



**HAMMERHEAD**<sup>®</sup>  
CLEANING EQUIPMENT COMPANY

# 500 SERIES

Adjustment & Testing Guide



## ENGINEERED SIMPLICITY™

Easy to Use  
Efficient  
Economical

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**HammerheadClean.com**



## READ THE USE AND MAINTENANCE MANUAL

### Display function

The display 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:  
Function  
Eco

Key 2:  
NOT  
USED

Key 3:  
Clean  
water



Key 4:  
Forward /  
Bacward  
speed

Key 5:  
Coupling /  
Uncoupling  
brushes  
(only BT version)

Key 6:  
Chemical  
percentage



**Display function – Alarm Table**

The display 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.

<b>Allarm id.</b>	<b>Alarm Description</b>	<b>What to do</b>
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_10: Function Batt. Connection	Batteries not connected	Check the connections of the batteries cables and the related connections on the electronic card.
AL_13: Traction Lever Failure	Lever fault	Check connections and functionality of potentiometer.
AL_14: Traction Release lever	Pressed lever during turning on	Forward Micro Switch pressed at turning on. Release the lever.
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.



**Steering wheel function – Alarm Table (following)**

<b>Allarm id.</b>	<b>Alarm Description</b>	<b>What to do</b>
AL_18: Traction Tract. Ammeter	Traction Current Protection	High current consumption detected. Check the traction motor absorption and utilization.
AL_19: Traction Motor lecture	-----	Power stage read as damaged : if persist replace the card.
AL_21: General Key-off failure	Fault in turning on/off sequence	Check connections of the connector of the key. Swith off and switch on again.
AL_22: General Main Relay Fail	Main Relay Failure	Check the connections of the motors. If it is ok, the main Relay is 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 electr. card and command bridge.	Check connections between the command bridge and the electronic card.



**Display function – Working Mode – Battery Status**

During the working mode the display shows 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% (alarm limit 1).

From the limit 1, the charger level will blink.

Verify that the *battery check card* disables the vacuum motor (traction motor still on) when the remaining battery charge is at 10% (alarm limit 2).



**Display function – “user menu” and “advanced menu”**

The display 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 4” and “key 6”.
- Keeping pressed the mentioned buttons, rotate the machine key in ON position.
- Wait for the loading of “*user menu*” text interface.

Key 1:  
Function  
Eco

Key 2:  
NOT  
USED

Key 3:  
Clean  
water



Key 4:  
Forward /  
Bacward  
speed

Key 5:  
Coupling /  
Uncoupling  
brushes

Key 6:  
Chemical  
percentage

Use the “key 1” and the “key 3” to move and scroll into the “**user menu**”.

Use the “key 4” and the “key 6” to modify a setting.

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



**Display function – “user menu” and “advanced menu” (following)**

Available sections of “user menu” are:

MENU	DEFAULT	AVAILABLE VALUES	DESCRIPTION
General Sets: Language: ###	IT	IT – EN – DE – FR – SP	Language setup.
General Sets: Model: ###	ANTEA	B-BT-B DS-BT DS-VERSA-VERSA DS	Machine model setup.
General Sets: Battery: ###	GEL	WET – GEL – XFC	Installed batteries type.
General Sets: Reset main count-meter: ###	NO RESET	Y/N	Reset for partial hour meter.
General Sets: Display count-meter: ###	Traction	Traction / Key	Hourmeter mode: <b>key</b> – connected to ON/OFF key. <b>Traction</b> – connected to traction motor.
General Sets: Display tune: ###	15	5 - 50	Display tune
General Sets: Display brightness: ###	0	0 – 10	Display brightness
General Sets: Exit: ###	N	Y/N	Exit from “user menu”
General Sets: Key-on ctn: ###h:###m	-	-	General hour meter for turning on status.
General Sets: Traction motor_h: ###h:###m	-	-	General hour meter for traction motor use.
General Sets: Brush motor_h: ###h:###m	-	-	General hour meter for brush motor use.
General Sets: Vacuum motor_h: ###h:###m	-	-	General hour meter for vacuum motor use.
General Sets: -ID CHECK- Password: ###	-	-	Password to get access to “advanced menu”, only for experienced technicians. Default password is 60.



