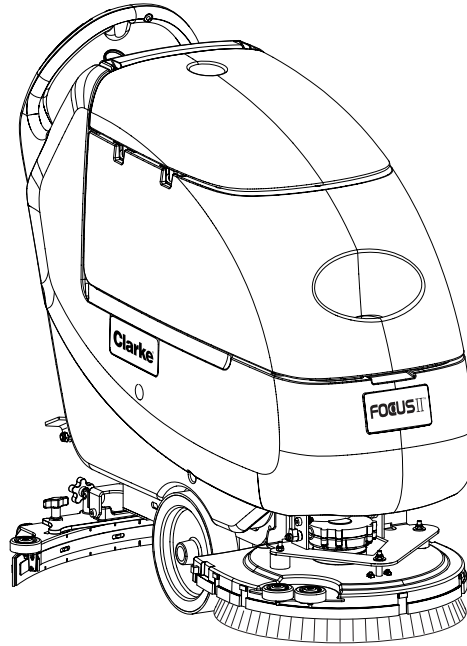
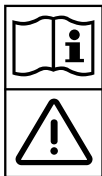


Clarke®

FOCUS II™



Instructions For Use - Original Instructions / Instrucciones de uso / Mode d'emploi
Models: 9087202020 - 9087203020



READ THIS BOOK
LEA ESTE MANUAL
LISEZ CE MANUEL

EN English (2 - 33)
ES Español (34 - 65)
FR Français (66 - 98)



























This book has important information for the use and safe operation of this machine. Failure to read this book prior to operating or attempting any service or maintenance procedure to your Clarke machine could result in injury to you or to other personnel; damage to the machine or to other property could occur as well. You must have training in the operation of this machine before using it. If your operator(s) cannot read this manual, have it explained fully before attempting to operate this machine.




















All directions given in this book are as seen from the operator's position at the rear of the machine.

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OPERATOR SAFETY INSTRUCTIONS

-  **DANGER!** *It indicates a dangerous situation with risk of death for the operator.*
-  **WARNING!** *It indicates a potential risk of injury for people or damage to objects.*
-  **CAUTION!** *It indicates a caution related to important or useful functions. Pay careful attention to the paragraphs marked by this symbol.*
-  **DANGER!** *Disconnect the batteries before performing any maintenance/repair procedure.*
-  **DANGER!** *This machine must be used by properly trained and authorized personnel only. Children or disabled people cannot use this machine.*
-  **DANGER!** *Keep the batteries away from sparks, flames and incandescent material. During normal operation, explosive gases are released.*
-  **DANGER!** *Do not wear jewelry when working near electrical components.*
-  **DANGER!** *Do not work under the lifted machine without supporting it with safety stands.*
-  **DANGER!** *Do not operate the machine near toxic, dangerous, flammable and/or explosive powders, liquids or vapors.*
-  **DANGER!** *Battery charging produces highly explosive hydrogen gas. Keep the tank assembly open during battery charging and perform this procedure in well-ventilated areas and away from bare flames.*
-  **WARNING!** *Before using the battery charger, ensure that frequency and voltage values, indicated on the machine serial number plate, match the electrical mains voltage.*
-  **WARNING!** *Do not pull or carry the machine by the battery charger cable and never use the battery charger cable as a handle. Do not close a door on the battery charger cable, or pull the battery charger cable around sharp edges or corners. Do not run the machine on the battery charger cable. Keep the battery charger cable away from heated surfaces.*
-  **WARNING!** *Do not charge the batteries if the battery charger cable or plug is damaged. If the machine is not working as it should, has been damaged, left outdoors or dropped into water, return it to the Service Center.*
-  **WARNING!** *To reduce the risk of fire, electric shock, or injury, do not leave the machine unattended when it is plugged in. Before performing any maintenance procedure, disconnect the battery charger cable from the electrical mains.*
-  **WARNING!** *Do not smoke while charging the batteries.*
-  **WARNING!** *Always protect the machine against the sun, rain and bad weather, both under operation and inactivity condition. Store the machine indoors.*
-  **WARNING!** *Do not allow to be used as a toy. Close attention is necessary when used near children.*
-  **WARNING!** *Use only as shown in this Manual. Use only Clarke's recommended accessories.*
-  **WARNING!** *Take all necessary precautions to prevent hair, jewelry and loose clothes from being caught by the machine moving parts.*
-  **WARNING!** *Do not leave the machine unattended without being sure that it cannot move independently.*
-  **WARNING!** *Do not use the machine on slopes with a gradient exceeding the specifications.*
-  **WARNING!** *Do not use the machine in particularly dusty areas.*
-  **WARNING!** *While using this machine, take care not to cause harm to people or damage to objects.*
-  **WARNING!** *Do not bump into shelves or scaffoldings, especially where there is a risk of falling objects.*
-  **WARNING!** *Do not put any can containing fluids on the machine.*
-  **WARNING!** *The machine operating temperature must be between +32°F and +104°F (0°C and +40°C).*

-  **WARNING!** *The machine storage temperature must be between +32°F and +104°F (0°C and +40°C).*
-  **WARNING!** *The humidity must be between 30% and 95%.*
-  **WARNING!** *Do not use the machine as a means of transport.*
-  **WARNING!** *Do not use the machine on slopes with an inclination higher than 2%.*
-  **WARNING!** *Do not allow the brushes to operate while the machine is stationary to avoid damaging the floor.*
-  **WARNING!** *In case of fire, use a powder fire extinguisher, not a water one.*
-  **WARNING!** *Do not tamper with the machine safety guards and follow the routine maintenance instructions scrupulously.*
-  **WARNING!** *Do not allow any object to enter into the openings. Do not use the machine if the openings are clogged. Always keep the openings free from dust, hairs and any other foreign material which could reduce the air flow.*
-  **WARNING!** *Do not remove or modify the plates affixed to the machine.*
-  **WARNING!** *If the machine is used according to the instructions, the vibrations are not dangerous. The machine vibration level is less than 98.42 in/s² (2.5 m/s²) (98/37/EEC - EN 1033/1995).*
-  **WARNING!** *This machine cannot be used on roads or public streets.*
-  **WARNING!** *Pay attention during machine transportation when temperature is below freezing point. The water in the recovery tank or in the hoses could freeze and seriously damage the machine.*
-  **WARNING!** *Use the brushes and pads supplied with the machine and those specified in the Operator's Manual. Using other brushes or pads could reduce safety.*
-  **WARNING!** *In case of machine malfunctions, ensure that these are not due to lack of maintenance. If necessary, request assistance from the authorized personnel or from an authorized Service Center.*
-  **WARNING!** *If parts must be replaced, require ORIGINAL spare parts from an authorized Dealer or Retailer.*
-  **WARNING!** *To ensure machine proper and safe operation, the scheduled maintenance shown in the relevant chapter of this Manual, must be performed by the authorized personnel or by an authorized Service Center.*
-  **WARNING!** *Carefully read all the instructions before performing any maintenance/repair procedure.*
-  **WARNING!** *Do not wash the machine with direct or pressurized water jets, or with corrosive substances.*
-  **WARNING!** *The machine must be disposed of properly, because of the presence of toxic-harmful materials (batteries, etc.), which are subject to standards that require disposal in special centers (see Scrapping chapter).*

INTRODUCTION

FOCUS II model of Clarke scrubber-dryer ensures a highly effective floor cleaning performance.

FOCUS II L17 model is equipped with a single rotary brush to clean an area of 17.0 in (430 mm) in width.

FOCUS II S20 and FOCUS II L20 model is equipped with a single rotary brush to clean an area of 20 in (508 mm) in width.

FOCUS II L20 Cyl. model is equipped with two cylindrical brushes to clean an area of 20 in (508 mm) in width.

FOCUS II BOOST L20 model is equipped with a single orbital rectangular pad to clean an area of 20 in (508 mm) in width

The rear squeegee performs the floor cleaning and the vacuum system recovers the washing water in a single pass.

HOW TO KEEP THIS MANUAL

The Operator's Manual must be kept near the machine, inside an adequate case, away from liquids and other substances that can cause damage to it.

IDENTIFICATION DATA

The machine model and the serial number are marked on the plate. (Al. Fig. 2 - page 9).

The machine production year is indicated by the first two figures of the machine serial number.

This information is useful when requiring machine spare parts. Use the following table to write down the machine identification data for any further reference.

MACHINE model
MACHINE Serial Number

CHANGES AND IMPROVEMENTS

Clarke constantly improves its products and reserves the right to make changes and improvements at its discretion without being obliged to apply such benefits to the machines previously sold.

Any change and/or addition of accessories must be approved and performed by Clarke.

UNPACKING

To unpack the machine carefully follow the instructions on the packing.

Upon delivery carefully check that the machine and its packing have not been damaged during transportation. In case of visible damages, keep the packing and have it checked by the Carrier that delivered it. Call the Carrier immediately to fill in a damage claim.

Please check that the following items have been supplied with the machine:

1. Technical documents:
 - Scrubber-dryer Instructions for Use Manual
 - Electronic battery charger Manual
2. No. 2 lamellar fuses

TECHNICAL DATA

Model	FOCUS II L17	FOCUS II S20	FOCUS II L20	FOCUS II L20 Cyl.	FOCUS II BOOST® L20
Working Voltage	24 V DC				
Standard Batteries (2)	12 V - 130 Ah@20hr Wet				
Optional Batteries (2)	12V 114 Ah@20hr rating AGM				
Drive System Motor	0.3 hp (200 W)	—	0.3 hp (200 W)		
Drive Speed (variable)	0 to 3.5 mph (0 to 5.6 km/h)	Determined by brush rotation	0 to 3.5 mph (0 to 5.6 km/h)		
Battery Protection System	Low Voltage Cut-Off of Brush and Solution				
Vacuum Motor Power	0.5 hp, 2 stages, tangential discharge				
Vacuum Capacity	41.5 in H ₂ O (1.055 mm H ₂ O)				
Solution & Rec. Tanks	14.5 US gal (55 liters)				
Solution Flow (min/max)	0 - 0.63 gal/min (0 - 2.4 liter/min)			0 - 0.3 gal/min (0 - 0.75 liter/min)	
Squeegee Width	29.9 in. (760 mm)				
Cleaning Width	17 in. (430 mm)	20 in. (508 mm)			
Brush Motor Power	0.7 hp (480 W)			(2) @ 0.4 hp (300 W) ea	0.75 hp (560 W)
Cylindrical Brush Size	—	—	—	4.3 x 19.1 in. (110 x 485 mm)	
BOOST® Pad Size	—	—	—	—	14 x 20 in. (457 x 508 mm)
Brush Speed	153 rpm			570 rpm	2250 rpm
Brush Pressure	45 and 90 lbs (20 and 41 kg)			58.4 lbs (26.5 kg)	40 and 75 lbs (18 and 34 kg)
Front Wheel Pressure on the floor	116 psi (0.8 N/mm ²)				
Rear Wheel Pressure on the floor	884.7 psi (6.1 N/mm ²)	406.1 psi (2.8 N/m ²)	884.7 psi (6.1 N/mm ²)		
On-Board Battery Charger	Standard				
Gradeability	2%				
Machine Length	52.1 in. (1.323 mm)			49.3 in. (1,253 mm)	51 in. (1.295 mm)
Machine Width without Squeegee	21.3 in. (541 mm)			22.7 in. (575.5 mm)	20.8 in. (528 mm)
Machine Height	42.8 in. (1.088 mm)				
Weight w/o Batteries and with empty tanks	209.4 lbs (95 kg)	191.8 lbs (87 kg)	209.4 lbs (95 kg)	231.5 lbs (105 kg)	203 lbs (92 kg)
Weight with batteries and full tanks	531.3 lbs (241 kg)	515.9 lbs (234 kg)	531.3 lbs (241 kg)	553.4 lbs (251 kg)	525 lbs (238 kg)
Sound level	65.8 dB(A)				
Battery compartment size (width x length x height)	13.8 x 13.8 x 11.8 in. (350 x 350 x 300 mm)				

MACHINE TRANSPORT PROCEDURES

How to load and unload the machine from a van or a truck

WARNING!

This machine is heavy. Machine transport must be performed by qualified personnel only. Machine transport on steep ramps must be performed by two well-trained operators only. Always move it slowly. Do not turn the machine on slopes. Do not leave the machine unattended on slopes. Loading ramp width must not be less than 40 in (1 m).

1. Check that the loading ramp is not longer than 8 feet (2.5 m) and not wider than 40 in (1 m). Its thickness must be adequate to support the machine and operators' weight.
2. Check that the ramp is dry and clean.
3. Position the ramp properly.
4. Before loading the machine, remove the squeegee assembly and the brush/pad-holder. Before loading the machine, empty both the solution and the recovery water tank.

How to Fasten the Machine Inside the Vehicle

5. Clarke recommends to fasten the machine with belts during transportation.

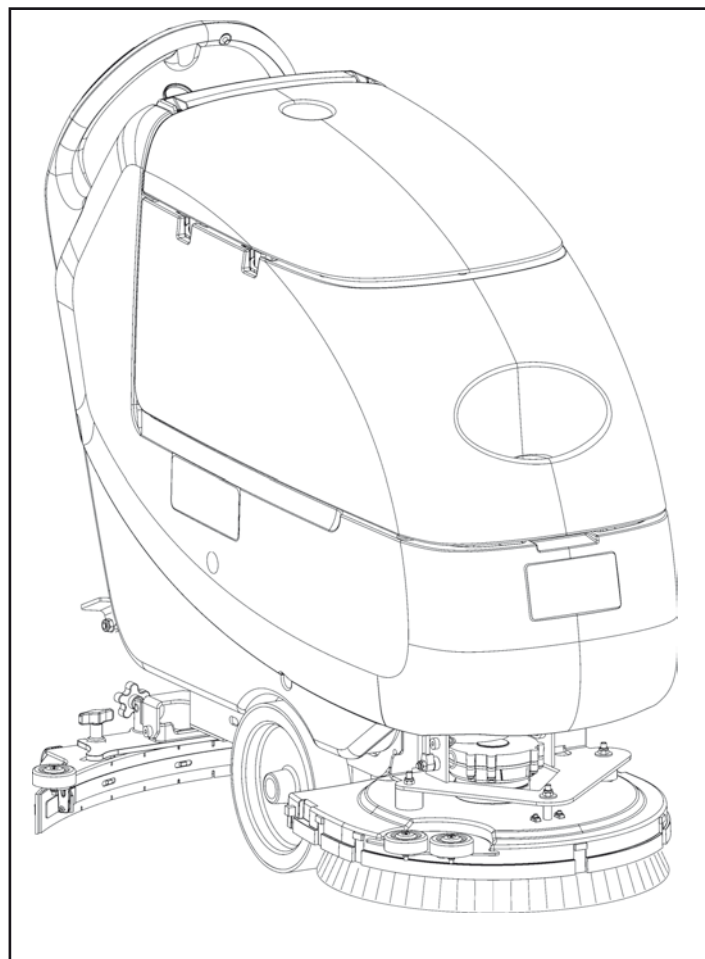



Figure 1

SYMBOLS SHOWN ON THE MACHINE



 **WARNING!**
Carefully read all instructions before performing any procedure.



 **WARNING!**
Do not wash the machine with direct or pressurized water jets.



 **WARNING!**
Do not use the machine on slopes exceeding the specifications.

MACHINE DESCRIPTION

OUTER AND INNER STRUCTURE

(See Fig. 2)

