

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

TX 050



USER AND MAINTENANCE INSTRUCTIONS

Well done for your choice!

FIorentini S.p.A. thanks you for having chosen our product and reminds you that **FIorentini S.p.A.** constructs and markets industrial cleaning machines and is currently among the world leaders of such appliances.

Our company's tradition and professionalism guarantee the technical quality of your choice. In fact, all our products are made with top quality materials and according to criteria that confer reliability, robustness and functionality that satisfy even the most demanding customers. **FIorentini** has recently obtained certification of its company quality system according to **UNI EN ISO 9001**.

Do not hesitate to contact us for any requirement, be it a technical or sales query. We are glad to be at your disposal for any clarification and information.

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1. GENERAL INFORMATION

1.1 WARNINGS

This manual is the property of **FIorentini S. p. A.**

Total or partial reproduction and transmission to third parties by any mechanical, electronic or other means is forbidden without written authorisation from the manufacturer. A single original copy is provided unless otherwise specified when placing the order.

The manual is delivered with the machine, which it forms an integral part of, and must accompany it even if it is sold. It is recommended to keep it in a safe place for the entire life of the machine itself. The buyer is responsible to make it available to all persons concerned. If lost, request a copy from FIORENTINI.

FIORENTINI disclaims any liability for any damage caused to persons and/or property deriving from failure to comply with the instructions in this manual.

1.2 CONSULTING THE MANUAL

The manual covers in detail all matters deemed necessary for easy and safe use of the machine, as required by EU Directives in terms of product safety.

Therefore, all operators authorised to use the machine are advised to carefully read the entire manual and strictly apply its content, requesting clarification from FIORENTINI if in doubt. The manual must also be used as a reference document whenever a procedure or operation must be remembered or new operators must be trained.

For the sake of publishing, the pictures and diagrams may differ slightly from the actual appearance, however, they are not misleading.

Special symbols and text that is **bold** and/or in *italics* draw the attention of the reader to very important information with particular attention on safety.

1.3 WARRANTY

The terms and conditions of the warranty are set out in the following points unless specified otherwise in the confirmation order.

PURPOSE OF THE WARRANTY:

The support has been designed and built for multi-purpose use without major problems. However, if anomalies should arise during the warranty period, FIORENTINI undertakes to repair or replace the parts that are worn prematurely or have broken due to defects in the materials used, a manufacturing defect or faulty assembly, free of charge. The warranty does not cover parts that break or wear prematurely due to:

- failure to comply with the instructions provided in this manual;
- tampering or alterations implemented without specific approval from FIORENTINI;
- non-original spare parts being used.

- Used parts being worn, such as: tyres, brake lining, etc.

FIORENTINI provides the buyer with the same warranty provided by suppliers to FIORENTINI for electrical equipment installed and commercial materials purchased from external suppliers.

DURATION OF THE WARRANTY

The warranty period is a unique term of 12 months from the date of delivery and cannot be extended as a result of replacements or repairs made during this period.

APPLICATION PROCEDURE

The defective parts must be delivered to FIORENTINI in order to establish the cause of the anomaly and apply the warranty. FIORENTINI will decide whether the parts are to be repaired or replaced under warranty in their workshop, by third parties or on site. The customer is responsible for the sources of energy, special equipment, additional personnel and travel, lodging and boarding expenses for FIORENTINI personnel when works are carried out on site.

RETURNING MATERIAL

Written approval must be provided by the FIORENTINI Technical Assistance Department before shipping parts that are to be replaced or repaired under warranty.

The defective parts must be packaged properly to avoid being damaged during transport, shipped ex-works and accompanied by:

- the serial number taken from the identification plate of the support (point 2.1);
- the code and position of the component derived from the spare parts list (spare parts manual);
- an accurate description of the defect and how it occurred.

As for the defective electrical and electronic equipment, please send this separately from other material for the waste containing hazardous substances to be separated and to recycle the (WEEE) in accordance with Directive 2002/96/EEC.



The components under warranty are delivered ex-works; those being replaced remain the property of FIORENTINI.

