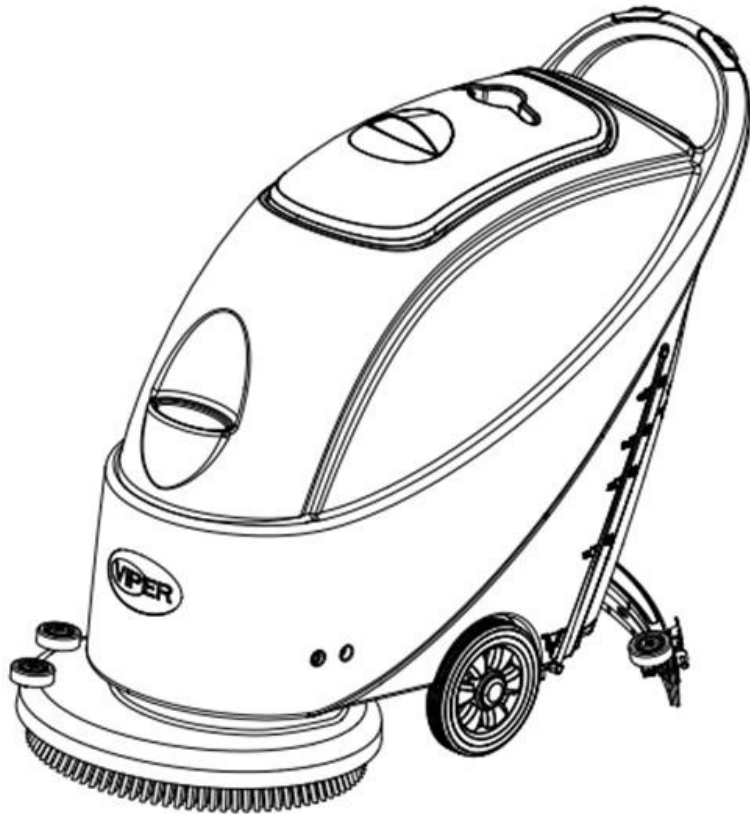


# VIPER

## Scrubber User Manual

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### AS430C



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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 and 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.

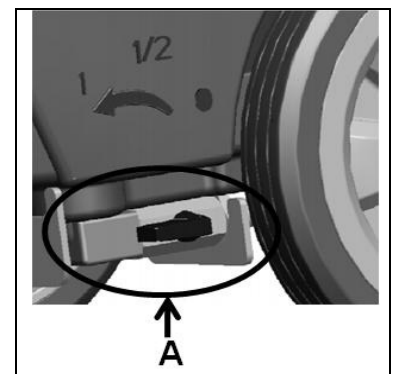
Upon delivery, please inspect the packing and the machine to ensure no damage has been done during transport. If there is any visible damage, please contact the distributor you purchased the machine from.



### — 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).

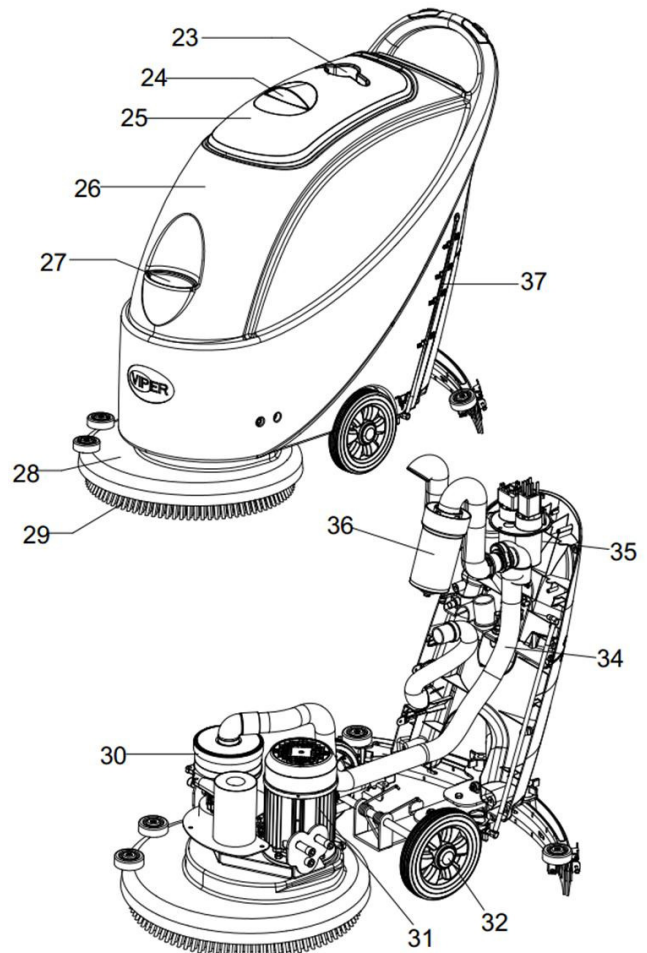
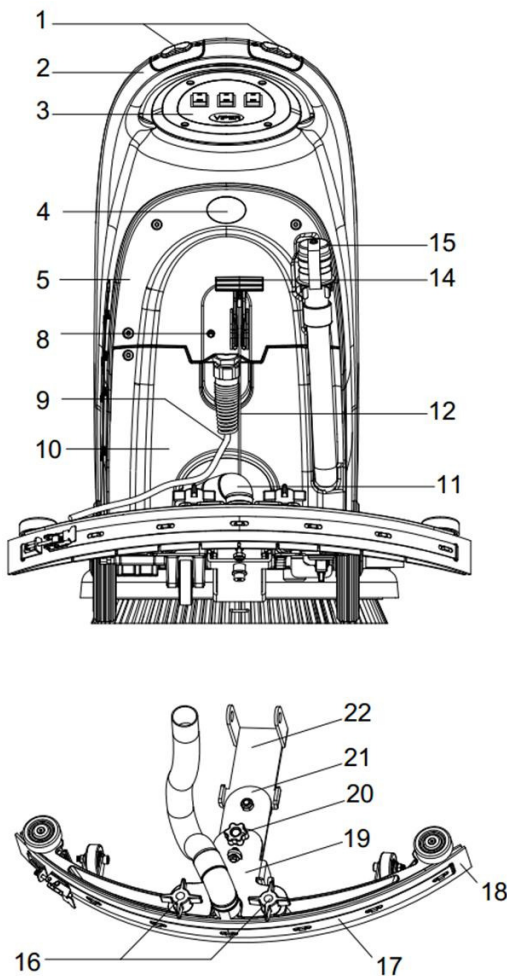
### TECHNICAL DATA

