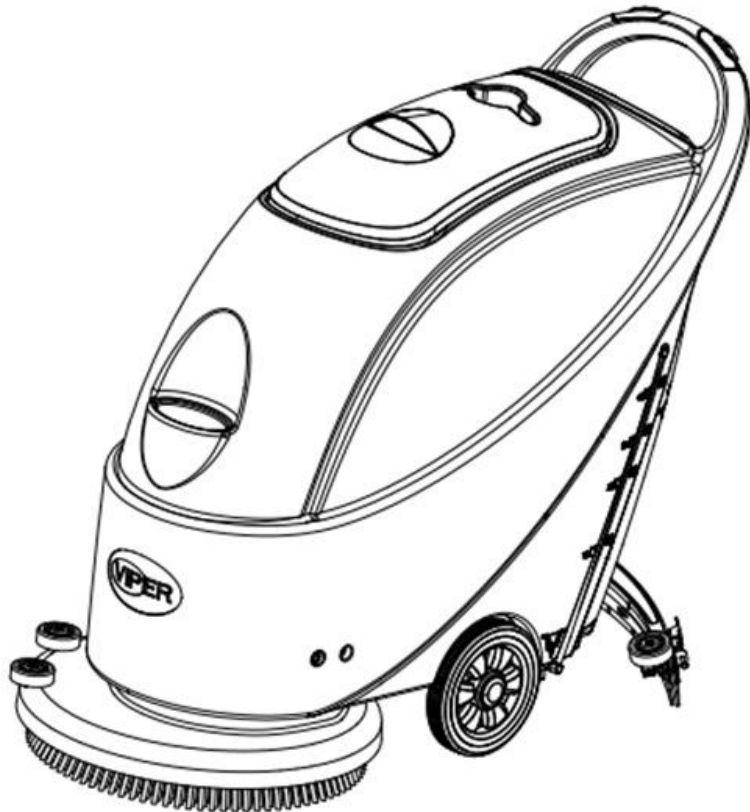




# Scrubber User Manual

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## AS430C



VIPER NORTH AMERICA

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VF90031-US  
Rev.01

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## INTRODUCTION



### NOTE

Numbers shown in parenthesis correspond with the numbers in the machine exploded view.

## CONTENTS

This manual is intended to provide the operator with the necessary information to use this machine properly and safely. The information includes technical data, safety, operation, storage, maintenance and disposal of the machine. All operators and technicians should study this manual carefully before prior to operating or servicing the machine. Please contact your local Viper distributor with any questions.

## PURPOSE

The intention of this manual is to educate the operator and service provider on the proper use and maintenance of this machine.

## SPARE PARTS AND MAINTENANCE

All necessary operation, maintenance, and repair procedures must be performed by an authorized Viper service provider.

Only authorized spare parts and accessories should be used.

If service, parts or accessories are needed, please contact your local Viper distributor.

## CHANGES AND IMPROVEMENTS

VIPER makes continuous improvements on its products. VIPER reserves the right to change and improve the machines. All changes / improvements should be performed by an authorized Viper service provider.

## MACHINE APPLICATION

This scrubber is used in commercial and industrial environments and is suitable for the cleaning of smooth hard floor surfaces. It must be used by qualified operators and in a safe environment. This machine is not to be used outdoors, on carpets, and on coarse floors.

## UNPACKING/TRANSPORT

Please follow carefully the instructions on the package when unpacking.

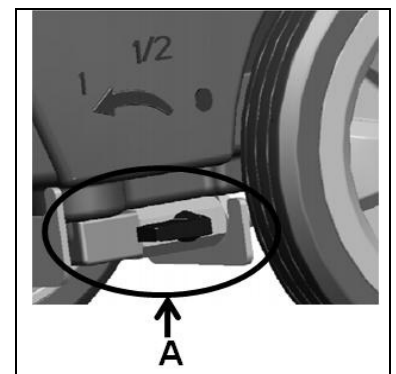
Upon delivery, please inspect the packing and the machine to ensure no damage has been done during transport. If there is any visible damage, please contact the distributor you purchased the machine from.



### — CAUTION

When unpacking and unloading, or during transportation, please take care to avoid hitting the solution valve. Part A in the figure on the right.

Check if the machine is equipped with the following items:  
Scrubber User Manual



## SAFETY GUIDES

The following are special warnings and notices on potential damages (personnel and machine):



### WARNING!

- Machine may only be operated under the guidance of this manual. Only accessories approved by VIPER should be used.

- This machine must be only used by trained & authorized personnel. Children or untrained persons must not use this machine.
- When working near electrical parts, please do not wear any jewelry. Please take all precautionary measures to avoid hair, jewelry, and loose fitting clothing from being caught by any moving parts of the machine.
- Prior to scrubbing, it is best to pre-sweep the area to be cleaned. Do not wash the machine directly with water. Do not let the machine come in touch with corrosive liquids.
- The temperature for storage and for working environment of the machine must be between 0 - 40°C.
- The humidity of air must be between 30% - 105%.
- Please do not use the machine on a slope with a gradient of more than 2%.
- In case of fire, please use dry powder fire extinguishers. Do not use liquid fire extinguishers.
- Particular attention should be paid when the machine is transported below 0° C. The water tank and the water in the hoses may freeze and cause serious damages to the machine.
- Use brush or pad driver supplied with the machine and those specified in the owners manual. Using other brushes or pads could reduce safety.
- In case of machine malfunction, please make sure that it is not caused by lack of maintenance. If it is caused by other conditions, contact your local Viper authorized service center. If it is confirmed that spare parts must be replaced, please secure the genuine parts from your local Viper distributor.
- In order to ensure safe and proper operation of the machine, it is advised that your Viper authorized service provider perform the scheduled maintenance according to the maintenance schedules outlined in this manual.
- This machine must be properly disposed of in accordance with local laws and regulations (please refer to machine disposal section).

**TECHNICAL DATA**

Model	AS430C
Machine Height	980mm
Solution tank capacity	50 litre
Recovery tank capacity	50 litre
Diameter of transport wheel	200mm
Diameter of guide wheel	63.5mm
Power of vacuum system motor	400w
Maximum gradient when working	2%(Max)
Sound pressure level at workstation	72dB(A) ±3dB(A)
Cable length	20m
Vacuum system circuit capacity	1200 mm H <sub>2</sub> O
Cleaning width	430mm
Squeegee width	730mm
machine maximum length	1060mm
Machine width without squeegee	480mm
Brush diameter	430mm
Weight with empty tanks	70kg
Gross weight of the machine ready for use	120kg
Brush motor power	750W
Brush speed	150rpm
Brush /pad-holder Maximum pressure	32kg (Max)
Packing size (Lx W x H)	1200 x 610 x 1170mm

MACHINE DESCRIPTION

MACHINE EXPLODED VIEW

- 1. Safety switch button
- 2. Handle
- 3. Control panel
- 4. Serial number plate/Technical data
- 5. Control cover
- 6. N/A
- 7. N/A
- 8. Reset switch
- 9. Power cable
- 10. Battery cover
- 11. Drain hose
- 12. Squeegee lift cable
- 13. N/A
- 14. Squeegee lift handle
- 15. Drain cap
- 16. Squeegee knob
- 17. Squeegee clip
- 18. Squeegee blade
- 19. Squeegee bracket
- 20. Squeegee adjusting knob
- 21. Squeegee rear support frame
- 22. Squeegee front support frame
- 23. Cup holder
- 24. Recovery tank cover handle
- 25. Recovery tank lid
- 26. Recovery tank
- 27. Solution fill
- 28. Brush deck
- 29. Brush / pad-holder
- 30. Vacuum motor
- 31. Brush motor
- 32. 8" wheel
- 33. N/A
- 34. Vacuum tube
- 35. Electric box
- 36. Float filter
- 37. Water level site tube