- | | |
|---|---|
| <ul style="list-style-type: none"> A. Control panel B. Handlebar C. Brush/forward gear switch (*). Brush switch (***) D. Speed adjuster (*) E. Battery charger data inspection window F. Battery charger cable G. Battery charger cable holder H. Solution/clean water rear filler neck I. Reverse gear switch J. Squeegee lifting/lowering lever K. Deck lifting/lowering pedal K1. Deck lifting K2. Deck lowering K3. Extra pressure activation (optional) (***) L. Battery connector (red). This connector also works as EMERGENCY switch, to stop immediately all functions. M. Rear steering wheel N. Front wheels on fixed axle. Driving wheels (*) O. Squeegee vacuum hose P. Recovery water drain hose Q. Solution/clean water drain and level check hose R. Deck with one brush/pad-holder S. Deck with two cylindrical brushes T. Brush/pad-holder U. Solution/clean water tank V. Recovery water tank W. Recovery water tank cover X. Can holder Y. Solenoid valve Z. Squeegee AA. Squeegee knobs AB. Squeegee balance adjusting knob AC. Machine straight forward movement adjusting pin AD. Machine forward speed adjusting pin (***) AE. Recovery water tank cover (open) AF. Tank cover gasket AG. Cover movable retaining plate AH. Cover fixed retaining plate (do not remove!) AI. Serial number plate/technical data AJ. Squeegee vacuum hose cleaning hole AK. Vacuum grid with automatic shut-off float AL. Solution/clean water front filler neck AM. Grid filter (optional) AN. Compensation hole AO. Recovery water tank (open) AP. Recovery water drain hose plug AQ. Tank safety cable AR. Vacuum system motor cover AS. Vacuum system motor sound-deadening filter AT. Detergent tank (**) AU. Detergent tank filler plug (**) AV. Detergent tank handle (**) AW. Detergent feed hose (**) AX. Detergent pump (**) AY. Detergent tank - pump connecting hose (**) AZ. Detergent pump holder (**) BA. Batteries | <ul style="list-style-type: none"> BB. Battery caps BC. Solution filter BD. Solution/clean water tap BE. Reference table for detergent proportioning (**) BF. Battery connection diagram <p>(*) Only for FOCUS II L17 - L20 - L20 Cyl. - BOOST L20
 (**) Only for machines with Chemical Mixing System (optional)
 (***) Only for FOCUS II S20</p> |
|---|---|

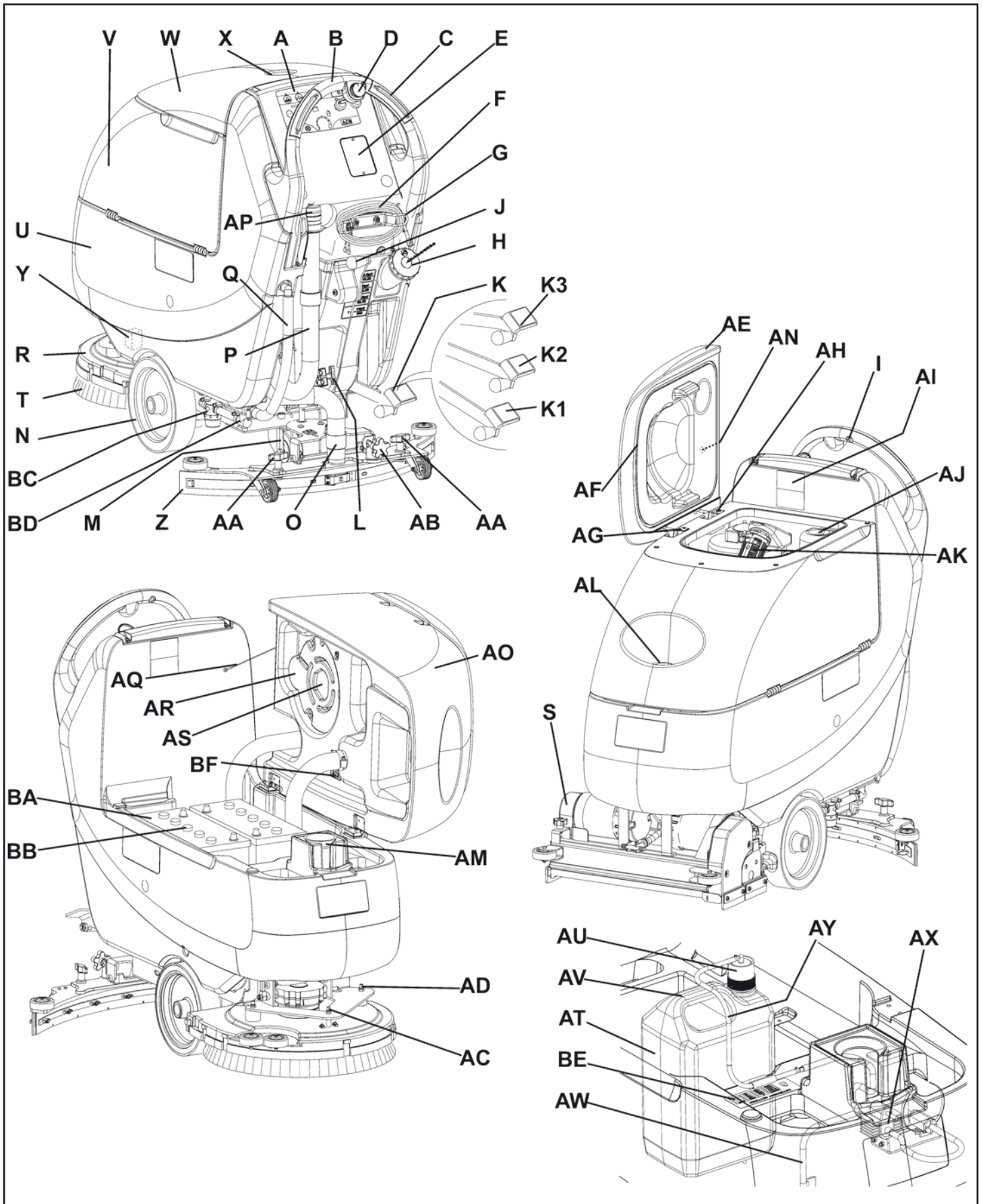


Figure 2

CONTROL PANEL

(See Fig. 3)

- A. Brush/pad-holder and vacuum system switch
- B. Brush/pad-holder and vacuum system switch warning light
- C. Vacuum system switch
- D. Vacuum system switch warning light
- E. Brush/pad-holder release switch
- F. Brush/pad-holder release switch warning light
- G. Detergent flow control knob (optional)
- H. Reverse gear switch
- I. Hour meter (optional)
- J. Ignition key (0 - I)
- K. Battery charge indicator
- L. Charged battery warning light (green)
- M. Semi-discharged battery warning light (yellow)
- N. Discharged battery warning light (red)
- O. Washing water flow control switches

- P. Flow increase switch
- Q. Flow decrease switch
- R. Washing water flow indicator
- S. Brush/forward gear switch (*). Brush switch (**)
- T. Speed adjuster (*)

(*) Only for FOCUS II L17 - L20 - L20 Cyl. - BOOST L20

(**) Only for machines with Chemical Mixing System (optional)

(***) Only for FOCUS II S20

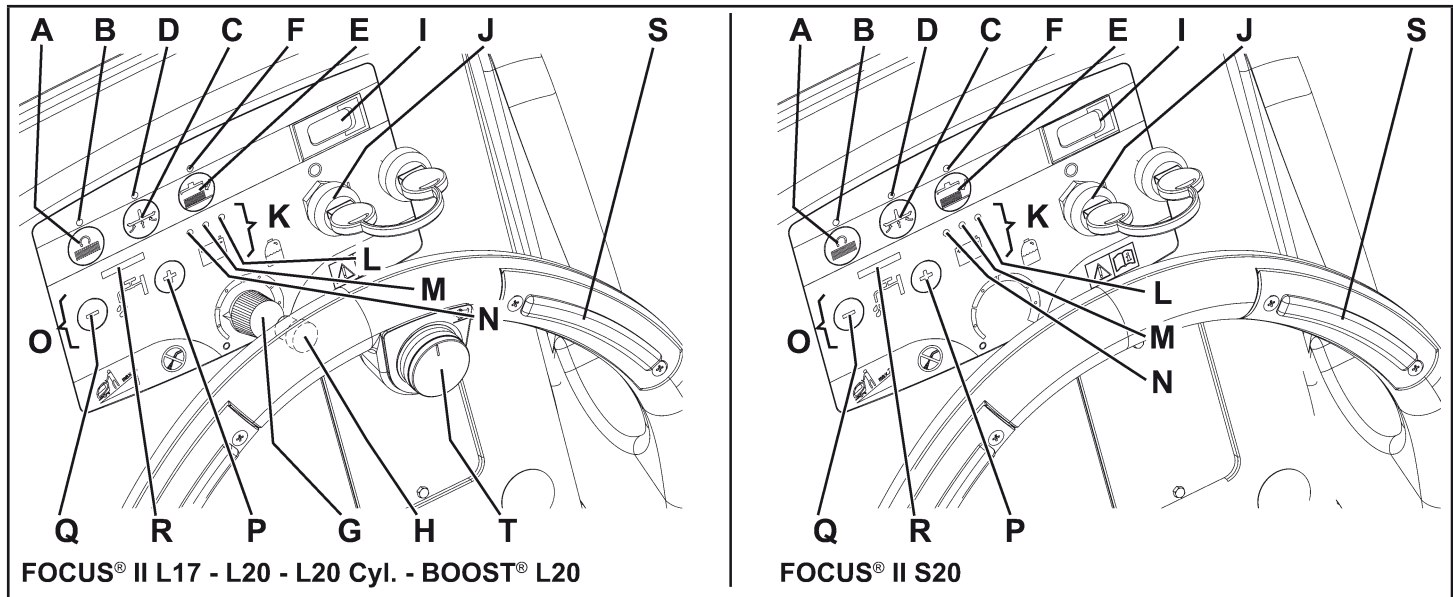


Figure 3

BATTERY CHARGER DATA INSPECTION WINDOW

(See Fig. 4)

- A. Electronic battery charger
- B. Lead (WET) or AGM (GEL) battery selector
- C. Green warning light (ON: the battery charger is on and batteries are charged)

- D. Yellow warning light (ON: the battery charger is on and batteries are semi-discharged)
- E. Red warning light (ON: the battery charger is on and it is charging the batteries)

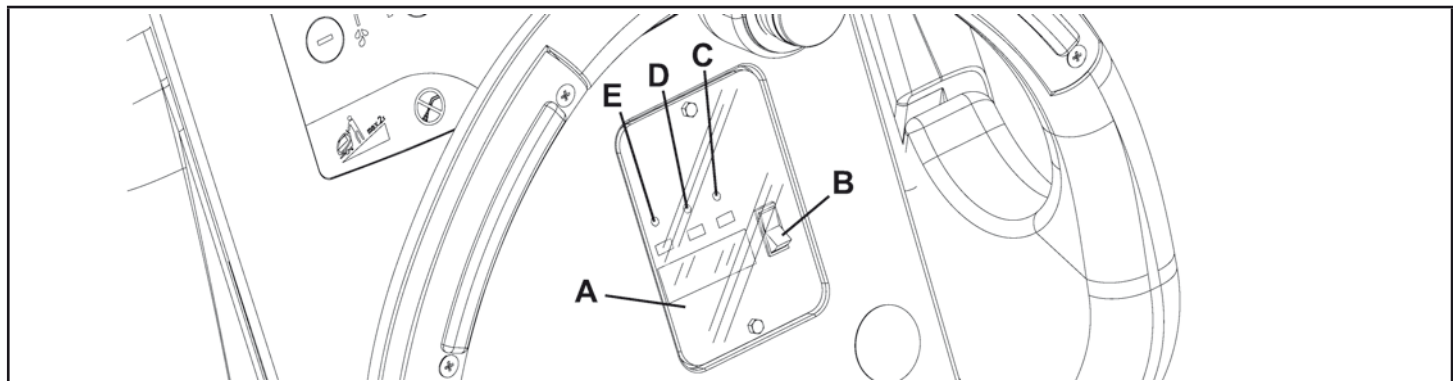


Figure 4

USE**WARNING!**

On some points of the machine there are some adhesive plates indicating:

- **DANGER**
- **WARNING**
- **CAUTION**
- **CONSULTATION**

While reading this Manual, the operator must pay particular attention to the symbols shown on the plates.

Do not cover these plates for any reason and immediately replace them if damaged.

BATTERY CHECK/SETTING ON A NEW MACHINE**WARNING!**

The electric components of the machine can be seriously damaged if the batteries are either improperly installed or connected. The batteries must be installed by qualified personnel only. Set the function electronic board and the built-in battery charger according to the type of batteries used (WET or AGM batteries).

Check the batteries for damage before installation. Disconnect the battery connector (A, Fig. 5) and the battery charger plug (I).

Handle the batteries with great care.

Install the battery terminal protection caps supplied with the machine.

The machine requires two 12 V batteries, connected according to the diagram (A, Fig. 6).

The machine can be supplied in one of the following modes:

A) Batteries (WET or AGM) already installed and charged

1. Check that the batteries are connected to the machine with the connector (A, Fig. 5).
2. Insert the ignition key (B) and turn it to "I".
If the green warning light (C) turns on, the batteries are charged.
If the yellow (D) or red warning light (E) turns on, the batteries must be charged (see the procedure in Maintenance chapter).

B) Without batteries

1. Buy appropriate batteries (see the Technical Data paragraph).
2. For battery choice and installation, apply to qualified battery Retailers.
3. Set the machine and the battery charger according to the type of batteries (WET or AGM), as shown in the next paragraph.

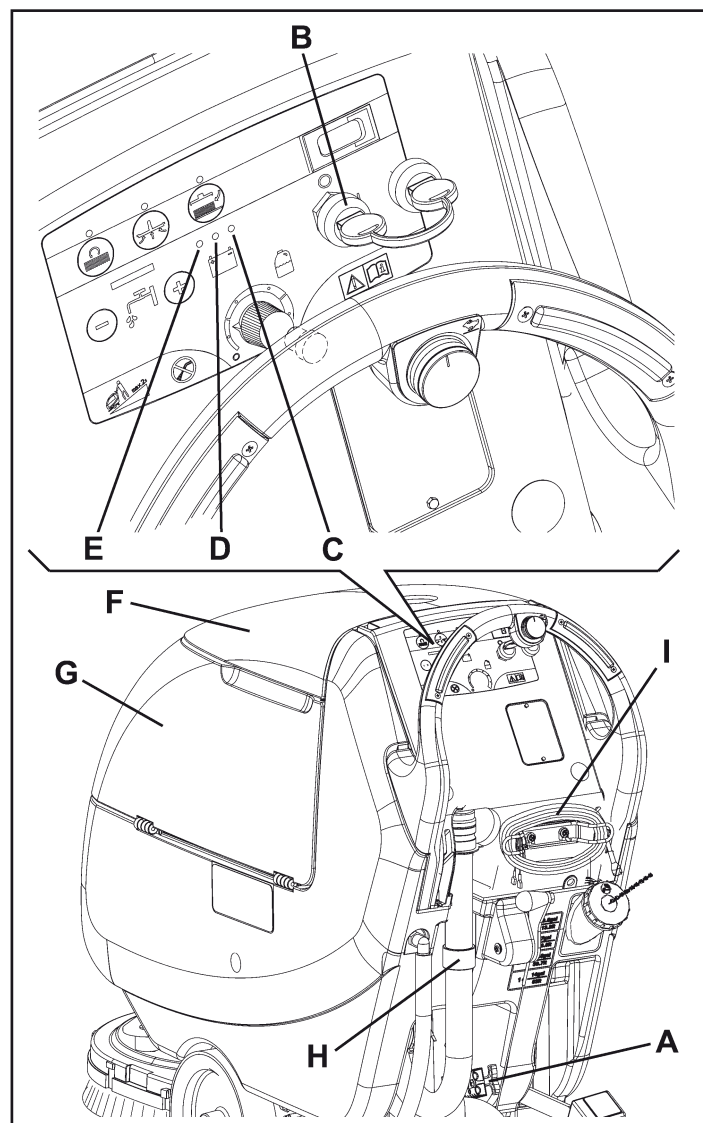


Figure 5

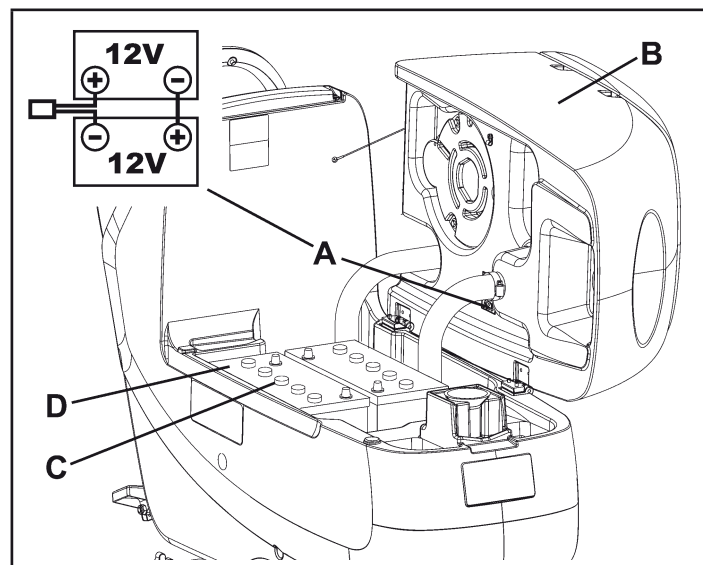


Figure 6

BATTERY INSTALLATION AND BATTERY TYPE SETTING (WET OR AGM)

