USE AND MAINTENANCE MANUAL

INNOVA 60 B 2013
INNOVA 65-75-85-100 B 2013
INNOVA 70 S 2013

ED. 08-2020 ENG

ORIGINAL
INSTRUCTIONS
Doc. 10029401
Ver. AD

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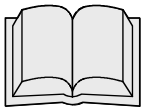
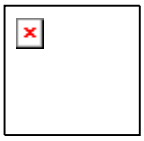
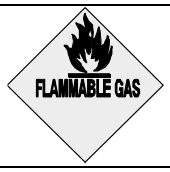
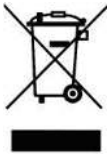
Symbols used in the manual

	Open book symbol with an "i": Indicates the need to consult the instruction manual
	Open book symbol: Used to tell the operator to read the manual before using the machine
	Warning symbol Carefully read the sections marked with this symbol and observe the indications, for the safety of the operator and the machine
	Warning symbol Indicates danger of gas exhalation and leakage of corrosive liquids
	Warning symbol Indicates the danger of fire. keep naked flames at a safe distance
	Warning symbol Indicates that the packed product should be handled with suitable lifting means that comply with the legal requirements
	Disposal symbol Carefully read the sections marked with this symbol, for machine disposal

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On consignment of the machine

When the machine is consigned to the customer, an immediate check must be performed to ensure all the material mentioned in the shipping documents has been received, and also to check the machine has not suffered damage during transportation. If this is the case, the carrier must ascertain the extent of the damage at once, informing our customer service office. It is only by prompt action of this type that the missing material can be obtained, and compensation for damage successfully claimed.

Introductory comment

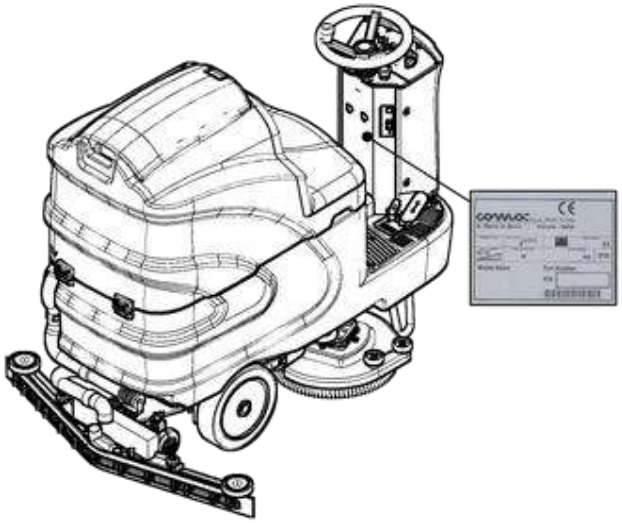
Innova 60B – Innova 65B – Innova 75B – Innova 85B – Innova 100B – Innova 70S – Innova 70BTO is a floor scrubbing machine that, thanks to the mechanical action of two disc brushes (or cylindrical, depending on the chosen version) and the chemical action of a water-detergent solution, can handle a wide variety of floors and types of dirt. As it moves forward, it collects the dirt removed and also the detergent solution not absorbed by the floor.
The machine must only be used for this purpose. Even the best machines will only work well if used correctly and kept in good working order. We therefore suggest you read this instruction booklet carefully, and read it again whenever difficulties arise while using the machine. If necessary, remember that our customer assistance service (organised in collaboration with our dealers) is always available for advice or direct intervention.

Intended use

The floor scrubbing machine is designed for the professional cleaning of surfaces and floors in industrial, commercial and public environments only. It is only suitable for use in closed (or at least covered) places.
The machine is not suitable for use in the rain, or under water jets. IT IS FORBIDDEN to use the machine for picking up dangerous dusts or inflammable liquids in places with an explosive atmosphere. In addition, it is not suitable as a means of transport for people or objects.

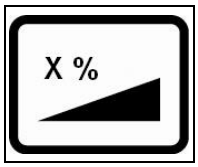
Serial number plate

The serial number plate is located at the rear of the steering column, and indicates the general characteristics of the machine, in particular the serial number of the machine. The serial number is an extremely important piece of information and should always be provided together with any request for assistance or to purchase spare parts.

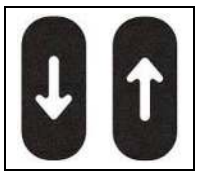


TECHNICAL DESCRIPTION	U/M	Innova 60B	Innova 65B	Innova 75B	Innova 85B	Innova 100B	Innova 70S	Innova 70BTO
Working width	mm	610	650	750	850	1010	690	710
Squeegee width	mm	780	970	970	1085	1085	970	970
Working capacity, up to	m^2/h	3660	3900	4500	5100	6000	4100	4200
Disc brushes	No. / ∅ mm	1/610	2/340	2/390	2/430	2/510		
Cylindrical brushes	No. / ∅ mm						1/210	
Abrasive pad	No. / mm							1/710x355
Brush rpm	rpm	170	170	170	170	120	520	3500
Brush motor	V/W	24/450	24/500	24/500	24/500	24/600	24/560	24/600
Maximum pressure on the brushes (min/max)	kg	30	30/60	30/60	30/60	30	20	30/60
Traction motor	V/W	24/400						
Traction wheel	∅ mm	220						
Forward speed	km/h	0÷6						
Maximum gradient with full load	%	10						
Suction motor	V/W	24/410						
Suction vacuum	mbar	91						
Rear elastic wheels	∅ mm	300						
Solution tank	l	110						
Recovery tank	l	125						
Detergent tank (CDS version only)	l	-	5					
Steering diameter	mm	1910						
Machine length (without squeegee)	mm	1495						
Machine height (without optional blinking light kit)	mm	1320						
Machine width (without squeegee) Solution	mm	680	680	770	855	1035	805	805
Battery compartment dimensions (l x w x h)	mm	385x525x350						
Rated battery voltage	V	24						
Battery weight (max)	kg	136						
Machine weight (empty and without batteries)	kg	213	213	213	213	230	233	233
Machine weight during transport (machine + batteries + brushes + squeegee)	kg	350	350	350	350	366	370	370
Machine weight in running order (machine + batteries + water + brushes + squeegee + operator)	kg	420	420	420	420	436	440	440
Sound pressure level (ISO 11201)	dB (A)	<70	<70	<70	<70	<70	<70	<70
Uncertainty K_{pa}	dB (A)	1.5	1.5	1.5	1.5	1.5	1.5	1.5

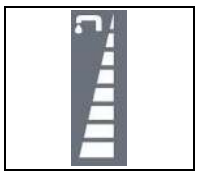
SYMBOLS USED ON THE MACHINE



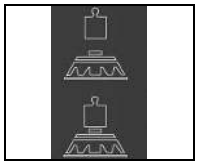
Indicates the maximum gradient.



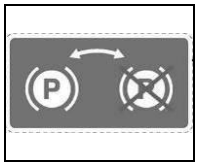
Pedal labels that indicate the forward and reverse direction of the machine.
Used to indicate the direction of the machine.



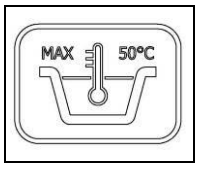
Water quantity regulation symbol.
Used on the steering column to indicate the knobs for adjusting the quantity of water distributed in the machine's water system.



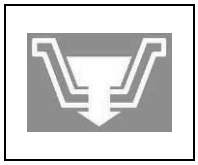
Symbol denoting pressure applied to the brushes.
Used to indicate the pedal to increase the pressure on the brushes.



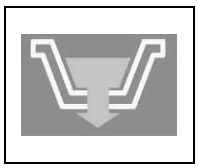
Parking brake symbol.
Used on the machine to indicate the parking brake control lever.



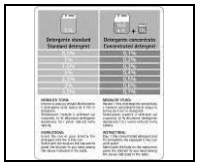
Symbol indicating the maximum temperature of the water used to fill the solution tank.



Symbol indicating the position of the solution tank drain pipe.



Symbol indicating the position of the recovery tank drainage tube.



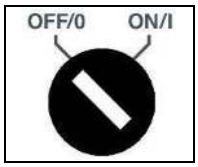
Label with instructions for the use of standard or concentrated detergents (CDS system only).

SYMBOLS USED ON THE MACHINE

Label with warnings on the type of detergent to use (CDS system only).

Label with Ph value of the detergent to use (CDS system only).

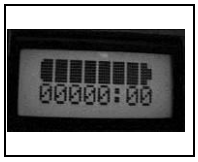
Indicates the risk of crushed hands.



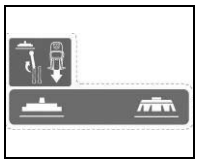
Main switch symbol (key switch).
Used on the instrument panel, to indicate the key switch for machine operation on (ON/I) or off (OFF/0).

Type of battery technology used (Innova 60B versions).
Used on the control display to indicate the type of battery programmed into the machine's control circuit board.

Type of hour meter and service (Innova 60B versions).
Used on the control display, in the top line to indicate the type of hour meter programmed into the machine's control circuit board. Whereas the bottom line displays the type of service programmed into the machine's control circuit board.

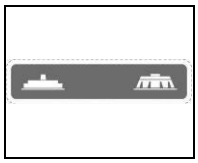


Battery charge level indicator and hour meter (Innova 60B versions).
Used on the control display, in the top line, to indicate the charge condition of the batteries. Whereas in the bottom line there is the machine's total operating hours.



Symbol of brush head / squeegee moving to the idle position (Innova 60B versions).

Used to indicate the movement linkage of the brush head and squeegee



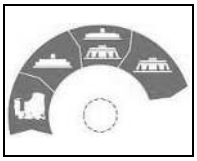
Symbol of brush head / squeegee moving to the work position (Innova 60B versions).

Used to indicate the movement linkage of the brush head and squeegee

SYMBOLS USED ON THE MACHINE

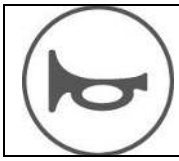
Horn symbol (Innova 60B versions).

It is used in the rear of the steering column to indicate the horn button.



Brush head / squeegee operating symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used to indicate the I-DRIVE program selector.

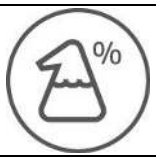
ECO mode symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used on the control panel to indicate the button that activates the ECO mode of the machine.



Horn symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used on the control panel, to indicate the horn button.

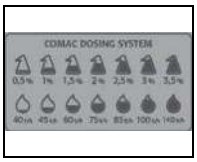
Symbol for water amount regulation (CDS system only).
Used on the control panel to indicate the button regarding the regulation of the water level inside the machine's water circuit.

Water level symbol (CDS system only).
Used on the control display to indicate the water level in the machine's water circuit.



Detergent percentage adjustment symbol (CDS system only).
Used on the control panel to indicate the button pertaining to the regulation of the percentage of detergent inside the machine's water circuit.

Detergent percentage level symbol (CDS system only).
Used on the control display to indicate the percentage of detergent in the machine's water circuit.



Symbol for the values for dosing the detergent solution (CDS system only).
Used on the control panel to indicate the variation of the "water amount level" symbols in relation to the water in the machine's water system. And the variation of the “detergent percentage level” in relation to the detergent percentage in the machine's water system.

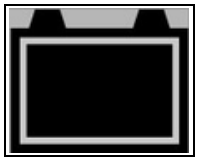
SYMBOLS USED ON THE MACHINE

Brush uncoupling symbol (Innova 65B - Innova 75B - Innova 85B versions).
Used on the control panel to indicate the button for uncoupling the brushes.

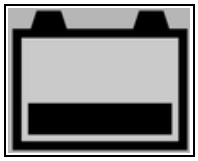
Brush uncoupling symbol (Innova 65B - Innova 75B - Innova 85B versions).
Used on the control display to indicate that the brushes are being uncoupled.

Forward/reverse speed adjuster symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used on the control panel, to indicate the button that allows you to regulate the forward or reverse speed of the machine.

Forward/reverse speed symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used on the control display, to indicate the level of speed of the forwards or reverse of the machine.



Battery charge level symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used on the control display to indicate the state of charge of the batteries.



Critical battery charge level symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used on the control display to indicate the critical state of charge of the batteries and the need to recharge them.

“DRYING” program symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used in the control display to indicate that the “DRYING” working program is active, in this case only the suction motor is operating.

“ECO DRYING” program symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used in the control display to indicate that the “ECO-DRYING” working program is active, in this case only the suction motor is operating in economic mode.

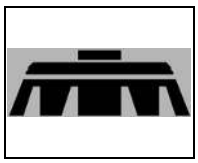
“SCRUBBING-DRYING” program symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used in the control display to indicate that the “SCRUBBING-DRYING” working program is active, in this case the brush motor, the solenoid valve and the suction motor are operating.

SYMBOLS USED ON THE MACHINE

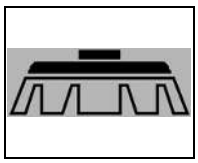
“ECO SCRUBBING-DRYING” program symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used in the control display to indicate that the “ECO SCRUBBING-DRYING” working program is active, in this case the brush motor, the solenoid valve and the suction motor are operating in economic mode.

“EXTRA PRESSURE SCRUBBING-DRYING” program symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used in the control display to indicate that the “SCRUBBING-DRYING-EXTRA PRESSURE” working program is active, in this case the brush motor, the solenoid valve and the suction motor are operating.

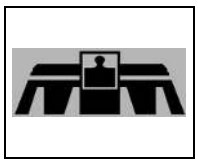
“ECO EXTRA PRESSURE SCRUBBING-DRYING” program symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used in the control display to indicate that the “ECO SCRUBBING-DRYING-EXTRA PRESSURE” working programme is active, in this case the brush motor, the solenoid valve and the suction motor are operating, and with the addition of extra pressure on the brushes in economic mode.



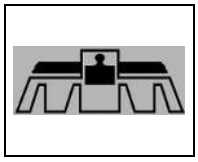
“SCRUBBING” program symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used in the control display to indicate that the “SCRUBBING” working program is active, in this case the brush motor and the solenoid valve are operating.



“ECO SCRUBBING” program symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used in the control display to indicate that the “ECO SCRUBBING” working program is active, in this case the brush motor and the solenoid valve are operating in economic mode.

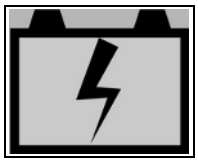


“EXTRA PRESSURE SCRUBBING” program symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used in the control display to indicate that the “SCRUBBING-EXTRA PRESSURE” working program is active, in this case the brush motor and the solenoid valve are operating, but with the addition of more pressure on the brushes.



“ECO EXTRA PRESSURE SCRUBBING” program symbol (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used in the control display to indicate that the “ECO SCRUBBING-EXTRA PRESSURE” working program is active, in this case the brush motor and the solenoid valve are operating, but with the addition of more pressure on the brushes in economic mode.

Symbol for active parking brake (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
Used in the control display to indicate that the parking brake is engaged.



Symbol for active battery-charger (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions with built-in battery-charger).
Used in the control display to indicate that the battery charger is operating and is carrying out the recharge cycle.

GENERAL SAFETY REGULATIONS

The regulations below must be carefully followed in order to avoid harm to the operator and damage to the machine.

WARNING:

- Read the labels on the machine carefully. Do not cover them for any reason and replace them immediately if they become damaged.
- The machine must be exclusively used by authorised, trained personnel.
- Do not use the machine on surfaces with an inclination greater than the one shown on the plate.
- The machine is not suitable for cleaning rough or uneven floors. Do not use the machine on slopes.
- If the power supply cable of the battery charger is damaged, contact an Authorised service centre immediately.
- In case of danger, disconnect the battery connector on the rear of the machine.
- For all maintenance interventions, switch off the machine and disconnect the battery connector and/or the power supply cable.
- Children must be supervised to ensure they do not play with the device.
- During the working of the machine, pay attention to other people and especially to children.
- Only use the brushes supplied with the machine, or those specified in the "CHOOSING AND USING THE BRUSHES" paragraph of the instruction manual. The use of other brushes could compromise safety levels.

ATTENTION:

- The machine is not suitable for use by children and persons with reduced physical, mental and sensory capabilities, or people who lack experience and knowledge.
- The machine must not be used or stored outdoors, in damp conditions or directly exposed to rain.
- The storage temperature must be between -25°C and +55°C; do not store outdoors in damp conditions.
- Conditions of use: °°room temperature between 0°C and 40°C with relative humidity between 30 and 95%.
- The socket for the machine's power cable (electric version) or for the battery charger power cable (battery version) must be correctly earthed.
- Adapt the speed to the adhesion conditions.
- Do not use the machine as a means of transport.
- The machine does not cause harmful vibrations.
- Do not use the machine in an explosive atmosphere.
- Do not vacuum inflammable liquids.
- Do not use the device to collect dangerous powders.
- Do not mix different types of detergent as this may produce harmful gases.
- The machine is not suitable for cleaning carpets.
- Do not place any liquid containers on the machine.
- Avoid working with the brushes when the machine is standing still, so as not to damage the floor.
- In the event of a fire, use a powder extinguisher. Do not use water.
- Do not knock against shelving or scaffolding, where there is a danger of falling objects. The operator must always be equipped with the appropriate safety devices (gloves, shoes, helmet, goggles, etc.).
- The machine is designed to carry out the scrubbing and drying operations simultaneously. Different operations should only be carried out in areas where the passage of unauthorised persons is prohibited. Signal the presence of damp floors with suitable signs.
- If the machine does not work properly, check this is not caused by failure to carry out routine maintenance. Otherwise, ask for intervention of the authorised technical assistance centre.
- If you need to replace any components, request the ORIGINAL spare parts from an Authorised dealer and/or Retailer.

- Restore all electrical connections after any maintenance interventions.
- Before using the machine, check that all the hatches and covers are positioned as shown in this Use and Maintenance Manual.
- Do not remove the guards that can only be removed with the aid of tools, except for maintenance work (see the relevant paragraphs)
- Do not wash the machine with direct water jets or with pressurised water, nor with corrosive substances.
- To prevent scaling in the solution tank filter, do not fill the tank with detergent solution many hours before using the machine.
- Do not use acid or basic solutions that could damage the machine and/or harm people.
- Have the machine checked by an authorised technical assistance centre every year.
- When disposing of consumable materials, observe the laws and regulations in force.
- When your machine has reached the end of its long working life, dispose of the materials it contains (especially oils, batteries and electronic components) in an appropriate manner, taking into account that the machine itself was constructed using 100% recyclable materials.
- The batteries must be removed from the machine before its disposal. The batteries must be disposed of in a safe manner, fully observing the laws and regulations in force.

PREPARATION OF MACHINE

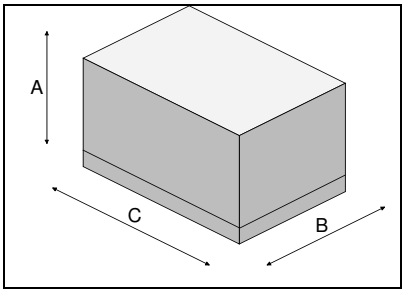
1. HANDLING THE PACKED MACHINE

The machine is contained in specific packaging with a pallet for the handling with fork trucks. The packages CANNOT be placed on top of each other.
The overall weight of the package (machine without batteries, plus packaging elements) is:

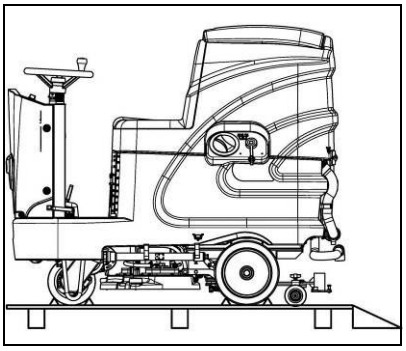
Innova 60B	Innova 65B	Innova 75B	Innova 85B	Innova 100B	Innova 70S	Innova 70BTO
268kg	268kg	268kg	268kg	285kg	288kg	288kg

The packaging dimensions are as follows:

Innova
A: 1635 mm
B: 730 mm
C: 1600 mm



2. HOW TO UNPACK THE MACHINE

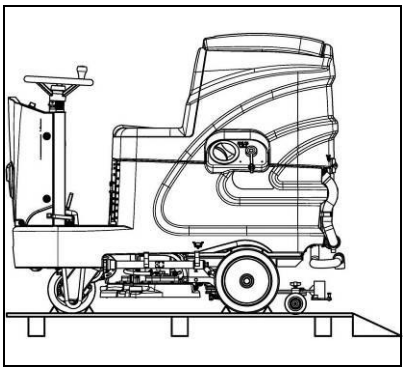


1. Remove the outer package.
2. The machine is fixed to the pallet with wedges which block the wheels.
3. Remove the wedges.
4. Use a chute to get the machine down from the pallet, pushing it backwards. Do not assemble the rear squeegee before unloading the machine, and avoid violently jolting the brush head. To assemble the squeegee, read the section “ASSEMBLING THE SQUEEGEE”.
5. Keep the pallet for any future transport needs.

ATTENTION: If the product is delivered in cardboard containers, handle the packed product with suitable lifting means that comply with the legal requirements

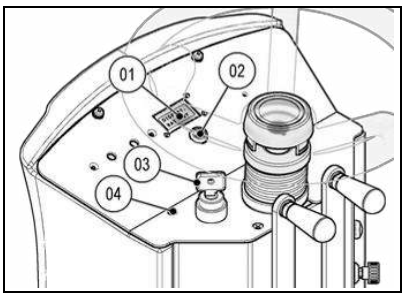
ATTENTION: During this operation, check there are no people or objects near the machine

3. HOW TO MOVE THE MACHINE



1. Using a chute, mount the machine on the pallet. Carry out this operation with the rear squeegee and the brushes detached from the machine.
2. Check the solution tank and recovery tank are empty; if necessary, empty them.
3. Make sure that the main switch of the machine is in the "0" position; if not, position it to "0".
4. Disconnect the electric system connector from the battery connector.
5. Secure the machine to the pallet using wooden wedges.
6. Engage the parking brake.

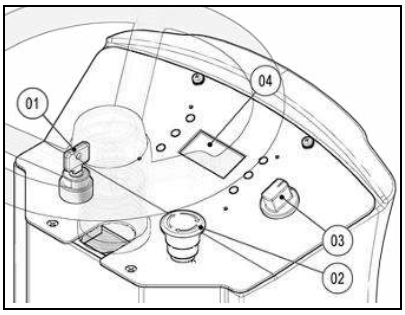
4. INSTRUMENT PANEL COMPONENTS (Innova 60B version)



The instrument panel components are identified as follows:

1. Battery level / hour meter display
2. Battery level hour meter display control button
3. Main key switch
4. Red warning light indicating that the parking brake is on

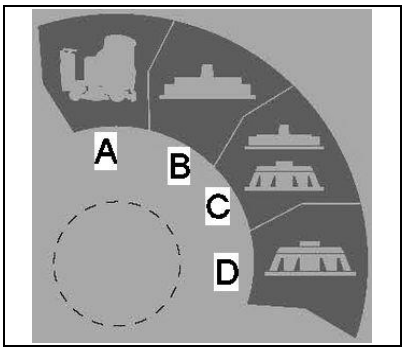
5. INSTRUMENT PANEL COMPONENTS (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70BTO versions)



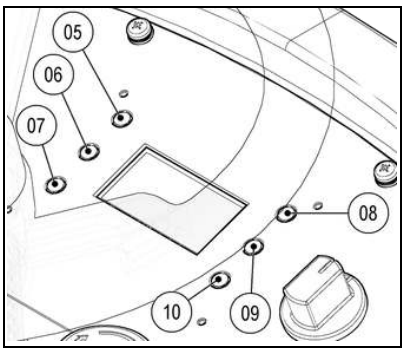
The instrument panel components are identified as follows:

1. Main key switch.
2. Emergency switch.
3. Working program adjustment switch, I-Drive device.
4. Command display.

Choose the desired working program with the I-Drive device:

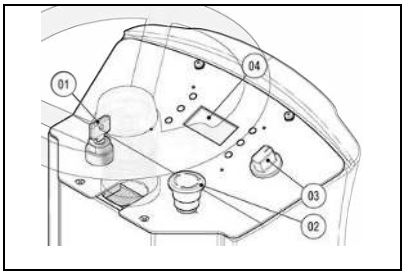


A. Transfer: movement of the machine without working.
B. Drying: using the squeegee only.
C. Scrubbing / Drying: using both the brushes and the squeegee.
D. Scrubbing only : using the brushes only.



5. "ECO" function button.
6. Horn button.
7. Selector button of the level of the water amount in the water system (only CDS system).
8. Selector button for the level of the forward and reverse speed.
9. "BRUSH UNCOUPLING" function button.
10. Selector button for the percentage of detergent in the water system (only CDS system).

6. INSTRUMENT PANEL COMPONENTS (Innova 70S version)



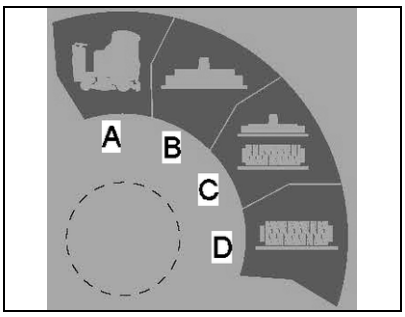
The instrument panel components are identified as follows:

1. Main key switch.
2. Emergency switch.
3. Working program adjustment switch, I-Drive device.
4. Command display.

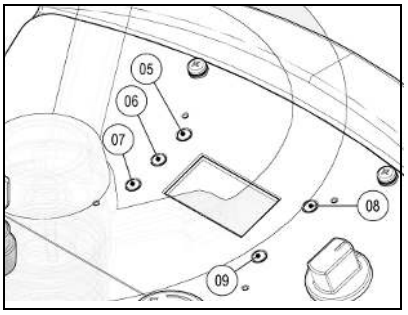
MACHINE PREPARATION

Choose the desired working program with the I-Drive device:

A. Transfer: movement of the machine without working.
B. Drying: using the squeegee only.
C. Scrubbing / Drying: using both the brushes and the squeegee.
D. Scrubbing only : using the brushes only.



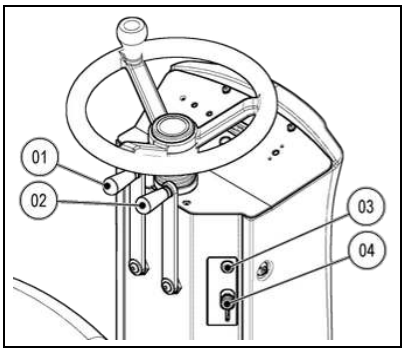
5. "ECO" function button.
6. Horn button.
7. Selector button of the level of the water amount in the water system (only CDS system).
8. Selector button for the level of the forward and reverse speed.
9. Selector button for the percentage of detergent in the water system (only CDS system).



7. STEERING COLUMN COMPONENTS (Innova 60B version)

The steering column components are identified as follows:

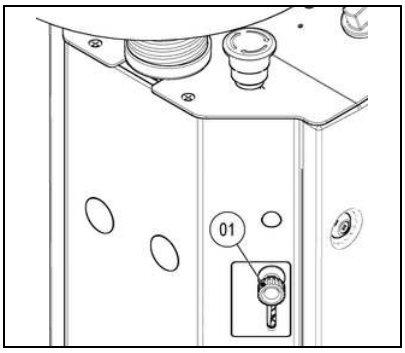
1. Squeegee body lifting lever
2. Brush head unit lifting lever
3. Horn button
4. Detergent solution adjustment lever



8. STEERING COLUMN COMPONENTS

The steering column components are identified as follows:

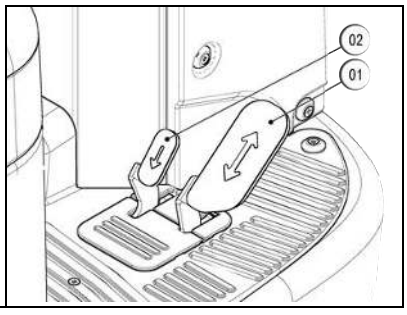
1. Detergent solution adjustment lever (version without CDS) - clean water adjustment lever (version with CDS).



