



**ING. O. FIORENTINI S.p.A.**  
**INDUSTRIAL CLEANING MACHINES**

**COMBINED MODEL**  
**I115SSE/ DE/ GE**



**INSTRUCTIONS FOR USE**  
**AND MAINTENANCE**

## **Congratulations on your choice!**

*Thank you for having chosen to purchase a product by **FIorentini S.p.A.**, a world-leading manufacturer and distributor of industrial cleaning machines.*

*Our long-standing experience and acquired know-how are the best guarantee of the technical quality of your purchase; all our products are built from top quality materials to ensure maximum reliability, sturdiness and functionality and to meet the requirements of even the most demanding customers.*

*Feel free to contact us with any technical or commercial inquiry; we will be happy to supply any details and information that you may need.*

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## 1. GENERAL INFORMATION

### 1.1. SYMBOLS USED

	<i>This symbol is used to alert the operator to important procedures or precautions to be followed in order to prevent damages to users or the machine</i>
	<i>This symbol is used to alert the operator to important general information.</i>

### 1.2. NOTES

	<p><i>This manual is the property of <b>FIorentini S. p. A.</b> The reproduction of all or part of this manual or its transmission to third parties by any mechanical or electronic system or otherwise is forbidden without a written authorisation by the manufacturer. This manual is supplied to the customers in a single original copy unless otherwise specified at the time of ordering.</i></p> <p><i>This manual is supplied as an integral part of the machine and if the machine is transferred to a new owner, this manual should also be transferred. This manual should be stored at a safe location throughout the machine working life. The purchaser is responsible for making this manual available to all users. If this manual is lost, a duplicate should be obtained from FIORENTINI.</i></p> <p><i>FIORENTINI S.p.a. will not be held responsible for any damages to persons and/or property resulting from failure to comply with the instructions in this manual.</i></p> <p><i>FIORENTINI reserves the right to introduce any required technical and commercial changes without giving any notice. Therefore, any data and information contained in this manual may be changed and/or updated.</i></p>
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### 1.3. CONSULTING THE MANUAL

This manual deals exhaustively with all the issues considered necessary for an easy and safe use of the machine, in compliance with European Directives on product safety.

**We therefore suggest to all authorised operators to carefully read this manual throughout and contact FIORENTINI S.p.A. in case of any doubt. This manual should also be used for reference whenever there are doubts concerning a procedure or operation to carry out or to train new operators.**

In print, pictures and drawings can look slightly different from actual machine parts, without however being perceived as confusing.

Special symbols and **bold** and/or *Italic* fonts are used to highlight important information, particularly concerning safety.

The current revision code is indicated in the bottom left corner of every page. The list of revised pages is shown at the end of the manual.

### 1.4. WARRANTY

Warranty terms and conditions are stated here below unless otherwise specified in the order confirmation.

#### SCOPE OF THE WARRANTY

The machine has been designed and built for trouble-free use over several years. However, if any malfunctioning is observed during the warranty period, FIORENTINI S.p.A. undertakes to repair or replace free of charge any parts showing breaks or early wear due to faulty materials, working defects or incorrect assembly. The manufacturer warranty will not cover any parts whose early breaking or wear-and-tear are caused by:

- failure to observe the instructions contained in this manual;
- tampering or alterations introduced without FIORENTINI's specific approval;
- use of non-original spare parts;
- wear parts e.g. brushes, squeegee blades etc.

For installed electrical parts and commercially available parts, FIORENTINI S.r.l. will extend to purchasers the same warranty terms granted to FIORENTINI itself by the parts' suppliers.

#### WARRANTY VALIDITY

The Ing.O.Fiorentini S.p.A. general terms conditions also apply to the warranty.

The manufacturer cannot be held responsible in any way for damages resulting from unauthorised modifications made to the appliance, from the use of unsuitable brushes and accessories and after use of the device other than that intended.

#### EXCLUSIONS

The warranty will not cover materials and components exposed to normal wear (brushes, squeegee blades etc.) and those whose working life cannot be established beforehand.

#### WARRANTY APPLICATION TERMS

Defective components must be returned to FIORENTINI S.p.a. in order to establish the causes of any observed defects and determine warranty applicability. Repairing and replacement under the warranty will be carried out on FIORENTINI's premises, by subcontractors or on customer's premises. For services under the warranty to be carried out on customer premises, power supply and any equipment that might be necessary for repairing purposes will have to be provided by the customer.

#### PRODUCT RETURNS

In case of parts to be returned for replacement or repairs under the warranty, a written authorisation must be obtained in advance from FIORENTINI's Technical Assistance Department.

All defective parts must be carefully repacked in order to avoid damages during transport. Products must be returned on a free-on-board basis, complete with:

- the serial number read from the equipment ID plate (see point 2.1);
- the item code and installation position of the returned parts, read from the spare part list (see point 7.2);
- a detailed description of the observed defect and conditions under which it became apparent;

In case of defective electric or electronic components, please return the parts separately from other materials, so that waste containing dangerous substances can be separated and Waste Electrical and Electronic Equipment (WEEE) can be recycled according to the 2002/96/EC Directive.



*A missing machine data plate will imply the immediate loss of any warranty rights.*

### **1.5. DECLARATION OF CONFORMITY**

The Declaration of Conformity is supplied with the purchased machine and the use and maintenance manual.

**DICHIARAZIONE CE DI CONFORMITA'-DECLARATION OF CONFORMITY  
DECLARATION DE CONFORMITE-EG-KONFORMITÄTSERKLÄRUNG-  
DECLARACION DE CONFORMIDAD**

(ai sensi dell'allegato II 1.A della Direttiva Macchine 2006/42/CE)

**La ING.O.FIORENTINI SPA**

con sede in Via Piancaldoli 1896 Firenzuola, 50033, (FI)

**DICHIARA/DECLARES/DECLARE/ERKLÄRT/ DECLARA**

in qualità di costruttore sotto la propria responsabilità che la macchina  
As manufacturer under its own responsibility that the machine  
En tant que fabricant sous sa propre responsabilité que la machine  
Als Hersteller, erklären, in alleiniger Verantwortung, dass das Produkt  
Como fabricante, bajo su responsabilidad que la máquina



**Modello/model/modèle/Typ/modelo**

**Matricola/serial number/numero de série/**

**Fabriknummer/ Número matricula**

**Anno di costruzione /**

**Year of production/ Année de production/**

**Baujahr/ Año de producción**

a cui la presente dichiarazione si riferisce è conforme alle prescrizioni  
which this declaration refers to, is in conformity with the requirements  
à laquelle se réfère cette déclaration, est en conformité avec les prescriptions  
Auf das sich diese Erklärung bezieht, mit der normativen übereinstimmt.  
que esta declaración se refiere, está en conformidad con los requisitos

della direttiva macchine 2006/42/CE/ Directive 2006/42/CE / de la Directive 2006/42/CE / der EG-Richtlinie 2006/42/EG über  
Maschinen / De la directiva máquinas 2006/42/CE

della direttiva compatibilità elettromagnetica 2014/30/EU/ the Electromagnetic Compatibility Directive 2014/30 / EU / de la Directive  
Compatibilité Electromagnétique 2014/30 / EU / elektromagnetische Verträglichkeit (EMV) 2014/30/EU / la directiva de  
compatibilidad electromagnetica 2014/30/EU

della direttiva sui rifiuti di apparecchiature elettriche ed elettroniche (RAEE) 2012/19/UE/ Directive on Waste of Electrical and  
Electronic Equipment (WEEE) 2012/19 / EU/ de la directive relative aux déchets d'équipements électriques et électroniques (DEEE)  
2012/19 / UE / Elektrische und elektronische Geräte Abfälle (DEEE)2012/19/UE Directiva sobre residuos de aparatos eléctricos y  
electrónicos (RAEE) 2012/19/UE/  
(ISCRIZIONE AL REGISTRO PRODUTTORI A.E.E.: N° IT1201000007391)

In particolare alle disposizioni normative  
In particular, the regulatory rules  
En particulier, les dispositions réglementaires  
Gemäß den Bestimmungen der Richtlinie  
En particular, las normas reguladoras

**EN ISO 12100, EN ISO 13857, EN ISO 13850, EN 60204-1, EN 349,  
EN 953, EN ISO 4413, EN 60335, EN 60335-1, EN 60335-2-69, EN 60335-2-72, EN 55014-1, EN 55014-2,  
EN 62233, EN 61000-6-2, EN 61000-6-4**

Il fascicolo tecnico è costituito da Ing. O. Fiorentini S.p.a. in qualità di persona giuridica - via Piancaldoli 1896 Firenzuola 50033 Fraz. Piancaldoli (FI) - Italia  
The technical dossier consists of Ing. O. Fiorentini Spa as a legal person - via Piancaldoli 1896 Firenzuola 50033 Fraz. Piancaldoli (FI) - Italy  
Le dossier technique est constitué de Ing. O. Fiorentini Spa comme personne juridique - via Piancaldoli 1896 Firenzuola 50033 Fraz. Piancaldoli (FI) - Italie  
Die technische Dokumentation besteht aus Ing. O. Fiorentini Spa as a legal person - via Piancaldoli 1896 Firenzuola 50033 Fraz. Piancaldoli (FI) - Italy  
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**Piancaldoli**

*Luogo e data*

**Ing. O. Fiorentini S.p.a.**

Il Legale Rappresentante/president/gérant/ representante

**Angelica Maria Cerutti**

*Firma*

*Cerutti Angelica Maria*

## 2. MACHINE FEATURES AND TECHNICAL DATA

### 2.1. MACHINE IDENTIFICATION

An adhesive machine identification label containing indelible “CE” marking details is affixed on the right-hand guard just below the driver's seat.



FIGURE N. 2.1



*The label must never be removed and should always be kept readable. In case of damage a duplicate should be ordered. The machine may not be sold without this label.*

### 2.2. DESCRIPTION AND COMPONENTS

This combined sweeping-scrubbing-drying machine has been designed for use on flat surfaces according to a combined cleaning process which includes: surface sweeping, wet scrubbing and subsequent washing water suction process. The machine is powered off the box-type battery.

The machine consists of the following parts:

- an electric motor connected to a variable delivery hydraulic pump and a fixed delivery hydraulic pump;
- a rear drive hydraulic motor, connected via the hydraulic system to the variable delivery pump actuated by the operator through the control pedal;
- two front side brushes;
- a centre roller brush;
- a fine particle suction system;
- a waste collection box;
- three scrubbing brushes located centrally behind the roller brush;
- a floor-wiping squeegee;
- a polyethylene washing solution filling tank;
- a polyethylene recovery tank for washing effluents with inlet and outlet suction hose;
- a box-type battery;
- a hydraulic power steering assembly;
- driving seat.



The machine uses the two side rotating brushes (left side, clockwise rotation - right side, anti-clockwise rotation) to convey any dirt towards the centre of the machine, where a roller brush rotating in the opposite direction to the machine's direction of movement will push any collected residues into the the collection tank. A vacuum system powered by the electric motor installed on top of the waste box is designed to take in by suction and deliver to the waste box the finer particles that cannot be trapped by the panel filter. During the sweeping process, the scrubbing brushes can be operated simultaneously to scrub the floor with water and detergent. During machine forward travelling, the squeegee, in contact with the floor, takes up any water by suction for its subsequent delivery to the recovery tank.



*Important: remember to actuate the fine particle filter shaking motor to clean the particle filter. This should be done with an open bucket next to the emptying area.*

All machine functions can be controlled via controls located on the instrument panel and designed for immediate actuation.

Through the control panel, all the main machine functions can be activated:

- control the side brushes and centre brush of the sweeping unit;
- start the sweeping unit suction system;
- lift and lower the waste box;
- close and open the flap;
- control the filter shaking motor;
- control the parking brake lever;
- lift and lower the scrubbing brush plate;
- control the scrubbing brush plate sideways movement;
- start the scrubbing brushes;
- regulate the water delivery flow;
- start the suction motor;
- start the squeegee up/down stroke;
- select the forward or backward travelling direction;
- turn the machine on and off;
- turn the flashing light on and off;
- turn the headlights on and off.



The machine load-bearing structure consists in a steel frame, sanded and painted to prevent oxidation which might affect machine reliability.

