



READ THE USE AND MAINTENANCE MANUAL

STEERING WHEEL

Steering wheel function

The steering wheel allows to:

- setup and manage the main functionalities and commands of the machine during the working mode;
- access separately to the following submenu:
 - **"user menu"** including the base functions of the machine. This menu is intended for the operator of the machine.
 - **"advanced menu"** including the advanced features and settings of the machine. This is addressed to experienced technicians. Access to "user menu" is open, while "advanced menu" is password protected.
- read eventual alarm signal to manage a potential issue of the machine.

Key 1:
Eco Mode



Key 3:
Reverse

Key 2:
Horn

Key 4: Brush
coupling/uncoupling

Steering wheel function – Working Mode – Battery Status

During the working mode the display shows the hour meter and the battery charge status (as percentage of the total available charge).

Verify that the *battery check card* disables the brush motor (traction and vacuum motors still on) when the remaining battery charge is at 20%:

1h:10min

20% 

Verify that the *battery check card* disables the vacuum motor (traction motor still on) when the remaining battery charge is at 10%:

1h:10min

10% 

Steering wheel function – Alarm Table

The display of the steering wheel shows the possible alarms of the machine. Alarms are shown on the first line of the display and it alternates between the alarm id and a short alarm description.

Here below the alarm table.

Allarm id.	Alarm Description	What to do
AL_1: Function Brushes Ammeter	Brushes Current Protection	High current consumption detected. Check the brush motor absorption and utilization.
AL_2: Function Vacuum Ammeter	Vacuum Current Protection	High current consumption detected. Check the vacuum motor absorption and utilization.
AL_3: Function Powerstage Fail	Damaged powerstage	Brush or vacuum power stage damaged. Replace the electronic card.
AL_4: Function Overcurrent	Brush or Vacuum overcurrent	Short circuit on brush or vacuum motor output. Check motor cables and conditions.
AL_5: Function Overtemperature	Thermal protection on brush or vacuum motor	Over temperature on brush or vacuum stage. Wait 5 minutes and check the motor absorption rate.
AL_6: Function Act1:endsw fail	Brush - Limit switch fault	Check connections of brush - limit switch and its actuator.
AL_7: Function Act2: endsw fail	Vacuum - Limit switch fault	Check connections of vacuum - limit switch and its actuator.
AL_8: Function Act1:timeout	Brush actuator: final position not reached	Final position of brush actuator not reached into the maximum assigned time. Check connections of actuator or any mechanical impediment.
AL_9: Function Act2:timeout	Vacuum actuator: final position not reached	Final position of vacuum actuator not reached into the maximum assigned time. Check connections of actuator or any mechanical impediment.
AL_10: Function Batt. Connection	Batteries not connected	Check the connections of the batteries cables and the related connections on the electronic card.

Steering wheel function – Alarm Table (following)

Alarm id.	Alarm Description	What to do
AL_13: Traction Pedal Failure	Pedal fault	Check connections and functionality of potentiometer.
AL_14: Traction Release pedal	Pressed pedal during turning on	Forward Micro Switch pressed at turning on. Release the pedal.
AL_15: Traction Overtemperature	Thermal protection on traction motor	Over temperature on traction stage. Wait 5 minutes and check the motor absorption.
AL_16: Traction Powerstage fail	Damaged powerstage	Traction power stage damaged. Replace the electronic card.
AL_17: Traction Overcurrent	Traction overcurrent	Short circuit on traction motor output. Check motor cables and conditions.
AL_18: Traction Tract. Ammeter	Traction Current Protection	High current consumption detected. Check the traction motor absorption and utilization.
AL_20: General Eeprom Fail	Eeprom data reading failed	Replace the electronic card.
AL_21: General Key-off failure	Fault in turning on/off sequence	Check connections of the connector of the key.
AL_22: General Main Relay Fail	Main Relay Failure	Main Relay damaged. Replace the electronic card.
AL_23: General Overvoltage.	Overvoltage.	Over voltage on electronic card. Check batteries status and connections.
AL_24: Traction Batt. Connection	Batteries not connected to electronic card.	Check batteries status and connections to electronic card.
AL_25: General Keyboard failure	No communication between electronic card and command bridge.	Check connections between the command bridge and the electronic card.

	ADJUSTMENT AND INSPECTIONS	Mxr	Doc. 10036128 Issued 01.07.2012 Ver. AA Pag. 4 di 28
--	----------------------------------	------------	---

Steering wheel function – “user menu” and “advanced menu”

The steering wheel acts as a programming console.

Using a specific key sequence it is possible to access the two main menu:

“**user menu**” including the base functions of the machine. This is intended for the operator of the machine.

“**advanced menu**” addressed to experienced technicians (“advanced menu” is password protected).

Enter the “user menu”.

To enter the “**user menu**” proceed as follow:

- Press at the same time, with machine off, the “key 3”, “key 4” and “key 2”.
- Keeping pressed the mentioned buttons, rotate the machine key in ON position.
- Wait for the loading of “user menu” text interface.



