



E87028-00  
E88063-00



# STEALTH™ ASD20BT

20" Automatic Scrubber  
with Traction Drive



Operator and Parts  
Manual

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# RECEIVING THE MACHINE

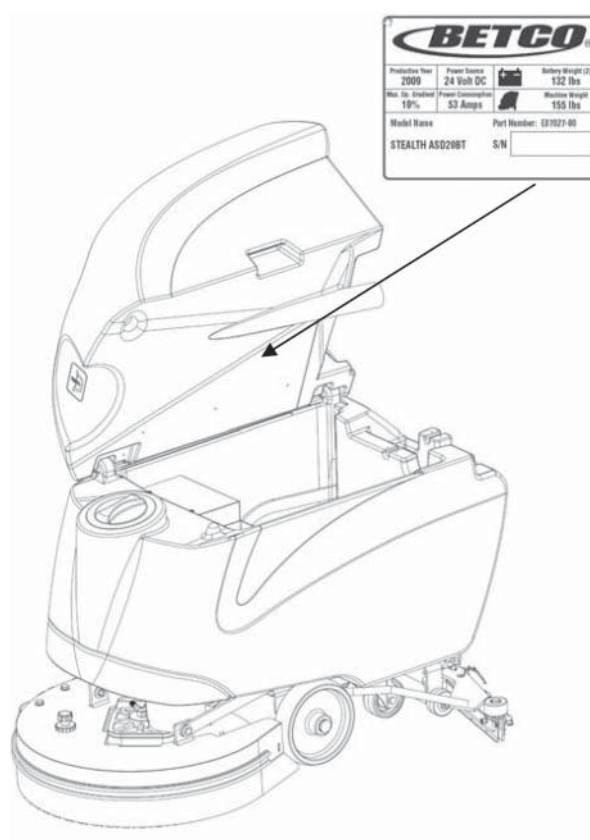
Immediately check, when receiving the machine, that all the materials indicated on delivery documents have been received and also that the machine has not been damaged in transit. If it has been damaged, this damage must be immediately reported to the shipper and also to our customer's service department. Only acting promptly in this manner will make it possible to receive missing material and to be compensated for damage.

## INTRODUCTION

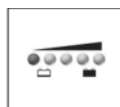
This is an automatic scrubber which, via the mechanical action of the rotating brush and the chemical action of a water/detergent solution, can clean many types of hard flooring. As it advances, it also collects the dirt removed and the detergent solution not absorbed by the floor.

**The machine must be used only for this purpose.** Even the best machines will only work well if used correctly and kept in good working order. We therefore suggest you read this instruction booklet carefully and re-read it whenever difficulties arise while using the machine. Please contact our technical service department or your dealers if you have any questions about the machine.

## Serial # Plate



## SYMBOLS USED ON THE MACHINE



**Battery charge gauge**

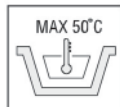


**Battery symbol**



**Open book symbol**

Used to tell the operator to read the manual before using the machine



**Maximum solution temperature gauge**

Located near the solution tank inlet

| <b>TECHNICAL DESCRIPTION</b>                             | <b>Measurement Unit</b>                | <b>Stealth™ ASD20BT</b> |
|----------------------------------------------------------|----------------------------------------|-------------------------|
| Rated power                                              | HP (W)                                 | 1.5 (1100)              |
| Working width                                            | In (mm)                                | 19.7 (500)              |
| Rear squeegee width                                      | In (mm)                                | 29.2 (742)              |
| Work capacity                                            | ft <sup>2</sup> /h (m <sup>2</sup> /h) | 22,050 (1450)           |
| Water consumption                                        | g/m <sup>2</sup>                       | 38                      |
| Brush & Pad (diameter)                                   | in (mm)                                | 20 (500)                |
| Brush RPM                                                | RPM                                    | 140                     |
| Brush pressure                                           | lb. (Kg)                               | 51 (23)                 |
| Brush motor                                              | V / HP (V / W)                         | 24 / 0.54 (24 / 400)    |
| Drive Type                                               |                                        | Automatic               |
| Traction motor                                           | V / HP (V / W)                         | 24 / 0.20 (24 / 400)    |
| Forward movement speed                                   | mph (km/h)                             | 2.5 (4)                 |
| Maximum grade                                            |                                        | 10%                     |
| Vacuum motor                                             | V / HP (V / W)                         | 36 / 0.74 (36 / 550)    |
| Vacuum motor suction                                     | inches of water (mbar)                 | 75.6 (188)              |
| Solution tank capacity                                   | Gal (l)                                | 11 (40)                 |
| Recovery tank capacity                                   | Gal (l)                                | 13 (50)                 |
| Weight of machine (excluding batteries)                  | lb. (Kg)                               | 210 (95)                |
| Batteries                                                | V / Ah                                 | 12 / 130 (2)            |
| Charger                                                  | V / A                                  | 24 / 12                 |
| Battery compartment dimensions (Length / Height / Width) | in x in x in                           | 14.2 x 12.8 x 13.0      |
|                                                          | (mm/mm/mm)                             | (360 / 325 / 330)       |
| Machine dimensions (Length / Height / Width)             | in x in x in                           | 45.3 x 39.4 x 20.9      |
|                                                          | (mm/mm/mm)                             | (1150 / 1000 / 530)     |
| Noise level                                              | dBA                                    | 58                      |

# GENERAL SAFETY REGULATIONS

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

- Read all labels on the machine carefully. Do not cover them for any reason and replace them immediately if they become damaged.
- The machine must be used exclusively by authorized and trained personnel.
- When operating the machine be careful of other people.
- The machine is not designed for cleaning carpets.
- The power cable outlet must be provided with a proper ground.
- Avoid damaging the power cable of the battery charger by crushing, bending, cutting or stressing it.
- Whenever the power cable of the battery charger is damaged, immediately contact a BETCO service center.
- Do not mix different types of detergent as this may produce harmful gases.
- Do not set containers on the machine.
- Machine storage temperature is between -10°F and 130°F, never store outside under humid conditions.
- Operating conditions: room temperature between 33°F and 100°F with relative humidity between 30% to 95%.
- Only use the machine in closed areas and do not expose it directly to rain.
- Never use the machine in an explosive environment.
- Do not use the machine as a means of transport.
- Never use acidic chemicals which could damage the machine.
- Avoid running the brushes with the machine stopped; this could damage the floor.
- Never vacuum up flammable liquids.
- Never use the machine to gather dangerous powders.
- Use a powder fire extinguisher in case of fire. Do not use water.
- Do not hit against shelving or scaffolding. The operator must always be equipped with the appropriate safety device (gloves, shoes, helmet, glasses, etc.)
- Do not use the machine on surfaces with an inclination greater than the one shown on the serial plate.
- The machine is designed to wash and dry floors simultaneously. Signal the presence of wet floors with suitable signs.
- If the machine does not work properly, perform routine maintenance. Otherwise, request the assistance of the BETCO technical service.
- When replacing parts ask for ORIGINAL spare parts from your Authorized BETCO Dealer and/or Retailer.
- Always turn off the machine and disconnect the battery connector whenever maintenance is performed.
- Never remove guards that require tools for removal.
- **Never wash the machine with direct or pressurized jets of water or with corrosive substances.**
- Have your BETCO service center check the machine once a year.
- To prevent the formation of scale in the solution tank filter, do not store the machine with detergent solution in the tanks.
- Before using the machine make sure that all doors and covers are positioned as shown in this operating and maintenance manual.
- When your BETCO machine is ready to be retired, the machine must be disposed of properly. It contains oils and electronic components. The machine was built using totally recyclable materials.
- Use only brushes furnished with the machine or those specified in the user's manual. Use of other brushes can compromise safety.
- When removing the battery, unplug the battery connection, unplug the charger and disconnect the battery terminals.
- Before recycling the machine, remove the battery.

# MACHINE PREPARATION

## 1. HANDLING THE PACKED MACHINE

The machine is contained in specific packaging.

It is not possible to place more than two packages on top of each other.

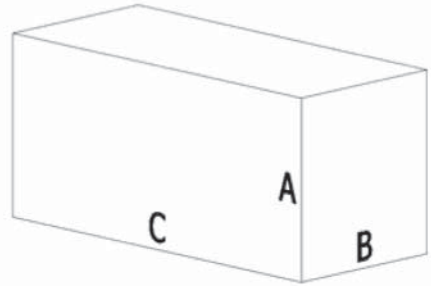
The total weight is 220 lb. (100 kg).

The overall dimensions of the package are:

A : 45.1 in (1145 mm)

B : 26.2 in (665 mm)

C : 48.4 in (1230 mm)

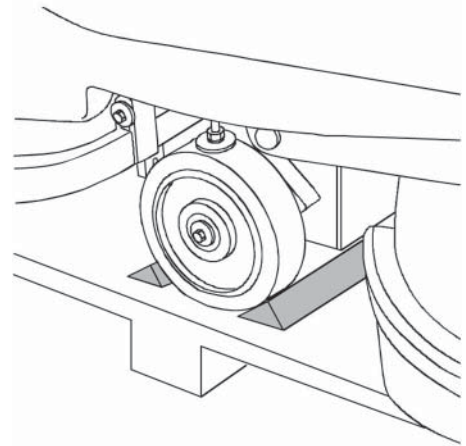


## 2. HOW TO UNPACK THE MACHINE

A. Remove the outer packaging.

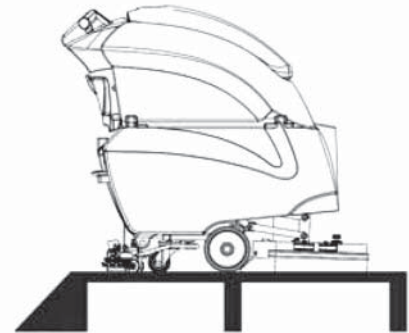
B. The machine is fixed to the pallet with wedges which lock the wheels.

C. Remove these wedges.



D. Use a ramp to get the machine down from the pallet, pushing it backwards.

E. Keep the pallet for any future transport needs.



# MACHINE PREPARATION

## 3. BATTERY INSTALLATION

The machine will be supplied with a battery charger and either two 12V Wet or AGM batteries. The batteries must be housed in the battery tray in the battery compartment beneath the recovery tank.

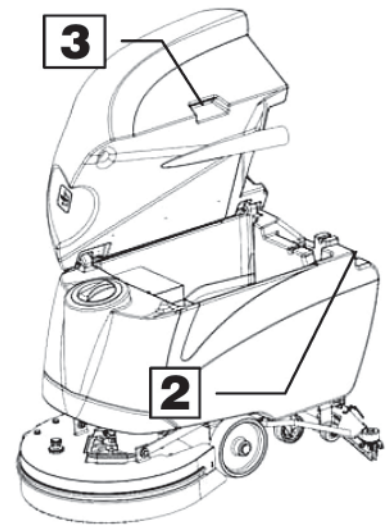
To insert the batteries you must:

- A. Lower the squeegee and brush deck.
- B. Open the rear latch that secures the recovery tank (2).
- C. Rotate the recovery tank as far as it will go, using the side handle (3).



**WARNING:** To avoid acid leakage you can use sealed batteries.

**WARNING:** Perform one battery charging cycle before using the machine.



## 4. TYPE OF BATTERY

To power the machine you can use:

- Wet batteries
- AGM batteries
- Gel batteries

OTHER TYPES MUST NOT BE USED.

The maximum dimensions and the weight are:

Width 6.7 in (171 mm)

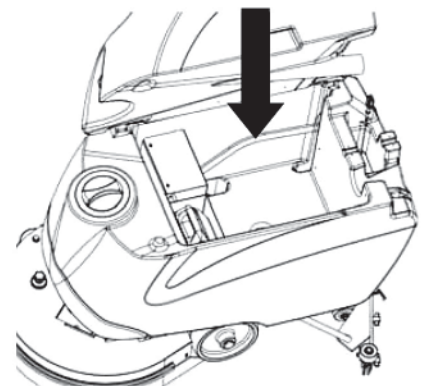
Length 12.9 in (329 mm)

Height 9.6 in (245 mm)

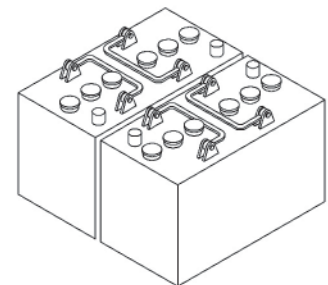
Weight 68 lb. (31 kg)



**WARNING:** Your charger must be set according to the type of battery you install. Call BETCO customer service to ensure correct charger setting after replacement batteries are installed.



- The batteries must be handled using lifting and transportation means suitable for the weight and dimensions.
- They must be lifted by the handles on the upper part.
- They must be connected together in series, to obtain an overall voltage of 24V on the lugs.
- The electrical connection operations must be carried out by certified trained personnel.





# MACHINE PREPARATION

## 5. BATTERY MAINTENANCE

For maintenance and recharging, follow the instructions provided by the battery manufacturer.

## 6. BATTERY DISPOSAL

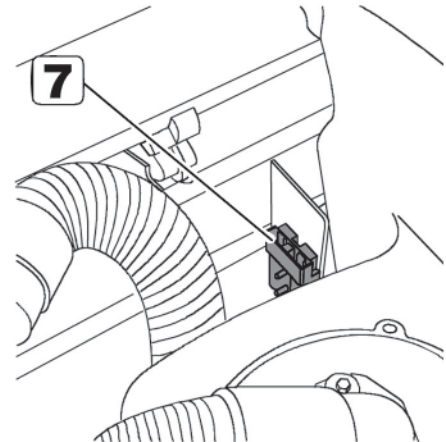
When the battery reaches the end of its working life, it must be disconnected by certified professional, and removed from the battery compartment.

## 7. CONNECTING THE BATTERY CHARGER

Beneath the recovery tank there is the battery connector (7), the battery charger connector must be plugged into. Disconnect the battery plug and plug the charger into the machine plug.



**WARNING:** This process must be carried out by qualified personnel. The incorrect or imperfect connection of the cables to the connector can seriously harm people and damage objects.

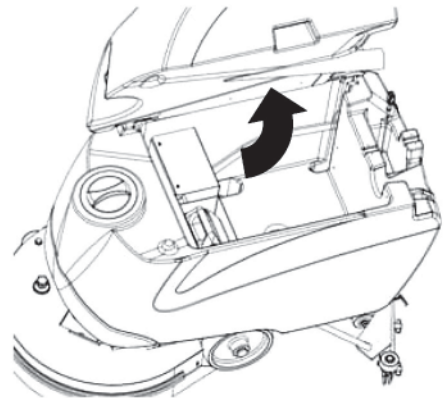


## 8. RECHARGING THE BATTERIES

Perform one complete battery charge cycle before using the machine. Avoid totally discharging the batteries! This can cause permanent damage to them. Recharge as soon as the battery discharged signal light starts to flash.



**WARNING:** Never leave the batteries completely discharged, not even if the machine is not being used. This can cause permanent damage to them. While recharging, keep the recovery tank raised. Ensure the battery charger is suitable for the batteries installed.



**Danger of inhalation of gas and leakage of corrosive liquids.**



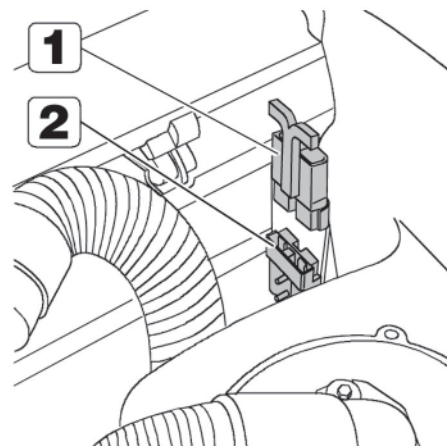
**Danger of fire: do not go near flames.**



# MACHINE PREPARATION

## 9. CONNECTING THE BATTERY CONNECTOR

Connect the battery connector (2) to the machine connector (1)

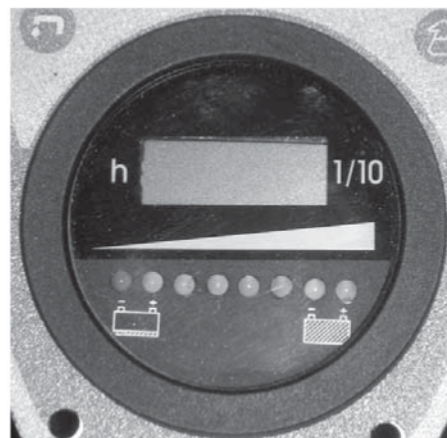


## 10. BATTERY INDICATOR

The battery indicator uses LEDs and has 8 positions (7 yellow - charged batteries, and 1 red - run down batteries).



