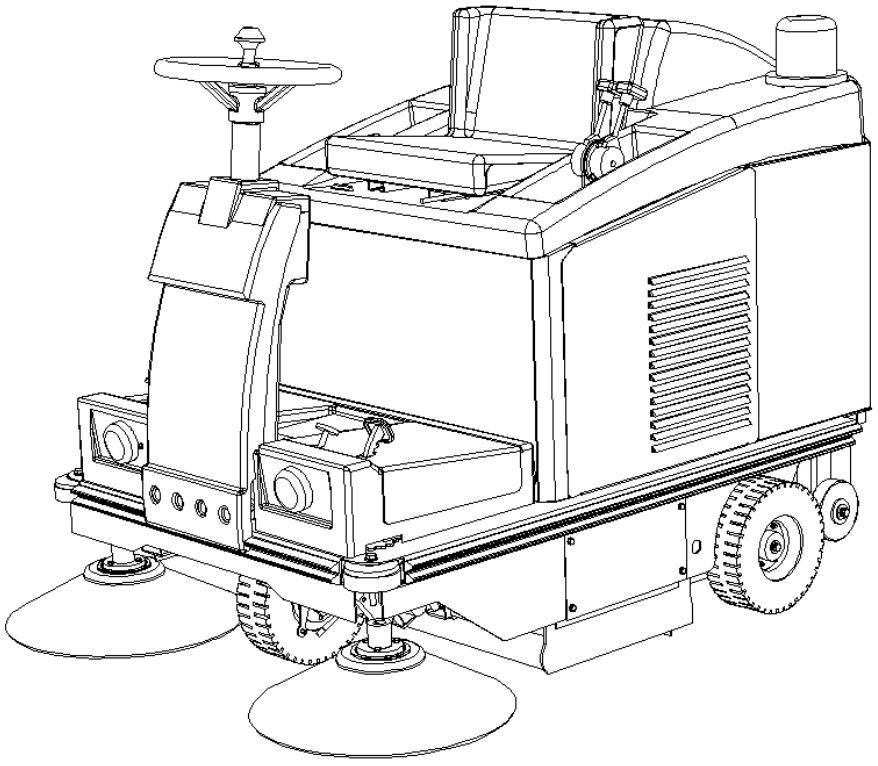
IT ATTENZIONE: leggere le istruzioni prima dell' utilizzo.
EN WARNING: read the instructions carefully before use.
FR ATTENTION: lire attentivement les istructions avant l'usage.
DE ACHTUNG: Die Anweisungen bitte vor Gebrauch sorgfältig lesen.
ES ADVERTENCIA: leer atentamente las advertencias antes el uso de aparado.
PL UWAGA: przed użyciem przeczytać instrukcje.
RU ВНИМАНИЕ: перед использованием прочитайте инструкцию по эксплуатации.
CS POZOR: před použitím si přečtěte návod k obsluze.

SWL R 1000 ET	**SWL R 1000 ST**
SW R 6200 BT	**SW R 8300 SC**
CSW R792BT	**CSW R792G**
SWL R 1000 ET BIN UP	**SWL R 1000 ST BIN UP**
SW R 8200 BT LIFT	**SW R 8300 SC LIFT**
CSW R792BT PLUS	**CSW R792G PLUS CSW**

Technical data plate

CE

INSTRUCTIONS AND OPERATING MANUAL



Mod. SWL R1000 ET / SW R 6200 BT / CSW R792BT
Mod. SWL R1000 ET BIN-UP / SW R 6200 BT LIFT / CSW R792BT PLUS

Mod. SWL R1000 ST / SW R 8300 SC / CSW R792G
Mod. SWL R1000 ST BIN-UP / SW R 8300 LIFT / CSW R792G PLUS

CHAPTER 1 - GENERAL INFORMATIONS

ATTENTION: READ THIS INSTRUCTIONS MANUAL CAREFULLY BEFORE USING THE MACHINE

THE MANUFACTURER DISCLAIMS ALL LIABILITY FOR DAMAGE TO THINGS AND / OR INJURY TO PERSONS RESULTING FROM FAILURE TO COMPLY WITH THE INSTRUCTIONS IN THIS MANUAL AND FROM INCORRECT AND / OR IMPROPER MACHINE USE.

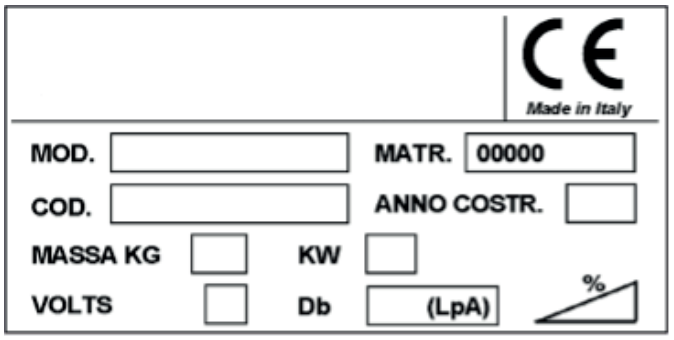
ALL THE EQUIPMENT NEEDED FOR PERSONAL PROTECTION (GLOVES, MASKS, WHITE-LENS GLASSES, KEYS, TOOLS, ETC.) MUST BE PROVIDED BY THE USER.

FOR EASIER READING, REFER TO THE INDEX PAGE.

ALWAYS KEEP THIS MANUAL HANDY FOR QUICK REFERENCE (IN CASE OF LOSS, ASK YOUR DEALER FOR ANOTHER COPY)

THE MANUFACTURER RESERVES THE RIGHT TO MAKE CHANGES OR UPGRADE ITS MACHINES, WITHOUT ANY OBLIGATION TO UPGRADE PREVIOUSLY- SOLD MACHINES.

ALL SWEEPERS CONFORM TO EEC STANDARDS AND ARE LABELLED:



CHAPTER 2 - PURPOSES / INTENDED USE

The manufacturer is pleased to count you among the many owners of SWL R1000 ET/SW R 6200 BT – SWL R1000 ST/SW R 8300 SC series.

By keeping to the following instructions, we feel sure you will fully appreciate its' work options.

- This instruction manual is provided to notify and define as clearly as possible the purposes and intended use which the machine was built and to enable you to use it in total safety. It also contains a list of minor operations for keeping the machine in good and safe working order. These operations can be easily performed by anyone.
- For extraordinary maintenance jobs, always employ skilled personnel.
- The manual also contains details of hazards and outstanding risks, i.e., all those risks that cannot be eliminated, with specific instructions for each single case. You will also find details of acceptable and unacceptable machine use, how to run the machine, technical details and performance limits, how to use and service the machine, details concerning decommissioning, dismantling and demolition.