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



**Figure 1**

**CONTROL PANEL (Figure2)**

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

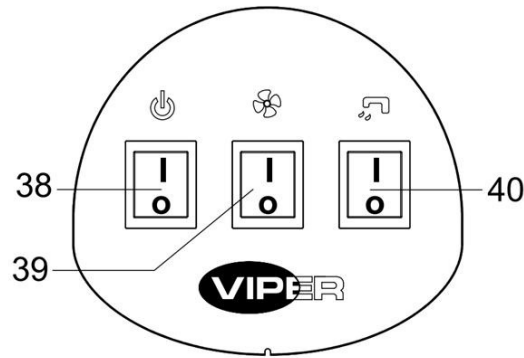


Figure 2

**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**

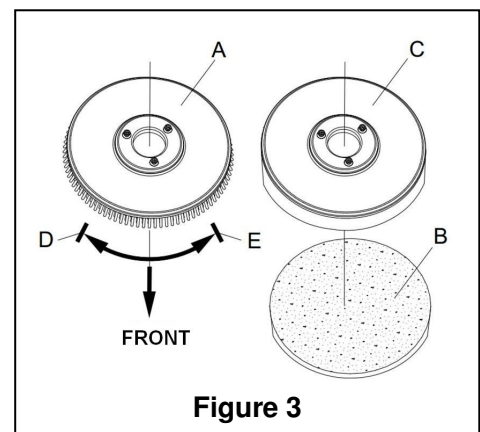
According to the type of floor to be cleaned, the machine may be installed with brush (Figure 3, A), or a pad-holder (Figure 3, B and C).



**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)



**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.

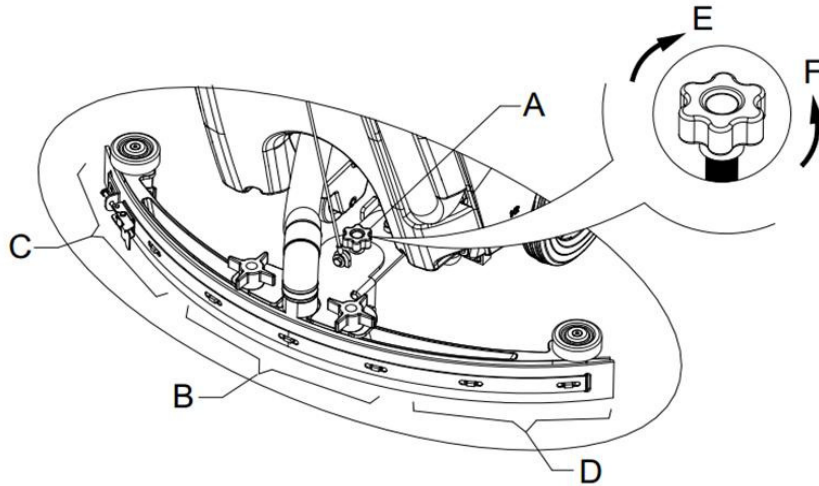


Figure 4

### 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.

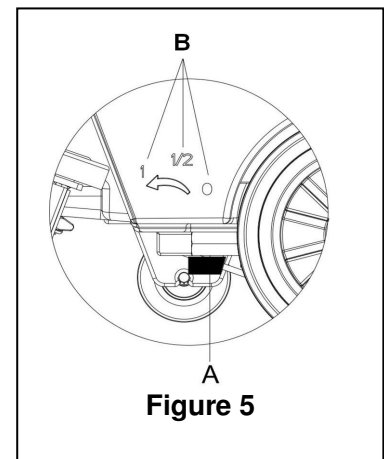


Figure 5

### 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.

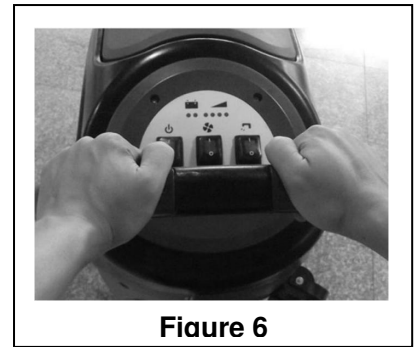


Figure 6

**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.

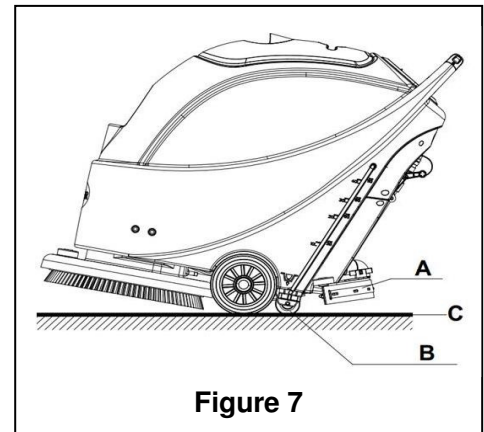


Figure 7

**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



## USER MANUAL

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.