9. FOOTBOARD COMPONENTS

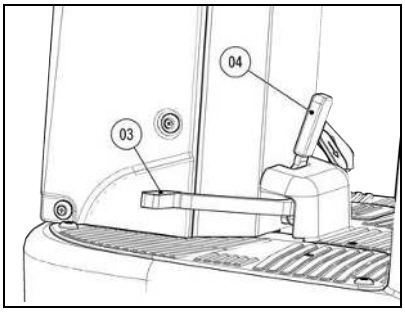
The footboard components are identified as follows:

1. Accelerator pedal, forward.
2. Accelerator pedal, reverse.

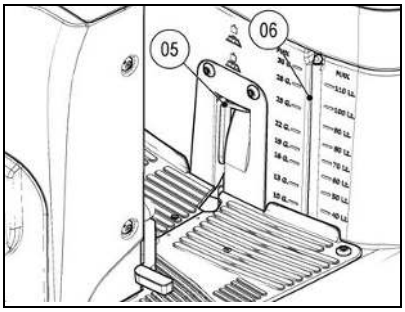


ATTENTION: Only by simultaneously pressing the pedals is the reverse made

3. Service brake pedal.
4. Parking brake lever.



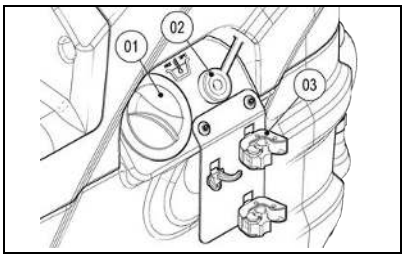
5. Pedal for extra brush head pressure (Innova 65B - Innova 75B - Innova 85B - Innova 100B versions).
6. Water level pipe (versions with CDS) or solution level pipe (versions without CDS).



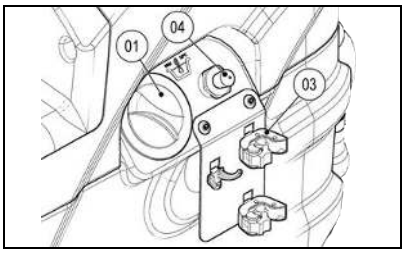
10. SIDE COMPONENTS OF THE MACHINE

The side components of the machine are identified as follows:

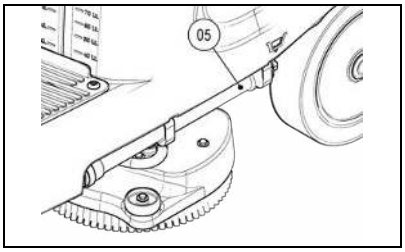
1. Water-detergent filler cap (versions without CDS), water filler (versions with CDS).
2. Fast water filler cap.
3. Optional kit for cleaning accessories.



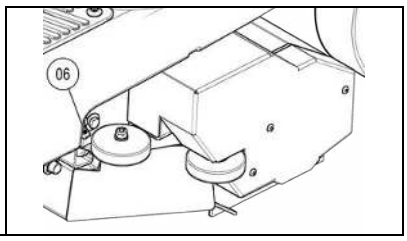
4. Optional rapid refill kit.



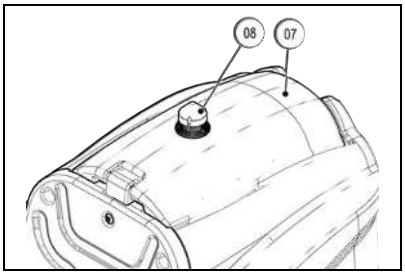
5. Solution tank dumping system tube (Innova 60B - Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70BTO versions).



6. Solution tank dumping system cap (Innova 70S versions).



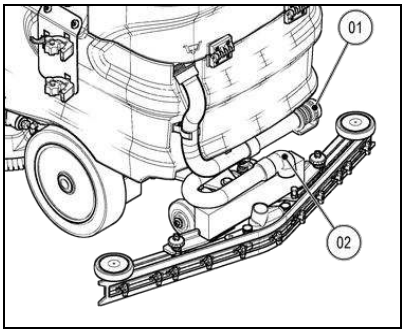
7. Vacuum cap.
8. Optional blinking light kit.



11. REAR COMPONENTS OF THE MACHINE

The rear components of the machine are identified as follows:

1. Recovery tank drainage tube.
2. Squeegee vacuum hose.



12. BATTERY TYPE

To power the machine it is necessary to use:

- liquidelectrolyte lead traction batteries;
- sealed traction batteries with gas recombination or gel technology.

OTHER TYPES MUST NOT BE USED.
The batteries must meet the requirements laid out in the norms: CEI EN 60254-1:2005-12 (CEI 21-5) + CEI EN 60254-2:2008-06 (CEI 21-7)
The battery compartment can house four 6V or two 12V batteries
For a good operating performance, we suggest the use of 210 Ah C5 batteries

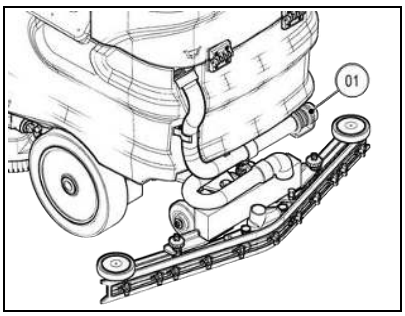
13. BATTERY MAINTENANCE AND DISPOSAL

For maintenance and recharging, respect the instructions provided by the battery manufacturer.
Particular attention must be paid when choosing the battery charger, if not supplied, since there are different kinds according to the type and capacity of the battery.
When the battery reaches the end of its working life, it must be disconnected by expert, trained personnel, then lifted, using the grips and suitable lifting devices, to remove it from the battery compartment.
EXHAUSTED BATTERIES ARE CLASSIFIED AS DANGEROUS WASTE AND MUST BE CONSIGNED TO THE AUTHORISED BODIES FOR CORRECT DISPOSAL.

ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

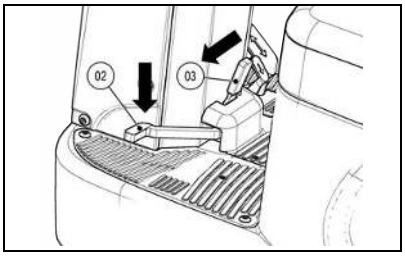
ATTENTION: You are advised to only lift and move the batteries with lifting and transportation means suitable for the specific weight and size.

14. FITTING THE BATTERIES INTO THE MACHINE

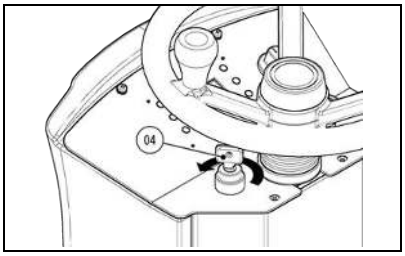


The batteries must be housed in the special compartment beneath the recovery tank and should be handled using lifting equipment that is suitable in terms of both weight and coupling system. They must also satisfy the requirements of Standard CEI 21-5. The dimensions of the battery compartment are: 384 x 520 x H340 mm.

ATTENTION: for battery maintenance and daily recharging, you must fully respect the indications provided by the manufacturer or retailer. all installation and maintenance operations must be carried out by specialized personnel.

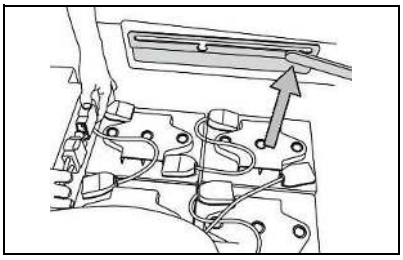


ATTENTION: make sure that you comply with the accident prevention regulations in force in the country where you work or with DIN EN 50272-3 and DIN EN 50110-1, before any handling of the batteries.
ATTENTION: to prevent an accidental short circuit use insulated tools to connect the batteries, and do not place or drop metal objects on the battery. Remove rings, watches and any clothing with metal parts that may come into contact with the battery terminals.



To insert the batteries into the compartment proceed as follows:

1. Check that the recovery tank is empty; if not, empty it using the tube provided for this purpose (01) positioned at the rear of the machine (read the section "EMPTYING THE RECOVERY TANK").
2. Block the machine in place by engaging the parking brake, press the pedal (02) and block it with the lever (03) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).
3. Check the main switch (04) is at "0", if not, turn the key by a quarter of a turn to the left, and remove the key from the instrument panel.



4. Grip the handle on the right side of the recovery tank.
5. Lift the recovery tank until it hooks to the end of the safety catch.

ATTENTION: Before installing the battery, clean the battery compartment with a damp cloth. Check that the connectors on the cables supplied are functioning correctly.
ATTENTION: check that the characteristics of the battery that you are looking to use are appropriate for the type of work to be performed. Check the battery charge and the condition of the contacts on the battery.

ATTENTION: You are advised to only lift and move the batteries with lifting and transportation means suitable for the specific weight and size.

ATTENTION: the lifting hooks must not damage the blocks, connectors or cables.

6. House the batteries in the compartment, positioning the poles “+” and “-“ opposite each other.

ATTENTION: Before inserting the batteries into the machine, remember to cover the terminals with a little grease to protect them against external corrosion.

ATTENTION: You are advised to use airtight batteries only, to avoid the leakage of acids!

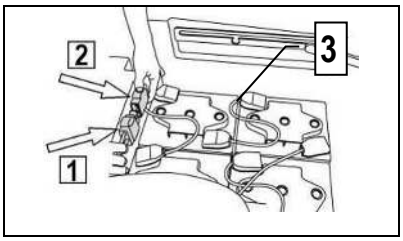
ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

15. CONNECTING THE BATTERIES AND BATTERY CONNECTOR

1. Connect the batteries in series using the jumper cables supplied (03) to the poles “+” and “-“.
2. Connect the battery connector cable (01) to the “+” and “-“ poles to obtain a voltage of 24V on the terminals.
3. Connect the battery connector (01) to the machine connector (02).

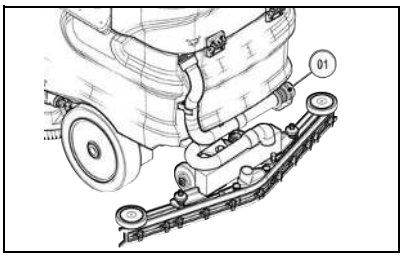
ATTENTION: All installation and maintenance operations must be carried out by expert personnel, trained at the specialised assistance centre.

ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.



4. Remove the safety catch.
5. Grip the handle on the right side of the recovery tank, lower the tank until it is in the work position.

16. CONNECTING THE BATTERY-CHARGER (VERSIONS WITHOUT BUILT-IN BATTERY CHARGER)

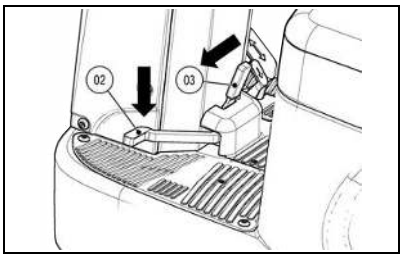


In order not to cause permanent damage to the batteries, it is essential to avoid their complete discharge: arrange the recharge within a few minutes of the switching on of the "discharged batteries" blinking light.

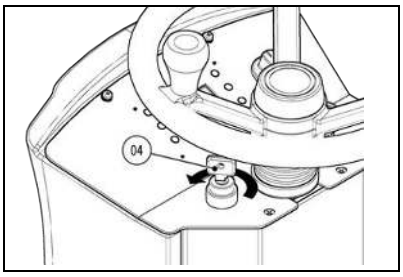
ATTENTION: Never leave the batteries completely discharged, even if the machine is not being used. Check the battery charger is suitable for the batteries installed, in terms of both capacity and type.

To connect the battery charger you must:

1. Move the machine near to the battery charger.
2. Check that the recovery tank is empty; if not, empty it using the tube provided for this purpose (01) positioned at the rear of the machine (read the section "EMPTYING THE RECOVERY TANK").
3. Block the machine in place by engaging the parking brake, press the pedal (02) and block it with the lever (03) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

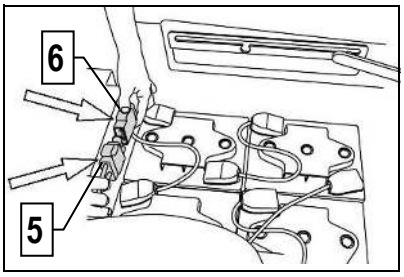


4. Check the main switch (04) is at "0", if not, turn the key by a quarter of a turn to the left, and remove the key from the instrument panel.
5. Grip the handle on the right side of the recovery tank.
6. Lift the recovery tank until it hooks to the end of the safety catch.



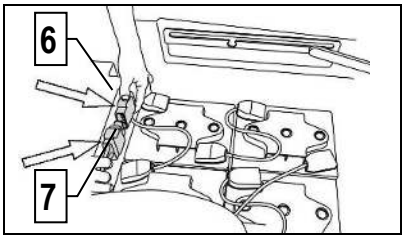
ATTENTION: Park the machine in an place protected from the weather and with suitable ventilation, and on a flat and level surface; near the machine there must be no objects that could either damage it, or be damaged through contact with it.

7. Disconnect the electric system connector (05) from the battery connector (06).



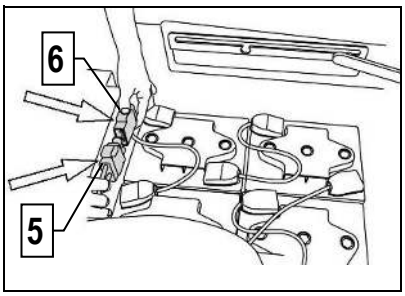
ATTENTION: This process must be carried out by qualified personnel. An incorrect connection of the connector may cause a malfunction of the device.

8. Connect the battery charger cable (07) to the battery connector (06).
9. Grip the handle on the safety catch and turn the recovery tank until it hooks up with the prop in the first point of the safety catch.



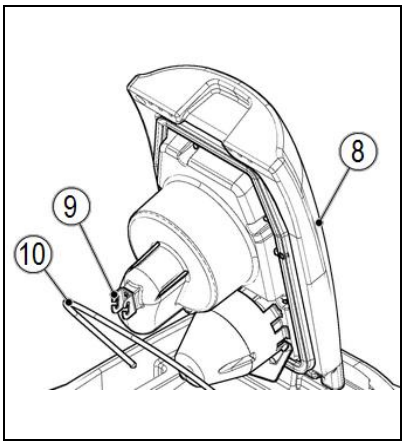
ATTENTION: keep the recovery tank open for the duration of the battery recharging cycle to allow gas fumes to escape.
ATTENTION: the room used to recharge the batteries must be adequately ventilated to prevent the accumulation of gases that leak from batteries.

The coupling connector of the battery charger is supplied inside the bag containing this instruction booklet, and must be fitted to the battery charger cables as shown in the instructions.



10. Connect the recently wired cable to the external battery charger.
11. After a full recharge cycle, grip the handle on the right side of the recovery tank until it hooks to the first prop of the safety catch.
12. Connect the battery connector (06) to the electric system connector (05).
13. Grip the handle on the safety catch and lower the recovery tank until it is in the work position.

ATTENTION: carefully read the use and maintenance instructions of the battery charger that is used for charging.
ATTENTION: Keep the recovery tank open for the duration of the battery recharging cycle to allow gas fumes to escape
ATTENTION: the room used to recharge the batteries must be adequately ventilated to prevent the accumulation of gases that leak from batteries.
ATTENTION: every time a battery recharging cycle is enabled, you are advised to raise the cap (8) until the hook (9) can be fixed to the prop (10) of the recovery tank.

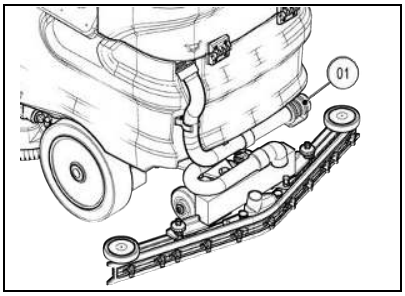


ATTENTION: Danger of gas exhalation and leakage of corrosive liquids.

ATTENTION: Danger of fire: keep naked flames at a safe distance

17. CONNECTING THE BATTERY-CHARGER (VERSIONS WITH A BUILT-IN BATTERY CHARGER)

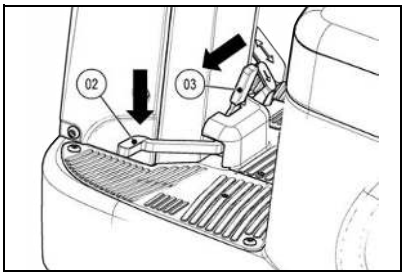
In order not to cause permanent damage to the batteries, it is essential to avoid their complete discharge: arrange the recharge within a few minutes of the switching on of the "discharged batteries" blinking light.



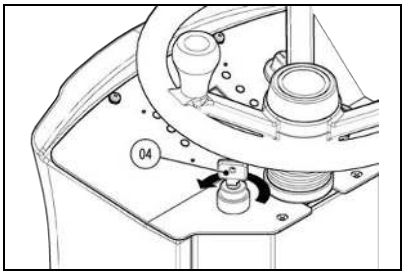
ATTENTION: Never leave the batteries completely discharged, even if the machine is not being used. Check the battery charger is suitable for the batteries installed, in terms of both capacity and type.

To connect the battery charger you must:

1. Take the machine to the maintenance area.
2. Check that the recovery tank is empty; if not, empty it using the tube provided for this purpose (01) positioned at the rear of the machine (read the section "EMPTYING THE RECOVERY TANK").
3. Block the machine in place by engaging the parking brake, press the pedal (02) and block it with the lever (03) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

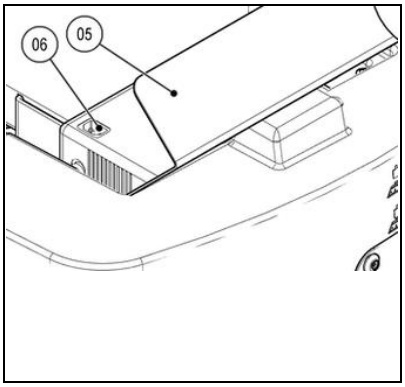


4. Check the main switch (04) is at "0", if not, turn the key by a quarter of a turn to the left, and remove the key from the instrument panel.
5. Grip the handle on the right side of the recovery tank.
6. Lift the recovery tank until it hooks to the end of the safety catch.



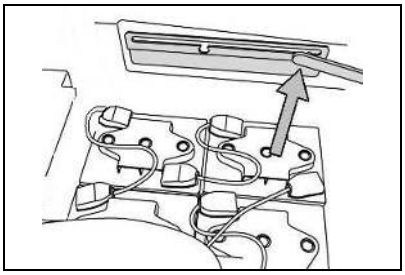
ATTENTION: Park the machine in an place protected from the weather and with suitable ventilation, and on a flat and level surface; near the machine there must be no objects that could either damage it, or be damaged through contact with it.

7. Remove the cover (05) of the battery charger.
8. Connect the connector of the battery charger power cable to the socket (06) on the charger itself.
9. Plug the battery charger power cable into the mains socket.
10. Grip the handle on the safety catch and turn the recovery tank until it hooks up with the prop in the first point of the safety catch.



ATTENTION: keep the recovery tank open for the duration of the battery recharging cycle to allow gas fumes to escape.
ATTENTION: the room used to recharge the batteries must be adequately ventilated to prevent the accumulation of gases that leak from batteries.
ATTENTION: Before inserting the battery charger power cable into the socket, verify that there is no condensate or other forms of liquids.

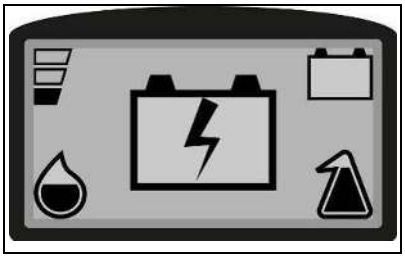
11. After a full recharge cycle, grip the handle on the right side of the recovery tank until it hooks to the first prop of the safety catch.
12. Pull out the battery charger power cable from the mains socket.
13. Disconnect the connector of the battery charger power cable from the socket (06) on the battery charger itself.
14. Secure the cover (05) of the battery charger.
15. Grip the handle on the safety catch and lower the recovery tank until it is in the work position.



ATTENTION: Carefully read the use and maintenance manual of the charger that is delivered inside the bag containing this instruction booklet.

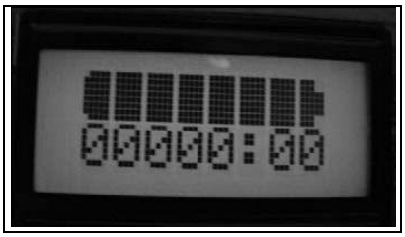
ATTENTION: if the electrical system of the machine is accidentally powered, the command display will visualise the symbol shown in the adjacent figure and none of the steering wheel commands will work. Valid for Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions only.

ATTENTION: Always make sure the green LED of the battery charger is on before using the machine again



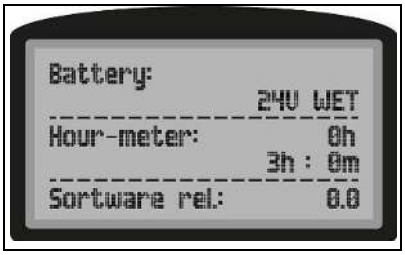
18. HOUR METER (Innova 60B versions)

The control display is on the machine's instrument panel, the third screen after the machine has been started allows you to observe, in the lower part of the screen, the hours and minutes the machine has been operating. The flashing ":" symbol indicates that the hour meter is counting the machine functioning time.



19. HOUR METER (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions)

The control display is on the machine's instrument panel, the third screen after the machine has been started allows you to observe:

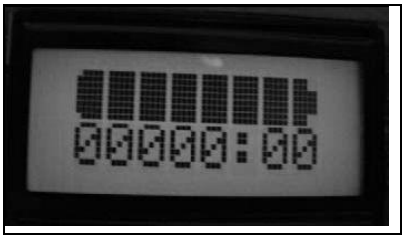


1. In the first part of the display you can display the work voltage that has been set and the type of battery.

2. In the second part of the display you can display the total time (first sequence of numbers) and the partial time (second sequence of numbers) that the machine has been used. The numbers followed by the letter “h” identify the hours, while the numbers followed by the letter “m” identify the tenths of an hour (a tenth of an hour corresponds to six minutes).
3. In the third part of the display you can display the program version of the controls circuit board.

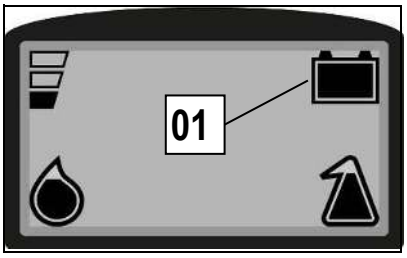
20. BATTERY CHARGE LEVEL INDICATOR (Innova 60B versions)

The control display is on the machine's instrument panel, the third screen after the machine has been started allows you to observe, in the top part of the screen, the state of charge of the batteries.
When the batteries supplied are fully charged, the upper line contains 8 light indicators that represent a battery. As the batteries gradually run down, the indicators go out and, with the batteries completely run down, only the battery outline flashes.



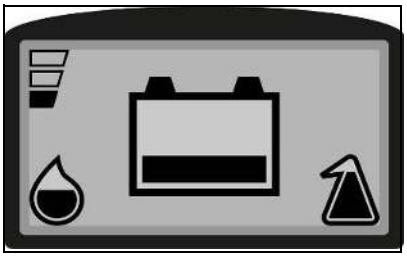
21. BATTERY CHARGE LEVEL INDICATOR (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions)

The control display is on the machine's instrument panel, in the top right of the work screen is the graphic symbol (01) that identifies the charge level indicator of the batteries. The indicator is composed of 5 charge levels, each of which represents about 20% of residual charge. With a residual charge of 20% the graphic symbol starts to flash and after a few second it will appear in larger dimensions in the middle of the screen, under these conditions take the machine to the usual place to charge the batteries.



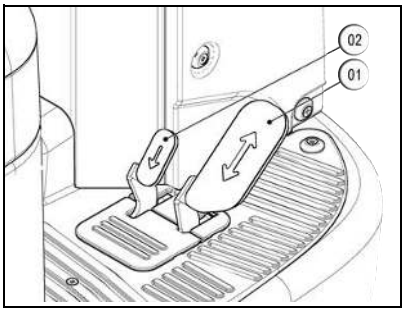
ATTENTION: a few seconds after the battery charge level reaches 20%, the brush motor switches off automatically. With the remaining charge it is still possible, however, to complete the drying process before recharging

ATTENTION: a few seconds after the battery charge level reaches 10%, the suction motor switches off automatically. With the remaining charge, it is still possible, however, to move the machine to the location designated for its recharging



22. WORKING FORWARD SPEED

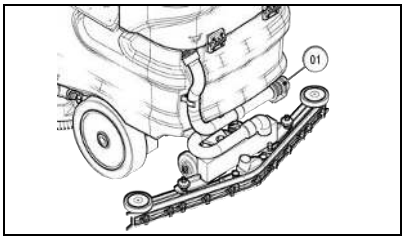
This machine is equipped with electronic traction control. To move the machine, after having turned the key in the ON position, push the drive pedal (01) adjusting the speed by pressing and releasing the pedal. The machine will then start moving. To make a reversing manoeuvre, press both pedals (01 and 02), the machine will then start moving backwards. During reverse motion, the machine emits an acoustic signal.



23. FILLING THE SOLUTION TANK WITH WATER

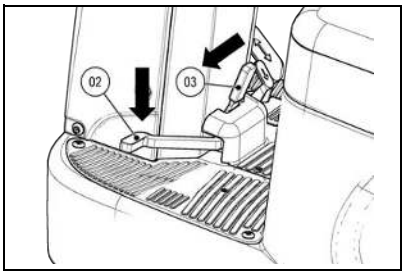
Before filling the solution tank, carry out the following steps:

1. Take the machine to the usual place for filling the solution tank
2. Check that the recovery tank is empty; if not, empty it using the tube provided for this purpose (01) positioned at the rear of the machine (read the section "EMPTYING THE RECOVERY TANK").

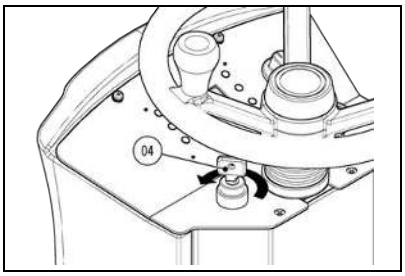


ATTENTION: The tanks should be emptied in the place used for draining dirty water.

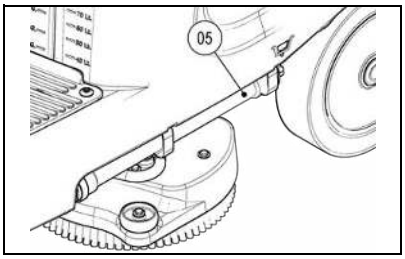
3. Block the machine in place by engaging the parking brake, press the pedal (02) and block it with the lever (03) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).



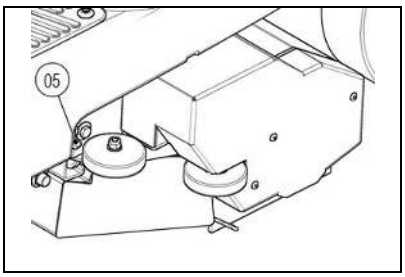
4. Turn the main machine switch to "0" by turning the key (04) a quarter rotation to the left.
5. Remove the key from the instrument panel.