Use the “key 3” and the “key 4” to move and scroll into the “**user menu**”.

Use the “key 2” to modify a setting or to confirm a new parameter value.

Steering wheel function – “user menu” and “advanced menu” (following)

Available sections of “**user menu**” are:

MENU	DEFAULT	AVAILABLE VALUES	DESCRIPTION
General Setup: Language: ###	IT	IT - EN - DE - FR - SP	Language setup.
General Setup: Model: ###	MXR	MXR - MXR FSS	Machine model setup.
General Setup: Battery: ###	GEL	GEL - WET - AGM - GEL1 - WET1	Installed batteries type.
General Setup: Reset Cnt: ###	N	Y/N	Reset for partial hour meter.
General Setup: Display Cnt: ###	Tr	Tr / Key	Hour meter working mode: key - connected to ON/OFF key. Tr. - connected to traction motor.
General Setup: Exit: ###	N	Y/N	Exit from “user menu”
General Setup: Total: ###h:###m	-	-	General hour meter for turning on status.
General Setup: Trctn: ###h:###m	-	-	General hour meter for traction motor use.
General Setup: Brshs: ###h:###m	-	-	General hour meter for brush motor use.
General Setup: Vcm: ###h:###m	-	-	General hour meter for vacuum motor use.
General Setup: Password: ###	-	-	Password to get access to “ advanced menu ”, only for experienced technicians. Default password is 60.

	ADJUSTMENT AND INSPECTIONS	Mxr	Doc. 10036128 Issued 01.07.2012 Ver. AA Pag. 6 di 28
--	----------------------------------	------------	---

Steering wheel function – “*user menu*” and “*advanced menu*” (next)

To modify a parameter value, act as follow:

- Scroll and move inside the submenu, using the “key 3” and the “key 4”, until finding the parameter to modify.
- Select the submenu using the “Key 2”.
- Use the “key 3” and the “key 4” display the admissible values related to the parameter to change.
- Use the “key 2” to setup the new parameter value.
- To confirm the new parameter value it is needed to go back to working mode. Select the submenu “exit” to go out from the “*user menu*”.

Ex. Modify the language setting from IT to EN.

1. Switch off the machine by switching the key in OFF position.
2. Enter the “*user menu*”. Press at the same time, with machine off, the “key 3”, “key 4” and the “key 2” .
3. keeping pressed the mentioned buttons, rotate the key in ON position. Wait for the loading of “*user menu*” text interface.
4. Once loaded the “*user menu*”, use the “key 3” and the “key 4” to find out the submenu “*language*”.
5. Confirm the access to the submenu “*language*” by pressing the “key 2”. The first text line of the display will flash. It is possible to modify and change the parameter value.
6. Use the “key 3” and the “key 4” to visualize the admissible values for the *language parameter* and find out the value EN.
7. Use the “key 2” to setup the new parameter value as EN.
8. To confirm the new parameter value (EN) it is needed to go back to working mode. Select the submenu “exit” to go out from the “*user menu*”. Press the “key 2” to confirm the action.

Steering wheel function – “user menu” and “advanced menu” (next)

“Advanced menu”.

To get access to the “advanced menu” enter as first the “user menu” and then the submenu “**password**”. Type in the value **60**. The available submenu are:

Options menu: >General sets.	Access to general settings (language,battery type...)
Options menu: >Brushes sets.	Access to parameters related to brush motor.
Options menu: >Pumps sets.	Access to parameters related to dosing system as water pump and detergent pump (if included).
Options menu: >Vacuum sets.	Access to parameters related to vacuum motor.
Options menu: >Traction sets.	Access to parameters related to traction motor.
Options menu: >Check/Monitor.	Monitor of machine working parameters.
Options menu: >Engineer pars.	Factory default settings. <u>Do not modify anything. Contact Fimap Service.</u>
Options menu: >Exit.....	Back to the main page.

Use the “key 3” and the “key 4” to move into the submenu of the “advanced menu”
 Use the “key 2” to modify a setting, to enter a submenu and to confirm a new parameter value.

Access the “Exit” submenu to leave the “advanced menu” and get back to the working mode.

Steering wheel function – “advanced menu” - submenu “General Sets”

The “General sets” submenu allows to enter the machine general parameters. “General sets” is very similar to “user menu”.

General Sets: Language: ###	default IT	Language setup for the text interface of the machine.
General Sets: Model: ###	default Mxr	Machine model setup (with or without dosing system).
General Sets: Battery: ###	default GEL	Setup for installed battery types.
General Sets: Rst.Cnthr: ###	default N	Reset for partial hour meter (as in the “user menu”).
General Sets: Rst.Main Cnthr: ###	default N	Reset for general hour meter (key, brush, vacuum, traction).

Steering wheel function - "advanced menu" - submenu "Brushes Sets"

The "Brushes sets" submenu allows to enter the parameters and settings related to brush motor.

