

INSTRUCTION MANUAL

TIGRA EB



EN

Instruction manual
(Original instruction)



Attention: Read the instruction before use
the machine



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PRESENTATION

Our company, a leader in the production of industrial cleaning machines, is delighted to have you among the owners of this sweeper and is sure you will be fully satisfied with it. We are sure that during its use, you will see the quality, robustness and possibilities of use it has to offer. This sweeper is suitable for private, industrial or public use. This manual describes the various installation operations, controls and maintenance interventions necessary to maintain perfect efficiency of your sweeper. These are normal maintenance operations that any operator can carry out using devices normally available in a company. For particular works, please contact specialist staff.

OUR COMPANY AIMS TO CONSTANTLY IMPROVE ITS PRODUCTS AND RESERVES THE RIGHT TO MAKE CHANGES AND IMPROVEMENTS WHEN NECESSARY WITHOUT ANY OBLIGATION TO UPGRADE PREVIOUSLY SOLD MACHINES.

ATTENTION!

BEFORE USING THE MACHINE OR CARRYING OUT ANY OPERATION ON IT, ALL THE PROCEDURES AND WARNINGS DESCRIBED IN THIS MANUAL MUST BE READ AND UNDERSTOOD. STRICT COMPLIANCE WITH THE REGULATIONS AND THE INSTRUCTIONS CONTAINED IN THIS MANUAL, COMBINED WITH THE OPERATOR'S ATTENTION AND CAUTION, WILL BE THE BEST GUARANTEE AGAINST ACCIDENTS THAT CAN OCCUR IN THE WORKPLACE.

SWEEPERS ARE DESIGNED TO PROVIDE UTMOST SAFETY IF USED ACCORDING TO INSTRUCTIONS. THIS MACHINE IS INTENDED FOR COMMERCIAL USE, FOR EXAMPLE IN HOTELS, IN SCHOOLS, IN HOSPITALS, IN FACTORIES, IN SHOPS, IN OFFICES AND IN BUSINESSES.

THIS MACHINE IS NOT INTENDED FOR USE BY PEOPLE (INCLUDING CHILDREN) WITH REDUCED PHYSICAL, SENSORY OR PSYCHOLOGICAL CAPACITY, OR WITH LACK OF EXPERIENCE AND KNOW-HOW. CHILDREN SHOULD BE MONITORED TO ENSURE THEY DO NOT USE THE EQUIPMENT TO PLAY ON.

THE USER MANUAL IS AN INTEGRAL PART OF THE SWEEPER AND MUST ACCOMPANY IT UP TO ITS DEMOLITION.

PURSUANT TO DIRECTIVE 2006/42 EC, AND DPR 459 ON 24/07/1996 AND SUBSEQUENT UPDATES, IT IS MADE KNOWN THAT: OPERATOR IS INTENDED AS THE PERSON OR PEOPLE RESPONSIBLE FOR INSTALLING, OPERATING, ADJUSTING, CARRYING OUT ROUTINE MAINTENANCE, CLEANING, REPAIRING AND TRANSPORTING THE MACHINE.

THIS COMPANY CANNOT BE HELD LIABLE FOR PROBLEMS, BREAKAGES, ACCIDENTS OR OTHER ISSUES DUE TO LACK OF KNOW-HOW OR NON-APPLICATION OF THE PROCEDURES CONTAINED IN THIS MANUAL, OR DUE TO IMPROPER USE OF THE MACHINE.

THIS COMPANY ALSO CANNOT BE HELD LIABLE FOR CHANGES, INSTALLATION OF PARTS AND/OR ACCESSORIES WITHOUT PRIOR AUTHORISATION.



EMERGENCY SITUATIONS

**IN THE EVENT OF FIRE, ONLY USE POWDER EXTINGUISHERS
IF OCCURS ANY ABNORMAL BEHAVIOR (UNCONTROLLED SPEED INCREASE,
OVERHEATING, ...) TURN OFF THE MACHINE IMMEDIATELY**

MACHINE IDENTIFICATION

The machine and manufacturer are identified through three plates on the rear of the dirt container



REFER TO THESE DETAILS WHEN ORDERING SPARE PARTS OR MAKING ANY OTHER ENQUIRY TO THE MANUFACTURER.

The sweepers conform with the EEC directives and show the CE mark

WARNINGS AND RECOMMENDATIONS

- If you have to move the machine, push it. Do not use the engine;
- The sweeper must be used inside only unless dry weather;
- The sweeper is designed to carry out the cleaning of dry floors;
- Do not use for toxic powders;
- Do not use in an explosion risk area;
- Do not collect materials that could cause a fire (f.e. cigarette butts hot weldibgs rod ends)
- Be aware of other members of staff in the sweeping area;
- Never leave the sweeper with the engine running. Turn the engine off and remove the key;
- Never open the protective covers when the sweeper is running;
- Maintenance operations should only be carried out with the engine turned off;
- Only operate the sweeper from the driving seat;
- Do not attempt to work on slopes whose gradients exceed the value shown on the table;
- Do not use the machine for the cleaning of large objects;
- The main brush must not sweep up wires, ropes, or any other long material that may get tangled with it;
- Do not carry out any modification to the machine without our previous agreement;
- The sweeper has not been approved for use on the public highway;

RESIDUAL RISK

Residual risk is considered as a potential danger, which is impossible to eliminate or partially eliminate, that can cause harm to the operator if they do not follow correct practices in the work place.

Despite the safety devices provided, some residual risks, as described here below, remain:

1. Risk of electric motor heating, which can lead to burns if contact is prolonged

WAIT FOR AN ELECTRIC MOTOR TO COOL BEFORE TOUCHING IT.

2. Risk of rolling

SLOW DOWN WHEN WORKING ON AN INCLINE.