According to the type of batteries (WET or AGM), set the machine and electronic board of the battery charger as follows:

Machine setting

1. Turn the ignition key (A, Fig. 7) to "I" and in the very first seconds of machine operation pay attention to the following:
 - If the green warning light (B) is flashing, the machine is set to AGM.
 - If the red warning light (C) is flashing, the machine is set to WET.
2. If the setting is to be changed, perform the following procedure.
3. Turn off the machine and turn the ignition key (A) to "0".
4. Press and hold the switches (D) and (E) at the same time, then turn the ignition key (80) to "I".
5. Continue to hold switches (D) and (E) until warning light (B) or (C) starts blinking.
6. Immediately release the switches and press the middle switch (E) to toggle to the other setting. (this must be done while the light is blinking to change the setting). Cycle the key switch to check.

Battery charger setting

7. Remove the battery charger data inspection window screws (F).
8. Remove the inspection window (G).
9. Turn the battery charger selector (H) to WET position for lead batteries, or to GEL position for AGM batteries.
10. Install the inspection window (G) and tighten the screws (F).

Battery installation

11. Open the cover (I) and check that the recovery water tank (J) is empty, otherwise empty it with the drain hose (K).
12. Carefully lift the tank (A, Fig. 8).
13. Install the batteries (B).

Battery charging

14. Charge the batteries (see the procedure in Maintenance chapter).

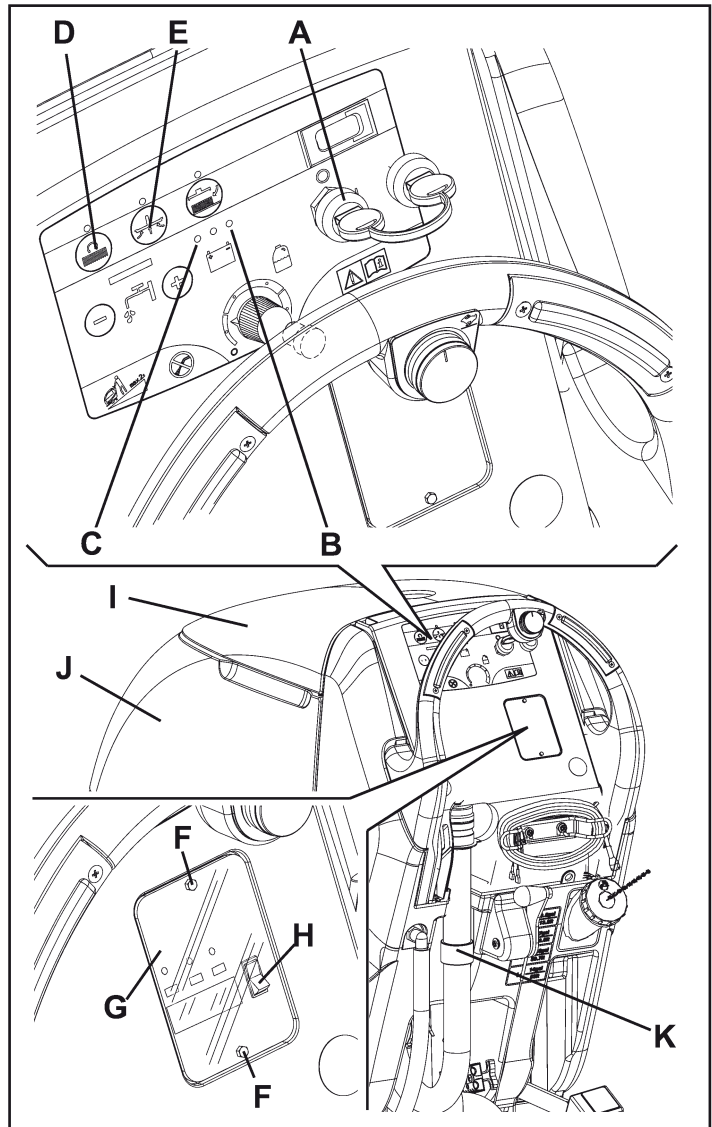


Figure 7

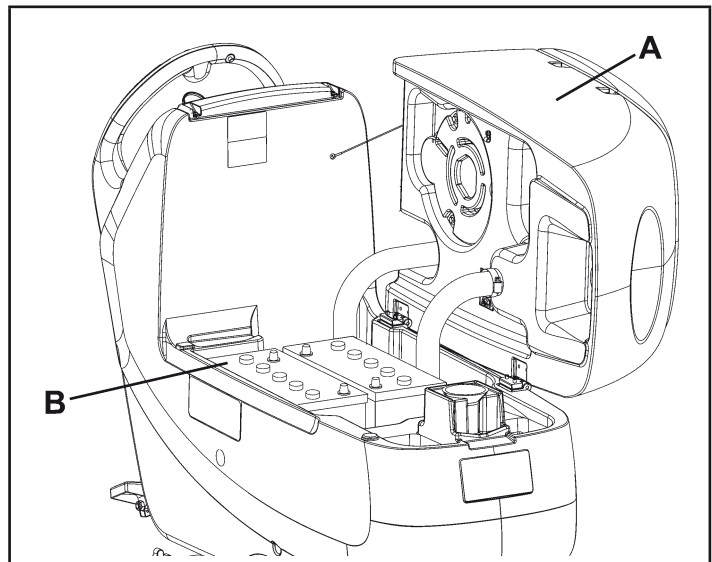


Figure 8

BEFORE START-UP

Brush/pad-holder deck or cylindrical brush deck installation/removal

On the machine it is possible to install/remove either the brush/pad-holder deck (A, Fig. 9) or the cylindrical brush deck (E).

For deck installation/removal see the procedure in Maintenance chapter.

Brush/pad-holder installation/removal

1. According to the kind of cleaning to be performed, the machine can be equipped either with brushes (B) or pad-holders (C) with pads (D) together with the appropriate deck.
2. Insert the ignition key (A, Fig. 10) and turn it to "I".
3. If equipped, turn the speed adjuster (B) to idle by turning it counter-clockwise.
4. Place the brushes (B, Fig. 9) or the pad-holder (C) under the 17 in / 20 in (430 mm / 530 mm) deck (A).
5. Lower the deck on the brushes/pad-holders by pressing the pedal (C, Fig. 10).
6. Turn the ignition key (A) to "I".
7. Press the brush/pad-holder switch (D).
8. Press one of the switches (E) to engage the brush/pad-holder, then release it. If necessary, repeat the procedure until the brushes/pad-holders are engaged.



WARNING!

(Only for FOCUS II L17, FOCUS II L20): Turn the speed adjuster (B, Fig. 10) counter-clockwise to drive the machine at the minimum speed.

To engage the brush/pad-holder press the switch (E) which turns on the brush/pad-holder motor.

9. To remove the brushes/pad-holders, the deck must be lifted by pressing the pedal (C), then press the switch (F) and wait for the brush/pad-holder to fall on the floor. Turn the ignition key (A) to "0".

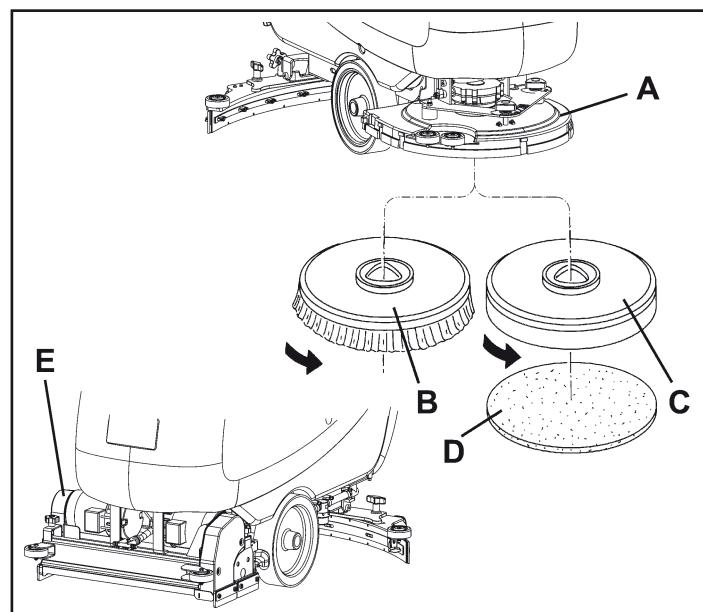


Figure 9

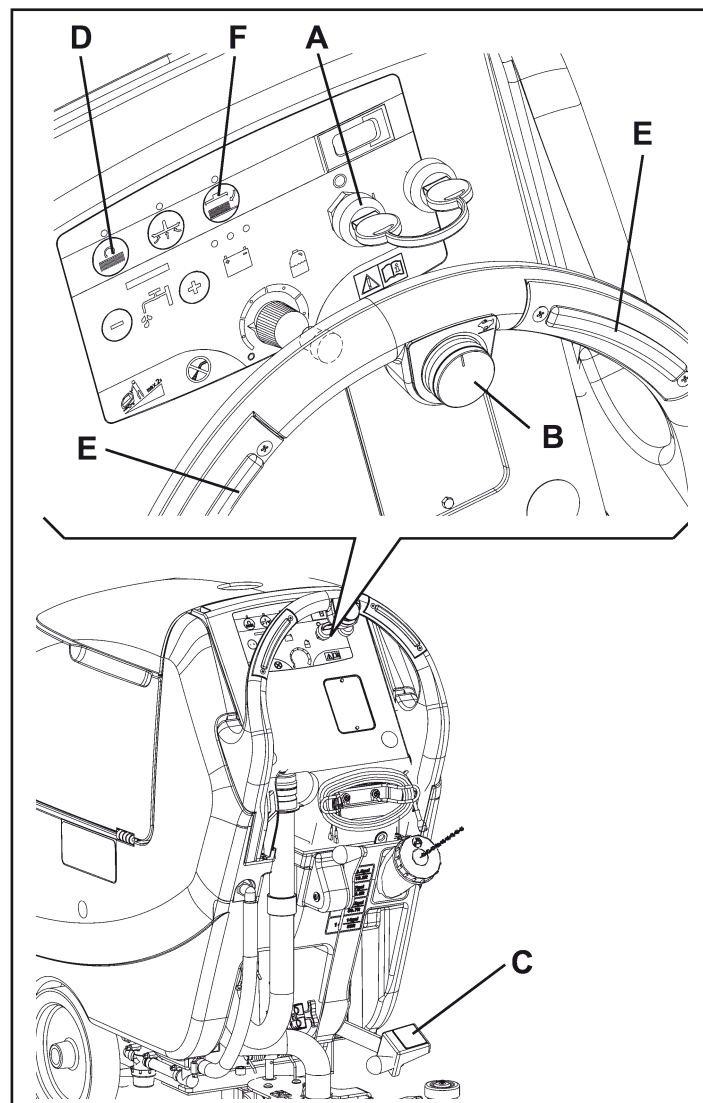


Figure 10

Types of brushes available

17 in (430 mm) models	20 in (508 mm) models
Light Grit	Light Grit
Medium Grit	Medium Grit
Polypropylene	Polypropylene
Lite Poly	Lite Poly

Brush/pad application guide (suggestions only)

Models	Light Grit	Medium Grit	Polypropylene	Lite Poly
General cleaning:				
Concrete				
Terrazzo floor				
Ceramic tiles/quarrestones				
Marble				
Vinyl tiles				
Rubber tiles				

Cylindrical brush installation/removal (only for FOCUS II L20 Cyl.)

1. Turn the ignition key (A, Fig. 11) to "0".
2. Lift the cylindrical brush deck by pressing the pedal (B).
3. Turn the knobs (A, Fig. 12) and remove the doors (B) by pushing them downwards and pressing on the knobs.
4. Install the cylindrical brushes (C).
5. Install the doors (B) and fasten them with the knobs (A).
6. To remove the cylindrical brushes, perform steps 1 to 5 in the reverse order.

