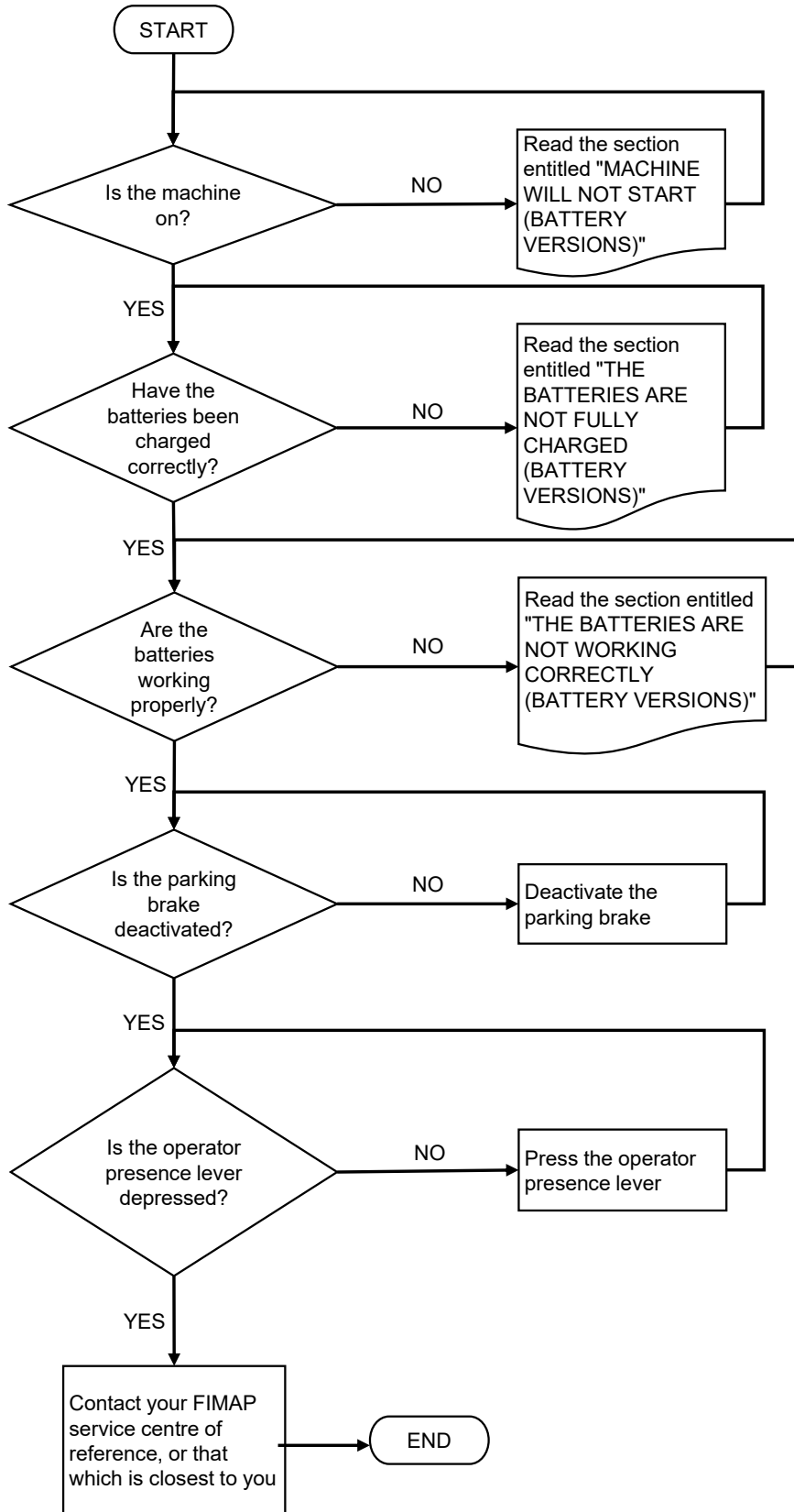
VERY LOW WORKING RANGE (BATTERY-POWERED VERSION)