3. Risk of collision

SLOW DOWN WHEN WORKING ON WET OR SLIPPERY SURFACES IN ORDER TO AVOID COLLISIONS WITH PEOPLE OR OBJECTS.

4. Risk of injury to people

DO NOT STOP IN THE AREA WHERE A MACHINE IS WORKING

5. Risk of fire or explosion during battery charging, with risk of burns or death.

NEVER APPROACH THE BATTERY CHARGING AREA WITH AN OPEN FLAME DURING CHARGING. BATTERY CHARGING MUST BE CARRIED OUT IN A VENTILATED AREA, WHICH IS PROTECTED FROM OPEN FLAMES OR EXTERNAL AGENTS THAT COULD CREATE DANGEROUS SITUATIONS. BEFORE CHARGING, CAREFULLY READ THE INSTRUCTIONS IN THE MANUAL AND THE BATTERY SPECIFICATIONS.

UPDATING OF THE USER'S MANUAL

When large-scale modifications are made to the machine or new parts are installed, the updated documentation must be sent to the Dealer along with the purchased part or as an update of the manual.

OBLIGATIONS OF THE EMPLOYER OR OWNER OF THE MACHINE

The employer or owner of the machine is responsible for giving the User's Manual to all the personnel who are going to have to use the machine.

The employer or owner of the machine also undertakes to update the manual with the documentation that the Manufacturer will send if modifications are made to the machine.

GENERAL WARNINGS AND ADVICE



WARNING: very hot surfaces



ATTENTION: DO NOT GET WET

Devices (normally they are electrical components) having this indication must be kept dry.



WARNING: Use adequate acoustic protection.

In a few working environments, sweepers might generate an acoustic danger which can be eliminated with adequate acoustic protection.

DISPOSAL



All packaging is recyclable. The packaging should not be thrown away with domestic waste, but sent to the relevant collection centres.



EXHAUSTED LEAD-ACID BATTERIES

Exhausted batteries are considered harmful toxic waste and therefore should be exclusively given to collection companies with specific authorisation (ascertain on hand-over).

MATERIAL COLLECTED FROM THE MACHINE

The waste collected by the machine must be given to the relevant urban cleaning company since it is considered urban waste or similar. The machine cannot be used to collect toxic-harmful materials.

SCRAPPING THE MACHINE

On scrapping, proceed with the correct disposal of the materials that make up the machine. It is compulsory to give the machine to authorised collection companies which will correctly dispose of oil, filters, plastic, metal, electric motors, electric boards, etc. in compliance with legislation in force. Decommissioned equipment contains precious recyclable materials and therefore should be given to the relevant collection centres. Please dispose of decommissioned equipment through differentiated collection systems.



DISPOSAL OF ELECTRICAL EQUIPMENT AND ELECTRONICS

DESCRIPTION OF THE PICTURES

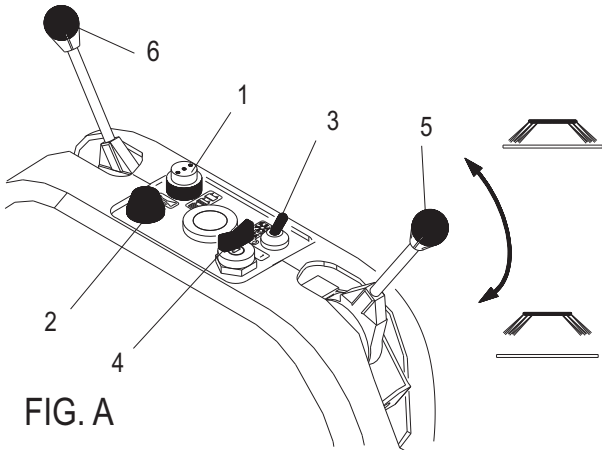


FIG. A

FIG.A: INSTRUMENTS PANEL

1. Battery charge indicator
2. Horn
3. Vacuum and brushes motor switch
4. Keyswitch
5. Right side brush lever
6. Left side brush lever (OPTIONAL)