CHAPTER 3 - PREPARATION (UNPACKING)

After removing the outer packaging, remove the machine from the pallet; this operation can be done in two ways:

A) Take a hook and 4 tie-rods of suitable lifting capacity for the weight of the machine (shown on the CE

plate). Lift the motor bonnet and secure the four eyebolts or hooks in the threaded housings (the lifting hooks are inside the collection bin **Part. B FIG. 1** together with the side brushes and instruction manuals); secure all four straps to their respective lifting hooks **Part. A Fig. 1** and with the aid of a fork lift truck or bridge crane (suitable for weight of the machine), lift this off the pallet and rest it on the floor very slowly.

ATTENTION:
THE MACHINE CAN ONLY BE LIFTED WHEN ALL FOUR STRAPS HAVE BEEN SECURED TO THEIR RESPECTIVE EYEBOLTS (M10 EYEBOLTS).

FIG. 1

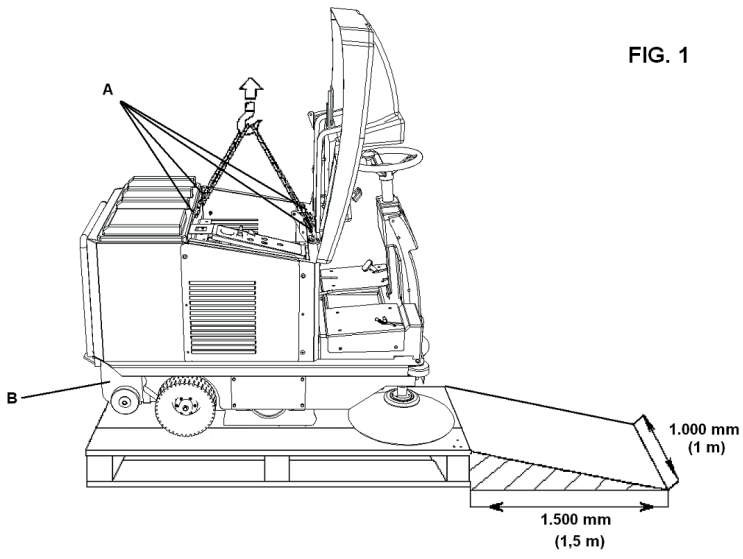
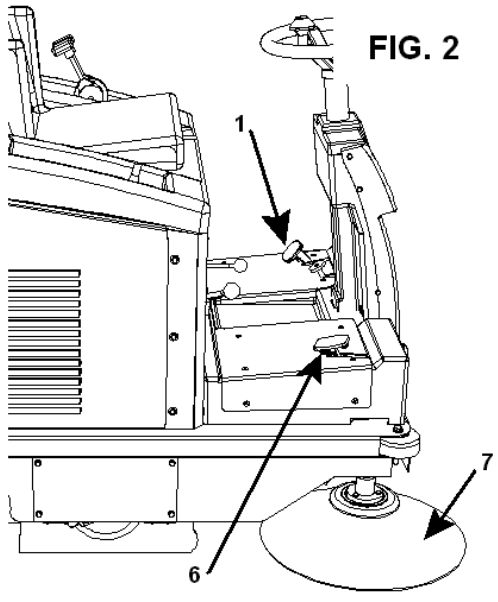


FIG. 2



B) Position a sloping surface (having a load-bearing capacity suitable for the weight of the machine) close up to the narrow side of the pallet. This must be at least 1,5 m long (so as not to damage the rubber dust seals) and 1 m wide. Remove the pieces of wood around the wheels and release the parking brake **Part. 1 Fig. 2**, pressing this so as to release the retention lever. At this point, simply push the machine onto the chute. This operation must be performed without anyone in front of the machine and on a large flat surface.
At the end of the unpacking operation, remove and keep the eyebolts and fit the right side brush **Part. 7 Fig. 2** and, If necessary, the left side brush as shown in **page 13**.

IMPORTANT: All the materials remaining after the unpacking operation must be carefully disposed of by the user, following applicable regulations.

ATTENTION:
MAKE SURE THAT THE MACHINE PROTECTION DEVICES ARE IN GOOD CONDITION AND PROPERLY FITTED. IN THE EVENT OF FAULTS OR MISSING PARTS, DO NOT START UP THE MACHINE AND NOTIFY THE DEALER OR MANUFACTURER

CHAPTER 4 - ACCEPTABLE ENVIRONMENTAL CONDITIONS

Consult the enclosed engine instruction booklet, however:

Minimum operating temperature:	- 10° C	(14° F)
Maximum operating temperature:	+ 38° C	(+100.4° F)

IMPORTANT: DO NOT USE OR LEAVE PARKED WITH TEMPERATURES ABOVE +40° C. (+104° F).

CHAPTER 5 - INTENDED AND FORBIDDEN USE

INTENDED USE:

The sweepers have been built to clean the residues left by machining operations, dust, dirt in general, from all flat, hard and not excessively uneven surfaces like: concrete, asphalt, stoneware, ceramic, wood, metal, marble, rubber or plastic covering, both rusticated and smooth, synthetic or short-pile carpeting, in open or closed premises.

FORBIDDEN USE:

- ✘ The **SWL R1000 ET/SW R 6200 BT** sweepers cannot be used on gradients over **12%** with standard swithcboard. They can reach a 20% gradiants with increased switchboards.
- ✘ The **SWL R1000 ST/SW R 8300 SC** sweepers cannot be used on gradients over **14%**
- ✘ The **SWL R1000 ST/SW R 8300 SC** series with internal combustion engines cannot be used inside for they could produce **carbon monoxide (an oudorless but lethal gas)**
- ✘ They cannot be used in explosive or inflammable environments.
- ✘ They cannot be used on uneven, gritty or very rough surfaces.
- ✘ They cannot pick up oils, poisons and chemical materials in general, (for use in chemical plants, apply for specific authorisation from the dealer or manufacturer).
- ✘ They cannot be used on town or country roads. They cannot circulate on public roads.
- ✘ They cannot be used in premises where the lighting is bad, as they are not equipped with their own lighting system.
- ✘ They cannot be towed in any way, either on private premises or on public roads or premises.
- ✘ They cannot be used to brush snow or to wash or grease surfaces in general, either wet or very damp.
- ✘ They cannot operate in the presence of stringy materials as this is incompatible with brush rotation.
- ✘ They cannot be used to rest things on or as raised platforms for things and persons.
- ✘ Never allow people within machine operating range.
- ✘ Do not make any changes to the machines unless authorised to do so by the manufacturer.