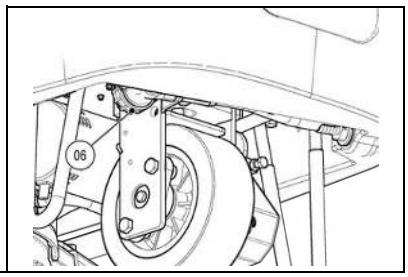
6. Check that the solution tank discharge plug (05) has been tightened, if not turn it in an anticlockwise direction. (Innova 60B - Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70BTO versions).



7. Check that the solution tank discharge plug (05) has been tightened, if not turn it in an anticlockwise direction. (Innova 70S versions)

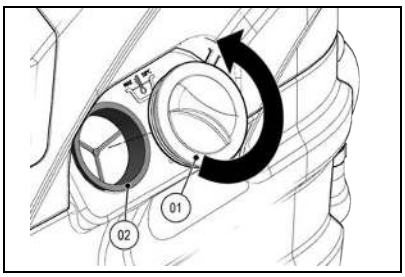


8. Check that the cap of the water system filter (06) on the front right of the machine, has been tightened, if not turn it in an anticlockwise direction.



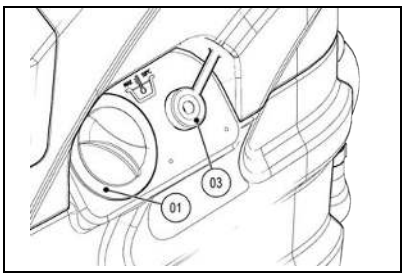
PREPARATION OF MACHINE

The solution tank can be filled with water in three different ways:

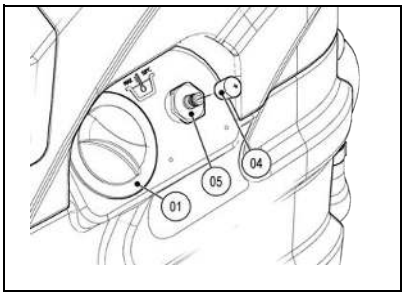


1. By unscrewing the filler cap (01) and filling it using a rubber tube or bucket.

   ATTENTION: Check that the filter (02) under the filler cap (01) is positioned correctly; this is to prevent impurities and dirt causing a malfunction in the machine's water system.



2. By using the rubber cap (03), which supports the water hose on its own, be sure to unscrew the cap (01) to allow the proper vent of air.



3. By using the optional system (05) for automatically topping up with clean water, which has a float for controlling the overflow, be sure to unscrew the cap (01) to allow the proper vent of air.

   ATTENTION: Before inserting the female insert into the male insert (05) in the rapid top-up kit, be sure to remove the cap (04).

   Fill with clean water, at a temperature not higher than 50°C and not lower than 10°C. The amount inside the tank can be seen by means of the level tube (04) on the front left of the seat.

24. DETERGENT SOLUTION (VERSION WITHOUT CDS)

After filling the solution tank with clean water add the liquid detergent to the tank in the concentration and manner indicated on the detergent manufacturer's label. To prevent the formation of an excessive amount of foam that could damage the vacuum motor, use the minimum percentage of detergent required.

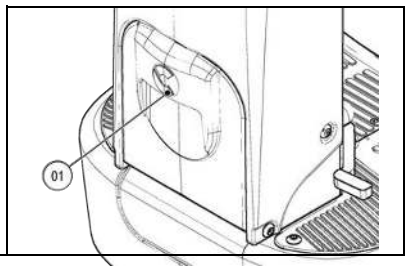
ATTENTION: Always use detergents whose manufacturer's label indicates their suitability for scrubbing machines. Do not use acid or alkaline products or solvents without this indication.

ATTENTION: protective gloves should always be worn before handling detergents or acidic or alkaline solutions, to avoid serious injury to the hands.

ATTENTION: always use low-foam detergent. To avoid the production of foam, put a minimum quantity of antifoam liquid in the recovery tank before starting to clean. Do not use pure acids.

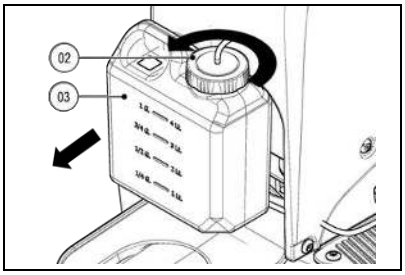
25. FILLING THE DETERGENT CANISTER (VERSION WITH CDS)

After filling the solution tank with clean water, proceed as follows:



1. Open the hatch (01) on the front of the steering column.

2. Remove the cap (02) of the detergent canister (03).



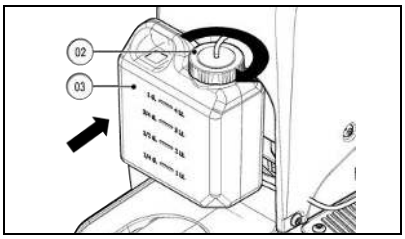
3. Remove the machine's detergent canister (03).
4. Fill the canister with the desired detergent, in the manner set out on the label coming with the machine.

ATTENTION: protective gloves should always be worn before handling detergents or acidic or alkaline solutions, to avoid serious injury to the hands.

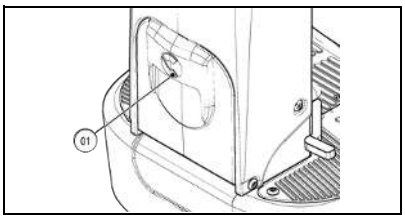
ATTENTION: always use low-foam detergent. To avoid the production of foam, put a minimum quantity of antifoam liquid in the recovery tank before starting to clean. Do not use pure acids.

ATTENTION: Always use detergents whose manufacturer's label indicates their suitability for scrubbing machines. Do not use acid or alkaline products or solvents without this indication. In addition, you are advised to always use low foam detergents. Do not use pure acids or detergents with a stronger gradation than that indicated on the label supplied.

5. Put back the canister in the chamber inside the steering column.
6. Properly close the screw cap (02) to prevent liquid coming out when working, and make sure that the detergent suction filter is properly positioned on the bottom of the canister.



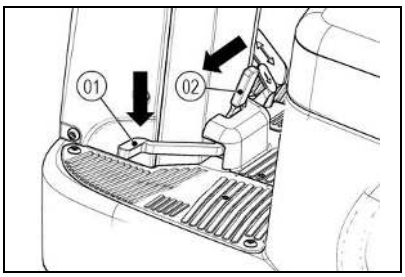
7. Close the hatch (01) on the front of the steering column.
8. Before starting to use the machine for the first time carefully read the sections “REGULATING THE DETERGENT (versions with CDS)” and “PRIMING THE DETERGENT SOLUTION PUMP (versions with CDS)”.



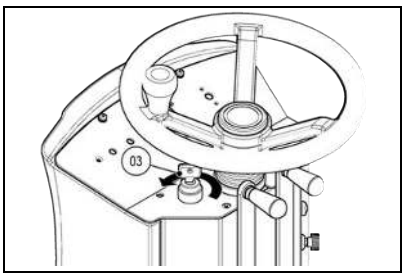
ATTENTION: the dosing system is suitable for frequent maintenance cleaning. Acid or alkaline maintenance detergent can be used with pH values between 4 and 10 and that do not contain: oxidising agents, chlorine or bromine, formaldehyde, mineral solvents. The detergents used must be suitable for use with scrubbing machines. Wash the circuit with water after use if the system is not used daily. The system can be excluded. In case of sporadic use of detergents with pH between 1-3 or 11-14, use the floor scrubbing machine in the traditional way by adding the detergent in the clean water tank and excluding the dosing circuit.

26. ASSEMBLING THE SQUEEGEE (Innova 60B versions)

To assemble the squeegee, which for reasons of packaging, is supplied dismantled from the machine, proceed as follows:

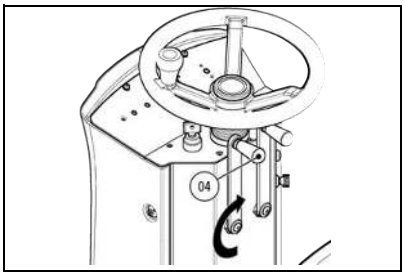


1. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

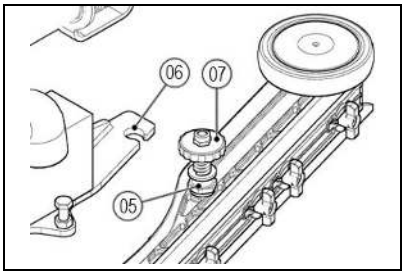


2. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
3. Remove the key from the instrument panel.

ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

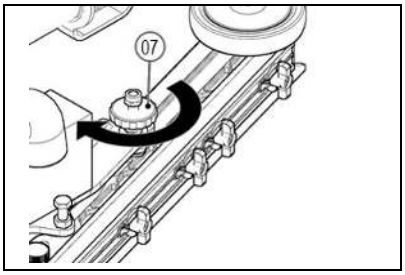


4. Check that the squeegee attachment is raised from the floor, if necessary turn the lever (04) clockwise.

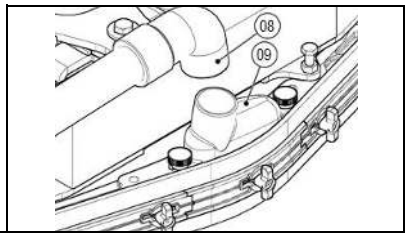


5. Initially insert the right pin (05) of the squeegee into the right slot (06) of the squeegee attachment, making sure to keep the spring and the washer above the squeegee attachment plate.

ATTENTION: This can be simplified by first loosening the handwheel (07) on the pin.



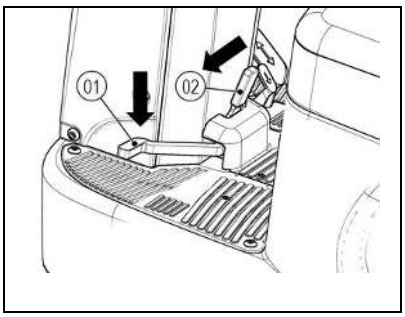
6. Repeat the same operation for the left pin.
7. Then tighten the handwheels (07) to lock the squeegee in place.
8. Finally insert the vacuum hose (08) of the squeegee into the relative coupling (09) of the vacuum nozzle.



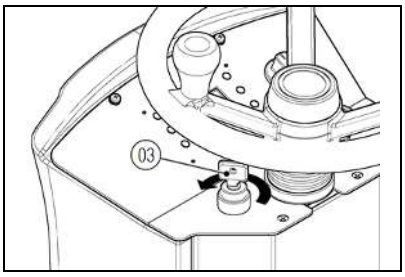
ATTENTION: The squeegee has already been regulated, however if it needs adjusting, read the sections “REGULATING THE SQUEEGEE” and “REGULATING THE SQUEEGEE ATTACHMENT”.

27. ASSEMBLING THE SQUEEGEE (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions)

To assemble the squeegee, which for reasons of packaging, is supplied dismantled from the machine, proceed as follows:

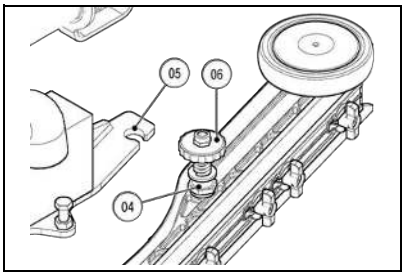


1. Check that the squeegee attachment is raised from the floor, if not, use the switch on the instrument panel.
2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).



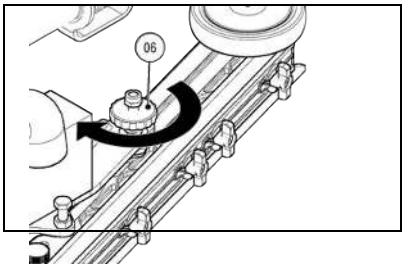
3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.

ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

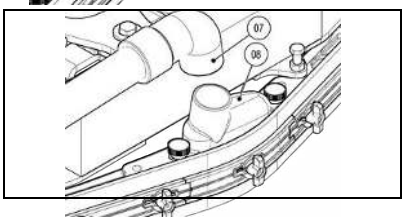


5. Initially insert the right pin (04) of the squeegee into the right slot (05) of the squeegee attachment, making sure to keep the spring and the washer above the squeegee attachment plate.

ATTENTION: This can be simplified by first loosening the handwheel (06) on the pin.



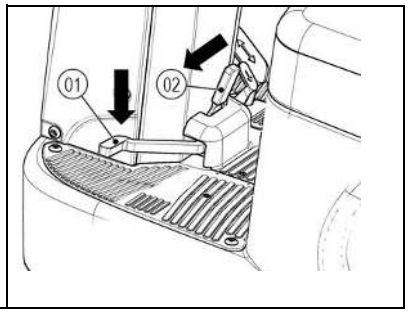
6. Repeat the same operation for the left pin.
7. Then tighten the handwheels (06) to lock the squeegee in place.
8. Finally insert the vacuum hose (07) of the squeegee into the relative coupling (08) of the vacuum nozzle.



ATTENTION: The squeegee has already been regulated, however if it needs adjusting, read the sections “REGULATING THE SQUEEGEE” and “REGULATING THE SQUEEGEE ATTACHMENT”.

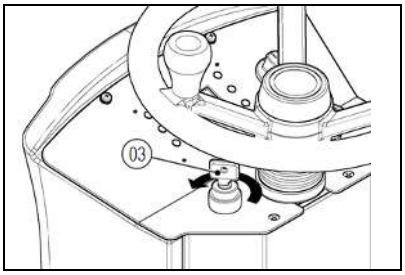
28. ASSEMBLING THE BRUSH HEAD CARTER (Innova 65B - Innova 75B - Innova 85B - Innova 100B versions)

The brush head casings, for reasons of packaging, are supplied dismantled from the machine, so to assemble to the brush head unit proceed as follows:



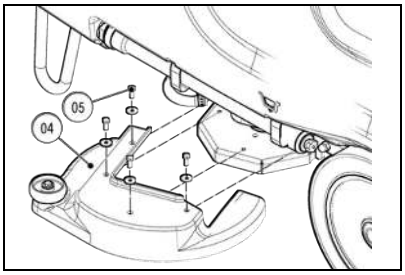
1. Check that the brush head unit is in contact with the floor, if not, use the switch on the control panel.
2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.



ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

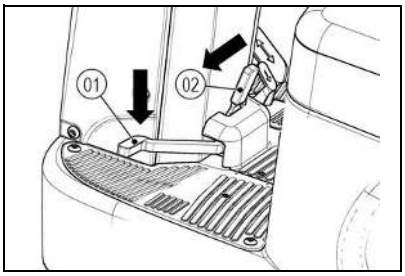
5. Insert the left casing (04) on the brush head unit, securing it on it using the screws (05) supplied.
6. Repeat the same operation also for the right casing.



ATTENTION: This operation must be carried out by qualified personnel, using suitable equipment. An incorrect connection may cause the machine to malfunction.

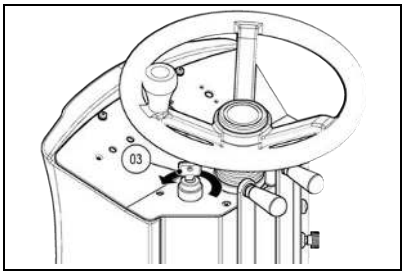
29. ASSEMBLING THE BRUSH (Innova 60B versions)

To assemble the brush, which for reasons of packaging is supplied dismantled from the machine, proceed as follows:



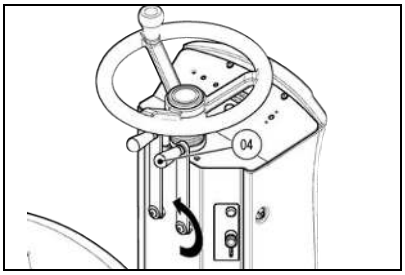
1. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

2. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
3. Remove the key from the instrument panel.

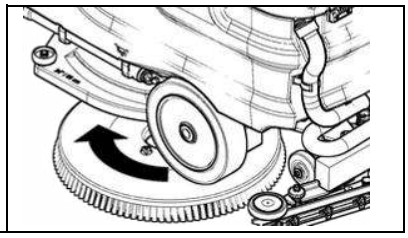


ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

4. Check that the brush head unit is raised from the floor, if necessary turn the lever (04) anticlockwise.

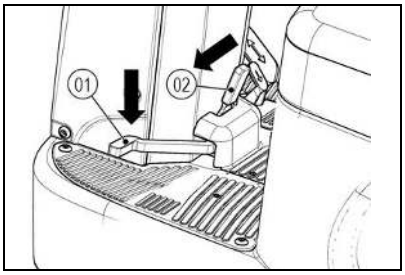


5. With the brush head in a high position put the brush in the housing of the plate under the brush head, turning it until the three buttons go into the niches of the plate itself; Turn until the pin is pushed towards the coupling spring and is locked into place.

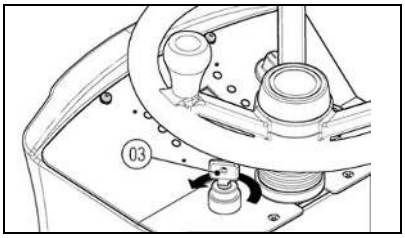


30. ASSEMBLING THE BRUSHES (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions)

To assemble the brushes, which for reasons of packaging are supplied dismantled from the machine, proceed as follows:

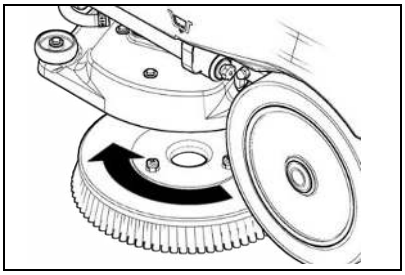


1. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).



2. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
3. Remove the key from the instrument panel.

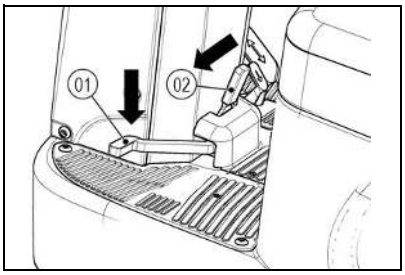
ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.



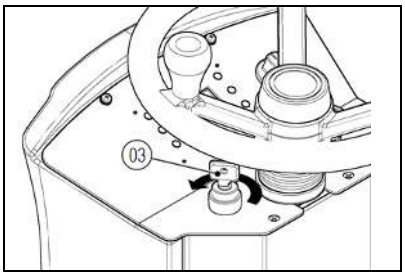
4. With the brush head up, insert the brushes in the plate housing beneath the brush head, turning them until the three pins enter the niches in the plate itself; Turn until the pin is pushed towards the coupling spring and is locked into place. The photo shows the rotation direction to hook up the left-hand brush; for the right-hand one, rotate in the opposite direction.

31. ASSEMBLING THE BRUSH (Innova 70S versions)

To assemble the brushes, which for reasons of packaging are supplied dismantled from the machine, proceed as follows:

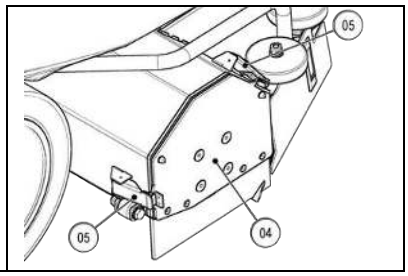


1. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).



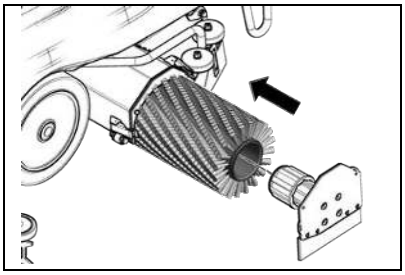
2. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
3. Remove the key from the instrument panel.

ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

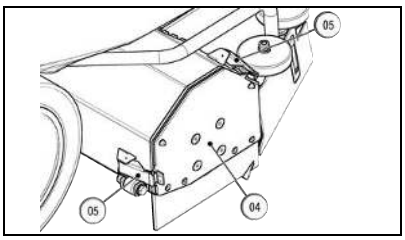


4. With the brush head in a high position remove the right brush head casing (04), uncoupling the retention hinges (05).

5. Insert the brush (the side with 5 teeth) in the tunnel until it couples with the drive hub on the opposite side of the tunnel.



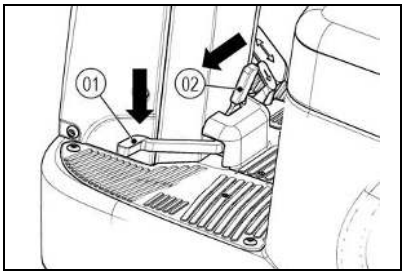
6. Insert the idler wheel of the right brush head casing in the brush.
7. Secure the right casing (04) to the brush head using the retention hinges (05).



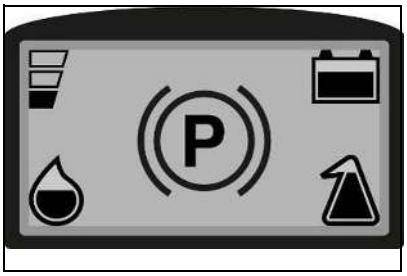
ATTENTION: Pay attention to the direction of the brush bristles during assembly, the cusp of the brush viewed from the above should be towards the front of the machine.

32. PARKING BRAKE – SERVICE BRAKE

The machine has an electronic braking system. To brake in normal conditions, just remove your foot from the accelerator pedal. If this service brake is working badly, or if necessary, activate the brake pedal (01) pushing it downwards.



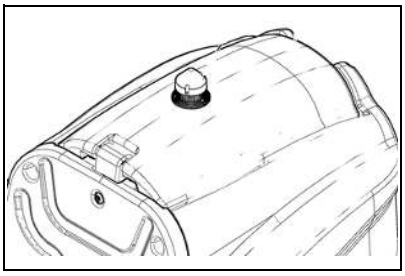
To engage the parking brake, press the brake pedal (01) downwards then pull the lever (02) to the left until the pedal (01) is locked in place. The command display will visualise the symbol shown in the figure (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions only).



ATTENTION: With the parking brake engaged the traction motor is disengaged, only by removing the parking brake is it possible to move forwards or backwards.

33. BLINKING LIGHT (OPTIONAL)

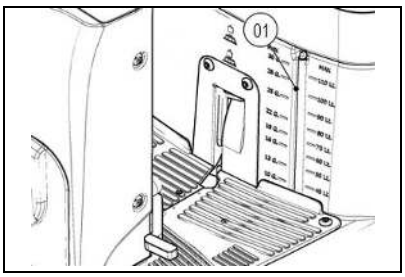
The machine can be equipped with a blinking light that turns on automatically when the key in the main switch is turned on.



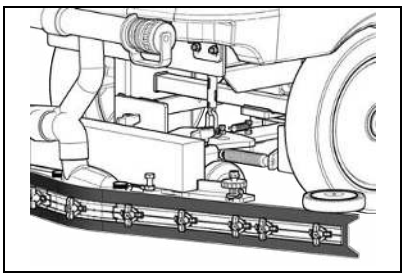
34. PREPARING TO WORK (versions without CDS)

Before beginning to work, it is necessary to:

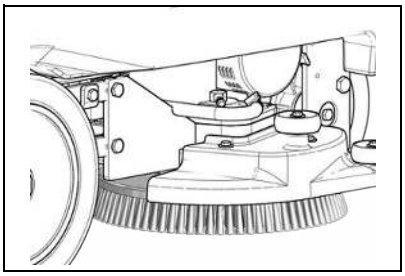
1. Make sure the recovery tank is empty, otherwise empty it completely.
2. Check that the quantity of detergent solution in the solution tank is correct for the type of work to be carried out; if not, refill the solution tank. View the level tube (01) on the front left of the seat.



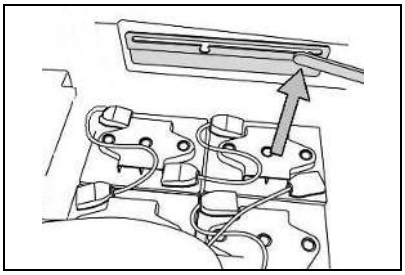
3. Check that the state of the squeegee rubber is suitable for work, if not have them maintained (read the sections “CLEANING THE SQUEEGEE RUBBER” or else “REPLACING THE SQUEEGEE RUBBER”).



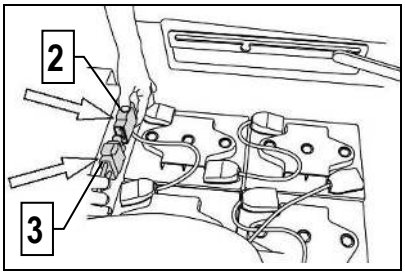
4. Check that the state of the disc brush/brushes (Innova 60-65-75-85-100 B versions) or the cylindrical brush (Innova70 S versions) are suitable for work, if not have them maintained (read sections “CLEANING THE BRUSH” or else “REPLACING THE BRUSH”).



5. Grip the handle on the right side of the recovery tank.
6. Lift the recovery tank until it hooks to the end of the safety catch.



7. Check that the connector of the general system (02) is connected to the battery connector (03), if not, connect them together.

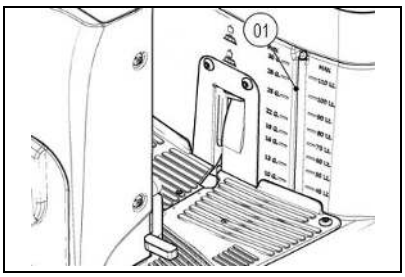


8. Grip the handle on the right side of the recovery tank.
9. Lower the recovery tank as far as the working position.

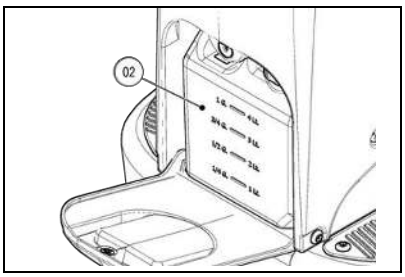
35. PREPARING TO WORK (versions with CDS)

Before beginning to work, it is necessary to:

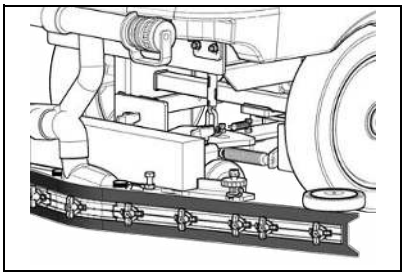
1. Make sure the recovery tank is empty, otherwise empty it completely.
2. Check that the quantity of water in the solution tank is sufficient for the type of work to be carried out; if not, refill the solution tank. View the level tube (01) on the front left of the seat.



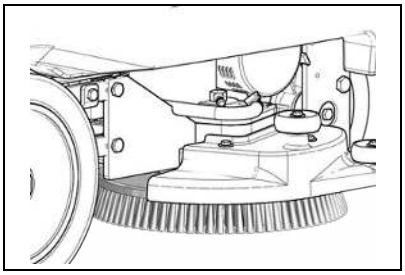
3. Check that the amount of detergent in the canister (02) is sufficient for the type of work you want to carry out, if not, fill up with detergent (read the section “FILLING THE CANISTER WITH DETERGENT”).



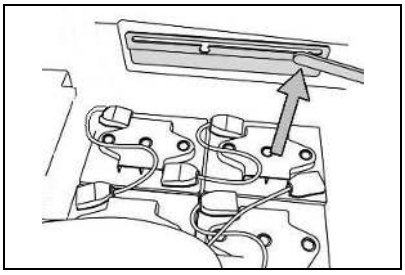
4. Check that the state of the squeegee rubber is suitable for work, if not have them maintained (read the sections “CLEANING THE SQUEEGEE RUBBER” or else “REPLACING THE SQUEEGEE RUBBER”).