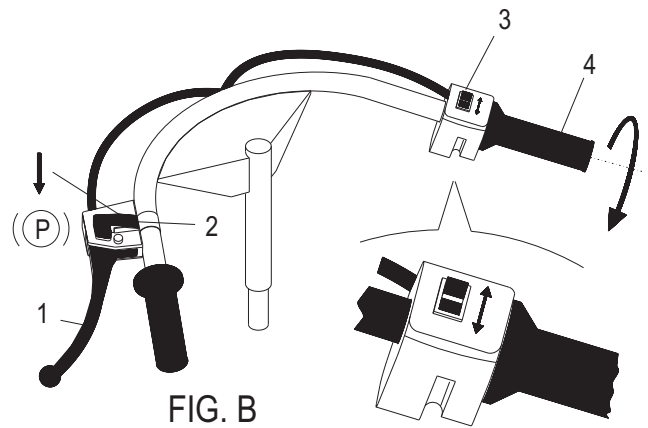


FIG. B

FIG.B: HANDLE

1. Emergency brake's lever
2. Switch for locking parking brake
3. Switch for reverse and forward
4. Traction lever

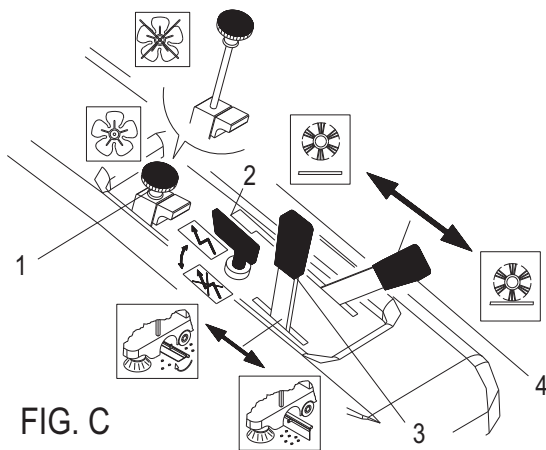


FIG. C

FIG.C: SIDE INSTRUMENTS PANEL

1. Vacuum shut off lever
2. Safety switch
3. Flap lever
4. Main brush lever

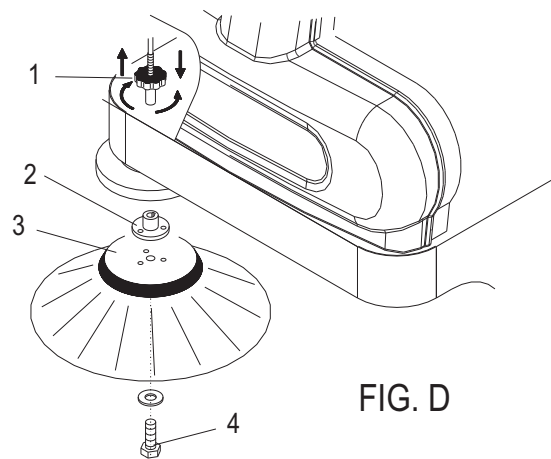


FIG. D

FIG.D: ADJUSTMENT AND REPLACEMENT OF THE SIDE BRUSH

1. Side brush pressure adjustment knob
2. Flange
3. Side brush
4. Locking crew

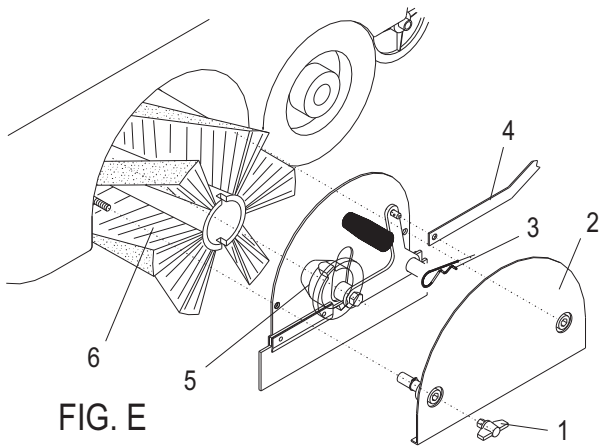


FIG. E

FIG.E: MAIN BRUSH REPLACEMENT

1. Key
2. Left side cover
3. Split pin
4. Brush lifting handle
5. Main brush left support
6. Main brush

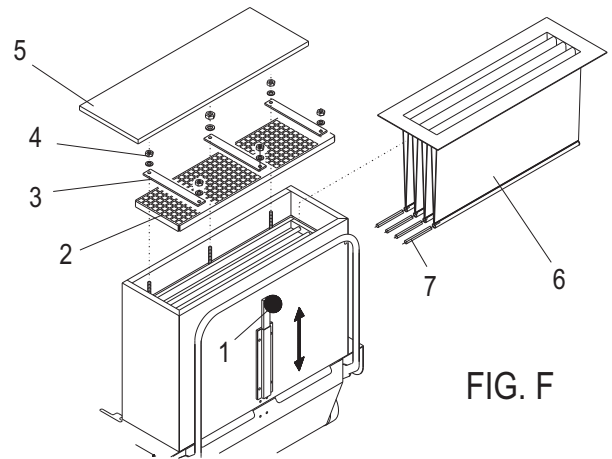


FIG. F

FIG.F: FILTER REPLACEMENT

1. Filter shaker lever
2. Filter locking net
3. Net blocking plate
4. Nut
5. Cover for filter container
6. Filter bag
7. Filter shaking washers

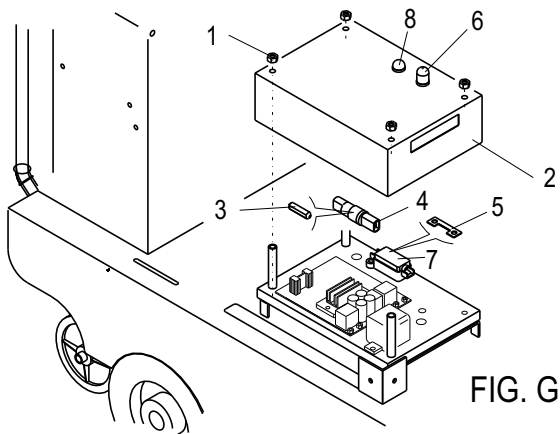


FIG. G

FIG.G: FUSES REPLACEMENT

1. Nut
2. Electrical box cover
3. Fuse 8A (services)
4. Fuse box (services)
5. Ribbon fuse 40A (forward)
6. Cut off switch
7. Ribbon fuse box
8. Alarm indicator light

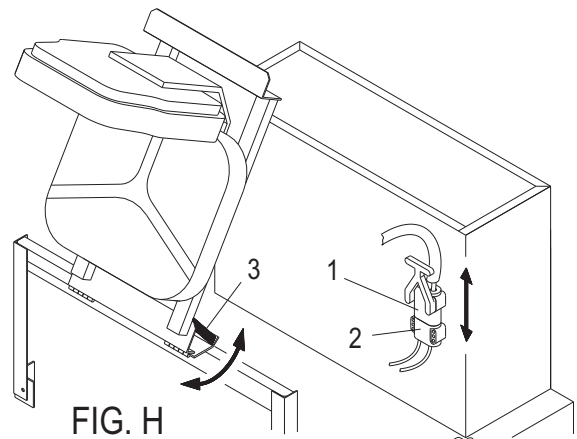


FIG. H

FIG.H: BATTERY RECHARGE

1. Mobile connector
2. Fixed connector linked to batteries
3. Safety locking for hood

HOW TO USE THE MACHINE

STARTING OF MOTOR AND BRUSHES SWITCH (PIC. A)