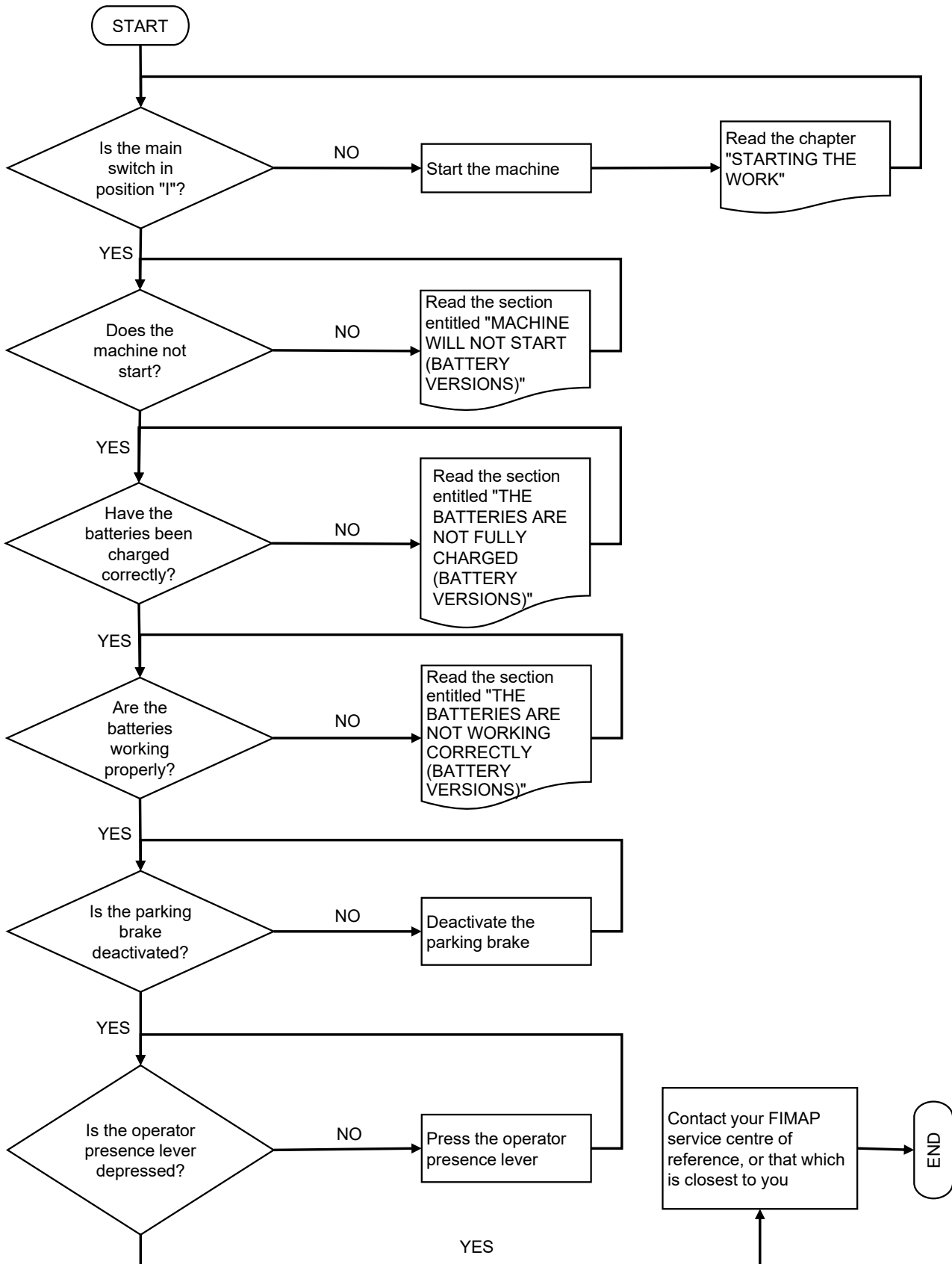
MACHINE DOES NOT MOVE (ELECTRIC VERSION)



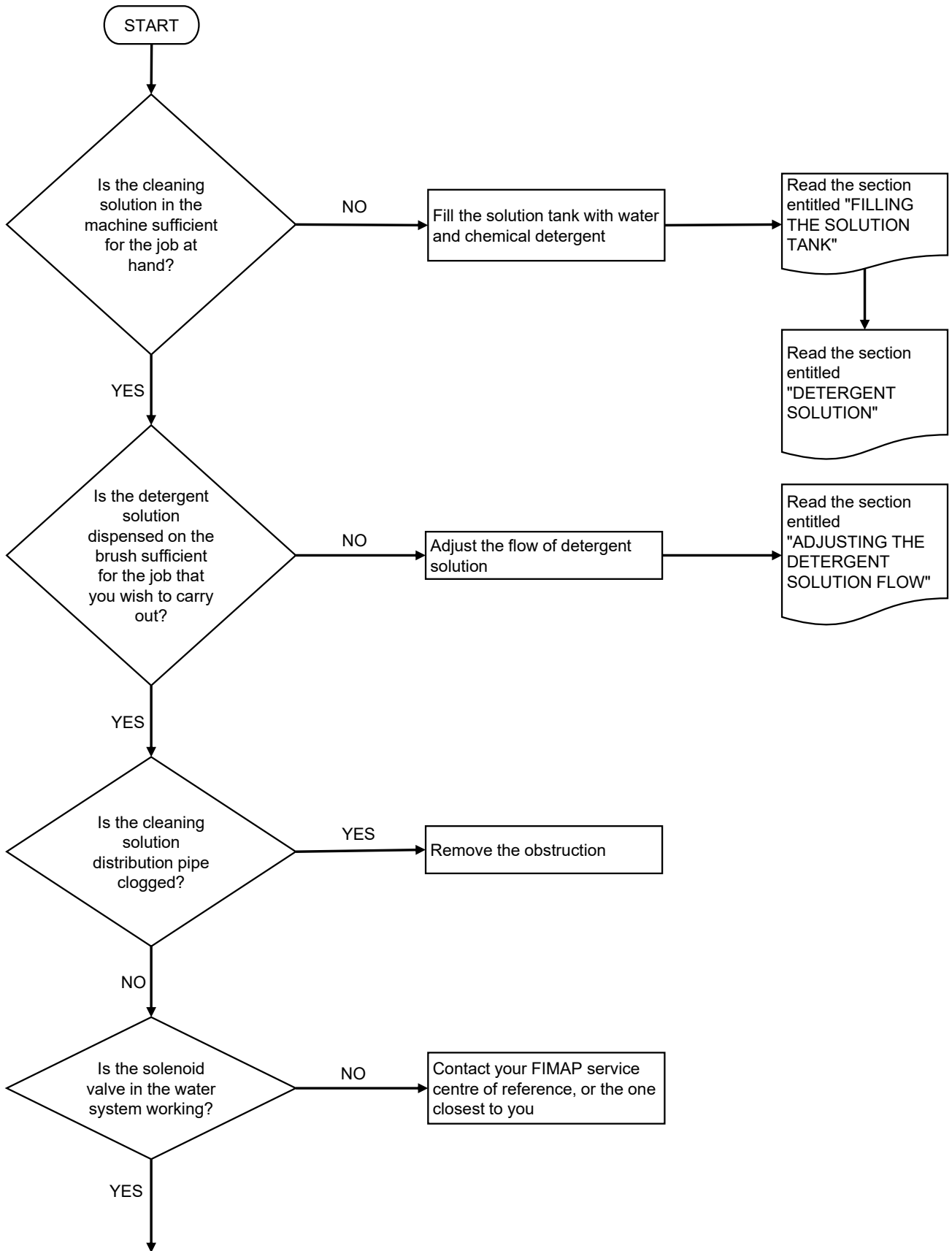
MACHINE DOES NOT MOVE (BATTERY-POWERED BASIC VERSION)