***WARNING: A few seconds after the red indicator light comes on, the brush motor switches off automatically. With the remaining charge it is possible to complete the drying process before recharging.***

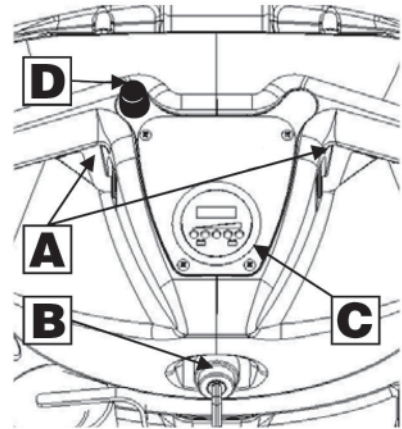


# MACHINE PREPARATION

## 11. INSTRUMENT PANEL COMPONENTS

The instrument panel components are identified as follows:

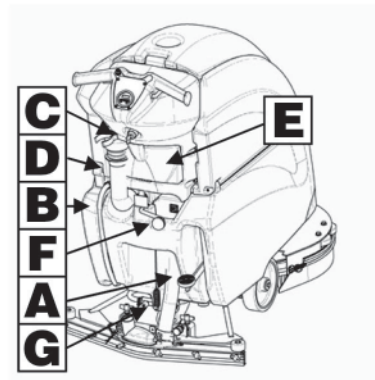
- A. Levers to activate brushes / traction (located beneath the handlebar)
- B. ON/OFF key switch
- C. Battery level / hour-counter display
- D. Traction speed control knob



## 12. REAR COMPONENTS

The rear components are identified as follows:

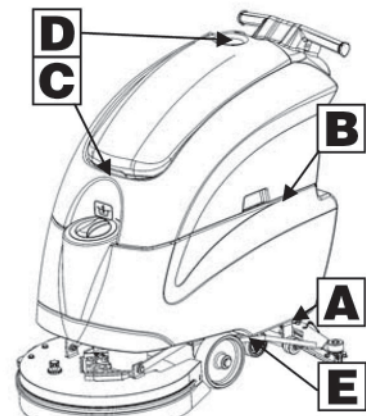
- A. Foot pedal to raise the brushes
- B. Water / solution level hose
- C. Drain hose with recovery tank cap
- D. Latch to close the tanks
- E. Compartment storage
- F. Lever to raise the squeegee
- G. Solution filter



## 13. SIDE COMPONENTS

The side components are identified as follows:

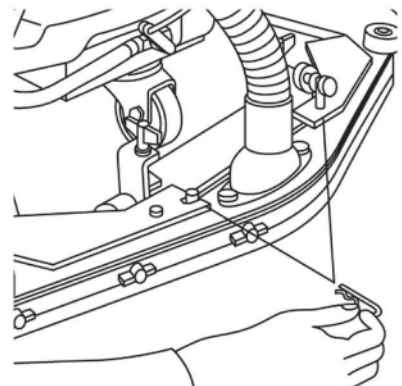
- A. Valve for manual regulation of clean water flow
- B. Handle to raise the recovery tank
- C. Handle to raise the vacuum unit
- D. Upper storage compartment
- E. Brake lever



## 14. ASSEMBLING THE SQUEEGEE

For packaging reasons, the squeegee is supplied dismounted from the machine, and must be assembled as follows:

- A. Insert the two small pins of the squeegee in the appropriate holes on the squeegee yoke.
- B. Insert the two cotter pins chained to the squeegee shoe.
- C. Attach the squeegee vacuum hose over the squeegee shoe adapter.

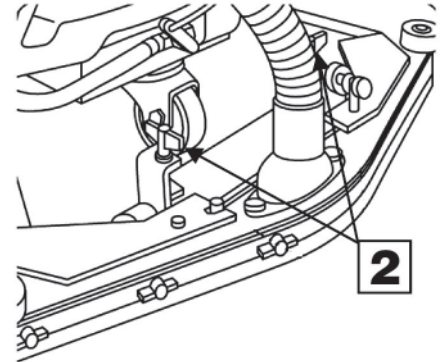


# MACHINE PREPARATION

## 15. ADJUSTING THE SQUEEGEE HEIGHT

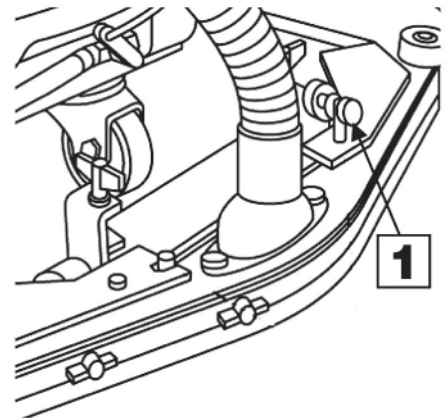
The height of the squeegee must be adjusted based on wear of the squeegee blade. To do this, turn the knobs **(2)** counter clockwise to raise the squeegee, and clockwise to lower it.

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



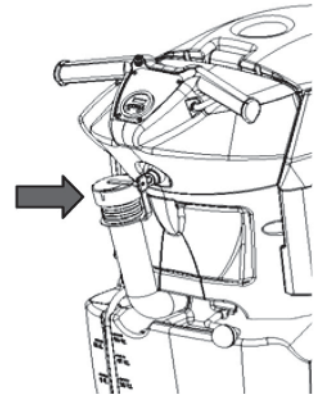
## 16. ADJUSTING THE SQUEEGEE INCLINATION

During operation, the rear squeegee blade is slightly tilted backwards (by about 0.2 in. (5 mm) in a uniform way over entire length. If it is necessary to increase the bend of the squeegee blade in the center, you must tilt the squeegee backwards, rotating the adjuster **(1)** counter clockwise. To increase the bend of the squeegee blade at the outside edges of the squeegee, rotate the adjuster clockwise. When fully adjusted, tighten the jam nut.



## 17. RECOVERY TANK

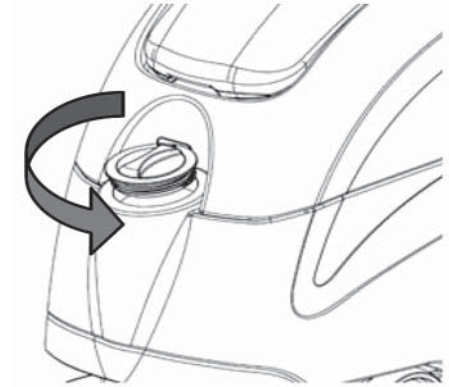
Check the drain hose cap (on the rear of the machine) to ensure it's closed.



# MACHINE PREPARATION

## 18. SOLUTION TANK

Remove the front inlet cap and check the solution filter is correctly installed. Check the filter cap (beneath the solution tank, at the back) is correctly closed.



## 19. SOLUTION TANK

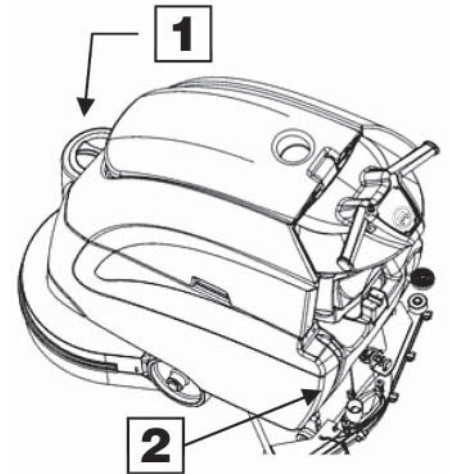
Fill the tank with clean water in the front fill location (1) at a temperature not exceeding 120°F (50°C). You can check the level of solution in the tank by means of the rear hose (2).

Add liquid detergent into the tank, in the concentration and manner specified by the manufacturer. The formation of excess foam could damage the vacuum motor, so be sure to use only the correct amount of detergent.



**WARNING:** Always use low-foam detergent. Introduce a small amount of defoaming liquid in the recovery tank before starting work to prevent foam from being generated.

**WARNING:** Never use pure acids.



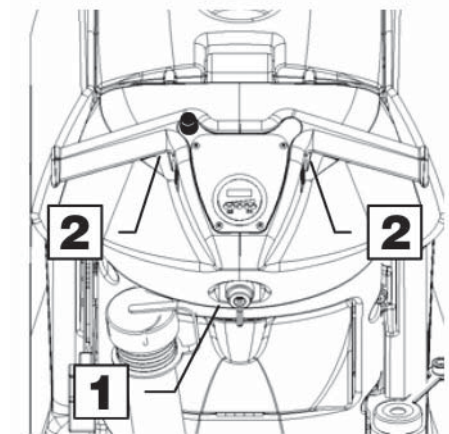
## 20. ASSEMBLING THE BRUSH

- A. With the brush deck up, place the brush and center it under the brush deck.
- B. Lower the brush deck, turn the key (1) to position "1", pull the switch levers (2) on the handlebars.

The brush is now installed.



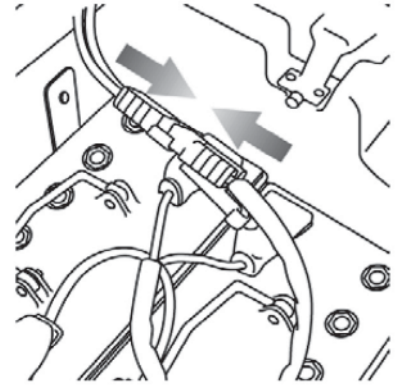
**WARNING:** Make sure there are no objects or people in the vicinity of the brush when doing this operation.



# OPERATION

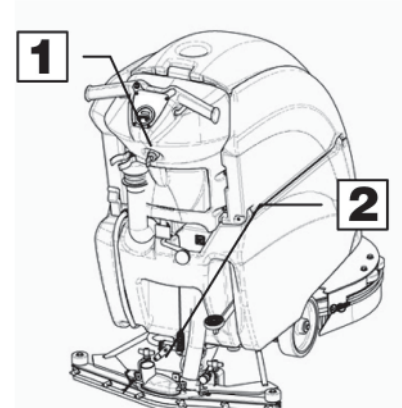
## 1. MACHINE OPERATION

A. Connect the battery plug to the machine plug.



B. Turn the key (1) of the main switch to the "ON" position (clockwise). The battery charge level indicator lights will immediately come on.

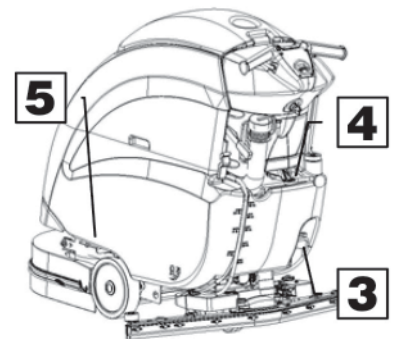
C. Turn on the water valve (2) (the water dispenses automatically when the brush is turning).



D. Release the foot lever (3) and lower the brush deck.

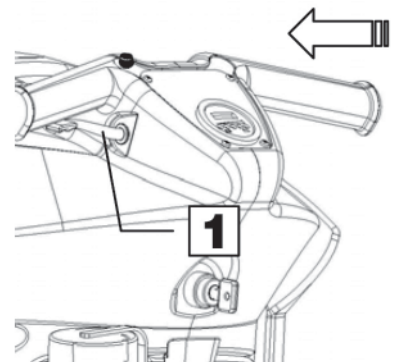
E. Lower the squeegee by rotating the squeegee lift handle (4) counter clockwise. The vacuum motor will turn on.

F. Check that the brake (5) is released.



G. Pulling the switch levers (1), activates the brush and the machine begins to move. During the first few feet, check that the amount of solution dispensed is correct, and that the squeegee dries the floor.

H. The machine will now start to scrub and dry until the solution tank is empty or recovery tank is full.



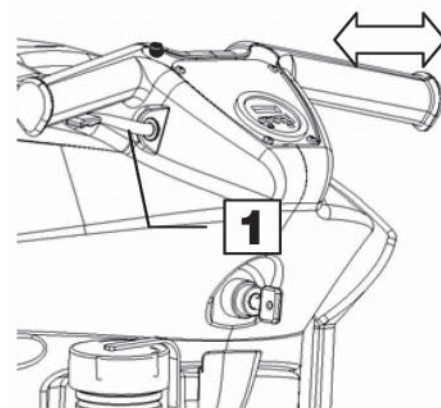
# OPERATION

## 2. REVERSE MOVEMENT

To move the machine in reverse push the switch levers (1) forward.



**WARNING:** When moving the machine in reverse, raise the squeegee.



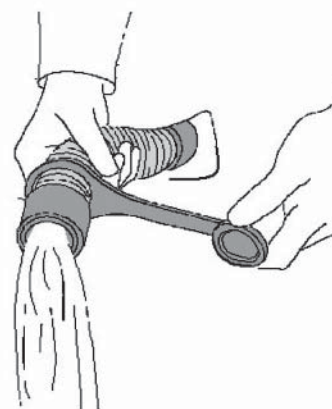
## 3. OVERFLOW DEVICE

The machine has a float in a filter basket that trips when the recovery tank is full to stop airflow into the vacuum hose.

At this point empty the recovery tank by removing the cap of the drain hose.



**WARNING:** Always wear gloves when doing this operation to protect yourself from contact with hazardous chemicals.





# SHUTTING DOWN THE MACHINE

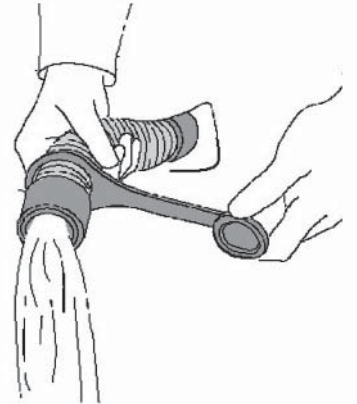
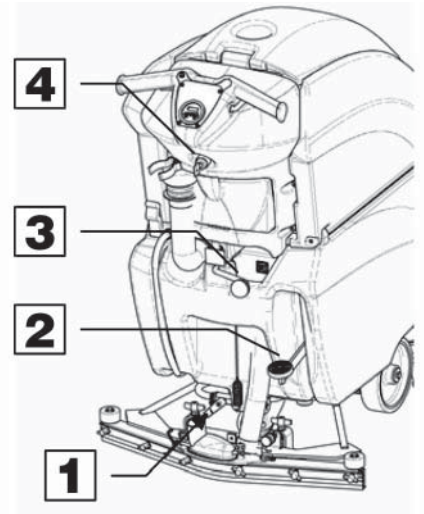
## 1. END OF WORK

When shutting down the machine and before you perform any type of maintenance:

- A. Turn off the solution control valve (1)
  - B. Raise the brush deck using the foot pedal (2)
  - C. Raise the squeegee using the squeegee lift lever (3)
  - D. Turn off the key switch (4)
  - E. Move the machine where the tanks can be drained.
- 
- F. Remove the drain hose from it's hook, remove the drain cap and empty the recovery tank.
  - G. The squeegee must be raised when the machine is not operating, to avoid deforming the squeegee blades.
  - H. Disassemble the pads and clean them with water.