Turn the key (n°4 pic. A) to the "1" position

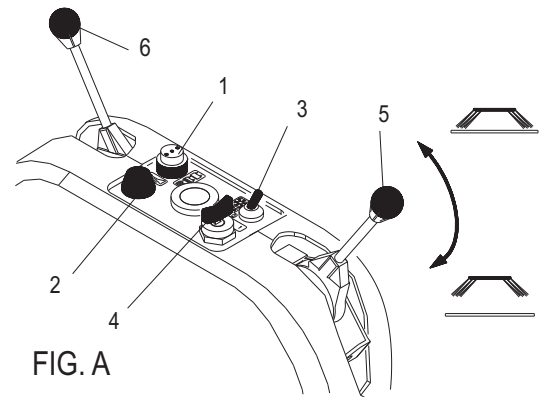
DEACTIVATION OF MOTOR AND BRUSHES (PIC. A)

Turn the key (n°4 pic. A) to the "0" position

Warning: after turning off the machine, wait until 3/4 seconds before start it again

BATTERY CHARGE INDICATOR (N°1 PIC. A)

It monitors the level of charge of the battery. While the green led is on, you can sweep. When the yellow led comes on, you must put machine on charge. When the red led comes on, you must immediately switch off the machine, this prevents irreversible battery damage.



FORWARD SPEED (PIC. B)

The operator must be seated:

- CHECK THAT THE PARKING BRAKE IS NOT ENGAGED (n° 2 pic. B)
- Turn the key to position 1 (n° 4 pic. A)
- Confirm that the safety switch (n° 2 pic. C) is in the correct position
- Verify that the button for forward and reverse speed (n° 3 pic. B) is in forward position
- By turning the handle anti clockwise (n° 4 pic. B) you will have forward motion

REVERSE SPEED (PIC. B)

- Move the button (n° 3 pic. B) for reverse speed
- By turning the handle anticlockwise (n° 4 pic. B) you can go in reverse

SERVICE BRAKE (PIC. B)

The service brake is activated by releasing the traction lever (n°4 pic. B)

EMERGENCY BRAKE (PIC. B)

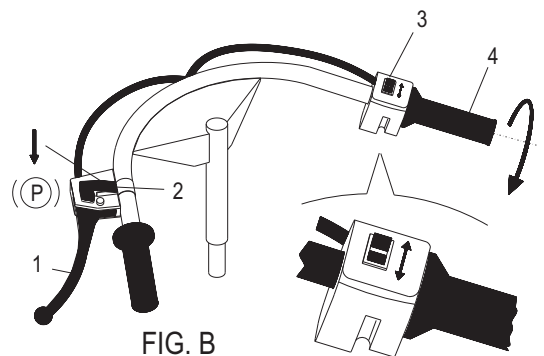
In case of emergency, pull the lever to stop the machine (n°1 pic. B)

PARKING BRAKE (PIC. B)

- When you finish, pull the lever (n°1 pic. B)
- Press the button for locking (n°2 pic. B) at the point shown by the arrow in pic. B

RELEASE OF PARKING BRAKE (PIC. B)

- Pull again the lever (n°1 pic. B)
- Push from the highest side the locking push-button (n°2 pic. B)



VACUUM CUT OFF (PIC. C)

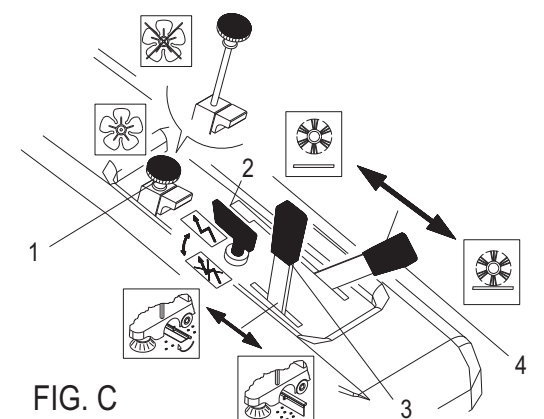
If you must overstep a wet floor or go across an area with puddles, you must cut the vacuum off using the handle (n° 1 Pic. C), to keep filters in good condition.

FLAP LEVER (PIC. C)

Raise the flap using the lever to collect light and bulky debris (n° 3 pic. C)

MAIN BRUSH (PIC. C)

The main brush can be raised and lowered by mean of a lever (n°4 pic. C)



PERIODIC MAINTENANCE

The operator has to check:

- brush state, every 10 hours;
- filters state, every 30 hours;
- brake adjustment, every 50 hours;
- the register of side brush, every 50 hours;

The authorised service centre has to check:

- the belt tension, every 200 hours;

The authorised service centre has to replace:

- the filter, from 12 to 24 months;
- the rubber flaps, when worn out;
- the brushes, when worn out;

Before effecting any maintenance, disconnect the machine from power source electric, unplug the connector (n°1 pic. H)

FILTER REPLACEMENT (PIC. F)

- Stop the machine
- Cut off the vacuum using handle (n°1 pic. C)
- Shake the filter thoroughly by the small lever (n°1 pic. F)
- Raise the hood
- Remove the cover of filter container (n°5 pic. F)
- Remove the 6 locking nuts (n°4 pic. F)
- Remove plates (n°3 pic. F) and filter blocking net (n° 2 pic. F)
- Remove the filter (n°6 pic. F)
- Take the 4 steel plates off (n°7 pic. F) and mount them again on the new filter
- Insert the new filter
- Mount again net, plates, and nuts
- Mount the cover and lower the hood

SIDE BRUSH ADJUSTMENT

Use adjuster (n° 1 pic. D)

SIDE BRUSH REPLACEMENT

- Remove the screw (n° 4 pic. D).
- remove the brush off (n° 3 pic. D).
- Take the flange off (n° 2 pic. D) and mount it on the new brush
- Mount everything.