In consideration of recent EU concerns regarding product safety, FIORENTINI designed and built this machine in compliance with the safety and health requirements provided by applicable Directives. The high quality of the materials used, the applied advanced technology and FIORENTINI's long-standing experience are a guarantee of the performance and reliability of this machine. Each machine is submitted to rigorous testing during construction and to a thorough final test.

**TECHNICAL DATA SHEET**
**TECHNICAL DATA**

	<i>I115SSE</i>	<i>I115SSDE</i>	<i>I115SSGE</i>
Power supply	Box-type battery 36V 630 A/h	Diesel engine	Petrol/Gas engine
Drive system	Rear hydraulic system		
Scrubbing width	1150 mm		
Squeegee width	1350 mm		
No. of brushes	3 x Ø 380 mm		
Brush pressure	180 Kg		
Cleaning capacity/h	6900 sq.m/h		
Range	3 h	-	
Solution tank	220 litres		
Recovery tank	210 litres		
Water lift	1795 mm H <sub>2</sub> O / 17 Kpa		
Centre brush	850 mm x Ø 300 mm		
Front side brushes	2 x Ø 550 mm		
Scrubbing range with side brushes	1300+60 (side brush clearance) mm		
Filtering surface	5.5 sq.m		
Waste container working capacity	112 l		
Hydraulic oil tank capacity	26.5		
Fuel tank capacity	-	20	
Rear wheel	No-track wheel		
Front wheels	No-track wheels		
Brakes	Hydraulic foot controlled		
Forward speed	0 – 6 Km/h	0 – 7 Km/h	

**ENGINE & MOTOR SPECIFICATIONS**

	<i>400cc hydraulic</i>	<i>Kubota D902 Diesel engine</i>	<i>Kubota DF972 Petrol engine</i>
Drive motor			
Displacement		898 cm <sup>3</sup>	962 cm <sup>3</sup>
N. of cylinders	-	3	3
Max power	-	17.5Kw – 23.5HP	23.1Kw – 31HP
Squeegee suction motor	2 x 36 V 500 W		
Scrubbing brush motor	3 x 36 V 800 W	3 hydraulic motors	
Waste box suction fan motor	1 x 36 V 350 W 3500 rpm		
Centre brush motor	N. 1 32 cc hydraulic motor		
Side brush motor	N. 2 100 cc hydraulic motors		

**MACHINE BODY DIMENSIONS**

Length	2100 mm
Width without brush guard	1200 mm
Width with brush guard	1230 mm
Height with roll bar	1850 mm
Height without roll bar	1420 mm

Drive	<b>Driver operated</b>
Waste container outlet height	<b>1350mm</b>
Max travelling gradient	<b>10 %</b>
Noise	<b>&lt; 75 dB(A)</b>



*The above mentioned specifications are not binding on the manufacturer and may therefore be changed without notice. FIORENTINI can be contacted at any time for further information (point 7.1.).*

**UNIT OF MEASURE CONVERSION TABLE**

<b>Length</b>	1 inch = 1" = 25.4 mm	<b>Power</b>	1 kW = 1.36 CV = 1.34 BHP
<b>Temperature</b>	$T (K) = t (°C) + 273 / t (°F) = 1.8 t (°C) + 32$	<b>Pressure</b>	1 bar = 100 kPa = 14.5 psi

### 3. SAFETY

#### 3.1. RECOMMENDED USE



*This combined floor sweeping-scrubbing-drying machine has been designed and built for use in industrial environments, to carry out sweeping, wet scrubbing, drying and effluent collection on flat horizontal surfaces or surfaces with a gradient not exceeding 10%. The maximum travelling gradient allowing for U-turns at 2 Km/h is 3%.*

#### 3.2. MISUSE



- *machine driving by unauthorised personnel;*
- *scrubbing uneven and/or bumpy surfaces;*
- *scrubbing surfaces inclined along the machine horizontal roll axis;*
- *scrubbing surfaces whose gradient exceeds 10%;*
- *performing U-turns at a speed in excess of 2 km/h with a gradient in excess of 3%;*
- *using the machine in environments containing dangerous substances, and in particular, in explosive atmospheres or inadequate microclimatic conditions;*
- *cleaning machine surfaces in the presence of flammable substances;*
- *the machine may not be used as a means of transport for people or other vehicles;*
- *altering or tampering with safety devices;*
- *charging batteries at not sufficiently ventilated locations;*
- *failure to comply with applicable safety standards currently in force;*
- *fitting equipment/devices likely to interfere with machine operation;*
- *introducing changes or alterations not authorised by FIORENTINI;*
- *using acid solutions likely to damage the machine;*
- *failing to comply with use and maintenance manual specifications.*



*Informative labels provided on the machine should be carefully read and should not be covered for any reason. FIORENTINI shall not be liable in any case for any of the above not recommended uses of the machine (instances of misuse).*

#### 3.3. SUGGESTED EQUIPMENT

To make the best use of your machine, equipment specially designed and tested by Fiorentini and original spare parts should be used. The Design Department of FIORENTINI S.p.A. is willing to meet any design requirements concerning parts and components for personalised applications.

**3.4. OPERATOR QUALIFICATIONS**

The table here below specifies the operator qualifications required for each operation to carry out.

<b>OPERATION</b>	<b>OPERATOR QUALIFICATIONS</b>
Machine driving/control	Skilled operator
Installation/removal	Skilled operator
Mechanical parts maintenance	Skilled operator
Electrical part maintenance	Skilled operator
Cleaning maintenance	Skilled operator
Dismantling and scrapping	Skilled operator

The personnel in charge of operating the machine should be specifically trained, particularly in regard to safety issues; machine operators must have read and become familiar with this manual.



*FIORENTINI declines all responsibility for accidents involving persons or property caused by not adequately skilled, unauthorised operators.*

**3.5. SAFETY AND WARNING DEVICES**



- ***It is strictly forbidden to tamper with, remove or deactivate safety and warning devices while the machine is in operation.***
- ***The efficiency of safety and warning devices should be regularly checked (see point 5.1.).***

<b>Scrubbing brush guards</b>	The machine I115SSE is equipped with three (standard) brushes with nylon bristles that rotate during normal machine operation. Access to dangerous areas is limited by fixed guards provided in each area. These safety guards can only be removed intentionally. Removing a fixing element will cause the obvious separation of the guard from the machine.
<b>Roller centre brush guards</b>	The machine is equipped with a roller centre brush that rotates during normal use. Access to dangerous areas is limited by protective metal skirting plates provided in each area. These protective plates can only be removed intentionally. Removing a fixing element will cause the obvious separation of the guard from the machine.
<b>Warning devices</b>	<p>The machine I115SSE is equipped with several warning devices to alert anyone who happens to be within the machine working range:</p> <ul style="list-style-type: none"> <li>➤ a horn-type acoustic signal to warn any persons who are near the machine during normal use;</li> <li>➤ an intermittent acoustic signal (buzzer) to warn any nearby persons while the machine is reversing;</li> <li>➤ a visual signal (yellow flashing lights) to indicate that the machine is in operation;</li> <li>➤ lights for use in poorly lit areas.</li> </ul>

### 3.6 SAFETY SYSTEMS

The machine is equipped with the following safety systems:

- **Power outlet:** the same outlet used for the battery charger. In case of emergency, the machine must be unplugged pulling on the handle. Before using the machine, the operator should become familiar with its safety devices, to be able to automatically actuate them in an emergency. The safety devices should never be reset before having corrected the cause of an observed problem; contact a skilled technician if necessary.
- **Insufficient battery charge:** the combined machine electronic control board is provided with a safety system which deactivates all machine functions, with the exclusion of machine drive, whenever battery charge goes below 20%, in order to prolong your battery life.
- **Emergency seat switch:** The machine is equipped with a presence-sensing device: without an operator on board, it will not start, and if the driver leaves the machine without having first turned off the key switch, the machine will stop. To turn it back on, climb into the driver's seat, turn the key switch to its OFF position, wait a few seconds then return the key switch to its ON position.
- **Parking brake:** the machine is equipped with a brake lever located at the bottom left of the operator's seat. To engage it, pull the lever towards yourself; to deactivate it, push it down to the end of its stroke.
- **Safety rod:** the machine is equipped with a red safety rod located below the waste box, which should be operated whenever maintenance must be carried out under the box.



*Always remember to lock the front wheels with the parking brake before getting off the machine even when it is still on.*

### 3.7. RESIDUAL DANGERS

Ever since the design phase, FIORENTINI has analysed all the possible dangers related to machine use in order to eliminate or at the very least minimise the risk of injuries for machine operators. In order to minimise the risk associated with residual dangers, danger signs and indications of accident-prevention systems and procedures have been provided for machine operators.

#### **DANGER OF CRUSHING**

Crushing risks are possible:

- during side brush adjustment;
- during battery charging in case of sudden battery cover falling;
- during oil tank filling in case of sudden battery cover falling;
- during waste box filter inspection;
- during squeegee adjustment;
- during centre brush replacement and scrubbing;
- during waste box emptying;

During sweeping side brush, centre roller and scrubbing centre brush adjustment, the operator must ensure that the ignition key is not in its slot in the control panel, to prevent unwanted machine starts.

During battery charging, the operator must keep all body parts out of the battery compartment.



Danger pictograms are provided on the brush guards and collection tank (point 3.8.).

#### **DANGER OF CRUSHING AND SHEARING**

Crushing and shearing risks are possible:

- during waste box emptying;
- when installing or replacing batteries;

During waste box emptying, make sure that no-one is within dangerous areas with any body parts.

Danger pictograms are provided on the steering column safety guard (point 3.8.).

#### **RISK OF OVERTURNING**

Machine overturning is possible:



- during normal machine operation when going over slopes with a higher gradient than the recommended value and when the machine is used to clean uneven/bumpy surfaces (see 3.2)



- **Do not use the machine to scrub surfaces with gradients exceeding 10% or bumpy or uneven surfaces likely to affect the stability of the machine.**



*FIorentINI declines all responsibility for accidents involving persons or property caused by machine use on stability-affecting floors. The buyer must provide suitable signage to inform the user about the condition of the working surfaces.*

### **DANGER OF OVERHEATING**

Machine overheating is possible:

- during normal machine use, when oil can become very hot with resulting burning risks; to prevent these risks, an electric fan is provided to keep internal temperature lower (see 3.2).





- **Be extra careful when servicing any machine internal parts, especially after machine use. Regularly check electric fan efficiency.**




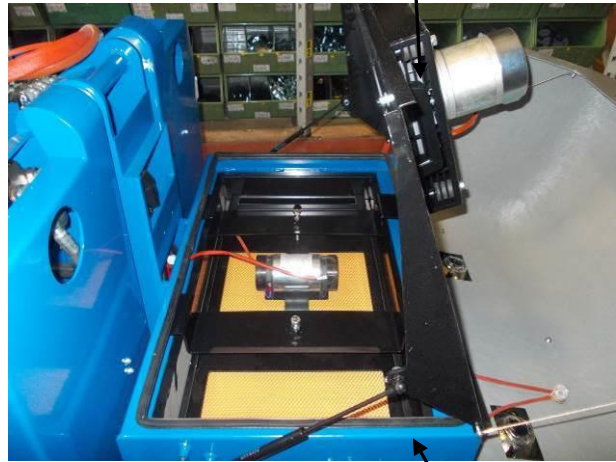
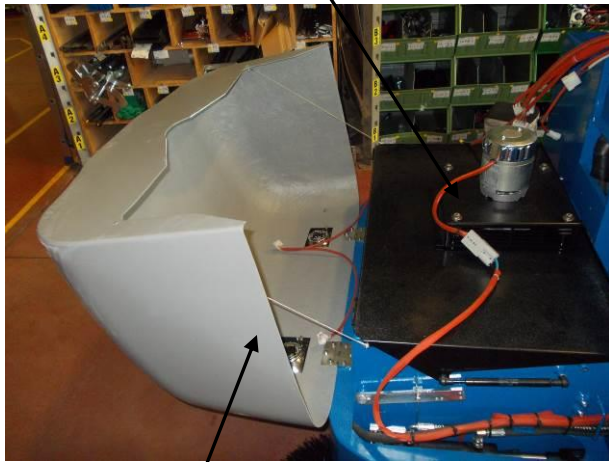
*FIorentINI declines all responsibility for accidents involving persons or property caused by machine use with the electric fan off or unsafe machine use.*


3.8. SAFETY SIGNS


The safety signs include signs indicating:

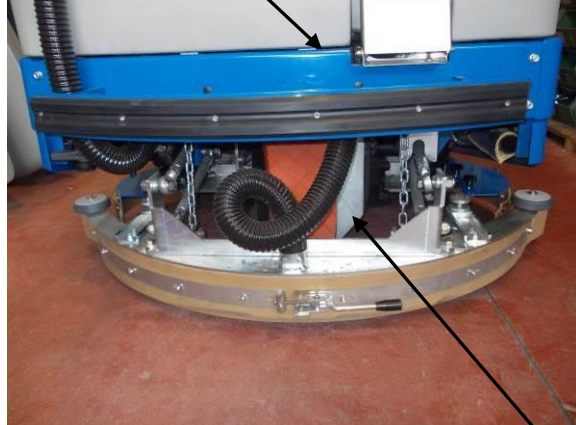
<b>DANGERS</b>		Danger signs are triangular with black pictograms on yellow background
<b>PROHIBITIONS</b>		Prohibition signs are round with black pictograms on white background and a red stripe


	<b>What is it?</b>	This sign warns that it is forbidden to remove safety guards from around moving parts.
	<b>What to do?</b>	During installation/maintenance, before removing guards always ensure that the ignition key is not in its slot in the control panel. During work, keep body parts off the dangerous areas and ensure that guards are securely fixed.