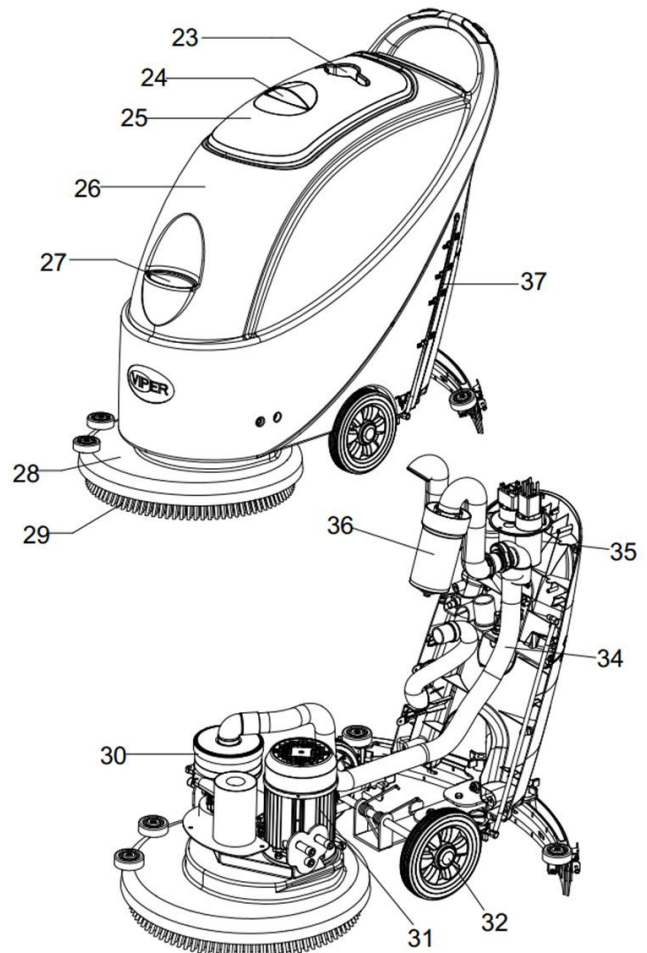
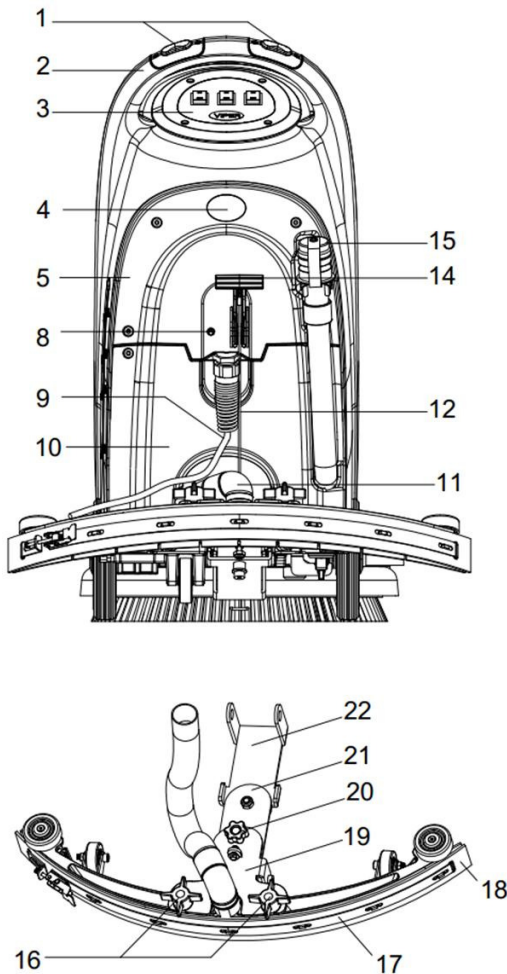


Figure 1

**CONTROL PANEL (Figure2)**

- 38. Power switch
- 39. Vacuum switch
- 40. Solution switch

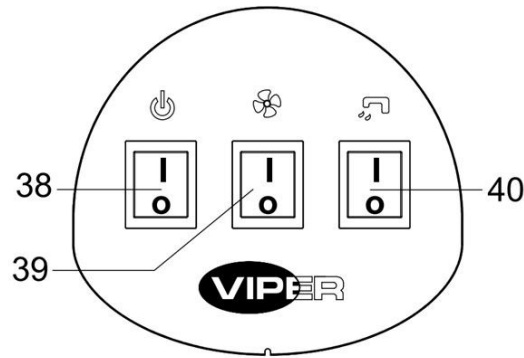


Figure 2

**GUIDE FOR USE**



**WARNING**

On certain parts of the machine are pasted some indicative signs:

- DANGER
- WARNING
- CAUTION
- CONSULTATION

When reading this manual, the operator must pay particular attention to the symbols on these labels. Under no circumstances shall these labels be covered. If they are damaged, please replace them immediately.

**BEFORE MACHINE START-UP**

**BRUSH / PAD-HOLDER INSTALLING AND REMOVAL**



**NOTE**

According to the type of floor to be cleaned, the machine may be installed with brush (Figure 3, A), or a pad-holder (Figure 3, B and C).



**CAUTION !**

When manually installing or removing the brush/pad-holder, first ensure that all the switches are in the “off” position and lift the squeegee off the floor. Only after which can the brush or pad-holder be worked on. Always wear protective gloves.

1. (Only applicable to **AS430C** ): make sure the power cable (9) disconnecting the power supply and the switch (38) is at the disconnecting (**Off**) condition.
2. Press down the handle (2) to lift the tank body (26).
1. Put the brush (A) or the pad-holder (B – C) under the case.
2. Use the handle (2) to lower the tank body (26) to come into contact with the brush or pad-holder.
3. Manually attach by following the arrow head (D) to install the brush/pad-holder (as shown in Figure 3).
6. Remove by turning the brush/pad-holder in the opposite direction and it can be taken off. (Figure 3)

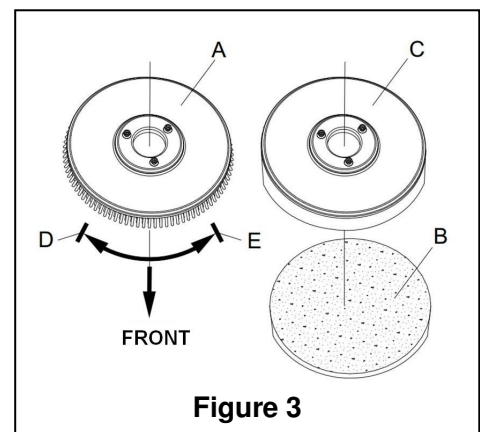


Figure 3

**SQUEEGEE ADJUSTING**

7. Install the squeegee and tighten the knobs. Then connect the vacuum hose to the squeegee assembly..
8. Adjust the squeegee through the adjusting handle (A) of the squeegee (Figure 4).
  - 1) If the mid-section of the rear squeegee bracket, section B, has a gap with the floor or the downward pressure is relatively light, adjust the handle in an anti-clockwise direction until the

whole length of the rear squeegee strip touches well with the floor. The front squeegee strip should lightly touch the floor.

- 2) If the two ends of the rear squeegee strip, sections C and D, have a gap with the floor or the downward pressure is relatively light, adjust the handle in a clockwise direction until the whole length of the rear squeegee strip touches well with the floor. The front squeegee strip should lightly touch the floor.

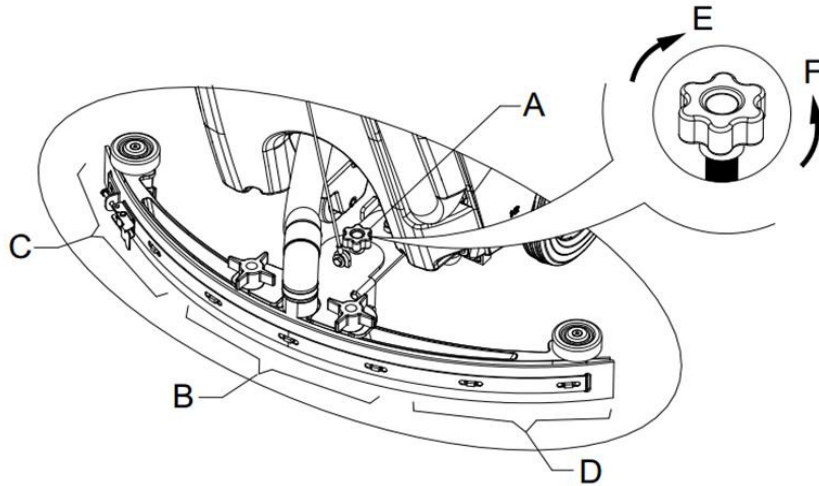


Figure 4

### Solution tank filling



#### CAUTION!

Only low foam, nonflammable detergents may be used. These detergents must be suitable for the use of scrubbers.

9. Open the water inlet cover (27) and add water to solution tank. Do not overfill the tank. When preparing the cleaning solutions, please follow the dilution rates supplied by the chemical manufacturer. Water temperature must not exceed 40° C.

### REGULATING WATER FLOW



#### WARNING !

Regulating the ball valve handle (A, Figure 5) must be done under the condition when the power switch (38) is in the "Off" position.

10. The volume of the water flow may be adjusted through the ball valve handle (A, Figure 5) according to the amount of water required for your scrubbing application.

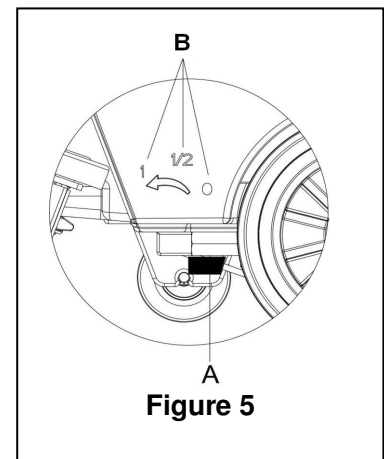


Figure 5

### MACHINE START AND STOP

#### Starting the machine

1. Complete the preparatory steps as outlined above.
2. Press the power switch (38) to the "I" position.
3. Use the squeegee handle (38) to lower the squeegee.
4. Press the Vacuum switch (39) to the "I" position.
5. Press the solution switch (40) to the "I" position. (Work simultaneously with the safety switch (1) to control the solenoid valve.)
6. Squeeze the on / off switch (1) and push to move the machine. When switches are squeezed, the brush (29) will rotate, and the solution will flow.



**CONSULTATION:**

Each safety switch is capable of controlling independently the operation of the brush. In use, it facilitates the control of the operation of the machine. Operators are encouraged to find the most comfortable position their hands.

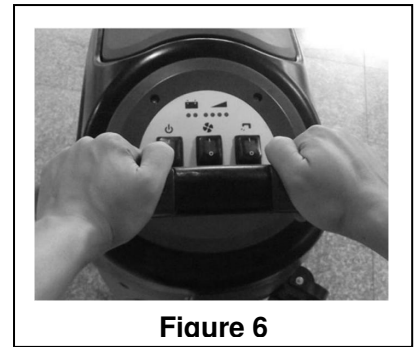


Figure 6

**Turning off the machine**

7. When you have finished using the machine, first remove the brush/pad-holder (refer to the steps mentioned above)
8. Release the safety switch (1) to turn off the brush/pad-holder and solenoid valve.
9. Press the Vacuum switch (39) to the “Off” position, and the Vacuum will delay for 5 seconds before stopping work.
10. Press the solution control switch (40) to the “Off” position to completely turn off the solution flow.
11. Press the power switch (38) to the “Off” position. And disconnecting the power cable (9) from the power supply.
12. Use the squeegee lift handle (14) to lift the squeegee.
13. Grasp the handle (2) and gently tilt the machine backward until the guide wheel (B) touches the floor. See Figure7.