CHARTER 6 - TECHNICAL CHARACTERISTICS AND NOISE LEVEL

TECHNICAL FEATURES	M.U.	SWL R1000 ET SW R 6200 BT	SWL R1000 ST SW R 8300 SC
POWER	**//**	**BATTERY**	**PETROL ENGINE**
CENTRAL BRUSH WIDTH	mm	700	700
CENTRAL BRUSH WIDTH+1 RIGHT SIDE BRUSH	**mm**	**920**	**920**
CENTRAL BRUSH WIDTH+2 RIGHT AND LEFT SIDE BRUSHES	mm	1.150	1.150
MAX SPEED	**m/s**	**1,72**	**2,13**
REVERSE MAX SPEED	m/s	0,88	0,5
MAX CLEANING CAPACITY (WITH 2 SIDE BRUSHES)	**mq/h**	**6.200**	**7.700**
MAX SLOPE	%	12 (20)	14
TRACTION	**//**	**BACK WHEELS**	**FRONT WHEELS**
TRANSMISSION	//	ELECTRIC	OLEODYNAMIC
MAX. SPEED TURNING RADIUS	**mm**	**1.450**	**1.450**
FILTERING SURFACE (6 FILTERS)	mq	6	6
CONTAINER CAPACITY	**L**	**62**	**62**
MAX LENGHT CONTAINER	mm	1.430	1.430
MAX WIDTH	**mm**	**910**	**910**
HEIGHT	mm	1.140	1.140
WEIGHT (BATTERIES NOT INCLUDED)	**Kg**	**260**	**300**
Acoustic pressure LpA	dB(A)	76 - K=1,5	84 - K=1,5
Acoustic power measured LwA	dB(A)	90 - K=1,5	97 - K=1,5
Acoustic power granted LwA	dB(A)	91	99
Vibrations, on steering wheel	m/s^2	1,92- K=0,81	3,74- K=1,15
Vibrations, on seat	m/s^2	0,65 - K=0,32	0,71 - K=0,18

Values according to standard: EN 60335-2-72

(only for internal combustion engine) Use the following personal protection equipment (PPE): Wear protective ear muffs..

CHAPTER 7 - DESCRIPTION OF MACHINE

SAFETY PROTECTION DEVICES:
Fig. 3 shows the safety protections, which must be carefully fitted and in good working condition.
The machine cannot be used with one or more safety protections devices missing or damaged. The description of the protection devices and relevant order codes are shown below:

PART.	DESCRIPTION
1	Driving seat safety switch
2	Right and left side panel
3	Motor bonnet
4	Central brush protection plate: Right and Left
5	Reverse indicator light
6	Front angular wheel

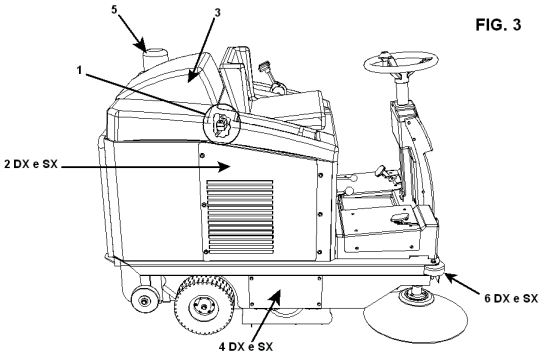
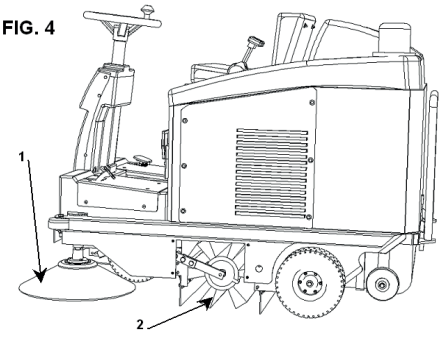


FIG. 3

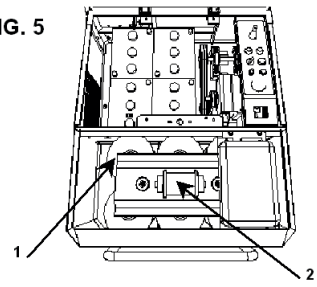
FIG. 4



SIDE BRUSH:
The side brush, **Part. 1 Fig. 4**, acts as a dust and waste conveyor. Its purpose is to clean edges, corners and profiles. After cleaning, this must be disengaged (raised) to prevent raising dust and because the cleaning effect of the side brush is inferior to that of the central brush. A left side brush is also available as an optional feature.

CENTRAL BRUSH:
The central brush **Part. 2 Fig. 4** is the main machine component for loading the dust and waste into the collection bin. It is available in various degrees of hardness and bristle types, depending on the type of material to be collected up and on the type of floor. It is height adjustable in case of wear (**See Chapter 13**).

FIG. 5



IMPORTANT: do not pick up cords, wires, packaging straps, sticks, etc., longer than 25 cm as these could wrap around the centre and side brushes and damage them.

FILTER SYSTEM:
During operation, the filter system ensures that the machine does not raise dust in the surrounding areas. It consists of six cartridge filters **Part. 1 Fig. 5**. The filter system can be disengaged by pulling knob **Part. 1**, seen in **Fig. 6**.

IMPORTANT: Disengage the filter system when passing with the machine over wet or very damp areas to prevent dampening and therefore deteriorating the paper filters.

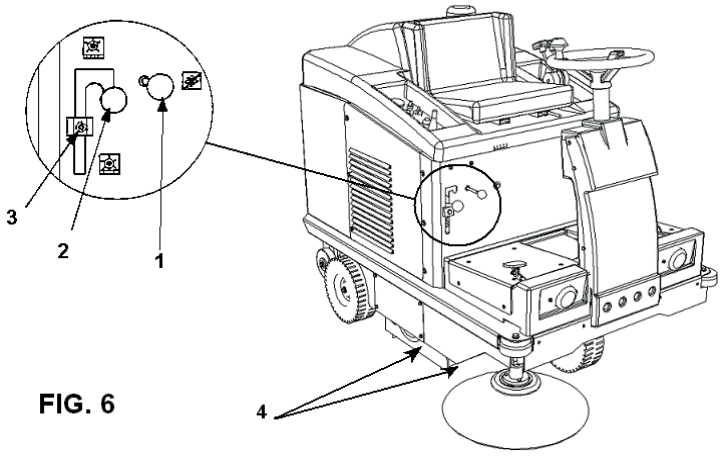
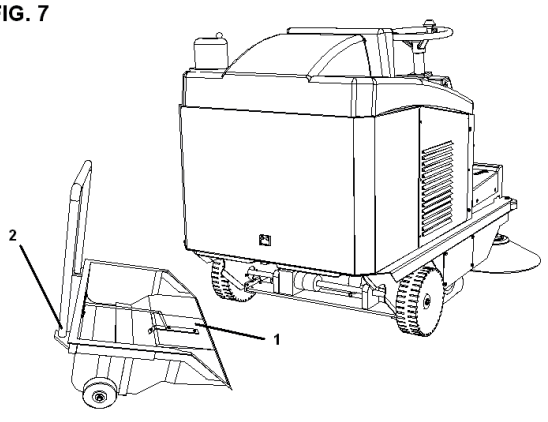


