



Clemas & Co Ltd

Industrial Cleaning Equipment
Sales - Hire - Service

C50 43B SCRUBBER DRYER OPERATOR MANUAL



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INTRODUCTION

AS SOON AS THE MACHINE ARRIVES PLEASE CHECK THAT EVERYTHING IS OK,PLEASE CHECK THAT THERE IS NOT ANY DAMAGE DUE TO TRANSPORT AND CHECK TO HAVE RECEIVED ALL THE SHOWING ON THE DOCUMENTS.

IN CASE OF DAMAGES OR MISSING PART PLEASE ADVISE IMMEDIATELY THE MANUFACTURER

INTRODUCTION

THIS KIND OF SCRUBBER MACHINE ALLOWS THE OPERATOR TO CLEAN ALL KIND OF FLOOR AND ALL KIND OF DIRTY ,GIVING THE BEST RESULT.

YOU CAN REACH BEST PERFORMANCES USING THE MACHINE IN A PROPER WAY AND TAKING CARE OF IT.

PLEASE READ THIS MANUAL WITH ATTENTION.

USE THE MACHINE ONLY FOR CLEANING PURPOSE.

Keep this manual for all needs.

GOODS TO BE RETURNED

In case of goods to be returned for warranty replacement, it is necessary to have a written acceptance from

FIorentini technical department before sending them.

All defective parts must be carefully packed in order to avoid further damages during transport.

Goods must be shipped ex-warehouse and followed by :

- **serial number of the equipment where they were installed on;**
- **item code of the defective part;**
- **detailed description of the defect and of the conditions where it happened.**

In case of defective electric or electronic goods, please return them separately from other materials, in order to help us in dividing dangerous wastegoods and recycle the (RAEE) as DER 2002/96/CEE LOW.



CONFORMITY DECLARATION

Conformity declaration is consigned with the support and the manual of operating and maintenance instructions.



DICHIARAZIONE-DECLARATION-DECLARATION-ERKLÄRUNG-DECLARACION

DICHIARAZIONE CE DI CONFORMITA'
DECLARATION OF CONFORMITE'
DECLARATION DE CONFORMITE'
ÜBEREINSTIMMUNGSERKLÄRUNG
DECLARACION DE CONFORMIDAD

ING. O. FIORENTINI s.r.l.
Loc. Rombola
50030 PIANCALDOLI (FI) ITALIA

Dichiara sotto la propria esclusiva responsabilità che la macchina:
Declares under its own responsibility that the machine :
Declares sous sa responsabilité exclusivement que la machine :
erklärt unter ausschließlich eigener Verantwortung, daß die Maschine :
declara bajo su propia y exclusive responsabilidad que la maquina :

FIORENTINI

Modello/model/modele/modell/modelo

Matricola/serial number/numero

matricule/serienummer/numero matricula

Anno/year/annee/jahr/ano

2009



Fabbricata nel rispetto delle direttive e decreti :
and moreover is built according to the directives and decrees :
et est fabriquées i, en outré, conformément aux directives et ou décrets :
und daß sie unter Einhaltung folgender Verordnungen und/oder Dekrete hergestellt worden (sind) :
y que además ha sido fabricada en conformidad con las directivas y/o decretos :

2006/42/CE/EC/EG-

Direttiva macchina: Machines Directive: Maschinen Richtlinie: Directive machines:

2004/108/CE/EC/EG-

Compatibilità elettromagnetica: Electro Magnetic Compatibility: Elektromagnetische Verträglichkeit: Compatibilité électromagnétique:

2002/95/CE/EC/EG-

Restrizione sostanze pericolose: Restrictions of Dangerous Substances Beschränkung der gefährlichen Mitteln :Restriction des substances dangereuses

2003/10/CE/EC/EG

Protezione da rumore: Exposure of Workers to Noise: Gefährdung der Arbeitnehmer durch Geräusch: Exposition des travailleurs aux Bruits:

È conforme alle seguenti norme :
conform to the following laws :
est conforme aux norms :
mit den folgenden Normen übereinstimmen :
está conforme a lassiguientes normas :

EN 12100-1- EN 12100-2

Norme applicate: Harmonized Standard Applied: Angewandte harmonisierte Normen: Normes Harmonisées Appliquées :

Ing. O. Fiorentini S.r.l.