### 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 1” and the “key 3”, until finding the parameter to modify.
- Use the “key 4” and the “key 6” 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, “key 4” and the “key 6” .
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 1” and the “key 3” to find out the submenu “*language*”.
5. Use the “key 4” and the “key 6” to visualize the admissible values for the *language parameter* and find out the value EN.
6. Use the “key 2” to setup the new parameter value as EN.
7. 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.



**Display 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:

Settings:  
>General sets.

Access to general settings (language,battery type...)

Settings:  
>Brushes sets.

Access to parameters related to brush motor.

Settings:  
>Water Pumps sets.

Access to parameters related to dosing system as water pump (if included).

Settings:  
>Chemical sets.

Access to parameters related to dosing system as detergent pump (if included).

Settings:  
>Vacuum sets.

Access to parameters related to vacuum motor.

Settings:  
>Traction sets.

Access to parameters related to traction motor.

Settings:  
>Monitor mode.

Monitor of machine working parameters.

Settings:  
>Engineer pars.

Factory default settings. Do not modify anything.  
Contact Fimap Service.

Settings:  
>Exit....

Back to the main page.

Use the “key 1” and the “key 3” to move into the submenu of the “advanced menu”  
Use the “key 2” to enter a submenu and to confirm a new parameter value.  
Use the “key 4” and the “key 6” to modify a setting.

Use the “key 2” to leave the “advanced menu” and get back to the working mode.



**Display 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 ANTEA	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).
General Sets: Display Cnt: ###	default TRACTION	Hourmeter mode: <b>key</b> – connected to ON/OFF key. <b>Traction</b> – connected to traction motor.
General Sets: Display tune: ###	default 15	Display tune
General Sets: Display brightness: ###	default 0	Display brightness



**Display function – “advanced menu” - submenu “Brushes Sets”**

The “*Brushes sets*” submenu allows to enter the parameters and settings related to brush motor.

Brushes Sets: Max motor current: ##[Amp]	default <b>40</b>	Maximum current provided from the electronic card to the brush motor.
Brushes Sets: Nom motor current: ##[Amp]	default <b>25</b>	Nominal current, joined with T_Nom define the condition of <i>Brush Current Protection</i> . (alarm + cut off motor).
Brushes Sets: Nominal motor time: ##[s]	default <b>30</b>	Nominal timer, joined with I_Nom define the condition of <i>Brush Current Protection</i> . (alarm + cut off motor).
Brushes Sets: Swicth off delay: #.#[s]	default <b>0,0</b>	Delay in turning off the brush motor at the release of the pedal.
Brushes Sets: Reset delay: ##[s]	Default <b>10</b>	Not used.
Brushes Sets: Swicth on delay: #.#[s]	default <b>0,2</b>	Delay in turning on the brush motor at the pressing of the pedal.
Brushes Sets: Ecomode voltage: ##[V]	default <b>17</b>	Not used.

Press the “key 2” to exit the submenu.  
Press the “key 2” to go back to the working mode.



**Display function – “advanced menu” - submenu “Water Pumps Sets”**

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

Water flow Sets: Flow1 sets: ##[V]	default 1.9	Water quantity (liter/hour) in the cleaning solution. Step 1 of the water selector.
Water flow Sets: Flow2 sets: ##[V]	default 2.1	Water quantity (liter/hour) in the cleaning solution. Step 2 of the water selector.
Water flow Sets: Flow3 sets: ##[V]	default 2.6	Water quantity (liter/hour) in the cleaning solution. Step 3 of the water selector.
Water flow Sets: Flow4 sets: ##[V]	default 2.7	Water quantity (liter/hour) in the cleaning solution. Step 4 of the water selector.
Water flow Sets: Flow5 sets: ##[V]	default 2.8	Water quantity (liter/hour) in the cleaning solution. Step 5 of the water selector.
Water flow Sets: Flow6 sets: ##[V]	default 3.2	Water quantity (liter/hour) in the cleaning solution. Step 6 of the water selector.
Water flow Sets: Flow7 sets: ##[V]	default 3.7	Water quantity (liter/hour) in the cleaning solution. Step 7 of the water selector.

Press the “key 2” to exit the submenu.  
Press the “key 2” to go back to the working mode.