Brushes Sets: I_Max: ##[Amp]	default 50	Maximum current provided from the electronic card to the brush motor.
Brushes Sets: I_Nom: ##[Amp]	default 22	Nominal current, joined with T_Nom define the condition of <i>Brush Current Protection</i> . (alarm + cut off motor).
Brushes Sets: T_Nom: ##[s]	default 30	Nominal timer, joined with I_Nom define the condition of <i>Brush Current Protection</i> . (alarm + cut off motor).
Brushes Sets: T_Off: #.#[s]	default 0,2	Delay in turning off the brush motor at the release of the pedal.
Brushes Sets: T_Reset: ##[s]	Default 60	Not used.
Brushes Sets: T_On: #.#[s]	default 0,5	Delay in turning on the brush motor at the pressing of the pedal.
Brushes Sets: Eco Speed: ##[V]	default 17	Voltage reduction for brush motor in ECO mode.

Press at the same time the "key 4" and the "key 3" to exit the submenu.
Access the "Exit" submenu to go back to the working mode.

Steering wheel function - "advanced menu" - submenu "Pumps Sets"

The "pumps sets" submenu allows to enter the parameters and settings of the water pump and detergent pump (if installed).

Pumps Sets: Wtr_pump1: ##[%]	default 40	Water quantity (liter/hour) in the cleaning solution. Step 1 of the water selector.
Pumps Sets: Wtr_pump2: ##[%]	default 50	Water quantity (liter/hour) in the cleaning solution. Step 2 of the water selector.
Pumps Sets: Wtr_pump3: ##[%]	default 60	Water quantity (liter/hour) in the cleaning solution. Step 3 of the water selector.
Pumps Sets: Wtr_pump4: ##[%]	default 70	Water quantity (liter/hour) in the cleaning solution. Step 4 of the water selector.
Pumps Sets: Wtr_pump5: ##[%]	default 80	Water quantity (liter/hour) in the cleaning solution. Step 5 of the water selector.
Pumps Sets: Wtr_pump6: ##[%]	default 90	Water quantity (liter/hour) in the cleaning solution. Step 6 of the water selector.
Pumps Sets: Wtr_pump7: ##[%]	default 100	Water quantity (liter/hour) in the cleaning solution. Step 7 of the water selector.

Steering wheel function - "advanced menu" - submenu "Pumps Sets" (next)

Pumps Sets: Det_pump1: #.#[%]	default 1.0	Detergent quantity (as % of the water amount lt/h) in the cleaning solution. Step 1 of the detergent selector.
Pumps Sets: Det_pump2: #.#[%]	default 2.0	Detergent quantity (as % of the water amount lt/h) in the cleaning solution. Step 2 of the detergent selector.
Pumps Sets: Det_pump3: #.#[%]	default 3.0	Detergent quantity (as % of the water amount lt/h) in the cleaning solution. Step 3 of the detergent selector.
Pumps Sets: Det_pump4: #.#[%]	default 4.0	Detergent quantity (as % of the water amount lt/h) in the cleaning solution. Step 4 of the detergent selector.
Pumps Sets: Det_pump5: #.#[%]	default 5.0	Detergent quantity (as % of the water amount lt/h) in the cleaning solution. Step 5 of the detergent selector.
Pumps Sets: Det_pump6: #.#[%]	default 6.0	Detergent quantity (as % of the water amount lt/h) in the cleaning solution. Step 6 of the detergent selector.
Pumps Sets: Det_pump7: #.#[%]	default 7.0	Detergent quantity (as % of the water amount lt/h) in the cleaning solution. Step 7 of the detergent selector.

Press at the same time the "key 3" and the "key 4" to exit the submenu.
 Access the "Exit" submenu to go back to the working mode.

Steering wheel function - "advanced menu" - submenu "Vacuum Sets"

The "Vacuum sets" submenu allows to enter the parameters and settings related to vacuum motor.

Vacuum Sets: I_Max: ##[Amp]	default 40	Maximum current provided from the electronic card to the vacuum motor.
Vacuum Sets: I_Nom: ##[Amp]	default 18	Nominal current, joined with T_Nom define the condition of <i>Vacuum Current Protection</i> . (alarm + cut off of the motor).
Vacuum Sets: T_Nom: ##[s]	default 30	Nominal timer, joined with I_Nom define the condition of Vacuum Current Protection. (alarm + cut off of the motor).
Vacuum Sets: T_Off: #.#[s]	default 20	Delay in turning off the vacuum motor at the lifting of squeegee body lever.
Vacuum Sets: T_Reset: ##[s]	default 60	Not used.
Vacuum Sets: Eco Speed: ###[V]	default 17	Voltage reduction for vacuum motor in ECO mode.

Press at the same time the "key 4" and the "key 3" to exit the submenu.
Access the "Exit" submenu to go back to the working mode.

Steering wheel function - "advanced menu" - submenu "Traction Sets"

The "Traction sets" submenu allows to enter the parameters and settings related to traction motor.