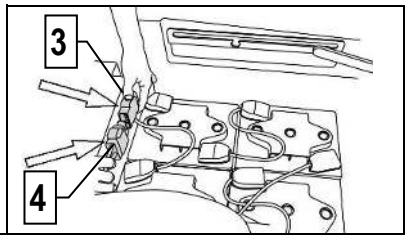
5. Check that the state of the brushes (Innova 65-75-85-100 B versions) or the cylindrical brush (Innova70 S versions) are suitable for work, if not, have them maintained (read sections “CLEANING THE BRUSH” or else “REPLACING THE BRUSH”).



6. Grip the handle on the right side of the recovery tank.
7. Lift the recovery tank until it hooks to the end of the safety catch.

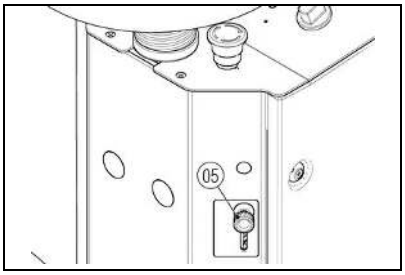


8. Check that the connector of the general system (03) is connected to the battery connector (04), if not, connect them together.
9. Grip the handle on the right side of the recovery tank.
10. Lower the recovery tank as far as the working position.

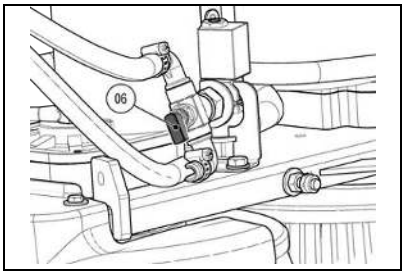


PREPARING TO WORK

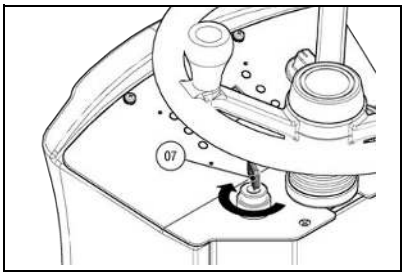
11. Make sure that the tap is fully open, the knob (05) should be completely down.



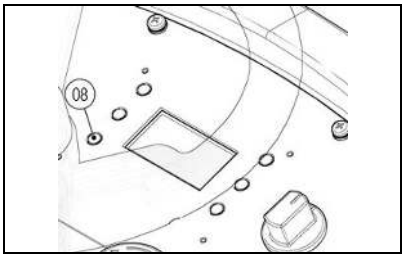
12. Make sure that the bypass tap (06) on the brush head is in the "dosing system" position.



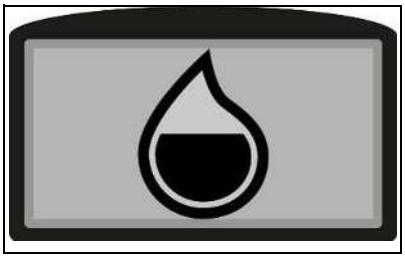
13. Turn the main machine switch to "I", turn the key (07) a quarter rotation to the right.



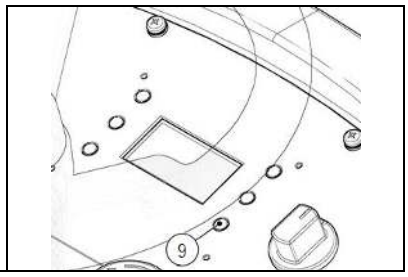
14. When the work screen appears on the control display, press the button (08) for water flow regulation.



15. Set the maximum amount of water in the detergent solution, by pressing the button (08) until the symbol shown on the side is completely full.

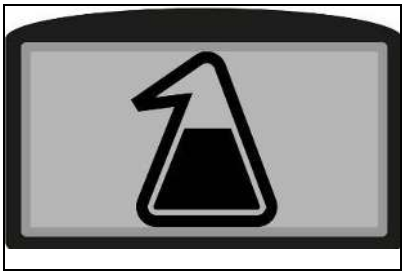


16. After regulating the amount of water in the detergent solution, press the button (09) to regulate the dispensing percentage level of the dosing system.

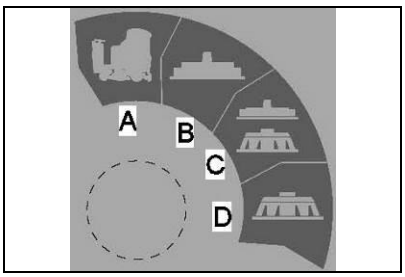


PREPARING TO WORK

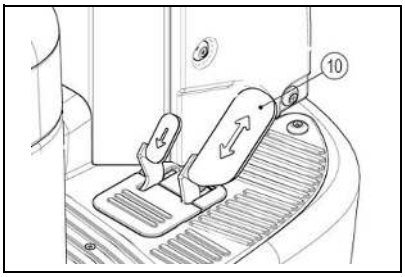
17. Set the maximum amount of chemical in the detergent solution, by pressing the button (09) until the symbol shown on the side is completely full.



18. Select the “WASHING/ DRYING” program, by rotating the switch to “C”.



19. Gently press the forward pedal (10) to activate the brush head and the dosing system.



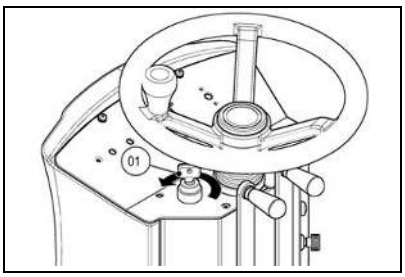
ATTENTION: As soon as you press the pedal (10) the machine will start to move, the brush head and the squeegee will come down into contact with the floor and will start working, at the same time the solenoid valve and the dosing system will dispense the detergent solution.

20. Wait a few moments, keeping the accelerator pedal gently depressed (normally 40 - 60 seconds) to allow the system to engage.
21. Proceed with the desired adjustment for normal scrubbing (read the section“REGULATING THE DETERGENT SOLUTION (versions with CDS)”).

36. BEGINNING TO WORK (Innova 60B versions)

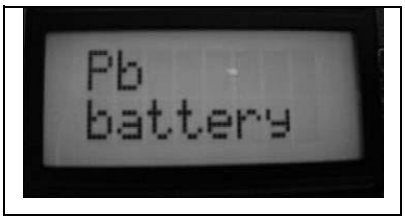
To start working, do as follows:

1. Make all the checks listed in “PREPARING TO WORK”.
2. Sit on the driver’s seat.
3. Turn the main switch key (01) clockwise by a quarter of a turn to "I". The control display on the instrument panel will immediately comes on.

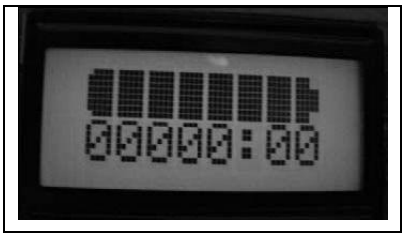


When the display comes on, three screens appear in sequence. The first screen shows (on the top line) what type of hour meter has been set; in this case it is a total hour meter (to display a different type - for instance partial - contact the qualified, COMAC-trained personnel). The bottom line shows the “service” setting (in this case there is no setting).

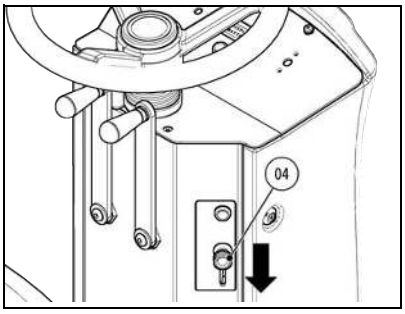
The second screen displays what battery technology has been set for machine operation; in this case it is lead batteries (to set another type of battery - for instance gel - contact the qualified, COMAC-trained personnel).



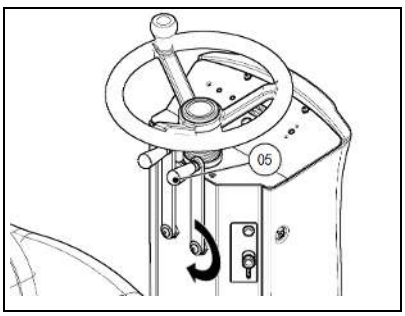
The third and last screen (known as “work”) displays the battery charge status and the total functioning time. When the batteries supplied are fully charged, the upper line contains 8 light indicators that represent a battery. As the batteries gradually run down, the indicators go out and, with the batteries completely run down, only the battery outline flashes. The bottom line indicates the hours and minutes of functioning. The flashing “:” symbol indicates that the hour meter is counting the machine functioning time.



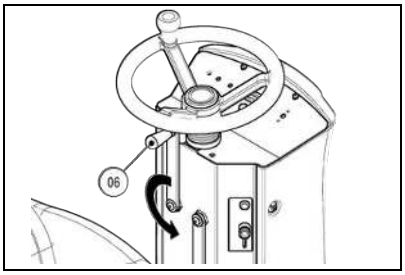
4. Pull the knob (04) down and adjust the amount of solution desired.



5. Lower the brush head until it comes into contact with the floor, rotating the lever (05) in a clockwise direction.

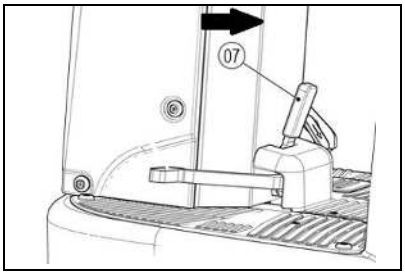


6. Lower the brush head until it comes into contact with the floor, rotating the lever (06) in an anti-clockwise direction.



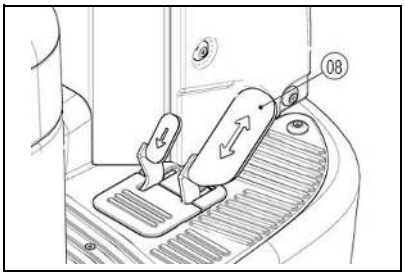
7. Remove the parking brake, turn the lever (07) clockwise. In the control panel the red indicator light pertaining to the parking symbol “P” will go out.

ATTENTION: If you try to move forward with the parking brake engaged, the machine will not move because the motor wheel is disengaged electrically when the parking brake is active.



8. Pressing the forward movement pedal (08), the machine will start to move.

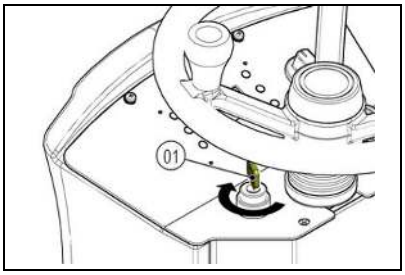
As soon as the forward movement pedal is pushed the brush head motor and the suction motor will start working, and as a result also the solenoid valve will start its work and detergent solution will be delivered to the brush. During the first few metres, check that there is sufficient solution and that the squeegee is drying correctly. The machine will now begin to work with full efficiency until the battery is flat or until the detergent solution has finished.



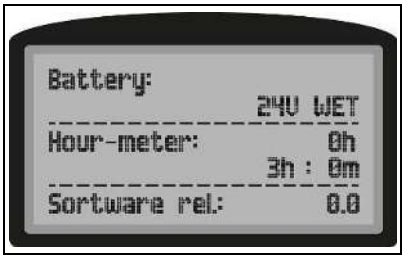
37. BEGINNING TO WORK (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions)

To start working, do as follows:

9. Make all the checks listed in “PREPARING TO WORK”.
10. Sit on the driver’s seat.
11. Turn the main switch key (01) clockwise by a quarter of a turn to "I". The control display on the instrument panel will immediately comes on.

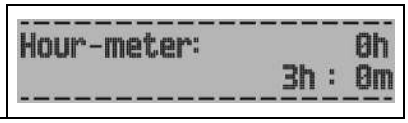


The first screen displayed indicates the name of the machine.
The second screen displayed (adjacent picture) indicates the characteristics of the machine's programming.



The top part displays the settings for the type of batteries used.

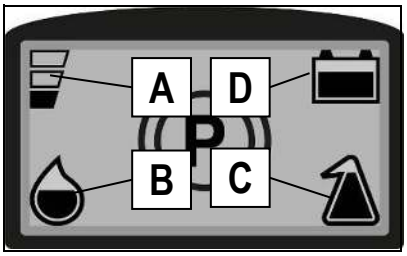
The middle part of the display indicates the total time (first sequence of numbers) and the partial time (second sequence of numbers) that the machine has been used. The numbers followed by the letter “h” identify the hours, while the numbers followed by the letter “m” identify the tenths of an hour (a tenth of an hour corresponds to six minutes).



WORK

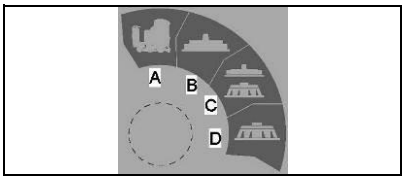
The lower part of the screen displays the program release inserted into the circuit board.

The third screen (adjacent picture) displays the work panel. The symbols represent the following:



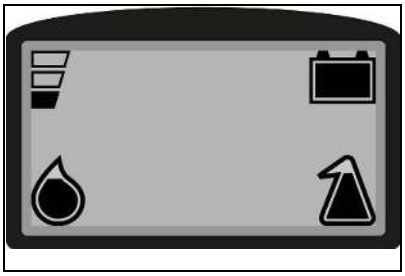
A. Level of transfer or work speed.
B. Level of the water in the machine's water system (versions with CDS).
C. Level of the detergent in the machine's water system (versions with CDS).
D. Battery charge level.

12. Choose the desired working program with the I-Drive device:

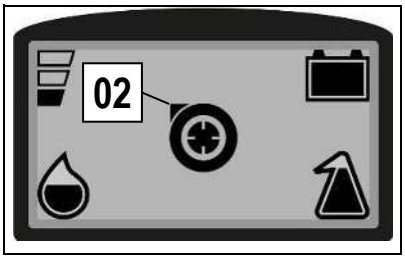


A. Transfer: movement of the machine without working
B. Drying: use the squeegee only
C. Scrubbing / Drying: use both the brushes and the squeegee
D. Scrubbing only : use brushes only

By selecting the "TRANSFER" program, the display screen will appear as in the adjacent figure. Both the brush head and the squeegee are raised from the floor and are not operating.



By selecting the "DRYING" program, the display screen shown on the side will appear. The brush head is raised from the floor and is not operating. The squeegee will position itself in contact with the floor as soon as the forward movement pedal is pressed, in that moment the vacuum motor will start working.



ATTENTION: this program should only be used to collect the dirty solution after a pre-wash, and should never be used for the work of vacuuming liquids.

If during the “DRYING” program the machine is stopped and the forward movement pedal is released, the squeegee body will remain in contact with the floor for a few seconds, after which it will raise up from the ground to go back to its rest position. For all these phases the suction motor will continue to operate, only after a few seconds that it has returned to its work position will it switch off, this is to allow the motor to collect all the liquid in the vacuum hose. During these phases, the symbol of the suction motor (02) on the instrument panel display will blink, and it will only stop when the squeegee is in its work position and the suction motor is off.

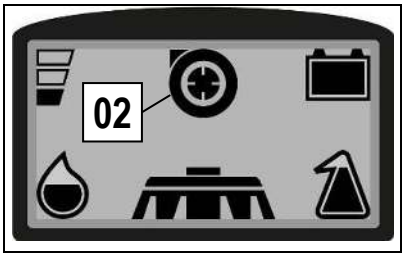
ATTENTION: by pressing the forward movement pedal it will start working with the same program and with the same parameters that were set before it stopped.

ATTENTION: if reverse is carried out with this program active, the brush head unit will raise up from the floor, the motor will keep working for a pre-set time and then it will switch off.

ATTENTION: By pressing the forward movement pedal again, drying will start working again normally.

WORK

By selecting the "SCRUBBING - DRYING" program, the display screen will appear as in the adjacent figure. Both the brush head and the squeegee will position themselves in contact with the floor as soon as the forward movement pedal is pressed, in that moment both the brush motor and the vacuum motor will start working. Also the solenoid valve will start to dispense detergent solution onto the brushes.



If during the “SCRUBBING - DRYING” work the machine stops and the forward movement pedal is released, the brush motor and the solenoid valve will switch off, and after a few second the brush head unit will raise up off the ground and return to its rest position. The squeegee body will stay in contact with the floor for a few seconds, after which it will raise up from the ground and return to its rest position. For all these phases the suction motor will continue to operate, only after a few seconds that it has returned to its work position will it switch off, this is to allow the motor to collect all the liquid in the vacuum hose. During these phases, the symbol of the suction motor (02) on the instrument panel display will blink, and it will only stop when the squeegee is in its work position and the suction motor is off.

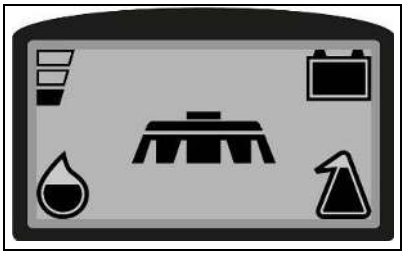
ATTENTION: by pressing the forward movement pedal it will start working with the same program and with the same parameters that were set before it stopped.

ATTENTION: if reverse is carried out with this program active, the brush head unit will raise up from the floor, the motor will keep working for a pre-set time and then it will switch off.

ATTENTION: if reverse is carried out with this program active, the brush head body will remain in contact with the floor, the motor will continue working but the solenoid valve will no longer dispense any detergent solution onto the brushes.

ATTENTION: By pressing the forward movement pedal again, drying will start working again normally.

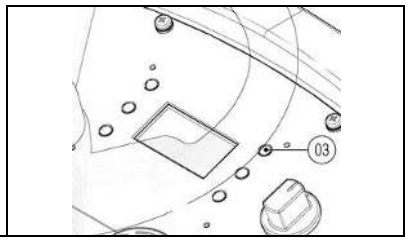
By selecting the "SCRUBBING” program, the display screen will appear as in the adjacent figure. The squeegee is raised from the floor and is not operating. The brush head will position itself in contact with the floor as soon as the forward movement pedal is pressed, in that moment the vacuum motor will start working. Also the solenoid valve will start to dispense detergent solution onto the brushes.



If during the “SCRUBBING” work the machine stops and the forward movement pedal is released, the brush motor and the solenoid valve will switch off, and after a few second the brush head unit will raise up off the ground and return to its rest position.

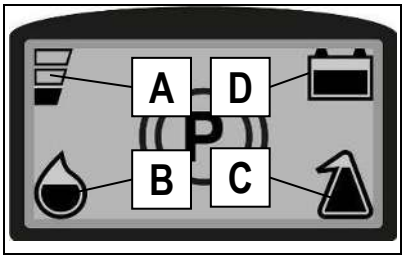
ATTENTION: by pressing the forward movement pedal it will start working with the same program and with the same parameters that were set before it stopped.

13. Choose the forward operating speed by pushing the button (03) on the control panel.



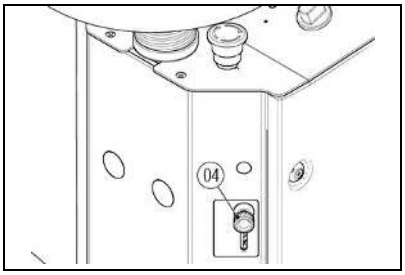
WORK

This machine has the possibility of selecting three different forward speeds, by pressing the button (03), the passage from one to the other is continuous. The symbol (A) on the top left part of the control panel display shows the speed.



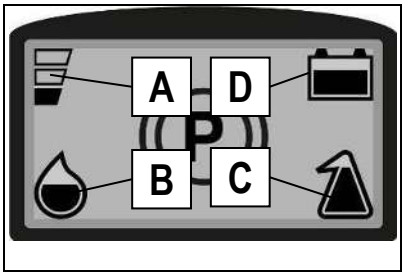
ATTENTION: the reverse speed is lower than the forward speed to comply with current health and safety standards.

14. If the machine does not have the CDS dosing device, move the knob (04) downwards and adjust the amount of desired solution.
15. If the CDS dosing system is present, the knob (04) must be pulled completely down, thereby fully opening the flow of water.

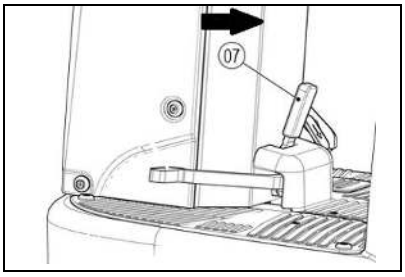


ATTENTION: with the CDS system, never operate the knob (04) when working. To get a correct dosing of the detergent solution only use the buttons (05) and (06). See paragraph “DETERGENT ADJUSTMENT WITH CDS SYSTEM”.

The level of the amount of water in the machine's water system is given by the symbol (B) in the lower left part of the display.
The level of the percentage of detergent in the machine's water system is given by the symbol (C) in the lower right part of the display.

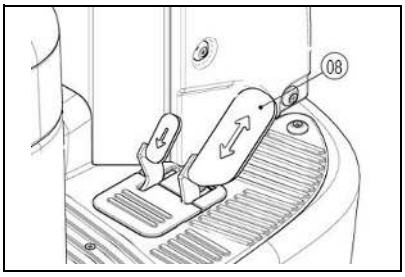


16. Remove the parking brake, turn the lever (07) clockwise. The parking symbol “P” will disappear from the control panel display.



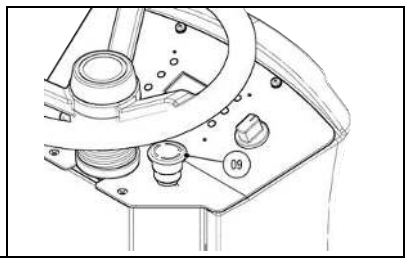
ATTENTION: If you try to move forward with the parking brake engaged, the machine will not move because the motor wheel is disengaged electrically when the parking brake is active.

17. Pressing the forward movement pedal (08), the machine will start to move.

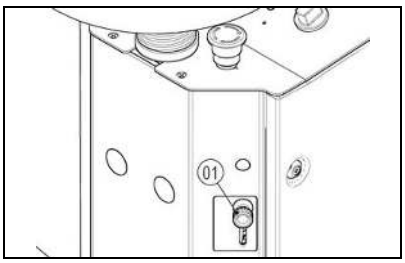


If the program selected is “SCRUBBING– DRYING” the squeegee and the brush head lower until they touch the ground. As soon as the forward movement pedal is pushed the brush head motor and the suction motor will start working, and as a result also the solenoid valve will start its work and detergent solution will be dispensed onto the brushes. During the first few metres, check that there is sufficient solution and that the squeegee is drying correctly. The machine will now begin to work with full efficiency until the battery is flat or until the detergent solution has finished.

If there are any problems while you are working, press the emergency button (09) on the instrument panel. This command interrupts the electrical circuit that goes from the batteries to the machine system. After stopping and resolving the problem, resume the work by turning the key to “0”, setting the button (09) to the standard position, and then turning the key to “I”.

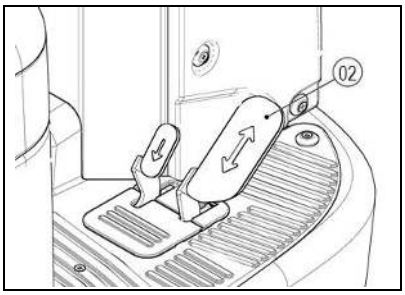


38. DETERGENT REGULATION (VERSION WITHOUT CDS)



To regulate the amount of detergent solution on the brushes, proceed as follows:

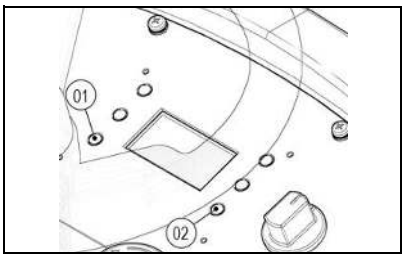
1. Fully open the flow coming from the tap on the front of the machine by moving the knob (01) on the rear of the steering column down.
2. Choose the desired working program with the I-Drive device, either "SCRUBBING - DRYING" or "SCRUBBING".



3. By pressing the forward movement pedal (02) the brush head and the squeegee, or just the brush head (depending on the program selected), will lower into a work position and the machine starts to move. Both the brush motor and the suction motor (depending on the program selected) will start to work and the solenoid valve will distribute detergent solution to the brushes.

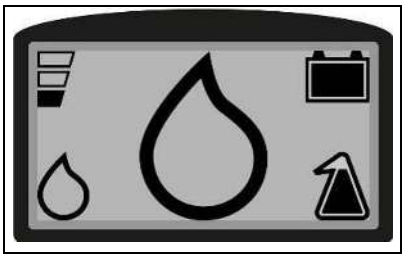
In the first few metres, check that the quantity of solution is sufficient to wet the floor, but not so much that it exits the splash guard, the amount of detergent can be adjusted by moving the knob (01),when lowering it increases the flow onto the brushes, when raising it decreases the flow. Bear in mind that the correct amount of solution always depends on the nature of the floor, the degree of dirt and the forward speed.

39. DETERGENT REGULATION (VERSION WITH CDS)

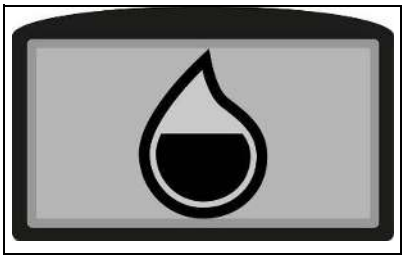


To regulate the amount of detergent solution on the brushes, proceed as follows:

1. Fully open the flow coming from the tap on the front of the machine by moving the knob on the rear of the steering column down.
2. Choose the desired working program with the I-Drive device, either "SCRUBBING - DRYING" or "SCRUBBING".

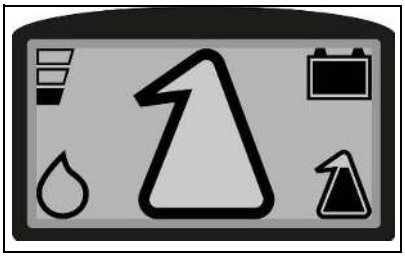


3. By pressing the button (01) for regulating the amount of water in the water circuit once, you can display the level that has been set, in the centre of the display the symbol in question will appear with the level highlighted (the symbol is shown in the picture on the side with the dispensing of water finished).



4. By pressing the button (01) for regulating the amount of water in the water circuit once again, you can change the level.

The quantity of water varies from a minimum of 40 litres/hour to a maximum of 140 litres/hour, with 7 set dosage levels. the right water flow should be proportional to the degree of dirt on the floor. In addition, remember that the time available for continuous working depends on the quantity of water in the tank.

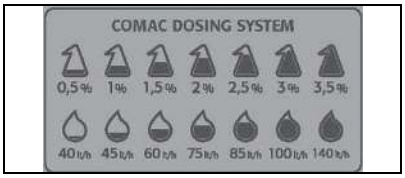


5. By pressing the button (02) for regulating the percentage of detergent in the water circuit once, it is possible to display the level that has been set, in the centre of the display the symbol in question will appear with the level highlighted (the symbol is shown in the picture on the side with the dispensing of detergent finished).

6. By pressing the button (02) for regulating the percentage of detergent in the water circuit once again, you can change the percentage.

The percentage of detergent in the solution varies from a minimum of 0.5 % to a maximum of 3.5 % with 7 set dosing levels. The correct detergent flow should be proportional to the degree of dirt on the floor. In addition, remember that the time available for continuous working depends on the quantity of detergent in the canister.