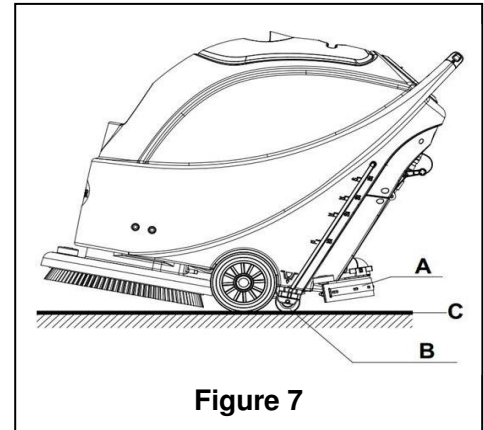


Figure 7

**MACHINE OPERATION**

1. Start the machine according to the description above.
2. Hold the on / off switch (1) (Figure 6), push to move the machine, and start the scrubbing.
3. If necessary, turn off the machine, and adjust the squeegee. (Refer to the steps for squeegee adjustment)
4. If necessary, turn off the machine, and adjust the solution flow with the ball valve handle. (Refer to the steps for adjusting solution flow.



**CAUTION!**

In order to avoid damaging the floor, when the machine stays in one place without moving, remove hands from switches & turn off the main power switch (38).

**TANK EMPTYING**

When recovery tank is full, a float shut-off device (36) will block the inlet connecting to the vacuum motor. Through a sudden increase of noise from the vacuum motor, it can be considered that the recovery tank is full and requires immediate draining.



**CAUTION!**

If the vacuum motor is suddenly turned off (due to sudden movement resulting in an activation of the float), and if a resumption of operation is needed, please perform the following steps: press the power switch (38 and 39) to turn off the power and the vacuum motor, and open the recovery tank cover (25) to check if the float has returned to the water surface. Close the recovery tank cover (25), and press the power switch (38 and 39) to turn on the main power and the vacuum motor.

**Recovery tank emptying**

1. Turn off the machine.
2. Raise the squeegee assembly (14).
3. Move the machine to a dedicated draining location.
4. Grasp the handle (2) and tilt the machine backward until the guide wheel touches the floor.
5. Remove the drain hose from the clip, bend the top end of draining hose (A, Figure 8), and then remove the drain hose cap. Lower the hose to a low level or on the ground to drain the water. Alternatively, place drain hose to a low position or on the ground to make the water outlet face



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downward (B, Figure 8), and then twist open the drain cap to drain the wastewater in the tank. After draining is completed, rinse the inside of recovery tank with clean water



### CAUTION!

**When draining the wastewater, the drain hose must be folded or lowered to a lower position (Figure 8 A or B), and the cap removed for wastewater to drain. Do not allow the opening of the drain hose to face upward, as it could get wastewater on the operator..**

### Solution tank emptying

6. Complete Steps 1 to 4.
7. As shown in Figure 9, turn open the lid of Solution tank (A) counter clockwise (direction C), to drain Solution tank completely. Use clean water to rinse the inside of Solution tank. When work is completed, replace the solution tank lid (A) by twisting in a clockwise in direction (B).

### AFTER EACH USE

When work is done and before leaving the machine, completes the following steps:

1. Remove the brush / pad holder.
2. Drain solution tank & rinse with clean water.
3. Drain recovery tank & rinse with clean water.
4. Complete the daily maintenance procedures. (see maintenance section)
5. Remove and rinse squeegee assembly with damp towel.
6. Keep recovery tank lid unsealed from tank to allow fresh air to circulate freely

### USING FOR THE FIRST TIME

After the first 9 hours of use, please check components to ensure all connections (electrical & mechanical) are tight & check for any damage that may have occurred during operation. Check for water leakage.

### MAINTENANCE AND CARE

The service life and the maximum operation safety of the machine are assured by proper and timely maintenance and care.

The following table is a routine maintenance guide for the machine. The time intervals of maintenance are determined to a large extent by the working conditions of the machine. These time intervals should be formulated by the person responsible for the maintenance.



### WARNING!

**Only after the main power is disconnected should these procedures be performed. Prior to proceeding with any of the maintenance procedures, please study carefully the related safety sections.**

All maintenance should be done by qualified personnel or authorized Viper service centers.

This manual only relates the simplest and the most common maintenance procedures.

For any maintenance procedures other than those stated in this table of planned maintenance, please contact your local Viper distributor.

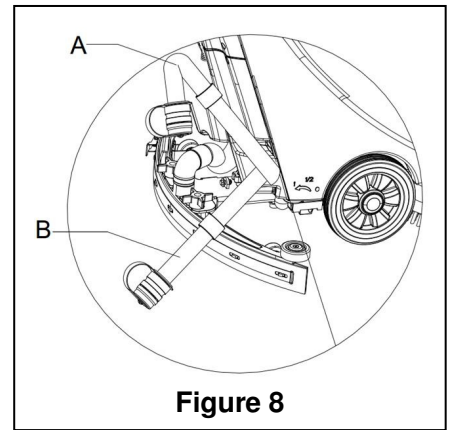


Figure 8

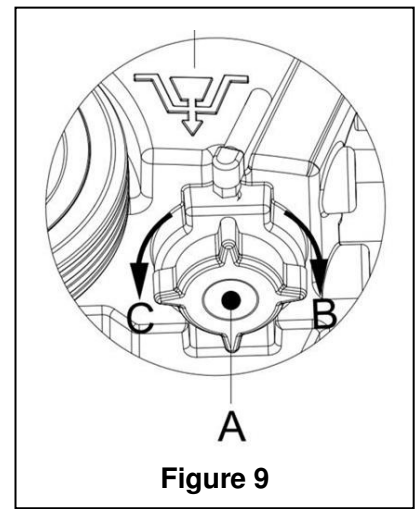


Figure 9

**SCHEDULED MAINTENANCE TABLE**

Procedure	Daily, Machine after use	Weekly	Every 6 months	Annually
Clean squeegee				
Clean brush/pad-holder				
Clean water tank and float filter, inspect tank gaskets				
Inspect and change the squeegee blades				
Clean solution filter				
Clean vacuum motor filter				
Inspect tightness of nuts and bolts			(1)	
Inspect or change motor carbon brush of brush motor				(2)
Inspect or change carbon brush of Vacuum motor				(2)

(1) It should be done 9 hours after the machine starts working.

(2) These maintenance procedures must be done by an authorized VIPER Service Center.

**SQUEEGEE CLEANING**



**NOTE**

In order to maintain the optimal squeegee performance, the squeegee must be kept clean, and the squeegee blades must remain in good condition.



**CAUTION !**

When cleaning the squeegee, it is recommended to put on protective gloves as the squeegee may contain sharp debris.

1. Move the machine to a flat and smooth surface.
2. Press the power switch (38) to the “O” position to turn off the machine.
3. Unscrew the squeegee knobs (16); remove the vacuum hose from the squeegee assembly & remove squeegee.
4. Use the squeegee lift handle (14) to lift the squeegee mount bracket.
5. Using a damp towel, clean the squeegee (Figure 10). Clean in particular the groove (A, Figure 10) and the dirt and fragments on the vacuum tube. Check if the front squeegee blade (C) and the rear squeegee blade (D) are intact, and if there are broken edges and cracks. Replace them if necessary (refer to the steps in the following section).
6. Re-install the squeegee in the reverse order of the above

**SQUEEGEE BLADE CHECK AND REPLACEMENT**

1. Following the methods related in the previous section clean the squeegee (Figure 10)
2. Check the edge (E, Figure 10) of the front squeegee blade and the edge (F) of the rear squeegee blade (D). On the whole length, they should be level. Otherwise, adjust their heights through the following procedure.
  - Loosen the clip (G) to let the rear squeegee blade (D) separate from the bracket (M) for the adjustment of the position of the squeegee. After the adjustment, lock the clip once again.
  - Loosen the screw on the handle (I) to adjust the front squeegee blade (C); tighten the handle screw after adjustment.
3. Check if the front squeegee blade (C) and the rear squeegee blade (D) is intact and if there are broken edges and cracks. If damage is found, change them according in the following way. If the front edge of the rear squeegee blade (J) has worn, it can be flipped upside down and re-installed (the top edge is required to be intact). If the top edge is also worn, change it by following the procedure below:
  - Loosen the clip (G) to let the pressure blade separate from the bracket (M), take off the clip bar (K), and then change or turn the rear squeegee blade (D) upside down. Re-install the rear squeegee blade in the reverse order of taking it off.

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- Loosen the handle screw (I) and take off the front clip bar (L), and then change the front squeegee (C).  
Re-install the front squeegee blade in the reverse order of taking it off.  
After changing the squeegee blade, adjust the level of the front and rear squeegee blades in the procedures as described above.
4. Connect the Vacuum hose (11) to the squeegee.
  5. Install the squeegee and tighten the knobs.
  6. If necessary, adjust the squeegee by turning the adjustment knob (20) (refer to the procedures for adjusting the balance of the squeegee).