FIG. 6

FIG. 7

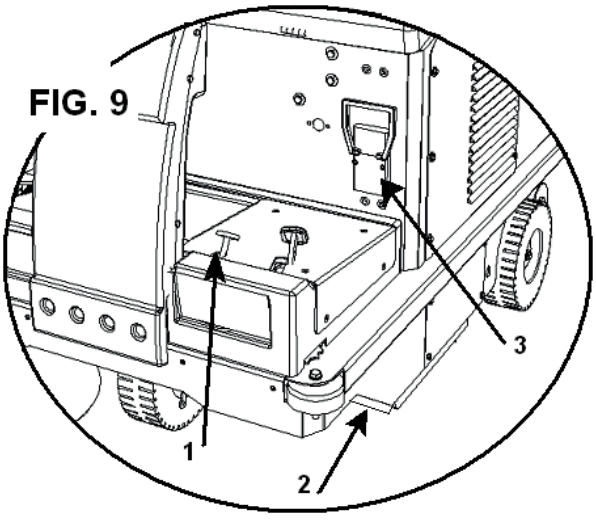


DUST SEALS:
See **Part. 4 Fig. 6**. These seals surround the central brush and are very important for ensuring good machine operation, making possible as they do the suction effect. Frequently check to make sure they are in good condition.

COLLECTION BIN:
The container or collection bin **Part. 1 Fig. 7**, made of resistant plastic, holds all the material picked up by the central brush and the filter dust. It can be **easily removed** thanks to a wheeled frame **Part. 2 Fig. 7**.

IMPORTANT: container emptying must always be done with the motor shut off. Wear gloves and possibly a face mask to protect the airways from dust (always present in this operation).

DESCRIPTION PF THE MANUAL CONTROLS
For Both Models



Battery Version.

FLAP-LIFT PEDAL:
By pressing the flap-lift pedal **Part. 1 Fig. 9**, the front seal **Part. 2 Fig. 9** lifts up for picking up a large objects. Suitable for collecting leaves, cigarette packets, etc.

BRAKE PEDAL:
By pressing this pedal **Part. 1 Fig. 10**, the machine slows down and stops (until the pedal is released).

PARKING BRAKE:
To leave the machine in parking position, proceed as follows: press the brake pedal with the left foot and then insert the stop tooth with the right foot by pressing lever. To release the parking brake, simply press the pedal **Part. 4 Fig. 10** again.

FORWARD AND REVERSE PEDAL: (only for battery version)
Part. 3 Fig. 10. This pedal has two functions depending on the position of the operation switch **Part. 1** of switchboard: when the switch is in forward position, the machine moves forward when the pedal is pressed. When switch is positioned in reverse, the machine reverses. **For safety reasons, the reverse speed of the machine is very low.** When the switch is in central position, the machine moves neither forward not in reverse.

FORWARD AND REVERSE PEDAL: (only for internal combustion engine)
Part. 3 Fig. 10. This pedal has two functions depending on the position. By pressing the right side (with arrow pointing UP) the machine goes forward while by pressing the left side (with arrow pointing DOWN) the machine withdraws. **For safety reasons, the reverse speed of the machine is very low.**

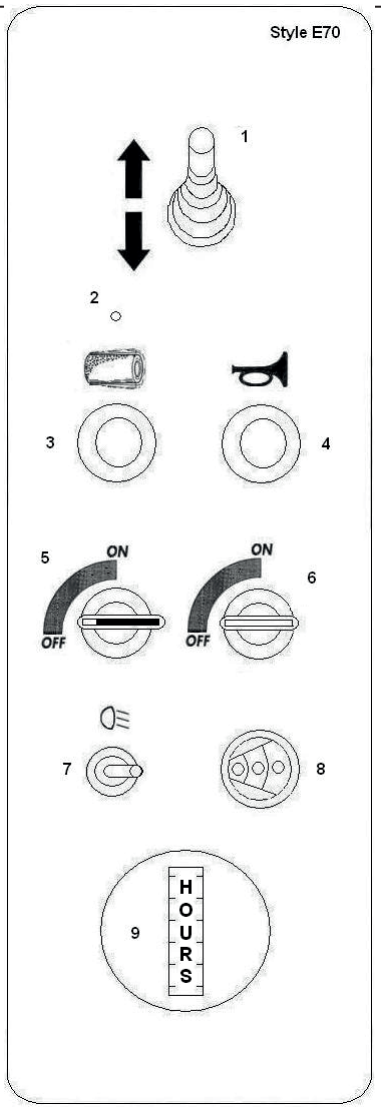
SIDE BRUSH ENGAGEMENT LEVER: (for all models)
The engagement lever **Part. 1 Fig. 10** makes it possible to lower the brush from the driving seat. Remember that the side brush must only be used for cleaning edges, profiles and corners and that it continues to rotate when the machine motor is rotating. To lower and then activate the side brush push forward lever **Part. 1 fig. 10**; to disconnect the side brush bring back the lever in the initial position by pulling it back.

ATTENTION:
NEVER TOUCH THE SIDE BRUSH WITH YOUR HANDS AND NEVER PICK UP THREADED MATERIALS.

SUCTION OFF KNOB: For all models.
Fitted to both models **Part. 1 Fig. 6**. When this knob is pulled outwards, suction is disengaged. Disengage the suction every time the filters need shaking or when passing over damp areas (with the motor on).

CENTRE BRUSH ENGAGEMENT LEVER: For all models.
This lever **Part. 2 Fig. 6** makes it possible to engage and disengage the centre brush. By sliding the lever down along the slot, the work position is lowered, while when the lever is slid upwards and inserted in the notch, the centre brush is disengaged.