	<b>What is it?</b>	this sign indicates a crushing danger caused by moving parts or machine overturning risks
	<b>What to do?</b>	During installation or maintenance make sure that the ignition key is not in the dashboard.


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	<b>What is it?</b>	this sign indicates a crushing danger caused by moving parts or machine overturning risks
	<b>What to do?</b>	During installation or maintenance make sure that the ignition key is not in the dashboard.

	<b>What is it?</b>	Explosion risk during battery charging due to the released hydrogen.
	<b>What to do?</b>	During battery charging, ensure that the machine is under a suction hood or in a ventilated area and keep it away from heat sources and corrosive substances.



	<b>What is it?</b>	Danger of crushing caused by suction tank overturning.
	<b>What to do?</b>	During battery charging or tank filling, provide a special support

 ***If any signs become damaged, the purchaser must replace them with identical signage. It is strictly forbidden to remove or tamper with these signs.***

## 4. START-UP AND OPERATION INSTRUCTIONS

### 4.1. TRANSPORT AND HANDLING

The machine is delivered to the purchaser without any packaging and tied with straps. The side brushes and scrubbing brushes are removed before transport to prevent any damaging. Upon customer request, the machine can be packaged on a special pallet.



*The purchaser should check upon delivery that the machine has not been damaged during transport and that all the material listed in the transport documentation has been received; otherwise, the forwarders and manufacturer should be promptly informed. Unless otherwise agreed, purchased goods will travel at the purchaser's own risk.*

Handling must be carried out as follows:

TYPE OF PACKAGING	HANDLING EQUIPMENT	FIG.
Pallet	Fork lift truck	N. 4.1
None	The machine should be handled with a fork lift truck/overhead crane with a two-strap balance harness.	N. 4.2



*The harness straps used must be suitable for the load to lift. Handling operations should be carried out at very slow speed to prevent load swinging and loss of stability. Any operation performed incorrectly may damage the machine and expose operators to dangers.*



*Refer to point 2.3 for machine dimensions and weight. Machine handling should be carried out by authorised personnel trained for lifting equipment use only.*

#### LOADING DIAGRAM

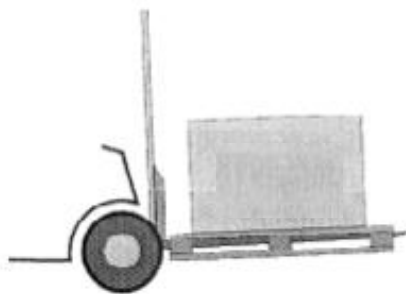


FIGURE 4.1

SI

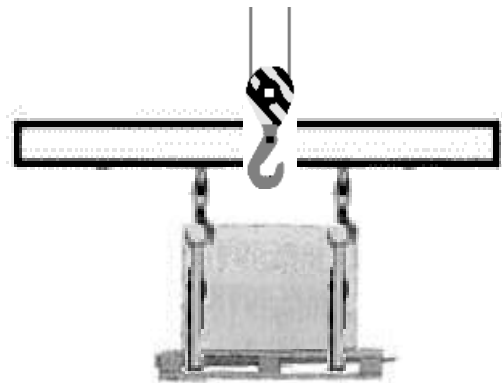


FIGURE 4.2



## **4.2. STORAGE**

If not immediately installed, the machine should be stored at a covered, dry location to ensure the perfect efficiency of all its parts. Relative humidity must be below 80% and the storage temperature must be between  $3^{\circ}\text{C} \leq$  and  $\leq + 45^{\circ}\text{C}$ .

## **4.3. MACHINE UNPACKING**

- Remove the fixing straps
- Rest the machine the floor.

## **4.4 UNPACKED MACHINE HANDLING**

- Inspect the machine and install the batteries if not already installed
- To prepare the machine for short distance handling after use, disconnect the battery cables and remove the brushes and the squeegee.

## 4.5. INSTALLATION



*Installation must be carried out by authorised personnel aware of the instructions contained in this manual.*

### 4.5.1 BATTERY INSTALLATION (battery powered version)

Follow these instructions for battery installation:

- lift the battery cover by removing both locking pins and lifting it by the handle (detail 1 in figure 4.3.1);
- open the right-hand side partition and remove the lower closure (detail 2 in figure 4.3.1);
- connect the battery cart (figure 4.3.2) to the special fixing points in the machine frame (detail 2 fig 4.3.4);
- slide the battery into the machine (fig. 4.3.3) and fix it by introducing the locking pin in its special seat (detail 1 fig 4.3.4);
- clean the matching surfaces and connect wirings;
- wheel away the battery cart and reassemble the lower battery closure;
- close the partition and the battery lid.



FIGURE 4.3.1

2



FIGURE 4.3.2





FIGURE 4.3.3



FIGURE 4.3.4

#### 4.5.2 BATTERY CHARGER INSTALLATION

The battery charging area must be provided with an efficient suction system for the gases released during charging. Alternatively, batteries must be charged in a dry, ventilated place, away from heat sources and corrosive environments.

Protect the factory power grid with a time-delay type switch or a fuse with a load exceeding the battery charger maximum load.

Observe the correct polarity of the battery outlet.

Plug the battery charger into the machine outlet.

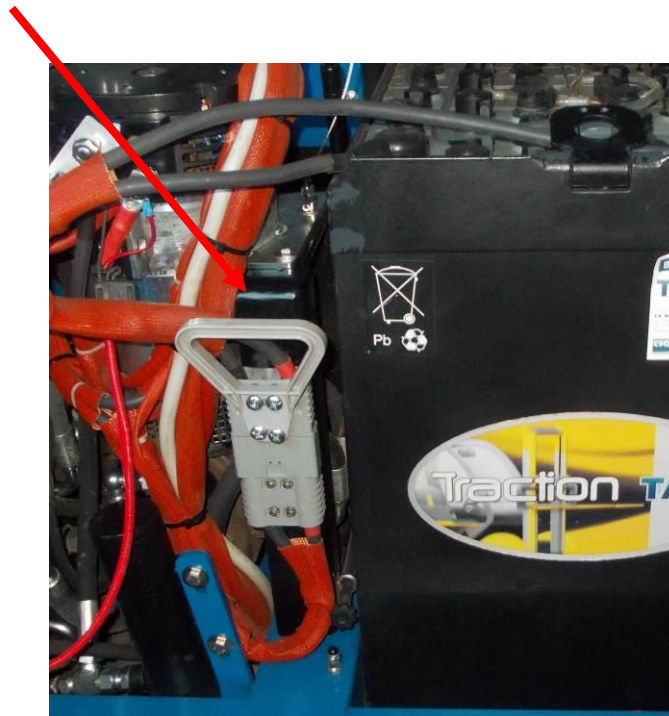
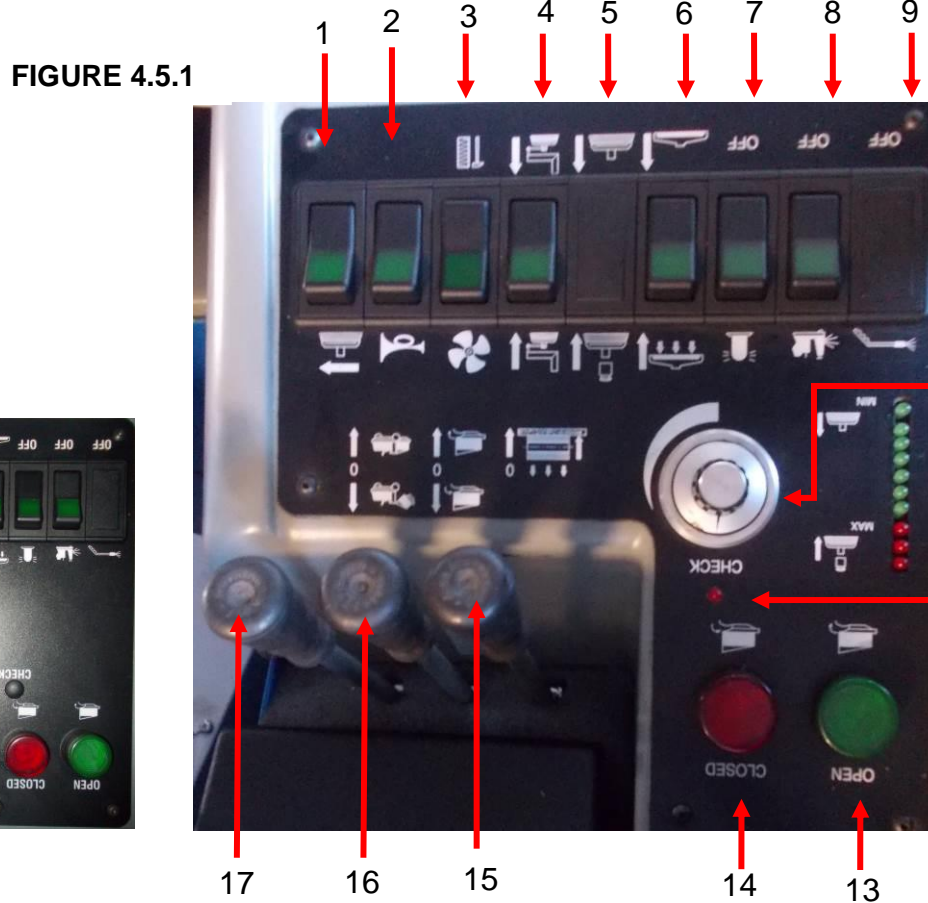


FIGURE 4.4

## 4.6. CONTROL AND MONITORING DEVICES

### 4.6.1. CONTROL PANEL

The control panel consists of a number of switches used to activate/deactivate all machine functions. Each switch is associated with a pictogram uniquely representing the switch function. The switch panel is pictured in figure 4.5, while the operation of each switch is described in the table here below.