To make it easier to set the parameters on the instrument panel (see adjacent picture) there is a table with the values and the variation of the symbols, both for the water level as well as for the percentage of detergent.

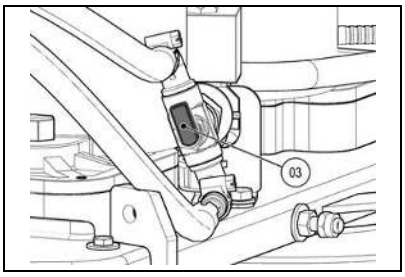


7. By pressing the forward movement pedal the brush head and the squeegee, or just the brush head (depending on the program selected), will lower into a work position and the machine starts to move. Both the brush motor and the suction motor (or only the brush head, depending on the program selected) will start to work and the solenoid valve will distribute detergent solution to the brushes.

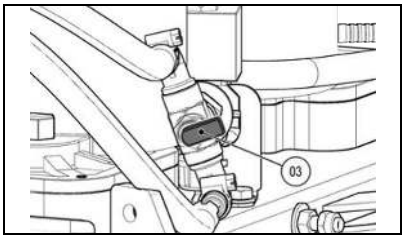
During the first few meters check that the amount of solution is sufficient to wet the floor, but not excessive to exit the splash guard. Bear in mind that the correct amount of solution always depends on the nature of the floor, the degree of dirt and the forward speed.

In case of failure of the CDS system, or if you want to work without this device, you use the lever (03) of the tap mounted on the brush head near the motor. Press the buttons (01) and (02) until the levels of water delivery and detergent percentage are zero.

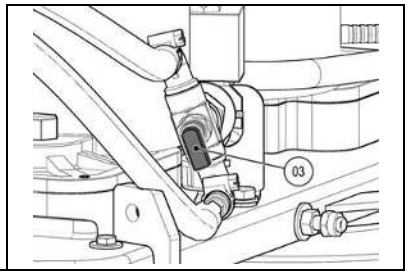
By positioning the tap lever (03) in this way, the CDS dosing system is activated.



By positioning the tap lever (03) in this way, there will be no leakage of detergent solution on the brushes. Press the buttons (01) and (02) until the levels of water delivery and detergent percentage are zero.



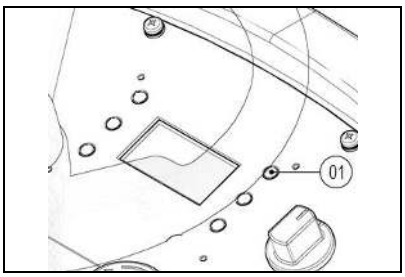
By positioning the tap lever in this way the CDS dosing system is excluded and the detergent solution is deposited on the brushes. Press the buttons (01) and (02) until the levels of water delivery and detergent percentage are zero.



ATTENTION: before regulating the solution, check there is detergent in the inner canister, and that the water tap on the side is open.

ATTENTION: to resolve any malfunctioning of the CDS system, contact the Assistance Centre.

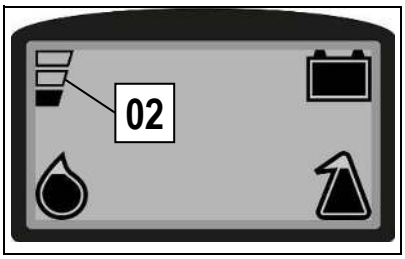
40. ADJUSTING THE FORWARD WORKING SPEED (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions)



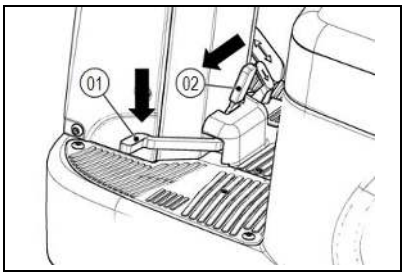
This machine allows you to choose from three different forward speeds using the button (01) on the instrument panel. The selection is continuous cycle, by pressing the button you pass from one level to another.

WARNING! the reverse speed is lower than the forward speed to comply with current health and safety standards.

To display the speed level that has been set, just look at the symbol (02) on the display.

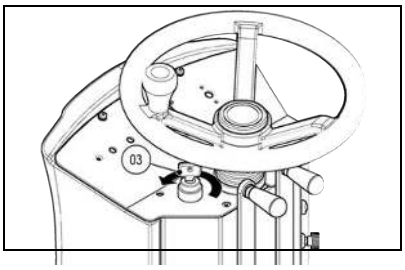


41. WATER MANAGEMENT KIT (Innova 60B versions)



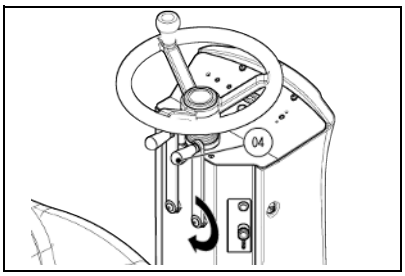
If you want to increase the working capacity of the machine, you can replace the detergent solution choke bushing on the solenoid valve (optional) with the more suitable one included in the water management kit. To do this, proceed as follows:

1. Take the machine to the designated maintenance place.
2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

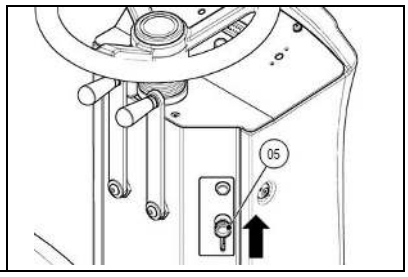


3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.

ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

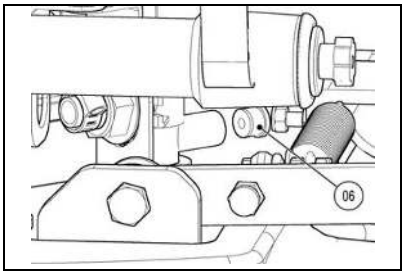


5. Make sure that the brush head unit is in contact with the floor, if not, lower it by turning the lever (04), positioned on the rear of the steering column, clockwise.



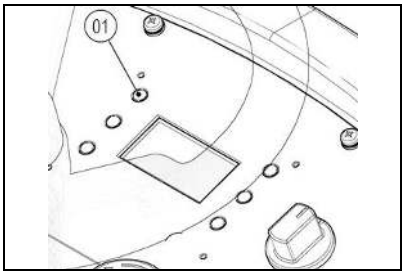
6. Make sure the solution tank is empty. If this is not the case, empty it (read "EMPTYING THE SOLUTION TANK").
7. Check that the detergent solution regulation tap is closed, if not, close it by moving the knob (05) on the back of the steering column up.

8. Remove the plastic clamp that fixes the solution distribution tube to the solenoid valve
9. Remove the solution distribution tube from the solenoid valve
10. If present, remove the solution choke bushing (06) and replace it with the more suitable one, or insert the more suitable choke bushing at the required working capacity (the choke bushings are included in the water management kit)
11. Reassemble all the elements

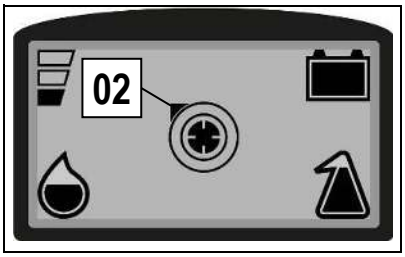


42. "ECO" DEVICE (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions)

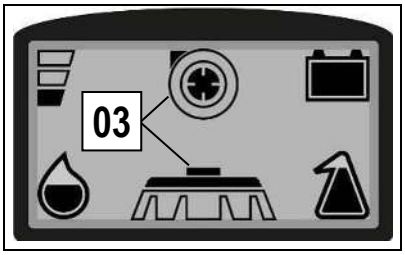
By activating “ECO MODE” mode using the relevant button (01) on the instrument panel, the energy used by the machine is reduced, decreasing the power of the brushes motor and the suction motor. Just press the button (01) on the instrument panel to deactivate the "ECO MODE" function.



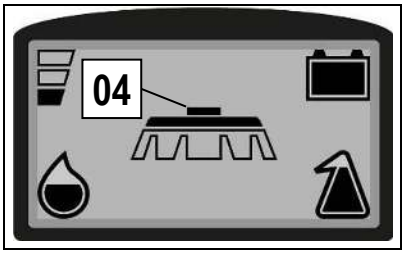
If, when working in "DRYING" mode, the "ECO MODE" button is pressed, the control display will immediately undergo the change (02) shown in the image on the side.



If, when working in "SCRUBBING - DRYING" mode, the "ECO MODE" button is pressed, the control display will immediately undergo the change (03) shown in the image on the side.



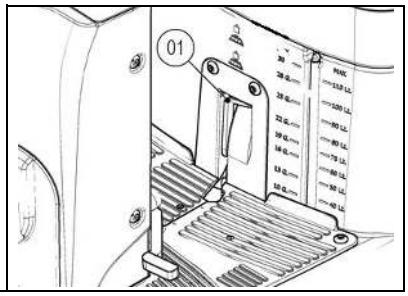
If, when working in "SCRUBBING" mode, the "ECO MODE" button is pressed, the control display will immediately undergo the change (04) shown in the image on the side.



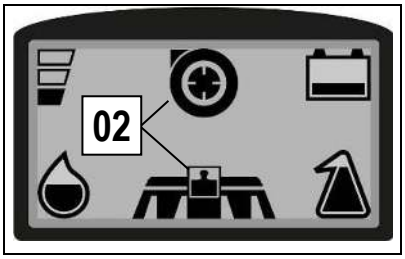
43. EXTRA BRUSH HEAD BODY PRESSURE (Innova 65B - Innova 75B - Innova 85B versions)

This machine allows you to increase the pressure on the brushes using the pedal (01) on the front left of the seat, and this can only be done when the brush head is in contact with the ground.

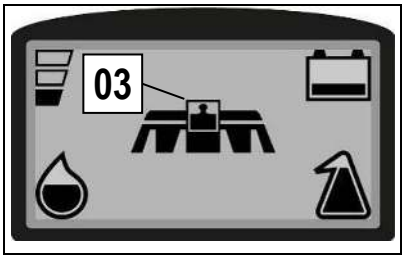
WARNING! The extra pressure should be engaged taking into account the type of floor and the degree of dirt. An increase in pressure could cause greater wear and tear of the brushes and greater energy consumption.



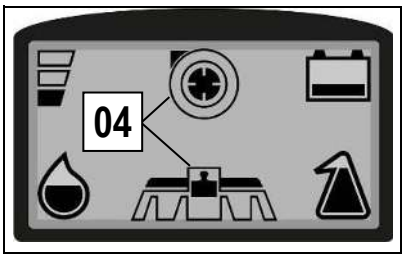
If, when working in "SCRUBBING - DRYING" mode, the extra pressure pedal is pressed, the control display will immediately undergo the change (02) shown in the image on the side.



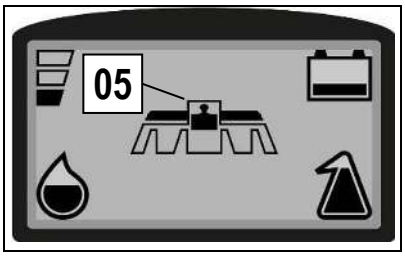
If, when working in "SCRUBBING" mode, the extra pressure pedal is pressed, the control display will immediately undergo the change (03) shown in the image on the side.



If, when working in "SCRUBBING - DRYING" mode in "ECO MODE", the extra pressure pedal is pressed, the control display will immediately undergo the change (04) shown in the image on the side.



If, when working in "SCRUBBING" mode in "ECO MODE", the extra pressure pedal is pressed, the control display will immediately undergo the change (05) shown in the image on the side.



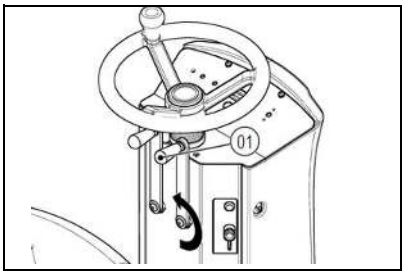
WARNING! If, while working with the extra pressure active, you stop and release the forward movement pedal, the brush head will not raise up from the ground in order to avoid seriously damaging the machine.

44. OVERFLOW DEVICE (Innova 60B versions)

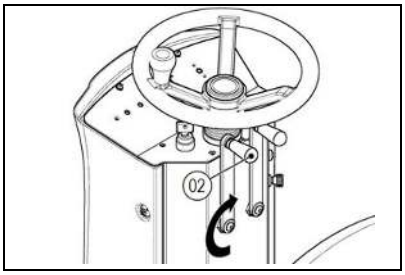
The machine is NOT equipped with an overflow device, because the capacity of the recovery tank is greater than the capacity of the solution tank. In extraordinary cases, there is a mechanical device (float) under the recovery tank lid that, when the recovery tank is full, shuts off the air to the vacuum motor intake to protect it; the sound of the suction motor will then be deeper.

If this is the case, proceed as follows:

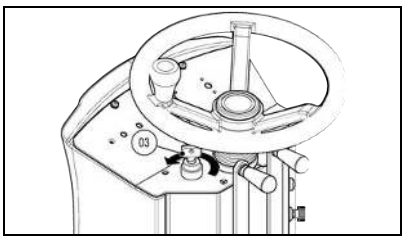
1. Raise the brush head off the ground, turn the lever (01) anti-clockwise. As soon as the brush head reaches the rest position it will stop working.



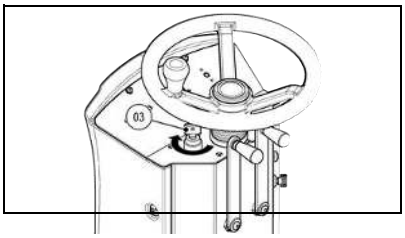
2. Raise the squeegee off the ground, turn the lever (02) clockwise.



3. After about 15-25 seconds turn the key (03) 1/4 of a turn left, this will stop the machine.



4. Turn the key (03) 1/4 of a turn right, this will start the machine.



ATTENTION: During machine switch-on, do not keep the accelerator pedal pressed down.

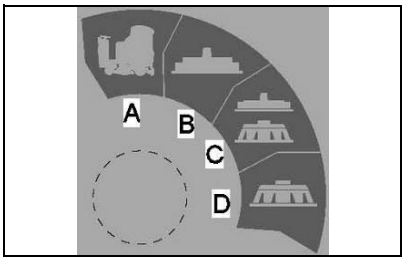
5. Bring the machine to the designated place for draining off the dirty water, and empty the recovery tank (refer to “DRAINING THE RECOVERY TANK”).

WARNING! It is good practice every time the solution tank level is topped up, to empty the recovery tank using the special drainage hose.

45. OVERFLOW DEVICE (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions)

The machine is NOT equipped with an overflow device, because the capacity of the recovery tank is greater than the capacity of the solution tank. In extraordinary cases, there is a mechanical device (float) under the recovery tank lid that, when the recovery tank is full, shuts off the air to the vacuum motor intake to protect it; the sound of the suction motor will then be deeper.

If this is the case, proceed as follows:



1. Using the switch on the instrument panel select the “TRANSPORT” program (A), in this way the brush motors and the solenoid valve will stop working, after a few seconds the brush head unit will lift up from the floor. The squeegee will remain in contact with the floor for a few seconds, to allow the drying to finish, after which it will lift up off the floor. A few seconds after the squeegee is in the rest position the vacuum motor stops working, this is to allow all the liquid in the suction hose to be suctioned off.

2. Bring the machine to the designated place for draining off the dirty water, and empty the recovery tank (refer to “DRAINING THE RECOVERY TANK”).

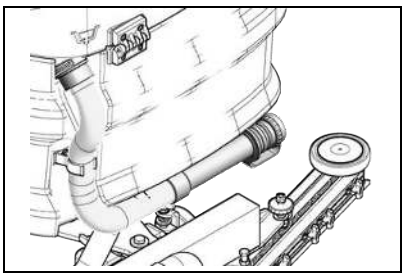
WARNING! It is good practice every time the solution tank level is topped up, to empty the recovery tank using the special drainage hose.

AT THE END OF THE WORK

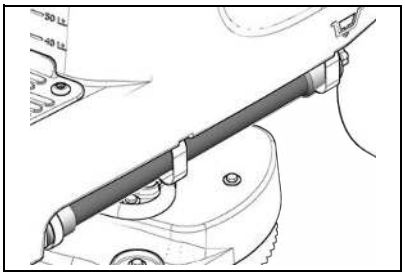
At the end of the work, and before carrying out any type of maintenance, perform the following operations:

1. Take the appliance to the dedicated dirty water drainage area.
2. Bring the main machine switch to "0" by turning the key on the instrument panel a quarter rotation to the left.
3. Engage the parking brake, rotating the lever on the rear of the steering column anti-clockwise.

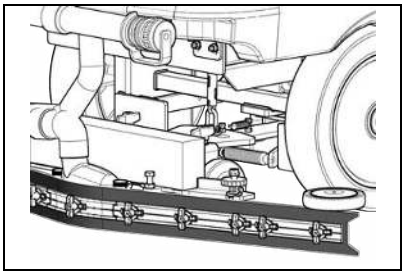
4. Empty the recovery tank (read the section “EMPTYING THE RECOVERY TANK”).



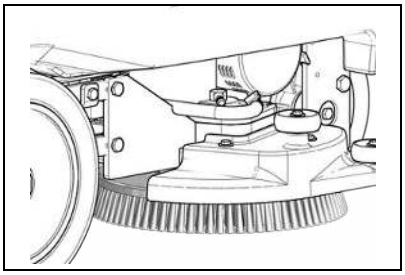
5. Empty the solution tank (read the section “EMPTYING THE SOLUTION TANK”). The adjacent picture shows the drainage tube for the Innova 60-65-75-85-100 B versions.



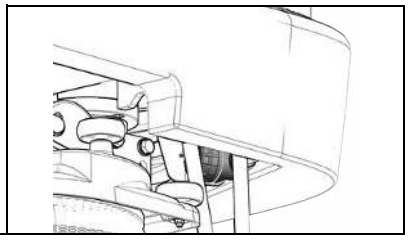
6. Remove the squeegee unit and clean it of any impurities (read the section “CLEANING THE SQUEEGEE UNIT”).



7. Remove the brushes and eliminate the impurities on them (read “CLEANING THE DISC BRUSHES (Innova 65B - Innova 75B - Innova 85B - Innova 100B versions)” or “CLEANING THE DISC BRUSHES (Innova 60B versions)” or “CLEANING THE CYLINDRICAL BRUSH (Innova 70S versions)”). The adjacent image shows a disc brush for the Innova 65B - Innova 75B - Innova 85B versions.

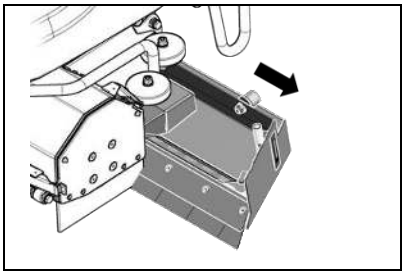


8. Remove the water system filter and clean it of any dirt (read the section “CLEANING THE WATER SYSTEM FILTER”).



AT THE END OF THE WORK

9. Remove the debris hopper and eliminate the impurities in it (read “CLEANING THE DEBRIS HOPPER (Innova 70S versions)”).

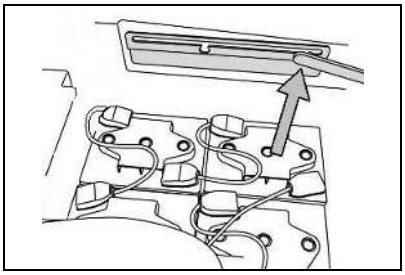


10. Engage the parking brake, rotating the lever on the rear of the steering column clockwise.
11. Bring the main machine switch to "I" by turning the key on the instrument panel a quarter rotation to the right.
12. Take the machine to the designated machine storage place.

ATTENTION: Park the machine in an enclosed place, on a flat surface; near the machine there must be no objects that could either damage it, or be damaged through contact with it.

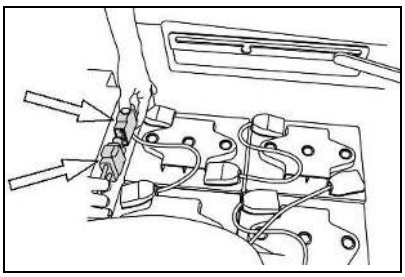
13. Bring the main machine switch to "0" by turning the key on the instrument panel a quarter rotation to the left.
14. Remove the key from the controls instrument panel.
15. Engage the parking brake, rotating the lever on the rear of the steering column anti-clockwise.

16. Grip the handle on the right side of the recovery tank.
17. Lift the recovery tank until it hooks to the end of the safety catch.



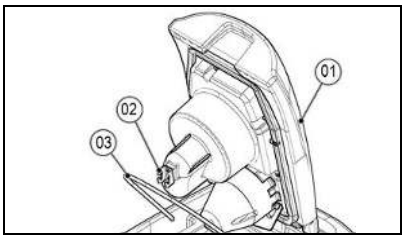
18. Disconnect the electric system connector from the battery connector.

ATTENTION: This process must be carried out by qualified personnel. An incorrect connection of the connector may cause a malfunction of the device.



19. Grip the handle on the safety catch and lower the recovery tank until it is in the work position.

ATTENTION: at the end of the job, you are advised to raise the cap (01) until the hook (02) is secured to the prop (03) of the recovery tank.

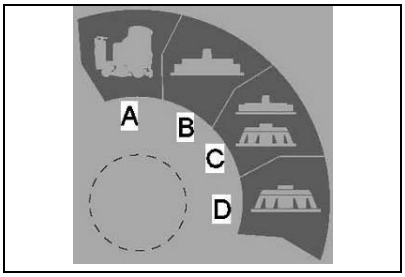


PERFORM ALL MAINTENANCE OPERATIONS IN SEQUENCE

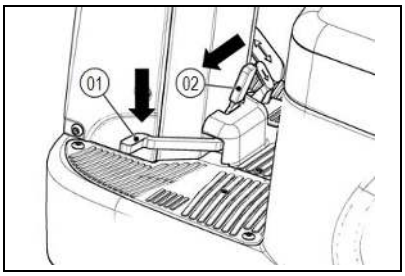
46. EMPTYING THE RECOVERY TANK

Proceed as follows to empty the recovery tank:

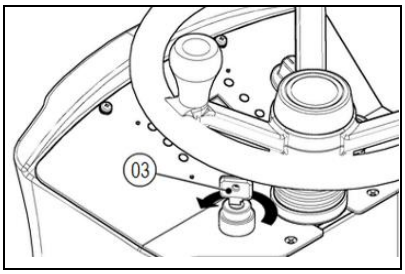
1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).



2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

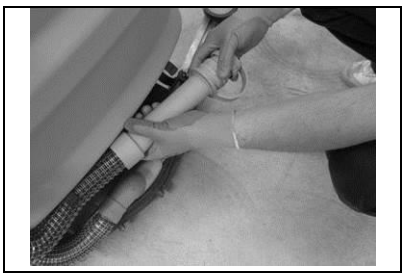


3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.

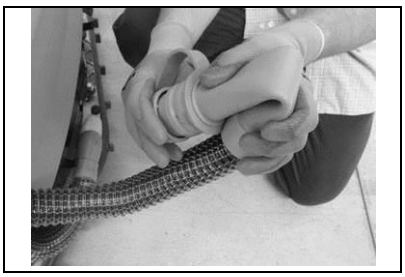


ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

5. Remove the drainage tube of the recovery tank from the clamps, it is located at the rear of the machine.



6. Bend the end of the drainage tube, so as to create a choke and prevent the content from coming out, put the tube on the discharge surface and gradually release the tube.
7. Repeat the operations in reverse order to reassemble all the parts.

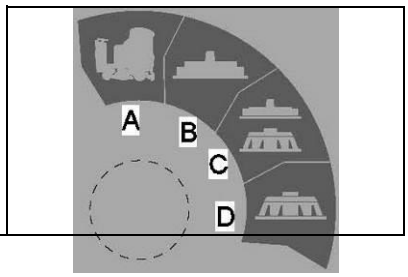


ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

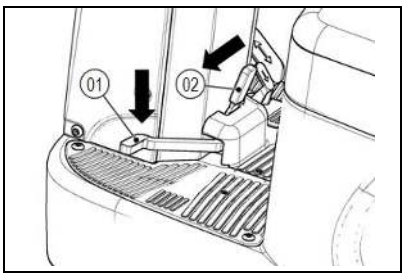
47. DRAINING THE SOLUTION TANK (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70BTO versions)

Proceed as follows to empty the recovery tank:

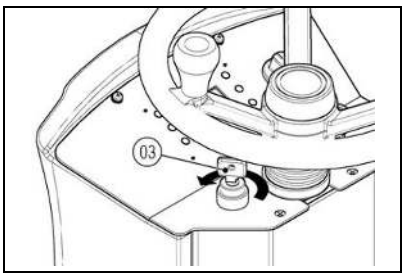
1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).



2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

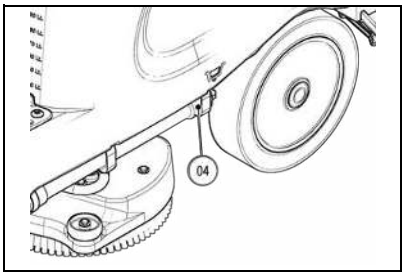


3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.



ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

5. Remove the drainage tube (04) of the solution tank from the clamps, it is located on the left side of the machine.
6. Put the tube on the drainage surface and unscrew the cap.



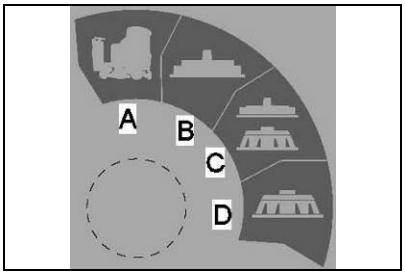
ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

7. Repeat the operations in reverse order to reassemble all the parts.

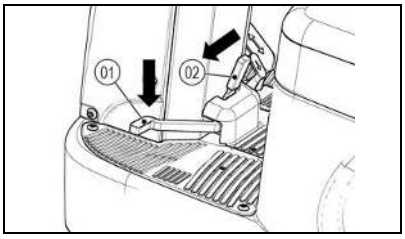
48. DRAINING THE SOLUTION TANK (Innova 70S versions)

Proceed as follows to empty the solution tank:

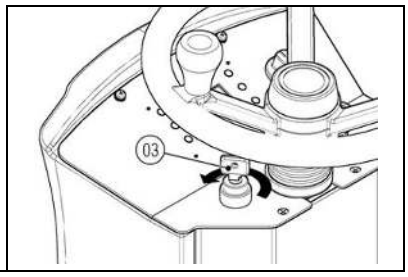
1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).



2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

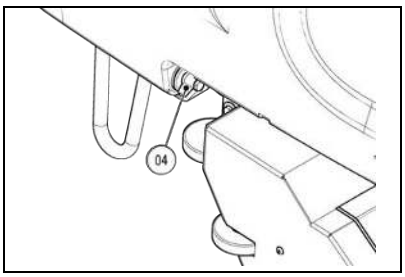


3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.



ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

5. Remove the drainage plug (04) of the solution tank, it is located on the left side of the machine.

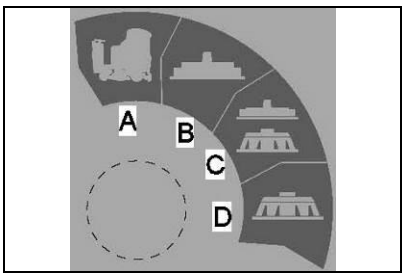


ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

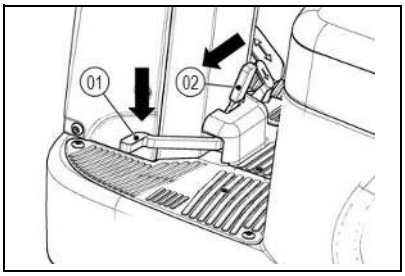
6. Repeat the operations in reverse order to reassemble all the parts.