**WARNING:** Always wear gloves when doing this operation to protect yourself from contact with hazardous chemicals.





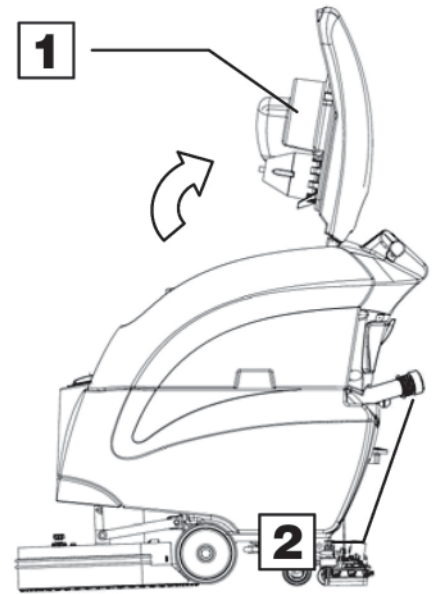
# DAILY MAINTENANCE

## 1. CLEANING THE RECOVERY TANK

- A. Raise the vacuum cover (1).
- B. Remove the drain hose (2) from it's hook and empty the tank.
- C. Rinse the inside of the tank with water.
- D. Close the cover on the machine and replace the drain hose cap and drain hose.



**WARNING:** Always wear gloves when doing this operation to protect yourself from contact with hazardous chemicals.

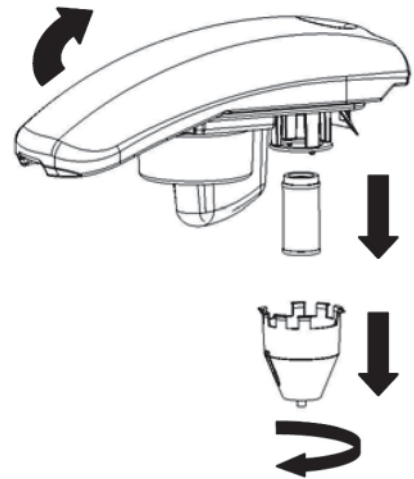


## 2. CLEANING THE VACUUM FILTER

- A. Raise the cover.
- B. Remove the vacuum filter cover by rotating it clockwise.
- C. Pull the filter straight down from the lid to remove it.
- D. Use water to clean the walls and base of the filter.
- E. Reassemble all the components.



**WARNING:** Always wear gloves when doing this operation to protect yourself from contact with hazardous chemicals.

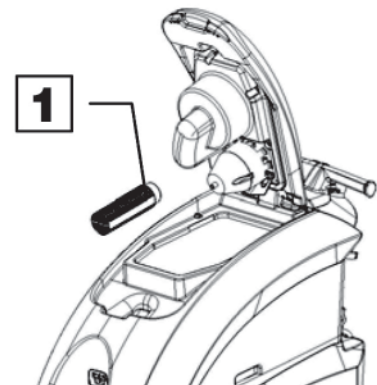


## 3. CLEANING THE VACUUM HOSE FILTER

- A. Raise the vacuum cover.
- B. Rotate the inner filter (1) and remove it.
- C. Use water to clean the walls and base of the filter.
- D. Reassemble all the components.



**WARNING:** Always wear gloves when doing this operation to protect yourself from contact with hazardous chemicals.

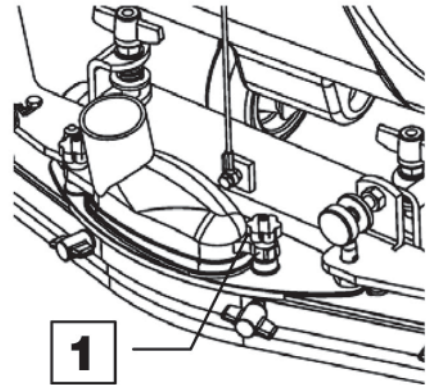


# DAILY MAINTENANCE

## 4. CLEANING THE SQUEEGEE

To clean:

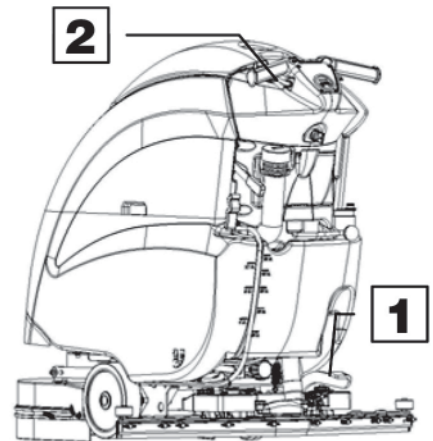
- A. Remove the vacuum hose from the squeegee shoe adaptor.
- B. Loosen the knobs **(1)** at the squeegee shoe adaptor.
- C. Remove and clean the squeegee shoe adaptor.
- D. Carefully clean inside the squeegee shoe.
- E. Carefully clean the squeegee blades.
- F. Reassemble all the squeegee components.



## 5. MOVING THE PAD DRIVER

To remove the pad driver:

- A. Turn on the machine with the key switch.
- B. Press the foot pedal that raises and lowers the brush deck, and slightly raise the pad off the floor **(1)**.
- C. Pull the switch levers **(2)** then release them immediately.
- D. The pad driver will be automatically release from the brush deck.

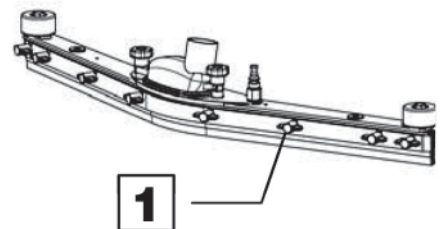


## 6. REPLACING THE SQUEEGEE BLADES

Check the wear of the squeegee blades and, if necessary, replace them.

To replace them:

- A. Remove the vacuum hose from the squeegee shoe adaptor.
  - B. Remove the cotter pins that mount the squeegee shoe.
  - C. Remove the squeegee shoe from the squeegee yoke.
  - D. Loosen the wing nuts **(1)**.
  - E. Remove the squeegee band clamp and squeegee blade.
  - F. Replace the squeegee blades.
- To reassemble the squeegee, repeat the operations in the reverse order.



**WARNING:** Always wear gloves when doing this operation to protect yourself from contact with hazardous chemicals.

# WEEKLY MAINTENANCE

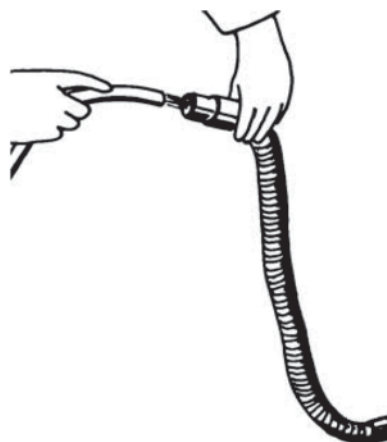
## 1. CLEANING THE SQUEEGEE HOSE

Every week, or whenever vacuum seems to be unsatisfactory, check the squeegee hose for obstructions. To clean it:

- Remove the vacuum hose from the squeegee shoe adapter on the squeegee shoe.
- Remove the other end from the recovery tank.
- Wash the inside of the hose with water from the end that it is connected to the tank.
- Reassemble the hose.

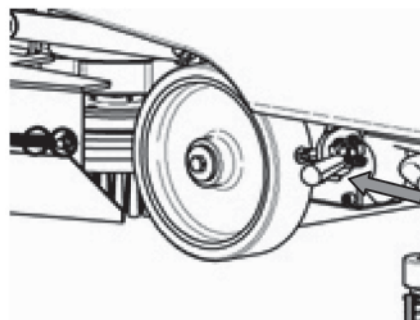


**WARNING:** Always wear gloves when doing this operation to protect yourself from contact with hazardous chemicals.



## 2. CHECKING THE BRAKE

Every week, check the distance between the work brake pads and the wheels. If necessary, adjust so they are at a distance of 0.12 in (3 mm) when released.

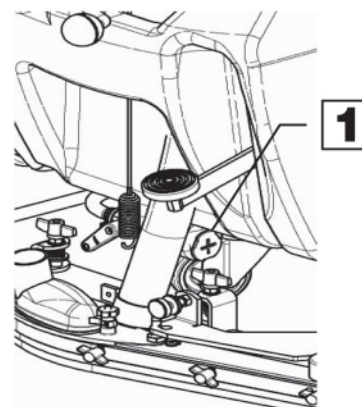


## 3. CLEANING THE SOLUTION TANK

- Remove the solution tank cap.
- Rinse with water.
- Remove the drain cap (1) located on the filter, and empty the tank.



**WARNING:** Always wear gloves when doing this operation to protect yourself from contact with hazardous chemicals.



# TROUBLESHOOTING GUIDE

## INSUFFICIENT WATER ON THE PAD

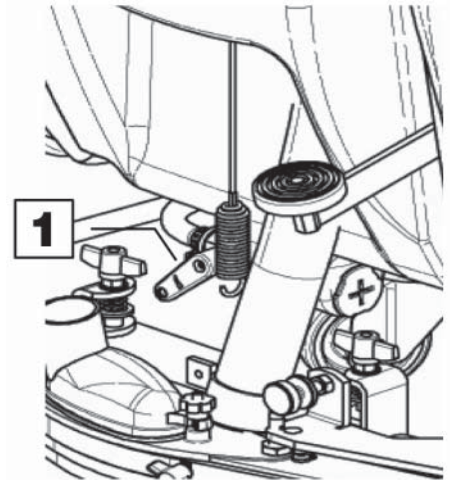
1. Check the valve – located beneath the symbol – (1) is turned on.
2. Check there is water in the solution tank.

## THE MACHINE DOES NOT CLEAN WELL

1. Check the wear of the scrubbing pad and, if necessary, replace it.

## THE SQUEEGEE DOES NOT DRY WELL

1. Check that the squeegee blades are clean.
2. Adjust the inclination of the squeegee.
3. Ensure the vacuum hose is correctly inserted in its housing in the recovery tank.
4. Check the inner filter inside the recovery tank to ensure that it is clean and, if necessary, clean it thoroughly.
5. Disassemble the entire vacuum unit and clean it.
6. Replace the squeegee blades, if worn.
7. Check squeegee wheel adjustment.



## TOO MUCH FOAM IS GENERATED

Check that low-foam detergent is being used. If necessary add a small amount of defoamer liquid to the recovery tank. Remember that more foam is generated when the floors are not very dirty. Dilute the detergent more when cleaning floors that are not very dirty.

---

## CHOOSING AND USING THE BRUSHES

### POLYPROPYLENE BRUSH (PPL)

Used on all types of floors. Good resistance to wear and tear, and hot water (no greater than 140°F (60°C)).

### NYLON BRUSH

Used on all types of floors. Excellent resistance to wear and tear and hot water (even over 140°F (60°C)).

### ABRASIVE BRUSH

The bristles of this type of brush are coated with highly aggressive abrasives. It is used to clean very dirty floors.

### THICKNESS OF THE BRISTLES

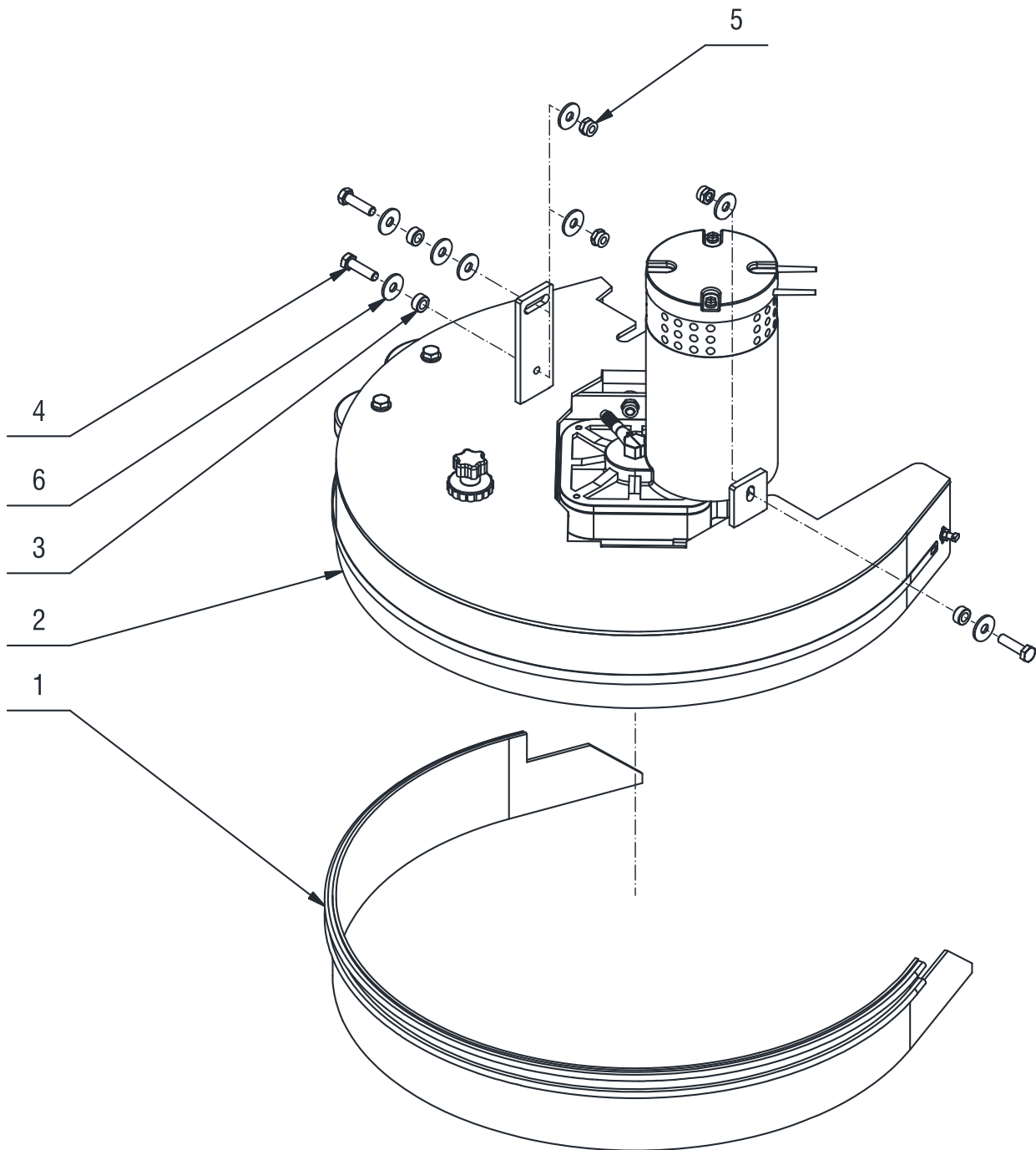
Thicker bristles are more rigid and are therefore used on smooth floors or floors with small joints. On uneven floors or those with deep joints, it is advisable to use softer bristles which can enter the gaps easier. Remember that when the bristles are worn and too short, they will become rigid and are no longer able to penetrate and clean deep and cause the brush to bounce.

### PAD DRIVER

A pad driver is recommended for cleaning smooth surfaces. There are two types of pad drivers:

1. The traditional pad holder is fitted with a series of anchor points that allow the abrasive floor pad to be held while working.
2. The CENTER LOCK type pad holder not only has anchor points, but also a snap-type central locking system made of plastic that allows the abrasive floor pad to be centered and held without any risk of it becoming detached.