**Display function – “advanced menu” - submenu “Chemical Pumps Sets” (next)**

Chemical Pumps Sets: MaxPumpFreq: #.#[puls/min]	default 800	Maximum number of pulsation per minute of the chemical pump.
Chemical Pumps Sets: PumpPulseDuration: #.#[ms]	default 15	Pulse duration of the chemical pump.
Chemical Pumps Sets: Flow1 set: #.#[%]	default 14	Detergent quantity (as % of the water amount lt/h) in the cleaning solution. Step 1 of the detergent selector.
Chemical Pumps Sets: Flow2 set: #.#[%]	default 28	Detergent quantity (as % of the water amount lt/h) in the cleaning solution. Step 2 of the detergent selector.
Chemical Pumps Sets: Flow3 set: #.#[%]	default 42	Detergent quantity (as % of the water amount lt/h) in the cleaning solution. Step 3 of the detergent selector.
Chemical Pumps Sets: Flow4 set: #.#[%]	default 56	Detergent quantity (as % of the water amount lt/h) in the cleaning solution. Step 4 of the detergent selector.
Chemical Pumps Sets: Flow5 set: #.#[%]	default 70	Detergent quantity (as % of the water amount lt/h) in the cleaning solution. Step 5 of the detergent selector.
Chemical Pumps Sets: Flow6 set: #.#[%]	default 84	Detergent quantity (as % of the water amount lt/h) in the cleaning solution. Step 6 of the detergent selector.

Press the “key 2” to exit the submenu.  
Press the “key 2” to go back to the working mode.



**Display function – “advanced menu” - submenu “Vacuum Sets”**

The “*Vacuum sets*” submenu allows to enter the parameters and settings related to vacuum motor.

Vacuum Sets: Max motor current: ##[A]	default 40	Maximum current provided from the electronic card to the vacuum motor.
Vacuum Sets: Nom. motor current: ##[A]	default 22	Nominal current, joined with T_Nom define the condition of <i>Vacuum Current Protection</i> . (alarm + cut off of the motor).
Vacuum Sets: Nom. motor time: ##[s]	default 30	Nominal timer, joined with I_Nom define the condition of Vacuum Current Protection. (alarm + cut off of the motor).
Vacuum Sets: Switch off delay: ##[s]	default 5	Delay in turning off the vacuum motor at the lifting of squeegee body lever.
Vacuum Sets: Reset delay: ##[s]	default 15	Not used.
Vacuum Sets: Ecomode voltage: ###[V]	default 17	Voltage reduction for vacuum motor in ECO mode.

Press the “key 2” to exit the submenu.  
Press the “key 2” to go back to the working mode.



**Display 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  2.5	Acceleration ramp. Time needed to reach the maximum speed.
Traction Sets: Dec Ramp:   #.#[s]	default  1.0	Deceleration ramp. Time needed to completely stop the machine at the release of the pedal.
Traction Sets: Rev Ramp:   #.#[s]	default  1.0	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: Stop pos ref. value: ##[V]	default  0.5	Minimum potentiometer voltage in idle condition.
Traction Sets: FW pos ref. value: ##[V]	default  12.0	Maximum potentiometer voltage for forward command.
Traction Sets: BW pos ref. value: ##[V]	default  12.0	Maximum potentiometer voltage for backward command.



**Display function – “advanced menu” - submenu “Traction Sets” (next)**

Traction Sets:	default	Dead band of the potentiometer.
Deadband ref value: ##[mV]	20	
Traction Sets:	default	Electronic brake delay at the switching off of the machine / release of the pedal.
E-Brake Delay: ###[s]	0,5	
Traction Sets:	default	Not used.
Model motor voltage: ##[%]	50	
Traction Sets:	default	Not used.
Mode1 motor current: ##[A]	35	
Traction Sets:	default	Machine breaking when moving switched on.
Runaway speed: ###[V]	20	
Traction Sets:	default	Maximum current provided from the electronic card to the traction motor.
Max current: ##[A]	45	
Traction Sets:	default	Nominal current, joined with T_Nom define the condition of <i>Traction Current Protection</i> . (alarm + cut off motor).
Nom current: ##[A]	10	
Traction Sets:	default	Nominal timer, joined with I_Nom define the condition of <i>Traction Current Protection</i> . (alarm + cut off motor).
Nom time: ##[s]	10	

Press the “key 2” to exit the submenu.  
Press the “key 2” to go back to the working mode.



**Display function – “advanced menu” - submenu “Monitor mode”**

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

Monitor sets:  
Battery:           ## [V]

Batteries voltage.