49. CLEANING THE SQUEEGEE BODY

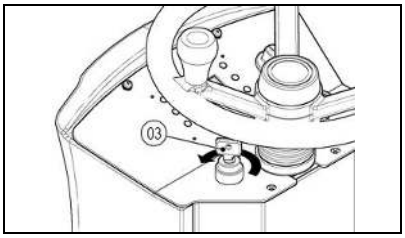
The careful cleaning of the whole vacuum unit ensures better drying and cleaning of the floor as well as a longer suction motor life. To carry out the cleaning of the squeegee body, proceed as follows:



1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).

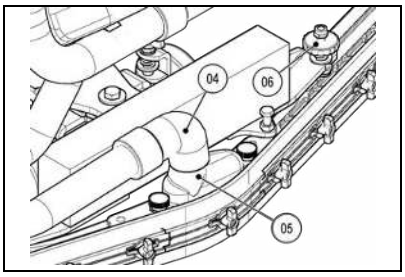


2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

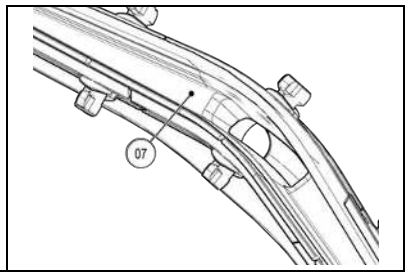


3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.

ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.



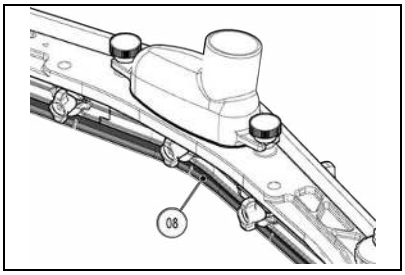
5. Remove the vacuum hose (04) from the vacuum nozzle (05) on the squeegee body.
6. Loosen the knobs (06) in the squeegee body pre-assembly.



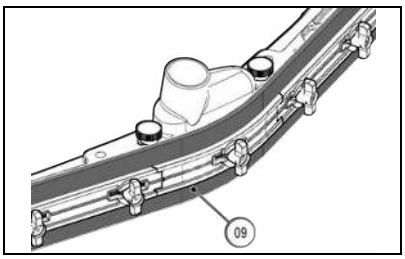
7. Remove the squeegee body from the slits in the squeegee connector.
8. First with a jet of water and then with a damp cloth, thoroughly clean the vacuum chamber (07) of the squeegee unit.

ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

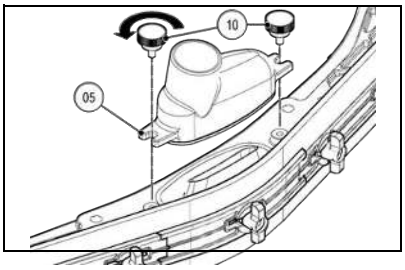
9. First with a jet of water and then with a damp cloth, thoroughly clean the front rubber blade (08) of the squeegee body.
10. Check the wear of the front rubber blade (08) on the squeegee body; if the edge of the rubber in contact with the floor is worn, replace it. Refer to "REPLACING THE SQUEEGEE UNIT RUBBER BLADES".



11. First with a jet of water and then with a damp cloth, thoroughly clean the rear rubber blade (09) of the squeegee body.
12. Check the wear of the rear rubber blade (09) on the squeegee body; if the edge of the rubber in contact with the floor is worn proceed with replacement, reading the paragraph "REPLACING THE SQUEEGEE UNIT RUBBER BLADES" first, in any event it is possible to turn the rubber blade around four edges.



13. Tighten the knobs (10) that fix the vacuum nozzle (05) to the squeegee body.
14. First with a jet of water and then with a damp cloth, thoroughly clean the vacuum nozzle (05). Also clean the squeegee body support surface.
15. Position the vacuum nozzle (05) on the squeegee body and fix it in place by means of the knobs (10).
16. Repeat the operations in the reverse order to reassemble everything



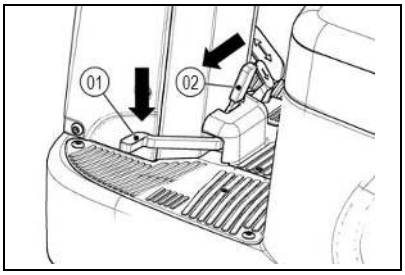
50. CLEANING THE DISC BRUSHES (Innova 60B versions)

Careful cleaning of the brushes guarantees better cleaning of the floor as well as a longer brush motor life. To clean the brushes, proceed as follows:

1. Take the machine to the designated maintenance place.

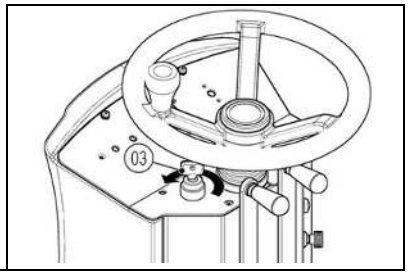
ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

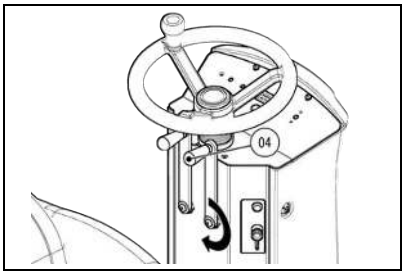


ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

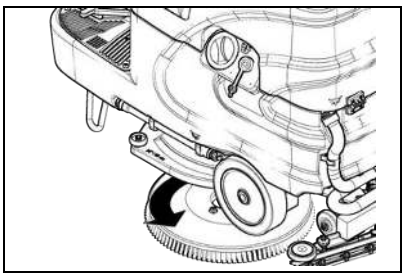
3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.



5. Check that the brush head unit is raised from the floor, if necessary turn the lever (04) anti-clockwise. As soon as the brush head reaches the rest position it will stop working.

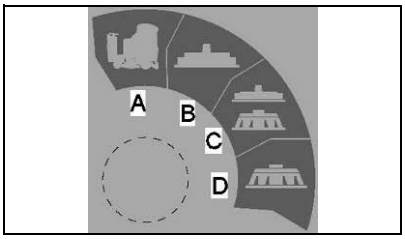


6. Rotate the brush until it comes out of the housing of the brush-holder plate.
7. Clean the brushes under a jet of water and remove any dirt in the brush bristles. Check the bristles. If they are excessively worn, replace the brushes (the bristles should protrude by at least 10mm). Read the section “REPLACING DISC BRUSHES (Innova 60 B version)” for replacing the brush.
8. Repeat the operations in reverse order to reassemble all the parts.



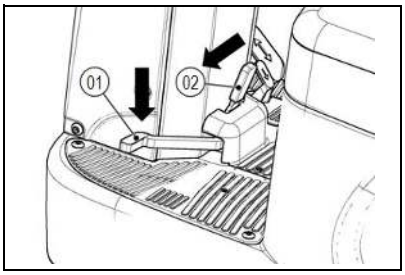
51. CLEANING THE DISC BRUSHES (Innova 65B - Innova 75B - Innova 85B - Innova 100B versions)

Careful cleaning of the brushes guarantees better cleaning of the floor as well as a longer brush motor life. To clean the brushes, proceed as follows:



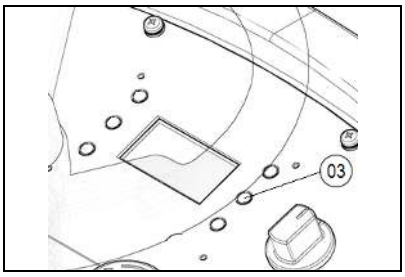
1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).

2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).



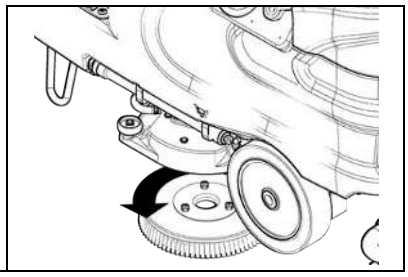
ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

3. Press the brush uncoupling button (03) on the instrument panel. As soon as the button is pressed, you will see the question “RELEASE?” on the screen. Press the brush release button (03) on the steering wheel again, to confirm



ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

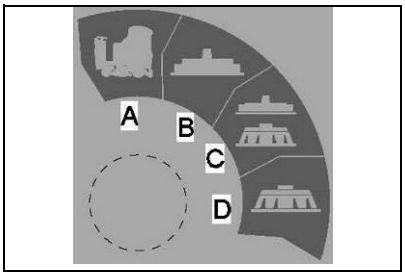
4. Clean the brushes under a jet of water and remove any dirt in the brush bristles. Check the bristles. If they are excessively worn, replace the brushes (the bristles should protrude by at least 10mm). If you need to replace the brushes, read “REPLACING THE DISC BRUSHES (Innova 65B - Innova 75B - Innova 85B - Innova 100B versions)”.
5. Repeat the operations in reverse order to reassemble all the parts.



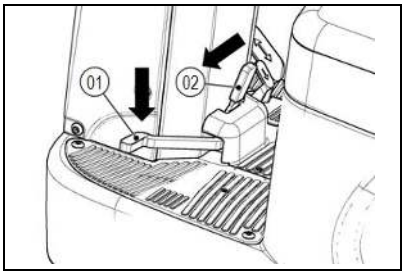
you are advised to invert the right and left-hand brushes every day. If the brushes are not new however, and have deformed bristles, it is better to reassemble them in the same position (the right-hand one on the right, and the left-hand one on the left), to prevent the different inclination of the bristles producing an overload on the brush motor as well as excessive vibrations.

52. CLEANING THE CYLINDRICAL BRUSH (Innova 70S versions)

Careful cleaning of the brush guarantees better cleaning of the floor as well as a longer brush motor life. To clean the brush, proceed as follows:

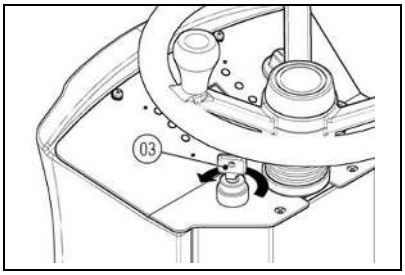


1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).

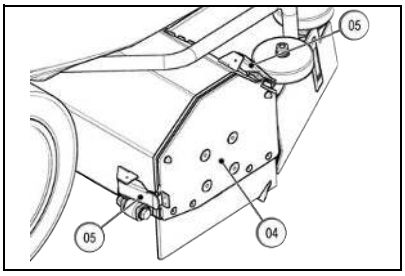


2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

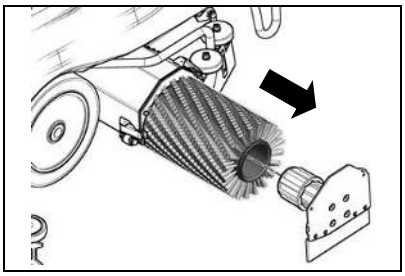


3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.



5. With the brush head in a high position remove the right brush head casing (04), uncoupling the retention hinges (05).

ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.



6. Remove the brushes from the tunnel.
7. Clean the brush under running water and remove any impurities present in the bristles of the brush.

Check the bristles. If they are excessively worn, replace the brushes (the bristles should protrude by at least 10mm). If you need to replace the brush, read “REPLACING THE CYLINDRICAL BRUSH (Innova 70S version)”.

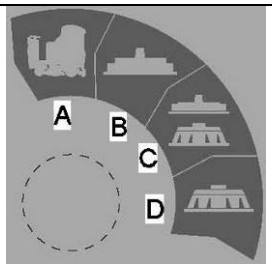
8. Clean the splash guard rubber on the left side of the brush head unit well with a wet cloth and on the right casing.
9. Repeat the operations in reverse order to reassemble all the parts.

ATTENTION: The brush must have the cusp facing towards the front of the machine to be fitted in the correct manner.

53. CLEANING THE DEBRIS HOPPER (Innova 70S versions)

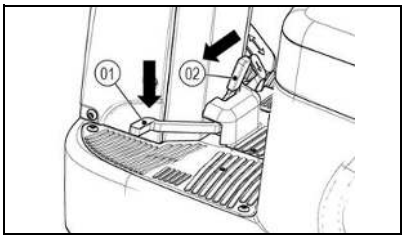
Careful cleaning of the debris hopper guarantees better cleaning of the floor as well as a longer suction motor life. To clean the debris hopper, proceed as follows:

1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).

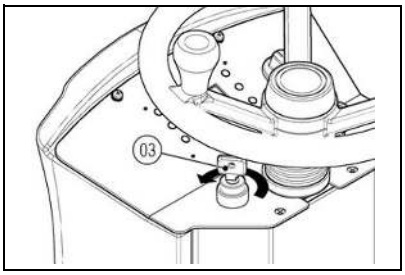


2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

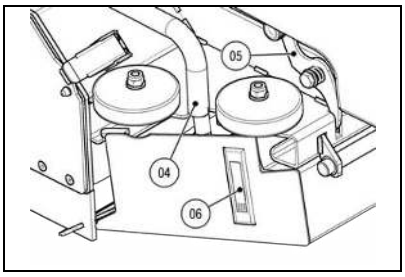


3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.

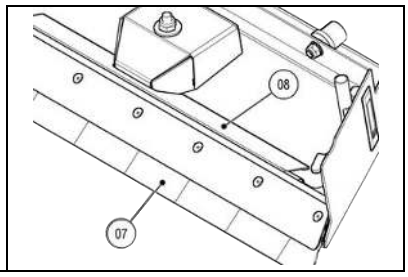


5. Disconnect the hopper vacuum hose (04).
6. Turn the knob (05) anti-clockwise until the debris hopper is free to move.
7. Using the flush handle (06), remove the hopper and empty it.

ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

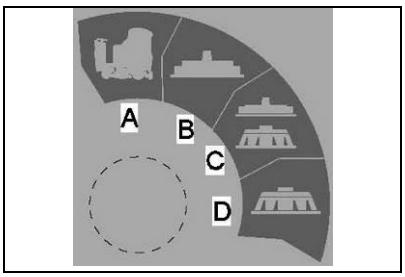


8. Check the wear of the rubber (07) and clean it with a jet of running water and then with a damp cloth.
9. Turn the hopper vacuum filter (08) anti-clockwise, pulling it towards the vacuum hose and extract it from the retainer pin.
10. Clean underneath with a jet of water and check it is working correctly.
11. Repeat the operations in reverse order to reassemble all the parts.

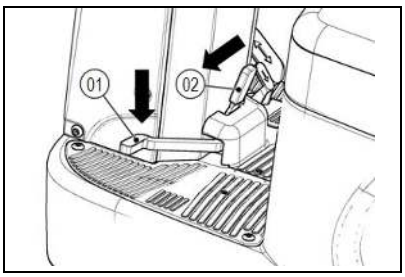


54. CLEANING THE RECOVERY TANK FILTER

Careful cleaning of the recovery tank filter guarantees better cleaning of the floor as well as a longer suction motor life. Proceed as follows to clean the recovery tank filter:

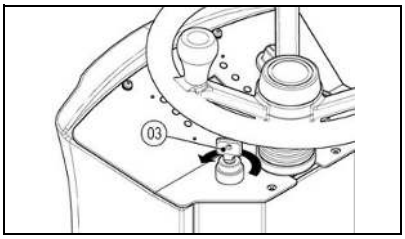


1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).

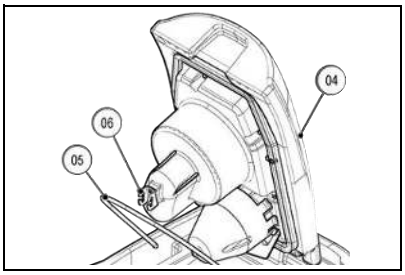


2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

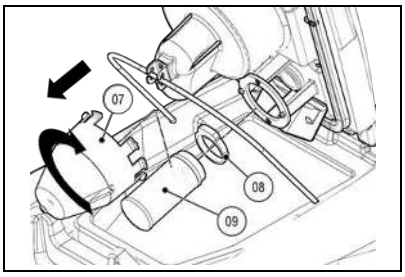
ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.



3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.



5. Raise the cap (04) until the hook (05) is secured to the prop (06) of the recovery tank.



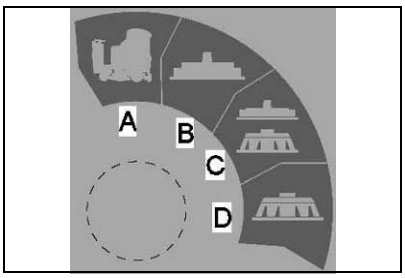
6. Remove the vacuum filter protection (07) by rotating it in a clockwise direction.
7. Release the retaining clips (08).

8. Take the vacuum filter out of the housing (09), clean the walls and the bottom of the filter with a jet of water, remove any dirt that is attached.
9. Repeat the operations in reverse order to reassemble all the parts.

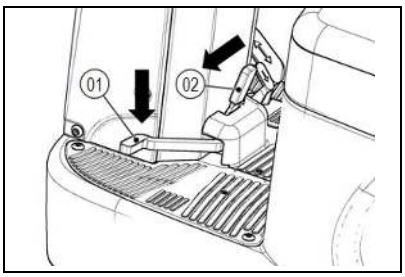
ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

55. CLEANING THE RECOVERY TANK

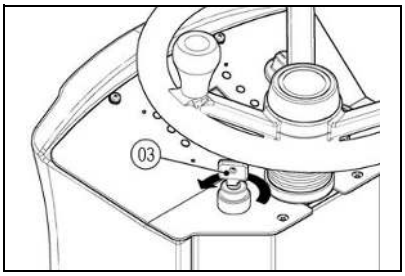
The careful cleaning of the recovery tank guarantees a longer machine life. Proceed as follows to clean the recovery tank:



1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).

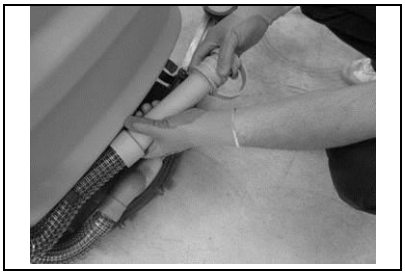


2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

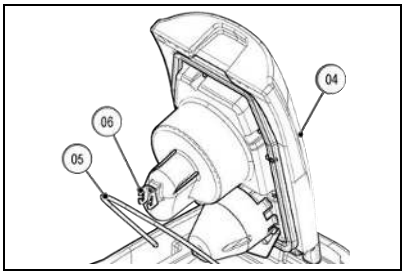


3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.

ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.



5. Release the recovery tank drainage tube (at the back of the machine) from the retainers. Remove the cap and place it on the ground.
6. Grip the handle on the right side of the recovery tank.
7. Lift the recovery tank until it hooks to the safety clamp at the first point.

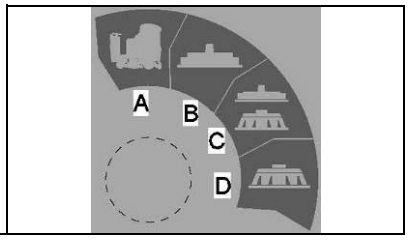


8. Raise the cap (04) until the hook (05) is secured to the prop (06) of the recovery tank.
9. Rinse the inside with a jet of water, if necessary use a spatula to remove the sludge that has accumulated at the bottom of the tank.
10. Repeat the operations in reverse order to reassemble all the parts.

ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

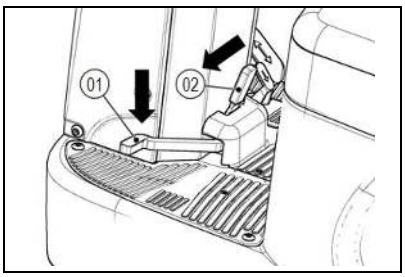
56. CLEANING THE SOLUTION TANK (Innova 65B – Innova 75B – Innova 85B – Innova 100B – Innova 70BTO versions)

The careful cleaning of the solution tank guarantees a longer machine life. Proceed as follows to clean the solution tank:

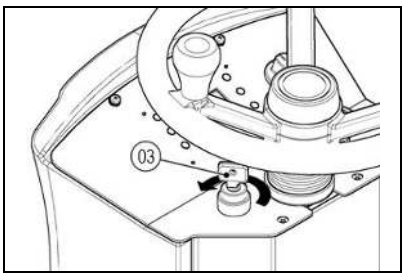


1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).

2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

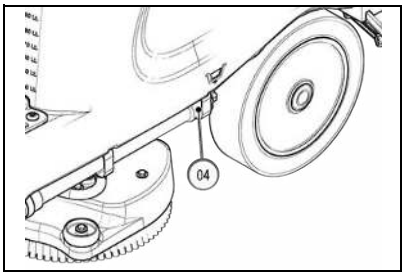


3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.

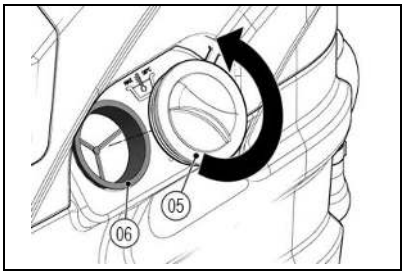


ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

5. Remove the drainage tube (04) of the solution tank from the clamps, it is located on the left side of the machine, unscrew the cap and lay it on the ground.



6. Remove the filling cap (05) and the filter (06) on the left side of the machine. Clean the filter (06) with a jet of water and remove any dirt.



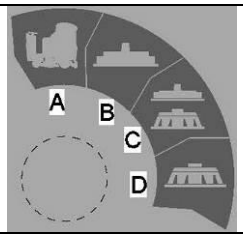
7. Clean the inside of the solution tank with a jet of water.
8. Repeat the operations in reverse order to reassemble all the parts.

ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

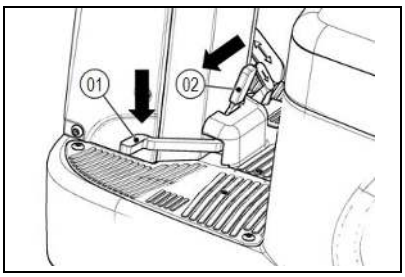
57. CLEANING THE SOLUTION TANK (Innova 70S versions)

The careful cleaning of the solution tank guarantees a longer machine life. Proceed as follows to clean the solution tank:

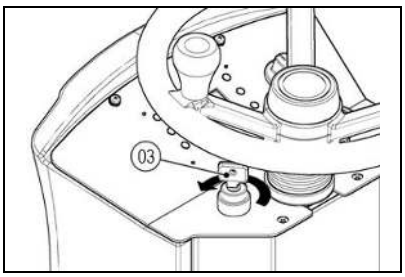
1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).



2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

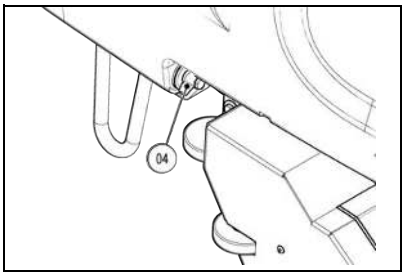


3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.

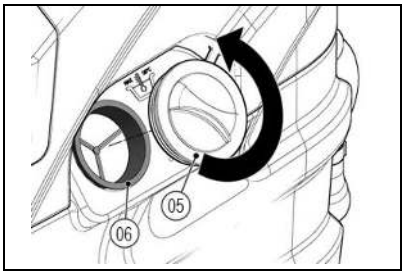


ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

5. Unscrew the drainage plug (04) of the solution tank, it is located on the left side of the machine.



6. Remove the filling cap (05) and the filter (06) on the left side of the machine. Clean the filter (06) with a jet of water and remove any dirt.



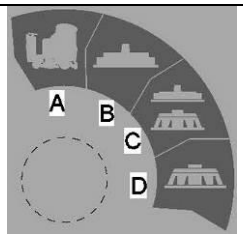
7. Clean the inside of the solution tank with a jet of water.
8. Repeat the operations in reverse order to reassemble all the parts.

ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

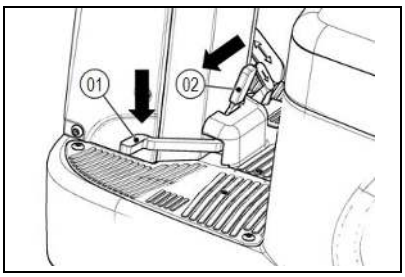
58. CLEANING THE WATER SYSTEM FILTER

The careful cleaning of the water system guarantees a better cleaning of the floor as well as a longer life for all the components that make up the water system. To clean the water system filter, proceed as follows:

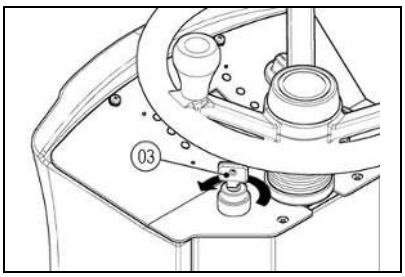
1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).



2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

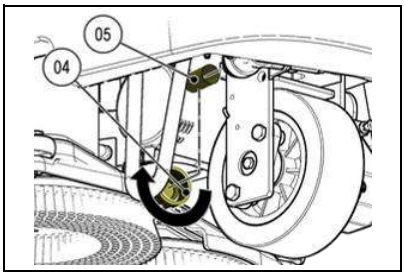


3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.
5. Make sure the solution tank is empty. If it isn't, empty it completely.



ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

6. Unscrew the filter cap (04) of the water system on the front of the machine.
7. Remove the filter cartridge (05) and clean it under a jet of water, remove any dirt that might be attached.
8. Repeat the operations in reverse order to reassemble all the parts.

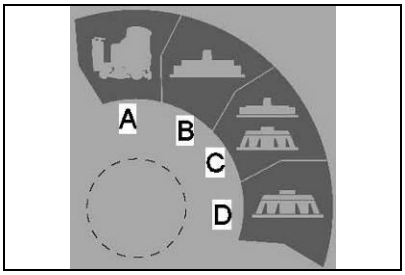


ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

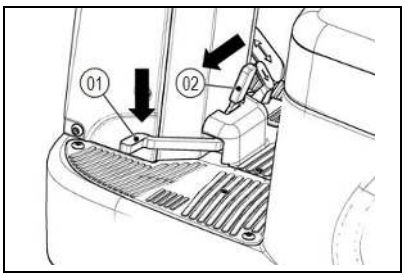
59. CLEANING THE VACUUM TUBE (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70BTO versions)

Careful cleaning of the vacuum hose guarantees better cleaning of the floor as well as a longer suction motor life. Proceed as follows to clean the vacuum hose:

1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).

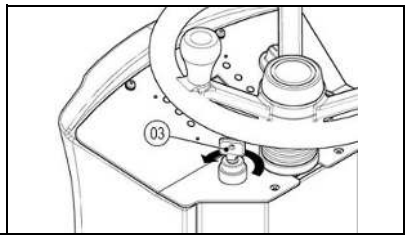


2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

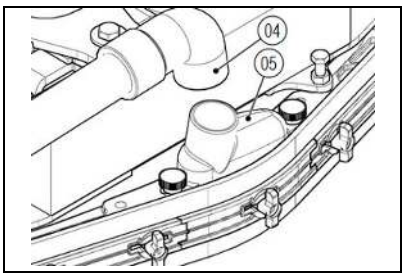


ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

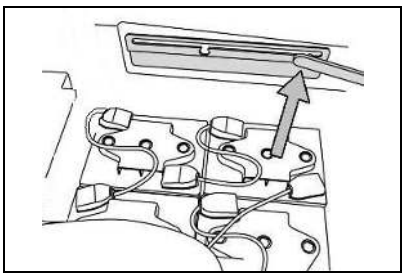
3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.