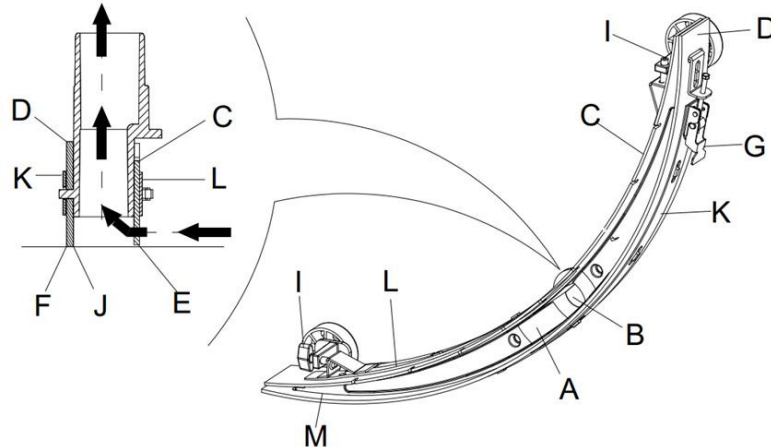


Figure 10

## BRUSH/ PAD CLEANING



### CAUTION!

When cleaning the brush/pad-driver, wearing protective gloves is Recommended as the brush / pad may contain sharp debris.

1. Remove the brush/pad-driver.
2. With the use of water and detergents, clean the brush/pad driver.
3. Check the brush for wear & if necessary, replace the brush.
4. Check the pad driver for wear & if necessary, replace the pad driver.

## WATER TANK AND FLOAT FILTER MESH CLEANING

1. Move the machine to a dedicated draining area.
2. Press the power switch (38) to the position “O” to turn off the machine.
3. Open recovery tank lid (A, Figure 11), and remove the float device (36) from inside the tank.
4. Use clean water to rinse the recovery tank lid (A), the tank (B and C), and the float filter support frame (E). Drain all the water from the water tank.
5. If necessary, following the symbols “Open” and “Close” as shown in Figure 11, open the bottom lid (F) of the float filter and clean the float (D), float filter support frame (E), and the filter sponge (I). After cleaning, re-attach the float onto the support frame (E), and then align the mark groove (L) of the bottom lid (F) of the float filter with the mark groove (L) of the float filter support frame (E). Turn the bottom lid (F) of the float filter tight, and re-attach the filter sponge (I) onto the support frame (E), and then onto the vacuum tube (M).
6. Inspect the seal / gasket (G) of the recovery tank lid.

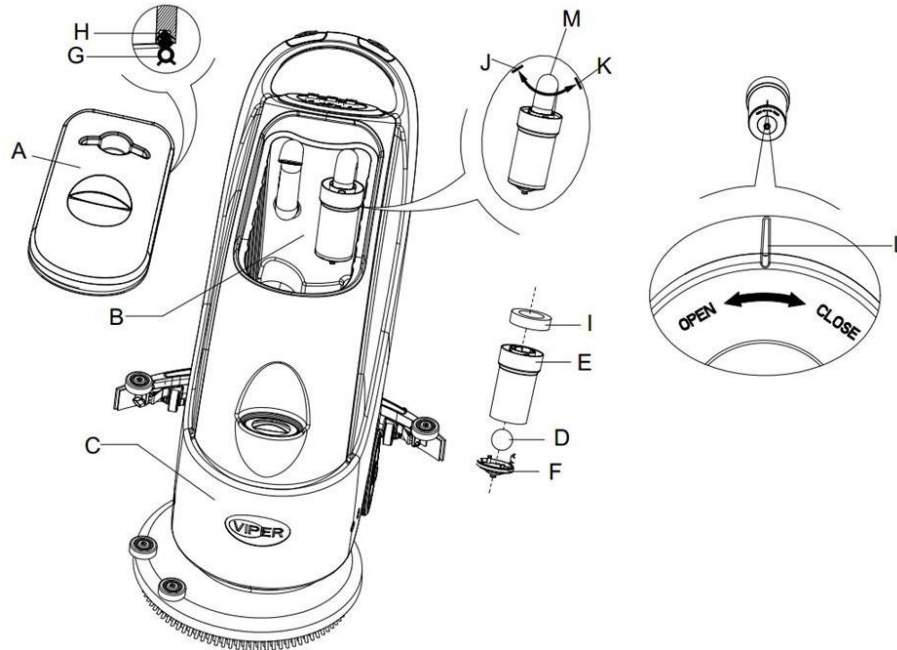


### NOTE

The seal / gasket (G) of the recovery tank allows the tank to create a vacuum. It must be completely sealed to be able to effectively suck the wastewater from the floor.

If necessary, If necessary, the recovery tank seal / gasket (G) may be taken out from the groove (H) and changed. When installing the new seal / gasket as shown in Figure 11 below, install the

- connector to the middle section of the rear part.
7. Check if the receiving surface of the sealing strip (G) is intact and seals adequately.
  8. Close recovery tank lid (A).



**Figure 11**

**SOLUTION FILTER CLEANING**

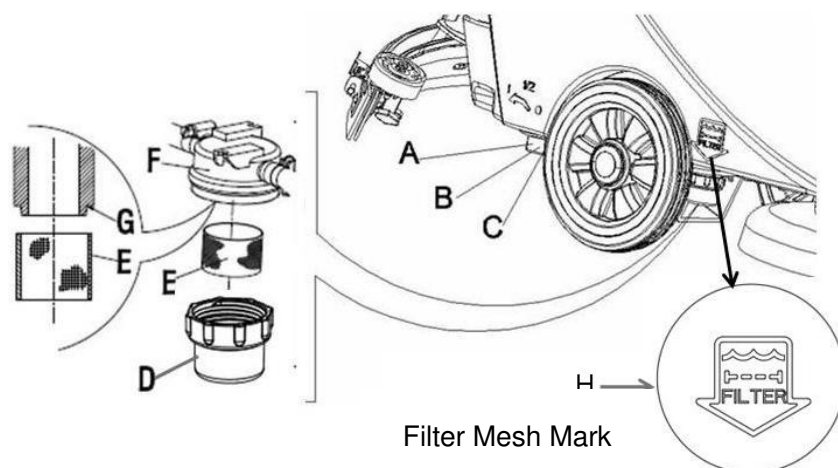
1. Drain all the water from Solution tank as previously outlined.
2. Move the machine to a flat and smooth surface.
3. Press the power switch (38) to the “O” position to turn off the machine.
4. Turn off the draining ball valve (A, Figure 12) (located at the bottom of the machine, behind the wheels). Position B ball valve open, and position C ball valve closed.
5. Remove the transparent cap (D), and then take off the filter (E), and install them onto the filter box (F) after cleaning.



**NOTE**

The filter (E) must be accurately installed onto the position of the housing (G).