Monitor sets:  
Traction voltage:   ## [V]

Traction motor voltage.

Monitor sets:  
Traction current:   ## [A]

Traction motor current.

Monitor sets:  
Traction ammeter: ## [A]

Traction motor current.

Monitor sets:  
Brushes current:   ## [A]

Brush motor current.

Monitor sets:  
Vacuum current:    ## [A]

Suction motor current.

Monitor sets:  
Traction temp:      ## [°C]

Traction motor temperature.

Monitor sets:  
Function temp.:     ## [°C]

Main card temperature.

Monitor sets:  
Function inputs:

Main card inputs.



### Display function – “advanced menu” - submenu “Monitor mode”

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 4” and the “key 6”.
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 1” and the “key 3” to find out the submenu “password”.
5. Use the “key 4” and the “key 6” to display the value 60 as the standard password to enter the “advanced menu”.
6. Use the “key 2” to confirm the new parameter value of the password. The “advanced menu” is now accessible.
7. Use the “key 1” and the “key 3” to find out the submenu “Check/Monitor”.
8. Confirm the access to the submenu “Check/Monitor” by pressing the “key 2”.
9. Use the “key 1” and the “key 3” to visualize the parameter to be monitored in working mode.
10. Confirm the parameter to be monitored by pressing the “key 2”.
11. Once confirmed the display will come back to “advanced menu”.
12. Press the “key 1” and the “key 3” to find out the submenu “Exit”.
13. It is possible to use and works with the machine as usual and monitoring at the same time the status of the parameter.
14. To exit the submenu “Check/Monitor” switch off and switch on the machine.



**Electric System Testing**

1. Disconnect the battery connector.
2. Check cleanliness and tightness of the battery connection cables.
3. Check the connection and tightness of the power cables.
4. Check the functionality of connectors and the wiring system.
5. Reconnect the battery connector.



6. Check the functionality:
  - display and its functions;
  - direction switch;
  - emergency button;
  - key contact;
  - brush disconnection;
7. Check forward movement, backward movement, acceleration and braking, lifting and lowering of the brush base and the squeegee.



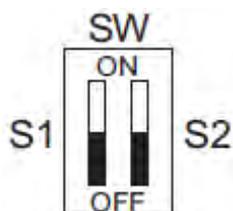


**Battery charger adjustment (NORDELETRONICA)**

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**.



Use only the **upper dip switch**, check that the **lower ones** are both OFF.



Set the upper dip switches as follows

S1	S2	SET UP	FLASHES
OFF	OFF	Wet cell batteries	1
ON	ON	Gel TROJAN	2
OFF	ON	Generic GEL or AGM batteries	3
ON	OFF	Gel EXIDE SONNENSCHN	4



**SW2 : S3 e S4:** OFF for all batteries (not used)



**Carefully read the battery charger operating manual.**

Battery charger alarm signals:

**YELLOW LED**

- 1 Flash: WRONG BATTERY - POLARITY REVERSAL - SHORT CIRCUIT OUTPUT;
- 2 Flashes: ALARM TIME-OUT, DEFECTIVE BATTERY
- 3 Flashes: DEFECTIVE CHARGER
- 4 Flashes: OVERHEATING ALARM

Initial test of the charger:

When plugged in, the Red LED lit once, than the Yellow LED lit once, and then the green LED flashes to confirm which charging algorithm was selected by the dip switches (see table).



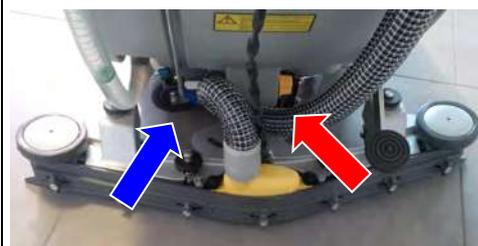


**Hydraulic installation**

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 drain and level hose**.





### Vacuum adjustment

1. Check cleanliness and functionality of the **floating filter**.
2. Unscrew the **cap** of the floating filter and check the right positioning of the **vacuum filter**, cleaning it if necessary.