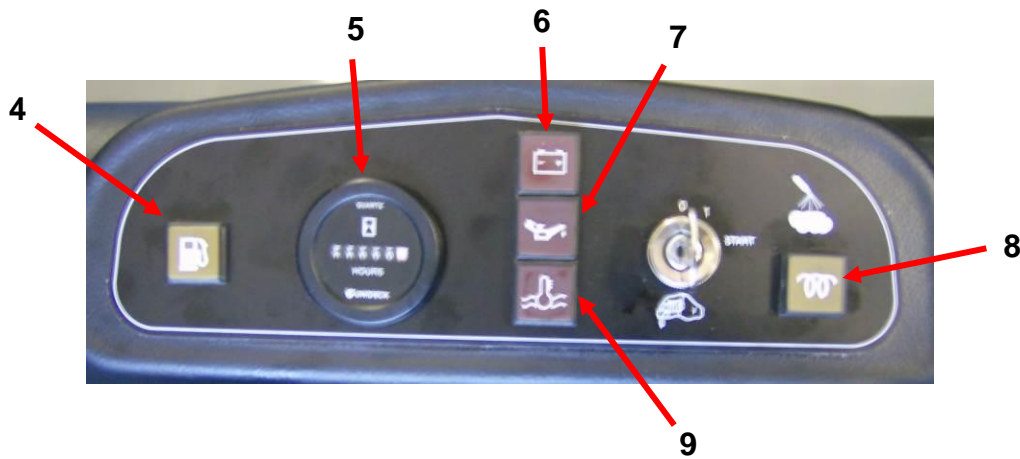
1	Brush plate movement control switch
2	Horn control button
3	Filter shaking and waste box suction control switch
4	Front side brushes actuation switch
5	Scrubbing brush plate pressure switch (Diesel and gas versions only - see figure 4.5.2)
6	Squeegee suction switch
7	Flashing light switch
8	Headlight switch
9	Pressure cleaner actuation switch (optional)
10	Scrubbing brush pressure adjustment potentiometer (battery version only)
11	Scrubbing brush pressure indicator
12	Diagnostic LED
13	Open flap green warning light
14	Closed flap red warning light
15	Centre brush actuation lever
16	Flap opening and closing lever
17	Waste box lifting lever



-Battery version



-Diesel version



-Gas version



1	Emergency stop button
2	Hour meter with Battery charge level indicator
3	Key switch
4	Fuel level light
5	Hour meter
6	Ignition battery charge light
7	Motor oil light
8	Preheating light
9	Engine water temperature light

**4.6.2. CONTROL BOARD DIAGNOSTICS**

When the control system detects a fault, the machine will stop due to an error condition. The type of error can be diagnosed by checking the diagnostic LED (detail 12 figure 4.5.1).

- **LED OFF:** the logic board is off or on without any errors;
- **LED ON WITH STEADY LIGHT:** the board is being programmed via the console or PC software;
- **LED ON WITH FLASHING LIGHT – ERRORS:** the LED will flash a given number of times corresponding to the code of the observed error, followed by a pause.

The machine must be restarted to resume normal operation.

A table of the possible errors is provided here below.

N. OF FLASHES	ERROR CODE	ERROR	POSSIBLE CAUSES AND REMEDIES
2	22	Automatic acquisition error	Automatic acquisition could not be completed.
3	1D	Too low input voltage	Input voltage has gone below Vmin (1.5V/el.) Check the battery and its wiring.
4	1E	Too high input voltage	Input voltage has exceeded Vmax (2.35V/el.) or the maximum supported value. Check the battery wiring.
5	5E	Brush overcurrent	Brush current values have exceeded the system settings. Check the wiring, the motor and ensure that free rotation is not hindered.
6	5D	Brush jack overcurrent	Brush jack current values have exceeded the system settings. Check the wiring, the motor and the mechanical parts.
7	FF	Squeegee jack overcurrent	Squeegee jack current values have exceeded the system settings. Check the wiring, the motor and the mechanical parts.
9	27	E2prom programming error	Certain settings are incorrect. Check programming.
10	2D	E2prom checksum error	The programming procedure was interrupted. The procedure must be repeated
11	28	Program memory error	Contact Fiorentini technicians
12	29	Setting memory error	Contact Fiorentini technicians
13	2F	Device not registered	Contact Fiorentini technicians

#### 4.7. OPERATION

The machine I115SS is designed for sweeping and scrubbing floors. To ensure efficient cleaning, carry out the following operations: actuate the sweeping centre roller and side brush control lever and actuate the sweeping unit suction control lever. After activating the unit, specific experience will help you choose the right type of scrubbing brush and detergent and determine whether or not a double cleaning cycle is necessary. To carry out wet scrubbing, the distributor levers should be operated to: lower the squeegee, control the scrubbing brushes, turn on the solution dispensing tap (and adjust the quantity of water) and start the effluent suction motor (by pressing the switch).

After completing scrubbing operations, before drying completion, the water tap should be turned off as this is independent from the forward travelling foot control. If the floor is very dirty, a double cleaning cycle is advisable. Control initial sweeping followed by scrubbing with the squeegee in its raised position and the scrubbing brushes in their working position; after starting the brushes and turning on the water tap, the first cleaning cycle will be performed over a surface of a few dozen square metres. The cleaning solution must be left on the floor to dissolve dirt by acting as a solvent until it is collected during the second cleaning cycle. The second cleaning cycle must be performed with lowered brushes, tap turned on and the squeegee in contact with the floor (suction switch activated).

During wet scrubbing, the machine can wash outside of its footprint, too, by causing the plate to travel out to the right. This function is also used for brush changing.



*Motor-driven machines should always work at 3/4 of the highest rpm, to ensure that brushes and motors work correctly.*

#### **N.B.:**



*Before carrying out any operation, check that the guards are in their design position and well secured.*

#### 4.7.1 PREPARING AND STARTING THE MACHINE

If the cleaning machine battery charger is plugged in, unplug the battery charger connected to the machine battery and connect the battery plug to the machine power plug (fig 4.6), then fill the machine with water through the filler plug (detail 1 figure 4.7).

Check the oil level via the special indicator in the top part of the tank. To obtain access to the hydraulic oil tank, open the machine left side panel (figure 4.8).

The machine can now be powered on by turning the main key switch when the operator is sitting in the driver's seat.



FIGURE 4.6

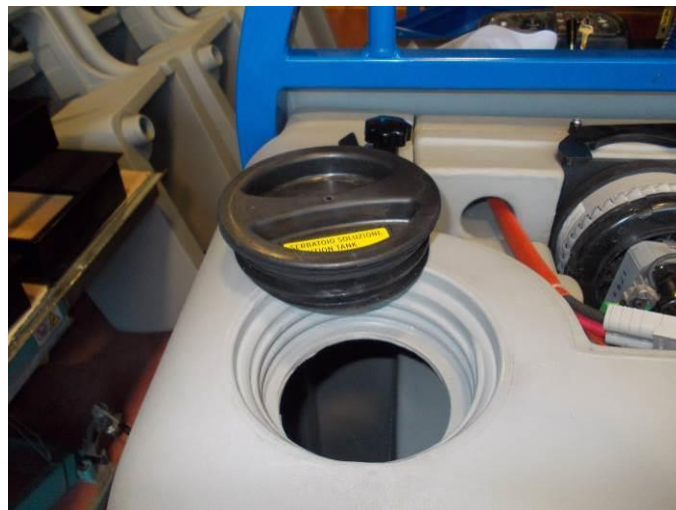


FIGURE 4.7





FIGURE 4.8



#### 4.7.2 CHOOSING THE RIGHT DETERGENT

Choosing the right detergent is very important for efficient floor cleaning. Too strong a detergent could cause damages. Low-foaming detergents or foam preventing additives should be used to prevent damages to the suction motor; if these products cannot be procured, try adding 50cc of common wine vinegar to the recovery tank before starting the cleaning cycle.



*Make sure that the detergent used is suitable for the surface to clean. FIORENTINI S.p.A. will not accept any responsibility for damages caused by too aggressive detergents.*

#### 4.7.3 DRIVING POSITION ADJUSTMENT

The operator seat can be adjusted to ensure a personalised ergonomic sitting position according to the operator's physical characteristics.

- Press the lever and move the seat forward or backward with the other hand to obtain ideal positioning (detail 1 figure 4.9);

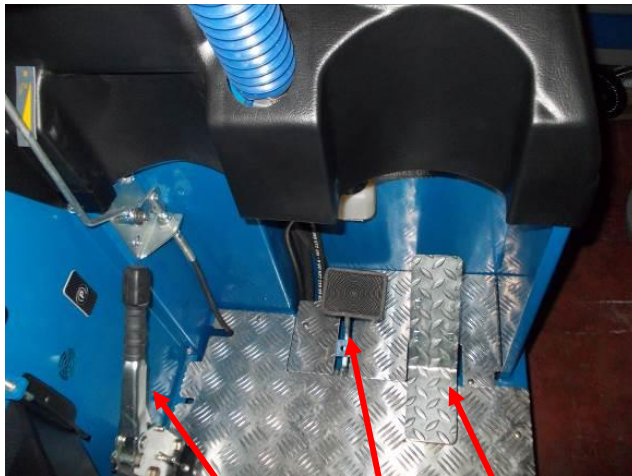


FIGURE 4.9

**4.7.4 OPERATOR WORKSTATION CONTROLS**

The controls available at the operator's workstation are:

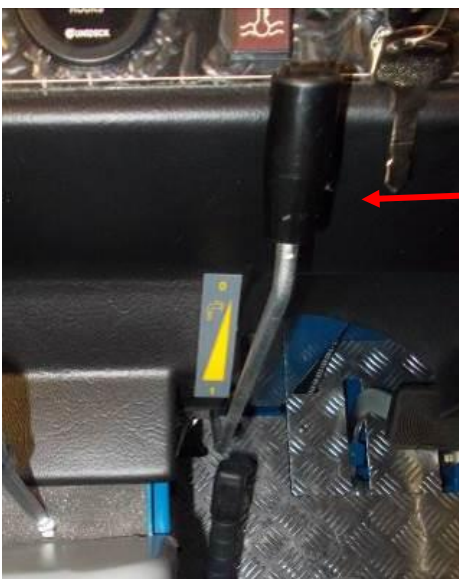
- **Accelerator pedal** (detail 1 figure 4.10): by depressing the front end of the pedal with your foot you will control the forward travelling direction, while by depressing the rear end of the pedal you will reverse the machine.
- **Parking brake** (detail 2 figure 4.10): see paragraph 3.6.
- **Service brake** (detail 3 figure 4.10): by pressing the pedal the machine will stop, by releasing it normal operation will be resumed. It is a hydraulic-type brake with an oil tank located below the front dashboard (detail 4 figure 4.10).
- **Solution water lever** (detail 5 figure 4.10): by following the instructions in the data plate next to the lever, the solution water tap can be turned on or off.



2 3 1



4 1



5

**FIGURE 4.10**

#### 4.7.5 SQUEEGEE ADJUSTMENT

To guarantee perfect drying, it is essential for the squeegee to be perfectly adjusted.

This type of squeegee is very efficient in collecting water to facilitate pipe suction, but it is very sensitive to parallelism with the ground. To adjust the squeegee:

- remove the key from the control panel to prevent unwanted ignition;
- adjust the squeegee angle, by working the 4 hex nuts (detail 1 figure 4.11).
- adjust pressure with the special ring nuts used to adjust the height of the wheels (detail 2 figure 4.11)

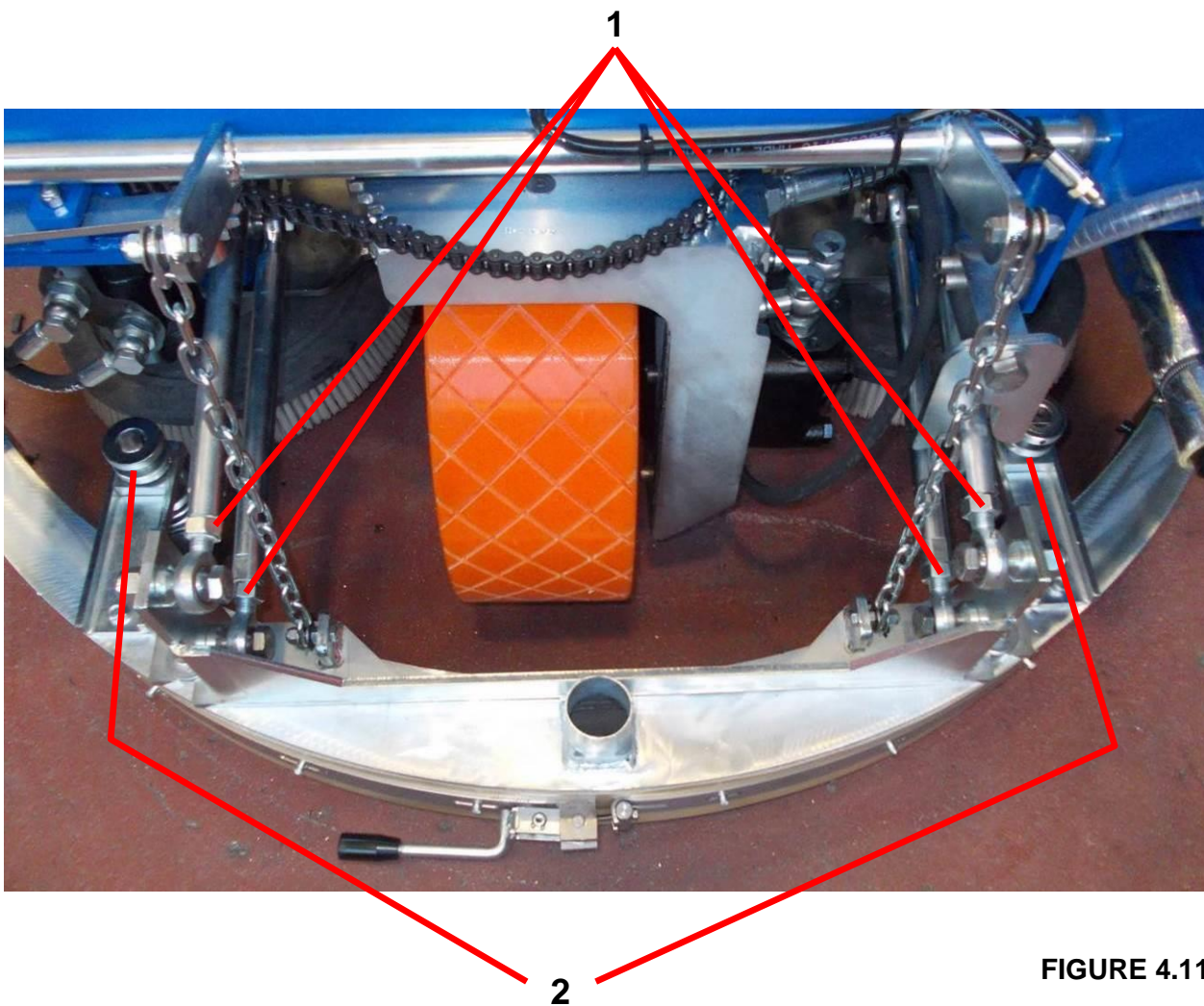


FIGURE 4.11



*It is very important that the two wheels are adjusted to ensure that the squeegee blades are parallel and rest firmly on the ground.*