1.4 DECLARATION OF CONFORMITY

The declaration of conformity is delivered together with the support and the User and Maintenance Instruction 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

Angelica Maria Cerutti

2. FEATURES OF THE SUPPORT AND TECHNICAL DATA

2.1 IDENTIFICATION

The support is identified by a self-adhesive plate affixed to the machine that indelibly bears the information concerning the CE marking.

Ing. O.Fiorentini S.p.A. 50030 Piancaldoli (FI)		MADE IN ITALY		CE	
Mod		S.N.		2011	
V		Hz			
Kg		A	W		



The plate must never be removed and must always be legible. If it should be damaged, another must be requested. The support cannot be marketed without the plate.

2.2 DESCRIPTION AND COMPONENTS

The TX050 machine has been designed and built to tow carts with a maximum level capacity of 5000 kg. This is obtained by using the machine properly and keeping it in full working order. The machine is fitted with (standard or as an option) a number of devices to tow any type of cart, on level or inclined surfaces, with no difficulty.

All functions of the machine can be activated via simple commands (described in detail in Chapter 4). A signalling system with LEDs, buzzers and analogue gauges is at the disposal of the operator. The signalling tools are not only crucial for the proper use of the machine, but also to guarantee safety of the machine, of those who use it and those who work close to it and therefore, they must always be checked and their correct operation must be verified (Chapter 3).

The main components of the machine are:

- iron frame painted or cold galvanised;
- battery pack housed in the compartment under the driver's seat;
- 2 rear drive wheels;
- 1 front steering wheel;
- hooks to tow carts;
- operator-canopy (optional);
- windscreen (optional).

TX050

FIORENTINI is aware of the new European issues concerning product safety and that is why it has designed and built the machine in compliance with the health and safety requirements prescribed by the applicable Directives. Quality materials, the technology applied and the experience enjoyed by FIORENTINI have allowed a car with high performance and reliability to be created. Skilled technicians perform strict inspections during construction and a thorough final test for each machine.

2.3 TECHNICAL DATA SHEET

	UoM	TX050
<i>GENERAL SPECIFICATIONS</i>		
Drive		Rear
Speed	Km/h	6/12
Climbing ability with no load	%	14
Running time when empty	h	8
Parking brake		Lever
Service brake		Hydraulic with pedal
Towable weight on flat ground	kg	5000
Minimum steering radius	mm	1750
<i>Electric system</i>		
Supply voltage	V	36
Drive motor		36V 4000W 2400rpm
Power supply	(Ah in C5)	36V 240Amp
<i>DIMENSIONS AND WEIGHTS</i>		
Length	mm	1730
Width	mm	875
Height	mm	1110
Wheel number/diameter	mm	3x Ø400
Machine weight unloaded	kg	354

The data shown are not binding for the manufacturer; they are subject to change without prior notice. In any case, FIORENTINI is always available for any information and clarification requirements.

3. SAFETY

3.1 PROPER USE

All situations that define PROPER and IMPROPER use of the machine are listed below:

- the vehicle is designed for one person, it is therefore forbidden to carry passengers besides the operator;
- it is important to drive the vehicle while paying attention to pedestrians who are in the surroundings;
- while using all body parts, the operator must remain inside the frame of the machine;
- when the vehicle is left unattended, engage the parking brake and remove the ignition keys from the control panel;
- keep a safe distance from ramps and platforms;
- operators must not modify or alter the vehicle in any way;
- keep a clear view of the direction of travel and the load being towed, while paying attention to other vehicles and pedestrians;
- slow down and sound the horn at road junctions or anywhere with poor conditions of visibility;
- climb up and down from inclined surfaces with utmost attention, while slowing down and keeping the vehicle on a straight line;
- slow down before sharp turns;
- at all times, the vehicle and the towed load must travel at a speed that allows for safe braking in the presence of an unexpected obstacle;
- always invert the direction of travel, steer, start and stop in a gradual and gentle manner;
- never take risks or drive recklessly or incorrectly;
- always pay attention on wet and slippery surfaces;
- make sure the weight of the towed load is within the towing capacity of the vehicle (paragraph 2.3).

3.2 TYPES OF RECOMMENDED EQUIPMENT

It is recommended to use equipment that is specifically designed and tested by Fiorentini, and original spare parts in order to take advantage of the features of the machine. In any case, the Fiorentini technical department is available to its customers to meet any project requirement with regards to parts and components required for particular use of the machine.