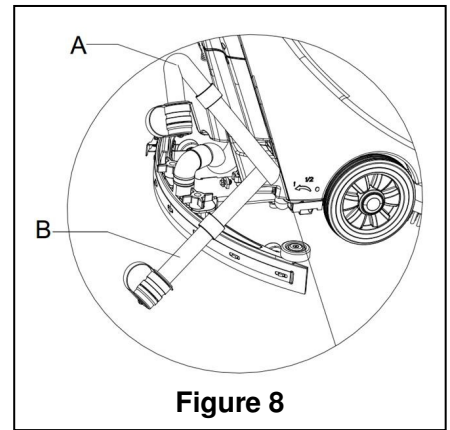


Figure 8

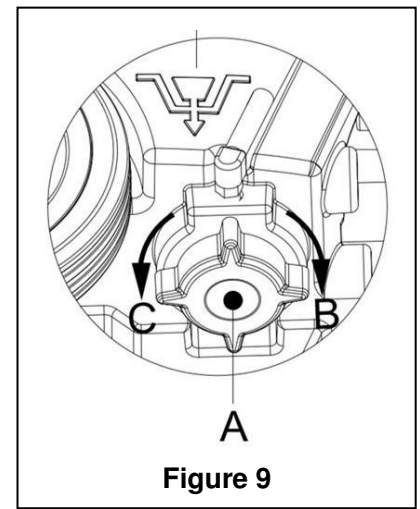


Figure 9

**SCHEDULED MAINTENANCE TABLE**

| Procedure   | Daily,<br>Machine<br>after use | Weekly | Every<br>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.

- 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).