Traction Sets: Acc_Ramp: #.#[s]	default 3.0	Acceleration ramp. Time needed to reach the maximum speed.
Traction Sets: Dec_Ramp: #.#[s]	default 0.7	Deceleration ramp. Time needed to completely stop the machine at the release of the pedal.
Traction Sets: Rev_Ramp: #.#[s]	default 0.7	Reverse ramp. Time needed to move from forward to backward, and vice versa.
Traction Sets: FW_Speed: #[%]	default 100	Maximum forward speed (as percentage of the maximum reachable speed).
Traction Sets: BW_Speed: #[%]	default 60	Maximum backward speed (as percentage of the <i>Maximum forward speed</i>).
Traction Sets: Min_Speed: #[%]	default 0	Speed at the minimum pressing of the pedal.
Traction Sets: Ref_0: ####[V]	default 7	Minimum potentiometer voltage in idle condition.
Traction Sets: Ref_FW: ####[V]	default 9	Maximum potentiometer voltage for forward command.
Traction Sets: Ref_BW: ####[V]	default 9	Maximum potentiometer voltage for backward command.

Steering wheel function – “advanced menu” - submenu “Traction Sets” (next)

Traction Sets: Ref_DB: ####[V]	default 02000	Dead band of the potentiometer.
Traction Sets: Brake Del: ###[S]	default 1,5	Electronic brake delay at the switching off of the machine.
Traction Sets: Model V: ##[%]	default 50	Voltage setup for speed reduction.
Traction Sets: Model I: ##[Amp]	default 25	Current setup for speed reduction.
Traction Sets: Runaway: ###[Volt]	default 100	Not used.
Traction Sets: I_Max: ##[Amp]	default 70	Maximum current provided from the electronic card to the traction motor.
Traction Sets: I_Nom: ##[Amp]	default 20	Nominal current, joined with T_Nom define the condition of <i>Traction Current Protection</i> . (alarm + cut off motor).
Traction Sets: T_Nom: ##[s]	default 10	Nominal timer, joined with I_Nom define the condition of <i>Traction Current Protection</i> . (alarm + cut off motor).

Press at the same time the “key 3” and the “key 4” to exit the submenu.
Access the “Exit” submenu to go back to the working mode.

Steering wheel function – “advanced menu” - submenu “Check/Monitor”

The “Check/Monitor” submenu shows the parameters and settings of the machine during the working condition.

Check/ Monitor:

I_Tr: ## [Amp]

Current consumption of the traction motor.

Check/ Monitor:

I_Br: ## [Amp]

Current consumption of the brush motor.

Check/ Monitor:

I_Vac: ## [Amp]

Current consumption of the vacuum motor.

Check/ Monitor:

V_Tr: ##.## [V]

Voltage level related to traction motor.

Check/ Monitor:

V_Batt: ##.## [V]

Batteries voltage in working mode.

Check/ Monitor:

Vref: #.## [V]

Voltage reference for backward/forward pedal.

Check/ Monitor:

Wtr_Pump: ## [%]

Speed percentage of the water pump.

Check/ Monitor:

Det_Pump: ## [%]

Speed percentage of the detergent pump.

Check/ Monitor:

BR Temp: ## [C]

Temperature of the brush/vacuum dissipator.

	ADJUSTMENT AND INSPECTIONS	Mxr	Doc. 10036128 Issued 01.07.2012 Ver. AA Pag. 16 di 28
--	----------------------------------	------------	--

Steering wheel function - "*advanced menu*" - submenu "*Check/Monitor*" (next)

Check/ Monitor:

TR Temp: ## [C]

Temperature of the traction dissipator.

Check/ Monitor:

TR Ovrld: ## [C]

Over temperature value.

The mentioned parameters can be displayed also in working mode. Follow the procedure here described:

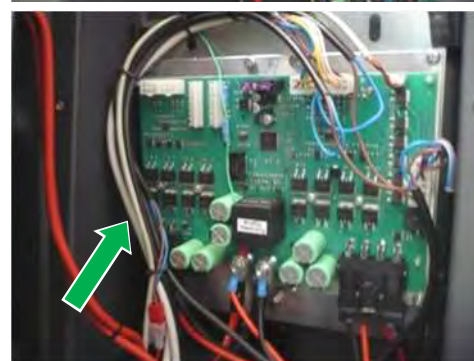
1. Switch off the machine by switching the key in OFF position.
2. Enter the "*user menu*". Press at the same time, with machine off, the "key 3", "key 4" and the "key 2".
3. keeping pressed the mentioned buttons, rotate the key in ON position. Wait for the loading of "*user menu*" text interface..
4. Once loaded the "*user menu*", use the "key 3" and the "key 4" to find out the submenu "*password*".
5. Confirm the access to the submenu "*password*" by pressing the "key 2".
6. Use the "key 3" and the "key 4" to display the value 60 as the standard password to enter the "*advanced menu*".
7. Use the "key 2" to confirm the new parameter value of the password. The "*advanced menu*" is now accessible.
8. Use the "key 3" and the "key 4" to find out the submenu "*Check/Monitor*".
9. Confirm the access to the submenu "*Check/Monitor*" by pressing the "key 2".
10. Use the "key 3" and the "key 4" to visualize the parameter to be monitored in working mode.
11. Confirm the parameter to be monitored by pressing the "key 2".
12. Once confirmed the display will come back to working mode. It is possible to use and works with the machine as usual and monitoring at the same time the status of the parameters.
13. By pressing the "key 2" it is possible to scroll the available parameter list belonging to the submenu "*Check\Monitor*".
14. To exit the submenu "*Check/Monitor*" switch off and switch on the machine.