**4.7.7 WATER DRAINING, CONE FILTER CLEANING AND WASTE BOX EMPTYING**

**Waste water draining:** hold the pipe (figure 4.12) and lift it just slightly to free it from its support, then place it over a sewer hole. Undo the cap; after draining completion, replace the cap and place the pipe back in its support.



FIGURE 4.12



**Recovery tank cleaning:** carry out recovery tank cleaning by using the drain located in the bottom right corner on the back of the machine (figure 4.13):

- pull down the chute (figure 4.13)
- place a large container under it or park the machine near a sewer hole
- perform these operations in reverse order to complete the process.



FIGURE 4.13



*Before opening the recovery tank draining cap, ensure that water has been drained through the pipe (fig.4.12).*

**Solution water draining:** a solution draining tap is provided in the bottom left corner below the solution tank (detail 1 figure 4.13):

- park the machine near a sewer hole;
- turn on the tap ensuring that water does not fall on the squeegee to avoid splashing;
- turn off the tap again.



**FIGURE 4.13**

**Solution cone filter cleaning:** the solution cone filter is located in the right rear part of the frame:

- remove the key from the dashboard to prevent unwanted ignition and close back the solution tap with the special lever;
- from behind the machine, bend down and reach out with your hand to grasp the filter (figure 4.14);
- screw out the transparent guard and remove the filter;
- clean it and replace it locking it with its guard.



**FIGURE 4.14**

**Waste box emptying:** carry out the following operations to empty the waste box:

- remove the key from the dashboard to prevent unwanted ignition and turn off the suction fan motor;
- close the flap;
- lift the waste box by working the lever;
- hold down the filter shaking button for several seconds;
- lift the box by using the corresponding lever on the distributor;
- hold the box above a rubbish bin;
- open the flap;
- press the filter shaker switch once again;
- move away from the bin making sure no-one is near the box then lower the container.

**Waste box safety:** before carrying out any operations with a raised box, ensure that the red colour lever (figure 4.15) has been secured as follows:

- release the lever;
- fix the tube holder spring to the hydraulic cylinder stem.

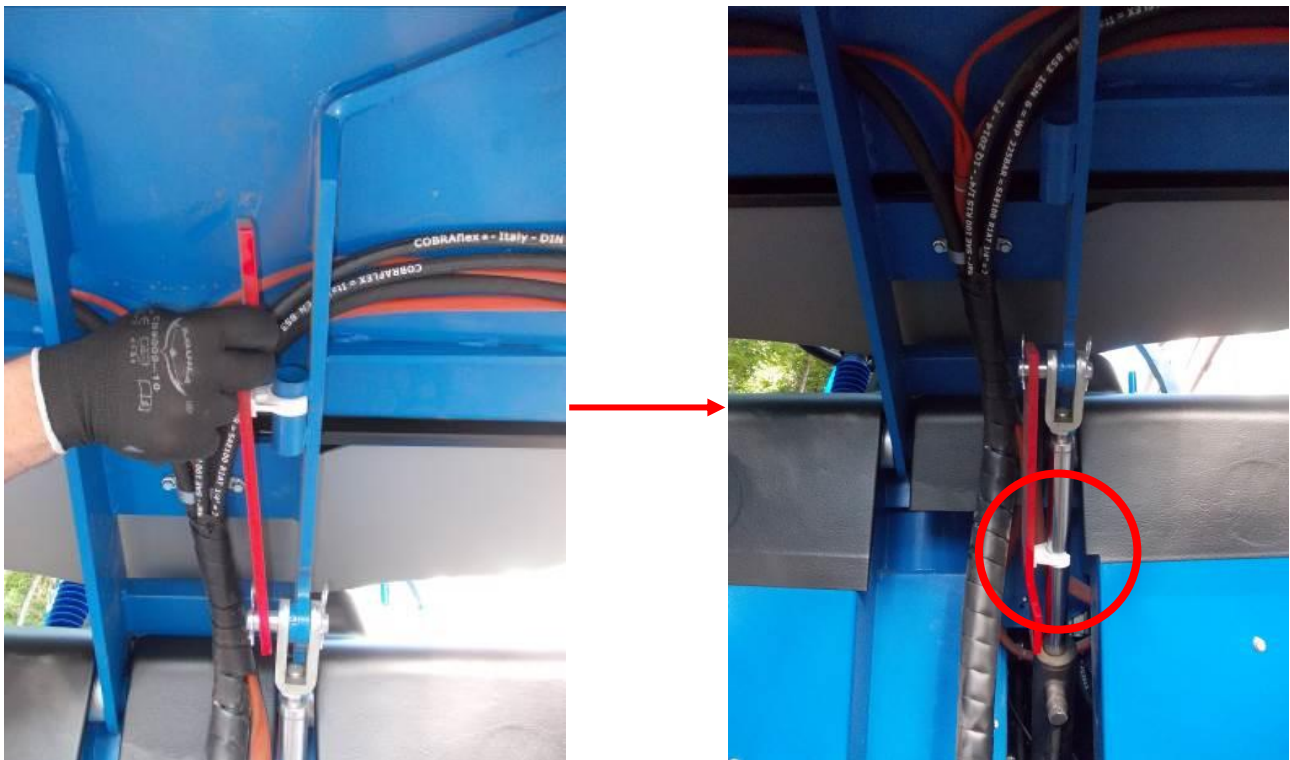


FIGURE 4.15



#### 4.7.8 SWEEPING BRUSHES REPLACEMENT AND MAINTENANCE

##### Centre brush replacement:

- open the right-hand side guard through the release hinge (fig. 4.16)
- screw out the 4 wing nuts fixing the rubber dust seal stop plate (figure 4.17).
- remove the stop plate and take out the rubber dust seal. (fig. 4.18)
- loosen the screw (detail 1, figure 4.19) and open the brush support guard (fig. 4.19)
- remove the brush (detail 1 figure 4.20)
- replace the brush checking that it is inserted in the driving flange pins on the opposite side (detail 1 figure 4.18)
- now repeat the disassembly operations described here above in reverse order.



FIGURE 4.16



FIGURE 4.17

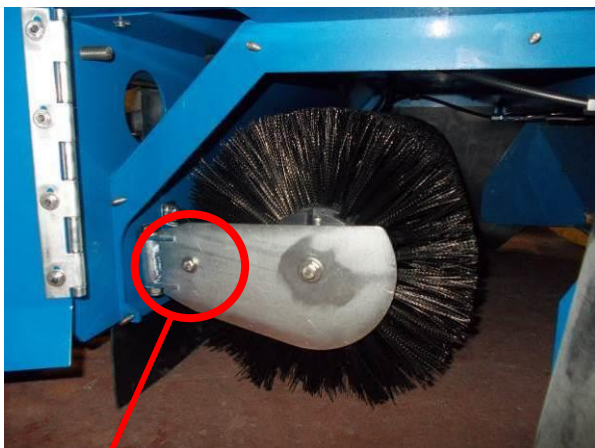


FIGURE 4.19

1



FIGURE 4.18





FIGURE 4.20

**Centre brush replacement:**

- To adjust the height of the centre brush, turn the nut on the left side of the frame next to the hydraulic jack (fig.4.21): turn counter-clockwise to lower the brush and in the opposite direction to lift it.



FIGURE 4.21

**Side brush replacement:**

- Lift the waste box to make brush replacement easier;
- remove the key from the control panel to prevent unwanted ignition;
- remove the three nuts and washers (detail 1, fig. 4.22);
- remove the centre screw (detail 2, fig. 4.22);
- remove the brush and fit the replacement;

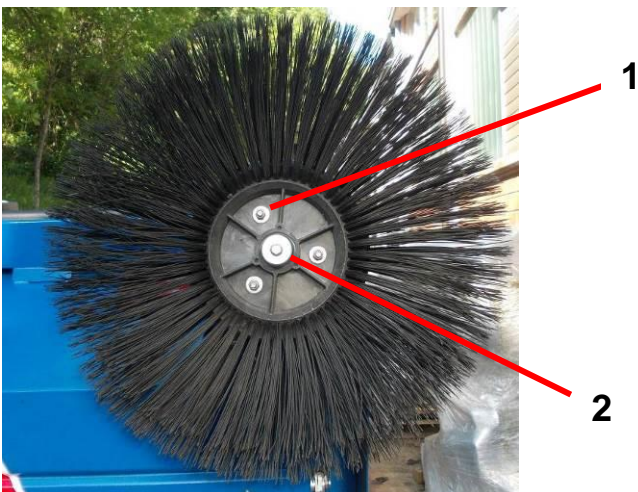


FIGURE 4.22

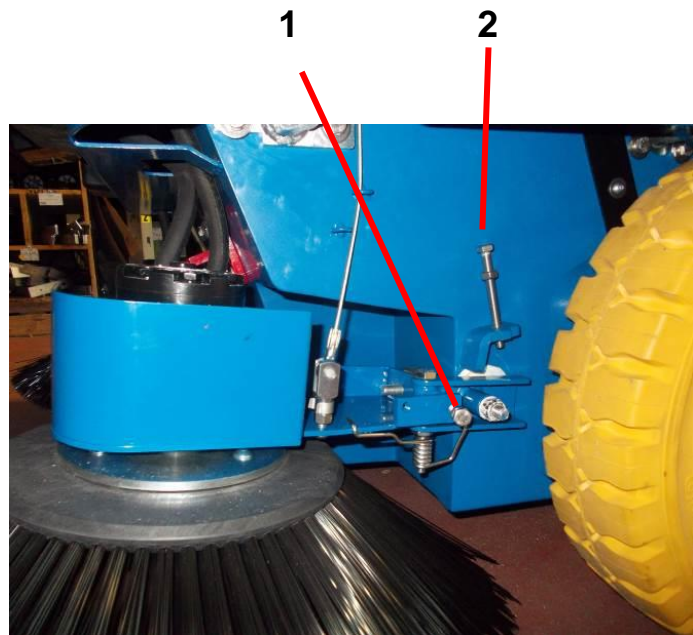
**Side brush adjustment:**

There are three possible adjustments: the height, the opening angle to the outside (caused by impact against an object) and the pressure applied to the floor.

- by loosening the rounded screw on the brush shaft plate, the steel cable height is adjusted (fig.4.23).
- by screwing in or out the hex screw (detail 1 fig.4.24) the hydraulic motor support opening angle is adjusted;
- by screwing in or out the hex screw (detail 2 fig.4.24) the pressure applied to the floor is adjusted.