3.3 OPERATOR QUALIFICATION

The table shows the required qualification for operators according to the type of operation that is to be performed.

TYPE OF OPERATION	OPERATOR QUALIFICATION
Drive/control	Trained operator
Installation/uninstallation	Fiorentini technician
Maintenance on mechanical parts	Fiorentini technician
Maintenance on electrical parts	Fiorentini technician
Cleaning maintenance	Trained operator
Dismantling and demolishing	Fiorentini technician

3.4 SAFETY SYSTEMS

The machine is equipped with the following safety systems:

EMERGENCY MUSHROOM	In case of danger, press this switch for all functions of the machine to be interrupted immediately.	
FLASHING (Optional)	Orange: key is inserted. Green: the vehicle is moving at low speed (approx. 6 km/h). Red: the operator has abandoned the vehicle.	
BUZZER	This is triggered if the operator abandons the vehicle without having engaged the parking brake or if the seat belt is not fastened.	
SEAT BELT (Optional)	If the operator does not fasten the seat belt, the machine will not work.	
WHEEL DISC (Optional)	The white and red disc installed on the rear wheels allows anyone close to the machine to immediately determine whether the vehicle is moving and if so, at which speed.	
SLOW SPEED DEVICE	Each time the machine is started, the maximum speed is automatically set at 6 km/h.	

3.5 RESIDUAL RISKS

FIORENTINI has analysed all the hazards related to machine use in order to eliminate or at least reduce the risk of injury to operators, starting from the design stage. The operators are informed on how to reduce the risk associated with the residual risks by means of signs and indications of the means to be used and safety procedures that are to be adopted.

RISK OF CRUSHING

The crushing hazard is present when maintenance is performed on the batteries or while they are being recharged as the seat support compartment can fall.

When charging, the operator must be careful not to insert parts of his body inside the perimeter of the battery storage compartment.

RISK OF TIPPING

The risk of rollover is present during normal use of the machine when you do not meet the standards contained in the paragraph 3.1 indicating the proper use of the machine. Furthermore, since the vehicle is equipped with a minimum turning radius and low gears, pay attention at relatively high speeds; suddenly turning the steering wheel poses a risk of tipping over.

FIORENTINI disclaims any liability for damage caused to people or property resulting from the machine being used on surfaces that can affect its stability. The buyer must set up appropriate signs to inform the operator about the state and condition of the surfaces on which he must operate.

4. INSTRUCTIONS FOR COMMISSIONING AND USE

4.1 TRANSPORT AND HANDLING

The machine is delivered to the buyer fully assembled in a specific package. A black arrow on the packaging indicates the position of the centre of gravity; the transpallet or the forks of the forklift truck must be positioned with the black arrow in the centre of the forks. The pallet must be handled with extreme care. It is forbidden to stack the pallets.

On delivery, check that the machine has not been damaged during transport and that all the material listed on the accompanying documents has been received; if parts are damaged or missing immediately notify the carrier and the manufacturer for the problem to be promptly resolved. Unless indicated otherwise, the goods travel at the buyer's risk.

4.2 INSTRUCTIONS TO UNPACK THE MACHINE

- Cut the straps paying attention to any spring back
- Remove the staples on the cardboard base that join the cardboard to the pallet
- Remove the staples from the side and base of each panel in the case of plywood
- Cut the straps that prevent the machine from shifting
- Bring the machine to ground level

4.3 HANDLING THE UNPACKED MACHINE

- Check the machine and mount the batteries if not already installed
- When moved a short distance, disconnect the battery wires after use. When moved a longer distance, repack the machine in its original box.

4.4 INSTALLING AND HANDLING THE BATTERIES

The batteries can be installed or handled by lifting the seat support cover and remove them from the machine from the relative opening on the canopy opening (where present) with a suitable lifting device.