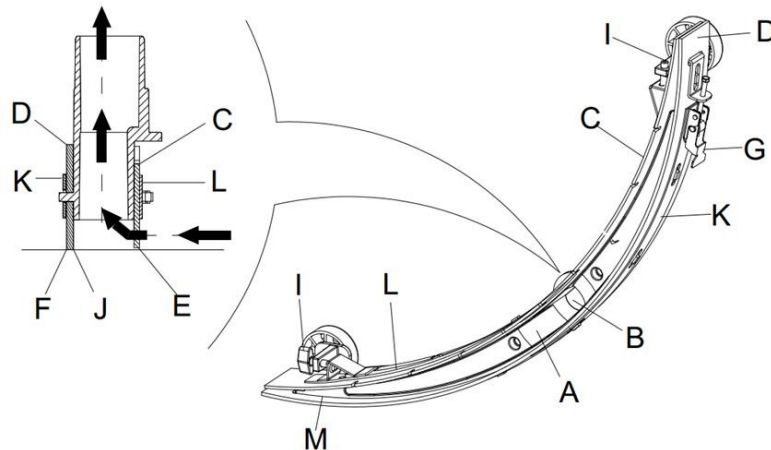


Figure 10

### 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.

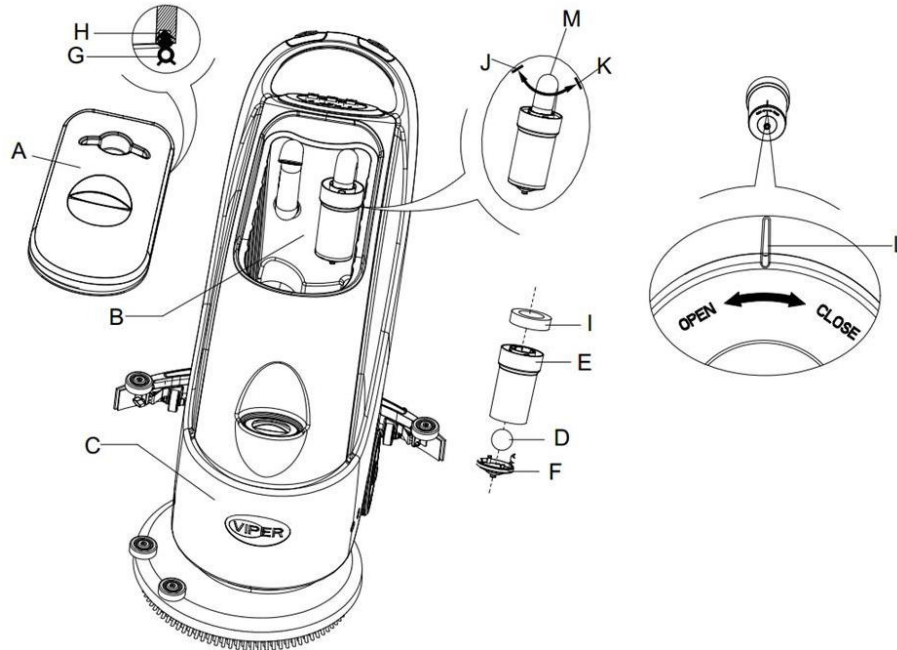


#### NOTE

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**

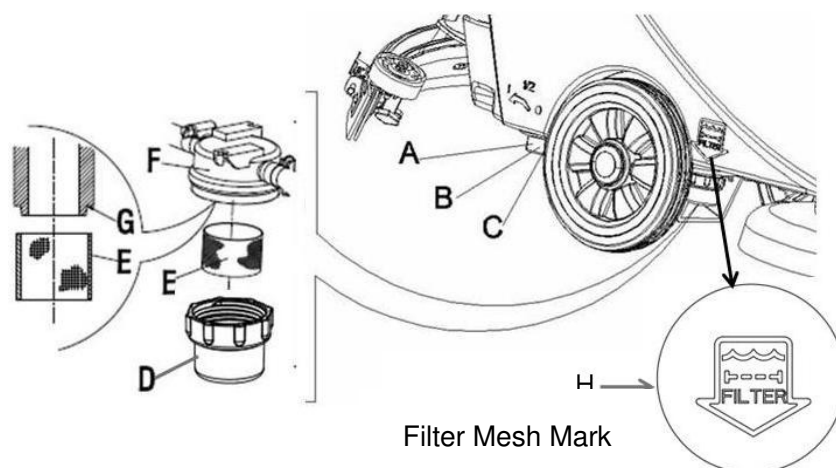
1. Drain all the water from Solution tank as previously outlined.
2. Move the machine to a flat and smooth surface.
3. Press the power switch (38) to the “O” position to turn off the machine.
4. Turn off the draining ball valve (A, Figure 12) (located at the bottom of the machine, behind the wheels). 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).