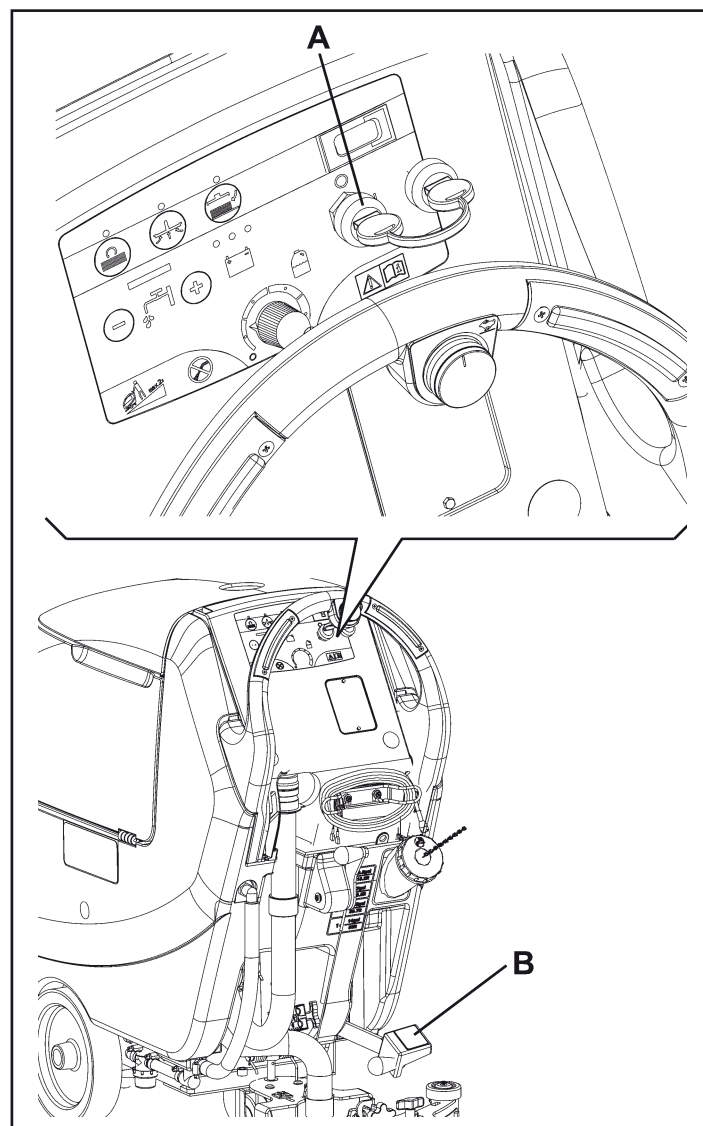


Figure 11

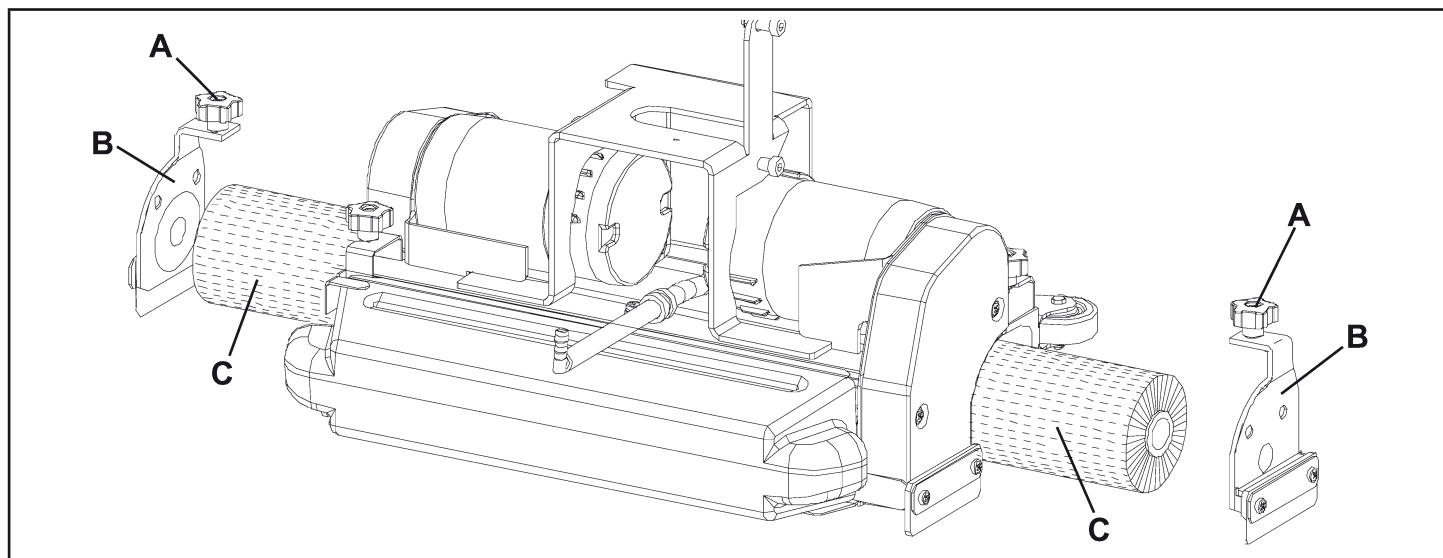


Figure 12

Types of cylindrical brushes available

19.1 in (485 mm) models
Poly Plus 0.40
Polypropylene 0.45
Medium Grit

Cylindrical brush application guide (suggestions only)

Models	Poly Plus	Polypropylene	Medium Grit
General cleaning:			
Concrete			
Terrazzo floor			
Ceramic tiles/quarrrstones			
Marble			
Vinyl tiles			
Rubber tiles			

Squeegee installation

1. Install the squeegee (A, Fig. 13) and fasten it with the knobs (B), then connect the vacuum hose (C) to the squeegee.
2. Adjust the squeegee with the knob (D) so that the rear blade touches the floor along all its length.

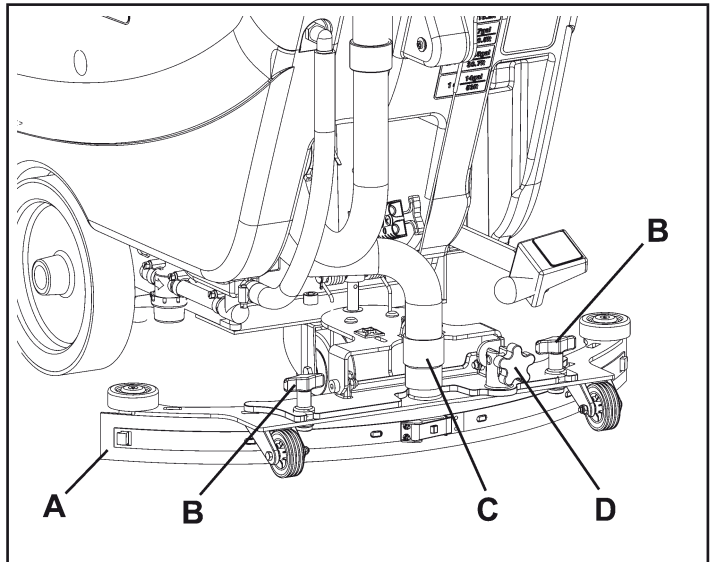


Figure 13

Guide to match squeegees and brush/pad-holder/cylindrical brush decks

Deck model	Squeegee model
Deck with one brush, brush diameter: 17in (430 mm)	Aluminum (A, Fig 13), width 29.9 in (760 mm)
Deck with one brush, brush diameter: 20 in (508 mm)	
Deck with two brushes, brush length: 19,1 in (485 mm)	
Deck with one brush rectangular, brush width: 20 in (508 mm)	

Solution or washing water tank filling



NOTE

If the machine is equipped with Chemical Mixing System (optional) the tank must be filled with clean water, otherwise the tank must be filled with solution.

1. Open the filler neck (A, Fig.14).
2. **(For machines without Chemical Mixing System)**
Use the front filler neck (B) or the rear filler neck (C) to fill the tank (D) with a solution suitable for the work to be performed. Refill to the reference mark "1" of the level check hose (H). Always follow the dilution instructions on the label of the chemical product used to prepare the solution. The solution temperature must not exceed +104°F (+40°C).



WARNING!

Use only low-foam and non-flammable detergents, intended for automatic scrubber applications.

3. **(For machines with Chemical Mixing System)**
Fill the tank (D) with clean water by using the filler neck (B) or the rear filler neck (C). Refill to the reference mark "1" of the level check hose (H). The water temperature must not exceed +104°F (+40°C).

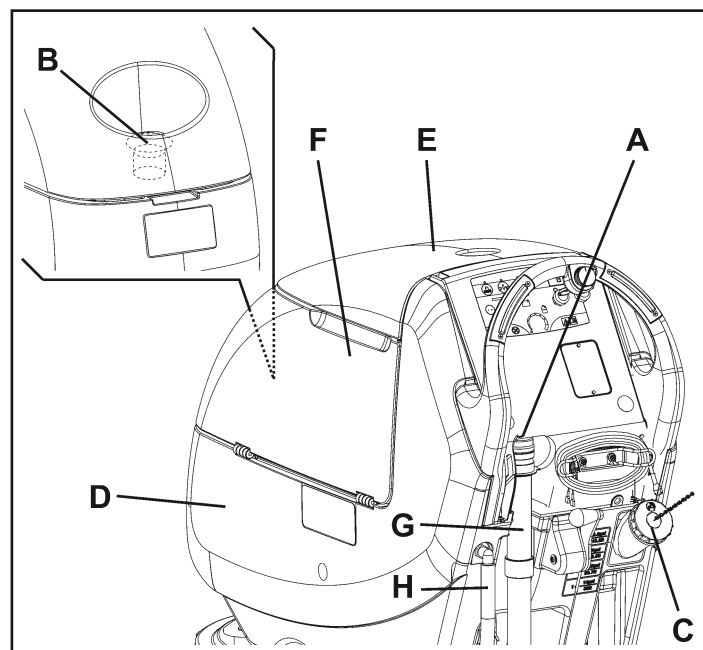


Figure 14

Detergent tank filling (For machines with Chemical Mixing System)

1. Open the cover (E) and check that the recovery water tank (F) is empty, otherwise empty it with the drain hose (G).
2. Carefully lift the tank (A, Fig. 15).
3. Open the cap (B).
4. Replace or fill the jug (C) with any standard gallon container of detergent suitable for the work to be performed (highly concentrated detergents). Do not fill the detergent tank completely, leave a few centimeters from the edge.



WARNING!

Use only low-foam and non-flammable detergents, intended for automatic scrubber applications.



NOTE

To install a new jug container, determine the cap size and if it is the smaller cap, remove the reducing adapter from the hose cap (B). Insert the suction tube into the jug (C). Pushdown firmly on the cap (B) and twist at the same time to put the cap back onto the jug (C). In case of new system, system emptied for cleaning, etc., wait for the hoses to fill up, before starting the Chemical Mixing System.

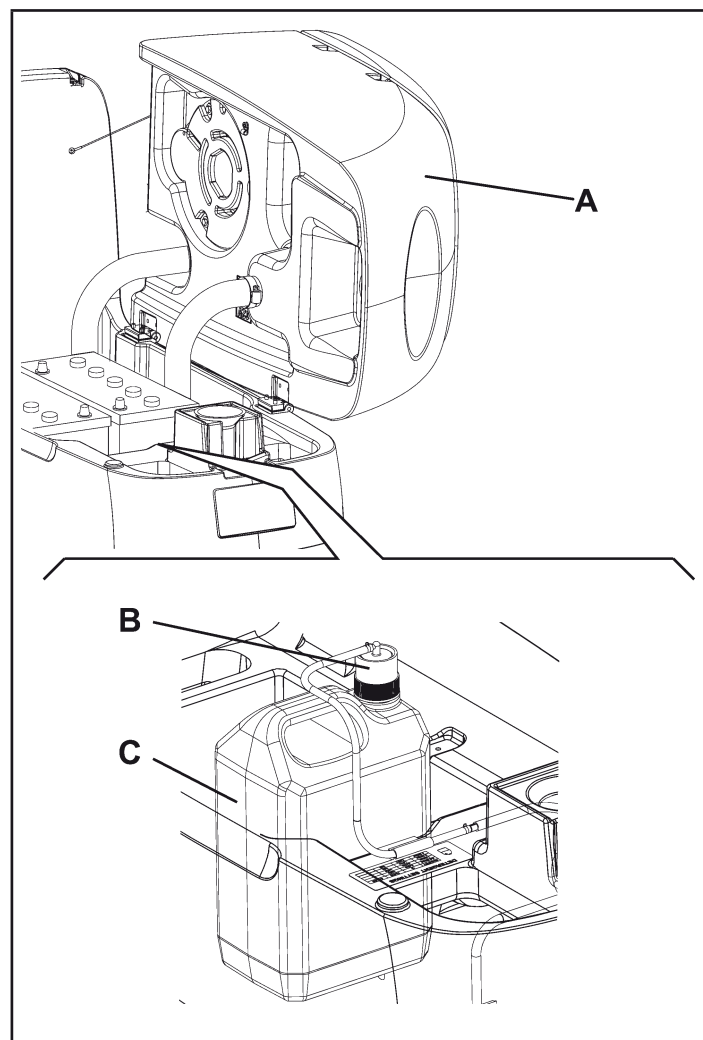


Figure 15

MACHINE START AND STOP

Starting the machine

1. Prepare the machine as shown in the previous paragraph.
2. Insert the ignition key (A, Fig. 16) and turn it to "I".
Check that the green warning light (B) turns on (charged battery).
If the yellow (C) or red warning light (D) turns on, turn the ignition key back to "0" and charge the batteries (see the procedure in Maintenance chapter).
3. Drive the machine to the working area:
 - By pushing it with the hands on the handlebar (E) (only for **FOCUS II S20**).
 - By pushing it with the hands on the handlebar (E) and pressing the switch (F) to move forward, or pressing the switch (F) together with the switch (G) to move backward (only for **FOCUS II L17, FOCUS II L20, FOCUS II L20 Cyl., BOOST L20**).

The forward speed can be adjusted with the adjuster (H).

4. Lower the squeegee (I) with the lever (J).
5. Lower the brush/pad-holder deck (K) by pressing the pedal (L).
6. Press the brush/pad-holder switch (M) and the vacuum system switch (N).
7. Press the washing water flow control switches (O) as necessary, depending on the type of cleaning to be performed.
8. Start cleaning:
 - (Only for **FOCUS II S20**) by pushing the machine with the hands on the handlebar (E) and pressing the switch (F).
 - (Only for **FOCUS II L17, FOCUS II L20, FOCUS II L20 Cyl., BOOST L20**) by pushing the machine with the hands on the handlebar (E) and by pressing the switch (F). If necessary, the forward speed can be adjusted with the adjuster (H).



NOTE

To move the machine forward, press either the left or right switch (F) or both.

Stopping the machine

9. Stop the machine by using the handlebar (E) (Only for **FOCUS II S20**).
Stop the machine by releasing the switches (F) (Only for **FOCUS II L17, FOCUS II L20, FOCUS II L20 Cyl., BOOST L20**).
10. Stop the brushes and the vacuum system by pressing the switch (M). The vacuum system stops after a few seconds.
11. Lift the brush/pad-holder deck (K) by pressing the pedal (L).
12. Lift the squeegee (I) with the lever (J).
13. Turn the ignition key (A) to "0".
14. Make sure that the machine cannot move independently. ù

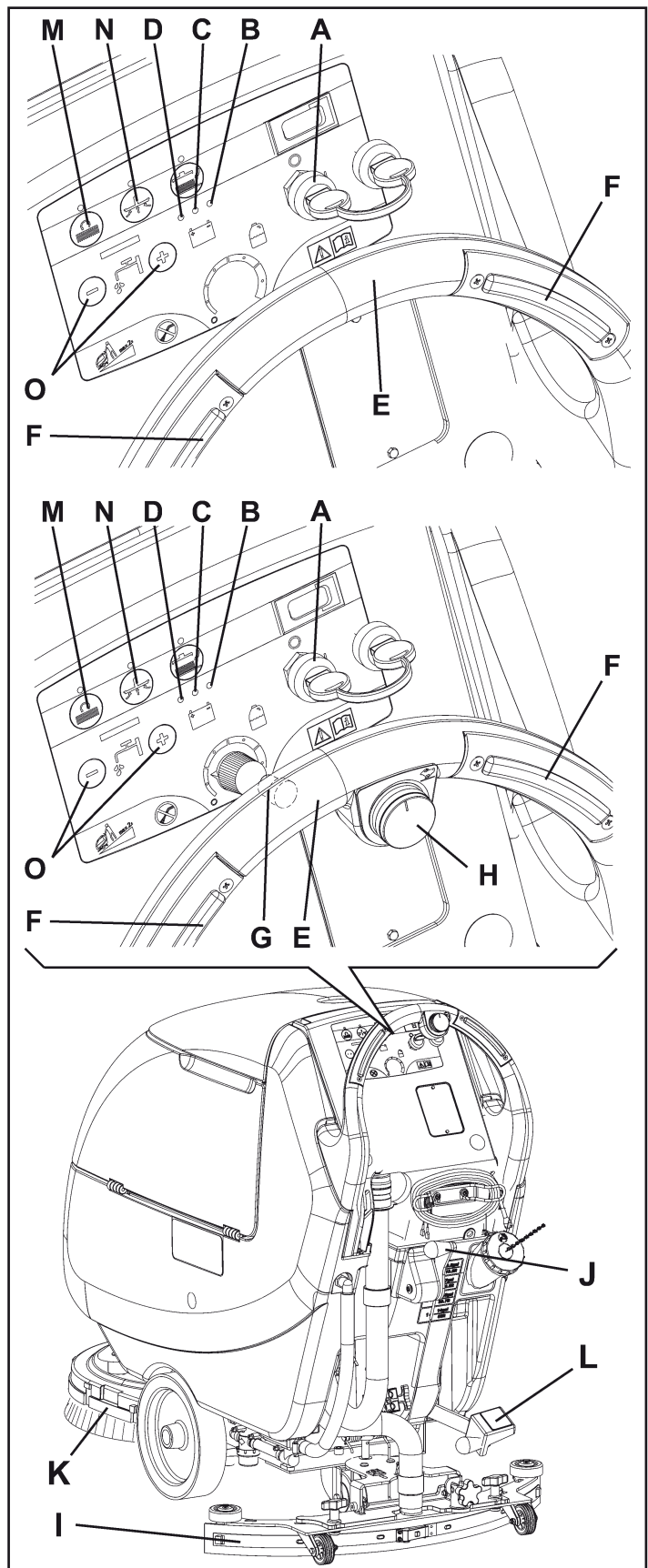


Figure 16

MACHINE OPERATION (SCRUBBING/DRYING)

1. Start the machine as shown in the previous paragraph.
2. If necessary, press the washing water flow control switches (A and B, Fig. 17) as necessary, depending on the type of cleaning to be performed.
3. If necessary, stop the machine and adjust the squeegee with the knob (C) so that the rear blade (D) touches the floor along all its length.