4.5 BATTERY CHARGER

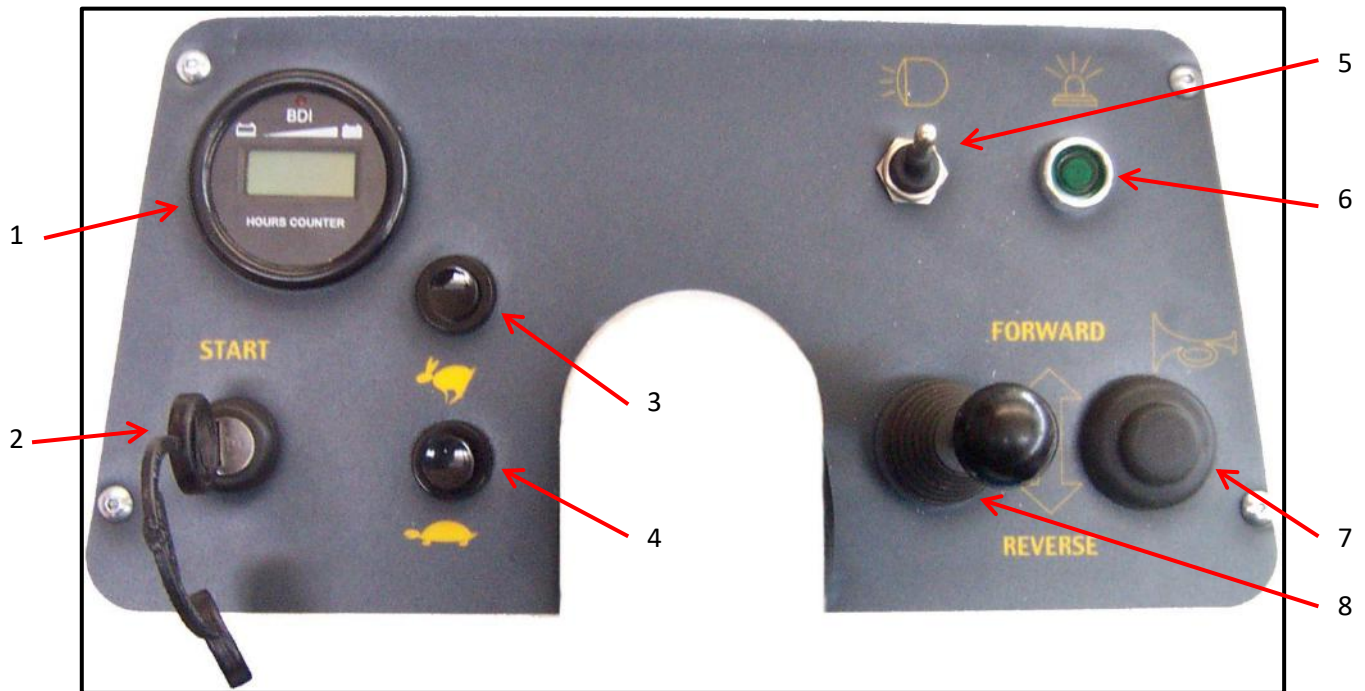
Refer to the specific manual (attached) for all the information concerning the battery charger.

4.6 PRINTED CIRCUIT BOARD

Refer to the specific manual (attached) for all the information concerning the printed-circuit board.