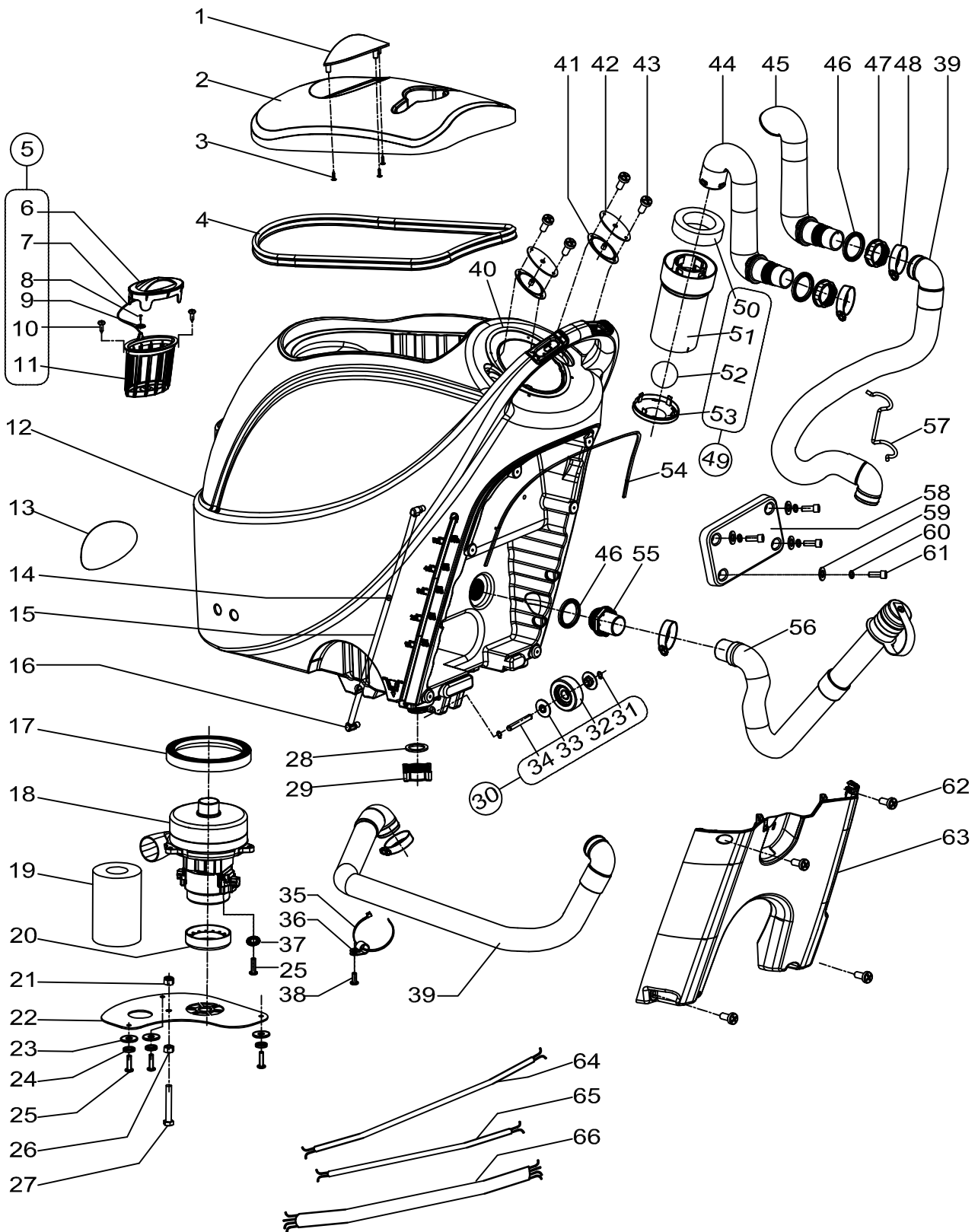


**Figure 12**

**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

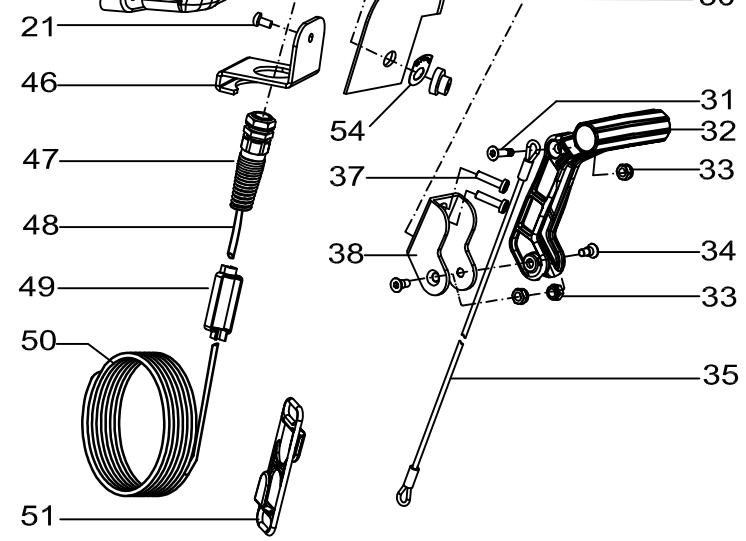
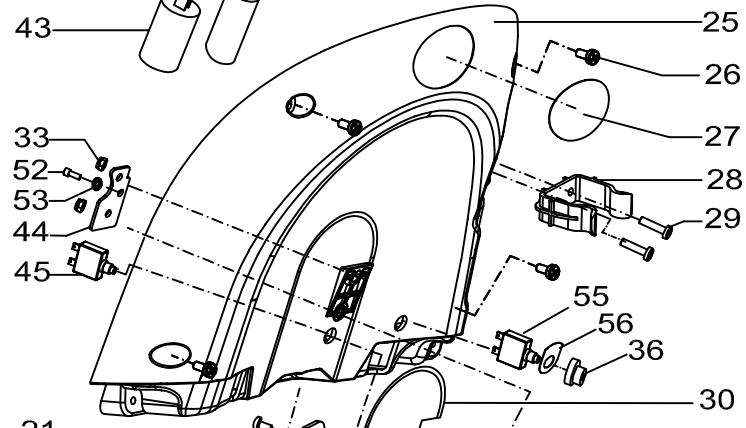
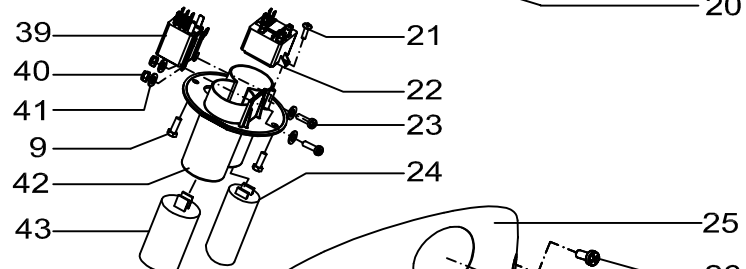
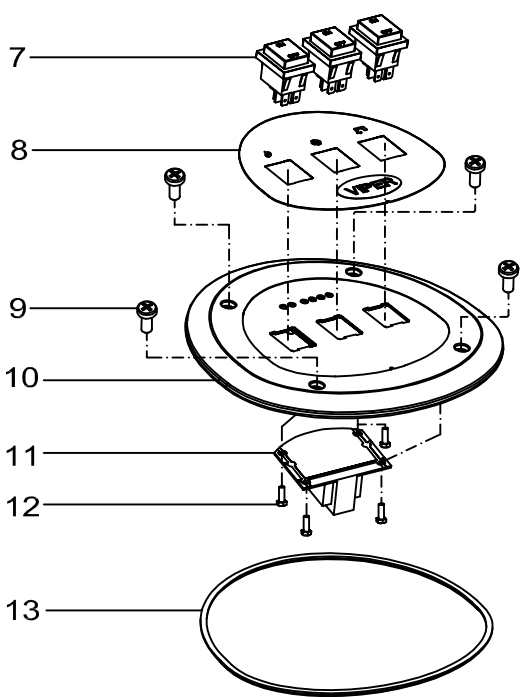
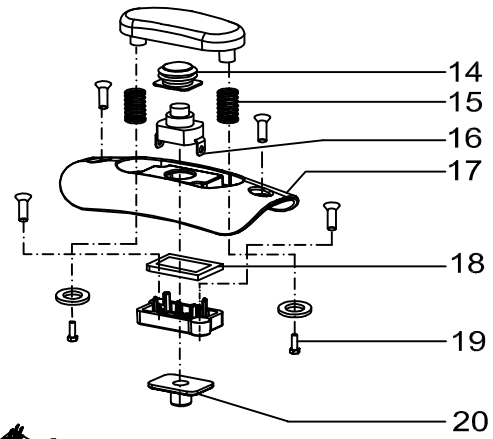
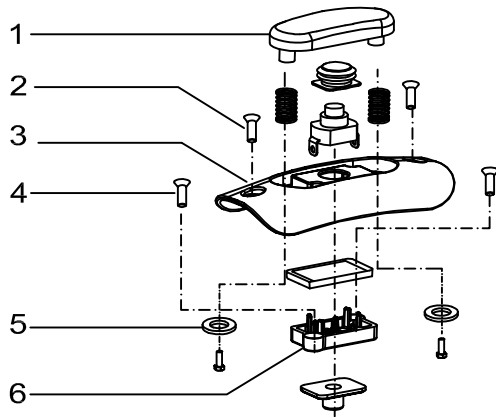
### AS430C PART LIST