Machine drive controls



CAUTION!

These procedures must be performed by qualified personnel or Clarke personnel only.

The machine speed and forward movement capability depends on the floor type and on the choice of using brush or pad.

These can be adjusted by two screws (B and D, Fig.18), which are on the brush plate, according to the following procedure:

- Loosen the nut (A); when turning the adjusting screw (B) counter-clockwise, the machine moves towards the left; when turning it clockwise the machine moves towards the right.
- (Only for **FOCUS II S20**) loosen the nut (C); when turning the adjusting screw (D) counter-clockwise, the machine speed increases; when turning it clockwise the machine speed decreases.

When the procedure is completed, tighten the nuts (A and/or C).

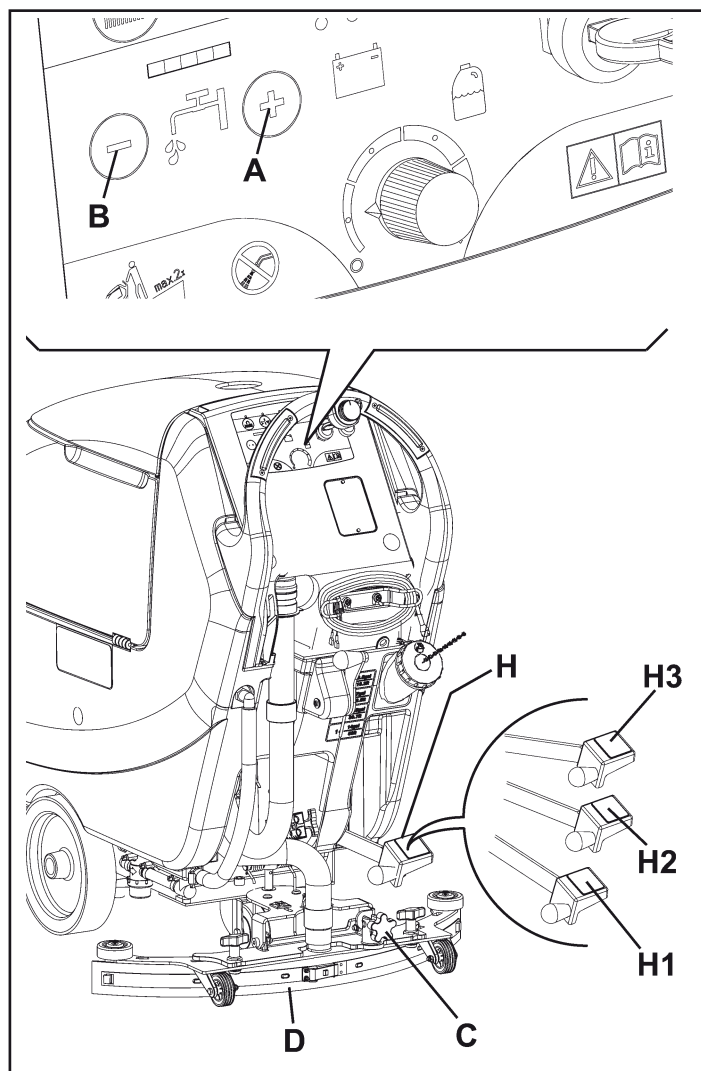


Figure 17

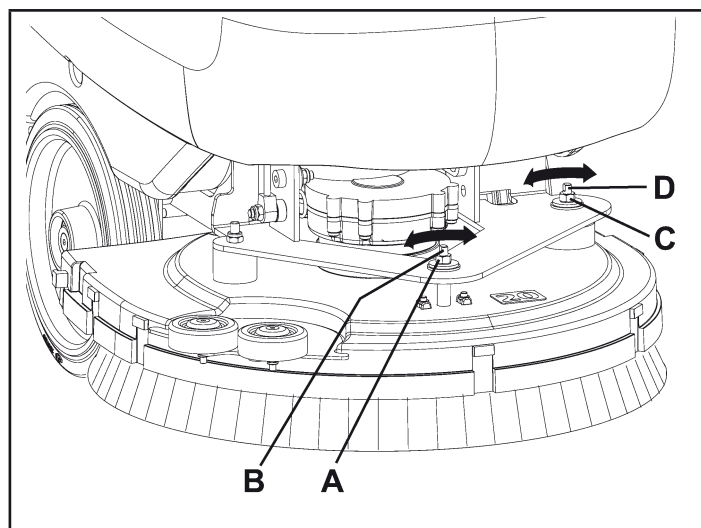


Figure 18



NOTE

For correct scrubbing/drying of floors at the sides of the walls, Clarke suggests to go near the walls with the right side of the machine (A and B, Fig. 19) as shown in the figure.



CAUTION!

To avoid any damage to the floor surface, turn off the brushes/pad-holders when the machine stops in one place, especially when the extra pressure function is on.

Detergent flow adjustment

(For machines with Chemical Mixing System)

1. Turn the knob (A, Fig. 20) clockwise or counter-clockwise to increase or decrease the detergent concentration.
2. The average detergent concentration values, matching the 4 colored areas of the scale (B), are shown in the figure.
3. To set the detergent quantity to zero, fully turn the knob (A) counter-clockwise.



NOTE

The detergent concentration is kept constant even if the washing water flow is changed with the switches (C) or (D).

Working with brush/pad-holder extra pressure function turned on

If the floor proves to be particularly difficult to clean, it is possible to turn on the brush/pad-holder extra pressure function by pressing the pedal (E) to position (E3).



CAUTION!

When the cylindrical brush deck (S, Fig. 2 - Page 9) is installed, the extra pressure function is not enabled.

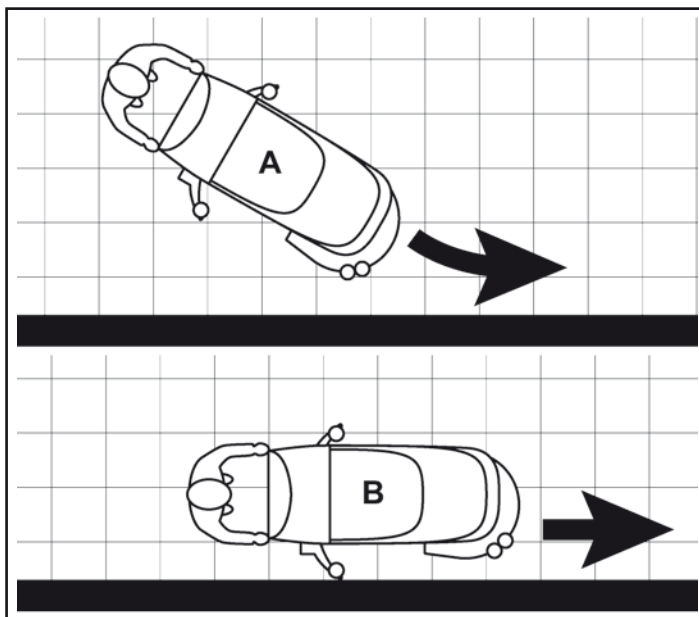


Figure 19

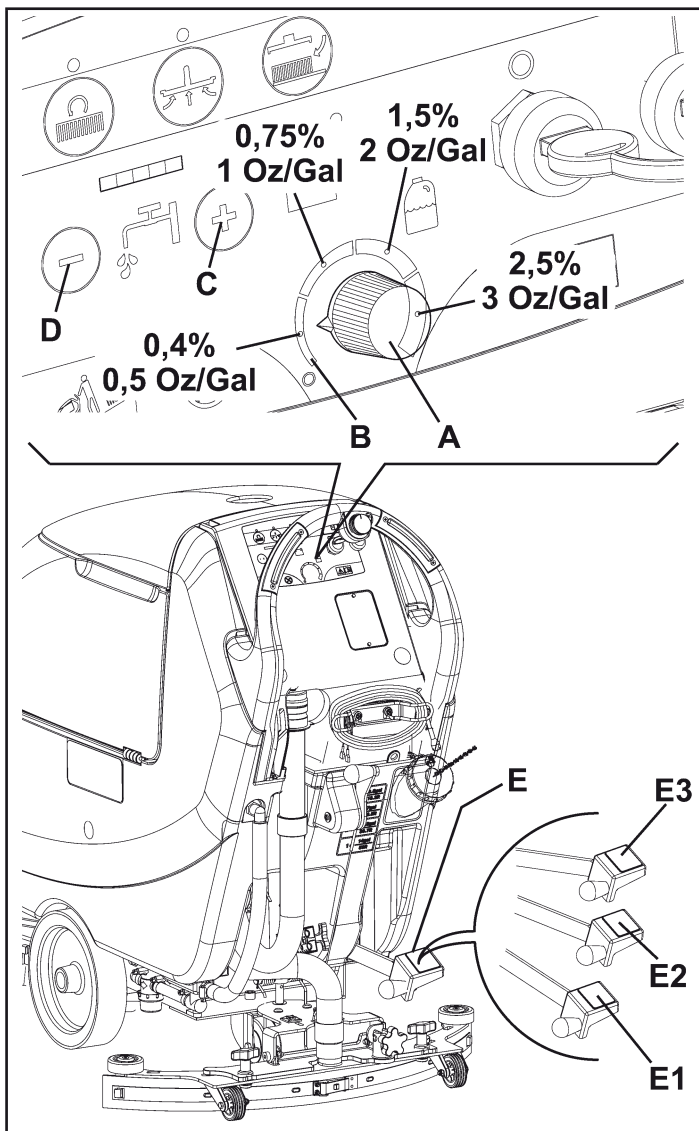


Figure 20

Battery discharge during operation

Until the green warning light (A, Fig. 21) stays on, the batteries allow the machine to work normally. When the green warning light (A) turns off, and the yellow warning light (B) turns on, it is advisable to charge the batteries, because the remaining charge will last for a few minutes (depending on battery characteristics and work to be performed). When the red warning light (C) turns on, batteries are fully discharged. After a few seconds, the brush/pad-holder is automatically tuned off, while the vacuum system and (only for **FOCUS II L17, FOCUS II L20, FOCUS II L20 Cyl., BOOST L20**) the drive system stay on, to finish drying the floor and drive the machine to the appointed recharging area.

CAUTION!

Do not use the machine with discharged batteries, to avoid damaging the batteries and reducing the battery life.

TANK EMPTYING

An automatic float shut-off system (A, Fig. 22) stops the vacuum system when the recovery water tank (B) is full. The vacuum system deactivation is signaled by a sudden increase in the vacuum system motor noise frequency, also the floor has not dried.

CAUTION!

If the vacuum system turns off accidentally (for example, when the float is activated because of a sudden machine movement), to resume the operation: turn off the vacuum system by pressing the switch (D, Fig. 19), then open the cover (C, Fig. 22) and check that the float inside the grid (A) has gone down to the water level. Then close the cover (C) and turn on the vacuum system by pressing the switch (D, Fig. 19).

When the recovery water tank (B, Fig. 21) is full, empty it according to the following procedure.

Recovery water tank emptying

1. Stop the machine.
2. Lift the brush/pad-holder deck (E, Fig. 21) by pressing the pedal (F).
3. Lift the squeegee (G) with the lever (H).
4. Drive the machine to the appointed disposal area.
5. Empty the recovery water tank with the hose (I). Then, rinse the tank (B, Fig. 22) with clean water.

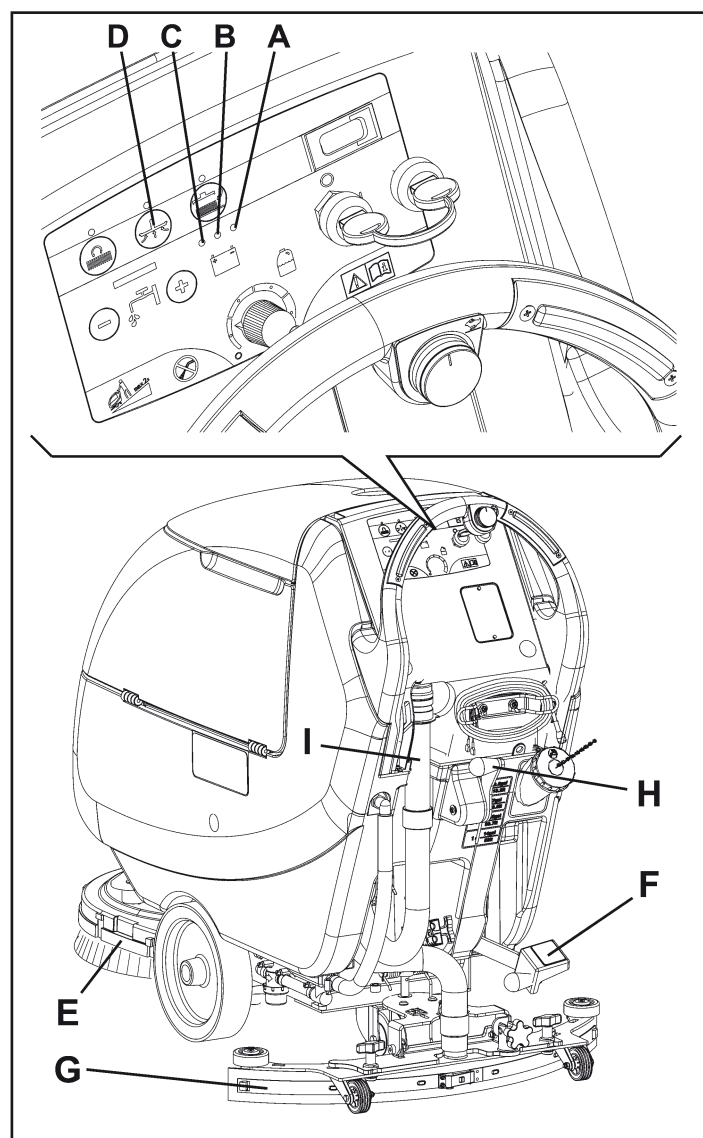


Figure 21

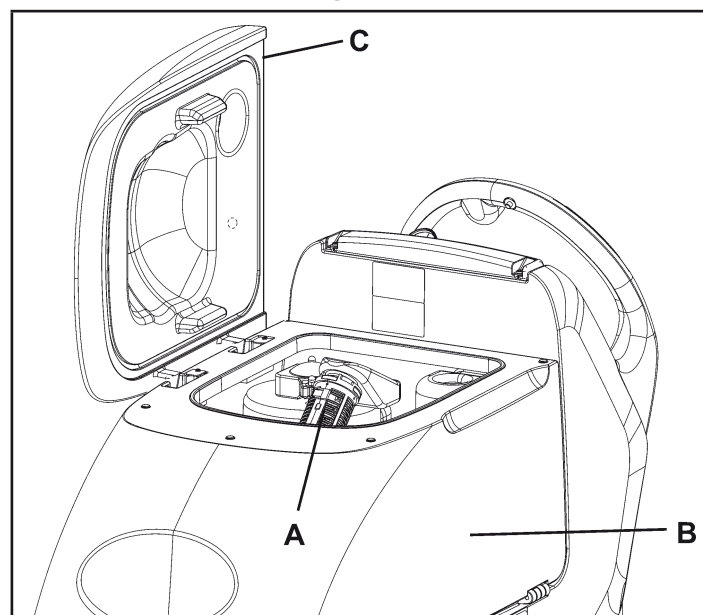


Figure 22

Solution/clean water tank emptying

6. Perform steps 1 to 4.
7. Empty the solution tank with the hose (A, Fig. 23). After working, rinse the tank with clean water.