Il titolare/chairmen/gérant

Ing. O. Fiorentini

Piancaldoli

Luogo e data

Firma

In caso di modifiche apportate alla macchina questa dichiarazione non è piu valida



TECNICAL DESCRIPTION

	DE LUXE 43B	DE LUXE 50B
DIMENSIONAL CHARACTERISTICS		
LENGHT	1000 mm	1030 mm
WIDTH BRUSH COVER	480 mm	550 mm
HEIGHT	1060 mm	
N° BRUSHES	1	
BRUSH SIZE	Ø430 mm	Ø500 mm
PRESSURE BRUSH	30Kg	
WORK WIDTH	430 mm	500 mm
SQUEEGEE WIDTH	700 mm	
SOLUTION TANK IN POLYETHYLENE	45 liters	
RECOVERY TANK IN POLYETHYLENE	45 liters	
FRONT WHEEL DIAMETER	160 mm	
REAR WHEEL DIAMETER	80 mm	
TRACTION	Electric	
WEIGHT WITHOUT OPERATOR	135 Kg	140 Kg
WEIGHT WITHOUT BATTERY	80Kg	85Kg
BATTERY COMPARTMENT SIZE (l x w x h)	310x350x260	
ELECTRIC CHARACTERISTICS		
VOLTAGE	24 V	
BRUSH GEARMOTOR	370W 17A	
TRACTION MOTOR	110W 8A	
VACUUM MOTOR	550W 22A	
FUNCTIONAL CHARACTERISTICS		
BRUSH LIFT CONTROL	By pedal	
SQUEEGEE LIFT CONTROL	By pedal	
PERFORMANCES		
FORWARD RUNNING SPEED	0÷3,5km/h	
MAX.SLOP	3%	
HOUR SCRUBBING m ² /h	1500mq/h	1750mq/h
ECOLOGIC CHARACTERISTICS		
NOISE AT DRIVER'S EAR	72 decibel	



GENERAL INFORMATION

MANUFACTURER RESPONSABILITY

The manufacturer ING.O.FIORENTINI SRL is not responsible for any inconvenient, failures, accidents, etc.due to the non-acquaintance (or non-fulfilment) of the prescriptions contained in this manual .The same applies to change's execution, modifications, and/or to the installation of accessory not preliminarily authorized.

In particular the firm ING FIORENTINI SRL is not responsible for any damages caused by:

- Natural calamity
- Erroneous operations
- No maintenance

Furthermore ,the MANUFACTURER is not responsible for any interventions not performed by authorized personnel.

INTERVENTION REQUEST

Possible intervention requests should be made after an accurate analysis of the inconvenient and their causes .In any case, when calling the technician, report what follow:

- Model of the machine
- Serial number (fig. 1)
- The detail of the faults
- Inspections done
- Any other information considered useful for this purpose
- Address the requests to authorised customer service.

Fig. 1



Ing. O. Fiorentini	MADE IN	CE
S.r.l. Piancaldoli (FI)	ITALY	
Mod. V 24	S.N. Hz.	2002
Kg 135	A 47	W 1020

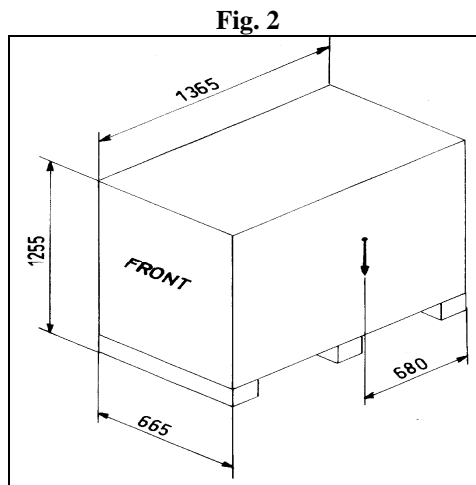


TRANSPORTATION

HANDLING OF PACKED MACHINE

The machine is supplied packed on pallet, closet in a box made of plywood or paper board. The weight and sizes are showed in the normal characteristics.