| 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   |

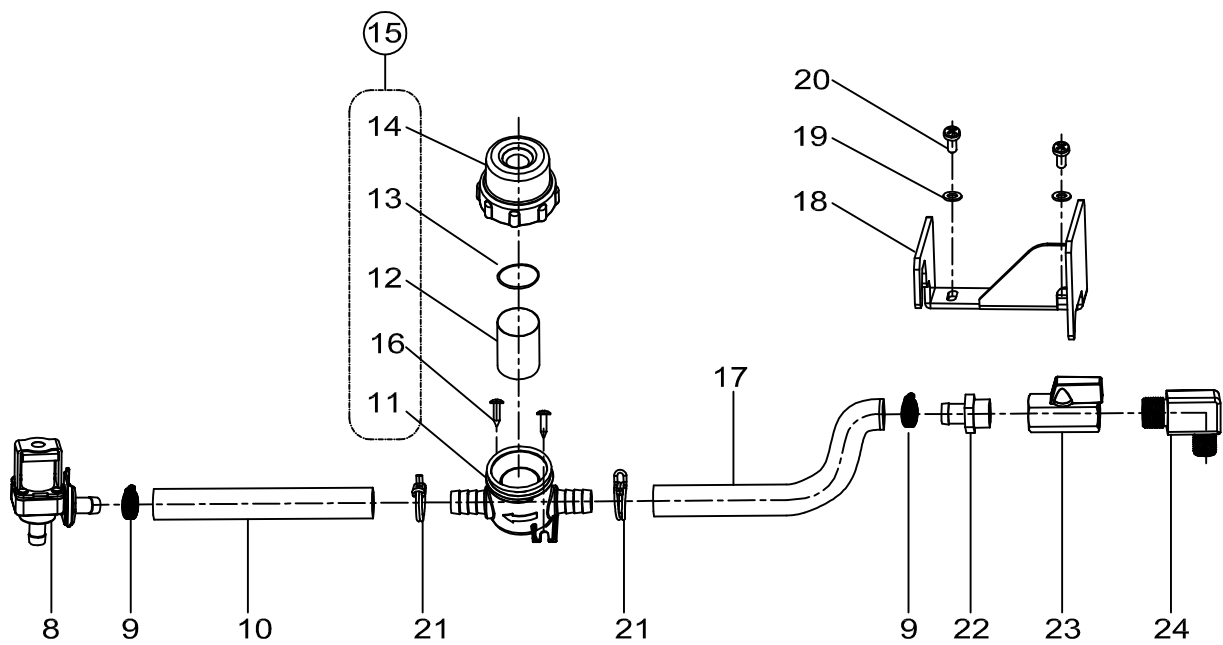
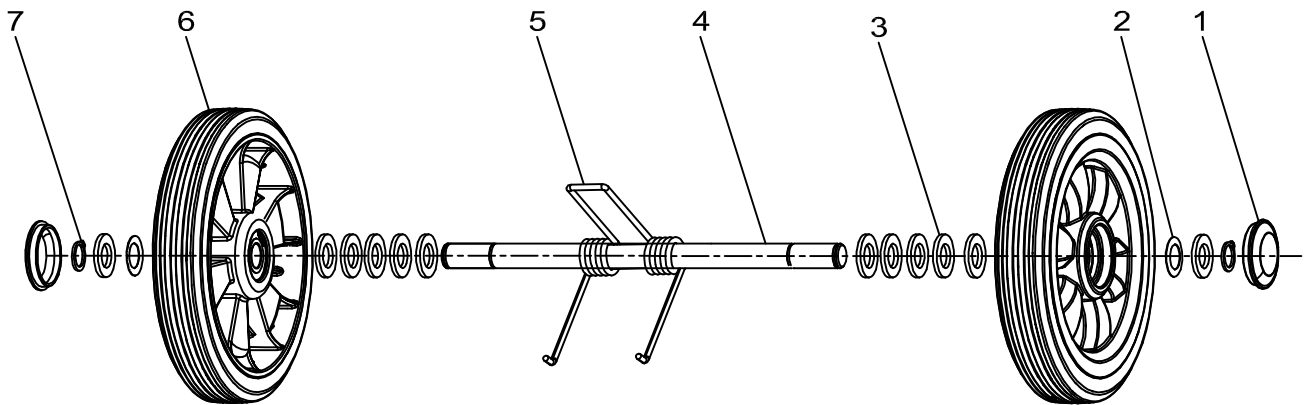
**CONTROL SYSTEM AND ELECTRICAL SYSTEM  
AS430C PART LIST**