STANDARD FEATURES SWL R1000 ET/SW R 6200 BT



1) Gear switch
2) Electric switchboard check led
3) Filter Buzzer Button
4) Acoustic Indicator Button
5) Brushes motor switch
6) Ignition key
7) Working light switch (optional)
8) Charge indicator
9) Hour counter

GEAR SWITCH :
Part. 1 The purpose of the gear switch lever is to move the machine forward or reverse. When the switch is in forward position (arrow pointing up) by pressing the pedal **Part. 3 Fig. 10** the machine moves forward. When the switch lever is in reverse position (arrow pointing down) by pressing the pedal the machine moves reverse. **For safety reasons, the reverse speed is very low.** If the switch is left in central position, the machine

moves neither forward nor in reverse.

ELECTRIC SWITCHBOARD CHECK LED:
Part. 2 This red led must be always switched on during functioning. If this led should flash at regular intervals there could be technical problems within the machine. In this case you are adviced to immediately contact assistance to check the motorsweeper.

FILTER BUZZER BUTTON:
Part. 3 This buzzer cleans the suction filters through a motor-vibrator **Part. 2 Fig. 5**; it must be pressed at least 6 / 7 times for 8 / 10 seconds each (operation to be performed before starting work, before emptying the bin and with the motor off); to perform this operation with motor running, close the suction by pulling the knob **Part. 1 Fig. 6.**

ACOUSTIC INDICATOR BUTTON:
Part. 4 By pressing this button the acoustic indicator switches on.

BRUSHES MOTOR SWITCH:
Part. 5 By actioning this switch either central and side brushes are activated.

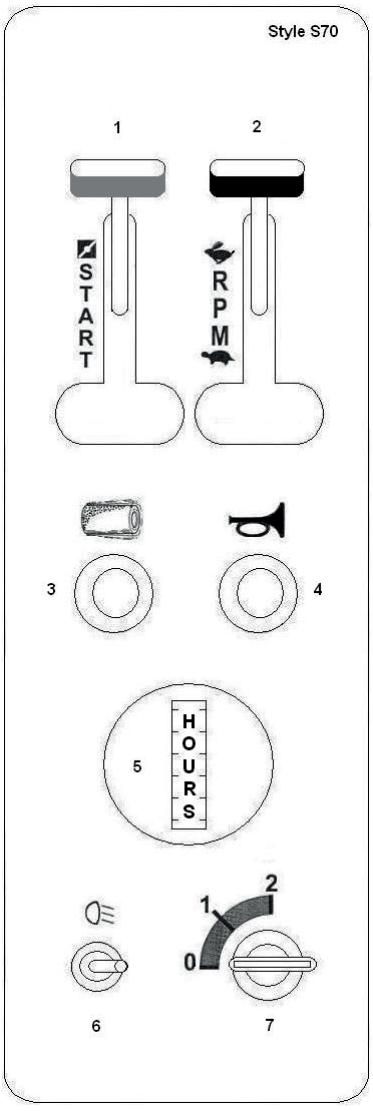
IGNITION KEY :
Part. 6 It activates the switchboard and in particular the movement potentiometer. It is therefore possible to move the machine without have it working.

WORKING LIGHT SWITCH: *Optional*
Part. 7. It activates the adjustable working light.

CHARGE INDICATOR:
Part. 8 It indicates the charge level of batteries and it's represented by three coloured lights (red, yellow and green); by turning on the ignition key **Part. 6** they switch on in the following order: red-yellow-green; **wait until green light is on before forwarding or reversing.** If red light should switch on batteries need recharging.

 **IT IS RECOMMENDED NOT TO WAIT UNTIL THE RED LIGHT TURNS ON TO PROCEED WITH RECHARGING OF BATTERIES BUT TO PROCEED WITH THE OPERATION AS SOON AS YELLOW LIGHT SWITCHES ON.**

HOURCOUNTER:
Part. 9 Makes it visible the number of hours worked by the machine.



1) Start lever
2) Accelerator lever
3) Filter buzzer button
4) Acoustic indicator button
5) Hourcounter
6) Working light switch (optional)
7) Ignition key

START LEVER:
Part. 1 It is needed for "cold" ignition of the machine. It is positioned in "up" position. After the ignition it must be slowly brought back.

ACCELERATOR LEVER:
Part. 2 It controls the number of motor's rotations.

FILTER BUZZER BUTTON:
Part. 3 This buzzer cleans the suction filters through a motor-vibrator **Part. 2 Fig. 5**; it must be pressed at least 6 / 7 times for 8 / 10 seconds each (operation to be performed before starting work, before emptying the bin and with the motor off); to perform this operation with motor running, close the suction by pulling the knob **Part. 1 Fig. 6.**

ACOUSTIC INDICATOR BUTTON:
Part. 4 By pressing this button the acoustic indicator switches on

HOURCOUNTER:

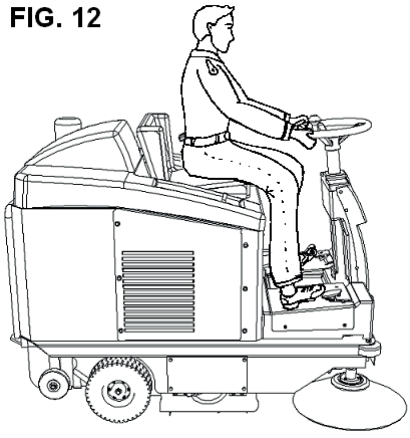
Part. 5 Makes it visible the number of hours worked by the machine.

WORKING LIGHT SWITCH: *Optional*
Part. 6 It activates the adjustable working light.

IGNITION KEY :
Part. 7 It activates the switchboard and in particular the movement potentiometer. It is therefore possible to move the machine without have it working

CHAPTER 8 - OPERATOR WORK STATION EMERGENCY STOP

FIG. 12



WORK STATION:
The work station is shown in **Fig. 12.**

IMPORTANT: For safety reasons, the machine switches off automatically if the operator moves from the driving seat or if the motor bonnet part. 3 fig. 3 is raised or is not completely closed.

EMERGENCY STOP: (Only for battery version)
Using the left hand, grip the connector handle **Part. 3 Fig. 9**, pull this upwards and out and press the brake pedal **Part. 4 Fig. 10** hard; power will be interrupted and motors will stop immediately.

EMERGENCY STOP: (Only for petrol version)
Release the forwarding pedal and press the brake pedal **Part. 4 Fig. 10**, switch off the machine by turning off the key on the switchboard (anticlockwise) **Part. 7**

CHAPTER 9 - SAFETY REGULATIONS

OUTSTANDING RISKS WHICH CANNOT BE ELIMINATED

DEFINITION: These are risks which, for various reasons, cannot be eliminated. Please find below some indications on how operating in total safety.