The barycentre position is indicated by black arrow on the box. The forks of the lift truck or the transpallet should be placed so that the black arrow indicated on the packing is about in the centre of the forks. The package should be handled with extreme caution, this avoiding impacts or lifting it to remarkable heights without any reasons. It is forbidden to stack the packages one another.



UNPACKING THE MACHINE

1. Cut the straps with proper cutting nippers
2. Remove the clips on the paper board to the pallet
3. In case of package made of plywood ,remove the clips on the sides and on the base of each panel as well
4. Remove the other clips fastening the machine by cutting them in the same way of external ones
5. Brought the machine at round level

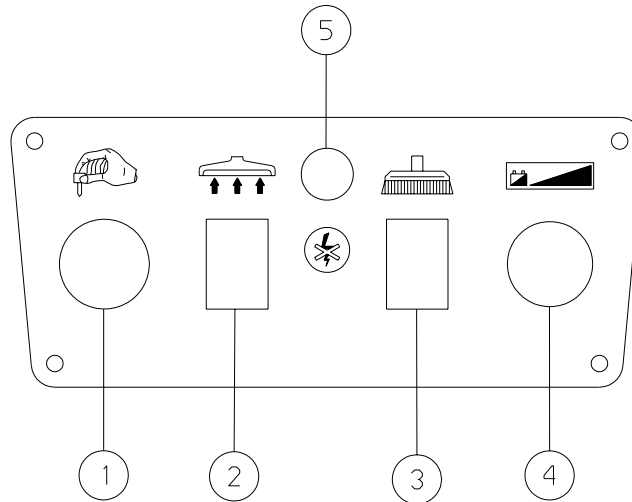
HANDLING OF UNPACKED MACHINE

1. Check the machine
2. If the machine must handled for a short transport after being used, and remove the brushes and the squeegee. For longer transport, is recommended to pack the machine again in its original box



OPERATING CONTROLS

DASHBOARD CONTROLS



1	MAIN KEY SWITCH
2	VACUUM MOTOR SWITCH
3	BRUSHES MOTOR SWITCH
4	BATTERY CHARGER INDICATOR
5	SAFETY MOTOR

DASHBOARD SYMBOLS

0	Close (off)	1	On (first function)
	Key Switch		Scrubbing Brush
	Vacuum by Squeegee		Traction safety motor
	Indicatore di carica batteria		

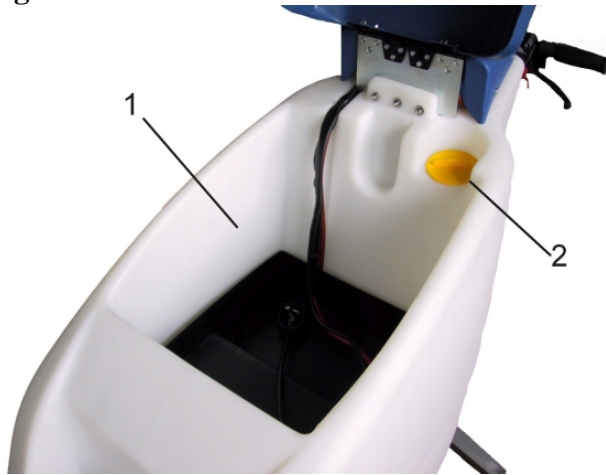


USE OF THE MACHINE

BATTERIES INSTALLATION

- Lift up the recovery tank in order to access to batteries box
- Install the batteries as per picture fig. 6-b
- Never add distilled water after recharging the batteries
- Clean the surfaces that are in contact with the connections