	ADJUSTMENT AND INSPECTIONS	Mxr	Doc. 10036128 Issued 01.07.2012 Ver. AA Pag. 17 di 28
--	----------------------------------	------------	--

Electric installation test

1. Check the **electric installation** functionality: switches, contactors, motors, solenoid valve, power fuses and thermal switches and emergency button.

Remove the bottom plate and the front cover, where the emergency button is placed, to gain access to electric installation.



2. Check functionality and connection of the **pedal connector**.

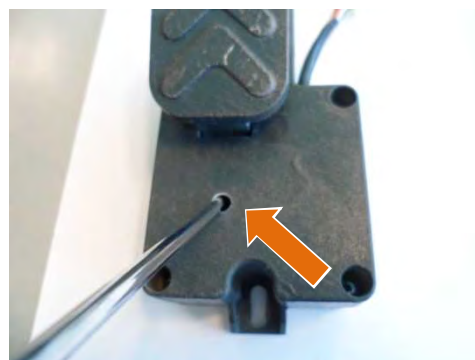
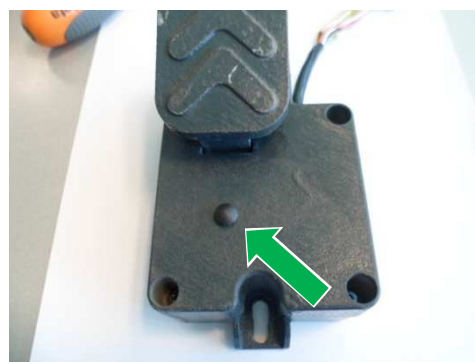
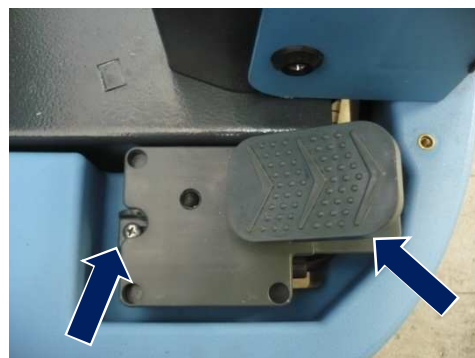


- 2.1 If needed, adjust the **potentiometer** and the **direction micro-switches** inside the pedal.

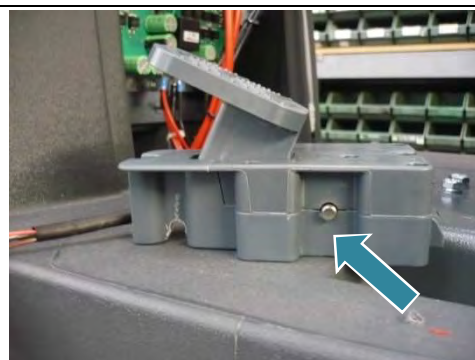


2.2 To adjust the potentiometer act as follow:

- Remove the **bottom plate**
- To remove **the pedal** unscrew the 2 fixing screws and disconnect the **connector**
- Remove the **plastic cap**
- Loosen the **register dowel** (allen spanner 2.5).



- Rotate clockwise the **small shaft** of the pedal till it reaches its end (zero) position.
- Use the tester to check the resistance value (Ω). Place the tester caps **at the yellow and red cables** and check that resistance value is near to zero ohm (Ω).
- Rotate counter clockwise the **small shaft** of the potentiometer till the tester measures 0,5 ohm (Ω).
- Fix the **register dowel** and put the plastic cap.
- Install the pedal and the bottom plate.



3. Check functionality and connections of the **brush deck enable micro-switch**, **vacuum motor micro-switch** and **backward enable micro-switch**.