MAIN BRUSH REPLACEMENT

- Unscrew with the key (n°1 pic. E) the cover fixing screws (n°2 pic. E)
- Take the cover off (n°2 pic. E)
- Take the split pin off (n°3 pic. E)
- Take the plate off (n°4 pic. E)
- Remove the brush support bar (n°5 pic. E)
- Extract the brush (n°6 pic. E)
- Insert the new brush but pay attention to the lie of bristles (pic. E)
- Mount everything

FUSE REPLACEMENT (FIG.G)

- Take the connector off (n°1 pic. H)
- Unscrew the nuts (n°1 pic. G)
- Take the cover off (n°2 pic. G)

1) Replacement of the 7.5A fuse (key switch power supply) (n° 3 pic. G):

- Remove the fuse holder (n° 4 pic. G)
- Replace the 7.5A fuse (n° 3 pic. G)

2) Replacement of the 40A fuse (traction) (n°8 pic. G):

- Open the fuse-box using a screwdriver (n°7 pic. G)
- Take off the screws locking the fuse and replace it

After having carried out the necessary replacements, mount everything

TECHNICAL CHART

MAIN SPECIFICATION	Cleaning path with side brush	1.055 mm
	Hourly performance with 2 side brushes	5.800 m ² /h
	Forward speed	0 - 5,5 km/h
	Dirt container capacity	63 L
	Maximum gradient	10 % forward, 20% in reverse
	Turning radius	950 mm
DIMENSIONS AND WEIGHT	Dimensions with 2 side brushes	1.380 x 1.055 x 1.215 mm
	Dimensions with side brush	1.380 x 932.5 x 1.215 mm
	Dimensions without side brush	1.270 x 810 x 1.215 mm
	Weight	160 kg
	Weight with type A batteries	232 kg
	Weight with type B batteries	240 kg
	Packaging dimensions	1.520 x 950 x 1.100 mm
	Packaging weight	40 kg
	Packaging volume	1,59 m ³
BRUSHES	Main brush dimensions	650 x Ø 265 mm
	Side brush diameter	450 mm
TRACTION SYSTEM	Traction type	Electronic
	Traction motor	24V - 400 W
	Power absorption (machine loaded)	12 - 15 A
PRIMARY ELECTRIC MOTOR	Primary motor	24V - 600 W
	Power absorption (machine loaded)	32 - 35 A

TYPE A BATTERIES	Type	2 lead acid batteries 12V 158A 20H - 110A 5H
	Dimensions ea.	345 x 170 x 285 mm
	Autonomy (theoretical)	2 h
TYPE B BATTERIES	Type	2 gel batteries 12V 105A 5H
	Dimensions ea.	345 x 170 x 285 mm
	Autonomy (theoretical)	1 h 30 min
FILTER SYSTEM	Filter type	MultiPocket filter © L class
	Total surface area	3 m ²
WHEELS	Type of wheels	3, solid rubber, super elastic, non-marking
	Wheels	Ø 200 mm
	Brakes	Mechanical service brake and handbrake on front wheel
SOUND LEVEL (MEASURED ACCORDING TO ISO 11201)	Noise emission value LpA	74 dB (A)
	Uncertainty KpA	2.1 dB (A)
VIBRATION LEVEL	Whole-body vibration level aW	1,61 m/s ²
	Uncertainty K	0,64 m/s ²
TEMPERATURE RATING	Storage temperature	-20 / +50 °C
	Operating temperature	-20 / +50 °C

TROUBLESHOOTING TABLE

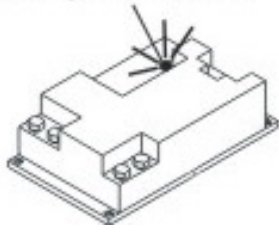
ATTENTION!

ANY TYPE OF SERVICE OR TESTING, WITH THE EXCEPTION OF THOSE DESCRIBED IN THE ENGINE OR BATTERY MANUAL, MUST ONLY BE CARRIED OUT BY AN AUTHORISED SUPPORT CENTRE (ASC)

BEFORE ANY INTERVENTIONS CHECK THE CORRECT VOLTAGE OF THE BATTERY: 24V

FAULT	CAUSE	SOLUTION
Battery won't charge	Overloaded motors owing to anomalous frictions	Take off foreign corps or have the machine checked
	The electrolyte density is very low	Try to recharge the battery and eventually have it checked
When the key is turned on, everything is off	Battery not charged	Recharge or replace
	Fuse is damaged	Replace
	Safety switch in stop position	Turn it to the correct position
Dust inside the hood	Filter is broken	Replace
	Filter blocking nuts are loosen	Tighten the nuts
	There are no washers under the filter	Mount the washer
The main brush doesn't clean uniformly	Brush worn out	Have it replaced
	1Brush raised	Lower it
	Different material around the brush	Take it off
	Little pressure on the floor	Levers blocked or damaged
No vacuum when working	Vacuum off	Open it
	Filter clogged	Shake or replace it
Discharge of material and dust at front of the machine	Flap seal worn out or broken	Have it replaced
	Flap blocked and opened	Check it and eventually replace it
Discharge of material and dust behind or at the side	Flaps worn out or damaged	Have them replaced
No movement when machine switched on	The operator is not seated	Sit down
	Seat microswitch faulty	Have it replaced
	Drive motor fuse faulty	Replace the fuse
	Faulty traction board	Have it replaced
	Chain broken	Have it replaced
	Carbon brushes worn out	Have them replaced
With key turned on, functional charge indicator, and brush motor switch in on position, brushes don't turn	Cut out switch intervention	Engage the cut out switch
	Brush motor switch faulty	Have it replaced
	Belts broken	Have them replaced
	Loosen belt	Check belt tensioner
	Motor carbons brushes worn out	Have them replaced
With the key inserted and the charge indicator functioning, the machine does not climb the ramp.	Thermal sensor activation	Allow the engine to cool down

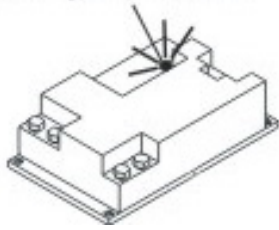
TRACTION BOARD ALARMS (UP TO FRAME 65001968)



If the machine does not start, please check the connections indicated to the traction board and eventually use a deoxidizing spray. If you don't have it, remove and insert repeatedly the connectors.