Fig. 3



BATTERY CHARGER INSTALLATION

- Install the battery charger in a ventilated and dry place, far from heat sources and corrosive environments.
- Make sure that the voltages are correct. Protect the mains with a delayed switch or with a load fuse higher than the max. power consumption of the battery charger. Observe the polarity of the battery socket (black and red cables are identified by symbols +,-)

CHOOSING THE DETERGENT SOLUTION

For a good cleaning of the floor, it is important to choose the proper detergent solution. If necessary, ask the supplier or a competent person for the proper solution. Keep in mind that a too strong chemical agent can compromise the long life of each machine. It is necessary to use a low-sudsing detergent solution, or an antifoaming additive, in order not to damage the vacuum motor. If it is impossible to get these products, use some vinegar to avoid foam, pouring 50cc of it in the recovery tank before scrubbing.

SCRUBBING

The scrubbing operation is very delicate, as the operator's experience must be used to decide upon the brush type, the requirement of a possible double scrubbing operation, the right cleanser choice and the right machine adjustments: if only one of these factors is inadequate, the scrubbing operation can give very poor results. If the floor is very dirty or difficult to be cleaned, a double scrubbing operation is recommended. In this first phase, the squeegee must be lifted and the brushes must be in working position. Start the brushes and pass the machine over a surface of some tenth sq. mt. Let the detergent solution on the floor to dissolve the dirt, then pass the machine again. For this second machine passage, lower the brushes and bring the squeegee in contact with the floor.

Look at the floor after this second passage and decide if the scrubbing operation was enough or if an additional operation is required. To perform the scrubbing procedure, turn the brush motor ignition



switch to pos. 1, brushes motor start. The brushes will be lowered to the floor pushing on the brush plate lowering block. Now operate immediately the lever to apply the detergent water, and adjust it accordingly. Put the run selector (fig.2) in its forward position and press the pedal (fig.3) so that the machine moves forward and starts scrubbing. The water dosage must be adjusted to get the whole surface completely wet after the brush passage, but without any excess, that could generate splashes, stream or flows out of the squeegee. If no double scrubbing is not performed, lower the squeegee after placing the run switch in forward position. The squeegee is lowered by means of the pedal. The vacuum motors are operated by means of the switch. Once the scrubbing and drying procedure are finished, first of all close the water with the lever , then lift the brushes by means of the pedal and the squeegee by means of the pedal. Finally, turn the motors off.

WATER FILLING AND DISCHARGE, TANK CLEANING

Before every scrubbing operation, open the door and fill the solution tank with the right quantity of water and cleanser. The tank is made of polyethylene resistant to all acid and basic solution and to all dissolvents found on the market. At the end of the scrubbing operation, discharge the dirty water from the tank by means of the hose. Accurately clean the tank at least once per week.

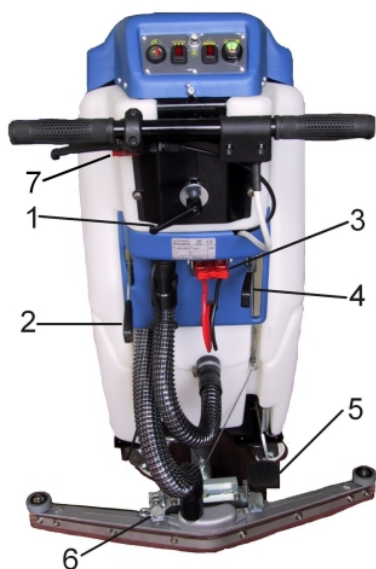
SQUEEGEE ADJUSTMENT

The squeegee must be perfectly adjusted to get a perfect floor drying (fig. 8).

The main characteristic of this type of squeegee is to pick-up the water from the floor and convey to the vacuum hose, but it must be parallel to the floor. To rightly adjust the squeegee operate as follow:

Extract the key from the control dashboard to avoid accidental start of the machine.