6. Open the draining ball valve (A).

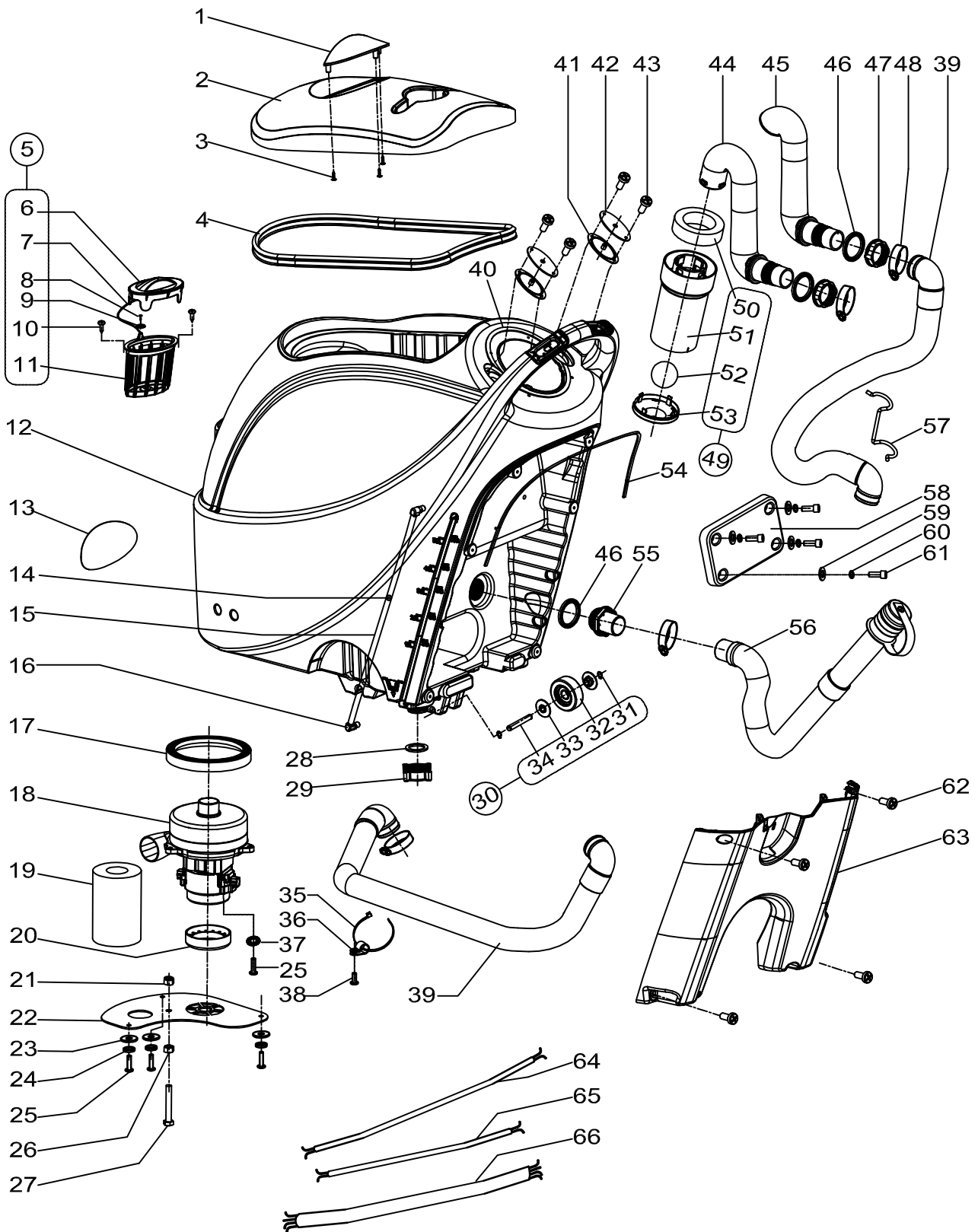


**Figure 12**

**TROUBLESHOOTING**

<b>Breakdown</b>	<b>Probable Causes</b>	<b>Remedies</b>
Machine not working	The wiring not connected correctly or bad wiring	Check the wiring or contact Viper Distributor
	Bad brush motor	Contact Viper Distributor
	Carbon brush worn out	Contact Viper Distributor
Vacuum motor not working	The wiring not connected correctly or bad wiring	Check the wiring or contact Viper Distributor
	Bad vacuum motor	Contact Viper Distributor
	Carbon brushes worn out	Contact Viper Distributor
Little or no solution flow	Bad ball valve	Contact Viper Distributor
	Bad solution valve	Contact Viper Distributor
	Ball valve position in need of adjustment	When ball valve is in horizontal position, the amount of solution flow is maximum
	Filter dirty.	Clean the filter
Inadequate Vacuum	Wastewater tank is full.	Drain the water tank
	Vacuum tube for waste and squeegee not properly connected	Connect the Vacuum tube for waste and the squeegee
	Float filter blocked or inlet blocked	Clean the float filter, check the float ball
	Squeegee dirty or squeegee blade worn and damaged	Clean and check the squeegee
	Recovery tank lid not properly turned on, or the sealing strip of the water tank damaged	Refit on the lid properly, or change the water tank sealing strip
Squeegee leaving marks	Debris like fragments under the squeegee blade	Remove the fragments
	Squeegee blade already worn, cracked, brittle.	Change the squeegee blade
	Balance of squeegee not adjusted	Adjust the balance

**TANK SYSTEM**  
**AS430C PART LIST**



## TANK SYSTEM

### AS430C PART LIST

Item	Part No.	Description	Qty
1	VF90412	HANDLE, RECOVERY TANK COVER	1
2	VF90503	RECOVERY TANK COVER	1
3	VA80758	SCREW	3
4	VF90504	GASKET	1
5	VF90619	TANK FILTER NET KIT	1
6	VF90612	FILTER COVER	1
7	VF90614	INLET STRAP	1
8	VF90616	SCREW TA3.5X12	2
9	VA13483A	WASHER	2
10	VA13477	SCREW ST4X15	2
11	VF90611	FILTER SUPPORT	1
12	VF90519	TANK (CABLE MODLE)	1
13	VF90011	LOGO LABEL	1
14	VF90613	FLOATING BALL OF WATER LEVEL	1
15	VF90617	INSPECTION TUBE	1
16	RD60764	ELBOW 90° BRASS	2
17	VA80770	GASKET	1
18	VF90727	VACUUM MOTOR KIT	1
19	VF85319	ACOUSTIC INSULATION PIPE	1
20	VF90523	TOP GASKET OF SUCTION MOTOR	1
21	VF13503	NUT LOCK M8	1
22	VF90511	COVER, VACUUM MOTOR	1
23	VF14543	WASHER $\phi 6 \times \phi 18 \times 1.5$	3
24	VV13601	WASHER, LOCK, $\phi 5$	3
25	VA13474	SCREW M5*16	4
26	VF14066	NUT M8	1
27	VF90434	SCREW M8*65	1
28	VF90513	OUTLET O-RING	1
29	VF90507	OUTLET COVER	1
30	VF90312	2.5" WHEEL KIT	1
31	VF14551	RING D 17	2
32	VF90306	2.5" WHEEL	1
33	VF90308	2.5" HUB CAP	2
34	VF90314	TRANSPORT WHEEL SHAFT	1
35	VV10116	SELF-LOCKING NYLON CABLE TIES	1
36	VF85102	CLAMP	1

## TANK SYSTEM

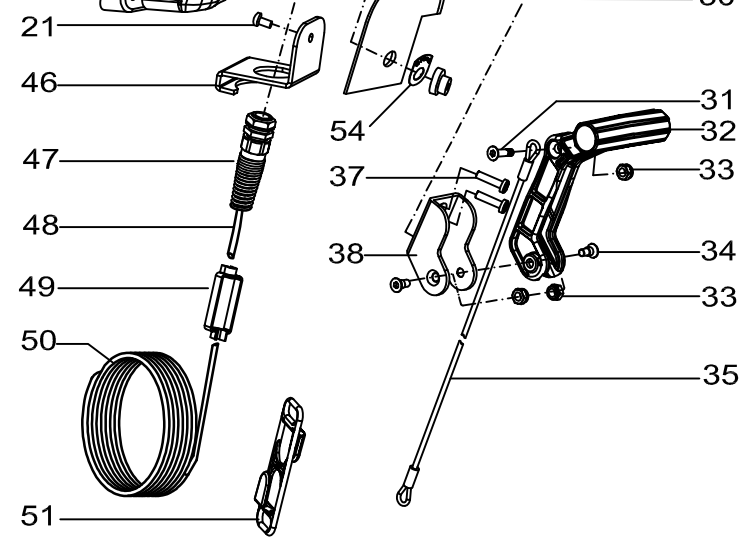
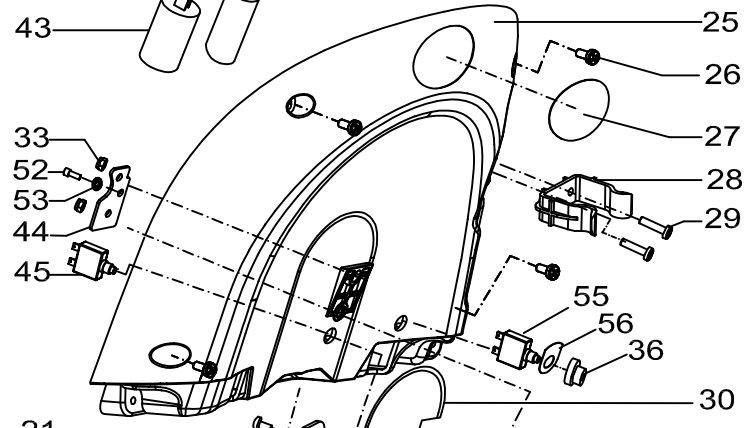
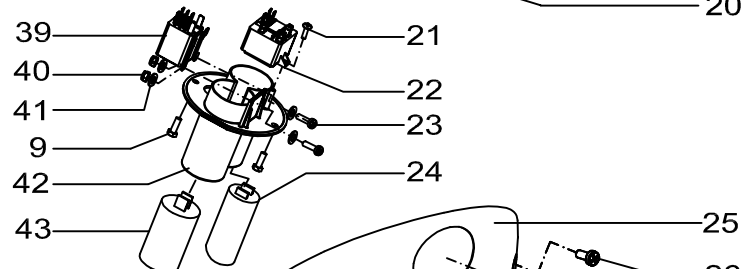
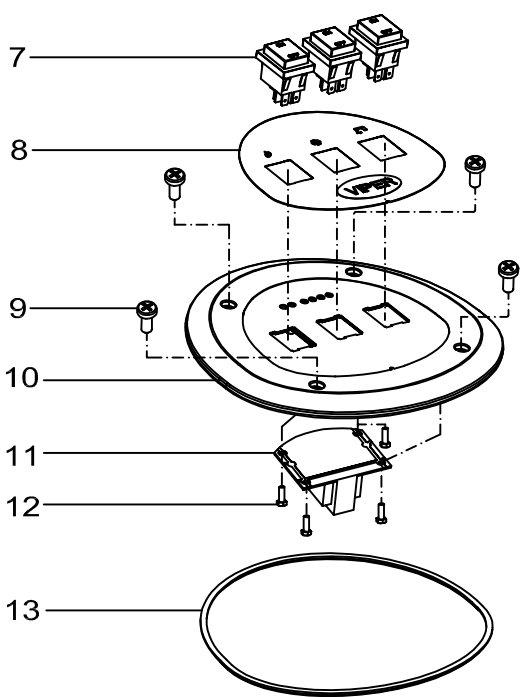
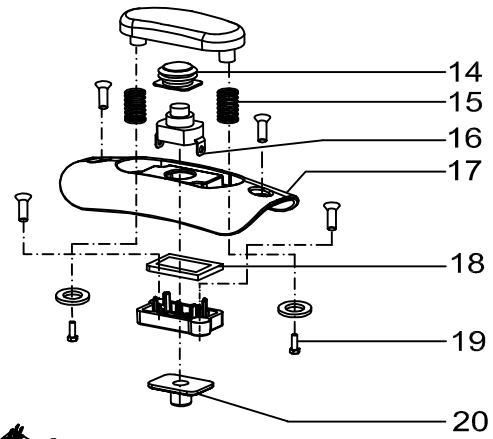
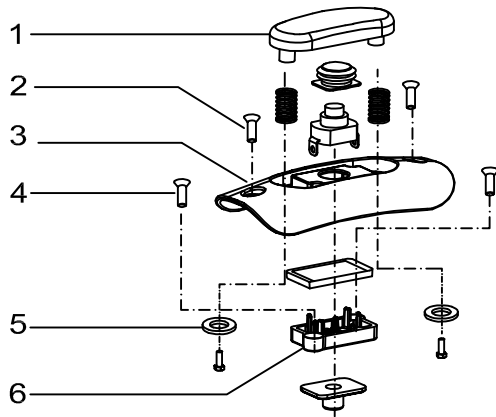
### AS430C PART LIST