Cylindrical brush debris container emptying (only for cylindrical brush deck)

8. Stop the machine.
9. Lower the cylindrical brush-holder deck and remove the debris container (A, Fig. 24) by pulling it on one side with the handle (B).
10. Empty and wash the debris container (A), and then install it by engaging it on the fasteners.

AFTER USING THE MACHINE

After working, before leaving the machine:

1. Remove the brushes/pad-holders as shown on pages 13 and 15.
2. Empty the tanks (B and C, Fig. 23) and the debris container (A, Fig. 24) as shown in the previous paragraph.
3. Perform the daily maintenance procedures (see the Maintenance chapter).
4. Store the machine in a clean and dry place, with the brushes/pad-holders and the squeegee lifted or removed.

MACHINE LONG INACTIVITY

If the machine is not going to be used for more than 30 days, proceed as follows:

1. Perform the procedures shown in After Using the machine paragraph.
2. Disconnect the battery connector (D, Fig. 23).

FIRST PERIOD OF USE

After the first 8 hours, check the machine fastening and connecting parts for proper tightening and check the visible parts for wear and leakage.

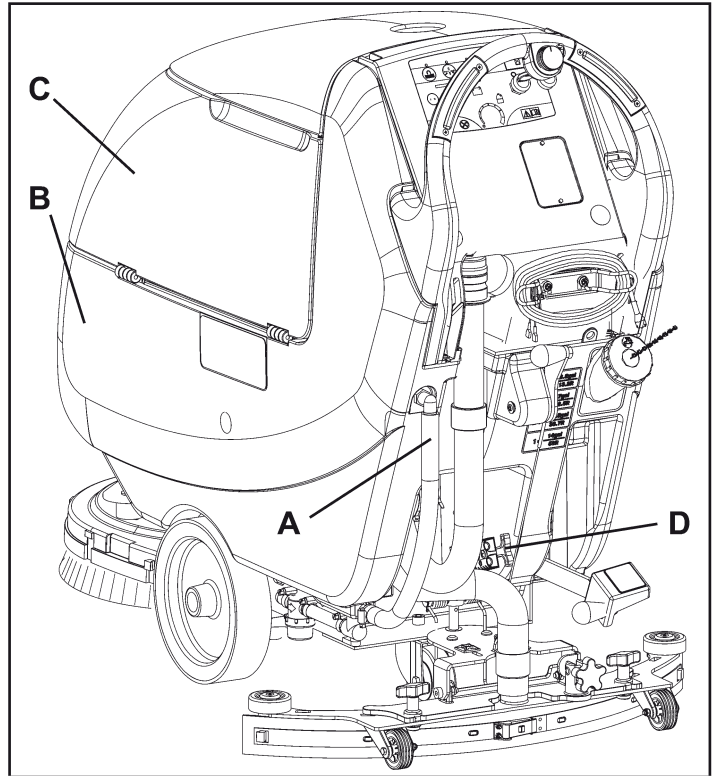


Figure 23

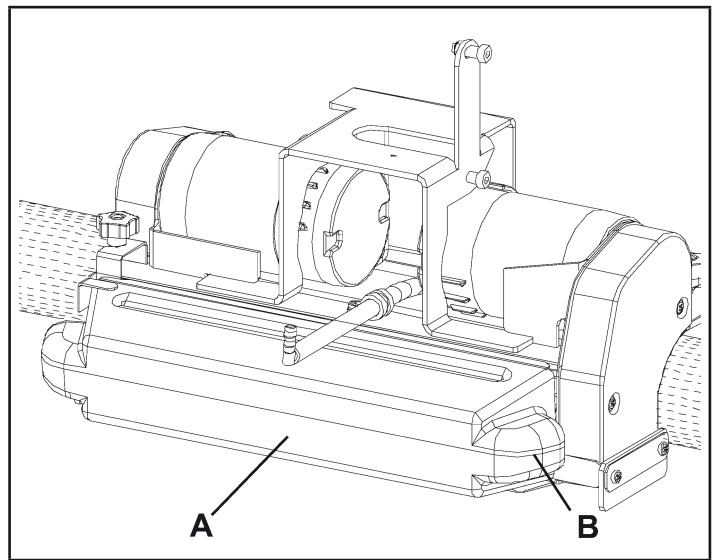


Figure 24

MAINTENANCE



WARNING!

The lifespan of the machine and its maximum operating safety are ensured by correct and regular maintenance.



WARNING!

All scheduled or extraordinary maintenance procedures must be performed by qualified personnel, or by an authorized Service Center.



WARNING!

The procedures must be performed with the machine off and the batteries disconnected. Moreover, read carefully the instructions in the Safety chapter before performing any maintenance procedure.

The following table provides the scheduled maintenance. The intervals shown may vary according to particular working conditions, which are to be defined by the person in charge of the maintenance.

This Manual describes only the easiest and most common maintenance procedures.

For other maintenance procedures shown in the Scheduled Maintenance Table, refer to the Service Manual that can be consulted at any Service Center.

SCHEDULED MAINTENANCE TABLE

Procedure	Daily, after using the machine	Weekly	Every six months	Yearly
Battery charging				
Squeegee cleaning				
Brush/pad cleaning				
Tank and vacuum grid with float cleaning, and cover gasket check				
Squeegee blade check and replacement				
Solution/clean water filter cleaning				
Vacuum system motor cleaning				
WET battery fluid level check				
Screw and nut tightening check			(1)	
Brush/pad-holder motor carbon brush check or replacement				(2)
Vacuum system motor carbon brush check or replacement				(2)
Drive system motor carbon brush check or replacement (Only for FOCUS II L17, FOCUS II L20, FOCUS II L20 Cyl., BOOST L20)				(2)

(1) And after the first 8 working hours.

(2) This maintenance procedure must be performed by Clarke authorized Service Center.

SQUEEGEE CLEANING



NOTE

The squeegee must be clean and its blades must be in good conditions in order to get a good drying.



CAUTION!

It is advisable to wear protective gloves when cleaning the squeegee because there may be sharp debris.

1. Drive the machine on a level floor.
2. Turn the ignition key (A, Fig. 25) to "0".
3. Lower the squeegee (B) with the lever (C).
4. Loosen the knobs (D) and remove the squeegee (B).
5. Disconnect the vacuum hose (E) from the squeegee.
6. Clean the steel or the aluminum squeegee (Fig. 26). Clean the compartments (A) and the hole (B) especially. Check the front blade (C) and the rear blade (D) for integrity, cuts and tears; if necessary replace them (see the procedure in the following paragraph).
7. Assemble the squeegee in the reverse order of disassembly.

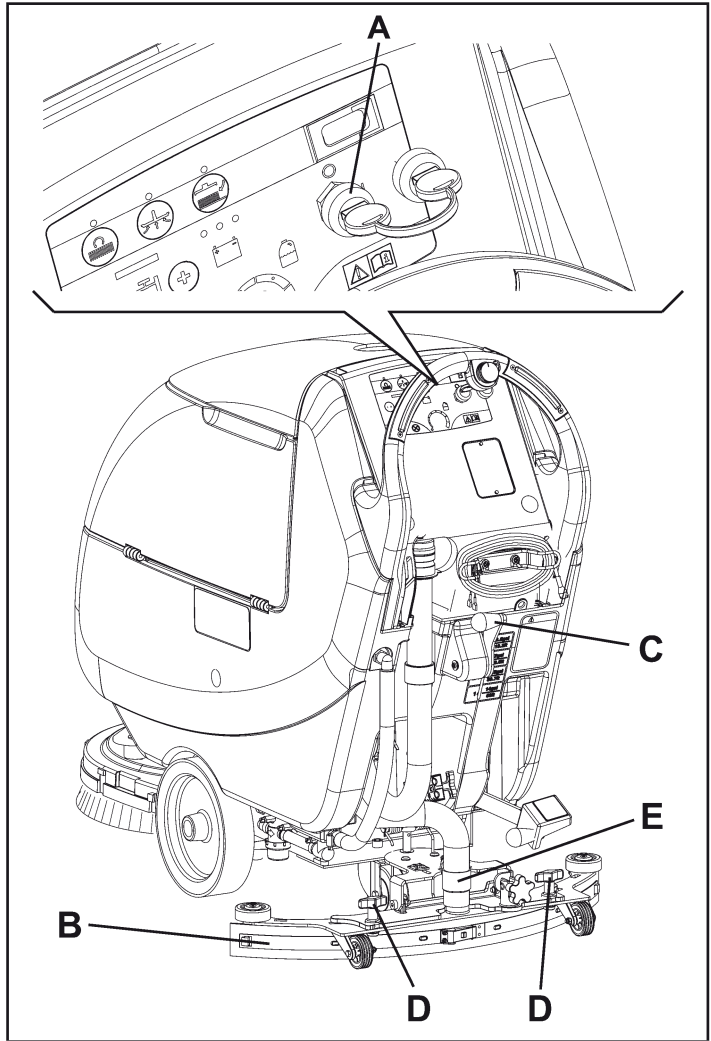


Figure 25

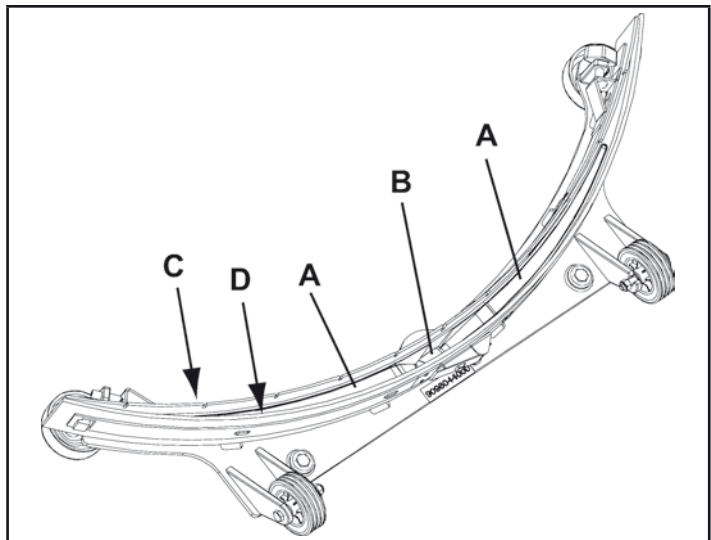


Figure 26

SQUEEGEE BLADE CHECK AND REPLACEMENT

1. Clean the steel or the aluminum squeegee, as shown in the previous paragraph.
2. Check that the edges (E, Fig. 28) of the front blade (C) and the edges (F) of the rear blade (D) lay down on the same level, along their length; if necessary adjust their height according to the following procedure:
 - Remove the tie rod (G), disengage the fasteners (M) and adjust the rear blade (D), then engage the fasteners (M) and install the tie rod (G).
 - Loosen the knobs (I) and adjust the front blade (C), then tighten the knobs.
3. Check the front blade (C) and rear blade (D) for wear, cuts and tears; if necessary replace them according to the following procedure. Check that the front corner (J) of the rear blade (D) is not worn; if necessary, overturn the blade to replace the worn corner with an integral one. If the other corners are worn too, replace the blade according to the following procedure:
 - Remove the tie rod (G), disengage the fasteners (M) and remove the retaining strip (K), then replace/overturn the rear blade (D). Assemble the blade in the reverse order of disassembly.
 - Unscrew the knobs (I) and remove the retaining strip (L), then replace the front blade (C). Assemble the blade in the reverse order of disassembly.

After the blade replacement (or overturning), adjust the height as shown in the previous step.

4. Connect the vacuum hose (A, Fig. 27) to the squeegee.
5. Install the squeegee (B) and screw down the knobs (C).
6. If necessary, adjust the squeegee balance adjusting knob (D).

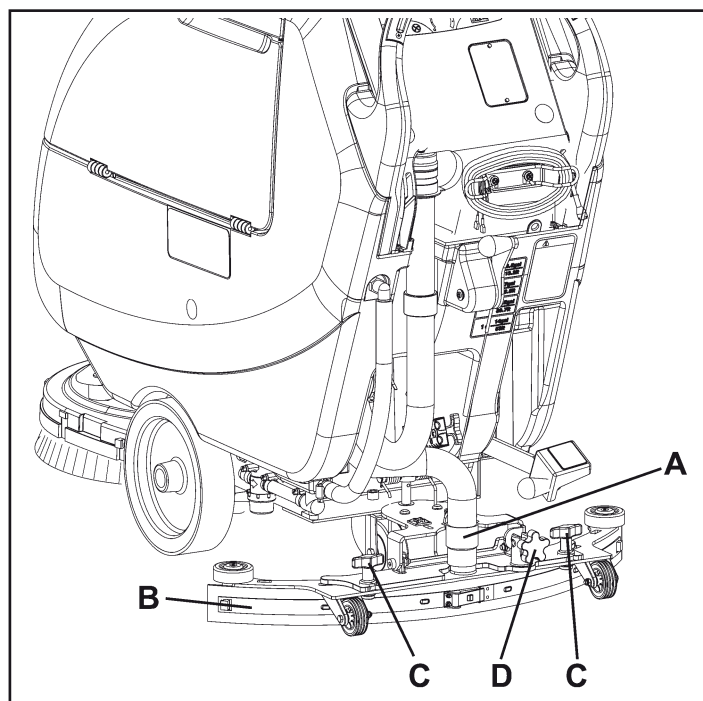


Figure 27

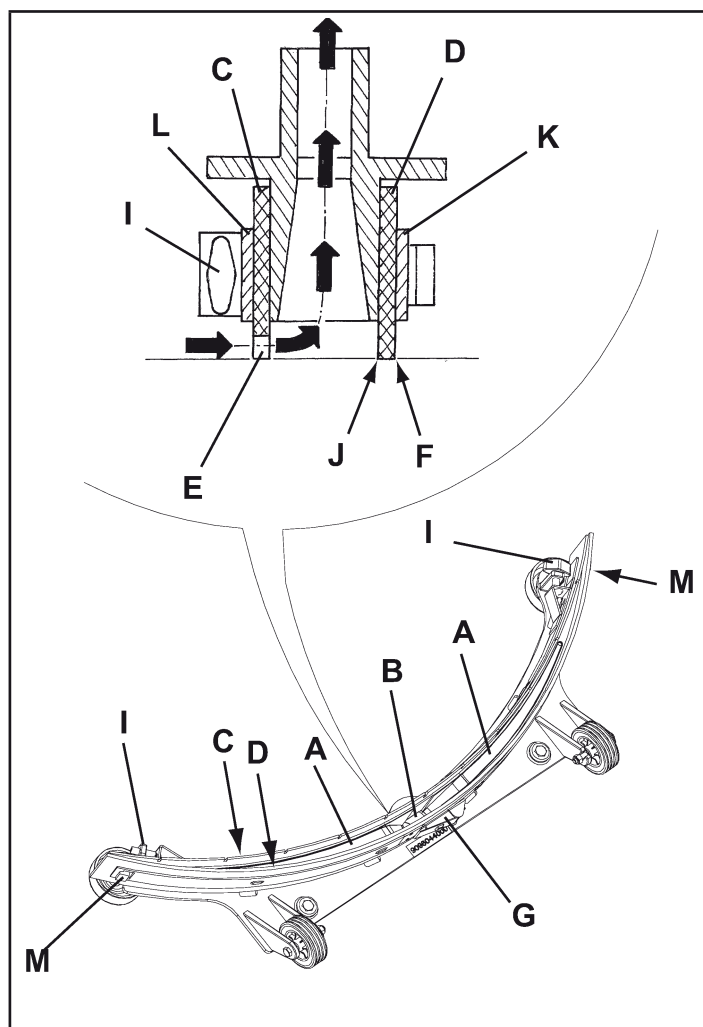


Figure 28

BRUSH/PAD CLEANING



CAUTION!