- o To adjust the squeegee slope operate the knob (fig 3).
- o The right pressure is got when the edge of the rear blade touches the floor with a slating of approx. 60°-45° referring to the floor.



- | | |
|----|---------------------------------|
| 1. | handle position adjustment knob |
| 2. | solution adjustment lever |
| 3. | battery charge plug |
| 4. | squeegee lifting lever |
| 5. | brush lifting pedal |
| 6. | squeegee slating adjusting knob |
| 7. | parking brake lever |

Fig. 3

Note that often drying is negatively affected by a wrong suction operation. If the suction hose doesn't work well, drying will continue to be bad, even with all adjustments attempts. In this case:

- a- accurately clean the suction hoses, their inlets and filters and the squeegee itself.
- b- check the vacuum motors operation.
- c- confirm that all inspection openings of the tank are closed.

BRUSHES REPLACEMENT

How to attach the brush in order to fix the brush is necessary:

- Place the machine on the brush, keeping the brush plate up
- Switch on the brush and lift down the brush plate and allows the brush to be fixed
- In order to replace the brush is necessary to lift up the brush switch off the brush switch, the brush automatically goes away.

N.B. It is not necessary to move the brush cover to do all those operations.

Fig. 4



Fig. 5



SAFETY, MAINTENANCE AND INSPECTION

GENERAL SAFETY RULES

Before using the machine ,instruct all operators to read carefully the charter "SAFETY STANDARDS "WARNING.

- The manufacturer can make any changes to the machine, for constructive or commercial reasons, without being obliged to change the instruction manual at the right time according to these modifications.
- The person responsible for the machine must adhere to CEE rules and to the local standards as well, regarding the working environment for operator's safety and health purposes.
- Before starting the machine ,always perform the preliminarily checks. The safety standards which involve any dangers, mentioned in the manual text, can be recognized by the symbol: CAUTION.
- Beyond the standard listed hereunder, the person responsible for the machine must comply with the rules provided by the law in force regarding personnel's safety and health in the working stations. Furthermore, the person responsible for the machine must instruct the operators on what follows:
 - Safety and accident prevention standards
 - Specific standards regarding the machines
 - Location on the machine of emergency pushbuttons or similar mechanism, for a prompt operation. The fixed or movable protections(carters)should always remain in their position, correctly fixed with perfect integrity during all procedures regarding the normal operation. If, for any reason ,the carters are removed, their efficiency should be restored before restarting the machine.



- Use the machine only under technically unexceptionable conditions and in compliance with its destination, by observing the safety and prevention standards according to the prescriptions contained in the instruction and maintenance handbook.
- Remove (or let remove) immediately any failures which could compromise the safety.
- The machine is designated to be used as a scrubber ;any other different use doesn't not comply with its destination. the manufacturer/supplier takes no responsibility for any consequent damage.
- DANGER

It is absolutely forbidden to suck inflammable and or toxic liquids and powders

- DANGER

It is dangerous and absolutely forbidden to touch the lower part of the machine with the hands when some parts are moving. Should it be absolutely necessary, remove the main key from the control dashboard.

CAUTION

Keep in mind the following standards; failure to adhere to these rules can endanger the life of the operator or of other people. Always keep a sufficient distance from the sidewalk edges and from large differences in height of the floor where the machine can fall; never adopt a work technique that can compromise the stability of the machine. Never pass through slopes in transversal direction; when going through a downhill road, always adjust the speed to the environment conditions. Do not turn the machine at excessive speeds, particularly if the floor is not flat.

CAUTION: DANGER

Never operate the machine when stopped for special operations (setting up, maintenance, etc.). Before starting the work, check for any possible visible defects on the safety devices, and the correct operation of the emergency stop pushbutton or of the equivalent mechanism . Never operate the machine when the control panel indicates defective tools, warning lights, etc.

MAKE SURE THAT:

- No strangers are present near the machine
- No strange objects (appliances, cloths, etc.) are on the machine
- The machine does not emit strange noises after its starting; if so, stop it immediately and detect the cause.