**FIGURE 4.23**



**FIGURE 4.24**



**FIGURE 4.25**



*To ensure a correct working pressure, the side brushes must be in contact with the floor to half-way up the bristles (see fig.4.25)*

#### 4.7.9 SCRUBBING BRUSHES AND SPLASH GUARD REPLACEMENT.

Proceed as follows to replace the scrubbing brushes:

- remove the key from the dashboard to prevent unwanted ignition after moving the plate all the way out by pressing the button on the panel (detail 1 figure 4.26);
- open the metal skirting panel (detail 2 figure 4.26);
- loosen the right-hand guard knobs (part 3 figure 4.26);
- turn the right-hand brush until the release pin becomes visible (detail 4 figure 4.26);
- remove the brush;
- to install a new brush, ensure that it is in line with the coupling axis then firmly push it up;
- pull in the plate, open the left-hand guard and repeat the previously performed operations;
- after fitting the brushes, re-install the guards;

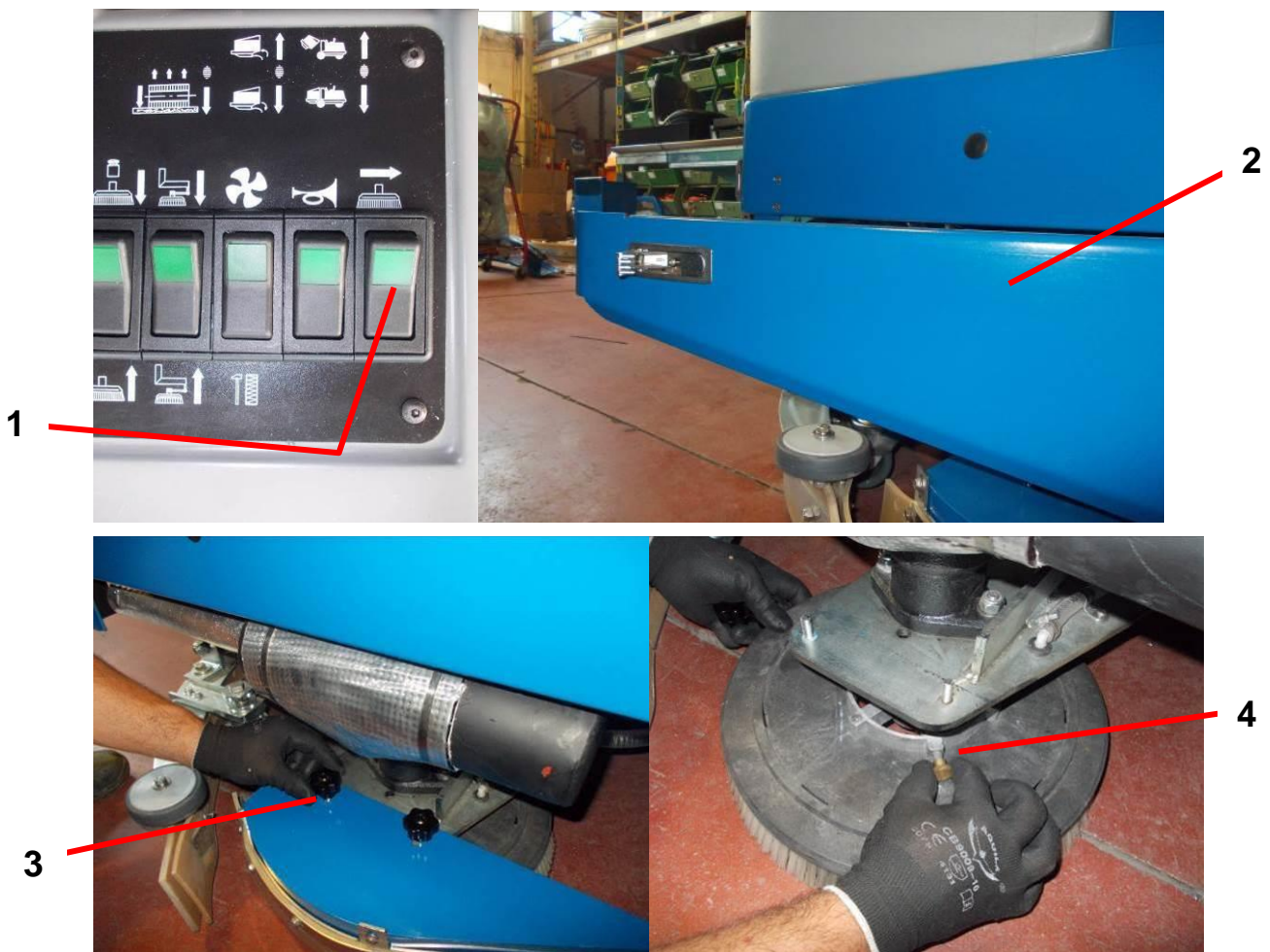


FIGURE 4.26



*Before restarting the machine, ensure that the protective guards have been correctly replaced.*



To replace the right-hand and left-hand splash guards, loosen the 7 screws as shown in figure 4.27; by loosening the 3 screws in the slot, height can be adjusted, too (detail 1 figure 4.27).

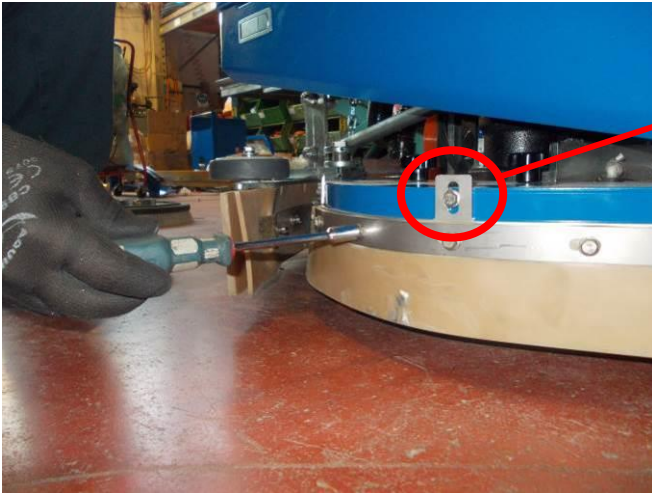


FIGURE N° 4.27

#### 4.7.10 SQUEEGEE REPLACEMENT

The squeegee blades must be replaced when the edges become worn; the blade edges must be sharp to ensure perfect drying.

To replace the squeegee proceed as follows:

- Remove the squeegee from the machine by loosening the screw in figure 4.28 and place it on a workbench or leave it on the floor (figure 4.29)
- Loosen the strip by turning the lever (fig. 4.30/ 31) and screw out the two side wing nuts (fig. 4.32)
- Remove the steel strips (fig. 4.33)
- Perform the same operations in reverse order to fit new blades then adjust the squeegee (fig. 4.34).

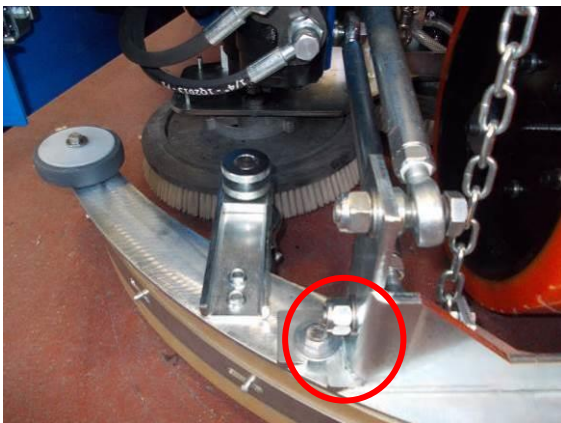


FIGURE N° 4.28



FIGURE N° 4.29

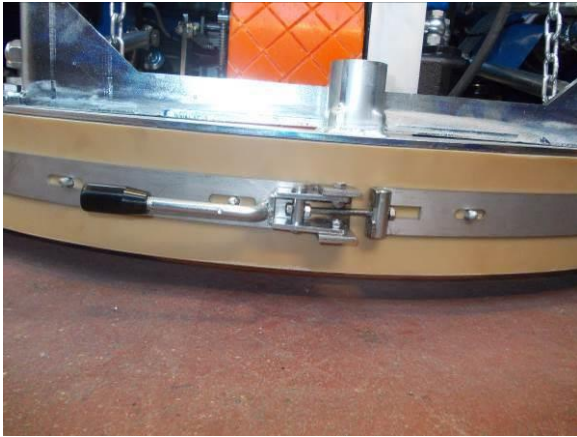


FIGURE N° 4.30



FIGURE N° 4.31



FIGURE N° 4.33



FIGURE N° 4.32



FIGURE N° 4.34

#### 4.7.11 SWEEPING UNIT SUCTION FILTER AND FILTER SHAKING MOTOR REPLACEMENT

- Before carrying out these operations remove the key from the dashboard;
- open the machine front guard (figure 4.35)
- lift the box lid (figure 4.36)
- loosen the two hex screws and remove the frame (detail 1 figure 4.37)
- remove the filter shaking motor support (detail 2 figure 4.37)
- unplug the filter shaking motor connector;
- lift and replace the damaged or clogged filter (detail 3 figure 4.37)
- now reverse the order of the above operations



FIGURE 4.35

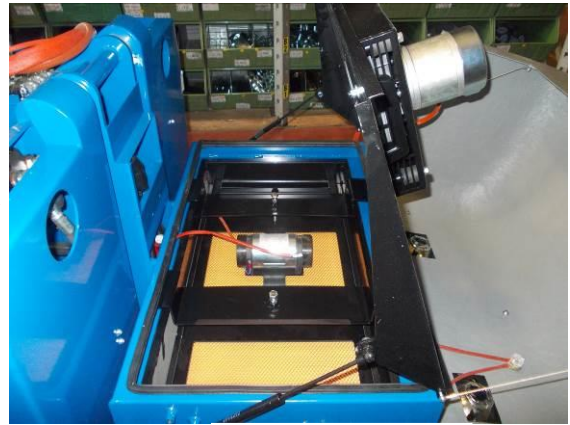


FIGURE 4.36

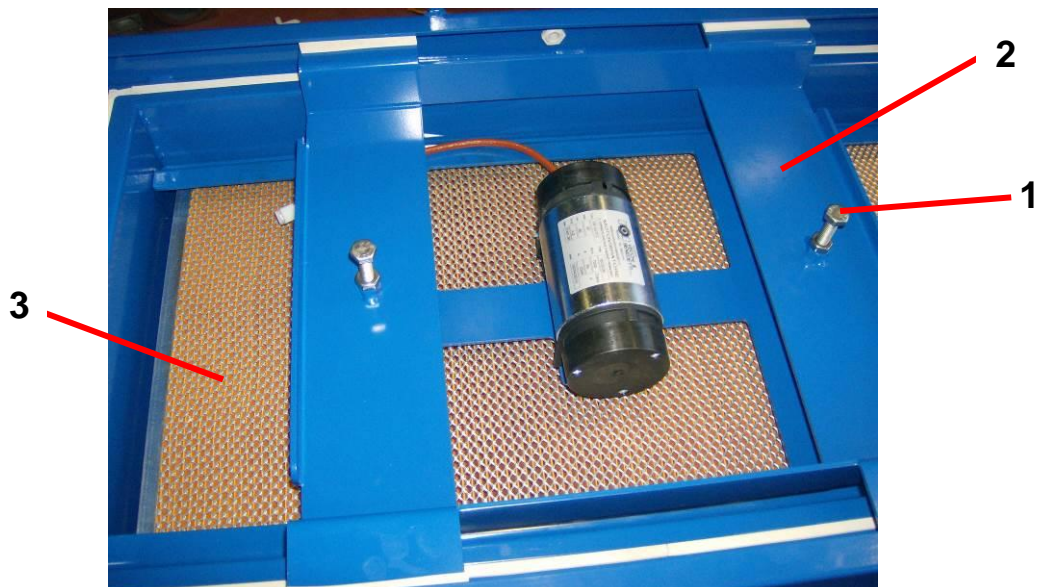


FIGURE 4.37



#### 4.7.12 RH/LH RUBBER BLADE REPLACEMENT (centre brush).

Perform the following operations to replace the RH/LH lateral rubber blades:

- remove the key from the dashboard to prevent unwanted ignition;
- open the RH or LH side guard (figure 4.38);
- screw out the wing nuts (figure 4.39);
- remove the rubber blade fixing strip and remove the blade (figure 4.40);
- repeat the disassembly operations described here above in reverse order.