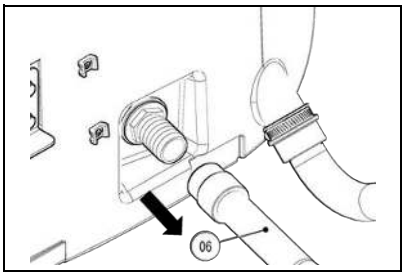
5. Remove the vacuum hose (04) from the vacuum nozzle (05) on the squeegee body.



6. Grip the handle on the right side of the recovery tank.
7. Lift the recovery tank until it hooks to the end of the safety catch.



8. Remove the vacuum hose (06) from the recovery tank.
9. Clean the inside with a jet of water, inserting the tube in the part of the vacuum nozzle that was fixed to the recovery tank.
10. Repeat the operations in reverse order to reassemble all the parts.

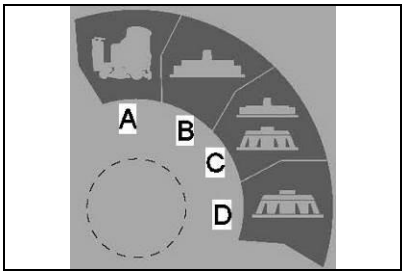


ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

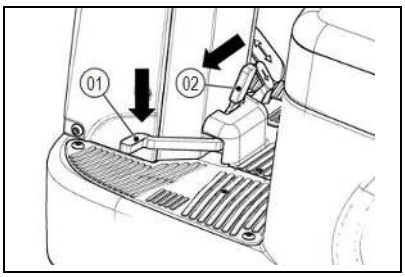
60. CLEANING THE VACUUM TUBE (Innova 70S versions)

Careful cleaning of the vacuum hose guarantees better cleaning of the floor as well as a longer suction motor life. Proceed as follows to clean the vacuum hose:

1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).

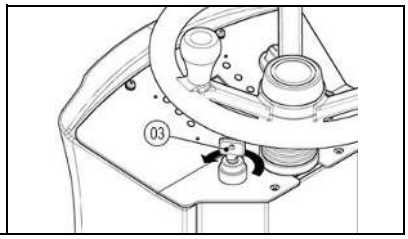


2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

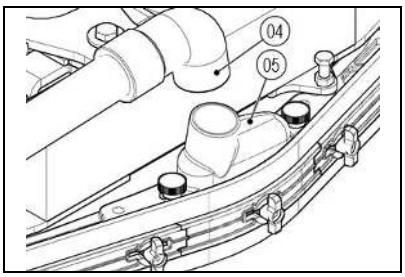


ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

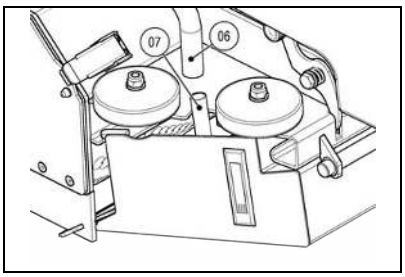
3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.



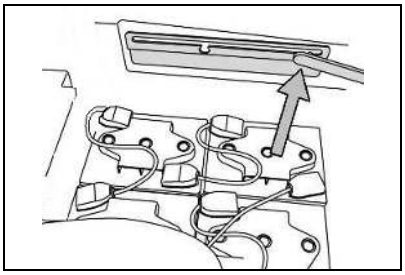
5. Remove the vacuum hose (04) from the vacuum nozzle (05) on the squeegee body.



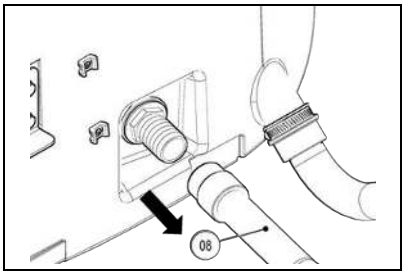
6. Remove the debris hopper vacuum hose (06) from the vacuum nozzle (07) on the brush head unit.



7. Grip the handle on the right side of the recovery tank.
8. Lift the recovery tank until it hooks to the end of the safety catch.



9. Remove the vacuum hose (08) from the recovery tank.
10. Clean the inside with a jet of water, inserting the tube in the part of the vacuum nozzle that was fixed to the recovery tank.
11. Repeat the operations in reverse order to reassemble all the parts.

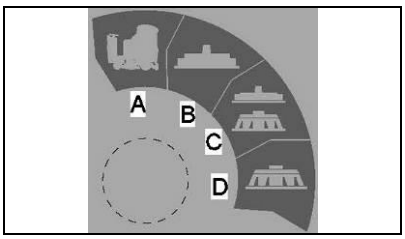


ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

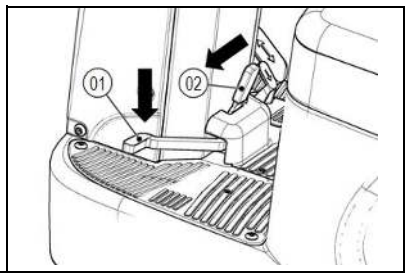
61. CLEANING THE DETERGENT CANISTER (versions with CDS)

Careful cleaning of the vacuum hose guarantees better cleaning of the floor as well as a longer suction motor life. Proceed as follows to clean the vacuum hose:

1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).

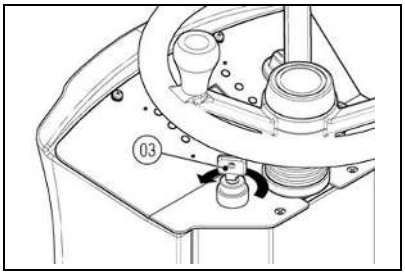


2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

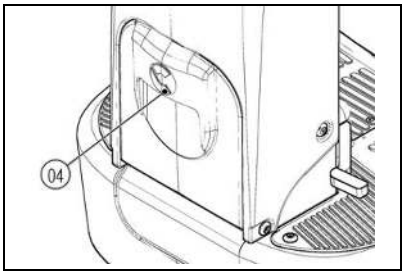


ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

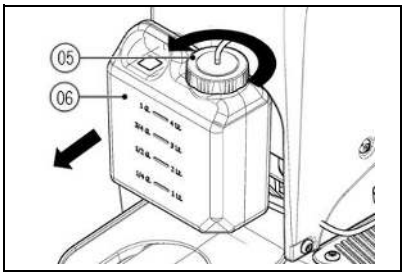
3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.



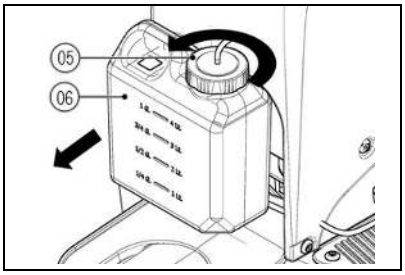
5. Open the hatch (04) on the front of the steering column.



6. Remove the cap (05) of the detergent canister (06).



7. Remove the machine's detergent canister (06).
8. Remove any detergent residue.
9. Rinse the inside of the canister with a jet of running water.
10. Repeat the operations in reverse order to reassemble all the parts.



ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

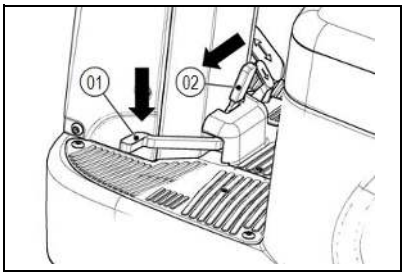
ATTENTION: Do not throw the detergent directly into the drain, but comply with current environmental protection regulations.

62. REPLACING THE SQUEEGEE RUBBER BLADES (Innova 60B versions)

Careful cleaning of the squeegee rubber guarantees better cleaning of the floor as well as a longer suction motor life. To replace the squeegee rubber blades, proceed as follows:

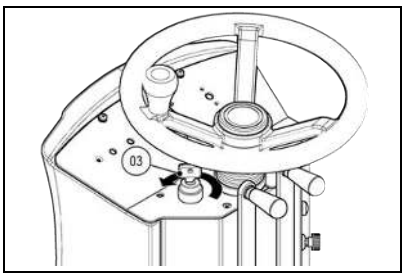
1. Take the machine to the designated maintenance place.

2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

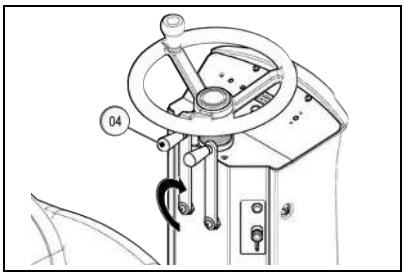


3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.

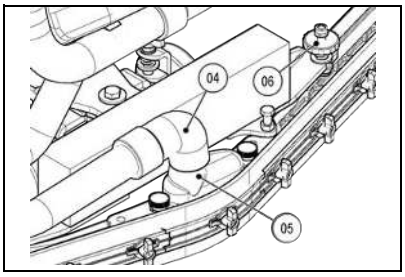
ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.



5. Check that the squeegee is raised from the floor, if not, turn the lever (04) clockwise.

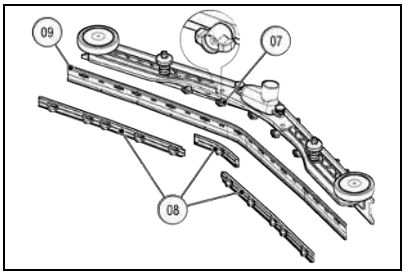


6. Remove the vacuum hose (04) from the vacuum nozzle (05) on the squeegee body.
7. Loosen the knobs (06) in the squeegee body pre-assembly.
8. Remove the squeegee body from the slits in the squeegee connector.



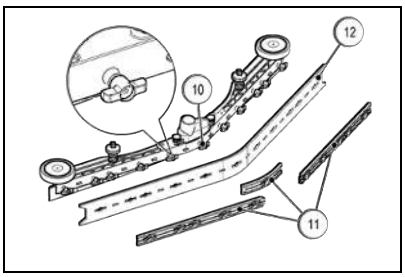
Proceed as follows for replacing the front rubber blade of the squeegee body:

1. Turn the wing nuts (07) in the horizontal position.
2. Remove the front rubber-pressing blades (08).
3. Remove the rubber (09) and replace it.
4. Proceed in reverse to replace the rubber.



Proceed as follows for replacing the rear rubber blade of the squeegee body:

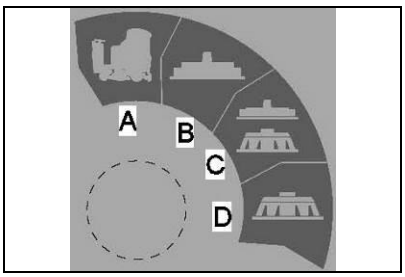
1. Turn the wing nuts (10) in the horizontal position.
2. Remove the front rubber-pressing blades (11).
3. Remove the rubber (12) and replace it.
4. Proceed in reverse to replace the rubber.



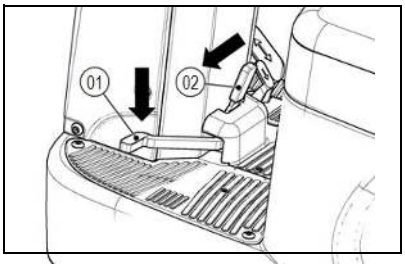
63. REPLACING THE SQUEEGEE RUBBER BLADES (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70BTO versions)

Careful cleaning of the squeegee rubber guarantees better cleaning of the floor as well as a longer suction motor life. To replace the squeegee rubber blades, proceed as follows:

1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).

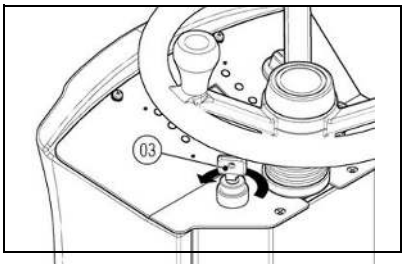


2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

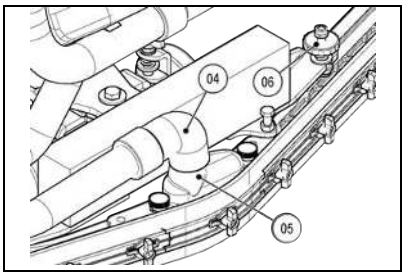


3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.

ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

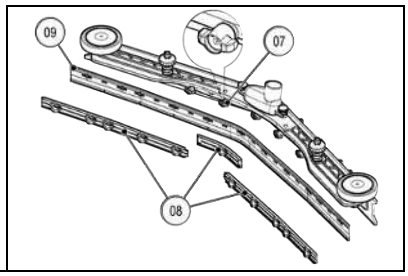


5. Remove the vacuum hose (04) from the vacuum nozzle (05) on the squeegee body.
6. Loosen the knobs (06) in the squeegee body pre-assembly.
7. Remove the squeegee body from the slits in the squeegee connector.



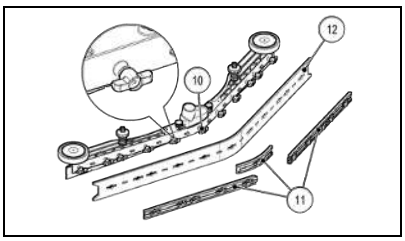
Proceed as follows for replacing the front rubber blade of the squeegee body:

1. Turn the wing nuts (07) in the horizontal position.
2. Remove the front rubber-pressing blades (08).
3. Remove the rubber (09) and replace it.
4. Proceed in reverse to replace the rubber.



Proceed as follows for replacing the rear rubber blade of the squeegee body:

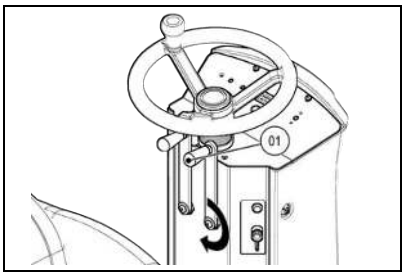
1. Turn the wing nuts (10) in the horizontal position.
2. Remove the front rubber-pressing blades (11).
3. Remove the rubber (12) and replace it.
4. Proceed in reverse to replace the rubber.



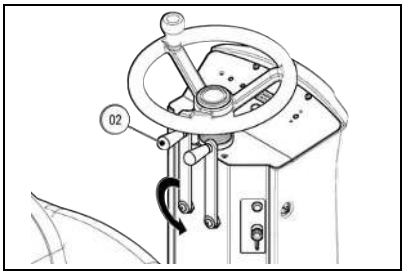
64. ADJUSTING THE SQUEEGEE (Innova 60B versions)

Careful adjustment of the height between the squeegee rubber and the floor guarantees better drying and cleaning of the floor as well as a longer suction motor life. To regulate the squeegee rubber proceed as follows:

1. Bring the brush head unit into contact with the floor, turn the lever (01) on the rear of the steering column clockwise.

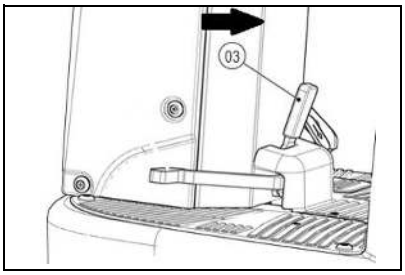


2. Bring the squeegee into contact with the floor, turn the lever (02) on the rear of the steering column anti-clockwise.

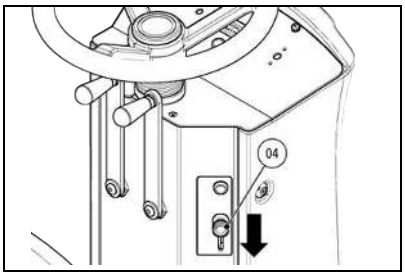


3. Remove the parking brake, turn the lever (03) clockwise. In the control panel the red indicator light pertaining to the parking symbol “P” will go out.

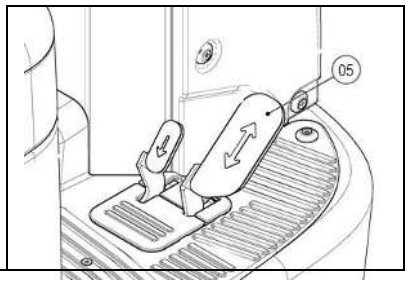
ATTENTION: If you try to move forward with the parking brake engaged, the machine will not move because the motor wheel is disengaged electrically when the parking brake is active.



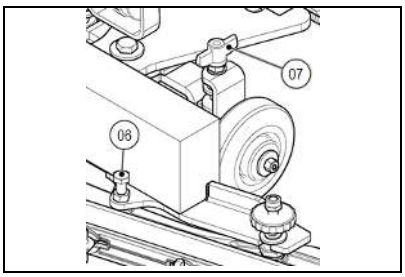
4. Adjust the flow of detergent coming out by using the knob (04) on the rear of the steering column.



5. By pressing the forward movement pedal (05), the brushes and the suction motor start and the machine starts to move.

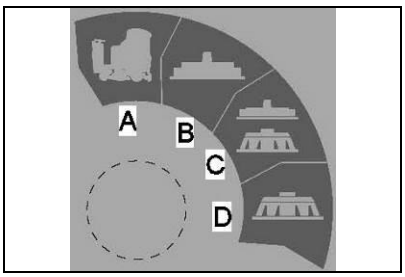


If you need to increase the inclination of the rubber blade in the centre, it is necessary to tighten the screw (06); to decrease it, just turn the screw (06) in the opposite direction.
During working operation, the rear rubber blade should be slightly tilted backwards by about 30°- 45° with respect to the floor in a uniform way along its whole length. This means that the height of the squeegee must be regulated, and this is done by turning the knob (07) (the diagram shows only the right-hand knob, but there will be another one on the left-hand side) anti-clockwise to raise the squeegee and in the opposite direction to lower it.



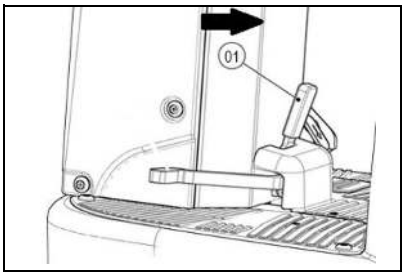
65. ADJUSTING THE SQUEEGEE (Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions)

Careful adjustment of the height between the squeegee rubber and the floor guarantees better drying and cleaning of the floor as well as a longer suction motor life. To regulate the squeegee rubber proceed as follows:



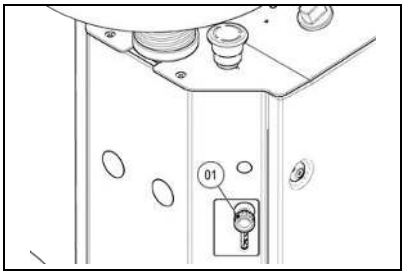
1. Using the switch on the instrument panel, select the program “SCRUBBING - DRYING" (C).

2. Remove the parking brake, turn the lever (01) clockwise. The parking symbol “P” will disappear from the control panel display.

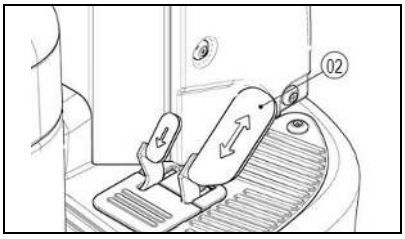


ATTENTION: If you try to move forward with the parking brake engaged, the machine will not move because the motor wheel is disengaged electrically when the parking brake is active.

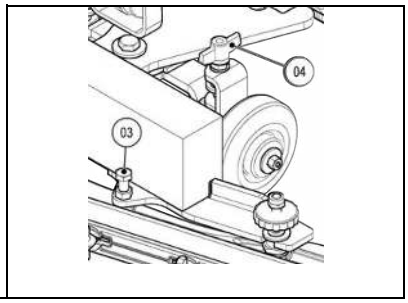
3. Adjust the flow of detergent coming out by using the knob (01) on the rear of the steering column.



4. By pressing the forward movement pedal (02) the brushes and the suction motor start and the machine starts to move.



If you need to increase the inclination of the rubber blade in the centre, it is necessary to tighten the screw (03), while to decrease it just turn the screw (03) in the opposite direction. During working operation, the rear rubber blade should be slightly tilted backwards by about 30°- 45° with respect to the floor in a uniform way along its whole length. This means that the height of the squeegee should be regulated, and this is done by turning the knob (04) (in the diagram only the right knob is depicted) anti-clockwise to raise the squeegee and in the opposite direction to lower it.



ATTENTION: the right and left wheels must be adjusted to the same level, so the squeegee can work parallel to the floor.

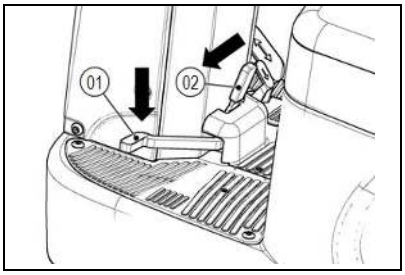
66. REPLACING THE DISC BRUSH (Innova 60B versions)

Brushes in a good condition guarantee better cleaning of the floor as well as a longer brush motor life. To replace the brush, proceed as follows:

1. Take the machine to the designated maintenance place.

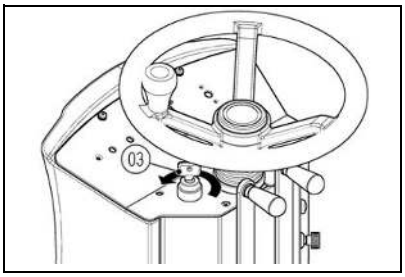
ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

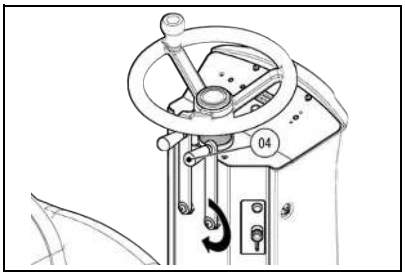


ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

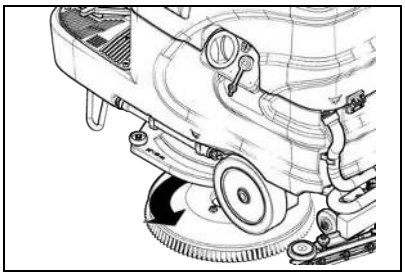
3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.



5. Check that the brush head unit is raised from the floor, if necessary turn the lever (04) anti-clockwise. As soon as the brush head reaches the rest position it will stop working.



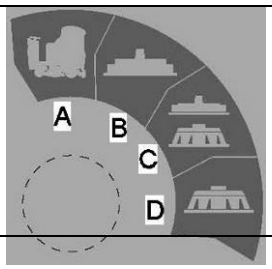
6. Rotate the brush until it comes out of the housing of the brush-holder plate.
7. Replace the old brush with the new one



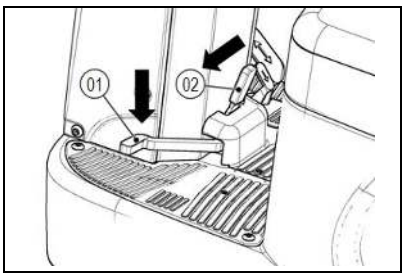
67. REPLACING THE DISC BRUSHES (Innova 65B - Innova 75B - Innova 85B - Innova 100B versions)

Brushes in a good condition guarantee better cleaning of the floor as well as a longer brush motor life. To replace the brushes, proceed as follows:

1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).

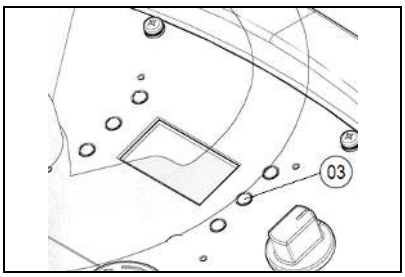


2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

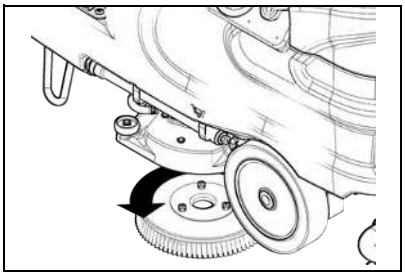


ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

3. Press the brush uncoupling button (03) on the instrument panel. As soon as the button is pressed, you will see the question “RELEASE?” on the screen. Press the brush release button (03) on the steering wheel again, to confirm.

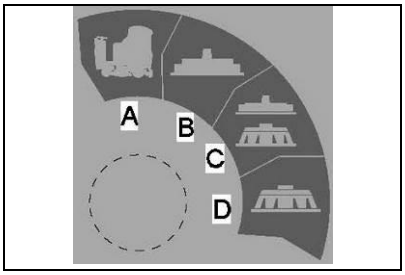


4. Replace the old brush with the new one.



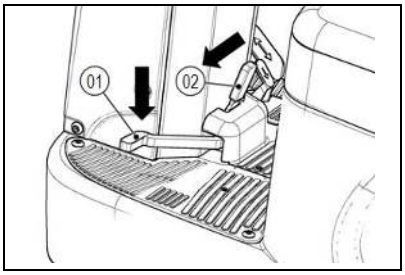
68. REPLACING THE CYLINDRICAL BRUSH (Innova 70S versions)

Brushes in a good condition guarantee better cleaning of the floor as well as a longer brush motor life. To replace the brush, proceed as follows:



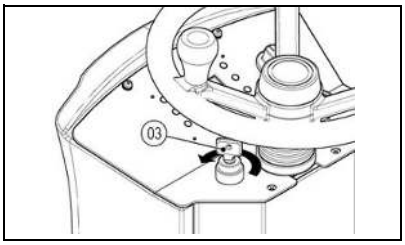
1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).

2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

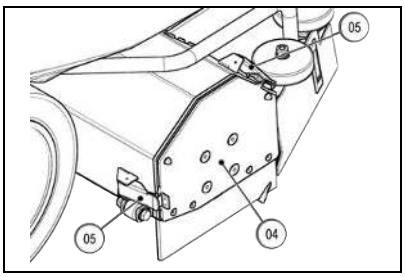


ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

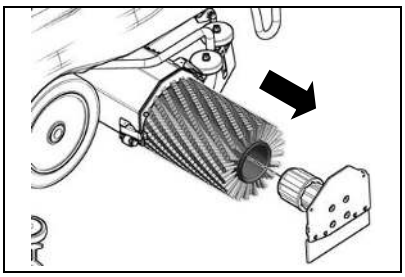
3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.



5. With the brush head in a high position remove the right brush head casing (04), uncoupling the retention hinges (05).

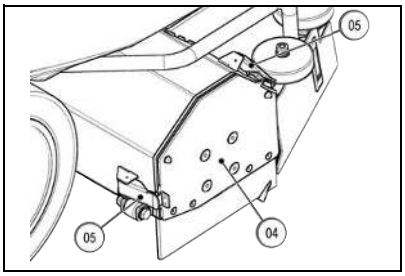


6. Remove the brush to be replaced from the tunnel.
7. Insert the brush (the side with 5 teeth) in the tunnel until it couples with the drive hub on the opposite side of the tunnel.



ATTENTION: Pay attention to the direction of the brush bristles during assembly, the cusp of the brush viewed from the above should be towards the front of the machine.

8. Insert the idler wheel of the right brush head casing in the brush.
9. Secure the right casing (04) to the brush head using the retention hinges (05).
10. Clean the splash guard rubber on the left side of the brush head unit well with a wet cloth and on the right casing.
11. Repeat the operations in reverse order to reassemble all the parts.

