

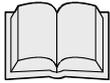
VALIDITY

This document has validity since the serial number

212002760

CHANGE FROM PREVIOUS DOCUMENT

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2	Electrical equipment testing	Pictures update
5	Vacuum adjustment	Pictures update
7	Check charger	New battery charger Pictures update



READ THE USE AND MAINTENANCE HANDBOOK

Check electrical equipment

1. Check the functionality of the electrical equipment:
 - brush motor (the motor starts pushing **brush switch**);
 - suction motor (the motor starts pushing the **suction switch**);
 - solenoid valve (it starts pushing **solenoid valve switch**).

2. Check the functionality of the **display** in the middle of the instrument board:
 - Turning on the machine, first the letter "G" will appear with card setting on gel batteries and then the number indicating the charge level;



- it indicates the battery charge (4 = full, 0 = empty, brush motor off).



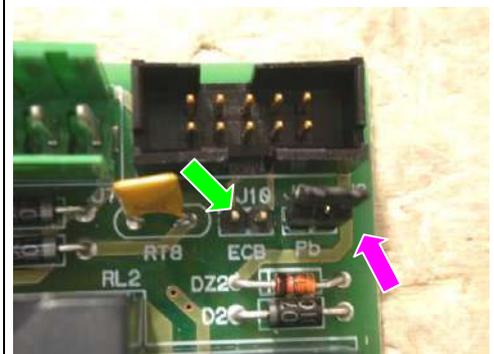
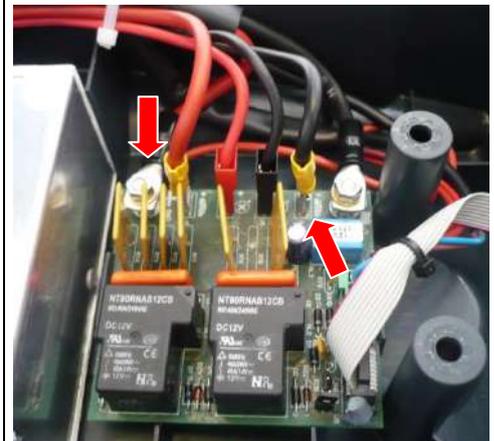
3. Check the tightness of the **battery contacts** and **faston cables** into the electric box situated on the back side of the machine (behind the ABS cover near the charger).

WARNING: If lead acid battery is installed, put the **jumper** on the pin with "**Pb**" label as indicated on the picture (switching on the machine, it will appear the letter "P" instead of the "G").



There are two pins nearby with the writing "**ECB**", in case of breakdown of the control battery, inserting a jumper you can bypass the control and to keep on working up to the discharge of the battery.

WARNING: to use only to diagnose a possible problem of the battery level card. In this condition the battery charge level is not under control and the battery could be damaged by an deep discharge.



Test of battery control card

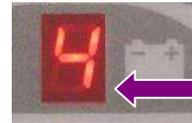
Set the **tester** to Vdc mode.

Put the **red pin** of the tester on the positive pole of the battery and the **black pin** on the negative pole of the battery to verify the **values** indicated by battery control card:

- Value **4**: $V_b > 11,6$
- Value **3**: $11,4 < V_b < 11,6$
- Value **2**: $11,1 < V_b < 11,4$
- Value **1**: $10,9 < V_b < 11,1$
- Value **0**: $V_b < 10,9$

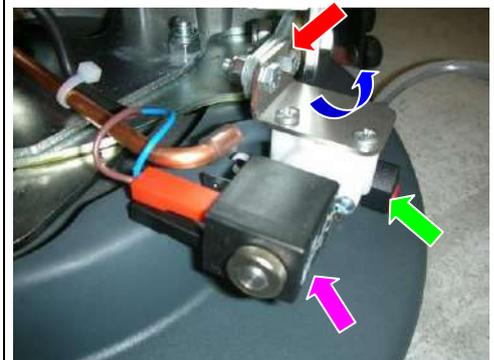
Any values can be more and less 0,1 volt different.

The measure of the battery voltage have to be made with the machine at work. To have the right measure leave the machine works for about 10-15 seconds before to read the value.