- Risk of injury to the hands and eyes if the machine is used without all the safety protections properly fitted and in good working condition.
- Risk of injury to hands by touching the side brush or central brush for any reason during rotation. The brushes must only be touched with the motor switched off and wearing protective gloves to avoid being pricked or cut in the event of sharp objects caught up between the bristles.
- Risk of inhalation of harmful substances and hands injuries in emptying the container (bin) without using protective gloves and a face mask.
- Risk of not controlling the machine if this is used on different gradients than those indicated in chapter 5
- Risk of explosion or fire if refuelling with engine switched on or with engine switched off but not yet cold.
- Risk of heavy burn by operating maintenance with engine switched on or with engine switched off but not yet cold.

SEE ALSO ENGINE MANUAL AT CHAPTER "SAFETY REGULATIONS"

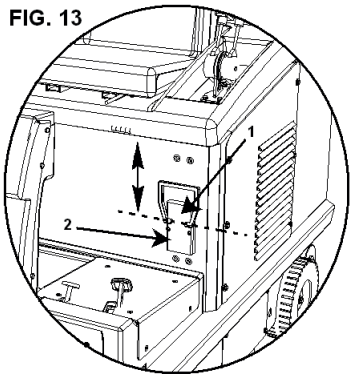
GENERAL RISKS FOR BATTERIES

- Before charging the batteries, make sure the premises are well-ventilated or perform charging operations in premises set aside specifically for the purpose.
- Do not smoke, do not move near to the batteries with open flames, do not use grinding or welding machines; do not cause sparks near the batteries
- Do not take current samples from the batteries using pliers, sockets and provisional contacts.
- Make sure all connections (cable terminals, sockets, plugs, etc.) are always well tight and in good conditions
- Do not rest metal tools on the batteries.
- Keep the batteries clean and dry, if possible using antistatic cloths.
- Top up with distilled water every time the level of the electrolyte falls to 5 - 10 mm from the splash guards.
- Avoid overcharging and keep battery temperature below 45 - 50° C.
- Maintain any centralised topping-up systems in good working order and service regularly.
- Risk of electric shocks and short circuits; for safety's sake, before performing any maintenance or repairing on the batteries (or on the machine), remove the +/- terminals from the battery poles.
- Risk of explosions during charging; this can occur when recharging with an unsuitable battery charger (depending on battery Amperes)
- During battery recharging operations, or whenever the battery charger plug is inserted, the machine must never be switched on or moved (even manually)

CHAPTER 10 - CHECKS BEFORE START UP

SWL R1000 ET/SW R 6200 BT

FIG. 13



1 - Check the level of the battery solution and if necessary top up with distilled water.

2 - Make sure the connector **Part. 1 Fig. 13** is well inserted in the socket **Part. 2 Fig. 13**.

SWL R1000 ST/SW R 8300 SC

Read carefully the Engine User Manual attached to this machine booklet and follow some simple instructions:

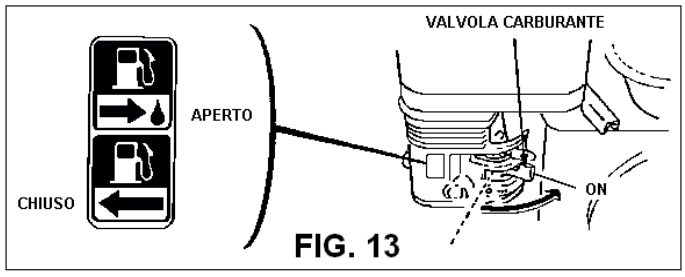


FIG. 13

Internal Conbustion Version

1. Check the level of oil in the engine and top up, if low, wearing protection gloves (possibly nitrile gloves with cotton inside) the oil sump (from 5,5 hp-3,75 kw) contains about 5hg of oil. The recommended oil for temperate climate is 10w-30.To protect engine a particular device stops the engine by switching on if oil is absent or not enough; it is therefore necessary checking the oil level very often.
2. Refuel with switched off and cold engine only; Unlead petrol is strongly advised.

ATTENTION:
KEEP FUEL OUT OF CHILDREN'S REACH , IN A DRY AND AIRY PLACE, FAR FROM HEAT SOURCES

IMPORTANT: Fuel tank must be fit for the purpose and well cleaned. This will grant you a good and long lasting of the petrol engine filter. Please use a tank suitable to use up fuel in max 2/3 months in order to have fresh fuel all the time.

CAPITOLO 11 - STARTING AND STOPPING

ATTENTION PLEASE:
BEFORE PROCEEDING MAKE SURE YOU HAVE READ ALL PREVIOUS CHAPTERS.

SWL R1000 ET/SW R 6200 BT

IMPORTANT: To start the machine, first of all sit in the driver's seat. If the operator is not sat, or if he/she stands up during start up, the machine will stop.

START UP :
- Turn the key **Part. 6** of switchboard clockwise
- Turn the switch **Part. 5** of switchboard to start the engine, the rotation of brushes and to activate suction.

The machine is in working position with the central brush lowered and suction engaged.

FORWARD MOVEMENT:
- Position the switch **Part. 1** of switchboard forwards and press the forward pedal with the foot **Part. 6 Fig. 2.**

REVERSE MOVEMENT:
- Position the switch **Part. 1** of switchboard backwards and press the backward pedal with your foot **Part. 6 Fig. 2**

NEUTRAL:
- With the switch **Part. 1** of switchboard in central position the machine is in neutral.

STOP:
- Turn the switch **Part. 5** of switchboard anticlockwise
- Turn the key **Part. 6** of switchboard anticlockwise.

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STARTING :
- Disconnect the brake **Part. 4 Fig. 10.**

- Put the lever "START" in position "Switch off" **Part. 1** of the switchboard
- Move the acceleration lever **Part. 2** of switchboard in position "MAX" (represented by a hare).
- Turn the key **Part. 7** of switchboard in position 1 and then in position **AV**
- As soon as the engine starts bring the Start lever back, slowly, and regulate the number of rotations ("**RPM**") ; it's better to warm up the engine for some minutes at slow running before starting.

IMPORTANT: For warm starting of the engine use the same procedure

STOPPING:

- Turn anticlockwise the key **Part. 7** of switchboard.

ATTENTION:
IF THE ENGINE DOESN'T START AT FIRST TRY, REPEAT THE SEQUENCE AT TIME BREAKS OF 10/15 SECS. DON'T PERSIST IN STARTINGS FOR MORE THAN 5/6 SECS.

CAPITOLO 12 - CORRECT USE AND ADVICES

IMPORTANT: Before starting work, make sure there are no strings, plastic or metal wires or long strips of cloth, sticks, power leads, etc. on the floor as theY are hazardous and could damage the dust seals and brushes. These must be **removed** before starting work with the machine.