FIGURE N° 4.38



FIGURE N° 4.39



FIGURE N° 4.41



FIGURE N° 4.40



*Ensure that the rubber dust seal is flush with the floor after completing the replacement.*

### 4.7.13 HYDRAULIC OIL TOP-UP AND DRAINING

As a general rule, if there aren't any leaks from the couplings or hydraulic system pipes, oil level will remain constant; however, it sometimes becomes necessary during services and after leaks to top up the oil level by opening the cap shown in the photo (figure 4.42) after lifting the battery cover.

To access the hydraulic oil drain pipe open the left-hand guard (figure 4.43) and after procuring a big enough container unscrew the cap (figure 4.44).

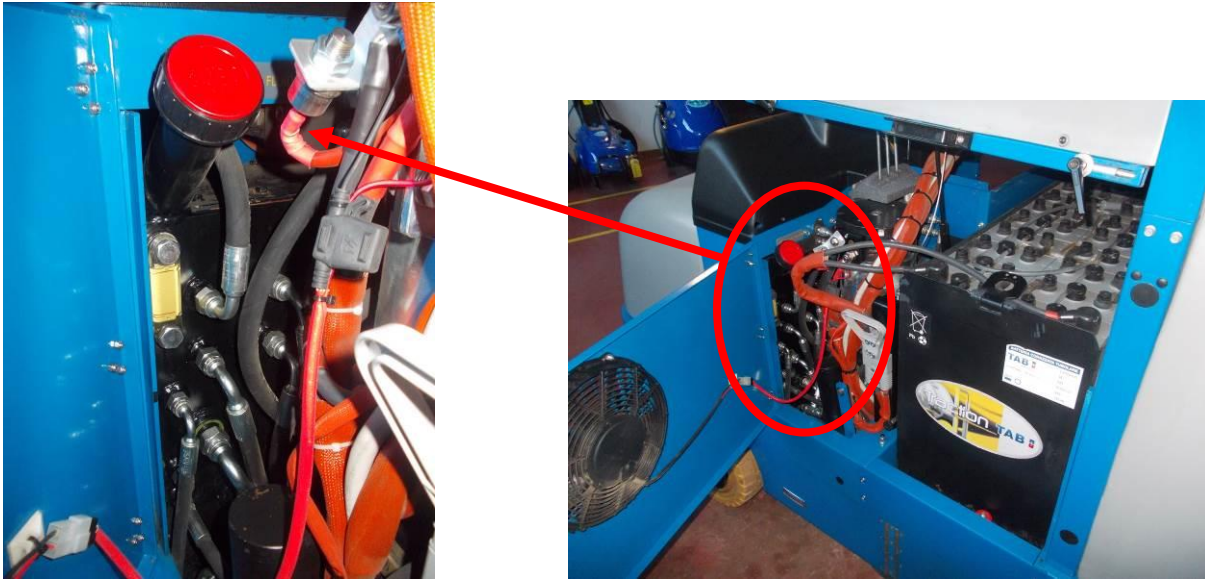


FIGURE N° 4.42



FIGURE N° 4.43



FIGURE N° 4.44




## 5. MAINTENANCE

### 5.1. ROUTINE MAINTENANCE

Carrying out maintenance at regular intervals is extremely important to ensure the floor scrubber efficiency and prolong its working life to the end of the warranty time. The performed services should be logged in writing by using the special form contained in this manual.



- *Trained personnel only may service the machine and in particular, its electric and electromechanical parts. Specific tools and equipment should be used according to the type of service.*
- *For servicing and spare part requirements exclusively contact FIORENTINI S.p.A. (point 7.1. /7.2.).*

OPERATION	TASKS	FREQUENCY
Cleaning	➤ Clean the recovery tank	Daily
	 <ul style="list-style-type: none"> <li>• <i>Do not use corrosive substances.</i></li> <li>• <i>Do not use pressurised water jets.</i></li> </ul>	
	<ul style="list-style-type: none"> <li>➤ Check the cleanness of the suction pipes and squeegee</li> <li>➤ Check and clean the clean water cone filter</li> </ul>	Weekly
Checks	➤ Check the condition of the squeegee rubber suction blades	Every 2 weeks
	➤ Check the battery water level	Weekly
	Check the clean water tank filter (OPTIONAL)	Monthly
	Check the braking system	Every 3 months
	Check battery cable connections	Every 6 months
	Check the brushes of each motor	Yearly
	<ul style="list-style-type: none"> <li>➤ Check the safety devices</li> <li>➤ Check the wiring system</li> </ul>	Yearly

### 5.2 BATTERY MAINTENANCE (battery powered version) .....

- The operator is expected to check the battery state of charge while the machine is in operation via the battery charge indicator on the dashboard



- Leave the battery compartment open during charging*
- *Do not use naked flames or smoke near batteries*
  - *Warning: battery acid is corrosive*
  - *Do not produce sparks near batteries*
  - *Battery gases are explosive*
  - *Do not reverse battery polarity*

### **5.2.1 HYDROMETRY**

The battery charge state should be checked while the batteries are charging by using a hydrometer. Proceed as follows:

- By using a syringe hydrometer draw a small quantity of electrolyte to cause the float to rise to the surface;
- Make sure that its top does not touch the rubber bulb or sticks to the glass walls under the effect of capillarity.
- For hydrometric measurements, after adding distilled water wait for density to become homogeneous throughout the volume of liquid contained in the element.

### **5.2.2 WATER TOP-UPS**

- Add distilled water to each battery cell before charging to bring liquid level to 6 mm above the plates.
- This operation should be repeated whenever the level goes down, or in any case, at no more than one week's intervals.

### **5.2.3 CHARGE LIMITS**

Battery charging is not necessary if, at end of a day's work, hydrometric values have not gone below 1.24 (28 Bè). The highest recommended temperature is 45°C. If the electrolyte temperature is 10/12 °C higher than the environment temperature, the batteries could overcharge regardless of the actually reached temperature.

### **5.2.4 STANDBY OR INACTIVE BATTERIES**

Inactive batteries will lose their charge spontaneously (self discharge). If a battery inactivity period is expected, carry out the following operations:

- Charge the batteries once a month by selecting a "charge end" current intensity, until considerable gas development is observed in all the cells, and voltage and specific gravity readings remain constant for 3-4 hours;
- This should also be done if specific gravity measurements are high. Store inactive batteries in a dry place

### 5.2.5 Battery charger technical characteristics

The battery charger should have the following characteristics:

**INPUT V 230, Hz 50, A5**

**OUTPUT V 36, A 30**



Check recommended battery specifications in section 2.3 TECHNICAL DATA SHEET.

### 5.2.6 BATTERY DISPOSAL

Batteries are classified as "toxic and hazardous" waste. For disposal purposes, they should be committed to specialised, specifically authorised companies whose qualifications must be ascertained by the battery owners. Temporary battery storage before collection by a specialised disposal company must be in line with the following legal requirements:

- A temporary storage authorisation must be obtained
- The batteries must be sealed in plastic containers having capacities not lower than the volume of the electrolyte contained in the batteries, or in any case, stored in such a way as to prevent rainwater seeping into the storage containers.

### 5.3 ENGINE MAINTENANCE (Diesel/Gas versions).....

#### 5.3.1 ENGINE REMOVAL

In order to make the machine IC engine maintenance operations easier, a system has been created enabling to partly remove it from the machine.

Remove the engine from the machine by following these instructions:

- Remove the 2 M12 screws fixing the engine to the frame (detail 1 figure 5.1) and disconnect the feed yoke (detail 2 figure 5.1) (both parts can be accessed from the cover located under the seat on the right side of the machine);
- Lift the top cover (detail 2 figure 5.2), open the left-hand side partition and remove the lower closure (detail 1 figure 5.2);
- Disconnect the air inlet hose from the air filter (figure 5.3);
- Remove the engine (figure 5.4);
- To reinstall the engine, reverse the order of the above operations

FIGURE 5.1

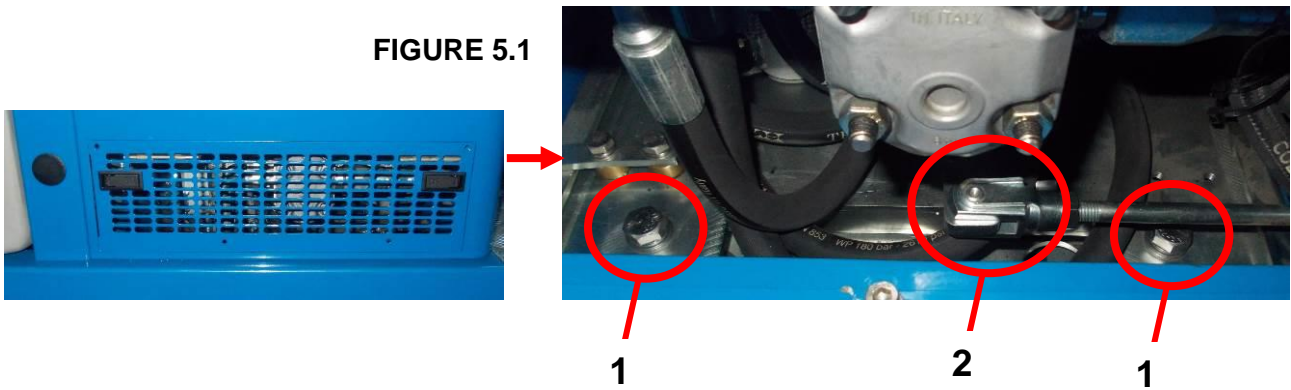


FIGURE 5.2

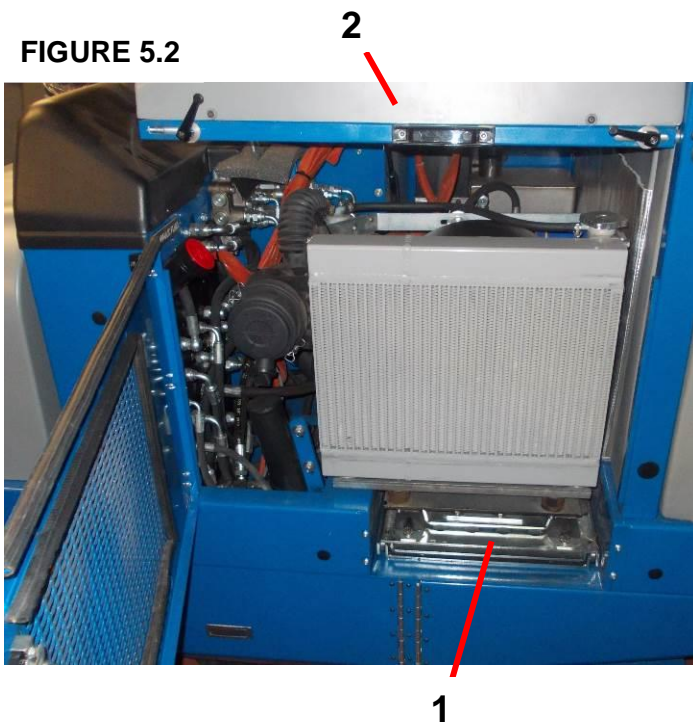


FIGURE 5.3



FIGURE 5.4



### 5.3.2 MOTOR MAINTENANCE



The summary tables of the checks to carry out are contained in the engine "OPERATOR MANUAL" supplied with the machine

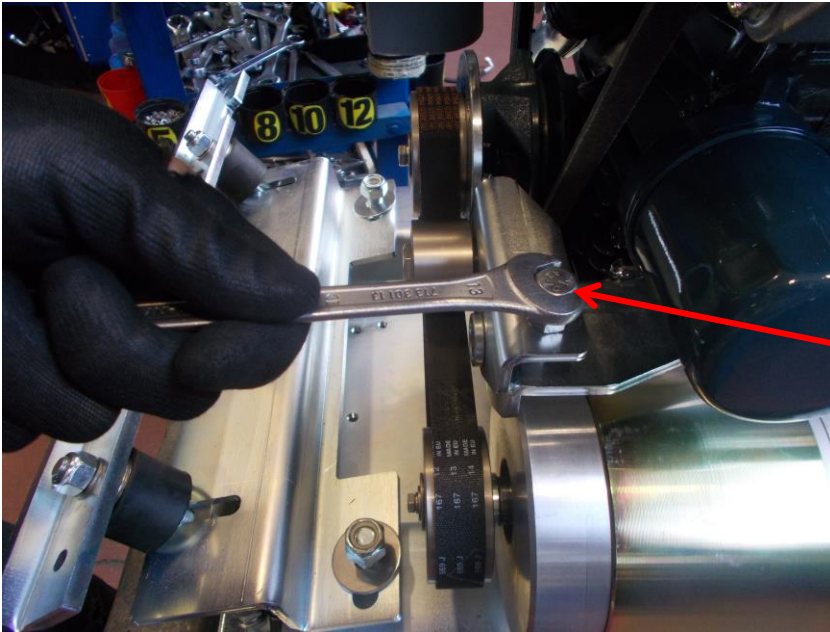
In addition to the inspection schedules, the operator manual contains all the procedures and data useful to carry out efficient machine maintenance.