Item	Part No.	Description	Qty
37	VF13604	GROOVED METAL GASKET	1
38	VF90235	SCREW TM4x10	1
39	VF90508	SUCTION HOSE	2
40	VF90231	GASKET	1
41	VF90214	SEAL PLATE COVER	2
42	VF90217	SEAL PLATE	2
43	VA80758	SCREW	4
44	VF90529	SUCTION TUBE CONNECTER	1
45	VF90528	DRAIN HOSE CONNECTOR	1
46	VF90512	SUCTION TUBE GASKET	2
47	VF90509	SEALING KNOB	2
48	VA20304	CLAMP	4
49	VF90534	FLOAT KIT	1
50	VF90530	CAGE,FLOAT COMPLETE	1
51	VF90526	FLOAT BRACKET	1
52	VF85124	FLOATE	1
53	VF90527	FLOATE BRACKET COVER	1
54	VF90218	CONTROL SEAL GASKET	1
55	VF90401	DRAIN HOSE CONNECTER	1
56	VF90443	DRAIN HOSE-38	1
57	VF83150	HOLDER,"U"HOSE	1
58	VF90701	17"COUNTER WEIGHT BLOCK	1
59	VF13534	WASHER	4
60	VF13519	WASHER,LOCK,Ø8	4
61	VF14067	SCREW M8*25	4
62	GT13054	SCREW TM5x12	4
63	VF90814	BATTERY COVER	1
64	VF90720	VACUUM MOTOR CONNECTION LINE	1
65	VF90730	SOLENOID VALVE CONNECTION LINE	1
66	VF90721	BRUSH MOTOR CONNECTION LINE	1



# CONTROL SYSTEM AND ELECTRICAL SYSTEM

## AS430C PART LIST



## CONTROL SYSTEM AND ELECTRICAL SYSTEM

### AS430C PART LIST

Item	Part No.	Description	Qty
1	VF90203	SAFETY SWITCH KNOB	2
2	VF90286	SCREW KA3.5x12	4
3	VF90201	SAFETY SWITCH COVER LEFT	1
4	VV68303	SCREW KA3.5x15	4
5	VF90288	WASHER $\Phi 3.6 \times \Phi 8 \times 0.5$	4
6	VF90210	SWITCH FIX FRAME	2
7	VV60153	SWITCH RL2 (P)	3
8	VF90009	DECAL CONTROL PANEL	1
9	VF90235	SCREW TM4x10	6
10	VF90204	17" SWITCH COVER	1
11	VF90706	24VDC REGULATOR BOARD	1
12	VA14584	SCREW PB3.0x8	4
13	VF90285	SWITCH SEAL STRIP	1
14	VF90216	SWITCH SEAL BUSHING	2
15	VF90202	SPRING	4
16	VF90252	SWITCH	2
17	VF90212	SAFETY SWITCH COVER RIGHT	1
18	VF90219	GASKET	2
19	VA13469	SCREW PB3x12	4
20	VF90213	SWITCH SEAL RING	2
21	GT13091	SCREW,PB3.5x9.5mm	2
22	VF89042-3	RELAY	1
23	GT13025	SCREW,M3X12	2
24	VF90725-1	RUNNING CAPACITOR	1
25	VF90815	COVER CONTROL HOUSING	1
26	GT13054	SCREW TM5x12	4
27	N/A	17" SERIAL NUMBER LABEL	1
28	GV70034	CLAMP DRAIN HOSE	1
29	VF14538	SCREW ST3.5x16	2
30	VF90027	BACK COVER PANEL	1
31	VF90129	SCREW M5x20	1
32	VF90113	HANDLE LIFT	1
33	VF14514	NUT LOCK M5	5

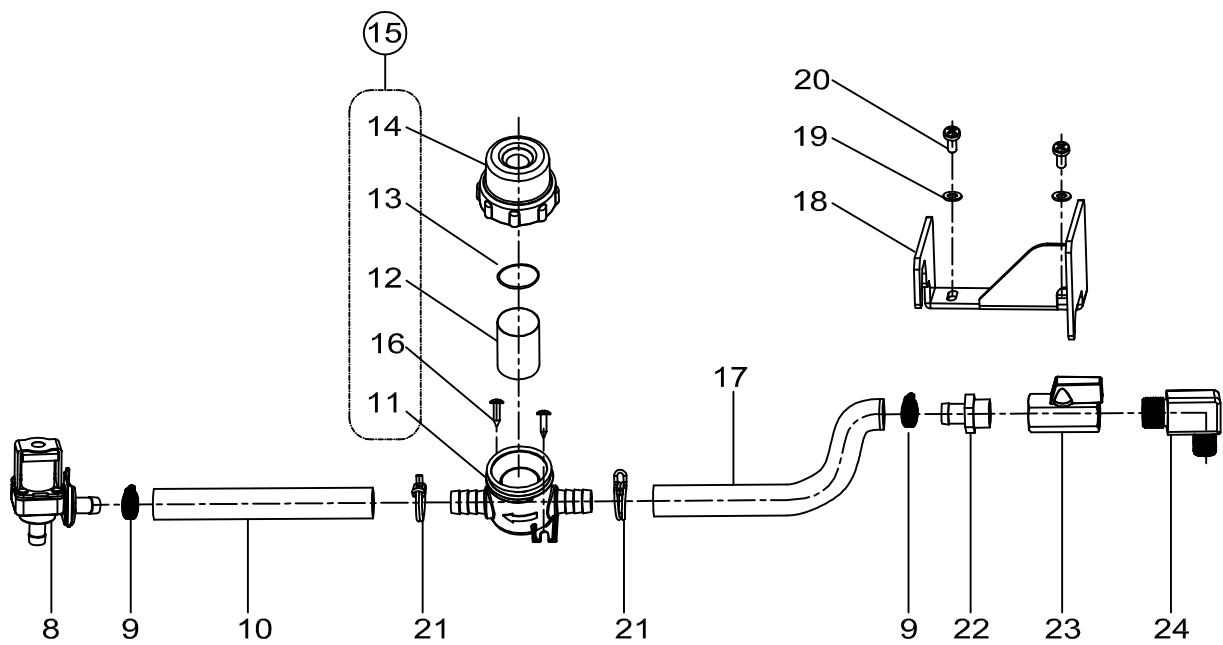
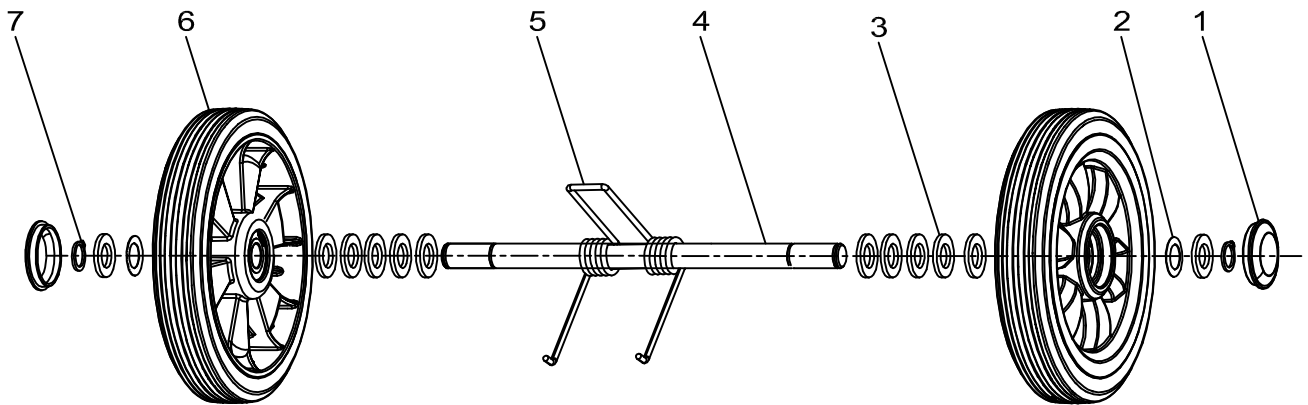
**CONTROL SYSTEM AND ELECTRICAL SYSTEM**  
**AS430C PART LIST**

<b>Item</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty</b>
34	VF90128	SCREW M5	2
35	VF90114	CABLE SQUEEGEE LIFT	1
36	VF89076	CIRCUIT BREAKER CAP	2
37	80407A	SCREW M5X25	2
38	VF90116	HAND BRACKET	1
39	VF90704	24V RELAY	1
40	VV13652	NUT LOCK M3	2
41	VV13653	WASHER Ø3.4xØ10x1.0mm	4
42	VF90232	ELECTRIC SUPPORT	1
43	VF90725-2	START CAPACITOR	1
44	VF90259	HAND FIX PANEL	1
45	VF99010C	CIRCUIT BREAKER	1
46	VF90517	CABLE FIX BRACKET	1
47	VF73705	CABLE SLEEVE	1
48	VF90745	POWER CORD	1
49	VV67105	CONNECTOR	1
50	VF90703-US	CABLE (20M)	1
51	VF422997	HANGING BOARD	1
52	VV13667	SCREW TM4x8	1
53	VF13604	GROOVED METAL GASKET	1
54	VF90019	BRUSH CIRCUIT LABEL	1
55	VF90747	CIRCUIT BREAKER	1
56	VF90020	VACUUM CIRCUIT LABEL	1