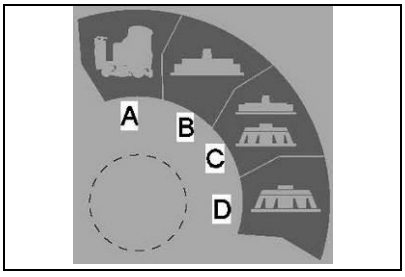


Check the state of wear of the side splash guard blades and in the event of excessive wear replace the splash guard blades. Read the section “REPLACING THE SIDE SPLASH GUARD BLADE (Innova70 S version)” for replacing the rubber blade.

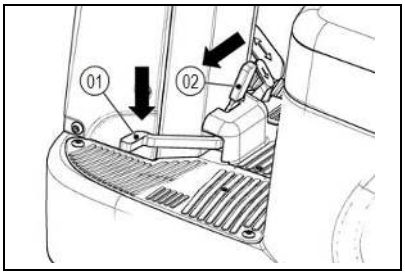
69. REPLACING THE BRUSH HEAD CARTER (Innova 65B - Innova 75B - Innova 85B - Innova 100B versions)

When the brush head casing is in a good condition it guarantees a better cleaning of the floor as well as a longer brush motor life. To replace the brush, proceed as follows:

1. Take the machine to the designated machine maintenance area; use the switch on the instrument panel to select the “TRANSPORT” program (A).

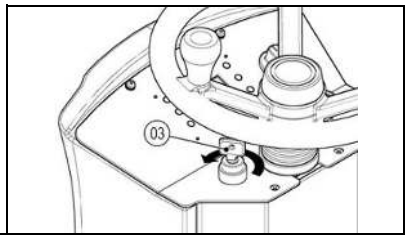


2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).



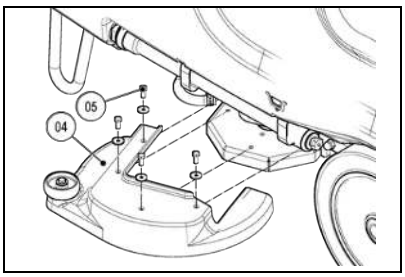
ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.



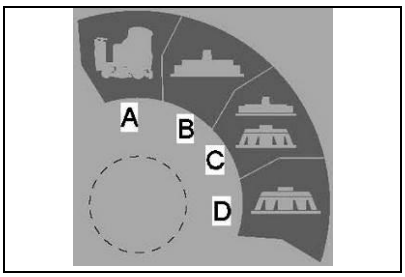
ATTENTION: This operation must be carried out by qualified personnel, using suitable equipment. An incorrect connection may cause the machine to malfunction.

7. Remove the casing to be replaced (04) from the brush head unit, the casing is fixed to it by means of screws (05). The image on the side shows the left casing.
8. Secure the new casing to the brush head unit (read the section "ASSEMBLING THE BRUSH HEAD CASING").
9. Repeat the operation also for the casing on the opposite side.



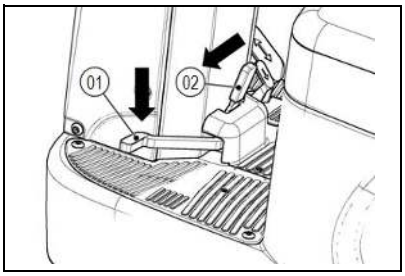
70. CLEANING THE DOSING SYSTEM (VERSIONS WITH CDS)

If the machine is unused for long periods (more than 48 hours) it is recommended that the dosing system be washed, and to do this proceed as follows:



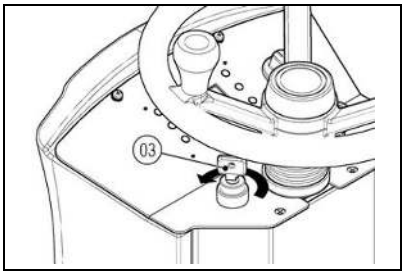
1. Take the machine to the designated maintenance place. For the Innova 65-75-85-100 B versions and the Innova70 S versions, using the switch on the instrument panel select the program "TRANSPORT" (A).

2. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).

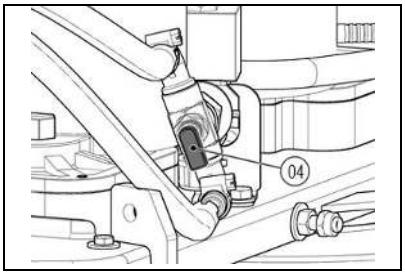


ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

3. Turn the main machine switch to "0" by turning the key (03) a quarter rotation to the left.
4. Remove the key from the instrument panel.

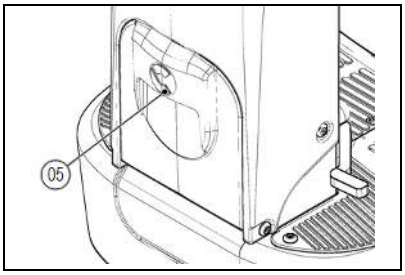


5. Verify that the bypass tap (04) is in the "dosing system" position, if not, position it as in the diagram.

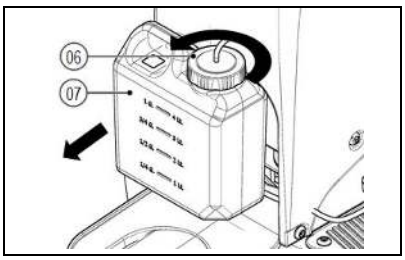


6. Make sure the solution tank is full, if not,fill it up (read the section "FILLING THE SOLUTION TANK WITH WATER").
7. Make sure the recovery tank is empty, otherwise empty it completely (read the section "EMPTYING THE RECOVERY TANK").

8. Open the hatch (05) on the front of the steering column.



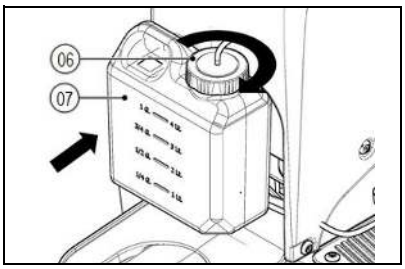
9. Unscrew the cap (06) of the detergent canister (07).



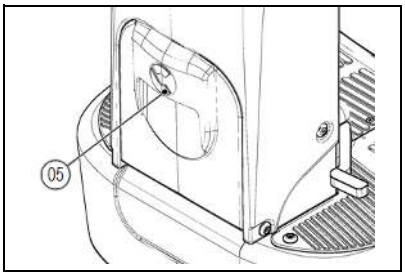
10. Remove the machine's detergent canister (07).
11. Fill the canister with clean water.

ATTENTION: Fill with clean water, at a temperature not higher than 50°C and not lower than 10°C.

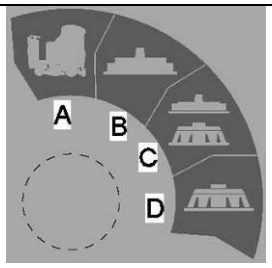
12. Put back the detergent canister (07).
13. Screw on the cap (06) of the detergent canister (07), making sure that the detergent draft filter is correctly positioned on the bottom of the canister.



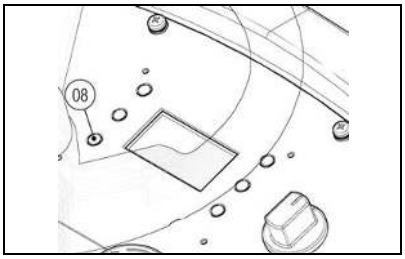
14. Close the hatch (05) on the front of the steering column.
15. Engage the parking brake, rotating the lever on the rear of the steering column clockwise.



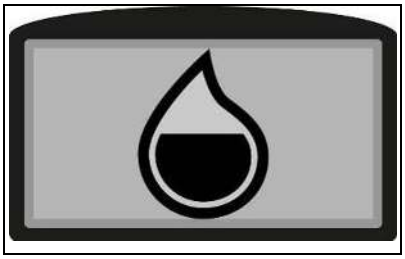
16. Using the switch on the instrument panel, select the program “SCRUBBING - DRYING" (C).



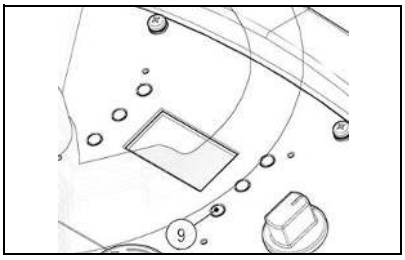
17. Turn the main machine switch to "I", turn the key (03) a quarter rotation to the right.
18. When the work screen appears on the control display, press the button (08).



19. Set the maximum amount of water in the detergent solution, by pressing the button (08) until the symbol shown on the side is completely full.

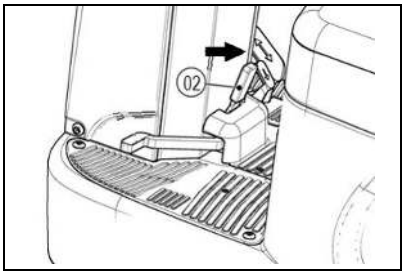


20. After regulating the amount of water in the detergent solution, press the button (09).

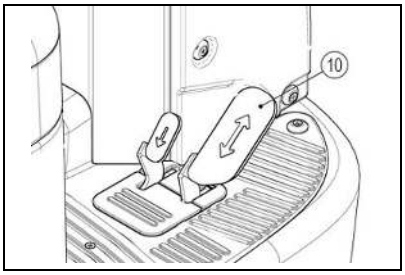


21. Set the maximum amount of chemical in the detergent solution, by pressing the button (09) until the symbol shown on the side is completely full.

22. Remove the parking brake, by turning the lever (02) on the rear of the steering column to the right (read the section “PARKING BRAKE AND SERVICE BRAKE”).



23. Press the accelerator pedal (10) gently to activate the brush head and the dosing system.

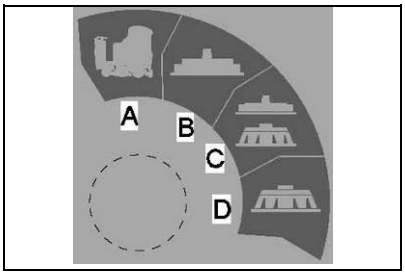


24. Wait a few minutes, normally 2 – 4 minutes, to allow the dosing system to be washed.
25. Completely empty the solution tank and detergent canister.

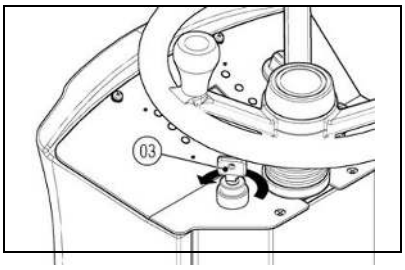
ATTENTION: The machine will dispense solution during this operation

26. Using the switch on the instrument panel, select the program “TRANSPORT" (A).
27. Take the machine to the designated machine storage place.

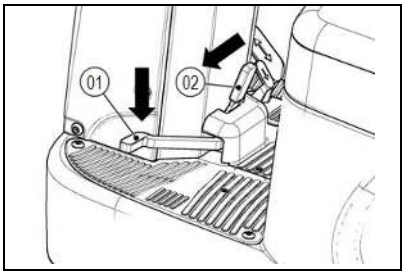
ATTENTION: Park the machine in an enclosed place, on a flat surface; near the machine there must be no objects that could either damage it, or be damaged through contact with it.



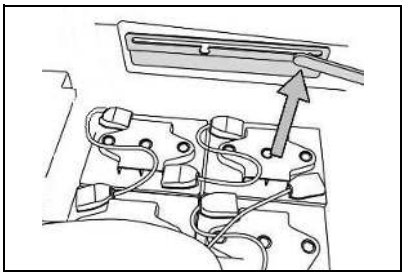
28. Bring the main machine switch to "0" by turning the key (03) on the instrument panel a quarter rotation to the left.
29. Remove the key (03) from the control panel.



30. Block the machine in place by engaging the parking brake, press the pedal (01) and block it with the lever (02) at the rear of the steering column (read the section “PARKING BRAKE AND SERVICE BRAKE”).



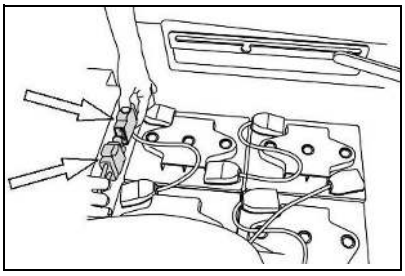
31. Grip the handle on the right side of the recovery tank.
32. Lift the recovery tank until it hooks to the end of the safety catch.



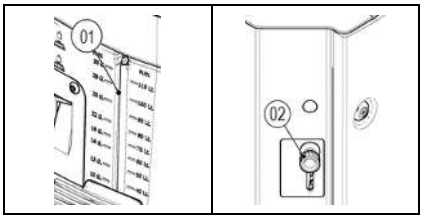
33. Disconnect the electric system connector from the battery connector.

ATTENTION: This process must be carried out by qualified personnel. An incorrect connection of the connector may cause a malfunction of the device.

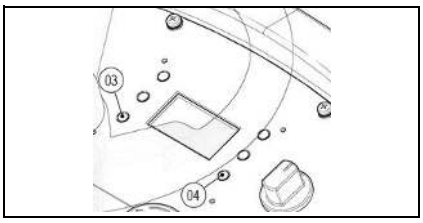
34. Grip the handle on the safety catch and lower the recovery tank until it is in the work position.



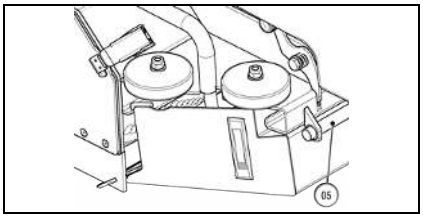
71. INSUFFICIENT WATER ON THE BRUSHES



1. Check that there is water in the solution tank, the amount inside the tank can be seen by means of the level tube (01) on the front left of the seat.
2. Make sure that the detergent solution tap is open, and check that the knob (02) on the back of the steering column is completely lowered.



3. Check that the water flow in the water system is not at zero, and with the machine on press the button (03) once to view the delivery level. (versions with CDS)
4. Check that the detergent flow in the water system is not at zero, and with the machine on press the button (04) once to view the delivery level. (versions with CDS)



5. Clean the solution filter located at the front of the machine.
6. Make sure the water distribution pipe (05) (S versions) is not blocked.
7. For the Innova 60B versions with “KIT WATER MANAGEMENT”, check that the choke bushing is not blocked.

72. THE SQUEEGEE DOES NOT DRY PERFECTLY

1. Check the squeegee is clean.
2. Check the squeegee adjustments (read the section “SQUEEGEE ADJUSTMENT”).
3. Clean the whole vacuum unit (read the relevant sections in the chapters “DAILY MAINTENANCE” and “WEEKLY MAINTENANCE”).
4. Replace the rubber blades if worn out (read the section “REPLACING THE SQUEEGEE RUBBER BLADES).
5. Check that the cap on the recovery tank drainage hose is properly closed.

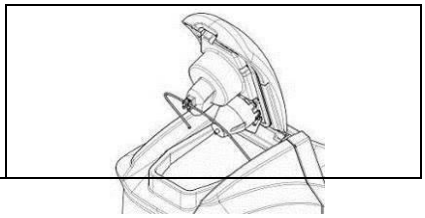
73. THE MACHINE DOES NOT CLEAN WELL

1. Check the state of wear and tear of the brushes and, if necessary, replace them. The brushes should be changed when the bristles are about 15 mm long. To do this, read “REPLACING THE DISC BRUSH” for Innova 65-75-85-100 B versions, or “REPLACING THE CYLINDRICAL BRUSH” for the Innova 70S version. Working with over-worn brushes may cause damage to the floor.
2. Use a different kind of brush to the one fitted as standard. For cleaning floors where the dirt is particularly resistant, we recommend the use of special brushes supplied upon request and according to needs (see “CHOOSING AND USING THE BRUSHES”).

74. EXCESSIVE FOAM PRODUCTION

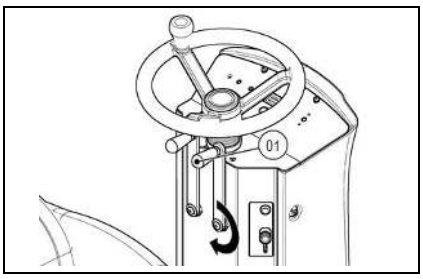
Check that a low foam detergent has been used. If necessary, add a small quantity of anti-foam liquid to the recovery tank.
Remember that, when the floor is not very dirty, more foam is generated. In this case the detergent solution should be more diluted.

75. THE VACUUM CLEANER DOES NOT FUNCTION



1. Check whether the recovery tank is full and, if necessary, empty it.
2. Check the float on the vacuum cap is working properly (see also “CLEANING THE RECOVERY TANK” and “CLEANING THE RECOVERY TANK FILTER”).

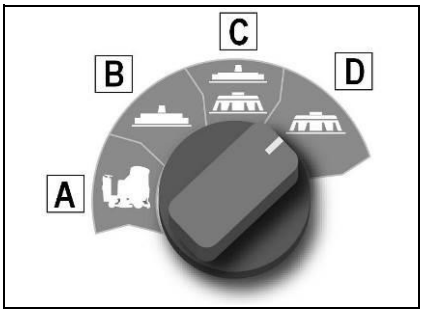
76. THE BRUSH MOTOR DOESN'T WORK (INNOVA 60B VERSIONS)



ATTENTION To avoid damaging the floor, the engine only starts up when the machine is moved forwards

1. Check that the brush head is lowered during the forward movement, with the right lever (01) turned clockwise.
2. The operator must be properly seated in the driving position
3. Check no thermal protection device has intervened.
4. Check the correct connection of the engine to the terminal board under the footboards.

77. THE BRUSH MOTOR DOES NOT WORK



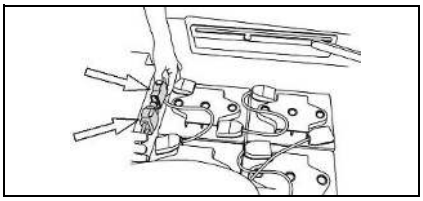
ATTENTION To avoid damaging the floor, the motor only starts up when the machine is moved forwards.

1. Check that the brush head is lowered during start-up.
2. The operator must be properly seated in the driving position.
3. Check the I-DRIVE selector is on “C” or “D” (brush operating function) (valid only for Innova 65B - Innova 75B - Innova 85B - Innova 100B - Innova 70S - Innova 70BTO versions).
4. Check no thermal protection device has intervened.
5. Check the correct connection of the engine to the terminal board under the footboards.

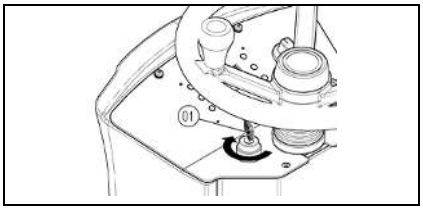
78. IT IS IMPOSSIBLE TO RAISE OR LOWER THE BRUSH HEAD OR SQUEEGEE

The machine is fitted with electrical protection devices that control the brush head and squeegee ascent/descent motor reducers. In the event of overloading, the fuses interrupt the power supply. After checking and removing the reason for the problem, to reset them just switch the machine off then on again. If the problem persists, contact the specialist technical assistance centre.

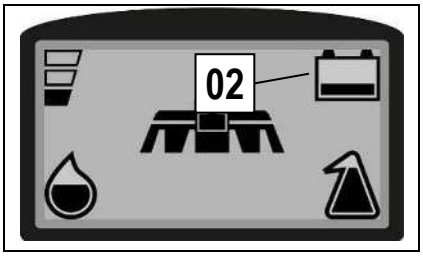
79. THE MACHINE DOES NOT START



1. Check the connector is connected to the batteries.



2. Check the key switch (01) is on "I".

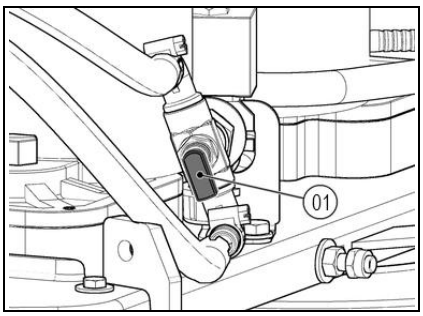


3. Check that the batteries are charged, control the symbol (02) on the control display.

80. ELECTRIC FUSES AND THERMAL CUT-OUTS

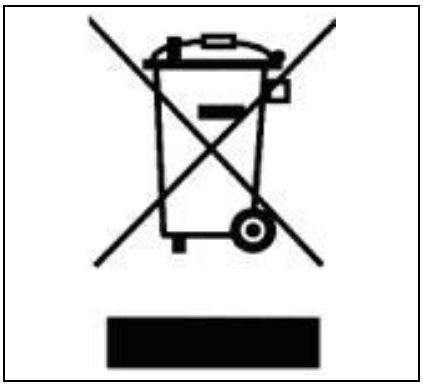
In addition to general 80 A fuses, the machine is also fitted with self-restoring safety fuses located on the boards in the electric system that interrupt the power supply to the brush and suction motor when the machine exceeds the predetermined load. To restore the power supply to the motor, switch off the machine and wait for the fuses to cool down (about 40 seconds). If the switch disconnects the current several times in a row, contact the specialised technical assistance centre.

81. THE AUTOMATIC WATER/DETERGENT DOSING SYSTEM DOES NOT WORK



The automatic water/detergent dosing system has been designed with criteria of extreme sturdiness and reliability, but there is a special by-pass system that allows you to use the machine even if the system is out-of-use.
To by-pass the automatic water/detergent dosing system, you must rotate the tap lever (01) on the rear-centre of the base downwards; in this way you can go on working even with the system out-of-use.
Remember, however, to put not only water in the solution tank, but the right quantities of both water and detergent. With the dosing system out-of-use, the water flow is regulated via the tap on the steering column.
Contact an Authorised Retailer to have the system repaired.

DISPOSAL



To dispose of the machine, take it to a demolition centre or an authorised collection centre.

Before scrapping the machine, it is necessary to remove and separate out the following materials, then send them to the appropriate collection centres in accordance with the environmental hygiene regulations currently in force:

- Brushes
- Felt
- Electric and electronic parts*
- Batteries
- Plastic parts (tanks and handlebars)
- Metal parts (levers and frame)

(*) In particular, contact your local distributor when scrapping electric and electronic parts.

CHOOSING AND USING THE BRUSHES

POLYPROPYLENE BRUSH (PPL)
Used on all types of floors. Good resistance to wear and tear, and hot water (no greater than 60°C.). PPL is non-hygroscopic and therefore retains its characteristics even when working in wet conditions.

NYLON BRUSH
Used on all types of floors. Excellent resistance to wear and tear, and hot water (even over 60°C). The nylon is hygroscopic and so tends to lose its characteristics over time when working in wet conditions.

ABRASIVE BRUSH
The bristles of this type of brush are charged with highly aggressive abrasives. It is used to clean very dirty floors. To avoid floor damage, work only with the pressure strictly necessary.

BRISTLE THICKNESS
Thicker bristles are more rigid and are therefore used on smooth floors or floors with small joints.
On uneven floors or those with deep joints, it is advisable to use softer bristles which can enter the gaps more easily.
Remember that when the bristles are worn and therefore too short, they will become rigid and are no longer able to penetrate and clean deep down. In this case, like with over-large bristles, the brush tends to jump.

PAD HOLDER
The pad holder is recommended for cleaning shiny surfaces.
There are two types of pad holder:

1. The traditional pad holder is fitted with a series of anchor points that allow the abrasive floor pad to be held and dragged while working.
2. The CENTRE LOCK type pad-holder not only has anchor points, but also a snap-type central locking system in plastic that allows the abrasive disc to be perfectly centred and held without any risk of it becoming detached. This type of holder is especially suitable for machines with several brushes, where it is difficult to centre the abrasive discs.

TABLE FOR CHOOSING THE BRUSHES

Machine	No.° Br.	Code	Type of bristles	∅ Bristles	∅ Br.	Length	Notes
Innova 60B	1	404627	PPL	0.3	610		
		405630	PPL	0.6	610		
		405629	PPL	0.9	610		
		405628	ABRASIVE		610		
		405627	NYLON	0.9	610		
		405519			585		PAD HOLDER
Innova 65B	2	422189	PPL	0.3	340		
		422971	PPL	0.6	340		
		422972	PPL	0.9	340		
		422981	ABRASIVE		340		
		422973			330		PAD HOLDER
Innova 75B	2	427715	PPL	0.3	390		
		427716	PPL	0.6	390		
		427717	PPL	0.9	390		
		427719	ABRASIVE		390		
		427718			380		PAD HOLDER
Innova 85B	2	430696	PPL	0.3	430		
		430697	PPL	0.6	430		
		430698	PPL	0.9	430		
		430699	ABRASIVE		430		
		431122			410		PAD HOLDER
Innova 100B	2	436310	PPL	0.3	510		
		436311	PPL	0.6	510		
		436312	PPL	0.9	510		
		436314	ABRASIVE		510		
		436316			490		PAD HOLDER
Innova 70S	1	431774	PPL	0.8			
		432423	PPL	1	210	690	
		432425	MIXED. STEEL ABRASIVE	0.6 + 1			
Innova 70BTO	1	442663					GREEN PAD 711X355
		442664					BLACK PAD 711X355
		443713					WHITE PAD 711X355
		443714					BROWN PAD 711X355

EC DECLARATION OF CONFORMITY

The undersigned manufacturer:
COMAC S.p.A.
Via Maestri del Lavoro, 13
37059 Santa Maria di Zevio (VR)
declares under its sole responsibility that the products

SCRUBBING MACHINES - mod.

Innova 60 B CB; Innova 65 B CB; Innova 75 B CB; Innova 85 B CB; Innova 100 B CB; Innova 70 S CB; Innova 70 BTO CB

comply with the requirements of the following Directives:

2006/42/EC: Machinery Directive.
2014/35/EC: Low Voltage Directive.
2014/30/EC: Electromagnetic compatibility directive.

They also comply with the following standards:

EN 60335-1:2012/A11:2014
EN 60335-2-72:2012
EN 12100:2010
EN 60335-2-29:2004/A2:2010
EN 61000-6-2:2005/AC:2005
EN 61000-6-3:2007/A1:2011/AC:2012
EN 61000-3-2:2014
EN 61000-3-3:2013
EN 55014-1:2006/A1:2009/A2:2011
EN 55014-2:2015
EN 62233:2008/AC:2008

The person authorized to compile the technical file:

Mr. Giancarlo Ruffo
Via Maestri del Lavoro, 13
37059 Santa Maria di Zevio (VR) - ITALY

Santa Maria di Zevio (VR), 24/08/2020

Comac S.p.A.
Legal representative

Giancarlo Ruffo

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EN 12100:2010
EN 61000-6-2:2005/AC:2005
EN 61000-6-3:2007/A1:2011/AC:2012
EN 62233:2008/AC:2008

The person authorized to compile the technical file:

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Via Maestri del Lavoro, 13
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Santa Maria di Zevio (VR), 24/08/2020

Comac S.p.A.
Legal representative

Giancarlo Ruffo

UKCA DECLARATION OF CONFORMITY

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comply with the requirements of the following Directives:

Supply of Machinery (Safety) Regulations 2008.
Electrical Equipment (Safety) Regulations 2016.
Electromagnetic Compatibility Regulations 2016.

They also comply with the following standards:

BS EN 60335-1:2012+A2:2019
BS EN 60335-2-72:2012
BS EN 12100:2010
BS EN 60335-2-29:2004+A11:2018
BS EN IEC 61000-6-2:2019
BS EN 61000-6-3:2007+A1:2011
BS EN IEC 61000-3-2:2019
BS EN IEC 61000-3-3:2019
BS EN 55014-1:2017+A11:2020
BS EN 55014-2:2015
BS EN 62233:2008

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BS EN IEC 61000-6-2:2019
BS EN 61000-6-3:2007+A1:2011
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