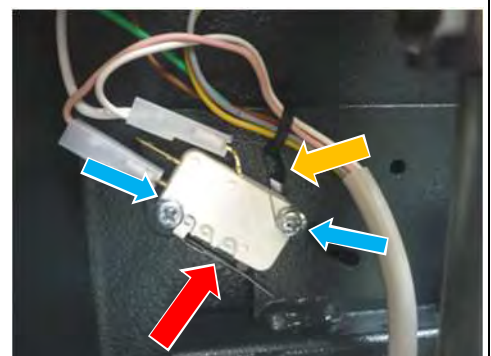
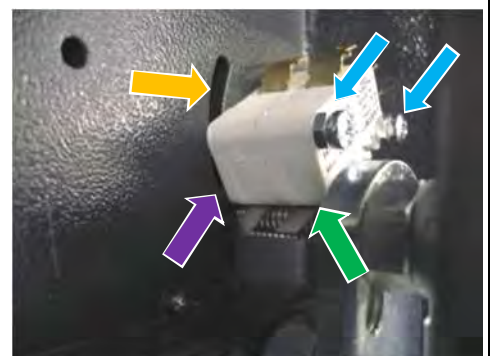
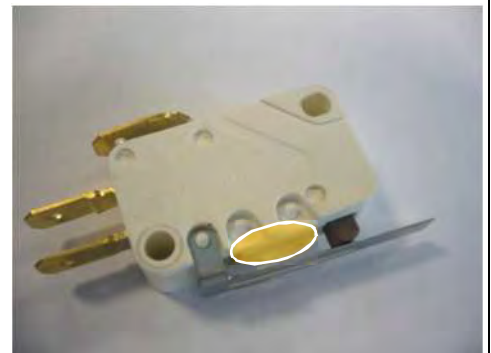
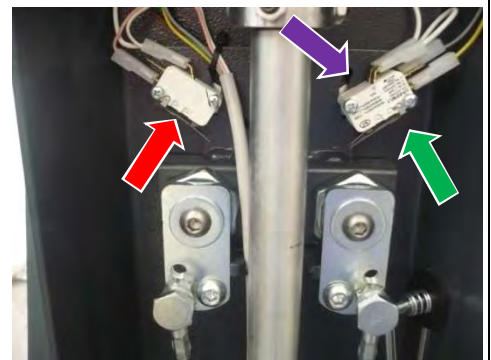
When the micro-switch is pressed, it shall remain 0.5mm of clearance **between the lever and the body of the device**. Check that the lever of the micro-switch operates correctly. If it is necessary to adjust the micro-switch please act as follow:

3.1 Adjustment of the **vacuum motor micro-switch** and **backward enable micro-switch**.

- Loosen the **M3 screws**;
- Move the micro-switches using **the register slot**.
- Fix the **M3 screws** to block the micro-switches paying attention to not screw up the screws too much in order to avoid a damage at the internal mechanism of the switches.
- Verify, once the adjustment is over, the correct functionality of the micro-switches. If it is necessary repeat the adjustment procedure.

3.2 Adjustment of **brush deck enable micro-switch**.

- Loosen the **M3 screws**;
- Move the micro-switch using **the register slot**.
- Fix the **M3 screws** to block the micro-switch paying attention to not screw up the screws too much in order to avoid a damage at the internal mechanism of the switch.
- Verify, once the adjustment is over, the correct functionality of the micro-switch. If it is necessary repeat the adjustment procedure.



	ADJUSTMENT AND INSPECTIONS	Mxr	Doc. 10036128 Issued 01.07.2012 Ver. AA Pag. 21 di 28
--	---	-------------------	--

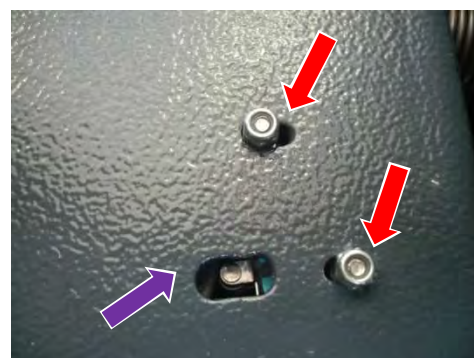
4. Check functionality and connections of the **Speed reduction microswitch** placed near the steering crown of the traction wheel under the steering shaft.



When the micro-switch is pressed, it shall remain 0.5mm of clearance **between the lever and the body of the device**. Check that the lever of micro-switch operates correctly.

To access the slit here shown remove the bottom plate.

If necessary operates on the **2 register screws** on the lateral side of micro-switch.



5. Check the functionality of the **emergency button**. Once pressed, the machine has to stop immediately.



Battery charger adjustment (Model with battery charger)

1. Check that the set-up of the battery charger corresponds to the type of battery actually installed on the machine.



2. To adjust the battery charger, proceed as follows:

- Use a screwdriver to remove the small **plastic cap**,
- Set the dip switch in accordance with the following tables,
- Fix again the small **plastic cap**.



Set the dip switch as indicated below :

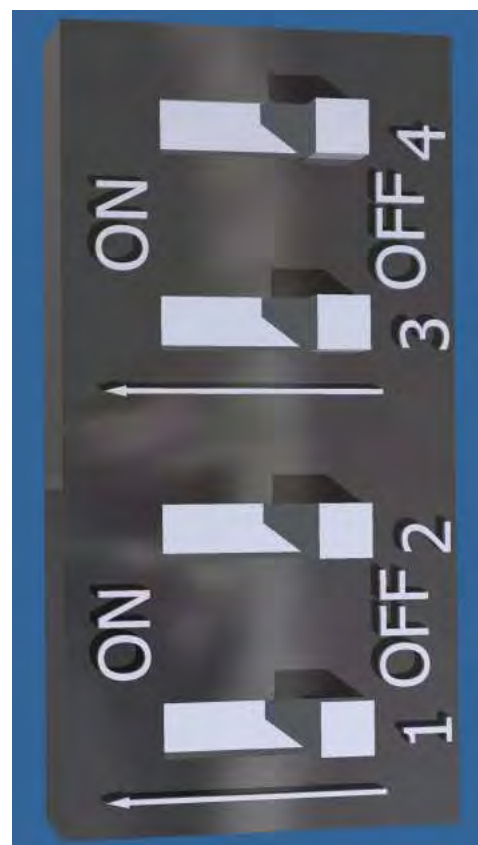
DP1	DP2	SET UP
OFF	OFF	Gel EXIDE SONNENSCHN
OFF	ON	Generic GEL or AGM batteries
ON	OFF	Wet cell batteries
ON	ON	Gel TROJAN