# BRUSH DECK DIAGRAM

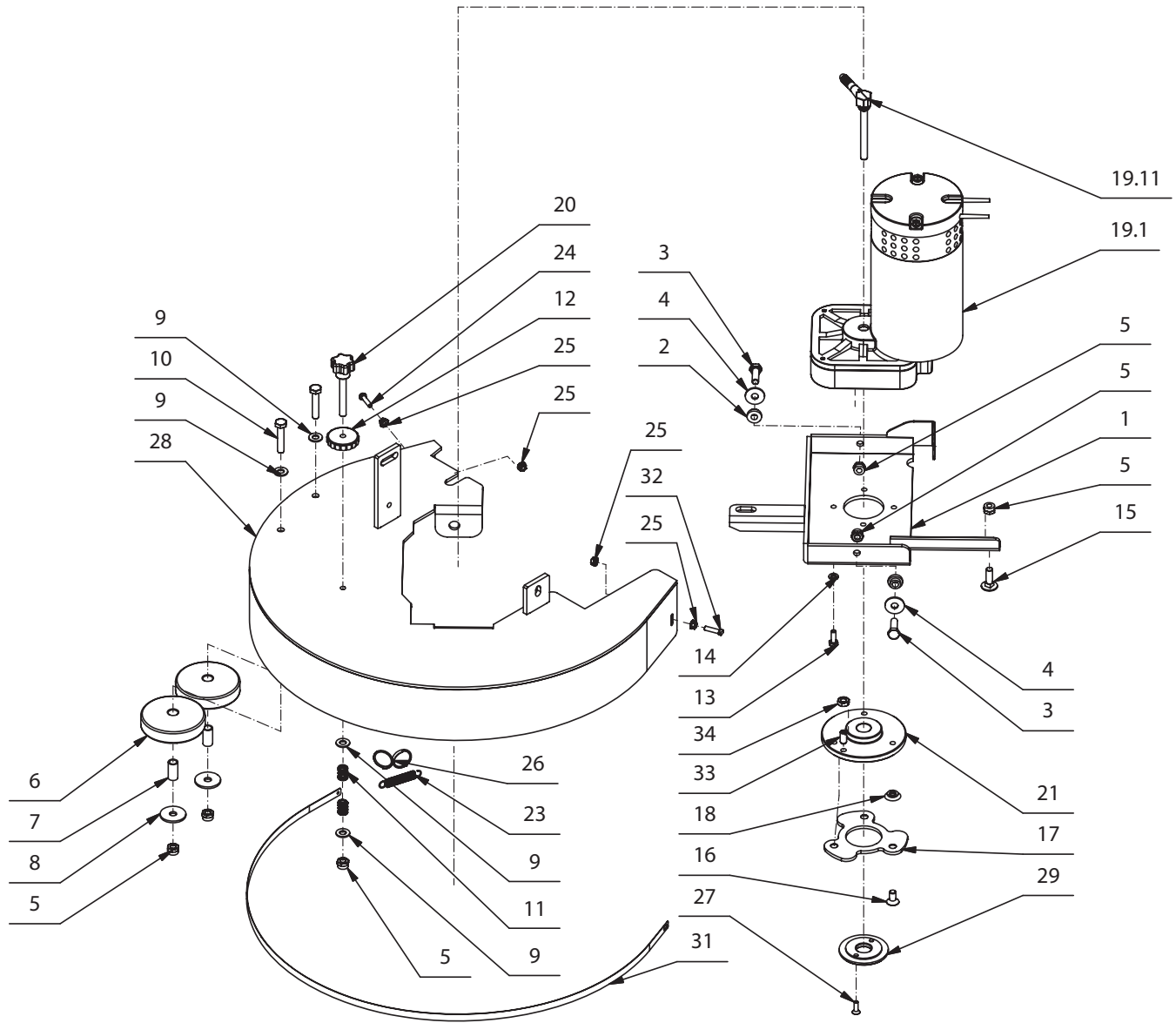


## BRUSH DECK PARTS LISTING

| Item# | Part # | Description             | Qty. |
|-------|--------|-------------------------|------|
| 1     | E88272 | Brush Deck Splash Guard | 1    |
| 2     | E20073 | Brush Deck              | 1    |
| 3     | E83970 | Bushing                 | 3    |

| Item# | Part # | Description                | Qty. |
|-------|--------|----------------------------|------|
| 4     | E83802 | Hex Bolt M8x30 Zinc        | 3    |
| 5     | E81709 | Nyloc Hex Nut, M8 Zinc     | 3    |
| 6     | E83404 | Flat Washer M9x24x2.5 Zinc | 8    |

# BRUSH DECK DRIVE DIAGRAM



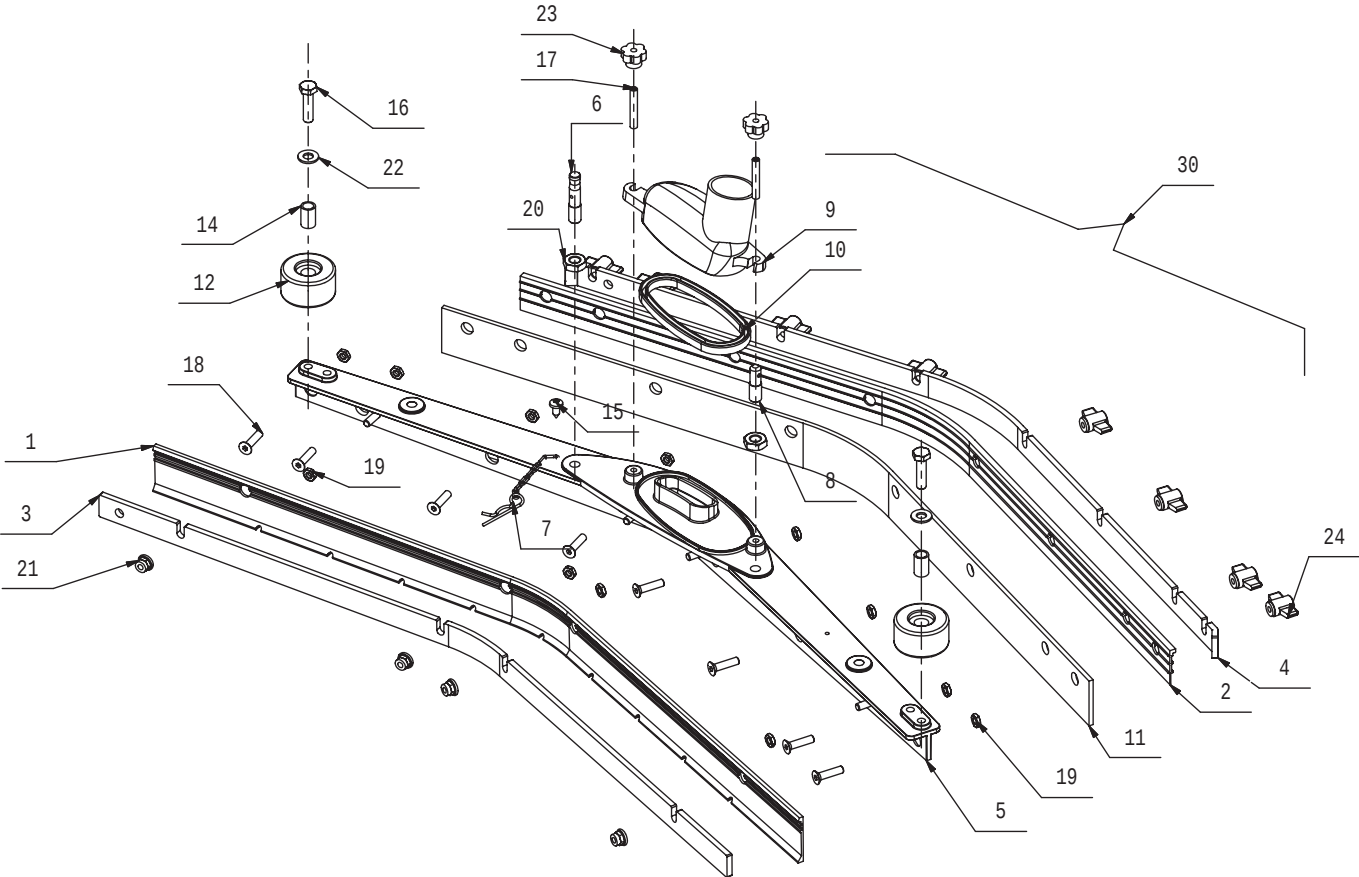


## BRUSH DECK DRIVE PARTS LISTING

| Item# | Part # | Description                          | Qty. |
|-------|--------|--------------------------------------|------|
| 1     | E20011 | Motor Mount Plate                    | 1    |
| 2     | E82312 | Bushing                              | 2    |
| 3     | E83833 | Hex Bolt M8x25 Zinc                  | 2    |
| 4     | E83404 | Flat Washer M9x24x2.5 Zinc           | 2    |
| 5     | E81709 | Nyloc Hex Nut, M8 Zinc               | 6    |
| 6     | E83895 | Wheel 80 OD x 23 W                   | 2    |
| 7     | E83524 | Bushing                              | 2    |
| 8     | E81918 | Flat Washer M9x32x2.5 Zinc           | 2    |
| 9     | E81874 | Flat Washer M8x17x1.6 Zinc           | 4    |
| 10    | E83830 | Hex Bolt M8x40 Zinc                  | 2    |
| 11    | E82309 | Spring, Compression                  | 2    |
| 12    | E83331 | Knob                                 | 1    |
| 13    | E83547 | M6x16 Bolt, Zinc Hex Head 4          |      |
| 14    | E82774 | Lock Washer, M6 Zinc                 | 4    |
| 15    | E20093 | Carriage Bolt M8x25 Zinc             | 1    |
| 16    | E20297 | Flat Hd Soc Machine Screw M8x16 Zinc | 3    |
| 17    | E82844 | Clutch Plate                         | 1    |

| Item# | Part # | Description                        | Qty. |
|-------|--------|------------------------------------|------|
| 18    | E82845 | Spacer                             | 3    |
| 19    | E88245 | Motor, Geared 24V 400W 140 RPM     | 1    |
| 19.11 | E20451 | Fitting, Solution Delivery Tube    | 1    |
| 20    | E83565 | Knob                               | 1    |
| 21    | E88246 | Brush, Flange Threaded             | 1    |
| 23    | E83491 | Spring                             | 1    |
| 24    | E83881 | Hex Bolt M5x20 Zinc                | 1    |
| 25    | E88010 | Hex Nut, M5                        | 4    |
| 26    | E83489 | Rings                              | 1    |
| 27    | E20290 | Flat Hd Soc Machine Screw M5x16 SS | 2    |
| 28    | E20507 | Brush Deck                         | 1    |
| 29    | E20584 | Retainer                           | 1    |
| 31    | E86169 | Band Clamp                         | 1    |
| 32    | E83823 | Screw M5x20/ SS Custom             | 1    |
| 33    | E20592 | Dowel Pin M8                       | 1    |
| 34    | E83672 | Hex Jam Nut, M8x5 SS               | 1    |

# SQUEEGEE ASSEMBLY DIAGRAM

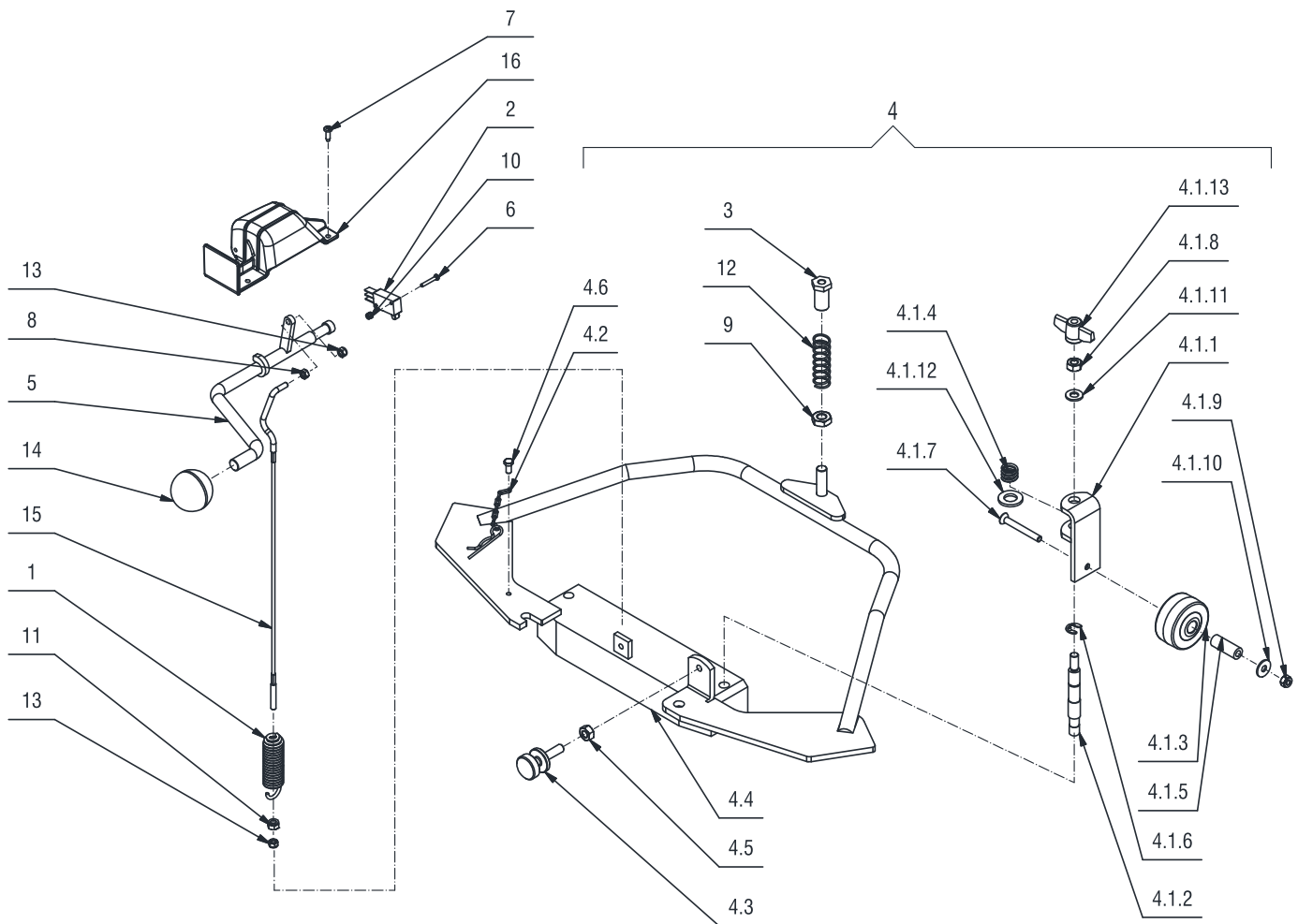


## SQUEEGEE ASSEMBLY PARTS LISTING

| Item# | Part # | Description                                          | Qty. |
|-------|--------|------------------------------------------------------|------|
| 1     | E83909 | Squeegee Blade, Polyurethane 30" x 1 3/4" x 1/8"     | 1    |
| 2     | E12560 | Squeegee Blade, Polyurethane 30 3/4" x 1 3/4" x 1/8" | 1    |
| 3     | E82608 | Band Clamp 29 1/2" x 7/8" x 1/8"                     | 1    |
| 4     | E82676 | Band Clamp 31 1/4" x 7/8" x 1/8"                     | 1    |
| 5     | E88240 | Squeegee Body                                        | 1    |
| 6     | E83911 | Stud Bolt M10x46 Custom                              | 1    |
| 7     | E83590 | Chain                                                | 1    |
| 8     | E83945 | Stud Bolt M10x33 Custom                              | 1    |
| 9     | E82307 | Squeegee Vacuum Adapter                              | 1    |
| 10    | E83971 | Gasket                                               | 1    |
| 11    | E12686 | Squeegee Blade, Gum Rubber 30 3/4" x 1 3/4" x 1/8"   | 1    |
| 12    | E82451 | Wheel 45 OD x 25 W                                   | 2    |
| 13    | E83914 | Hex Bolt M6x20 SS                                    | 2    |

| Item# | Part # | Description                                     | Qty. |
|-------|--------|-------------------------------------------------|------|
| 14    | E82253 | Bushing, Brass OD 11.95mm x ID 8.9mm x L 8.45mm | 1    |
| 15    | E83851 | Screw, Pan Hd Phil Self Tap M5.5x13 SS          | 2    |
| 16    | E83802 | Hex Bolt M8x30 Zinc                             | 2    |
| 17    | E82707 | Set Screw Hex Soc Flat End M6x40 SS             | 8    |
| 18    | E81848 | Flat Hd Soc Machine Screw M6x25 SS              | 12   |
| 19    | E20114 | Hex Jam Nut, M6X3 SS                            | 2    |
| 20    | E83875 | Hex Jam Nut, M10X6 Zinc                         | 4    |
| 21    | E20117 | Nyloc Hex Jam Nut, M6x9 SS                      | 2    |
| 22    | E81874 | Flat Washer M8x17x1.6 Zinc                      | 2    |
| 23    | E83810 | Knob                                            | 8    |
| 24    | E83591 | Knob                                            | 1    |
| 30    | E88536 | Squeegee Assembly                               | 1    |