# WHEELS AND SOLUTION SYSTEM

## AS430C PART LIST

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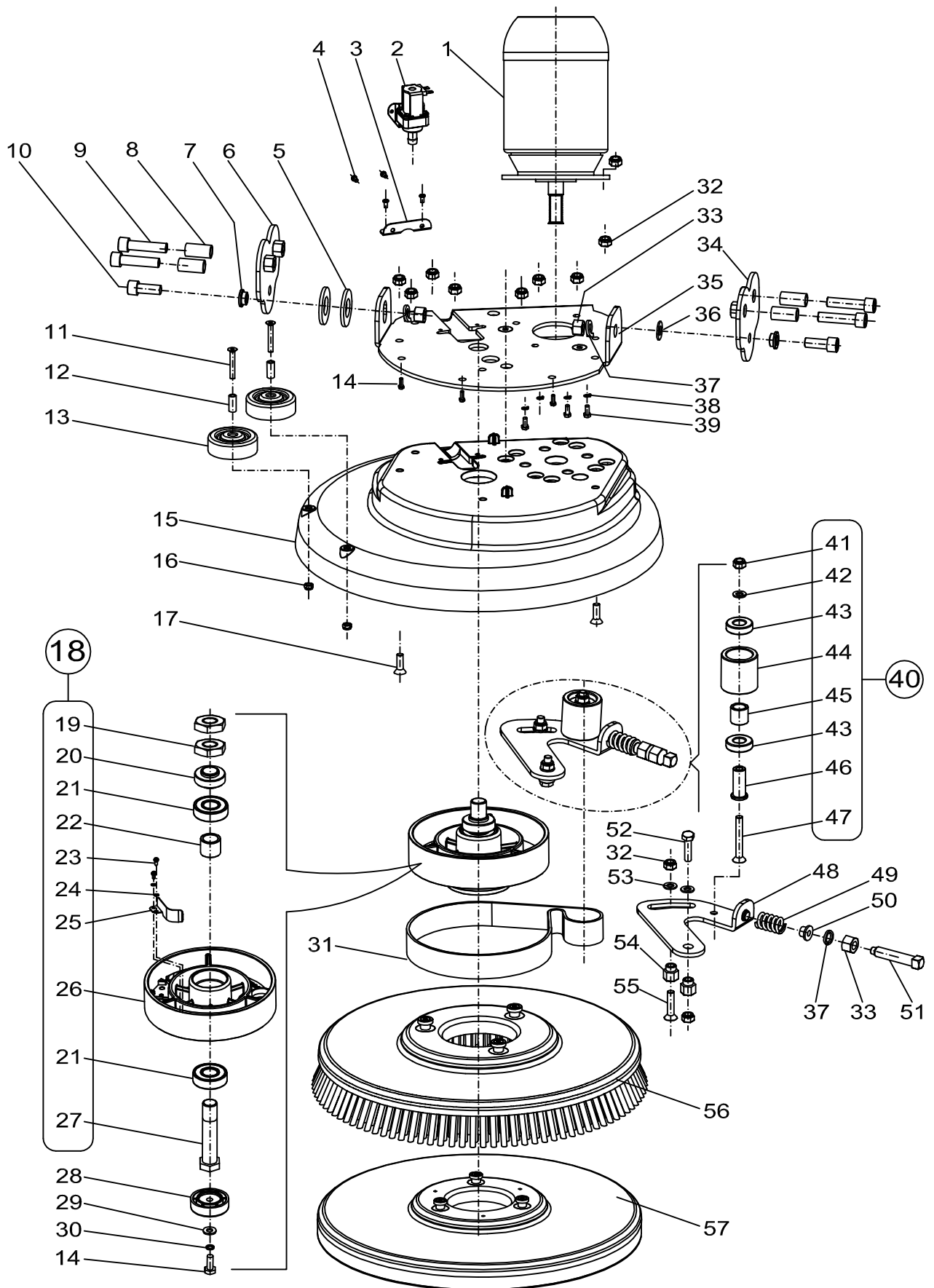


## WHEELS AND SOLUTION SYSTEM

### AS430C PART LIST

Item	Part No.	Description	Qty
1	VF89203	WHEEL COVER	2
2	VF14563	LEVILLE WASHER	2
3	VF14554	WASHER	12
4	VF90304	WHEEL SHAFT	1
5	VF82172	SPRING 70°	1
6	VF90305	8" WHEEL	2
7	VF14552	RING D 17	2
8	VF90284	SOLENOID VALVE KIT	1
9	VV10114	CLAMP	2
10	VF90440	TUBING L=260mm	1
11	VF90604	FILTER BASE	1
12	VF90608	FILTER NET	1
13	VF90607	O-RING	1
14	VF90603	FILTER COVER	1
15	VF90621	FILTER KIT	1
16	VA13507	SCREW ST4x12	2
17	VF90441	TUBING L=160mm	1
18	VF90625	SOLENOID VALVE BRACKET	1
19	VA13483	WASHER $\varphi 4 \times \varphi 12.5 \times 1.5$	2
20	VV13650A	SCREW M4x10	2
21	VF82148	CLAMP,HOSE	2
22	VF80313	BARB,HOSE	1
23	VF80361	BALL VALVE	1
24	VF90609	ELBOW,90°,BRASS	1

**BRUSH SYSTEM**  
**AS430C PART LIST**



**BRUSH SYSTEM****AS430C PART LIST**

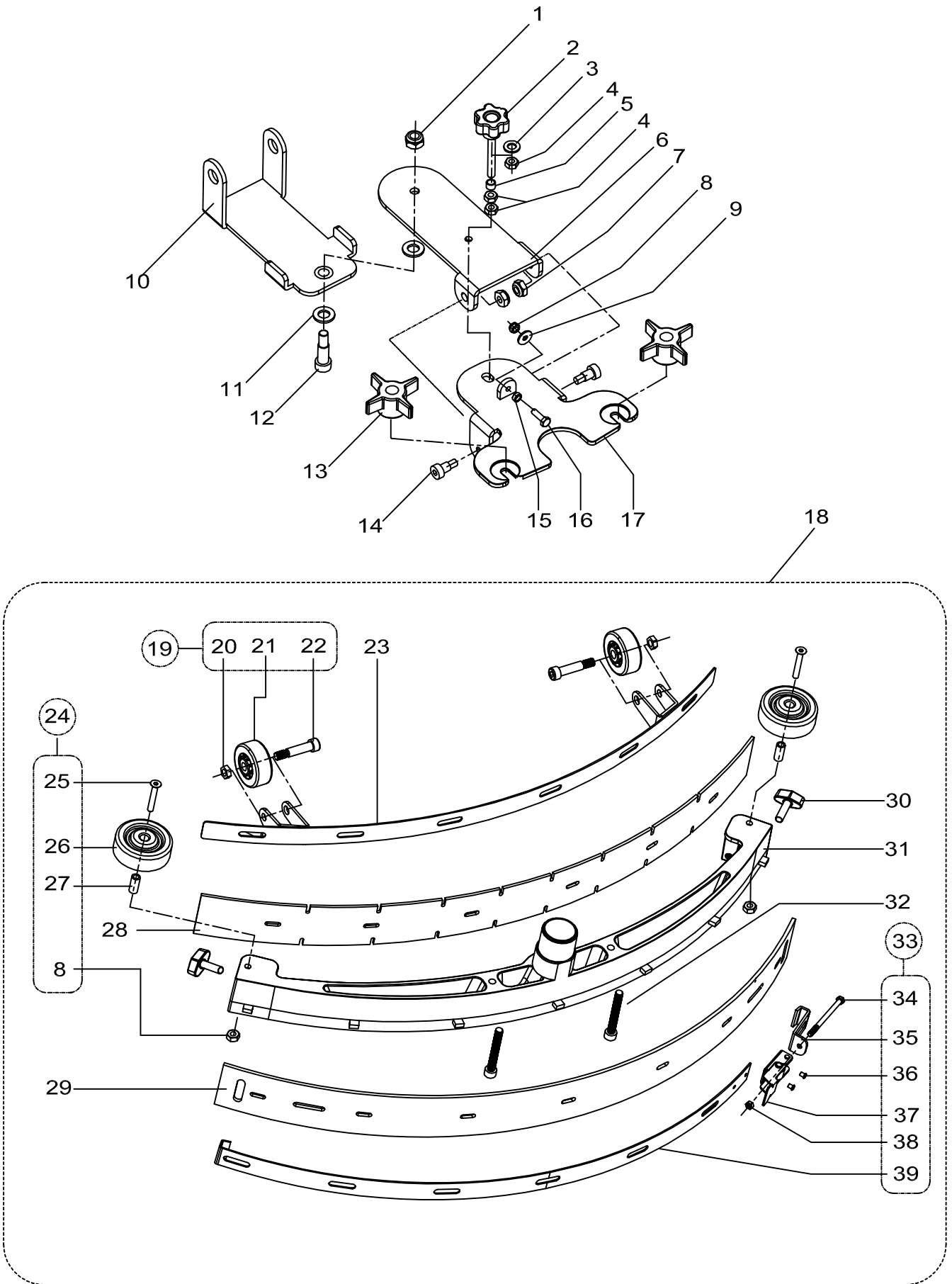
<b>Item</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty</b>
1	VF90729	BRUSH MOTOR KIT	1
2	VF90284	SOLENOID VALVE KIT	1
3	VF90418	SOLENOID VALVE BRACKET	1
4	VV13650A	SCREW M4x10	4
5	VV20274	WASHER	2
6	VF90460	CONNECT PLATE C	1
7	VF90461	BRASS SPACER B	2
8	VF90421	SPACER	4
9	VF14555	SCREW,SHOULDER M12x50	4
10	VF14238	SCREW, M12x30	2
11	VF14530	SCREW,SHOULDER M6x40	2
12	VF85134	SPACER	2
13	VF85107	BUMPER ROLLER	2
14	VV13604	SCREW,SHOULDER M8x20	4
15	VF90406	17" BRUSH DECK	1
16	VF14506	NUT LOCK M6	2
17	GT13067	SCREW,SHOULDER M8x25	2
18	VF90465	DRIVEN PULLEY KIT	1
19	VF90424	NUT M20	2
20	VF90422	SPACER	1
21	ZD45425	BEARING 6204 LU	2
22	VF90423	CLAMP SLEEVE	1
23	VV13650A	SCREW M4x10	2
24	VV20291	WASHER,LOCK,Ø4	2
25	VF90437	BRUSH SPRING CLIP	1
26	VF90463	DRIVEN PULLEY	1
27	VF90425	DRIVEN PULLEY SHAFT	1
28	VF90415	VIBRATION GASKET	1
29	VF13534	WASHER φ8.4x φ18x 2	1
30	VV20298	WASHER,LOCK,Ø8	1
31	VF90462	BELT	1