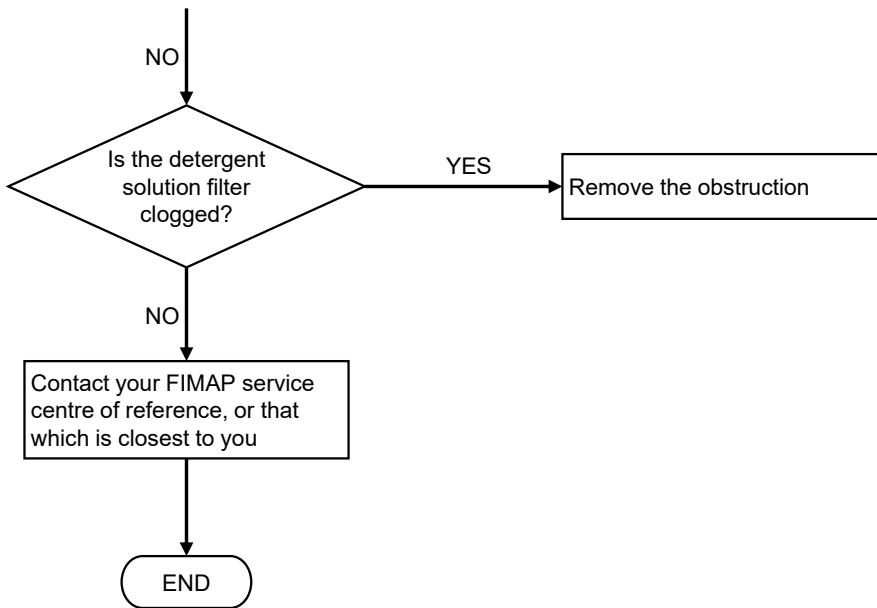


MACHINE DOES NOT MOVE (BATTERY-POWERED PRO VERSION)