# SQUEEGEE YOKE DIAGRAM

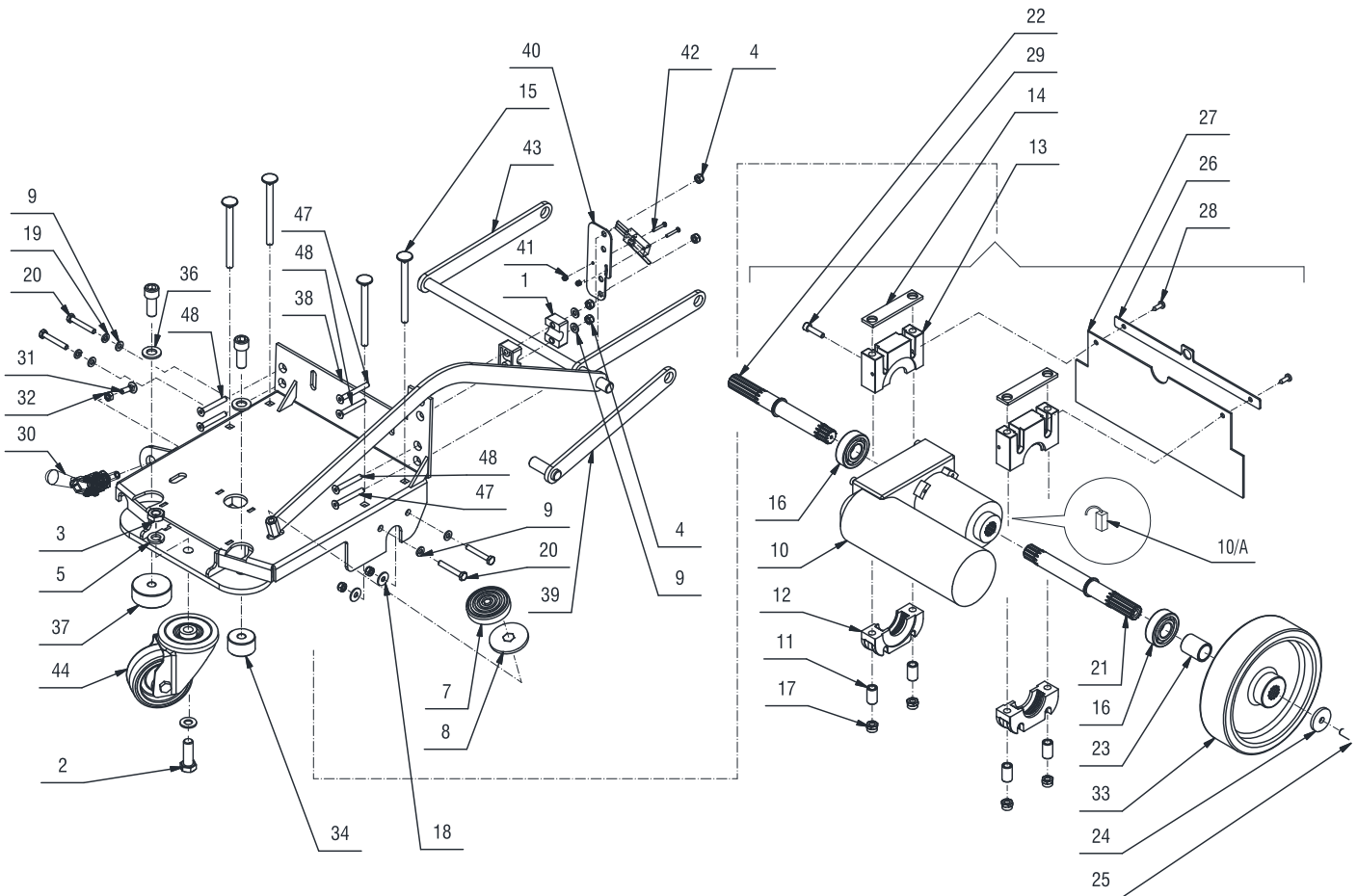


# SQUEEGEE YOKE PARTS LISTING

| Item#  | Part # | Description                          | Qty. |
|--------|--------|--------------------------------------|------|
| 1      | E82279 | Spring                               | 1    |
| 2      | E88279 | Micro Switch Sealed                  | 1    |
| 3      | E20373 | Guide Bushing                        | 1    |
| 4      | E20227 | Squeegee Yoke ASM                    | 1    |
| 4.1    | E20644 | Squeegee Wheel Support ASM           | 2    |
| 4.1.1  | E85497 | Weldment, Squeegee Wheel Support     | 1    |
| 4.1.2  | E82329 | Threaded Pin                         | 1    |
| 4.1.3  | E82428 | Wheel 52 OD x 28 W                   | 1    |
| 4.1.4  | E81634 | Spring Compression                   | 1    |
| 4.1.5  | E82273 | Bushing                              | 1    |
| 4.1.6  | E85498 | E Style Circlip                      | 1    |
| 4.1.7  | E20246 | Flat Hd Soc Machine Screw M6x50 Zinc | 1    |
| 4.1.8  | E83656 | Hex Nut, M8x6.5 Zinc                 | 1    |
| 4.1.9  | E83550 | NyLoc Hex Nut, M6 Zinc               | 1    |
| 4.1.10 | E82798 | Flat Washer M6x18x1.5 Zinc           | 1    |
| 4.1.11 | E81874 | Flat Washer M8x17x1.6 Zinc           | 1    |
| 4.1.12 | E85722 | Flat Washer M13x24x2.5 Zinc          | 1    |
| 4.1.13 | E83531 | Knob                                 | 1    |

| Item# | Part # | Description                          | Qty. |
|-------|--------|--------------------------------------|------|
| 4.2   | E83590 | Chain                                | 1    |
| 4.3   | E83655 | Adjuster Knob                        | 1    |
| 4.4   | E20286 | Squeegee Yoke                        | 1    |
| 4.5   | E85499 | Hex Nut, M8x6.5 SS                   | 1    |
| 4.6   | E20134 | Hex Bolt M5x10 Zinc                  | 1    |
| 5     | E20408 | Squeegee Lift Lever                  | 1    |
| 6     | E20242 | Pan Hd Phil Machine Screw M3x20 Zinc | 2    |
| 7     | E83838 | Screw 4.2 X 13                       | 4    |
| 8     | E82317 | Hex Jam Nut, M5X3.5 Zinc             | 1    |
| 9     | E83875 | Hex Jam Nut, M10X6 Zinc              | 1    |
| 10    | E81673 | Hex Nyloc Nut, M3 Zinc               | 2    |
| 11    | E83550 | NyLoc Hex Nut, M6 Zinc               | 1    |
| 12    | E88248 | Spring 17 x 14 x 53 Wide D=1.5       | 1    |
| 13    | E20382 | Nyloc Hex Nut, M5x5 Zinc             | 2    |
| 14    | E20638 | Knob                                 | 1    |
| 15    | E88250 | Squeegee Lift Cable                  | 1    |
| 16    | E20641 | Bracket                              | 1    |

# MAIN FRAME DIAGRAM



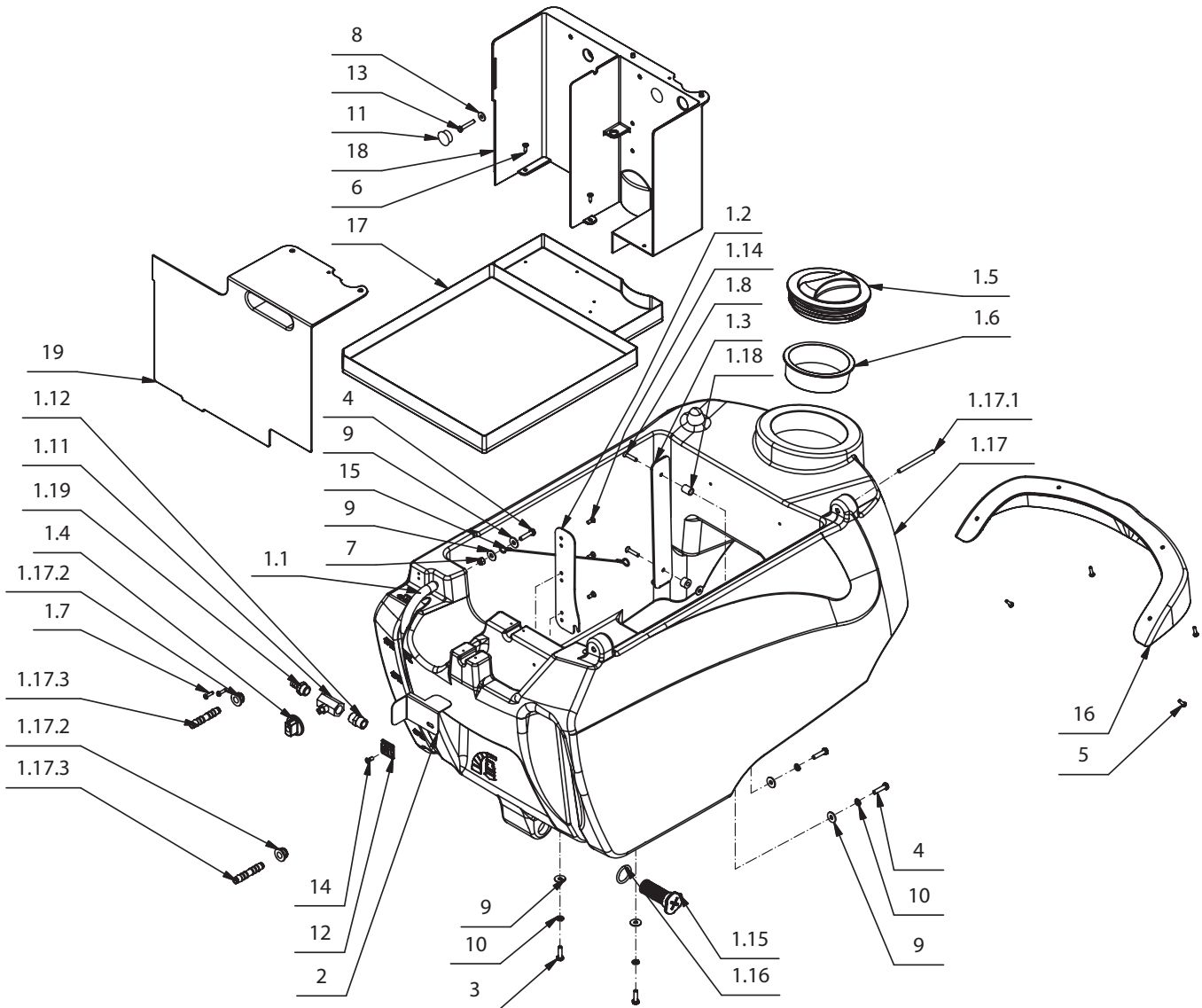
# MAIN FRAME PARTS LISTING

| Item# | Part # | Description                | Qty. |
|-------|--------|----------------------------|------|
| 1     | E82834 | Pivot Block                | 6    |
| 2     | E81735 | Hex Bolt M12x35 Zinc       | 1    |
| 3     | E83829 | Hex Jam Nut, M12X7 Zinc    | 1    |
| 4     | E83550 | NyLoc Hex Nut, M6 Zinc     | 10   |
| 5     | E81738 | Flat Washer M4x12x3 Zinc   | 1    |
| 7     | E83669 | Pedal cover                | 1    |
| 8     | E20370 | Foot Pedal                 | 1    |
| 9     | E82761 | Flat Washer M6x12x1.6 Zinc | 10   |
| 10    | E86182 | Drive Motor 24VDC 150W     | 1    |
| 10/A  | E20523 | Carbon Brush               | 2    |
| 11    | E88253 | Bushing                    | 4    |
| 12    | E20014 | Bearing Mount Cap          | 2    |
| 13    | E20609 | Bearing Mount Base         | 2    |
| 14    | E20315 | Shim Plate                 | 2    |
| 15    | E20591 | Carriage Bolt M8x100 Zinc  | 4    |
| 16    | E81657 | Bearing                    | 2    |
| 17    | E81709 | Nyloc Hex Nut, M8 Zinc     | 4    |
| 18    | E82798 | Flat Washer M6x18x1.5 Zinc | 2    |
| 19    | E82774 | Flat Washer M6x12x1.6 SS   | 2    |
| 20    | E81983 | Hex Bolt M6x40 Zinc        | 4    |
| 21    | E20446 | Axle Shaft, Right          | 1    |
| 22    | E20458 | Axle Shaft, Left           | 1    |
| 23    | E88254 | Spacer 25 x 20 x 31        | 2    |
| 24    | E81915 | Flat Washer M8.2x32x4 Zinc | 2    |
| 25    | E81917 | Hex Bolt M8x20 Zinc        | 2    |

| Item# | Part # | Description                            | Qty. |
|-------|--------|----------------------------------------|------|
| 26    | E20071 | Clamp Plate                            | 1    |
| 27    | E20501 | Splash Guard                           | 1    |
| 28    | E20108 | Screw, Pan Hd Phil Self Tap M4.8x16 SS | 2    |
| 29    | E83578 | Soc Hd Cap Screw M6x25 Zinc            | 2    |
| 30    | E20369 | Parking Brake                          | 1    |
| 31    | E20356 | Carriage Bolt M6x20 Zinc               | 1    |
| 32    | E83852 | Hex Nut, M6x5                          | 1    |
| 33    | E82542 | Drive Wheel 175 OD x 45 W              | 2    |
| 34    | E20226 | Bumper                                 | 1    |
| 36    | E85722 | Flat Washer M13x24x2.5 Zinc            | 2    |
| 37    | E20334 | Bumper                                 | 1    |
| 50    | E88256 | Micro Switch                           | 1    |
| 38    | E20600 | Main Frame Weldment                    | 1    |
| 39    | E83597 | Brush Deck Lift Idler Arm Weldment     | 1    |
| 40    | E20473 | Switch Plate                           | 1    |
| 41    | E20435 | Nyloc Hex Nut, M3 SS                   | 2    |
| 42    | E20242 | Pan Hd Phil Machine Screw M3x20 Zinc   | 2    |
| 43    | E20388 | Brush Deck Lift Arm Weldment           | 1    |
| 44    | E20437 | Castor                                 | 1    |
| 46    | E20380 | Soc Hd Cap Screw M12x30 Zinc           | 2    |
| 47    | E20246 | Flat Hd Soc Machine Screw M6x50 Zinc   | 2    |
| 48    | E20255 | Flat Hd Soc Machine Screw M6x45 Zinc   | 4    |
| 49    | E82773 | Flat Washer M10x21x2 Zinc              | 1    |
| 50    | E88256 | Micro Switch                           | 1    |