4.7 COMMAND AND CONTROL DEVICES

THE CONTROL PANEL

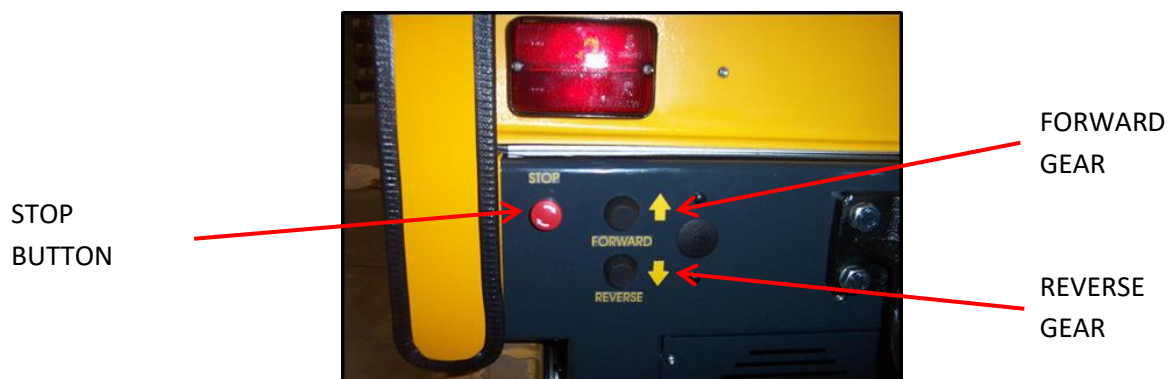


SWITCH FUNCTIONS

1	BATTERY CHARGER STATUS INDICATOR AND COUNTER
2	KEY SWITCH
3	MAXIMUM SPEED SELECTION
4	LIMITED SPEED SELECTION AT 6 km/h
5	LIGHT SWITCH
6	SPEED CONTROL LED
7	HORN
8	GEAR SELECTOR (FORWARD-BACKWARD)

GROUND COMMANDS (Optional)

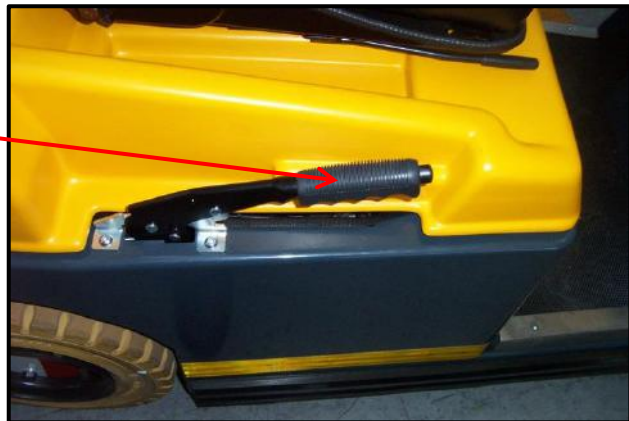
The machine can also be operated from the ground through a small control panel located in the rear part of the machine, close to the towing hook, to facilitate the operations when engaging/releasing the load.



PEDAL AND LEVERS

- **Parking brake:** on the right side of the driver's seat. It must be engaged every time the vehicle is stopped or the driver moves from the driver's seat. It limits the machine drive and it is advisable to engage it even if the machine is on level ground. Furthermore, remember that if the operator leaves the driver's seat without having engaged the parking brake, the buzzer alerts the hazard (paragraph 3.4). Engage it by simply pulling the lever upwards and release it by pressing the button on the lever itself and accompany it downwards.

PARKING BRAKE



- **Lever to adjust the seat position:** on the right side of the seat. If pulled upwards, the operator's seat is moved forward or backward until the correct driving position is found for each operator. Once the seat is moved, make sure that the seat locks itself properly.

SEAT ADJUSTMENT LEVER



TX050

- Service brake: in line with the operator's right foot. It slows down the machine if the operator acts on it. The more the pedal is pressed downwards, the stronger the braking action. If the pedal is released, the braking action stops immediately.

SERVICE BRAKE



- Accelerator pedal: in line with the operator's right foot. It allows the machine to move gradually; the more the pedal is pushed, the stronger the traction.

ACCELERATOR PEDAL



TX050

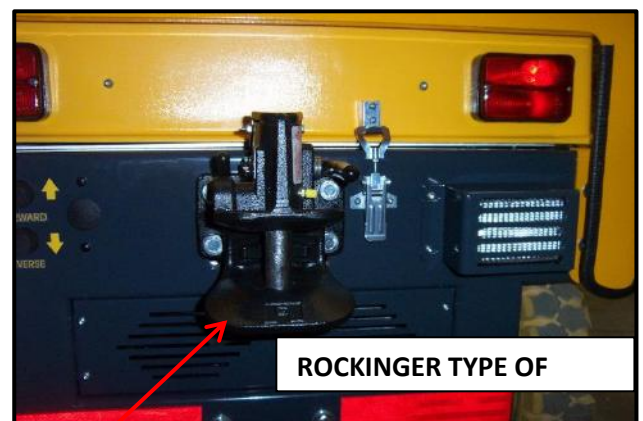
- Lever for adjusting the inclination of the steering wheel: located under the steering wheel itself. Once activated, the angle of the steering wheel can be changed for a more correct driving position for each operator.