### 5.3.3 DYNAMO MOTOR BELT REPLACEMENT

Follow the below instructions to replace the dynamo motor belt:

- Remove the ignition key from the control pane;
- Remove the motor;
- Loose the exagonal screw on the bracket (figure 5.1 part.1);
- Loose the screw on the bushing and remove the bracket (figure 5.1 part.2);
- Replace the worn belt (figura 5.1 part.3);
- Repeat the inverse operations





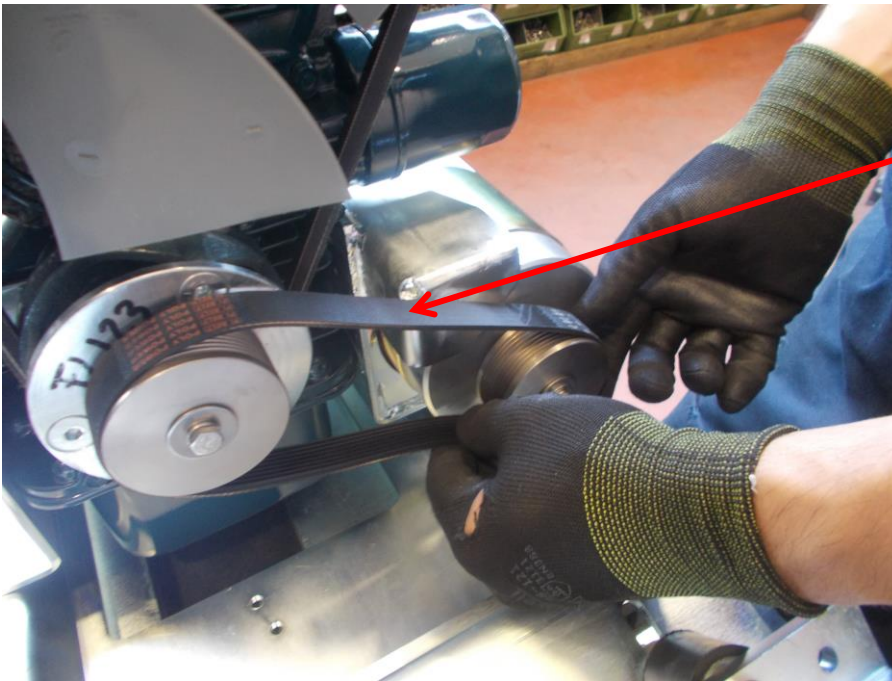
1



2

FIGURE 5.5





3

FIGURE 5.5

#### 5.4 SUCTION MOTOR AND RECOVERY TANK FLOAT MAINTENANCE

The suction motor should be regularly checked and cleaned every six months; the brushes should be checked and replaced, too - if necessary.

Suction motor maintenance should be carried out as follows:

- after removing the key from the dashboard, lift the motor cover by loosening the two knobs on the sides (detail 1 figure 5.5);
- unplug the connector plug (detail 2 figure 5.5.);
- unscrew the knob locking the bracket against the two motors (detail 3 figure 5.5);
- remove the motors and check brush wear (detail 4 figure 5.5);
- release the sponge filter below the motor; the filter can then be removed, washed and then replaced;
- through the suction motor front hole, check the suction fan.
- To reassemble, reverse the order of the above operations.

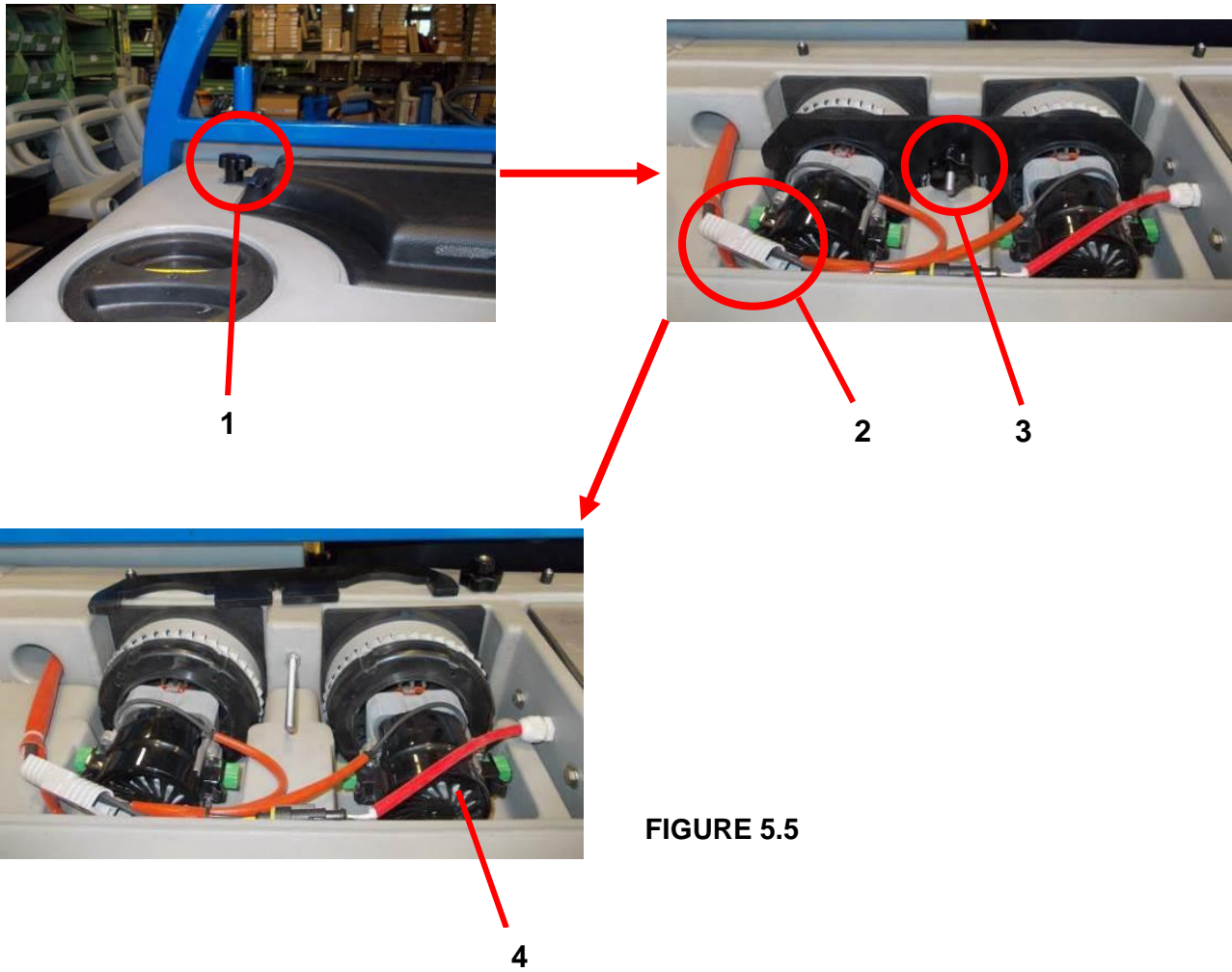


FIGURE 5.5

When cleaning the recovery tank, check the float, too, and if necessary, clean its protection filter:

- after removing the key from the dashboard lift the black plastic cover (detail 1 figure 5.5) and then the stainless steel one (detail 1 figure 5.6);
- check the protective filter condition (detail 2 figure 5.6) and remove it if necessary;



FIGURE 5.6

### 5.5 WIRING SYSTEM CHECKS

The machine wiring system should be inspected and examined every 2 years. It is very important to immediately correct any defects, e.g. disconnected wires or burnt cables.



Any service on the wiring system should be carried out by a skilled technician.  
 Any maintenance or repair not described as routine maintenance should be carried out by specialised personnel authorised by FIORENTINI.

**5.6 SUMMARY TABLE OF THE RECOMMENDED CHECKS**

REGULAR CHECKS	Every 10 hours	Every 20 hours	Every 50 hours	Every 125 hours	Every 250 hours	Every 500 hours	Every 750 hours	Every 1000 hours	Every 2500 hours	Every 5000 hours
Clean the recovery tank	x									
Clean the suction motor filter		x								
Check hydraulic oil level			x							
Check the condition of the squeegee rubber suction blades and pipes			x							
Check brake fluid level			x							
Check the filter of the clean water tank				x						
Check the battery				x						
Check the brushes of each motor						x				
Check the wiring system							x			
Check the safety devices					x					
Replace the hydraulic oil filter							x			
Replace the hydraulic oil								x		
Replace the flat transfer truck			x							
Check the wear level of seals			x							
Check dust filter clogging		x								
Check steer wheel bearing lubrication				x						
Lubricate the waste box rotation axle				x						
Check and clean the clean water cone filter			x							

**5.7. MAINTENANCE LOG**

<b><i>DATE</i></b>	<b><i>MAINTENANCE OPERATOR</i></b>	<b><i>TYPE OF SERVICE/NOTES</i></b>	<b><i>SIGNED BY</i></b>

## 6. TECHNICAL ASSISTANCE

### 6.1. TECHNICAL ASSISTANCE CONTACT INFORMATION

For services under the warranty and/or to request maintenance or repairs, or for any inquiries, please contact the Technical Assistance Department of Fiorentini SpA at:

**ING. O. FIORENTINI S.p.A.**  
“THE BEST IN FLOOR MACHINES”

BRANCH OFFICES:

20132 MILAN – Fax. 02/2592779

Via Palmanova 211/a – Tel. 02/27207783 - 2564810

00012 Guidonia Montecelio (ROME) – Fax. 0774 353419 - 353314

Via B. Pontecorvo 20 – Tel. 0774/357184 - 353015

PRODUCTION FACTORY:

50030 PIANCALDOLI (FI) – Fax. 055/817144

Loc. Rombola – Tel. 055/8173610

Most technical problems can be sorted with minor services. Before contacting our Technical Assistance Dept. we therefore advise to carefully read this manual.

If specialist service is required, please clearly specify the type and circumstances of the observed defect to help us find the best solution.

### 6.2 CLAIM REPORT

Fiorentini S.p.A., wishing to meet its customer requirements in the most effective manner and to constantly improve its products on the basis of valuable feedback obtained from customers themselves, has prepared a claim form to report any defects observed during use of its I115SS floor scrubber and dryer.



**Form completed by:**

Company: \_\_\_\_\_

Writer's name: \_\_\_\_\_

Position within the  
company: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

**Machine description:**

Machine: \_\_\_\_\_

Model: \_\_\_\_\_

Purchase date: \_\_\_\_\_

S.N.: \_\_\_\_\_

Applicable Warranty:

YES

NO

Worked hours: \_\_\_\_\_

Machine work  
environment: \_\_\_\_\_**Fault Description:**Code of the faulty  
component: \_\_\_\_\_Component  
name: \_\_\_\_\_

Fault type:

Short fault description:

Faulty Mechanical component

Faulty operation

Wiring system failure

Motor/Engine failure

Missing component

Excessively noisy operation

Water leak

Other

**Customer remarks:**

Please write below your comments and suggestions regarding the products and services supplied by Ing. O. Fiorentini S.p.A.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Mat no.  
Serial no. \_\_\_\_\_  
Nr. de série

Data di spedizione  
Date of shipment \_\_\_\_\_  
Date d'expédition

Distributed by:

**ING. O. FIORENTINI S.p.A.**  
"THE BEST IN FLOOR MACHINES"

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Via B. Pontecorvo 20 – Tel. 0774/357185 - 378827

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Loc. Rombola – Tel. 055/8173610