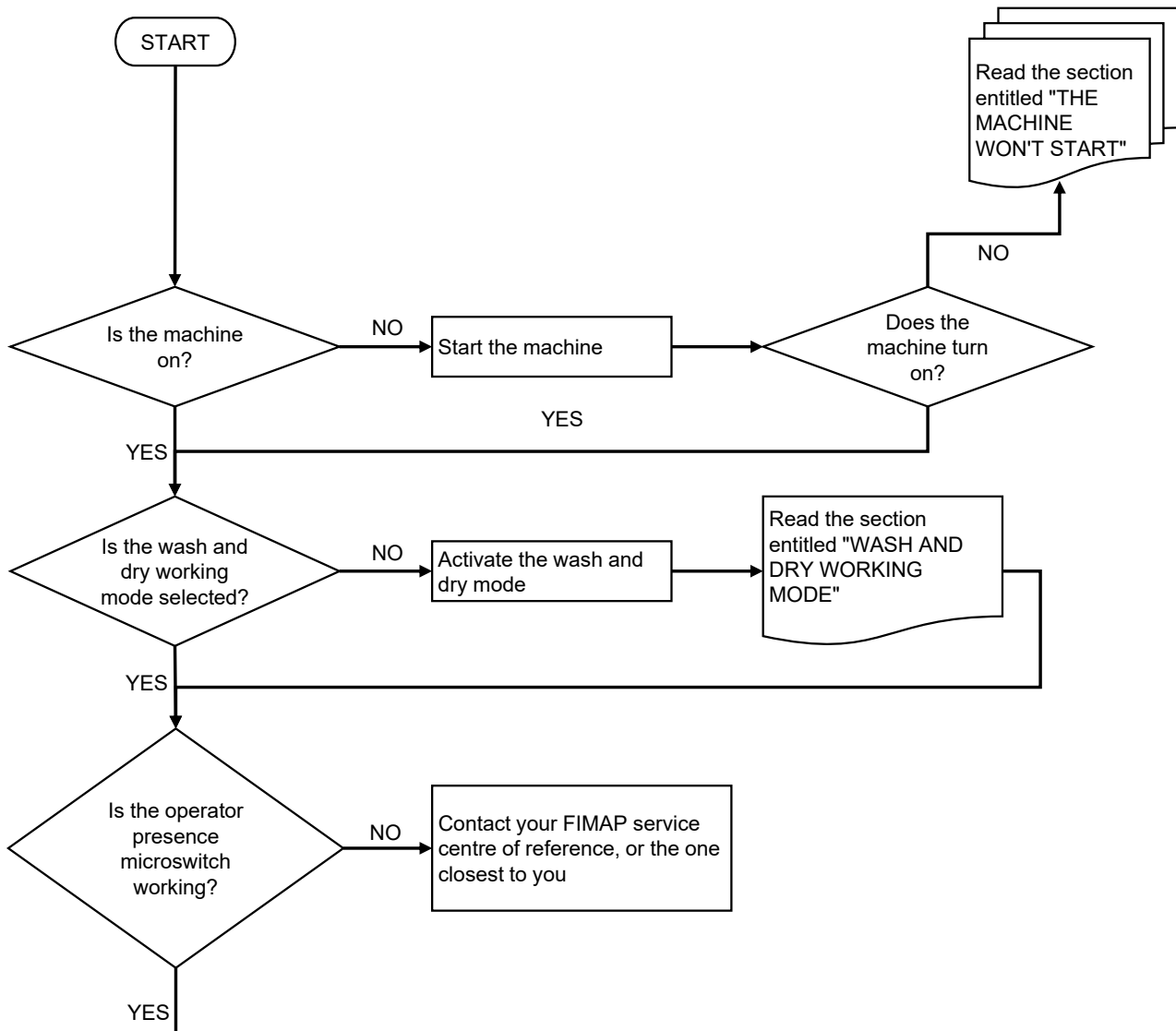


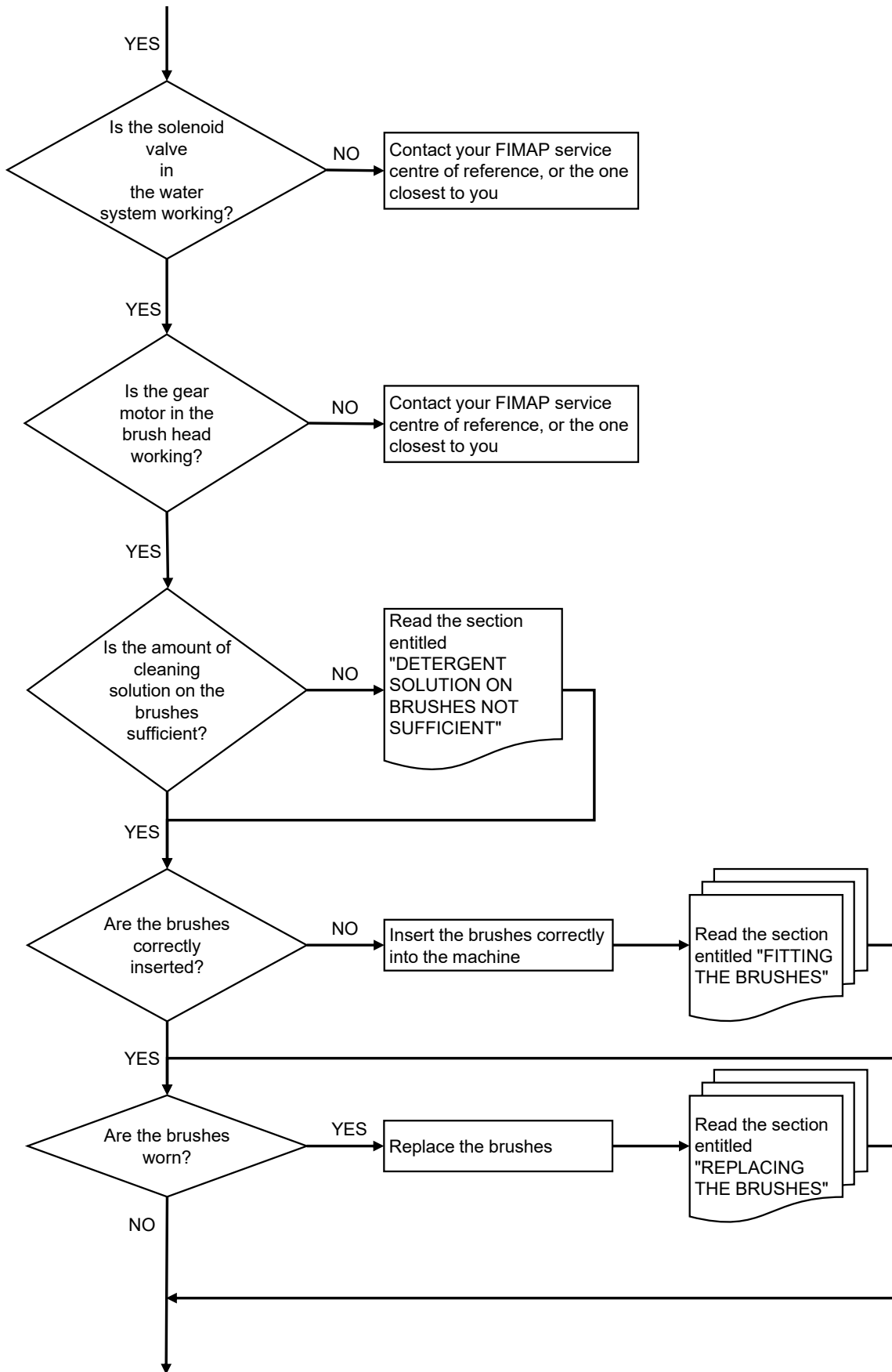
INSUFFICIENT DETERGENT SOLUTION ON THE BRUSHES

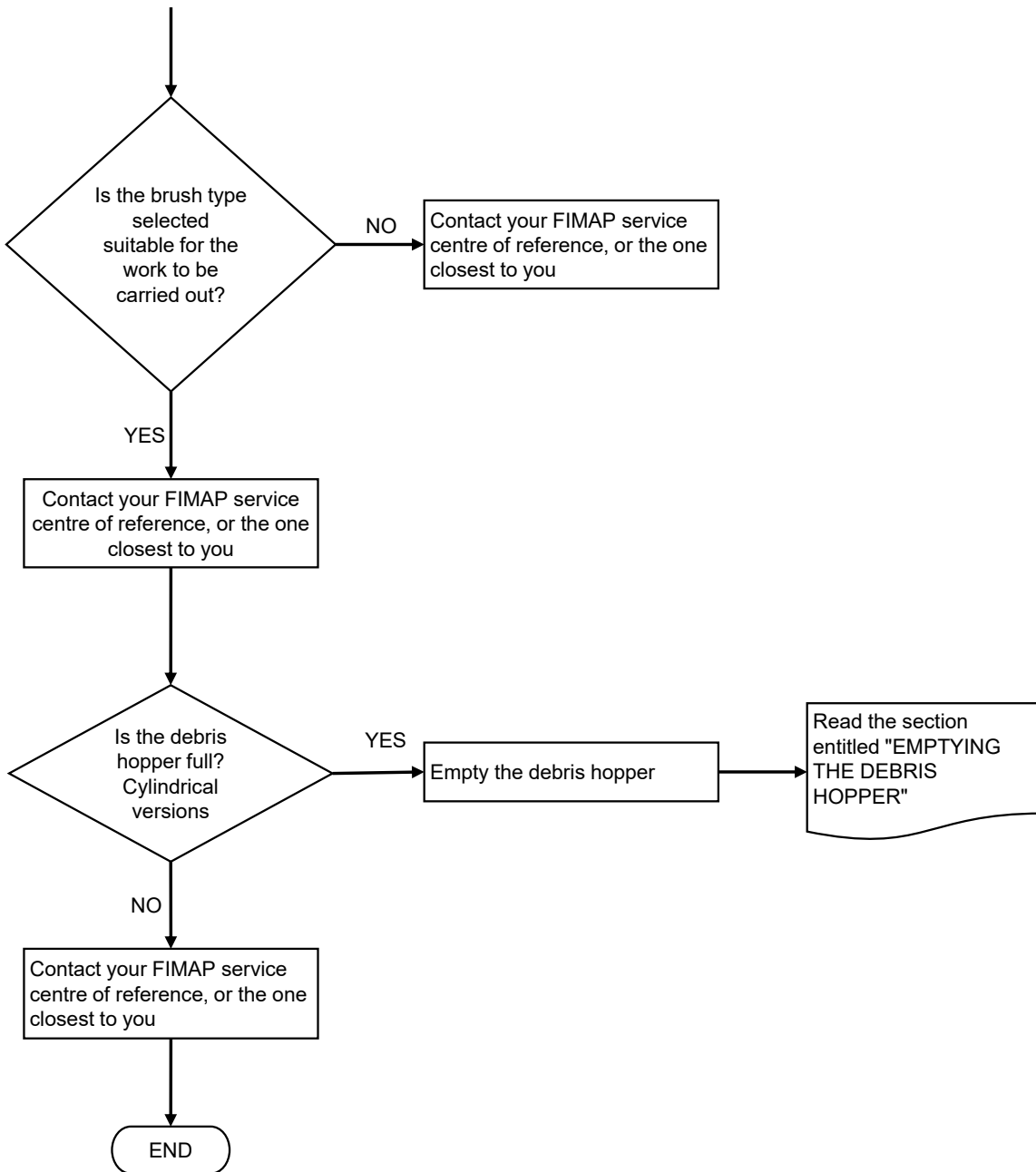