DP3:

OFF for all batteries (not used)

DP4:

OFF for all batteries (not used)



Carefully read the battery charger operating manual.

Battery charger alarm signals:

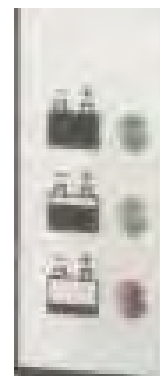
Flashing **YELLOW LED**: INCORRECT BATTERY - BATTERY IS NOT CONNECTED - OUTPUT SHORT CIRCUIT;

Flashing **RED LED**: SAFETY TIMER EXCEEDED - INTERNAL SHORT CIRCUIT

Initial battery charger test:

GREEN LED with 2 flashes: battery charger with set-up for GEL or AGM batteries.

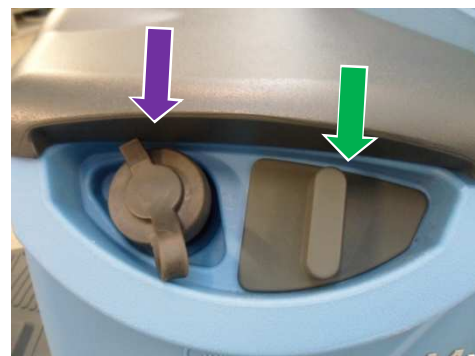
RED LED with 2 flashes: battery charger with set-up for wet-cell batteries.



	ADJUSTMENT AND INSPECTIONS	Mxr	Doc. 10036128 Issued 01.07.2012 Ver. AA Pag. 23 di 28
--	---	-------------------	--

Hydraulic installation

1. Check the cleanliness and functionality of the **solution tank plug** and **fast water-detergent filling cap**.



2. Check the cleanliness and sealing of the **solution filter**.
3. Fill up the solution tank.
4. Check hoses sealing, solenoid valve (on the brush base) and **water valve**.
5. Verify that when the water valve is open, the solution arrive continuously onto the floor.



6. Check the **detergent tank drainage tap**.

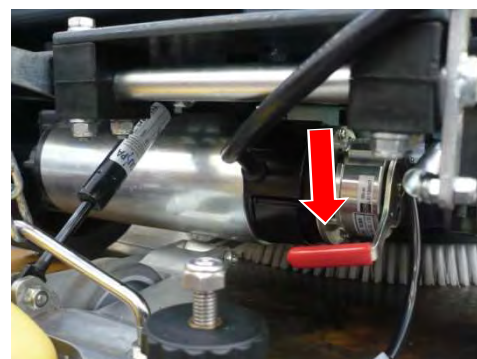


	ADJUSTMENT AND INSPECTIONS	Mxr	Doc. 10036128 Issued 01.07.2012 Ver. AA Pag. 24 di 28
--	---	-------------------	--

Traction, steering and braking adjustment

1. Check the functionality of electronic brake,

- **Lever moved down (electronic brake on).** Machine off or placed in incline **must** resist to motion.
- **Lever raised up (electronic brake off).** Machine off or placed in incline **has not to** resist to motion.



2. Check functionality and connections of the **traction motor** and **electronic brake**.



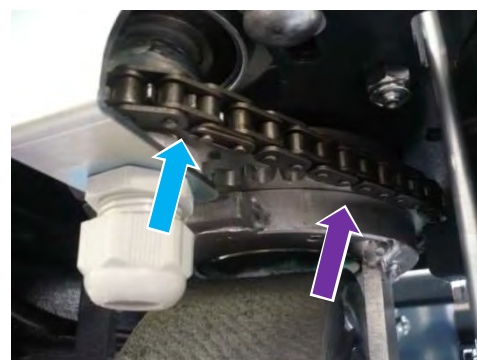
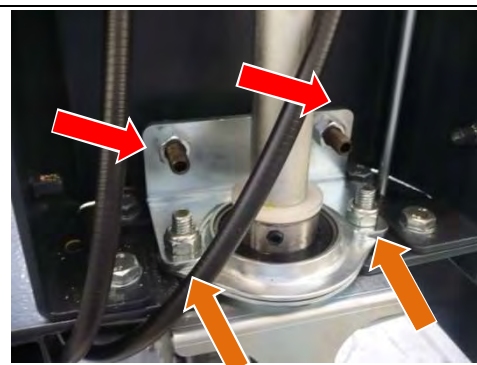
3. To proceed to the chain tensioning adjustment act as follow:

- Remove the **steering column cover**.