| <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

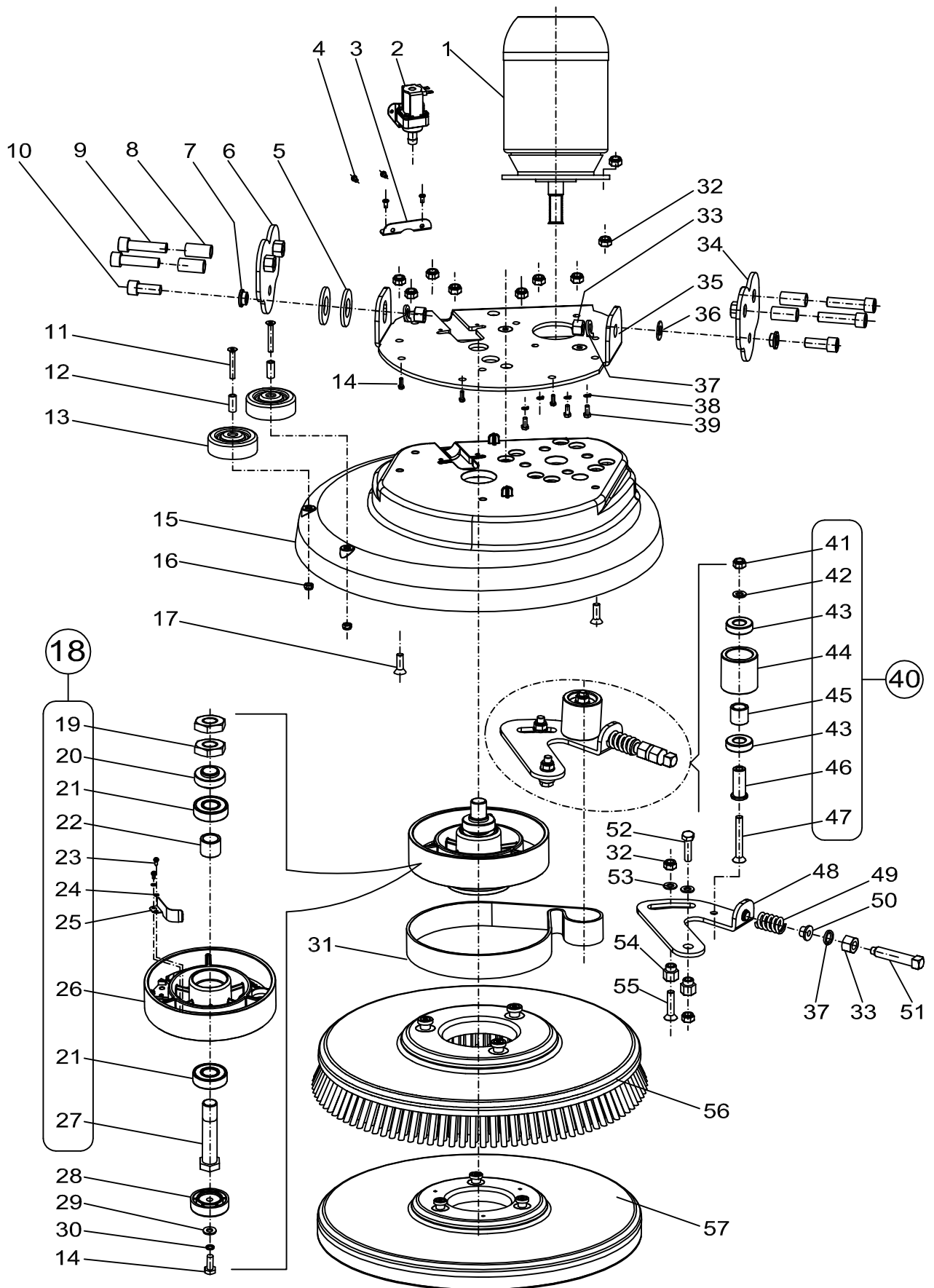
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**WHEELS AND SOLUTION SYSTEM**  
**AS430C PART LIST**

| <b>Item</b> | <b>Part No.</b> | <b>Description</b>                      | <b>Qty</b> |
|-------------|-----------------|---|------------|
| 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 $\varphi 4 * \varphi 12.5 * 1.5$ | 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**

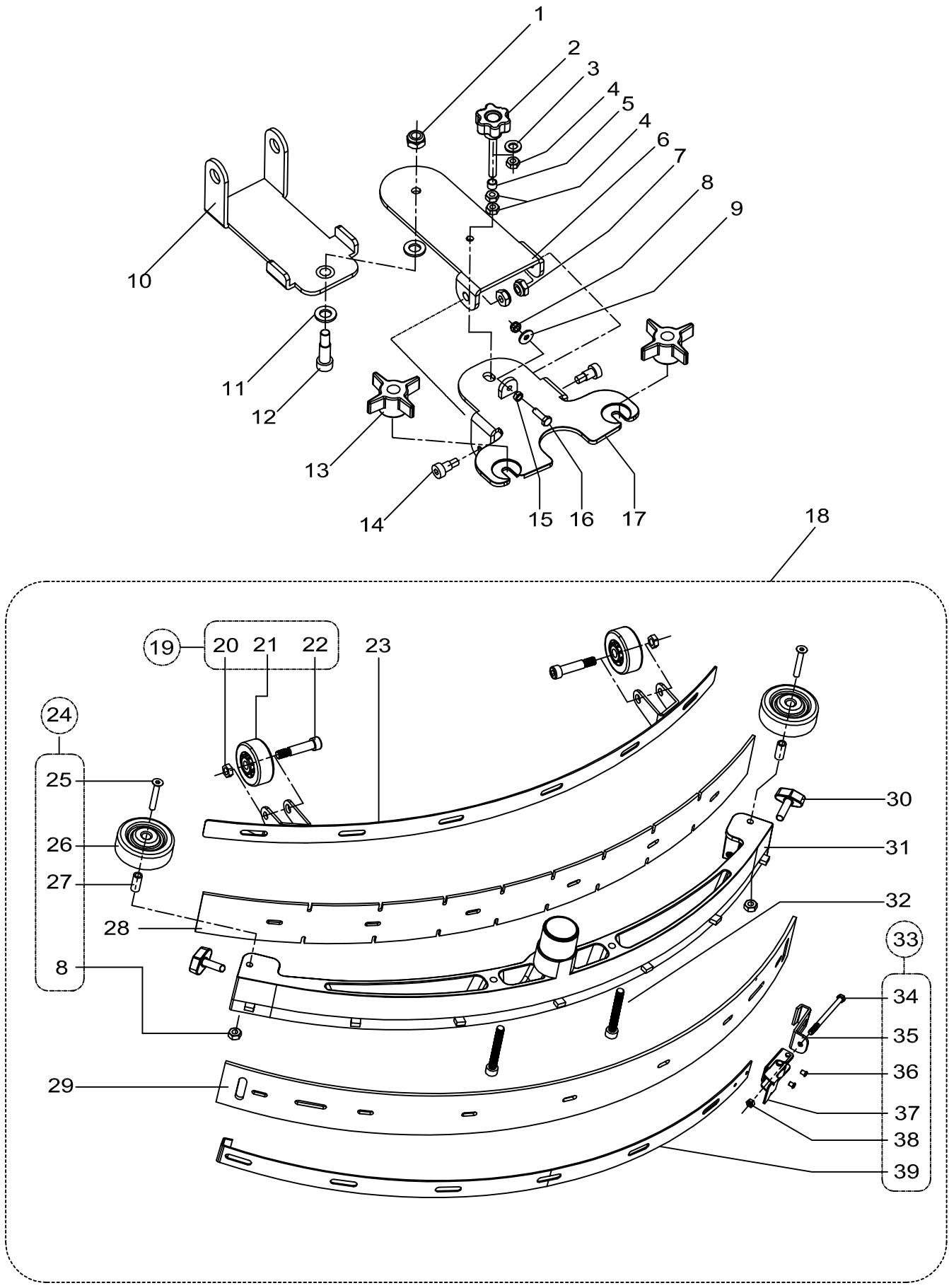
| <b>Item</b> | <b>Part No.</b> | <b>Description</b>     | <b>Qty</b> |
|-------------|-----------------|------------------------|------------|
| 1           | VF90729         | BRUSH MOTOR KIT        | 1          |
| 2           | VF90284         | SOLENOID VALVE KIT     | 1          |
| 3           | 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 $\phi$ 8.4x $\phi$ 18x 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 M6x40                     | 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 M8x30                  | 2   |