- Be very careful when driving over rails, door runners, ets. These can cause damage to dust seals. Drive over them very slowly.
- Avoid driving over puddles of water. In the presence of damp surfaces, close the suction by means of knob **Part. 1 Fig. 6** located to the right of the operator, alongside the central brush start lever.
- In the presence of large or lightweight objects (leaves, cigarette boxes etc.) lift the front flap by pressing the flap-lift pedal with the heel of your left foot **Part. 1 Fig. 9.**
- If the surface to be cleaned is very dirty in terms of quantity and quality of the material or dust to be picked up, first of all go over the area "**roughly**" without paying too much attention to the result. Then with a clean bin and the filters well shaken, go over it again. This way, the desired effect will be achieved.
- Subsequently, if the machine is used regularly and properly, such "**rough**" cleaning will no longer be required.
- The side brush must only be used for cleaning edges, profiles, corners, etc. It must be raised (disengaged) immediately after use so it does not lift up dust and also because results achieved with the side brush engaged are always inferior to those obtained with the central brush alone.
- For good results, empty the container regularly and keep the filters clean, shaking them with the tools provided.

CHAPTER 13 - ROUTINE MAINTENANCE

ATTENTION: ALL OPERATIONS MUST BE PERFORMED WITH COLD AND SWITCHED OFF ENGINE.

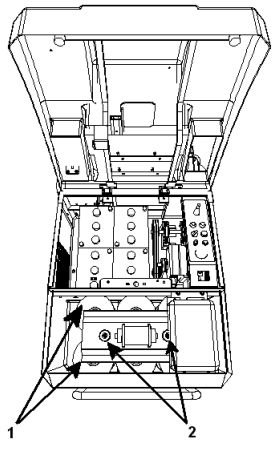
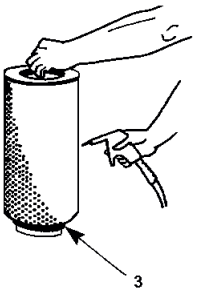


FIG. 14



CLEANING THE DUST FILTERS:

Every 40 / 70 working hours or whenever necessary, check the dust filters **Part. 1 Fig. 14**. Remove them from housing, loosen the filter-pressing blocks **Part. 2 Fig. 14** and clean the filters by, first of all, banging them on the floor (not violently), keeping the perforated side towards the floor. For more thorough cleaning, use a compressed-air gun and blow from outside towards the inside, as shown in **figure 14**. When refitting the filters, always remember to replace the black seal **Part. 3 Fig. 14** on the bottom of the filter.
Make sure that the filters are always in good condition and, whenever necessary, replace them.

DUST SEALS:
Every 40 / 70 working hours, check the condition of the dust seals **Part. 1** (movable) and **Part. 2** (3 fixed seals) **Fig. 15** surrounding the central brush **Part. 2 Fig. 4**. Whenever necessary, replace these.

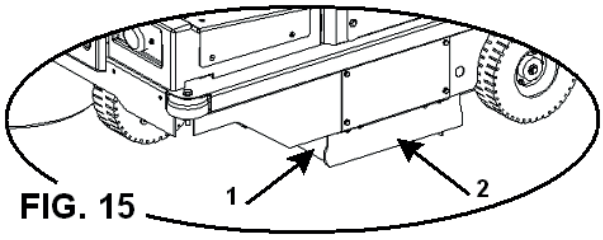


FIG. 15

IMPORTANT: By replacing the seals make sure the side seals (the shortest one on the right and on the left. in total 2) are raised off the ground of about 2 mm.

CENTRAL BRUSH:
Part. 2 Fig. 4. Every 50 / 80 working hours, or whenever necessary, check the condition of the central brush, especially if you have picked up pieces of string, wire, etc.
To remove such items from the brush:
- Remove the bin **Part. 2 Fig. 7**.
- Kneel down and inspect the central brush under the machine. Wearing gloves and a face mask to protect the airways, remove any pieces of string or wire wrapped around the central brush. The 4 hooks (eyebolts) provided can also be used to raise the machine (**see Fig. 1**) and perform this operation. Take care not to stand underneath the machine.

ADJUSTMENTS AND REPLACEMENTS

CENTRAL BRUSH ADJUSTMENTS:

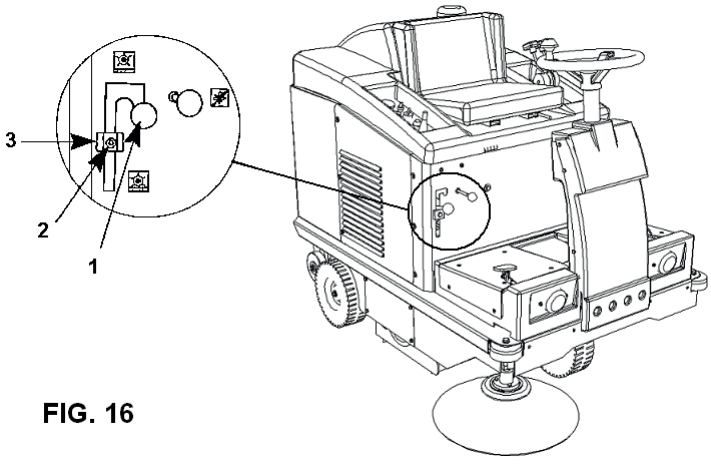


FIG. 16

If the machine starts cleaning in a faulty manner or leaves dirt around, it will have to be adjusted and lowered as followed:
- Position lever **Part. 1 Fig. 16** so that the central brush is raised.
- Loosen screw **Part. 2 Fig. 16**.
- Lower the adjuster **Part. 3 Fig. 16** by 3/4 mm or by the desired distance.
- Secure the adjuster by tightening screw **Part. 2 Fig. 16**
- Position lever **Part. 1 fig. 16** above the adjuster **Part. 3 fig. 16.**
- The central brush can be adjusted until the adjuster **Part. 3 fig. 16** reaches the end of stroke; after this, the brush must be replaced.

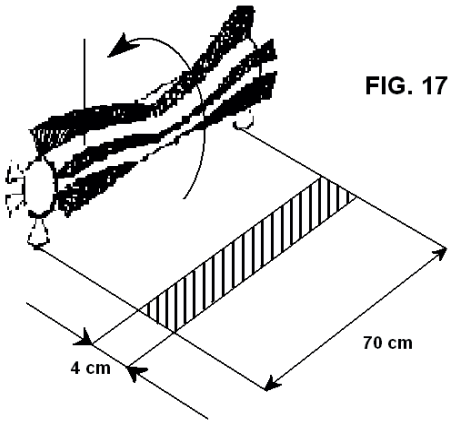


FIG. 17

IMPORTANT: To ensure the central brush is correctly adjusted, measure its "Track" as follows:

- After adjustments, start the machine up and, and without moving either forwards or backwards, leave it standing in the same place for at least 10 / 15 sec. with the central brush lowered.
- Turn off the engine, raise the central brush and move the machine forwards manually until the mark left on the floor by the rotation of central brush is visible, as shown in **Fig. 17**.