# SOLUTION TANK DIAGRAM

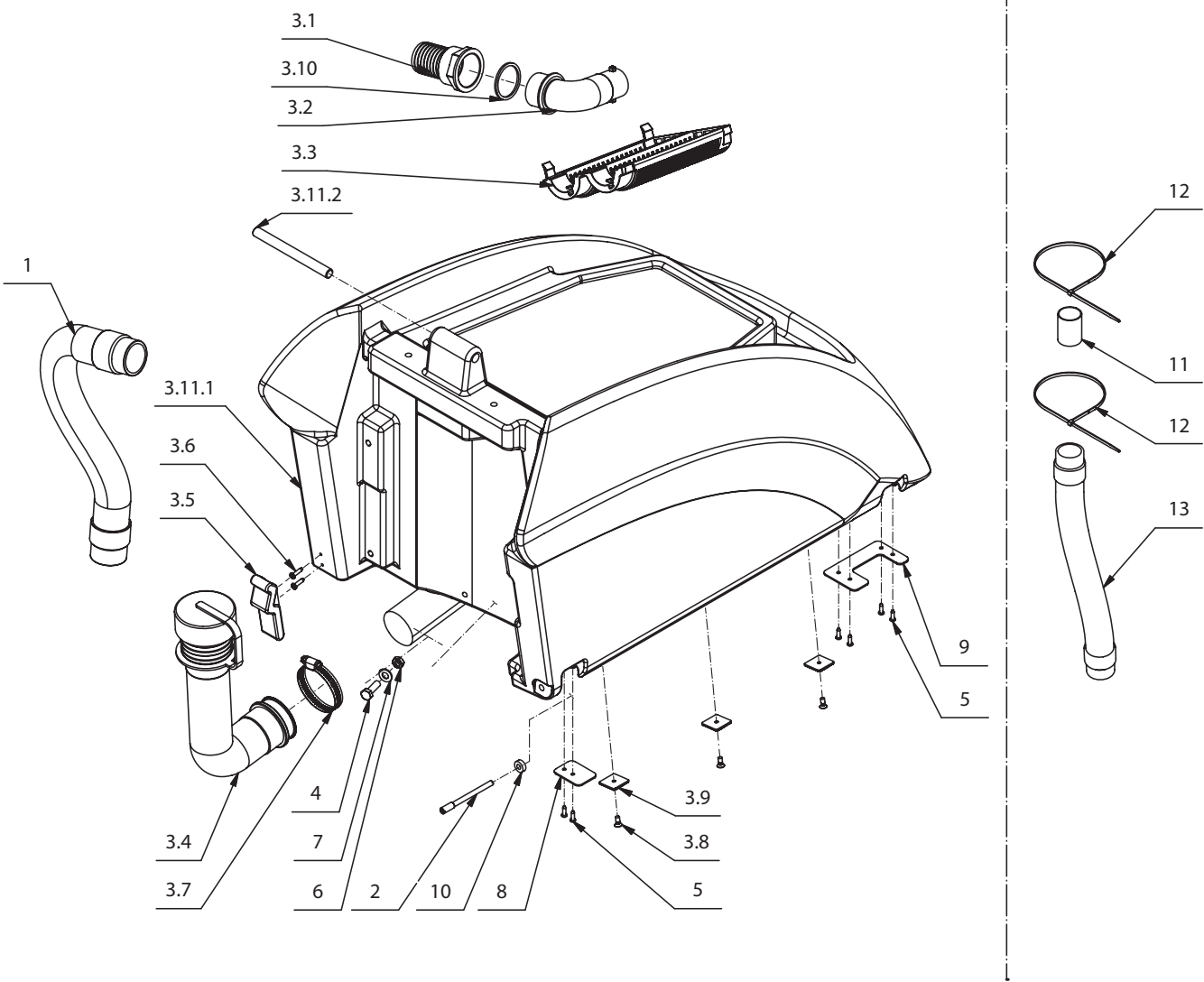


# SOLUTION TANK PARTS LISTING

| Item#  | Part # | Description                                  | Qty. |
|--------|--------|----------------------------------------------|------|
| 1      | E20285 | Solution Tank ASM                            | 1    |
| 1.1    | E88258 | Hose, Glass Reinforced 15 OD x 10 ID x 496 L | 1    |
| 1.2    | E20409 | Foot Pedal Latch Plate                       | 1    |
| 1.3    | E20611 | Guard Plate                                  | 1    |
| 1.4    | E86145 | Knob                                         | 1    |
| 1.5    | E82429 | Cap                                          | 1    |
| 1.6    | E82612 | Filter                                       | 1    |
| 1.7    | E20107 | Screw, Pan Hd Phil Self Tap M4.2x16 SS       | 2    |
| 1.8    | E20110 | Flat Hd Soc Machine Screw M5x25 SS           | 2    |
| 1.9    | E20122 | Flat Washer M5 x 15 x 1.5 SS                 | 1    |
| 1.10   | E85762 | Hose Clamp                                   | 1    |
| 1.11   | E83361 | Ball Valve                                   | 1    |
| 1.12   | E83943 | Nipple, Double Female 3/8"                   | 1    |
| 1.13   | E81981 | Spacer                                       | 1    |
| 1.14   | E20468 | Flat Hd Phil Machine Screw M5x12 Zinc        | 3    |
| 1.15   | E88259 | Filter, Water 23 x 53 Plug 3/4"              | 1    |
| 1.16   | E88261 | Flat Washer M8.2x32x4 Zinc                   | 1    |
| 1.17   | E20197 | Solution Tank, Gray                          | 1    |
| 1.17.1 | E20389 | Hinge Pin                                    | 1    |
| 1.17.2 | E20271 | Grommet                                      | 2    |
| 1.17.3 | E20196 | Fitting, Barbed                              | 2    |

| Item# | Part # | Description                              | Qty. |
|-------|--------|------------------------------------------|------|
| 1.18  | E20577 | Spacer                                   | 1    |
| 1.19  | E20602 | Fitting, Barbed Threaded                 | 1    |
| 2     | E20411 | Bracket                                  | 1    |
| 3     | E82772 | Hex Bolt M6x20 Zinc                      | 2    |
| 4     | E20090 | Hex Bolt M6x25 Zinc                      | 3    |
| 5     | E20392 | Pan Hd Phil Machine Screw M4x16 Zinc     | 4    |
| 6     | E83796 | Screw, Pan Hd Phil Self Tap M4.2x16 Zinc | 5    |
| 7     | E20112 | Hex Nut, M6x6 Zinc                       | 1    |
| 8     | E20121 | Flat Washer M5x15x1.5 Zinc               | 2    |
| 9     | E82798 | Washer, 6x18x1.5                         | 6    |
| 10    | E82774 | Lock Washer, M6 Zinc                     | 4    |
| 11    | E20708 | Cover, Bolt                              | 2    |
| 12    | E81619 | Support Bracket                          | 1    |
| 13    | E20359 | Hex Bolt M5x30 Zinc                      | 2    |
| 14    | E20468 | Flat Hd Phil Machine Screw M5x12 Zinc    | 1    |
| 15    | E88260 | Lanyard                                  | 1    |
| 16    | E20438 | Bezel                                    | 1    |
| 17    | E20709 | Battery Tray                             | 1    |
| 18    | E20710 | Housing, Plastic                         | 1    |
| 19    | E20711 | Housing Cover, Plastic                   | 1    |

# RECOVERY TANK DIAGRAM

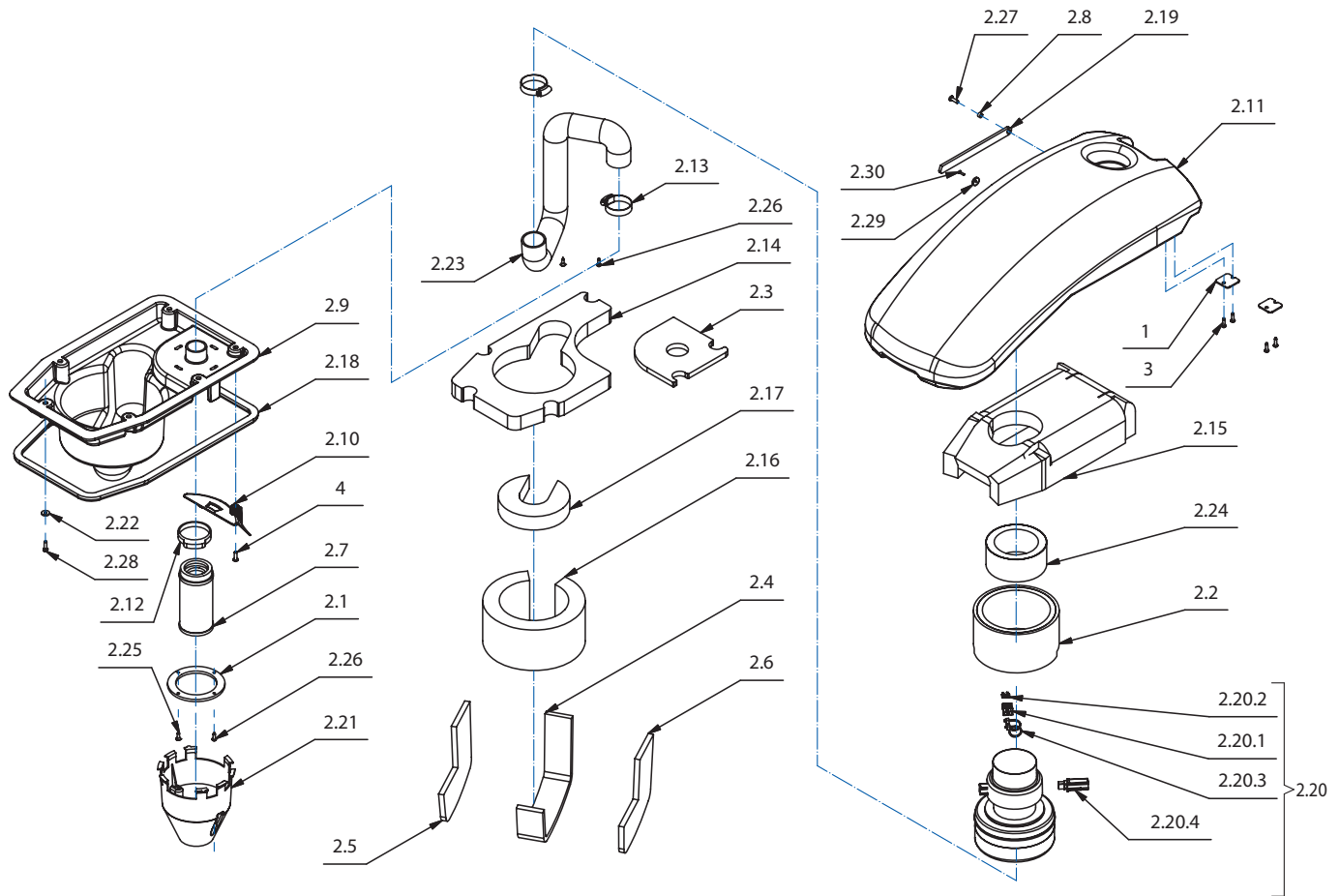


## RECOVERY TANK PARTS LISTING

| Item# | Part # | Description                            | Qty. |
|-------|--------|----------------------------------------|------|
| 1     | E88499 | Hose, Vacuum                           | 1    |
| 2     | E20074 | Hinge Pin                              | 1    |
| 3     | E20354 | Recovery Tank ASM                      | 1    |
| 3.1   | E20189 | Fitting, Barbed                        | 1    |
| 3.2   | E20186 | Elbow                                  | 1    |
| 3.3   | E88285 | Filter, Cage                           | 1    |
| 3.4   | E88286 | Hose, Drain                            | 1    |
| 3.5   | E20413 | Latch                                  | 1    |
| 3.6   | E20107 | Screw, Pan Hd Phil Self Tap M4.2x16 SS | 2    |
| 3.7   | E20707 | Clamp, Hose M40-64 Zinc                | 1    |
| 3.8   | E20468 | Flat Hd Phil Machine Screw M5x12 Zinc  | 3    |
| 3.9   | E81619 | Cable Tie Holder                       | 3    |
| 3.10  | E82341 | Gasket                                 | 1    |

| Item#  | Part # | Description                            | Qty. |
|--------|--------|----------------------------------------|------|
| 3.11.1 | E20198 | Recovery Tank, Red                     | 1    |
| 3.11.2 | E20188 | Hinge Pin                              | 1    |
| 4      | E83833 | Hex Bolt M8x25 Zinc                    | 1    |
| 5      | E82638 | Screw, Pan Hd Phil Self Tap M3.9x13 SS | 6    |
| 6      | E82808 | Hex Jam Nut, M8X5 Zinc                 | 1    |
| 7      | E20127 | Flat Washer M9x18x1.5 Zinc             | 1    |
| 8      | E20563 | Plate                                  | 1    |
| 9      | E20195 | Plate                                  | 1    |
| 10     | E20524 | Spacer, Nylon                          | 1    |
| 11     | E88500 | Fitting, Hose D38, W1.5, L50           | 1    |
| 12     | E88501 | Clamp 9x300 4,8x360 black              | 2    |
| 13     | E88499 | Hose, Vacuum                           | 1    |

# VACUUM UNIT DIAGRAM

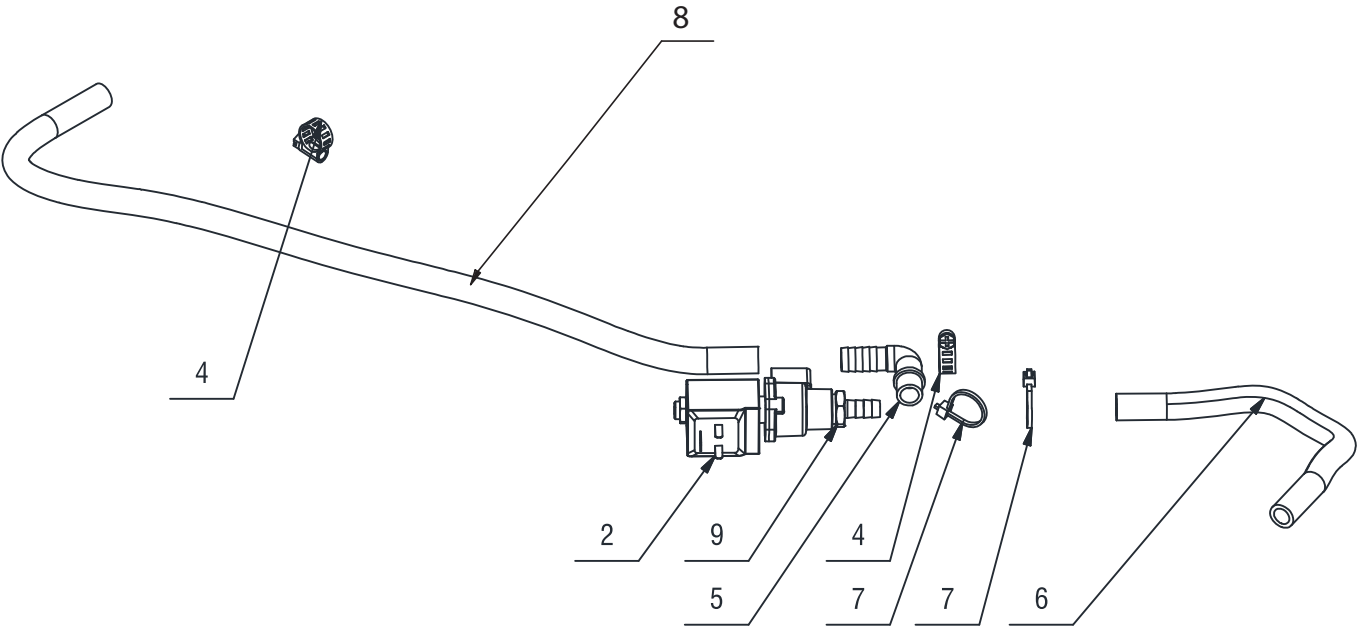


# VACUUM UNIT PARTS LISTING

| Item# | Part # | Description             | Qty. |
|-------|--------|-------------------------|------|
| 1     | E20265 | Plate                   | 2    |
| 2     | E20066 | Recovery Tank Cover ASM | 1    |
| 2.1   | E20305 | Mounting Ring           | 1    |
| 2.2   | E20652 | Sound Deadening Foam    | 1    |
| 2.3   | E20180 | Sound Deadening Foam    | 1    |
| 2.4   | E20179 | Sound Deadening Foam    | 1    |
| 2.5   | E20178 | Sound Deadening Foam    | 1    |
| 2.6   | E20266 | Sound Deadening Foam    | 1    |
| 2.7   | E88292 | Filter, Cage            | 1    |
| 2.8   | E20486 | Bushing                 | 1    |
| 2.9   | E20384 | Vacuum Motor Cover      | 1    |
| 2.10  | E20191 | Deflector               | 1    |
| 2.11  | E20199 | Recovery Tank Cover     | 1    |
| 2.12  | E81710 | Hose Clamp              | 1    |
| 2.13  | E20325 | Hose Clamp              | 2    |
| 2.14  | E20181 | Sound Deadening Foam    | 1    |
| 2.15  | E20184 | Sound Deadening Foam    | 1    |
| 2.16  | E20183 | Sound Deadening Foam    | 1    |
| 2.17  | E20182 | Sound Deadening Foam    | 1    |