TRACTION BOARD ALARMS: (RED LED FLASHING)		
FLASHINGS' NUMBER	ALARM	WHAT TO DO
1 FW Switch ON	FORWARD SWITCH (580182) ON AT THE POWER ON	<ul style="list-style-type: none"> • PUT THE HANDLE TO THE ZERO POSITION
2 BW Switch ON	BACKWARD SWITCH (580182) CLOSED AT THE POWER ON	<ul style="list-style-type: none"> • CHECK THAT THE RELEASED GRIP GOES BACK TO ZERO POSITION • CHECK THE MICROSWITCH (580182) IN THE GRIP
3 Pot. fault	POTENTIOMETER SIGNAL INTERRUPTION (580276)	CHECK THAT THE GRIP CABLE (580184) OR THE EXTENSION WIRE (650047) ARE NOT DAMAGED. REPLACE THE DAMAGED WIRE OR THE COMPLETE GRIP (650030)
4 Ref OUT Neutral	POTENTIOMETER (580276) OUT OF NEUTRAL POSITION AT POWER-ON	<ul style="list-style-type: none"> • PUT THE HANDLE TO THE ZERO POSITION • CHECK THAT THE RELEASED GRIP GOES BACK TO ZERO POSITION • CHECK THE POTENTIOMETER (580276) IN THE HANDLE GRIP
5 Overtemperature	THERMAL PROTECTION	WAIT FEW MINUTES, START THE MACHINE AND CHECK THE ENGINE ABSORPTIONS
6 Power stage	<ul style="list-style-type: none"> • FAULTY POWER FUSE • POWER STAGE DAMAGED 	<ul style="list-style-type: none"> • REPLACE POWER FUSE • CHANGE THE CONTROLLER (TRACTION BOARD)
7 Overcurrent	OVERCURRENT	THE WIRES FROM THE BATTERY TO THE CONTROLLER (TRACTION BOARD) OR FROM THE CONTROLLER(TRACTION BOARD) TO THE MOTOR ARE UNLOOSEN, OXIDIZED OR NOT WELL CONNECTED. PLEASE CHECK THE WIRES
8 Power fuse/ready	POWER FUSE OR INTERNAL RELAIS DAMAGED	CHECK THAT THE FUSE (640088) FROM THE BATTERY POSITIVE POLE TO THE CONTROLLER IS OK AND THAT THE WIRES OF THE BATTERY AND OF THE ENGINE ARE RIGHTLY CONNECTED. REPLACE THE CONTROLLER (TRACTION BOARD), IF IT CONTINUES
9 Undervoltage	UNDERVOLTAGE	BATTERY VOLTAGE BELOW THAN 19V
10 Overvoltage	OVERVOLTAGE	BATTERY VOLTAGE UPPER THAN 45V
11 Overload current	AMPEROMETRIC PROTECTION	WORK UPPER THE MAX. COURRENT OF 30A PER 1 MINUTE
13 Key-off	TEMPORARY POWER SUPPLY INTERRUPTION	ATTENTION! IF 13 FLASHES APPEAR, THE OPERATOR SHOULD FIRST ENSURE THAT AT LEAST 3-4 SECONDS HAVE PASSED BETWEEN TURNING OFF THE MACHINE (KEY IN POSITION 0) AND TURNING ON THE MACHINE (KEY IN POSITION 1). THIS IS THE TIME REQUIRED FOR THE TRACTION ELECTRONIC CARD TO ACTIVATE. OTHERWISE 13 FLASHES ARE GENERATED. IF THE PROBLEM PERSISTS, IT COULD BE A BAD ELECTRICAL CONTACT ISSUE: CHECK THAT THE IN THE IGNITION SWITCH, FUSES AND THE 16 POLE CONNECTOR OF THE CHOPPER THERE ISN'T ANY INTERMITTENT CONTACT. IF THE PROBLEM PERSISTS AGAIN REPLACE THE CHOPPER
14 Eeprom fail	SUPPLY IS NOT CORRECT	REMOVE THE KEY AND PUT THE HANDLE TO THE ZERO POSITION. IF THE ALARM IS REPEATED, CHANGE THE CONTROLLER (TRACTION BOARD)

TRACTION BOARD ALARMS (FROM FRAME 6500 1969 UP TO SERIAL 65002800)

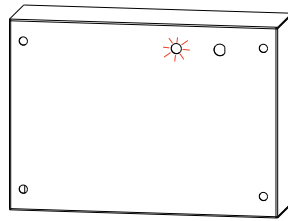
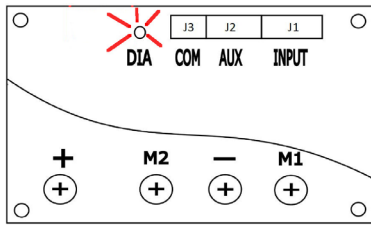


If the machine does not start, please check the connections indicated to the traction board and eventually use a deoxidizing spray. If you don't have it, remove and insert repeatedly the connectors.