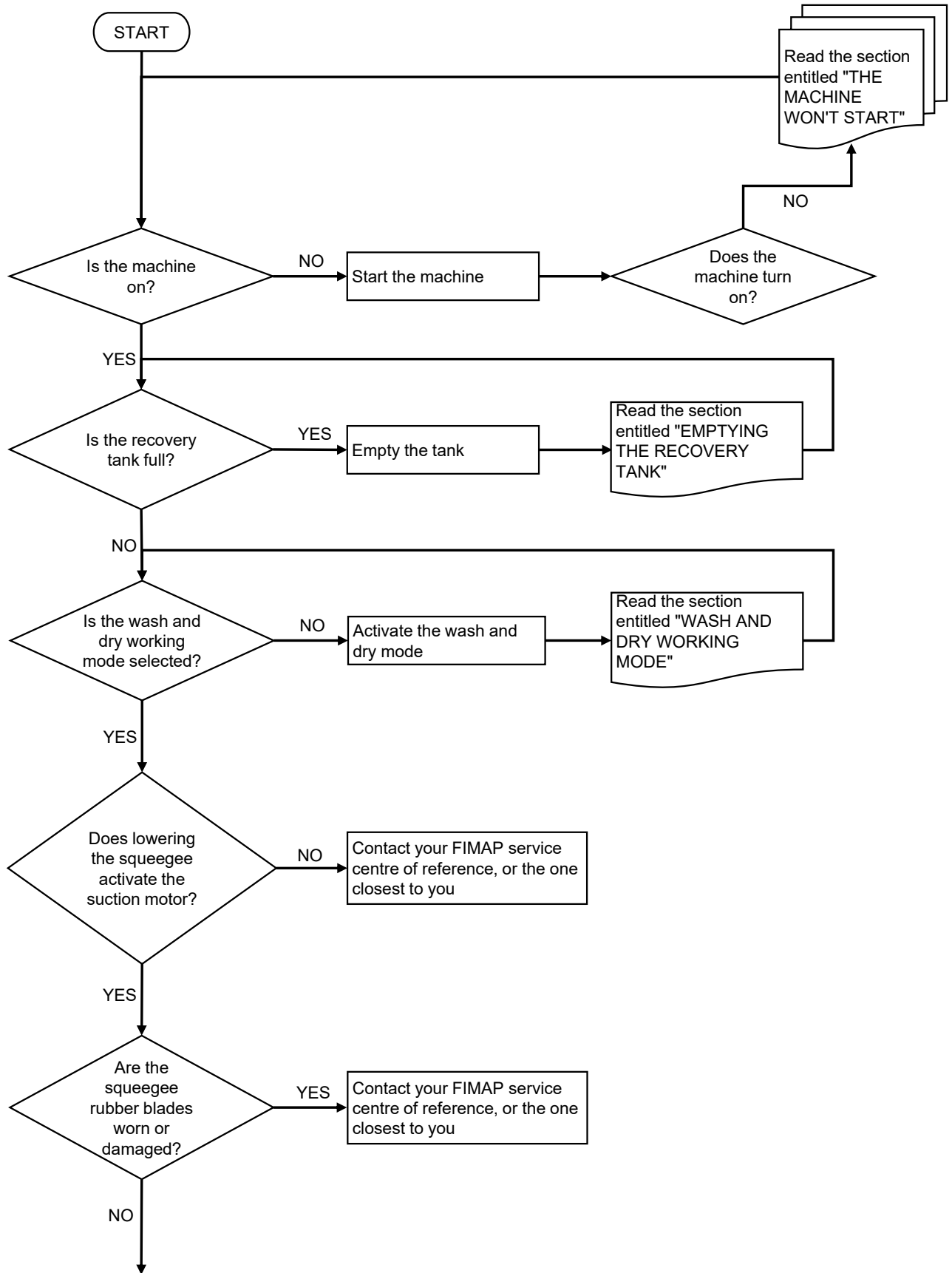
THE MACHINE DOES NOT CLEAN CORRECTLY

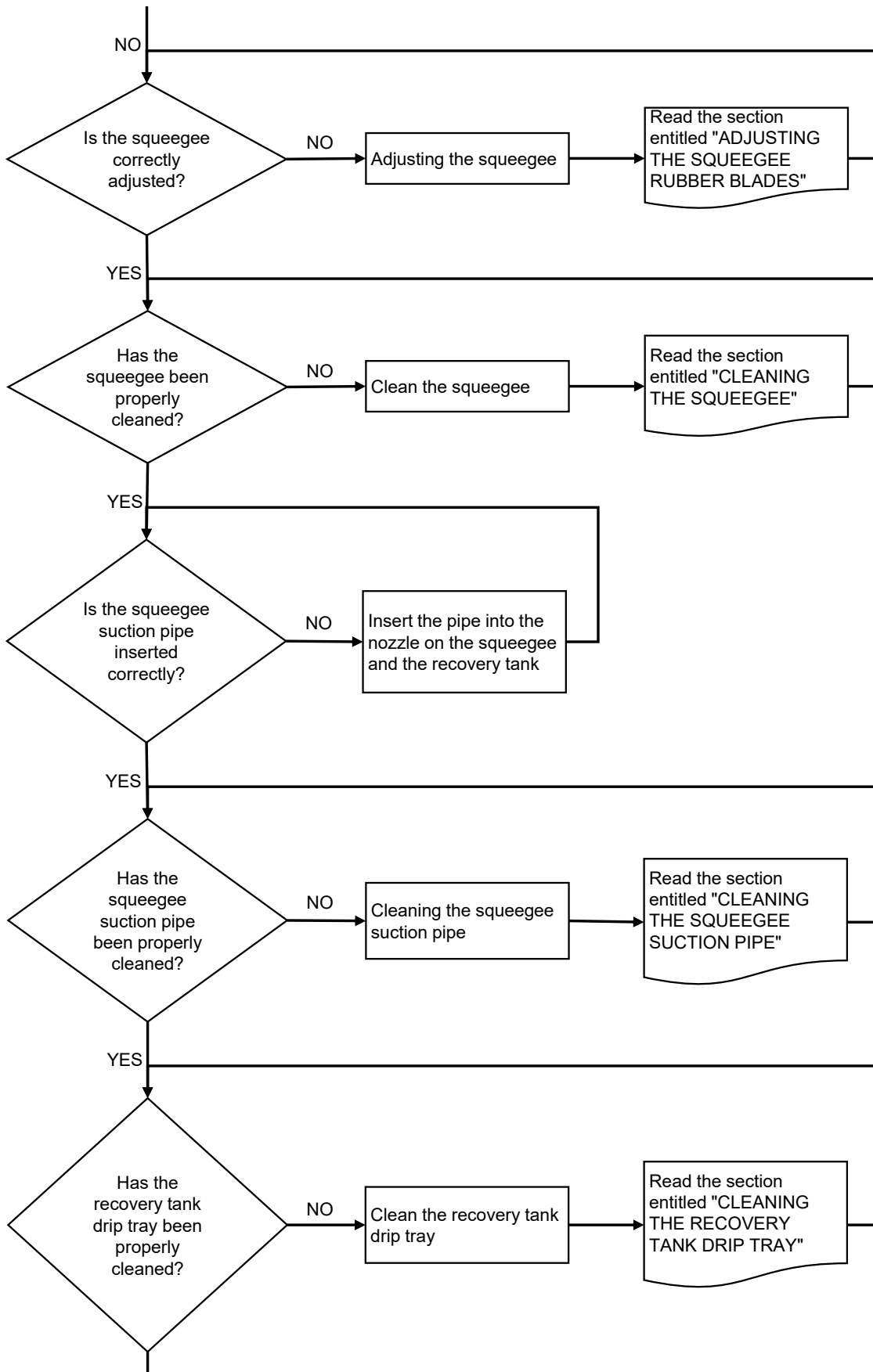


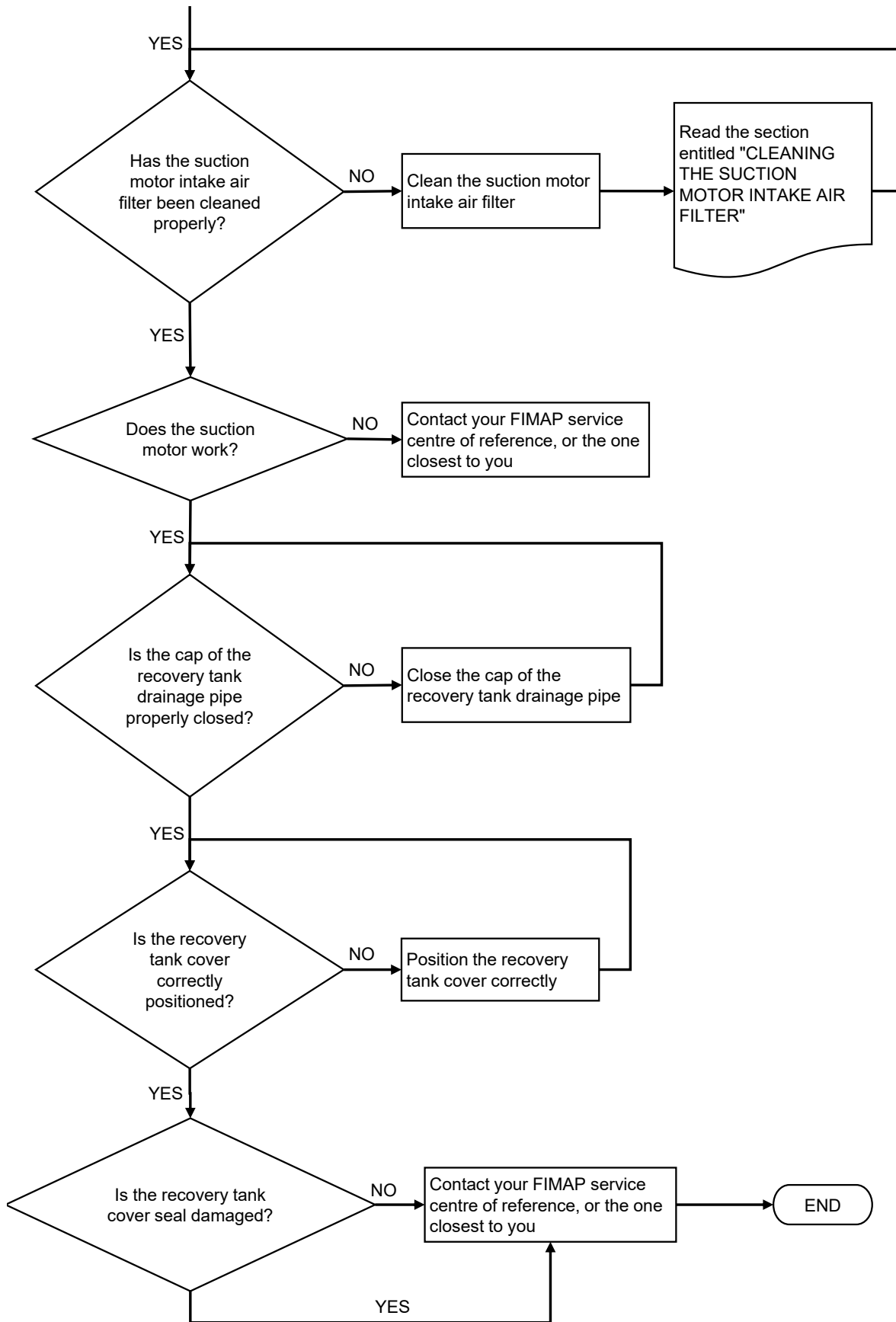