| Item#  | Part # | Description                              | Qty. |
|--------|--------|------------------------------------------|------|
| 2.18   | E88289 | Gasket                                   | 1    |
| 2.19   | E20064 | Support Bracket                          | 1    |
| 2.20   | E88291 | Vacuum Motor 36VDC 550W                  | 1    |
| 2.20.1 | E83897 | Connector, Electrical Housing 30A        | 2    |
| 2.20.2 | E83883 | Lug, Electrical 30A                      | 2    |
| 2.20.3 | E83935 | Wire Tie                                 | 2    |
| 2.20.4 | E20525 | Carbon Brush                             | 2    |
| 2.21   | E81006 | Vacuum Splash Guard                      | 1    |
| 2.22   | E20122 | Flat Washer M5 x 15 x 1.5 SS             | 5    |
| 2.23   | E88290 | Hose, Vacuum                             | 1    |
| 2.24   | E20440 | Sound Deadening Foam                     | 1    |
| 2.25   | E83796 | Screw, Pan Hd Phil Self Tap M4.2x16 Zinc | 2    |
| 2.26   | E83838 | Screw, Flat Hd M4x15 Zinc                | 2    |
| 2.27   | E20442 | Button Hd Soc Machine Screw M5x16 Zinc   | 1    |
| 2.28   | E20084 | Hex Bolt M5x16 SS                        | 5    |
| 2.29   | E20712 | Magnet                                   | 1    |
| 2.30   | E20192 | CHIPBOARD SCREW M3x12 Zinc               | 1    |
| 3      | E20107 | Screw, Pan Hd Phil Self Tap M4.2x16 SS   | 4    |
| 4      | E20298 | Soc Button Head Screw M5x16 SS           | 1    |

# SOLUTION DELIVERY DIAGRAM



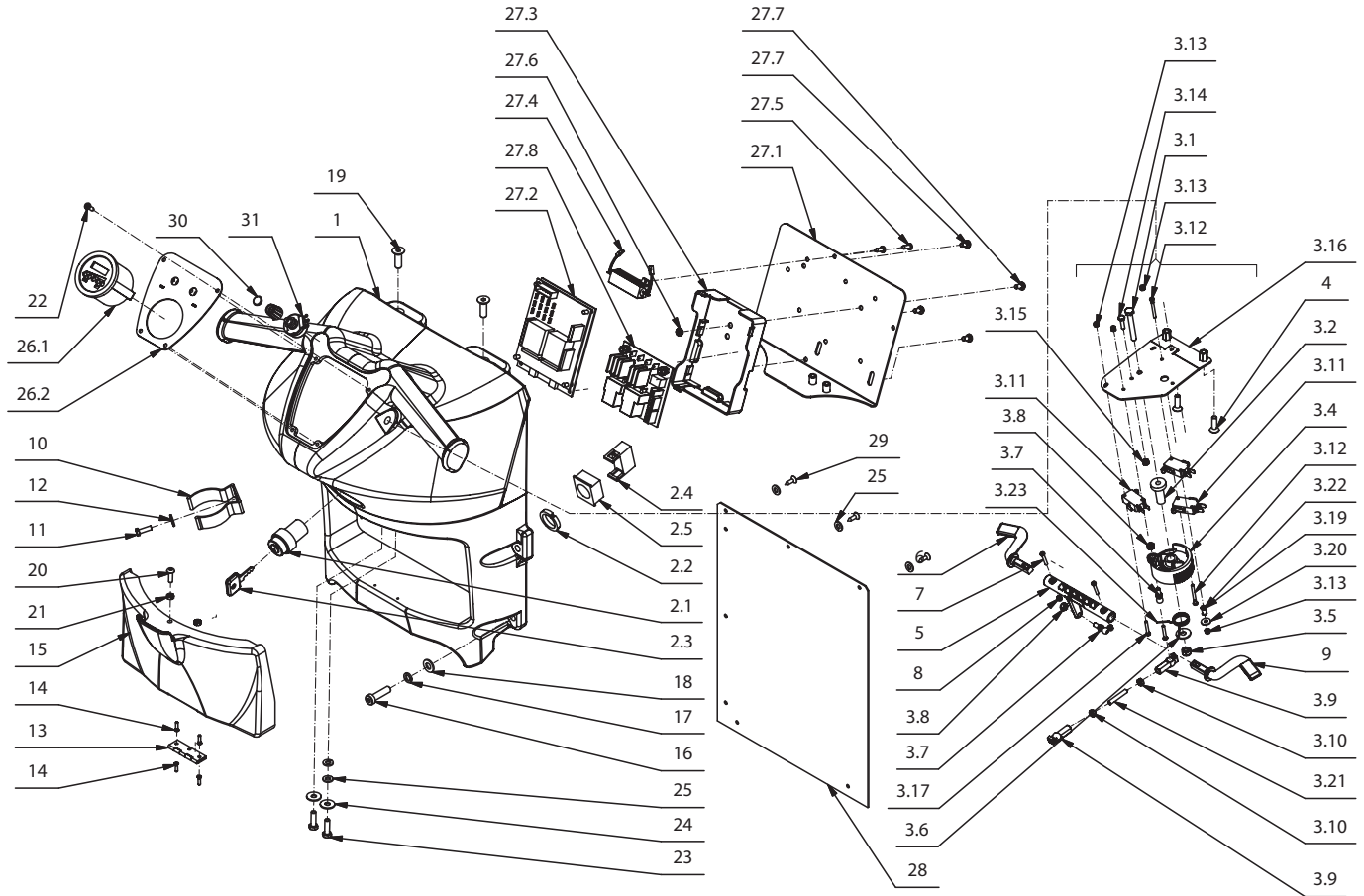
## SOLUTION DELIVERY PARTS LISTING

| Item# | Part # | Description                       | Qty. |
|-------|--------|-----------------------------------|------|
| 2     | E81035 | Solenoid Valve                    | 1    |
| 4     | E85762 | Hose Clamp                        | 2    |
| 5     | E86275 | Barbed Elbow                      | 1    |
| 6     | E88265 | Hose, Glass Reinforced D 10 x 140 | 1    |

| Item# | Part # | Description              | Qty. |
|-------|--------|--------------------------|------|
| 7     | E83935 | Hose Clamp               | 2    |
| 8     | E20375 | Tubing 10 ID x 650 L     | 1    |
| 9     | E20602 | Fitting, Barbed Threaded | 1    |



# HANDLE BAR ASSEMBLY DIAGRAM

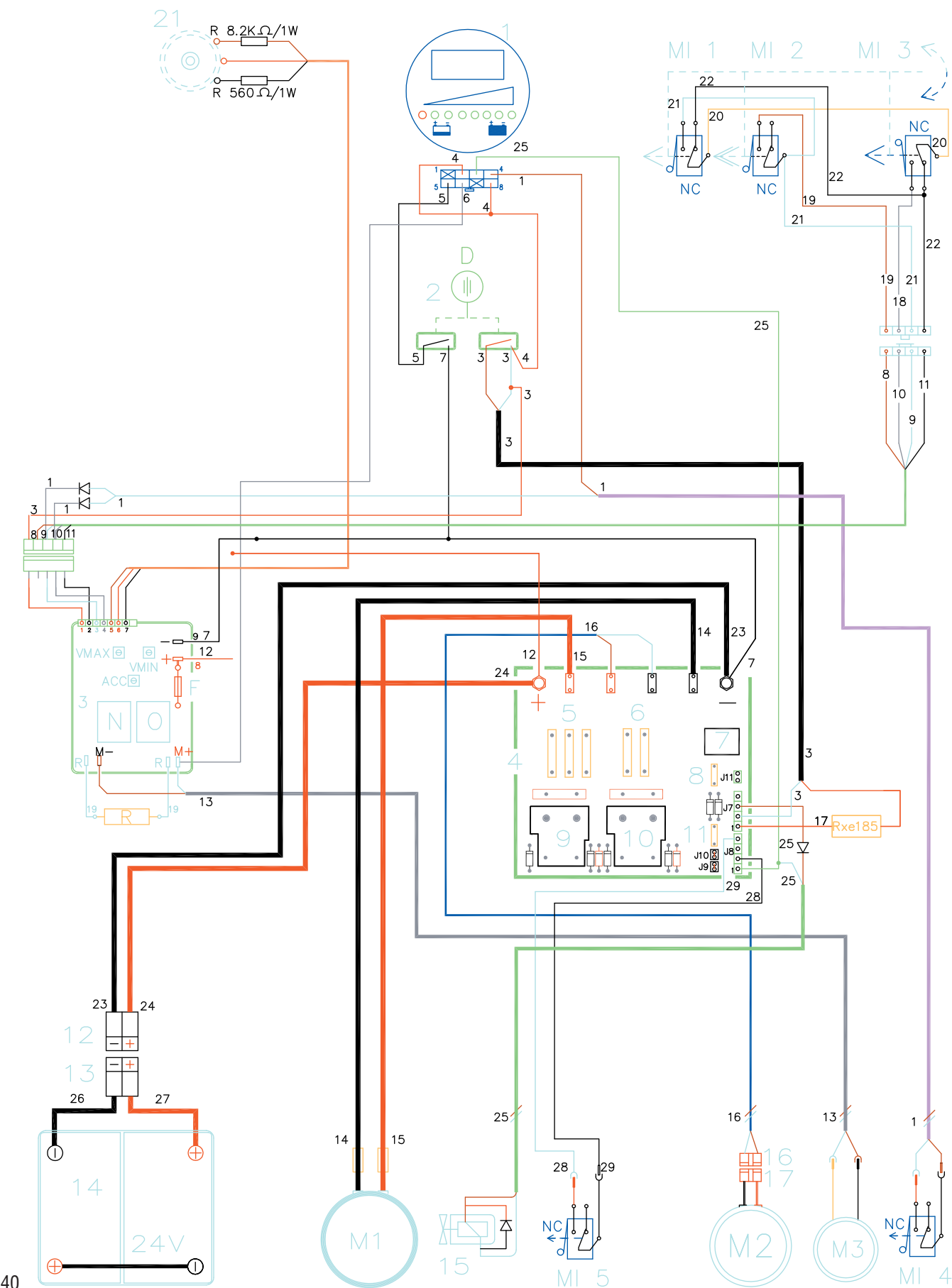


# HANDLE BAR ASSEMBLY PARTS LISTING

| Item# | Part # | Description                                               | Qty. |
|-------|--------|-----------------------------------------------------------|------|
| 1     | E20200 | Handlebar Housing                                         | 1    |
| 2     | E82351 | Key switch                                                | 1    |
| 2.1   | E83316 | Key Switch                                                | 1    |
| 2.2   | E83316 | Key Switch                                                | 1    |
| 2.3   | E83315 | Switch Key                                                | 1    |
| 2.4   | E83173 | Key Switch Contact                                        | 1    |
| 2.5   | E81358 | Switch Flange                                             | 1    |
| 3     | E20223 | Drive Control                                             | 1    |
| 3.1   | E20360 | Hex Bolt M6x45 Zinc                                       | 1    |
| 3.2   | E81597 | Circuit Breaker 10 amp 1600-037-100 1/4 in. Tab terminals | 1    |
| 3.4   | E81763 | Cam                                                       | 1    |
| 3.5   | E83550 | NyLoc Hex Nut, M6 Zinc                                    | 1    |
| 3.6   | E82798 | Washer, 6x18x1.5                                          | 1    |
| 3.7   | E20330 | Pin                                                       | 2    |
| 3.8   | E20382 | Nyloc Hex Nut, M5 x 5 Zinc                                | 2    |
| 3.9   | E81625 | Ball Stud Receiver                                        | 2    |
| 3.1   | E82317 | Hex Jam Nut, M5X3.5 Zinc                                  | 2    |
| 3.11  | E82270 | Micro Switch                                              | 3    |
| 3.12  | E20243 | Pan Hd Phil Machine Screw M3x30 Zinc                      | 2    |
| 3.13  | E81673 | Hex Nyloc Nut, M3 Zinc                                    | 4    |
| 3.14  | E20341 | Hex Bolt M4x16 Zinc                                       | 1    |
| 3.15  | E20248 | Hex Nut, M4x4 Zinc                                        | 1    |
| 3.16  | E20556 | Plate                                                     | 1    |
| 3.17  | E20242 | Pan Hd Phil Machine Screw M3x20 Zinc                      | 2    |
| 3.19  | E20466 | Insert                                                    | 1    |
| 3.2   | E83037 | Flat Washer M4x12x1.6 Zinc                                | 1    |
| 3.21  | E20362 | Set Screw Hex Soc Dog Point M5x30 Zinc                    | 1    |
| 3.22  | E20469 | Flat Washer M3 SS                                         | 2    |
| 3.23  | E82304 | Spring                                                    | 1    |
| 4     | E20111 | Flat Hd Soc Machine Screw M6x20 Zinc                      | 2    |
| 5     | E88267 | Switch Cam                                                | 1    |
| 6     | E88300 | Lever, Left Switch                                        | 1    |
| 7     | E20242 | Pan Hd Phil Machine Screw M3x20 Zinc                      | 2    |
| 8     | E81673 | Hex Nyloc Nut, M3 Zinc                                    | 2    |

| Item# | Part # | Description                              | Qty. |
|-------|--------|------------------------------------------|------|
| 9     | E88301 | Lever, Right Switch                      | 1    |
| 10    | E87296 | Drain Hose Clip                          | 1    |
| 11    | E83836 | Hex Bolt M5x16 Zinc                      | 1    |
| 12    | E20121 | Flat Washer M5x15x1.5 Zinc               | 1    |
| 13    | E20400 | Hinge                                    | 1    |
| 14    | E20192 | CHIPBOARD SCREW M3x12 Zinc               | 4    |
| 15    | E20267 | Door                                     | 1    |
| 16    | E20288 | Soc Hd Cap Screw M8x30 Zinc              | 4    |
| 17    | E83704 | Lock Washer M8x13x2.2 Zinc               | 4    |
| 18    | E81874 | Flat Washer M8x17x1.6 Zinc               | 4    |
| 19    | E20346 | Flat Hd Soc Machine Screw M8x25 SS       | 2    |
| 20    | E20442 | Button Hd Soc Machine Screw M5x16 Zinc   | 1    |
| 21    | E82317 | Hex Jam Nut, M5X3.5 Zinc                 | 2    |
| 22    | E83838 | Screw 4.2 X 13                           | 4    |
| 23    | E82772 | Hex Bolt M6x20 Zinc                      | 2    |
| 24    | E82798 | Washer, 6x18x1.5                         | 2    |
| 25    | E82761 | Washer 6x12x1.6                          | 5    |
| 26    | E20463 | Instrument Panel ASM                     | 1    |
| 26.1  | E88293 | Hour Meter                               | 1    |
| 26.2  | E20332 | Panel                                    | 1    |
| 27    | E20410 | Electrical Control Panel ASM             | 1    |
| 27.1  | E20374 | Plate                                    | 1    |
| 27.2  | E20646 | Chopper Card                             | 1    |
| 27.3  | E85788 | Electrical Housing                       | 1    |
| 27.4  | E20368 | Resistor                                 | 1    |
| 27.5  | E20104 | Screw, Pan Hd Phil Self Tap M4.2x13 SS   | 2    |
| 27.6  | E82317 | Hex Jam Nut, M5X3.5 Zinc                 | 1    |
| 27.7  | E83899 | Pan Hd Phil Machine Screw M5x10 SS       | 4    |
| 27.8  | E88266 | Relay Card                               | 1    |
| 28    | E88456 | Electrical Cover Rubber Flap             | 1    |
| 29    | E83796 | Screw, Pan Hd Phil Self Tap M4.2x16 Zinc | 3    |
| 30    | E88408 | Knob                                     | 1    |
| 31    | E20713 | Potentiometer                            | 1    |