IMPORTANT: The width of the track must not be under 4 cm.

SIDE BRUSH ADJUSTMENTS:
When the side brush **Part. 1 Fig. 18** is no longer able to convey dirt to the central brush, the height of the side brush will have to be adjusted as follows:

- Keeping the side brush raised turn anticlockwise the register **Part. 3 fig. 8**.

IMPORTANT: This operation must be performed with the engine switched off.

ION BIN:
Every 50 / 60 working hours or whenever necessary, wash the collection bin **Part. 1 Fig. 7** using warm water and, if necessary, common detergent. This will prevent any bacteria build-up **(wear rubber gloves)**.

- GENERAL RULES**To ensure a good machine functioning and life-span, keep both the outer bodywork and the inside of the machine, under the bonnets, clean by using jets of compressed air (perform this operation with the engine off and cold).**

REPLACEMENTS

REPLACING THE CENTRAL BRUSH:
This operation must be performed wearing gloves and a face mask to protect the airways. Use 10 / 13 / 17 mm spanners and make sure the engine is off and cold.

1. Remove the left panel (left to the driving seat) **Part. 4** (Left) **Fig. 3**, by loosening the retention screws.
2. Remove the 3 bolts on **Part. 7 and 9** of **Table 1**.
3. Remove the screws securing the left panel **Part. 13 Tab. 1** to which the side seal is also fastened.
4. Pull out the central brush **Part. 15 Tab. 1** and proceed to replace this being careful to ensure the brush bristles are in the right direction as shown in **Fig. 17**. Ensure the drive notches of the two brushes supports **Part. 4 and 24** (see **Tab. 1**) are inserted in the brush housing **Part. 15 Tab. 1**.
5. To end assembly, repeat the operations in the reverse order.
6. Adjust the height of the new brush (see "**CENTRAL BRUSH ADJUSTMENT**" paragraph).

REPLACING THE SIDE BRUSH:
This operation must be performed with the engine off and wearing gloves, using two 10 mm spanners.

1. Unscrew the three bolts **Part. 4 Fig. 18** to detach the side brush **Part. 1 Fig. 18** from the plastic flange **Part. 5 Fig. 18**.
2. Replace the worn brush and screw up the bolts **Part. 4 Fig. 18** to the flange **Part. 5 Fig. 18**.

ATTENTION:When checking or replacing the motor oil, always wear protectives gloves, if possible made of nitrile with cotton lining; Do not discard the used oil into the environment as this is a pollution hazard.

Dispose of the used oil through legally prescribed channels Carefully read the attached motor instruction booklet and always:

1 - Check the level of the oil every 5 work hours.

2 - First oil change after 5 work hours. The sump contains about 5 hg of oil. The oil recommended for temperature climates is 10W-30 multigrade for petrol engines. If the machine is operating outside the temperature zone, determine the right oil by referring to the motor booklet. When changing oil, use the special oil drain pipe.

3 - Subsequent oil changes every 40/50 work hours.

4 - Clean the motor air cartridge every 25 hours or before if necessary. Replace if necessary (see motor booklet).

IMPORTANT: The motor of the sweeper feature an OIL-ALERT system. This prevents motor start up in the absence or if the oil level is low.

CHAPTER 14 - EXTRAORDINARY MAINTENANCE

ATTENTION: Extraordinary maintenances are all those not mentioned in this manual. They must therefore be performed by specialised after-sales personnel (see manual cover).

CHAPTER 15 - PUTTING OUT OF USE

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- Remove the batteries from their housing and keep them in a dry and well-ventilated palce. To ensure a long lasting of unused batteries charge them and eventually top up with distillated water every 30/40 days
- Clean the dust filters and the bin. if necessary wash the bin as in instructions in "**Collection bin**" paragraph

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- Leaving the machine switched on use up all the petrol in the tank;
- Clean the machine (with cold and switched off engine);
  Clean the dust filters and the bin ; If necessary wash the bin as in instructions in "**Collection bin**" paragraph.

CHAPTER 16 - DISMANTLING/DEMOLITION

ATTENTION: Dismantling and demolition are a customer's responsability. These operations must be performed in accordance with applicable regulations, handing the entire machine or its components to companies specialised in such services.

CHAPTER 17 - EMERGENCY SITUATIONS

In the event of any emergency situations such as, for instance: the machine has accidentally been driven over power cables and these have wrapped around the central brush or side brush, or an unusual noise is heard coming from inside the machine or engine, hot materials, inflammable liquids, chemical materials in general, poisons etc. have been picked up ETC:

PROCEED AS FOLLOWS:

1) Disengage the traction

2) Hardly press the brake pedal

3) Switch off the engine by the key on the dashboard or simply by leaving the driving seat as the safety micro switch under the seat will automatically turn the engine off.

4) After picking up the above materials, remove the container (bin) part. 1 and 2 fig. 7 and clean it, wearing gloves and mask to protect the airways. Follow the instructions in the "collection bin" paragraph.

CHAPTER 18 - TROUBLESHOOTING

Two basic faults can effect: the machine raises dust during use, or leaves dirt on the floor; causes could be many but if the machine is carefully operated and routine maintenance is properly carried out, such faults will not occur.

FAULT	CAUSE	REMEDY
The machine raises dust	Suction lever is in OFF position (pulled out)	Turn to ON position (pushed in)
	Filters blocked	Clean them by "shaking" them using the provided tools and if necessary take them off and clean thoroughly
	Filters damaged	Replace
	Filters badly fitted	Fit with the seal provided and make sure they are well inserted and uniformly well-secured
	Side seals damaged	Replace
The machine leaves dirt on the floor	The central brush is not well set or is worn	Ad just the central brush and check the "track"
	Wires, strings etc. have been picked up	Remove them
	Side seals damaged	Replace
	Collection bin full	Empty
The machine battery is not performing properly. The machine is slow and does not clean well	Battery flat or not completely charged	Check the level of the electrolyte and procede with complete new charge cycle
	The battery charter is not that recommended or is not enough	Use a proper battery charger
The internal combustion engine doesn't start	Oil level too low or not at maximum.	Top up
	Micro-seat not activated.	Check

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