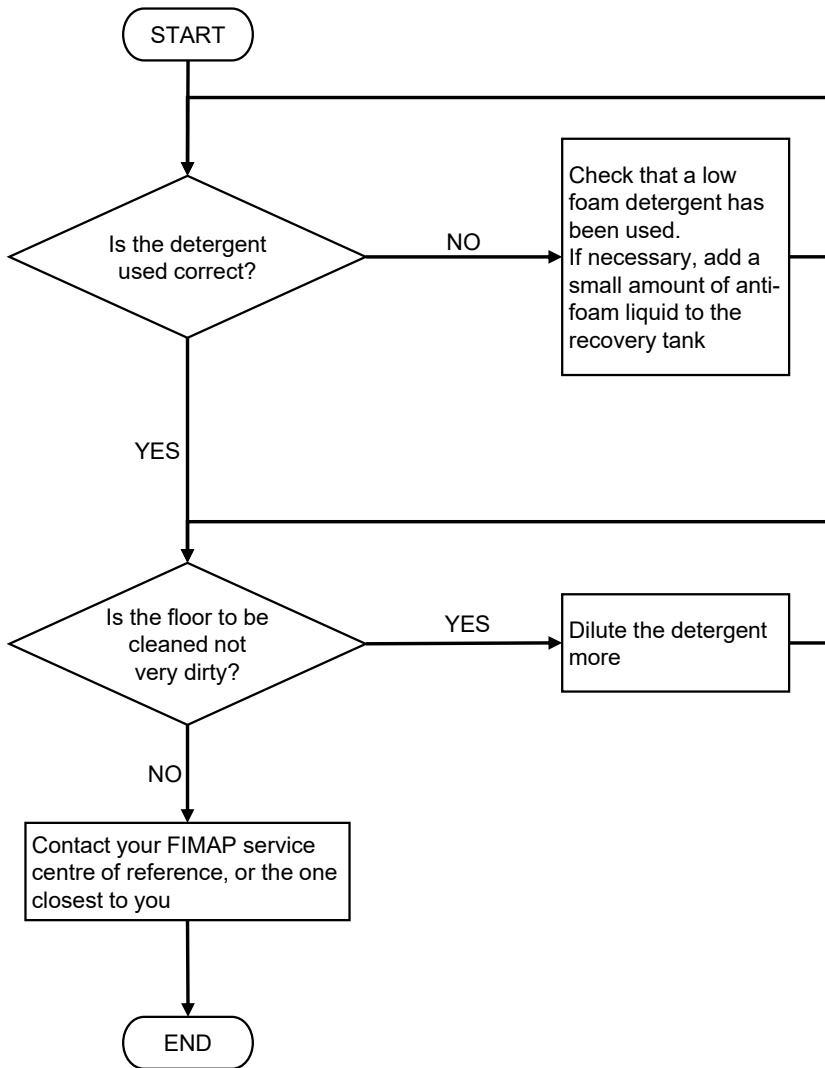
THE SQUEEGEE DOES NOT SUCTION PROPERLY







EXCESSIVE FOAM PRODUCTION



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. EMX 50 E

comply with the requirements of the following Directives:

- 2006/42/EC: Machinery Directive.
- 2014/35/EU: Low Voltage Directive.
- 2014/30/EU: Electromagnetic compatibility directive.