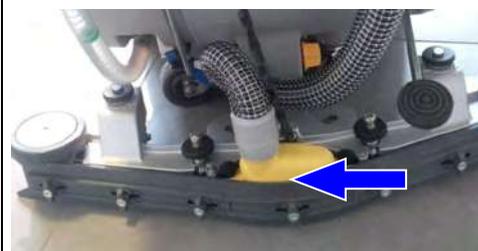


3. Check the seal between the **vacuum head** and the recovery tank.



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**.





7. **Suction microswitch** adjustment:

- adjust the microswitch so that when the lever is turned, the switch closes (thereby activating the suction).
- Once find the correct regulation fix the microswitch with the fixing **screw and nut**.

after adjusting, check the microswitch is functioning correctly.



**Check electrobrake**

Check the functionality of electronic brake :

**Lever raised up (electronic brake on).**

- The electronic brake must switch on automatically if the machine is off and if it is placed in incline. Once the electronic brake is switched on the **machine has to resist to motion** and the buzzer must be on.
- With the key in ON position the motion (by drive pedal) must be disabled.

**Lever raised down (electronic brake off).**

- Check the functioning of the electronic brake at the pushing of the emergency button.



**ECO Function testing**

1. The noise of suction motor must decrease with **Eco function** on.

**ATTENTION.** Precise power consumption and noise values are not provided since they are affected by the working and operating conditions.





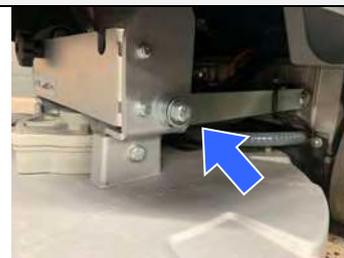
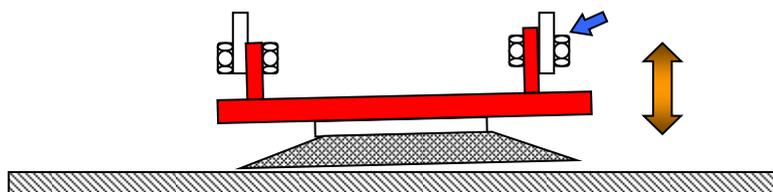
**Brush base adjustment (BT version)**

1. Base horizontal tilt adjustment.

- Position the machine on an even and level floor
- Mount the brush and lower the base to the floor.
- Loosen the **nut** on the left-hand lifting arm and allow the base to adapt to the floor.
- The slotted bracket of the base automatically positioned correctly.
- Tighten nut and bolt.

This operation ensures the correct alignment of the base to the floor for uniform cleaning on the work-track.

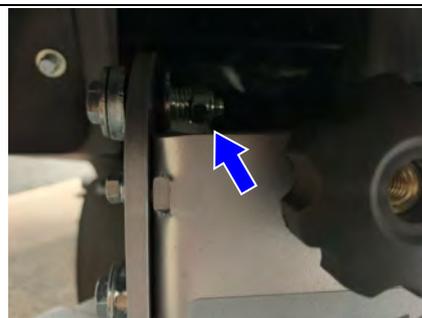
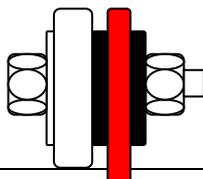
Attention: an incorrect angle will cause the machine to pull to the right or to go into reverse.



2. Base vertical tilt adjustment:

- Loosen the **self-locking nut** .
- Adjust the base without the brush so that it touches at the back first and that the front is 6-7 mm higher.
- Tighten the self-locking nut.

Correct adjustment ensures the correct tilt of the brush on the floor.



3. Traction adjustment

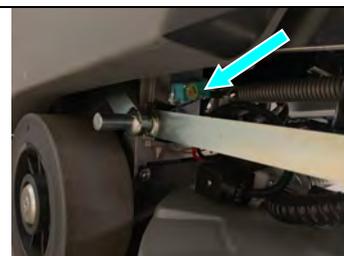
Adjust the traction by means of the **knob** indicated in the diagram:

- Unscrew to increase the traction effect;
- Screw to decrease the traction effect.
- Tighten the handwheel after adjustment.

Attention: increasing the traction of the machine diminishes the width of the floor cleaned.