Example of count flashes: ●●_●●●_ _ _ _ ●●_●●●_ _ _ _ ●●_●●●_etc.= 2+3 flashes

ALARM	WHAT TO DO
1 FLASH EVERY 3 SECONDS: NO FAILURE, NORMAL CONDITIONS	
1+2 FLASHES: overcurrent The cables from the battery to the traction board or from the traction board to the motor are loose, oxidized or not correctly connected	<ul style="list-style-type: none"> • Check the cables • Cycle the keyswitch
1+3 FLASHES: the controller's current sensors have invalid offset readings	<ul style="list-style-type: none"> • Cycle the keyswitch • Replace the traction board
1+5 FLASHES: controller severe undertemperature The heatsink temperature is below -40°C.	<ul style="list-style-type: none"> • Raise the heatsink temperature to above -40°C • Cycle the keyswitch
1+6 FLASHES: controller severe overtemperature The heatsink temperature is above 85°C.	<ul style="list-style-type: none"> • Decrease the heatsink temperature to below 85°C • Cycle the keyswitch
1+7 FLASHES: B+ undervoltage Battery voltage below 19V	<ul style="list-style-type: none"> • Charge the battery • Check battery terminal • Cycle the keyswitch
1+9 FLASHES: B+ overvoltage Battery voltage above 28.8V	<ul style="list-style-type: none"> • Check that the battery installed is 24V • Cycle the keyswitch
2+3 FLASHES: speed reduction due to controller temperature too high Heatsink temperature exceeds 75 °C. The controller is operating in an extremely hot environment. There is excessive load on the vehicle. The controller is incorrectly mounted.	<ul style="list-style-type: none"> • Return the machine in the field of acceptable temperature. • Check absorption of the drive wheel • Check the mounting of the controller • Cycle the keyswitch
3+7 FLASHES: The motor phase is ope	<ul style="list-style-type: none"> • Check the crimps and wiring M1-M2 • Check the wheel drive wiring • Cycle the keyswitch
3+9 FLASHES: blown B+ fuse	<ul style="list-style-type: none"> • Check the wiring and the B+ fuse • Replace the fuse
4+4 FLASHES: sequence error at power up Forward / reverse microswitch inserted or potentiometer not idle at switch-on	<ul style="list-style-type: none"> • Move the plate handle to zero position • Make sure the plate handle returns precisely to zero • Check the microswitch on the plate handle • Cycle the keyswitch
5+8 FLASHES: the motor has stalled	<ul style="list-style-type: none"> • Identify the possible causes of the stall • Cycle the keyswitch
8+8 FLASHES: an internal controller fault occurred	<ul style="list-style-type: none"> • Cycle the keyswitch • If it persists, replace the controller
11+8 FLASHES: the controller did not poweru p correctly	<ul style="list-style-type: none"> • Check connections • Cycle the keyswitch • If it persists, replace the controller
11+11 FLASHES: motor short	<ul style="list-style-type: none"> • Check the crimps and wiring M1-M2 • Check the wheel drive wiring • Cycle the keyswitch

TRACTION BOARD ALARMS (FROM FRAME 6500280 1)



If the machine does not start, please check the connections indicated to the traction board and eventually use a deoxidizing spray. If you don't have it, remove and insert repeatedly the connectors.

TRACTION BOARD ALARMS: (RED LED FLASHING)	
ALARM	WHAT TO DO
1 FLASH: The commands were already active when the ignition was switched on: the machine was started with the run command already engaged and/or with the throttle turned	<ul style="list-style-type: none"> • Turn the knob to zero • Check that the knob returns perfectly to zero • Check the microswitch on the knob • Switch the machine off and on again
2 FLASHES: Incorrect battery voltage	<ul style="list-style-type: none"> • Verify battery voltage
3 FLASHES: under voltage	<ul style="list-style-type: none"> • Recharge the battery • Check the cables • Switch the machine off and on again • If the problem persists, replace the controller
4 FLASHES: overcurrent The cables from the battery to the traction board or from the traction board to the motor are loose, oxidised or not correctly connected.	<ul style="list-style-type: none"> • Check that the battery installed is 24 Volt. • Check the cables • Switch the machine off and on again
5 FLASHES: Power capacitors do not charge	<ul style="list-style-type: none"> • Check power cable connections • If it persists, replace the controller
6 FLASHES: Check that the motor is properly connected	<ul style="list-style-type: none"> • Check motor connections • Check motor wheel wiring • Switch the machine off and on again
7 FLASHES: Potentiometer malfunction	<ul style="list-style-type: none"> • Check the potentiometer wiring and its integrity
8 FLASHES: Temperature limits exceeded	<ul style="list-style-type: none"> • Wait for the temperature to drop
9 FLASHES: Check that the engine is not running when the ignition is switched on	<ul style="list-style-type: none"> • Stop the machine and then repeat the check
10 FLASHES: SW or HW fault/anomaly	<ul style="list-style-type: none"> • Try switching the machine off and on again. • If it persists, replace the controller
11 FLASHES: EEPROM read/write error	<ul style="list-style-type: none"> • Replace the controller
14 FLASHES: Thermal probe intervention traction motor	<ul style="list-style-type: none"> • Allow the traction motor to cool

SERVICE AND MAINTENANCE RECORDS

1°

SERVICE AND MAINTENANCE RECORD

TO 50 HOURS

DATE

DAY	MONTH	YEAR	WORKING HOURS

BRUSH MOTOR

- Clean the outside of the motor using compressed air, above all the slats located at the rear
- Clean above the carbons and manifold

TRACTION MOTOR

- Clean the outside of the motor using compressed air, above all the top part where the carbons and manifold are located