It is advisable to wear protective gloves when cleaning the brush/pad because there may be sharp debris.

1. Remove the brushes/pads from the machine, as shown in the Use chapter.
 2. Clean and wash the brushes/pads with water and detergent.
 3. Check that the brushes/pads are in working condition and not excessively worn; if necessary replace them.
 4. Lower the cylindrical brush-holder deck and remove the debris container (A, Fig. 29) by pulling it on one side with the handle (B).
- Empty and wash the debris container (A), and then install it by engaging it on the inner fasteners.

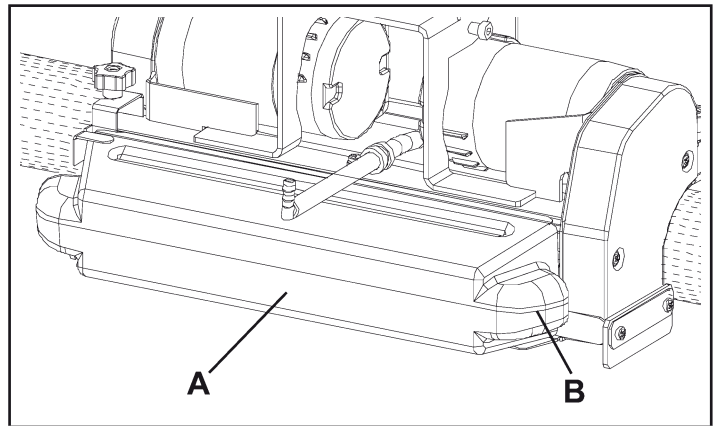


Figure 29

VACUUM SYSTEM MOTOR FILTER CLEANING

1. Drive the machine on a level floor.
2. Turn the ignition key (A, Fig. 30) to "0".
3. Lift the recovery water tank (B).
4. If necessary, drain the water from the tank in order to make the filter visible.
5. Check that the pre-filter (C) is clean. If necessary clean it with water and compressed air, then install it.
6. Perform steps 1, 2 and 3 in the reverse order.

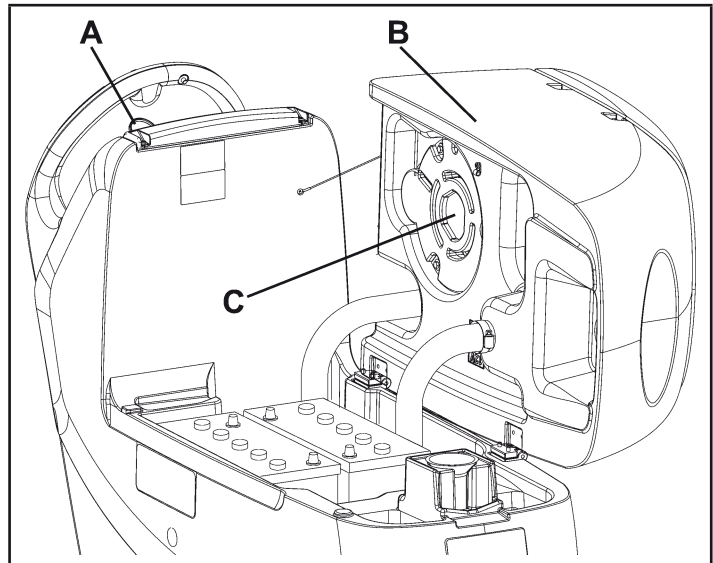


Figure 30

SOLUTION/CLEAN WATER FILTER CLEANING

1. Drive the machine on a level floor.
2. Turn the ignition key (A, Fig. 30) to "0".
3. Close the solution/clean water tap (A, Fig. 31) under the machine, behind the right rear wheel. The tap (A) is closed when it is on the position (B) and it is open when it is on the position (C).
4. Remove the transparent cover (D), then remove the filter strainer (E). Clean and install them on the support (F).



NOTE

The filter strainer (E) must be correctly positioned on the housing (G) of the support (F).

5. Open the tap (A).

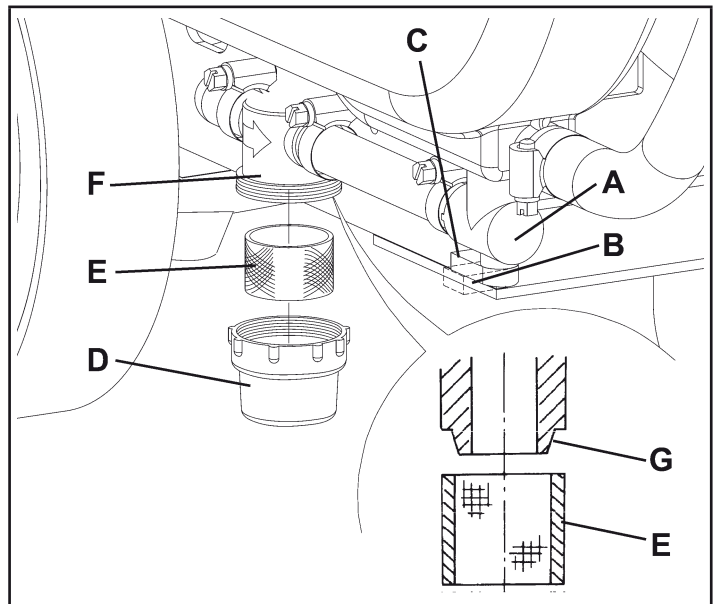


Figure 31

TANK AND VACUUM GRID WITH FLOAT CLEANING, AND COVER GASKET CHECK

1. Drive the machine to the appointed disposal area.
2. Turn the ignition key (A, Fig. 32) to "0".
3. Open the tank cover (A, Fig. 33) to position (L).
4. Wash with clean water the cover (A), the tanks (B and C) and the vacuum grid with automatic shut-off float (D).
5. Drain the water from the tanks with the hoses (B and C, Fig. 32).
If necessary, disengage the fasteners (E, Fig. 33) and open the grid (D); recover the float (F), clean all the components and then reinstall them.
6. Check the tank cover gasket (G) for wear.



NOTE

The gasket (G) creates vacuum in the tank that is necessary for vacuuming the recovery water.

If necessary replace the gasket (G) by removing it from its housing (H). When assembling the new gasket, install the joint (I) in the rear central area, as shown in the figure.

7. Check that the seating surface (J) of the gasket (G) is integral and adequate for the gasket itself.



NOTE

The hole (K), allowing to compensate the air in the cover air gap, contributes to create vacuum in the tank.

8. Close the cover (A).

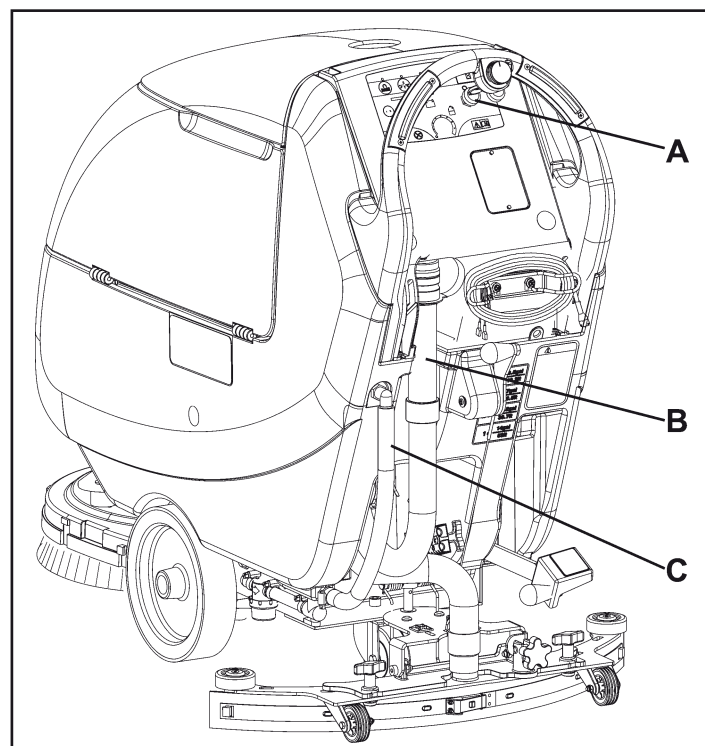


Figure 32

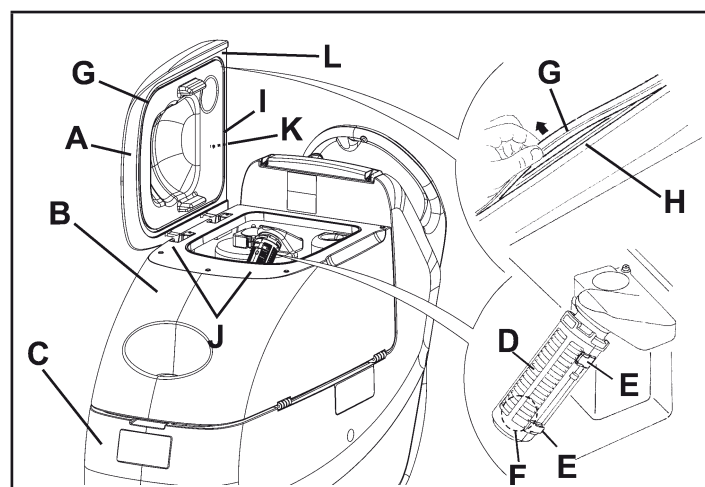


Figure 33

DETERGENT TANK CLEANING

(For machines with Chemical Mixing System)

Clean the detergent tank (C, Fig. 35) as shown below:

1. Drive the machine to the appointed disposal area.
2. Turn the ignition key (A, Fig. 34) to "0".
3. Open the cover (B) and check that the recovery water tank (C) is empty; if necessary empty it with the drain hose (D). Close the cover (B).
4. Carefully lift the tank (C).
5. Unscrew the plug (A, Fig. 35) and disconnect the hose (B) from the tank (C).
6. Remove the tank.
7. Wash the tank in the appointed disposal area.
8. Install the tank (C) and connect the hose (B).
9. After draining the detergent tank, drain the Chemical Mixing System too by running the system with clean water only.

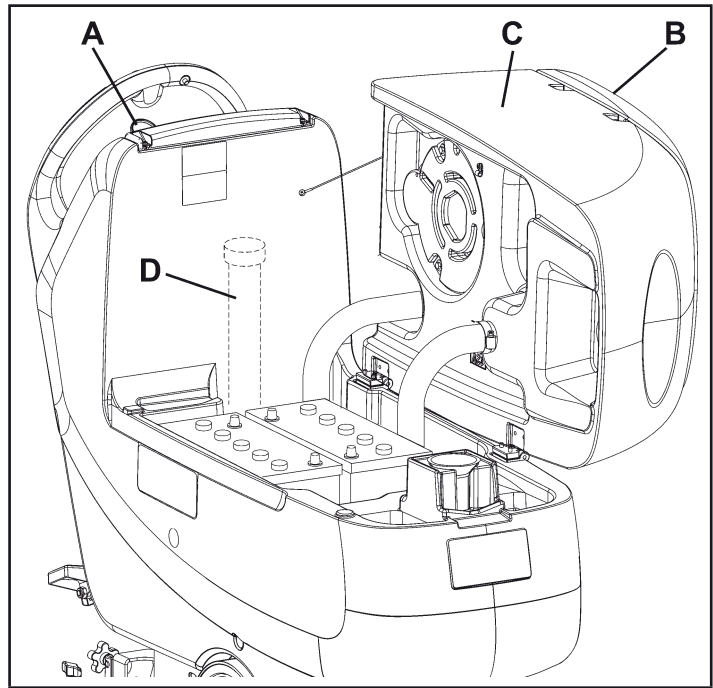


Figure 34

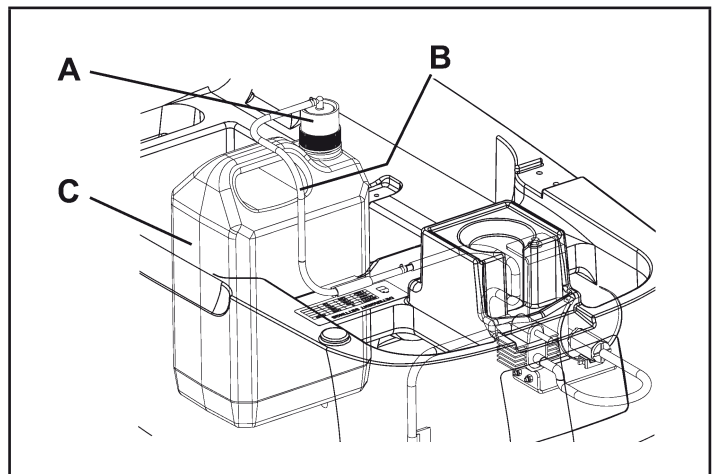


Figure 35

BRUSH/PAD-HOLDER/CYLINDRICAL BRUSH DECK DISASSEMBLY/ASSEMBLY

On the machine it is possible to install/remove either the brush/pad-holder deck (R, Fig. 2 - Page 9) or the cylindrical brush deck (S, Fig. 2 - Page 9).

Disassembly

1. Drive the machine on a level floor.
2. Remove the brushes/pad-holders as shown on pages 13 and 15. Do not remove the cylindrical brushes.
3. Lower the brush/pad-holder deck by pressing the pedal.
4. If equipped, remove the cotter pins (B, Fig. 36) and the gas spring (A).
5. Disconnect the brush/pad-holder motor electrical connection (D).
6. Disconnect the solution hose union (E).
7. Remove the screws (C), then remove the brush/pad-holder deck (F).

Assembly

8. Assemble the components in the reverse order of disassembly, and pay particular attention to the following:
 - When the machine is equipped with the cylindrical brush deck (S, Fig. 2 - Page 9), the gas spring (A, Fig. 36) must not be installed.

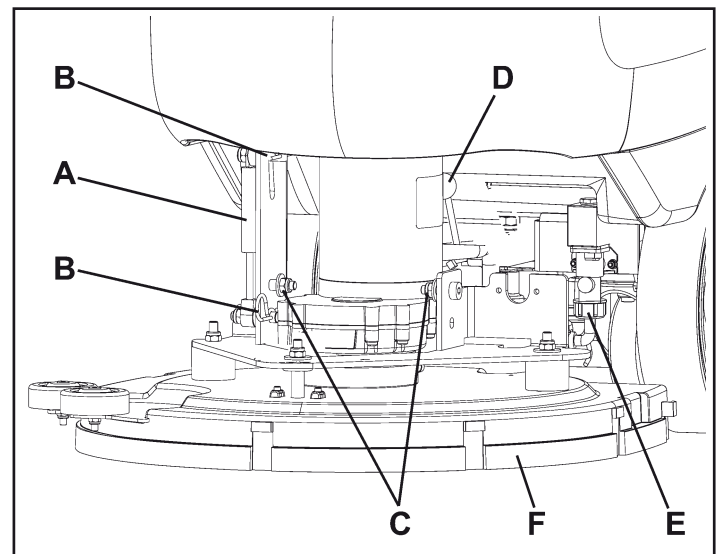


Figure 36

BATTERY CHARGING



NOTE

Charge the batteries when the yellow (A, Fig. 37) or red warning light (B) turns on, or when finishing cleaning.