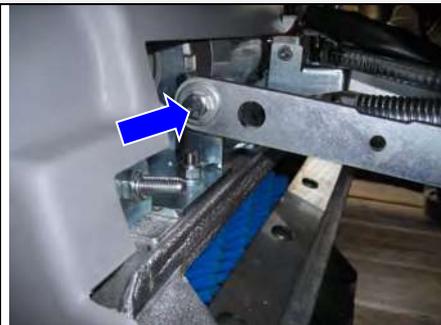
- 6. Make sure that when lowering the brush base and activating levers on the handlebar, the brush starts working. otherwise, adjust the bar of the **microswitch**.





**Adjusting the Washing Base (BTS version)**

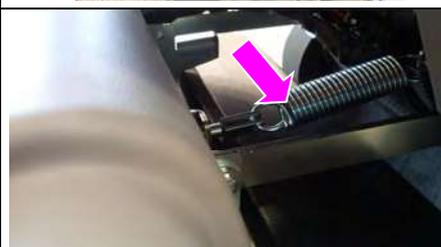
1. Adjust the transversal inclination of the base:
  - position the machine on an even, flat floor
  - lower the base onto the floor with the brushes assembled
  - loosen the **screw and M8 nut** that fix the left lifting arm to the base
  - rest the base on the floor so that the brushes touch the floor simultaneously
  - tighten the M8 screw and the locknut



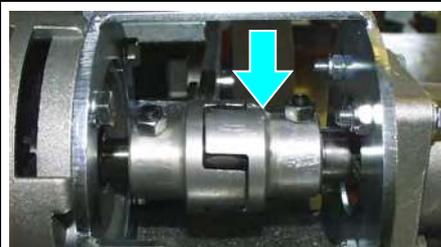
2. Check the **M8 screw** that fixes the arm to the third point allows the longitudinal movement of the base, so this can adjust itself to the specific floor.



3. Adjust the pressure relief **spring** by tightening the M6 screw on the tie rod until 5-6 mm of thread remain, so as to obtain the correct pressure on the base.

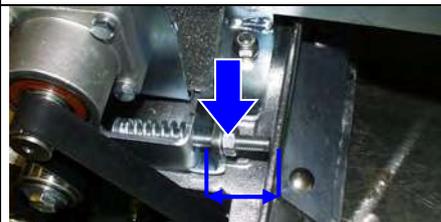


4. Assemble the transmission coupling so that there are **2 mm.** between the two hubs and that the rubber toothed star situated between the two works properly, no vibrations or misalignments.



5. Tighten the dowels and related nuts.

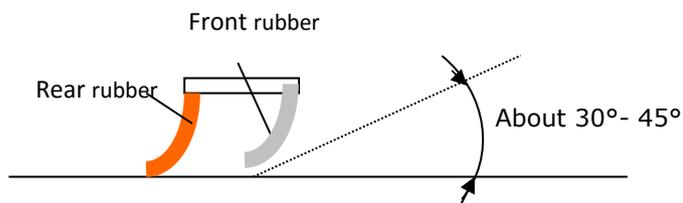
6. Adjust the drive belt tension by means of the **M8 nut**, so that the thread protrudes from the support by approx. **28-29 mm.**





### Adjusting the squeegee

1. The rubbers must have an angle between 30° and 45° relative to the floor and uniform along the entire length of the squeegee.
2. Adjust the **register** inclination of the rear rubber, with suction motor on, so that it has a uniform slope. Adjust the screw clockwise to increase the inclination of the squeegee in the central part. Adjust screw counterclockwise to increase the inclination of the squeegee in the lateral side.
3. To ensure the uniformity of the adjustment of all the rubber, act on the **knobs** for adjusting the height and the left / right balance of the wiper to the ground.
4. Make sure that the adjustment has been securely blocked.





### Testing machine operation

- Check the functioning of the switches.
- Check the functioning of the speed regulator.
- Check the functioning of the base.
- Check the functioning of the brush motor.
- Check the functioning of the solenoid valve.
- Check the functioning of the suction motor.
- Check the functioning of the dosing system (when present).
- Check the functioning of the electrobrake.
- Check the condition of the batteries, clamps and cables.

### Machine operating tests

- Fill the tanks with water and check for any leaks.
- Check the seal of the water system and check the water falls evenly onto the brush.
- Adjust the inclination and wheels of the squeegee, carrying out an operating test.
- Adjust the brush pressure and base inclination, carrying out an operating test.
- Check forward movement, backward movement, acceleration and braking.

### Final Testing

Check all the functions: washing, drying, forward movement.

# ENGINEERED SIMPLICITY™



## CONTACT US

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