MACHINE

- Check the liquid level in the battery
- Check the charge condition of each element
- Check the wear rate of brushes
- Check the rubber flaps wear
- Check the hopper gaskets wear
- Check the dust filters efficiency
- Check the tension of all belts
- Check the functioning of all instruments and levers
- Check the good functioning of the braking system
- Check the machine in all its functions

THE SERVICE WAS CARRIED OUT ON:

NAME:

SURNAME:

SIGNATURE:

STAMP OF DEALER WHO CARRIED OUT SERVICE

NOTES

2°

SERVICE AND MAINTENANCE RECORD

TO 100 HOURS

DATE

DAY	MONTH	YEAR	WORKING HOURS

BRUSH MOTOR

- Clean the outside of the motor using compressed air, above all the slats located at the rear
- Clean above the carbons and manifold

TRACTION MOTOR

- Clean the outside of the motor using compressed air, above all the top part where the carbons and manifold are located

MACHINE

- Check the liquid level in the battery
- Check the charge condition of each element
- Check the wear rate of brushes
- Check the rubber flaps wear
- Check the hopper gaskets wear
- Check the dust filters efficiency
- Check the tension of all belts
- Check the functioning of all instruments and levers
- Check the good functioning of the braking system
- Check the machine in all its functions

THE SERVICE WAS CARRIED OUT ON:

NAME:

SURNAME:

SIGNATURE:

STAMP OF DEALER WHO CARRIED OUT SERVICE

NOTES

SERVICE AND MAINTENANCE RECORDS

UP TO 200 HOURS AS FOR 50 HOURS DATE	DAY	MONTH	YEAR	WORK. HOURS
THE SERVICE WAS CARRIED OUT ON: NAME: SURNAME: SIGNATURE:	STAMP OF DEALER WHO CARRIED OUT SERVICE			

UP TO 300 HOURS AS FOR 100 HOURS DATE	DAY	MONTH	YEAR	WORK. HOURS
THE SERVICE WAS CARRIED OUT ON: NAME: SURNAME: SIGNATURE:	STAMP OF DEALER WHO CARRIED OUT SERVICE			

UP TO 400 HOURS AS FOR 50 HOURS DATE	DAY	MONTH	YEAR	WORK. HOURS
THE SERVICE WAS CARRIED OUT ON: NAME: SURNAME: SIGNATURE:	STAMP OF DEALER WHO CARRIED OUT SERVICE			

UP TO 500 HOURS AS FOR 100 HOURS DATE	DAY	MONTH	YEAR	WORK. HOURS
THE SERVICE WAS CARRIED OUT ON: NAME: SURNAME: SIGNATURE:	STAMP OF DEALER WHO CARRIED OUT SERVICE			

NOTES

SERVICE AND MAINTENANCE RECORDS

UP TO 600 HOURS AS FOR 100 HOURS DATE	DAY	MONTH	YEAR	WORK. HOURS
THE SERVICE WAS CARRIED OUT ON: NAME: SURNAME: SIGNATURE:	STAMP OF DEALER WHO CARRIED OUT SERVICE			

UP TO 700 HOURS AS FOR 200 HOURS DATE	DAY	MONTH	YEAR	WORK. HOURS
THE SERVICE WAS CARRIED OUT ON: NAME: SURNAME: SIGNATURE:	STAMP OF DEALER WHO CARRIED OUT SERVICE			

UP TO 800 HOURS AS FOR 300 HOURS DATE	DAY	MONTH	YEAR	WORK. HOURS
THE SERVICE WAS CARRIED OUT ON: NAME: SURNAME: SIGNATURE:	STAMP OF DEALER WHO CARRIED OUT SERVICE			

UP TO 900 HOURS AS FOR 400 HOURS DATE	DAY	MONTH	YEAR	WORK. HOURS
THE SERVICE WAS CARRIED OUT ON: NAME: SURNAME: SIGNATURE:	STAMP OF DEALER WHO CARRIED OUT SERVICE			

UP TO 1000 HOURS AS FOR 500 HOURS DATE	DAY	MONTH	YEAR	WORK. HOURS
THE SERVICE WAS CARRIED OUT ON: NAME: SURNAME: SIGNATURE:	STAMP OF DEALER WHO CARRIED OUT SERVICE			

NOTES

EU DECLARATION OF CONFORMITY

according to Annex II A of the Machinery Directive 2006/42/CE

The manufacturer that places this product on the market:

EUREKA S.p.A. Unipersonale

VIALE DELL'ARTIGIANATO 30/32, 35013 CITTADELLA (PD) - ITALY

formally declares that the product:

Sweeper TIGRA EB

complies with the following EU Directives:

2006 / 42 / CE
2014 / 30 / UE
2014 / 35 / UE
2011 / 65 / UE + 2015 / 863
2009 / 125 / CE

Machinery Directive, Annex 1
Electromagnetic Compatibility (EMC) Directive
Low Voltage Directive
RoHS 3 Directive
Energy-Related Products (ErP) Directive

The following harmonised and technical standards have been applied:

EN ISO 12100:2010	Safety of machinery - General principles for design - Risk assessment and risk reduction.
EN 60335-1:2013	Household and similar electrical appliances - Safety - Part 1: General requirements.
EN 60335-2-72:2016	Household and similar electrical appliances - Safety - Part 2: Particular requirements for floor treatment machines with or without traction drive, for commercial use.
EN 55014-1:2019	Electromagnetic compatibility - Requirements for household appliances - electric tools and similar apparatus - Part 1: Emission.
EN 55014-2:2015	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity - Product family standard.
EN 61000-6-2:2016	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments.
EN 61000-6-4:2018	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments.
EN 62233:2008	Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure.

Legal representative and person authorized to compile the technical file: Antonio Barile

Cittadella, 15/12/2023

EUREKA S.p.A
(Legal representative)