All doors and protections are regularly closed.

Never let approach strangers near the machine. Use, maintenance and repair of the machine are allowed only to operators authorized by the person responsible of the machine, who knows the manual contents. These operators should be persons physically and intellectually fit for this work, not under alcohol or drug effects.

MAINTENANCE INSTRUCTIONS

During the scrubbing operation, the maintenance of the machine and the replacement of parts, it is necessary to extract the ignition key.

Instructions for battery:

- when charging the battery, let the battery cover open
- do not use free flames and do not smoke near batteries
- caution: liquid is corrosive
- do not cause sparks near the batteries
- battery gases are explosive
- do not cause any short-circuits
- do not invert polarities

GENERAL NOTE

For any maintenance, revision or repair, engage qualified personnel or call an authorized workshop. Use only original fuses with the prescribed current intensity. In case of a power failure, disconnect



the machine or the plant immediately. The electric installation should be periodically inspected and checked. Any possible failure, such as detached connections and burnt cables should be immediately removed.

CAUTION

To clean the machine, use aggressive detergent solutions, acids, etc. only when necessary and with special care. Adhere to all instructions of the detergent manufacturer. Use protective clothes (overalls, gloves, protective glasses, etc., see CEE standards).

OPERATIONS ON THE ELECTRIC INSTALLATION

The operations on the electric installation can be performed only by QUALIFIED ELECTRICIANS, instructed in the electric characteristics of the machine and in accident prevention rules.

CHECKS

The machine must be inspected by a technician, who checks the safety conditions of the machine and any possible damages or defects visible from outside:

- before setting the machine at work
- after appropriate time intervals
- after any changes or repairs
- safety device control

SAFETY DEVICE CONTROL

All six month, check the efficiency of the safety devices, the inspection should be performed by qualified personnel of FIORENTINI s.r.l. or authorized by it. To grant the efficiency of the safety devices, the machine should be overhauled by a technician of FIORENTINI every 5 months.

ANNUAL CHECK

The responsible person should perform an annual check to determine if the machine complies with the technical safety standards. After this check, the responsible person should apply a test plate on the machine.

INFORMATION FOR USING THE MACHINE IN EXPLOSIVE ATMOSPHERE

The machine has not been designed to work in environments in which explosive gas, powders or steams can be generated.

DANGER

To drain the liquids used for floor scrubbing, follow the local standards concerning the elimination and purification.

INFORMATION CONCERNING THE MACHINE DEMOLITION<R>(CEE STANDARDS)

In case of machine demolition, it is important to subdivide the different types of materials composing the machine and deliver the batteries to operators authorized to their elimination.

BATTERY TECHNICAL CHARACTERISTICS

TENSION	V 12
CAPACITY	100 A/h
WEIGHT	30 Kg
SIZE (H.x W x.L)	29x17x22.5

BATTERY CAHRGER TECHNICAL CHARACTERISTICS

IN	V 230, Hz 50, A5
OUT	V 24, A 12

This kind of battery charter can charge all brand name of batteries.

MAINTENANCE SCHEDULE

During the cleaning and the maintenance of the machine remove the key.

DAILY

- Clean the recovery tank and the filter of the vacuum motors.

WEEKLY

- Check for the cleaning of the suction pipes and of the squeegee
- Check the state of the rubber squeegee blades