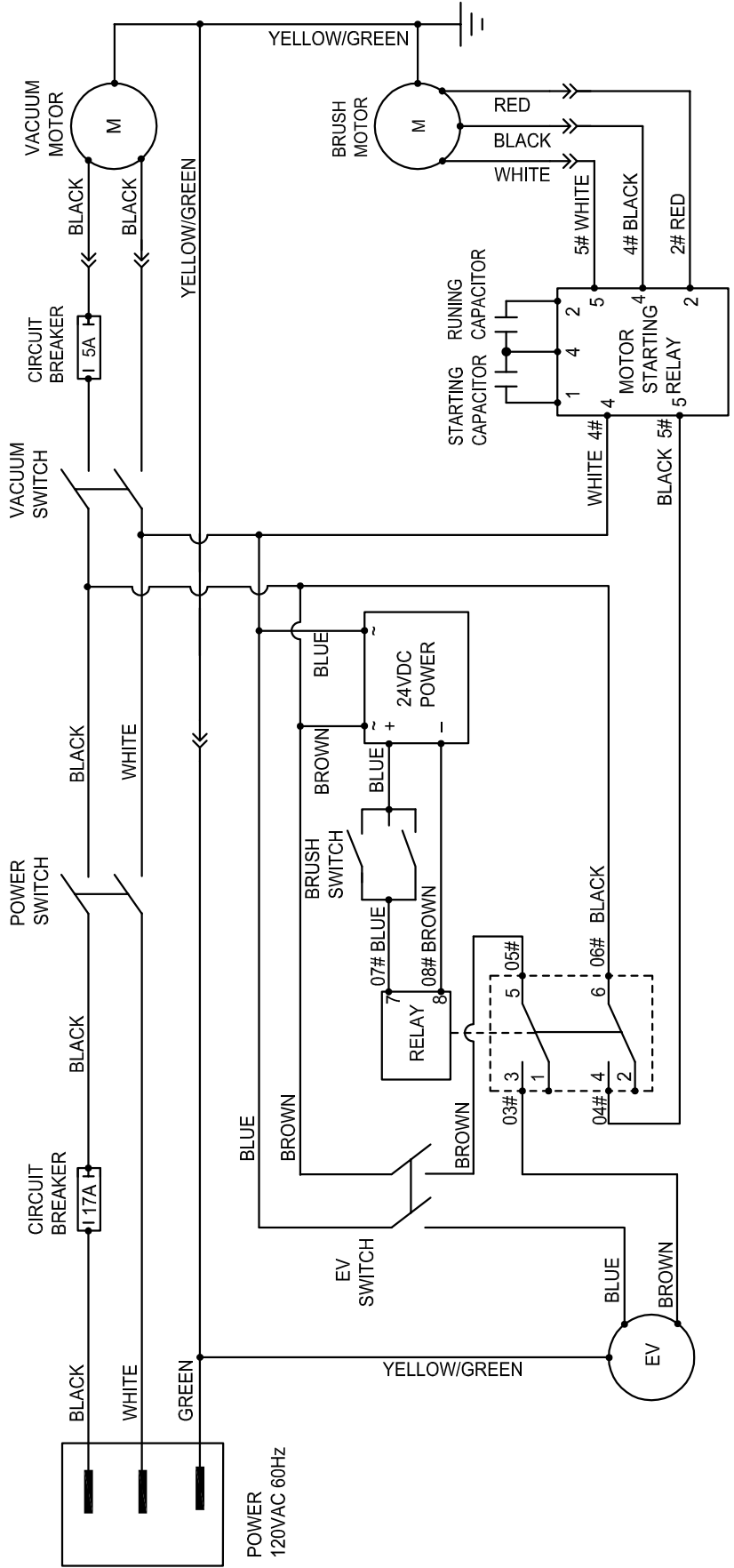
**SQUEEGEE SYSTEM**  
**AS430C PART LIST**

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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.usvipер.com](http://www.usvipер.com)