**BRUSH SYSTEM****AS430C PART LIST**

<b>Item</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty</b>
32	VF13503	NUT LOCK M8	9
33	VF14057A	NUT LOCK M12	3
34	VF90459	SLIDING CONNECT PLATE	1
35	VF90455	FRAME	1
36	VF13538	WASHER $\phi 12 \times \phi 24 \times 2$	1
37	VF13541	WASHER, LOCK $\phi 12$	3
38	VV20298	WASHER, LOCK, $\phi 8$	4
39	VA13491	SCREW, M8x25	3
40	VF90445	TENSION WHEEL KIT	1
41	VF14516	NUT LOCK M8	1
42	VF13535	WASHER $\phi 8 \times \phi 20 \times 2$	1
43	VF999821A	BEARING 6002	2
44	VF90426	TENSION WHEEL	1
45	VF80209	SPACER	1
46	VF80214	SPACER	1
47	GT13066	SCREW, SHOULDER M8x55	1
48	VF90427	ROD, TENSION WHEEL	1
49	VF80232	SPRING	1
50	VF80235	SPACER	1
51	VF14255	SCREW, M12x65	1
52	VF14236	SCREW, M8x40	1
53	VF13534	WASHER $\phi 8.4 \times \phi 18 \times 2$	2
54	VF90439	BUSHING TENSION WHEEL	2
55	VF90438	SCREW, SHOULDER M8x30	1
56	VF90411	17" BRUSH	1
57	VF90453	17" PAD	1



**SQUEEGEE SYSTEM**  
**AS430C PART LIST**



**SQUEEGEE SYSTEM**  
**AS430C PART LIST**

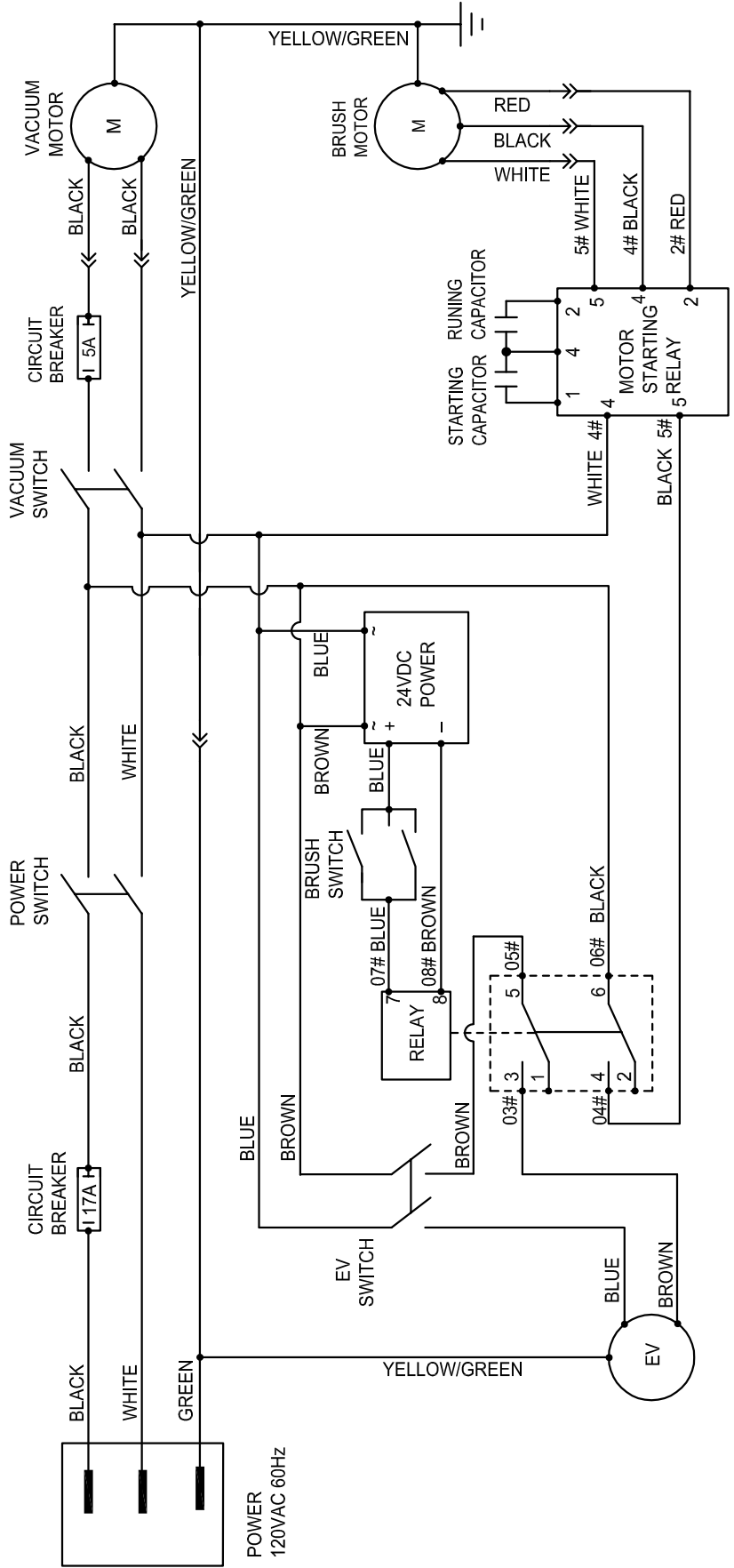
Item	Part No.	Description	Qty
1	VF14547	SCREW LOCK M10	1
2	VF85104	HAND WHEEL	1
3	VF13534	WASHER $\phi 8.4 \times \phi 18 \times 2$	1
4	VF14503	NUT M8	3
5	VF90133	SPACER	1
6	VF90110	BACK-SQUEEGEE-SUPPORT	1
7	VF14516	NUT LOCK M8	2
8	VF14506	NUT M6	3
9	VF13533	WASHER FLAT $\phi 6$	1
10	VF90111	FRONT-SQUEEGEE-SUPPORT	1
11	VF85336	WASHER NYLON	2
12	VF90130	SCREW SHOULDER	1
13	VF81210	KNOB	2
14	VF84228	SCREW SHOULDER M8	2
15	VF82112	SPACER	1
16	VF14233	SCREW	1
17	VF90109	SQUEEGEE-SUPPORT	1
18	VF90134	17" SQUEEGEE KIT	1
19	VF90136	SQUEEGEE ROLL WHEEL KIT	2
20	VV20203	NUT LOCK	2
21	VF81219	2" WHEEL	2
22	VF81222	BOLT SHOULDER 5/16"	2
23	VF90102	17" STRAP, SQUEEGEE FRONT	1
24	VF90137	BUMPER ROLLER KIT	2
25	VF14530	SCREW M6 $\times$ 40	2
26	VF85107	BUMPER ROLLER	2
27	VF85134	SPACER	2
28	VF90103	17" BLADE FRONT (NR)	1
	VF90146	17" BLADE FRONT (PU)	1
29	VF90104	17" BLADE REAR (NR)	1
	VF90147	17" BLADE REAR (PU)	1
30	VF85420	WING NUT M8 $\times$ 30	2

**SQUEEGEE SYSTEM**  
**AS430C PART LIST**

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<b>Item</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty</b>
31	VF90101	SQUEEGEE 17"	1
32	VF90127	SQUEEGEE SCREW	2
33	VF90138	17" STRAP, SQUEEGEE BACK KIT	1
34	VF14305	SCREW M5×60	1
35	VF90121	HOOK	1
36	VF81208A	RIVET Ø4×5	2
37	VF81218A	LATCH HOOD	1
38	GT13022	NUT LOCK M5	1
39	VF90105	17" STRAP, SQUEEGEE BACK	1

**WIRING DIAGRAM**  
**AS430C PART LIST**





**Company information:**  
[www.usviper.com](http://www.usviper.com)