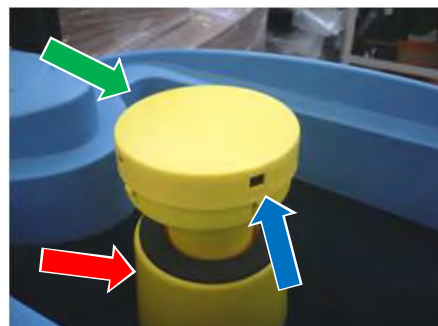
	ADJUSTMENT AND INSPECTIONS	Mxr	Doc. 10036128 Issued 01.07.2012 Ver. AA Pag. 25 di 28
--	---	-------------------	--

- Loosen the **nuts** that fix the plate in order to set up the optimal tension of the chain between the **crown** and the **pinion**.
- To set up the optimal tension of the chain operate on the **register dowel and nuts**, screwing or unscrewing the nuts.
- Once set up the right tension, screw again the **fixing nuts**.



Vacuum adjustment

1. Check cleanliness and functionality of the **floating filter**.
2. Remove the **cover** of the floating filter acting on the **plastic fixing splines**. Check the right positioning of the **vacuum filter**.
3. Check the seal between the **vacuum head** and the recovery tank.



	ADJUSTMENT AND INSPECTIONS	Mxr	Doc. 10036128 Issued 01.07.2012 Ver. AA Pag. 26 di 28
--	---	-------------------	--

4. Check the connections and sealing of the vacuum hoses and squeegee hose.
5. Check the sealing of the **squeegee adapter gasket.**

6. Check the sealing of the **drain hose and its plug.**



	ADJUSTMENT AND INSPECTIONS	Mxr	Doc. 10036128 Issued 01.07.2012 Ver. AA Pag. 27 di 28
--	---	-------------------	--

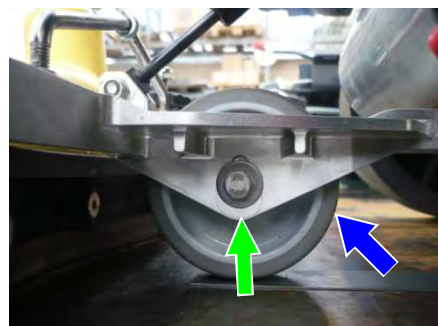
Scrub deck adjustment

1. The brush deck is on a floating support. It is necessary to adjust its horizontal inclination only.
2. To proceed to the deck adjustment proceed as follow:
 - Loosen the **screws and nuts M13** that fix the brush deck to the arm.
 - Put the brush to let it have a distance from the floor 5mm higher in the front that in the rear of the machine.
 - Tighten the screws and nut loosened to complete the adjustment.



Squeegee adjustment

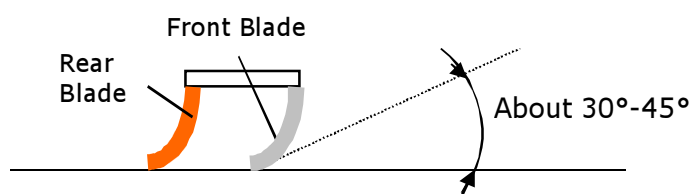
1. Adjust the wheel height by loosening the **fastening screw** so that the **wheel** is lifted up 1-2 mm from the floor surface with the squeegee lowered and rubbers in vertical position.
2. Tighten the **fastening screw** to fix the adjustment.



3. Adjust the rear rubber **inclination register** when the vacuum motor is switched on, checking the rubber inclination is even across its entire length. With adjustment complete, the wheels must touch the floor. Rotate clockwise the register to increase the inclination in the centre. Rotate counterclockwise the register to increase the inclination in the lateral sides.



4. Check that you have an even inclination of the blade for all its length. The inclination has to be between 30° and 45°.



	ADJUSTMENT AND INSPECTIONS	Mxr	Doc. 10036128 Issued 01.07.2012 Ver. AA Pag. 28 di 28
--	---	-------------------	--

Functional check of the machine

- ☐ Check the functionality of switches and warning lamps;
- ☐ Check the functionality of the accelerator lever;
- ☐ Check the functionality of the brush base;
- ☐ Check the functionality of the brush motor;
- ☐ Check the functionality of the solenoid valve;
- ☐ Check the functionality of the suction motor;
- ☐ Check the functionality of the brakes;
- ☐ Check the functionality of batteries and power cables;

Functional test of the machine

- ☐ Fill the tanks completely and verify the sealing;
- ☐ Verify the sealing of all the water plant and that the water is equal on both brushes;
- ☐ Adjust the inclination and the height of the squeegee rubbers doing a functional test;
- ☐ Adjust the inclination of the brush base and do a functional test;
- ☐ Check the efficiency of the parking brake;
- ☐ Verify the forward and backward movement, acceleration and braking;

Final Check

Check all the functions: washing, drying and movement