STEERING WHEEL

TOWING DEVICES

- Towing hook: 3 towing hooks are fitted on the rear part of the machine, 2 of which with a long pin and 1 with a short pin, to connect the forklift truck that is to be towed. Alternatively, a "ROCKINGER" type of towing hook can be fitted.



ROCKINGER TYPE OF

TOWING HOOKS

TX050

OPERATOR-CANOPY AND WINDSCREEN (OPTIONAL)

The machine can be equipped (on request) with an operator-canopy, which can also be completed with a number of sheets that form an actual cabin. The sheets can be opened from a simple hinge to allow the operator to enter and exit the machine and once they are opened, they can be wrapped and tied to the sides of the canopy structure.

Alternatively, the machine can also be equipped with a windscreen.



MACHINE WITH CANOPY
AND SHEETS



MACHINE WITH
WINDSCREEN

5. MAINTENANCE

5.1 ROUTINE CHECKS

Certain checks must be performed regularly in order to verify that the machine is functioning properly. These checks must be performed when unloaded, i.e. with no towed load and as follows:

- Accelerate gradually until the maximum speed is reached.
- Verify that the braking is equal on both rear wheels at the creep limit.
- Verify that the steering wheel turns completely on both sides, with normal effort and with no hardening.

If any of the above checks are not satisfactory, contact the assistance personnel.

5.2 IDLE PERIODS

The machine may have to remain idle for one or two weeks. In this case, disconnect the battery, lift the machine off the ground and rest the chassis on some spacers for the wheels to be off the ground.

The battery discharges even during idle periods, therefore it must be recharged every twenty days.

5.3 CLEANING THE MACHINE

Since the machine is also used outdoors, it is likely to get dirty. It is therefore good practice to make sure there are no mud deposits or similar that prevent normal operation, especially on the tie rods and levers of the brake system. Do not use jets of water to remove them as they may damage parts of the machine.

If the machine must be cleaned, do not use high pressure washers or water jets as the electrical system is not watertight and therefore, it would certainly be damaged.

5.4 MAINTENANCE LOG

[illegible]

6. TECHNICAL ASSISTANCE

6.1 TECHNICAL ASSISTANCE CONTACT DETAILS

If assistance is required while under warranty and/or a request must be submitted for maintenance or repairs, or for information, the customer can use the Technical Support of FIORENTINI S.p.A. by contacting:

ING. O. FIORENTINI S.p.A.

“THE BEST IN FLOOR MACHINES”

BRANCHES:

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 - 378827

PLANT:

50030 PIANCALDOLI (FI) – Fax. 055/817144

Loc. Rombola – Tel. 055/8173610

Many technical problems are resolved with minor intervention; we therefore recommend consulting this manual carefully before contacting our Technical Support Department.

If the department's intervention is required, clearly specify the type and mode of the problem for the most suitable material to be provided.

6.2 COMPLAINT REPORT

Fiorentini S.p.A is responsive to the customer's requirements and is certain that customers can provide valuable information in order to continuously improve our products, therefore the customer has a readily available form to report any defects found while using the machine.

Form completed by:

Company:	_____
Name of Person	_____
Completing the Form:	_____
Position held in	_____
Company:	_____
Completed on:	Signature: _____

Description of the Machine:

Machine:	_____	Model:	_____
Date of purchase:	_____	Serial No.:	_____
Machine is under warranty:	<input type="checkbox"/> YES	<input type="checkbox"/> NO	Operating hours: _____
Indicate the working environment of the machine: _____			

Description of the Defect:

Code of the defective part: _____	Name: _____
Type of Defect:	Brief description of the Defect:
<input type="checkbox"/> Defective mechanical component	_____
<input type="checkbox"/> Incorrect operation	_____
<input type="checkbox"/> Faulty electrical system	_____
<input type="checkbox"/> Motor failure	_____
<input type="checkbox"/> Missing part	_____
<input type="checkbox"/> Excessive noise	_____
<input type="checkbox"/> Water leak	_____
<input type="checkbox"/> Other	_____

Customer Notes:

Please specify any Notes and/or Suggestions about the products/services of Ing. O. Fiorentini S.p.A.

Mat. n.

Serial no.

Nr. de serie

Distributed by:

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