MONTHLY

- Check the filter of the clean water tank

EACH YEAR

- Check the brush state of each motor

AFTER TWO YEARS

- Check safety systems

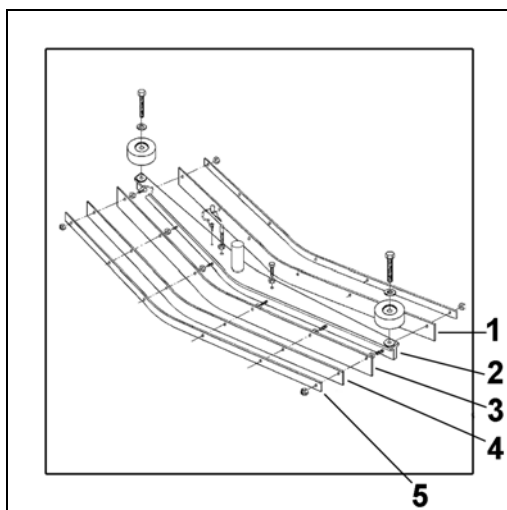
Check electric installation

SQUEEGEE BLADE REPLACEMENTS

The squeegee blades should be replaced when the contact edge becomes worn; the perfection of the edge is essential for a perfect drying. To replace the blades

- The squeegee should be demounted from the machine and placed on the desk.
- Now, remove the screws (fig) both on the front part and on the rear part of the squeegee, the steel straps and remove worn rubber blades
- Perform the inverse procedure and assemble the new blades, then adjust the squeegee.

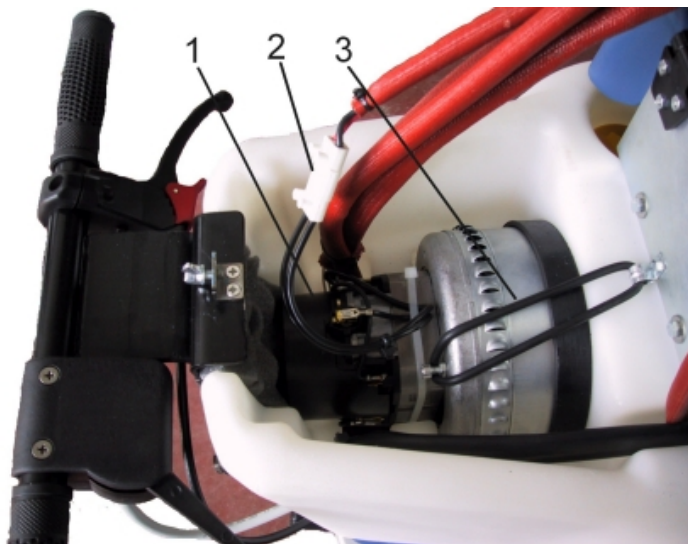
Fig. 6



1. squeegee front blade
2. squeegee body
3. squeegee rear blade
4. squeegeecounterblade
5. squeegee straps

VACUUM MOTOR MAINTENANCE

The vacuum motors must be checked and cleaned. The brushes should be checked all six months and replaced, if necessary. After removing the key from the dashboard, unscrew the screw in the vacuum motor space, open it, unhook the hooks and detach the plug . In this way, it is possible to extract the motors and release the sponge filter under the motors that can be extracted, cleaned and replaced. Check the suction fan from the hole located in the front part of the vacuum motor. By a visual check, the fan should appear undamaged and well-cleaned. To check the brushes, first of all remove the plastic cap, then unscrew the screws and remove the two plastic supports of the brushes. Once checked and replaced (if necessary), the brushes can be easily remounted, by reassembling all elements until the initial situation has been reached.



- | |
|---|
| <ol style="list-style-type: none">1. plastic cap2. carbon brushes3. carbon brushes screws |
|---|

Fig. 6

CAUTION

Each maintenance and repair operation not described under the “ordinary maintenance” should be performed by qualified personnel authorized by FIORENTINI s.r.l. only.



CONTROLS

The scrubber must be inspected from a technician that controls its safety conditions and the presence of possible damages or visible defects to the outside.

- To the first operation
- After changes and reparations

Check to the safety devices

Every 2 years to check the efficiency of the safety devices, the inspection must be performed by a professional technician. To guarantee the general efficiency every 5 years the scrubber must be revised by the personnel of the Fiorentini company.

Check on the electric installation

The preparation of the electric plant has to be every 2 years inspected and examined. Possible defects as disconnected connections or damaged cables, must immediately be eliminated. The interventions must be performed only by a professional technician.