CAUTION!

Keeping the batteries charged make their life last longer.



CAUTION!

When the batteries are discharged, charge them as soon as possible, as that condition makes their life shorter. Check for battery charge at least once a week.



WARNING!

WET battery charging produces highly explosive hydrogen gas. Charge the batteries in well-ventilated areas and away from naked flames. Do not smoke while charging the batteries. Keep the tank open while charging the batteries.



WARNING!

Pay careful attention when charging the batteries as there may be battery fluid leakages. The battery fluid is corrosive. If it comes in contact with skin or eyes, rinse thoroughly with water and consult a physician.

Preliminary procedures

1. Open the cover (A, Fig. 38) and check that the recovery water tank (B) is empty, otherwise empty it with the drain hose (C).
2. Drive the machine to the appointed recharging area.
3. Turn the ignition key (C, Fig. 37) to "0".
4. Carefully lift the tank (B, Fig. 38).
5. For WET batteries only:
 - Check the level of electrolyte inside the batteries (D); if necessary, top up through the caps (E).
 - Leave all the battery caps (E) open for next charging.
 - If necessary, clean the upper surface of the batteries (D).
6. Charge the batteries according to the following procedure.

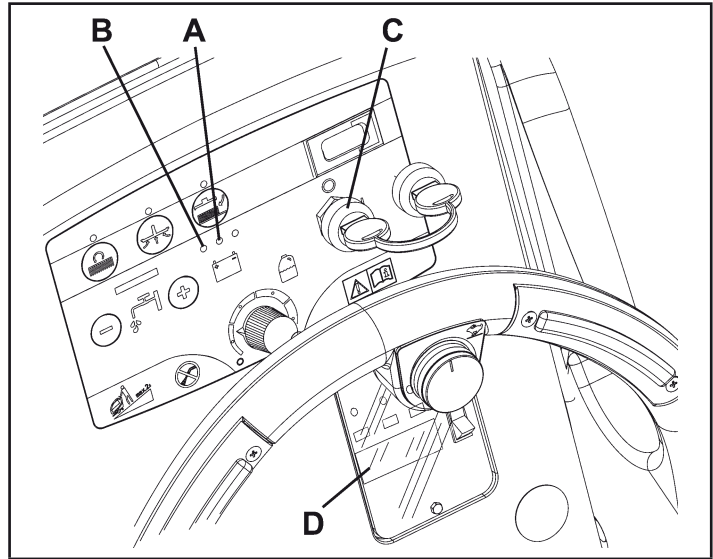


Figure 37

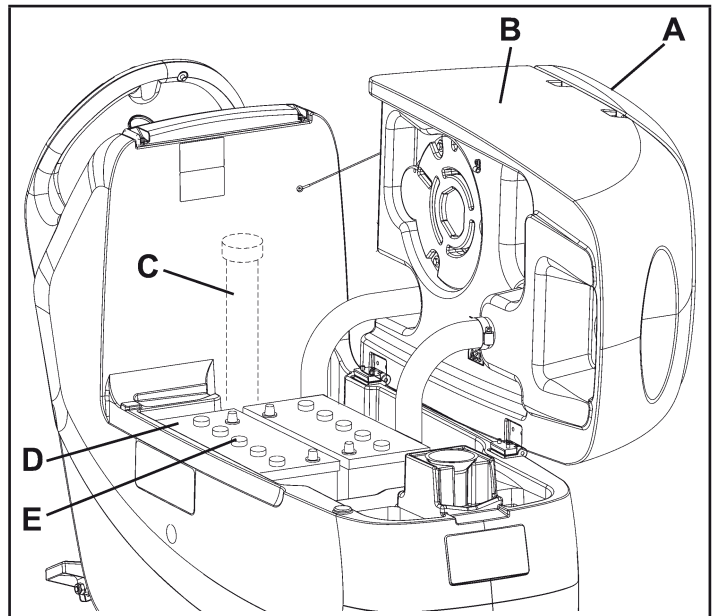


Figure 38

Battery charging with battery charger installed on the machine

7. Connect the battery charger cable (A, Fig. 40) to the electrical mains (the electrical mains voltage and frequency must be compatible with the battery charger values shown on the machine serial number plate (D, Fig. 39). When the battery charger is connected to the electrical mains, all machine functions are automatically cut off. If the red warning light (B, Fig. 40) on the battery charger control panel stays on, the battery charger is charging the batteries.
8. When the green warning light (C) turns on, the battery charging is completed.
9. When the battery charging is completed, disconnect the battery charger cable (A) from the electrical mains and wind it round its housing (D).
10. Carefully lower the tank (D).



NOTE

For further information about the operation of the battery charger (E, Fig. 40), see the relevant Manual.

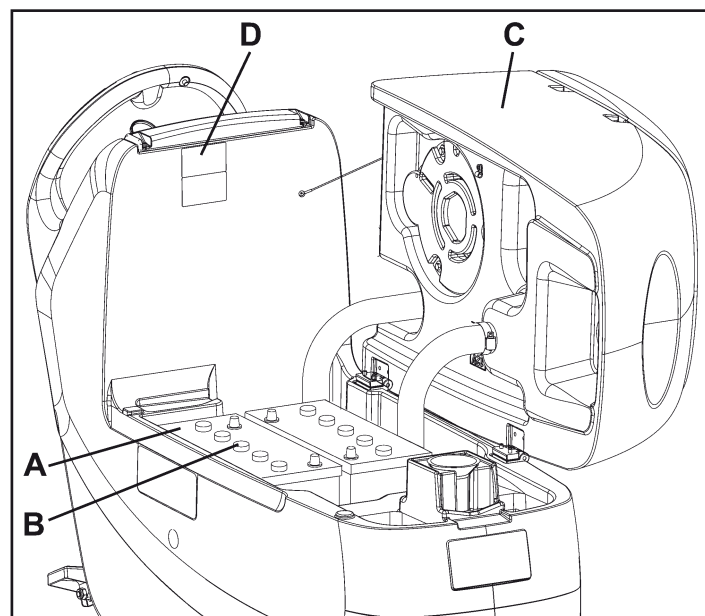


Figure 39

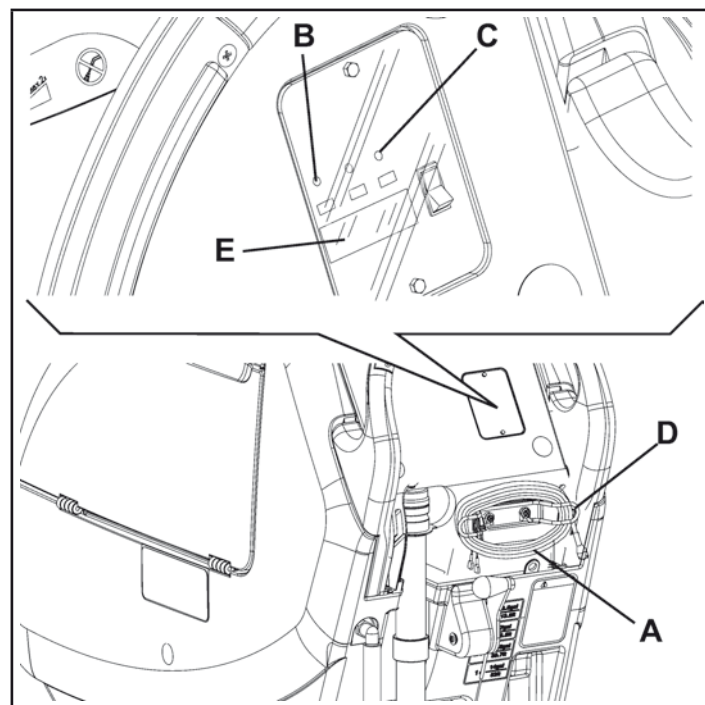


Figure 40

MACHINE WORKING HOUR CHECK

(Only if the machine is equipped with hour meter)

1. Turn the ignition key (A, Fig. 41) to "I".
2. Press the switch (B) and read on the hour meter (C) the total number of working hours (scrubbing/drying) performed by the machine.
3. Press the switch (B) again.
4. Turn the ignition key (A) to "0".

FUSE CHECK/REPLACEMENT

1. Disconnect the battery connector (A, Fig. 42).
 2. Move aside the recovery water drain hose (B).
 3. Remove the battery charger cable (I, Fig. 43) from the cable holder (J).
 4. Remove the screws (A) and carefully move aside the panel (B) by disengaging the grommet (K) from its housing on the panel (B).
 5. Check/replace the following fuses:
 - C) F1 fuse, deck: (40 A)
 - D) F2 fuse, vacuum system: (30 A)
 - E) F3 fuse, drive system: (30 A) (*)
 - F) F4 fuse, signal circuits: (3 A)
 - G) F5 fuse, brush/pad-holder release: (20 A)
 - H) F6 fuse, pump: (3 A)
 6. Perform steps 1 to 4 in the reverse order.
- (*) Only for FOCUS II L17, FOCUS II L20, FOCUS II L20 Cyl., BOOST L20

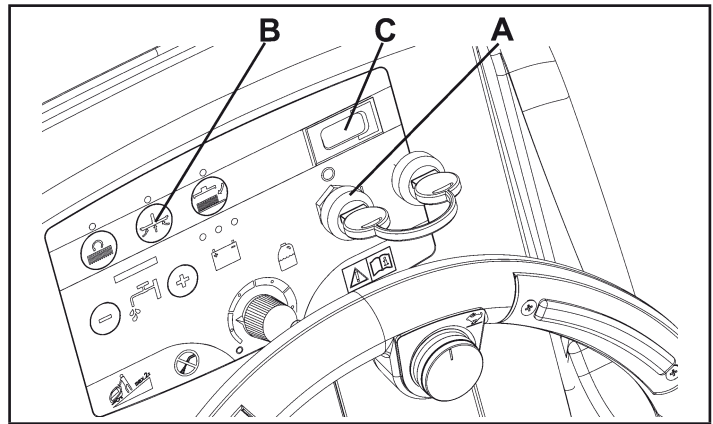


Figure 41

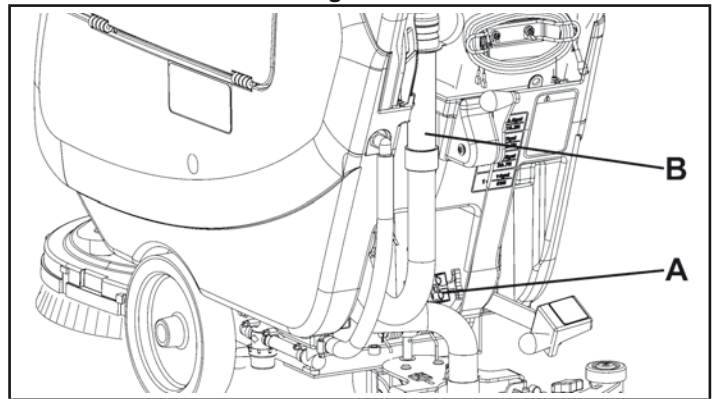


Figure 42

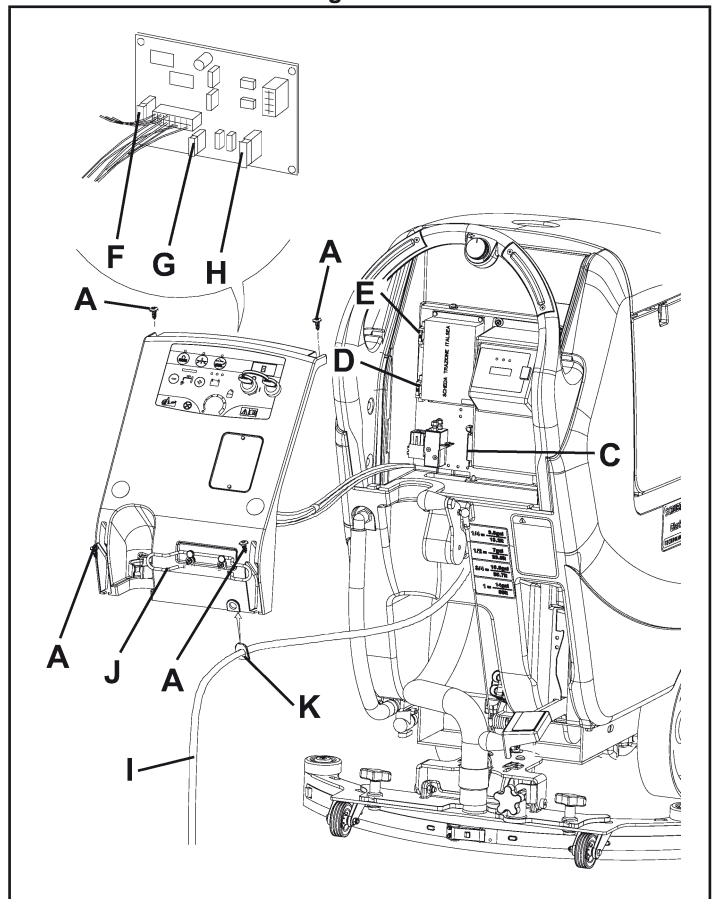


Figure 43

ACCESSORIES/OPTIONS FOR FOCUS II

In addition to the standard components, the machine can be equipped with the following accessories/options, according to the machine specific use:

For further information concerning the above-mentioned optional accessories, contact an authorized Retailer.

ACCESSORIES/OPTIONS

See "Parts List" section.

1. AGM batteries
2. Brushes and cylindrical brushes of different materials
3. Pads of different materials
4. Chemical Mixing System

TROUBLESHOOTING

Trouble	Possible Cause	Remedy
The motors do not work; no warning light turns on.	The battery connector is disconnected.	Connect the battery connector.
	The batteries are completely discharged.	Charge the batteries.
The machine does not move (Only for scrubbers with drive)	The machine has been turned on by using the ignition key and by keeping one of the switches pressed.	Turn the ignition key to "0", then try to start the machine again without pressing the switches.
The 3 battery charge indicators are flashing simultaneously.	Brush motor overload.	Use less aggressive brushes and/or avoid working with extra pressure activated.
	Foreign materials (tangled threads, etc.) which may prevent the brush from rotating.	Clean the brush hub.
The brushes do not work, the red warning light is on.	The batteries are discharged.	Charge the batteries.
The recovery water vacuuming is insufficient.	The recovery water tank is full.	Empty the tank.
	The hose is disconnected from the squeegee.	Connect.
	The vacuum grid is clogged or the float is stuck closed.	Clean the grid or check the float.
	The squeegee is dirty or the squeegee blades are worn or damaged.	Clean and check the squeegee.
	The tank cover is not properly closed, or the gasket is damaged, or the compensation hole is clogged.	Close the cover correctly, or replace the gasket or clean the compensation hole.
	The recovery water tank is dirty.	Clean.
The solution flow to the brushes is insufficient.	The solution/clean water filter is dirty.	Clean the filter.
The squeegee leaves marks on the floor.	There are debris under the squeegee blades.	Remove the debris.
	The squeegee blades are worn, chipped or torn.	Replace the blades.
	The squeegee has not been adjusted with the knob.	Adjust.



NOTE

Machine with battery charger installed, cannot operate if the charger is not on board. In case of battery charger malfunction, contact an authorized Service Center.

For further information refer to the Service Manual, available at any Clarke Service Center.

SCRAPPING

Have the machine scrapped by a qualified scrapper.

Before scrapping the machine, remove and separate the following materials, which must be disposed of properly according to the Law in force:

- Batteries
- Brushes/pads
- Plastic hoses and components
- Electrical and electronic components (*)

(*) Refer to the nearest Clarke Center especially when scrapping electrical and electronic components.