Check the water system

1. Full the solution tank and check the tightness of the tubes and gaskets on the **cock** and **solenoid valve**.
2. Check that the water flow on the floor is uniform and at the cock opening. In any case check the cleaning of the cock.
3. In case of interference between the cock and the brush carter, check that the **metal plate** support is completely rotated up along the **hole**
4. Check the **quick coupling**.



Pivoting wheel adjustment

To avoid that the pivoting wheel touches the pad holder of the machine the pivoting wheel has to be adjusted in the following way



Loose a little bit the **screw** that fix the wheel to the tank



Rotate the **spacer nut** using a wrench until the wheel has between 2 and 3mm of distance from the pad holder



Block the **screw** that fix the traction wheel



Check the suction system

1. Check the cleaning and functionality of the **filter with ball**
2. Check the tightness of the gasket with the **carter** of recovery tank closed.



3. Check the wear of the squeegee rubber and the right closing of the **knobs**.
4. Check the closing of the **knobs** of the squeegee blade.
5. Adjust the **side squeegee wheels** with the screw threads with the blade and the **central wheel** all low



6. Check the **pin** and the functioning of the **spring**.

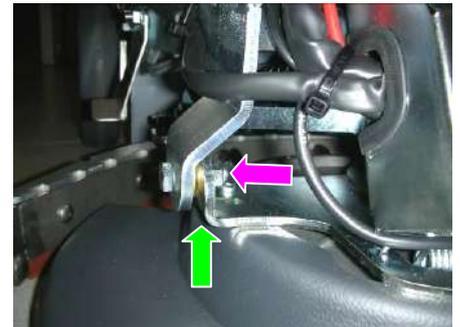


7. Adjust the rope of squeegee control so that the threaded is out from the nut near the squeegee support of **2-3 mm**.
8. Adjust the rope of squeegee control so that the threaded is out of **15 mm** including the nut



Check brush base

1. Check that the **brush base support** on the right side is free to move inside the hole of the frame arm. This allows the brush base to adjust itself on the floor. If, it is necessary, unscrew lightly the **lock nut**.



Check charger (previous serial number 212002760)

1. Check that the charger makes the initial test :
 - green led with two blinkings : charger setted for gel or agm batteries;

- red led with two blinkings : charger setted for lead acid batteries.
2. Check the functionality of the led of the charger during the charging time :
 - fix red led : first time during normal charging;
 - fix yellow led : second time during normal charging;
 - fix green led : ending of the charging or maintenance time.
 3. In the case of the blinking red led, it could happen the following problems:
 - before the charging time :
 - wrong battery : check the type of the battery;
 - battery not connected : check the connection;
 - problem on the charger : replace it;
 - after or during the charging time :
 - battery defected : check and eventually replace it;
 - disconnect and reconnect the charger;
 - replace the charger.



The charger takes about 12-13 hours to fully charge a battery with 20% remaining (ie when the control board batteries stops the scrubber and the display shows the flashing "0").

Check charger (after serial number 212002760)

1. Check that the charger makes the initial test :
 - green led with two blinkings : charger setted for gel or agm batteries;
 - red led with two blinkings : charger setted for lead acid batteries.
2. Check the functionality of the led of the charger during the charging time :
 - fix red led : first time during normal charging;
 - fix yellow led : second time during normal charging;
 - fix green led : ending of the charging or maintenance time.
3. In case of malfunctions, alarm signals are so indicated:
 - Yellow lit + 1 green LED flash: disconnected battery, reversed polarity or short circuit
 - Yellow lit + 2 green LED flash: alarm timeout, defective battery
 - Yellow lit + 3 green LED flash: Faulty charger alarm
 - Red lit + 1 green LED flash: overtemperature alarm
4. The cable used for the charger has two poles.



The charger takes about 12-13 hours to fully charge a battery with 20% remaining (ie when the control board batteries stops the scrubber and the display shows the flashing "0").

Functional check

- Check the switches and lamps functionality;
- Check the brush base functionality;

- Check the brush motor functionality;
- Check the squeegee functionality;
- Check the suction motor functionality;
- Check the battery charger functionality;
- Check the conditions of battery, connectors and cables;

Functional test

- Fill the solution and recovery tanks and check if there are leakage;
- Check that there are not leakage on the water plant and that water fall in the center of the brush;
- Check the functionality of water cock and solenoid valve;

Final test

Check all functions: cleaning, drying.