They also comply with the following standards:

- EN 60335-1:2012/AC:2014/A11:2014/A13:2017 /A1:2019/A14:2019/A2:2019/A15:2021
- EN 60335-2-72:2012
- EN ISO 12100:2010
- EN 61000-3-2:2014
- EN 61000-3-3:2013
- EN 55014-1:2017/A11:2020
- EN 55014-2:2015
- 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), 05/05/2023

FIMAP S.p.A.
Legal representative
Giancarlo Ruffo

The undersigned manufacturer:

FIMAP S.p.A.
Via Invalidi del Lavoro, 1
37059 Santa Maria di Zevio (VR)

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FLOOR SCRUBBING MACHINES

mod. EMX 43 B; EMX 50 B; EMX 43 BT; EMX 50 BT; EMX PRO 43 BT; EMX PRO 50 BT; EMX PRO 50 BTO, EMX PRO 50 BTS

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- EN 60335-2-72:2012
- EN ISO 12100:2010
- EN 61000-6-2:2005/AC:2005
- EN 61000-6-3:2007/A1:2011/AC:2012
- EN 62233:2008/AC:2008

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Santa Maria di Zevio (VR), 05/05/2023

FIMAP S.p.A.
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FLOOR SCRUBBING MACHINES

mod. EMX 43 B CB; EMX 50 B CB; EMX 43 BT CB; EMX 50 BT CB; EMX PRO 43 BT CB; EMX PRO 50 BT CB;
EMX PRO 50 BTO CB; EMX PRO 50 BTS CB

comply with the requirements of the following Directives:

- 2006/42/EC: Machinery Directive.
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- EN 60335-2-72:2012
- EN ISO 12100:2010
- EN IEC 60335-2-29:2021+A1:2021
- EN 61000-6-2:2005/AC:2005
- EN 61000-6-3:2007/A1:2011/AC:2012
- EN 61000-3-2:2014
- EN 61000-3-3:2013
- EN 55014-1:2017/A11:2020
- EN 55014-2:2015
- EN 62233:2008/AC:2008

The person authorized to compile the technical file:

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Santa Maria di Zevio (VR), 05/05/2023

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. EMX 50 E

comply with the requirements of the following Directives:

- S.I. 2008/1597 Supply of Machinery (Safety) Regulations 2008 (as amended).
- S.I. 2016:1101 Electrical Equipment (Safety) Regulations 2016 (as amended).
- S.I. 2016:1091 Electromagnetic Compatibility Regulations 2016 (as amended).

They also comply with the following standards:

- EN 60335-1:2012/AC:2014/A11:2014/A13:2017 /A1:2019/A14:2019/A2:2019/A15:2021
- EN 60335-2-72:2012
- EN ISO 12100:2010
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- EN 55014-1:2017+A11:2020
- EN 55014-2:2015
- EN 62233:2008

The person authorized to compile the technical file:

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Santa Maria di Zevio (VR), 05/05/2023

FIMAP S.p.A.
Legal representative
Giancarlo Ruffo

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. EMX 43 B; EMX 50 B; EMX 43 BT; EMX 50 BT; EMX PRO 43 BT; EMX PRO 50 BT; EMX PRO 50 BTO, EMX PRO 50 BTS

comply with the requirements of the following Directives:

- S.I. 2008/1597 Supply of Machinery (Safety) Regulations 2008 (as amended).
- S.I. 2016:1091 Electromagnetic Compatibility Regulations 2016 (as amended).

They also comply with the following standards:

- EN 60335-1:2012/AC:2014/A11:2014/A13:2017 /A1:2019/A14:2019/A2:2019/A15:2021
- EN 60335-2-72:2012
- EN ISO 12100:2010
- EN 61000-6-2:2005/AC:2005
- EN 61000-6-3:2007/A1:2011/AC:2012
- EN 62233:2008

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FIMAP S.p.A.
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37059 Santa Maria di Zevio (VR)

declares under its sole responsibility that the products

FLOOR SCRUBBING MACHINES

mod. EMX 43 B CB; EMX 50 B CB; EMX 43 BT CB; EMX 50 BT CB; EMX PRO 43 BT CB; EMX PRO 50 BT CB;
EMX PRO 50 BTO CB; EMX PRO 50 BTS CB

comply with the requirements of the following Directives:

- S.I. 2008/1597 Supply of Machinery (Safety) Regulations 2008 (as amended).
- S.I. 2016:1101 Electrical Equipment (Safety) Regulations 2016 (as amended).
- S.I. 2016:1091 Electromagnetic Compatibility Regulations 2016 (as amended).

They also comply with the following standards:

- EN 60335-1:2012/AC:2014/A11:2014/A13:2017 /A1:2019/A14:2019/A2:2019/A15:2021
- EN 60335-2-72:2012
- EN ISO 12100:2010
- EN IEC 60335-2-29:2021+A1:2021
- EN 61000-6-2:2005/AC:2005
- EN 61000-6-3:2007/A1:2011/AC:2012
- EN 61000-3-2:2014
- EN 61000-3-3:2013
- EN 55014-1:2017/A11:2020
- EN 55014-2:2015
- EN 62233:2008

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