# ELECTRICAL DIAGRAM

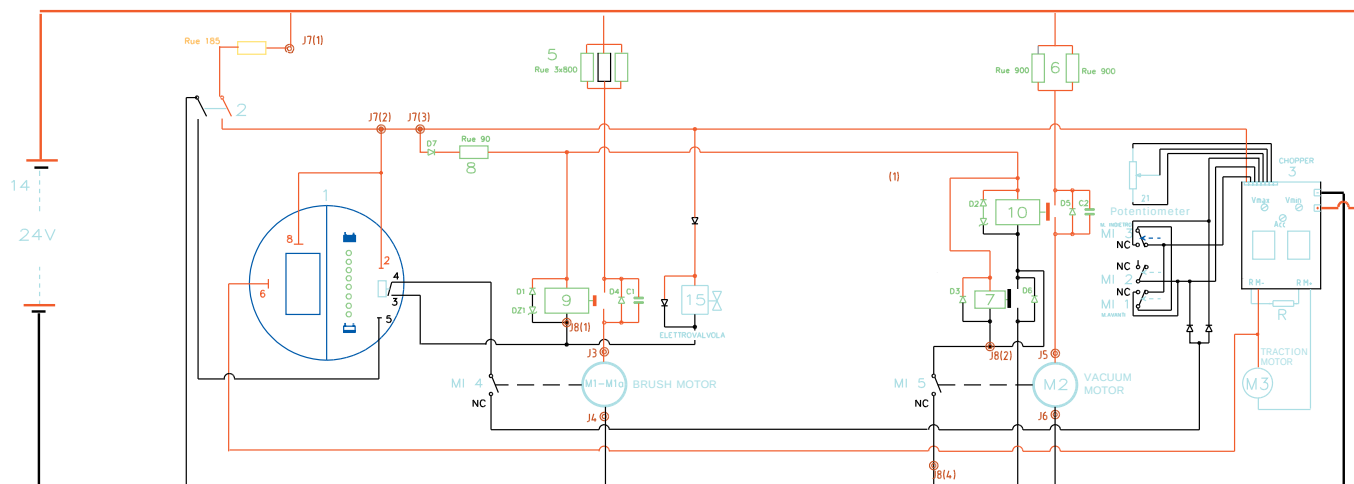


# ELECTRICAL LISTING

| Item#    | Part # | Description                         |   |
|----------|--------|-------------------------------------|---|
| 1        | E88293 | Battery Check Card, Hour Meter      | 1 |
| 2        | E82351 | Key Switch Assembly w/Keys          | 1 |
| 3        | E20646 | Chopper Card                        | 1 |
| 4        | E88266 | Relay Card                          | 1 |
| 5        | --     | Fuse, Self Reseting Rue 800         | 3 |
| 6        | --     | Fuse, Self Reseting Rue 900         | 2 |
| 7        | --     | Relay, Vacuum Motor Auto-Hold       | 1 |
| 8        | --     | Fuse, Self Reseting Rue 90          | 1 |
| 9        | --     | Relay, Brush Motor 24V 40A          | 1 |
| 10       | --     | Relay, Vacuum Motor 24V 40A         | 1 |
| 11       | --     | Fuse, Vacuum Motor Auto-Hold Rue 90 | 1 |
| 12       | E86208 | SB50 Red Electrical Connector       | 2 |
| 13       | E86208 | SB50 Red Electrical Connector       | 2 |
| 14 (Std) | E11767 | Battery 12V 130AH Wet               | 2 |
| 14 (Opt) | E88030 | Battery 12V 110AH AGM               | 2 |
| 15       | E81035 | Solenoid Valve                      | 1 |

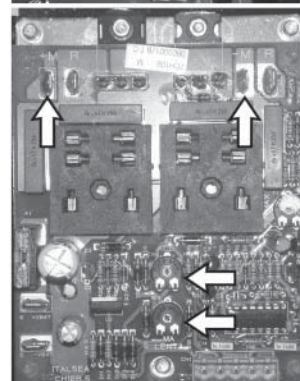
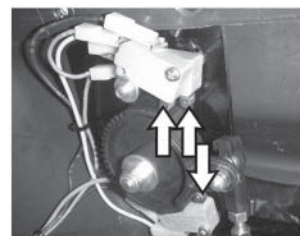
| Item# | Part # | Description               |   |
|-------|--------|---------------------------|---|
| 16    | E20402 | Electrical Connector 30A  | 2 |
| 17    | E20402 | Electrical Connector 30A  | 2 |
| 21    | E20713 | Potentiometer             | 1 |
| F     | E83972 | Fuse 30A fasten           | 1 |
| N     | E83159 | Relay 24VDC 20A           | 2 |
| O     | E83159 | Relay 24VDC 20A           | 2 |
| R     | E20368 | Resistor                  | 1 |
| MI 1  | E82270 | Micro Switch              | 3 |
| MI 2  | E82270 | Micro Switch              | 3 |
| MI 3  | E82270 | Micro Switch              | 3 |
| MI 4  | E88256 | Micro Switch              | 1 |
| MI 5  | E88279 | Micro Switch Sealed       | 1 |
| M1    | E82576 | Brush Motor 24VDC 400W    | 1 |
| M2    | E88291 | Vacuum Motor 36VDC 550W   | 1 |
| M3    | E20582 | Traction Motor 24VDC 150W | 1 |

# ELECTRICAL DIAGRAM



## ADJUSTMENT/INSPECTIONS OF THE VARIABLE SPEED CONTROL CARD

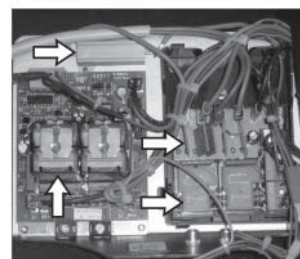
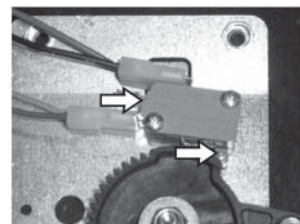
1. Verify the functionality of the variable speed control card.
2. If necessary adjust the traction card:
  - Lift up at least one of the traction wheel .
  - Remove the handlebar for access to the electric controls.
  - Set-up the tester in volt-meter with 50V maximum.
  - Put the tester pins on the faston **M+** and **M-** of the speed control card.
  - Turn on the key master switch.
  - Pull the switch lever until you hear the forward first **micro switch click** (first speed).
  - The tester has to show a voltage between 14 and 15V. If the reading is different adjust the **trimmer** (first speed) to have the right output voltage.
  - Completely pull the switch lever until the second (maximum) speed **micro switch** is pressed. A voltage of 24V (the same as the battery voltage) has to be read; in opposite case verify the power connections and the conditions of the battery.
  - Acceleration adjustment: Adjust on the **“ACC” trimmer** to let it be between 30° and 45° respect the central position rotating clockwise. Verify that with this regulation the machine reach the maximum speed in 4 second.
  - Check the backward direction .
  - Check the braking power of the traction motor. At maximum speed the machine has to stop in about 1 meter.



## ELECTRICAL SYSTEM

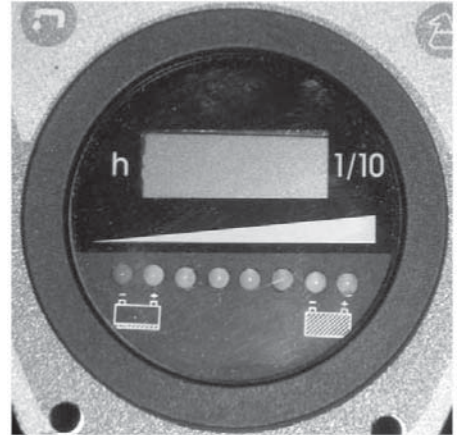
### 1. ELECTRIC HARNESS INSPECTION

1. Verify the functionality and adjustment of the **micro switches** of the handlebar control.
2. Verify that the micro switches are pressed with the switch lever in rest position and that in that condition the micro switch lever has about **0.5 mm of movement**.
3. Verify the functionality and conditions of the **power contactors** of the **self recovery fuses** and of the connections of the control card.
4. Verify the condition of the **brake resistor** and its connection.
5. Verify the conditions of the speed control card and the functionality of the **direction contactors**.



## BATTERY CHECK CARD – HOUR METER

1. Verify that turning on the machine the battery check card has the following starting sequence:
  - Turning on of the LED which correspond to the set-up (red LED = "0").
  - Turning on of all the LEDs (check of the lamps)
  - Turning on of the LEDs depending on the charge of the battery
2. Verify the hour meter functionality
  - To verify which is the set-up you simply need to turn on the machine and check which is the first LED that turns on. Counting the LEDs since the left side any LED correspond to a position and the LED which turn on correspond to the current set-up.



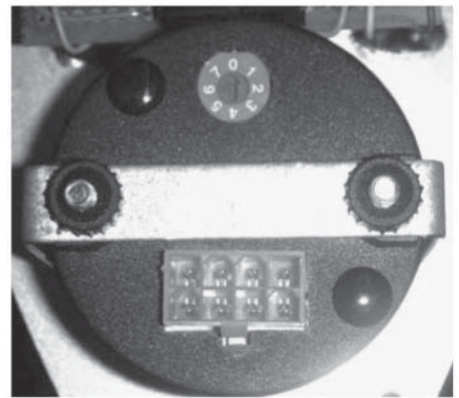
- Verify that if the machine uses wet cell batteries the adjustment is on position 1.



- Verify that if the machine uses GEL batteries the adjustment is on position 4.

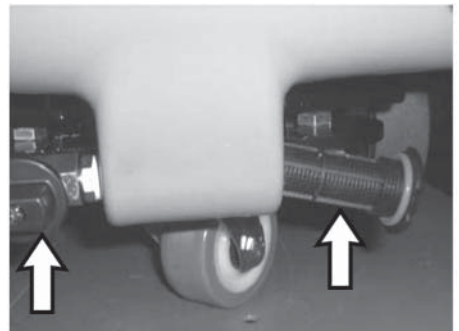


**WARNING:** A wrong set-up of the battery control card can compromise the battery efficiency and damage then in irreversible way.



## HYDRAULIC PLANT INSPECTIONS

1. Fill up the solution tank and verify the sealing of the gasket particularly on the **solution valve** and on the **drain plug**.
2. Verify that the water distribution on the floor is even and dependent on the solution valve adjustment.
3. Check the internal cleanness of the water valve. If necessary clean it using a metal bar putted inside the threaded hole of the filter plug.

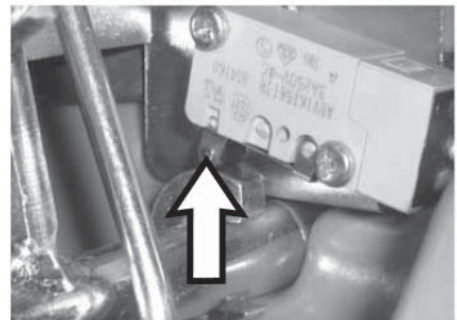
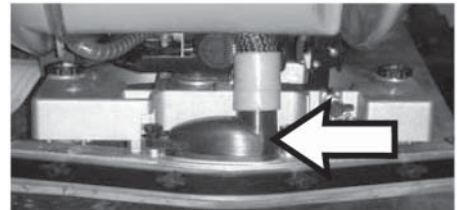
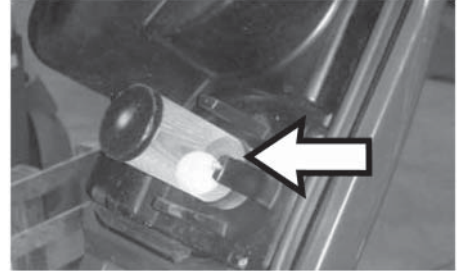


4. Verify the cleanness and functionality of the **solution filter** under the solution tank plug.



# VACUUM SYSTEM INSPECTION

1. Verify the cleanness and functionality of the **float filter**.
2. Check the air sealing of the **vacuum unit** on the recovery tank.
3. Verify the connections and the sealing of the vacuum hoses and the squeegee hoses.
4. Check the sealing of the **squeegee hose adapter**.
5. Check the sealing of the exhaust hose and exhaust hose plug.
6. Vacuum micro switch adjustment:
7. Adjust the vacuum micro switch in way that when the cam on the squeegee lever **push the micro switch** there is about 0.5 mm of clearance of the micro switch lever.



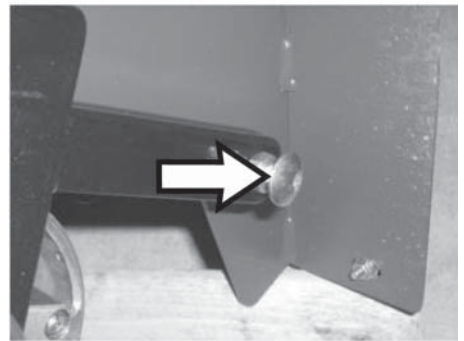
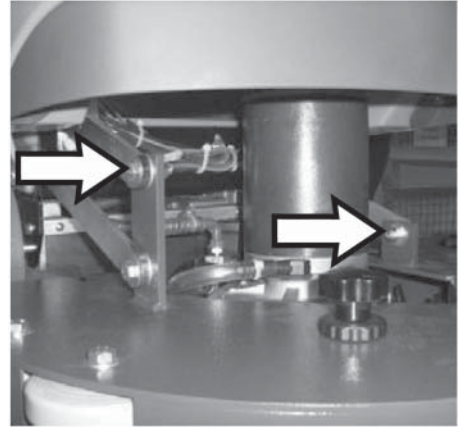


## BRUSH BASE ADJUSTMENT

Verify the right inclination of the brush deck adjust. To adjust the brush deck adjust as follows:

- Lower the brush deck to the floor with a brush installed.
- **Loosen the M8 bolt and the M8 nut** that attach the brush deck to the left arm.
- **Loosen the nut and the bolt** that attach the brush deck to the idler arm.
- Verify that the brush deck correctly lays on the floor and the brush touches the floor completely.
- **Tighten the nut and its M8 bolt** to lock the left arm of the brush deck.
- Lift up the front side of the brush deck to let it be 5 mm from the floor relative to the back side.
- **Tighten the M8 nut** to secure the brush deck in position.

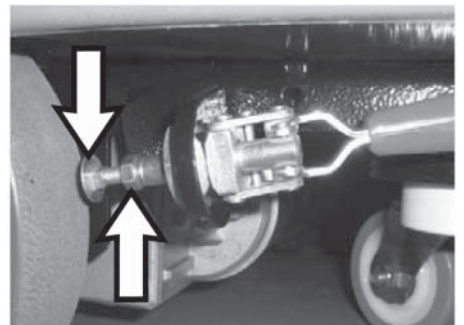
Check that the **pan head screw** on the back side is adjusted near the flat part of the brush deck. The distance between the screw head and the brush deck has to be 1 - 2 mm when the brush is locked and the brush deck is lowered.



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## BRAKE ADJUSTMENT

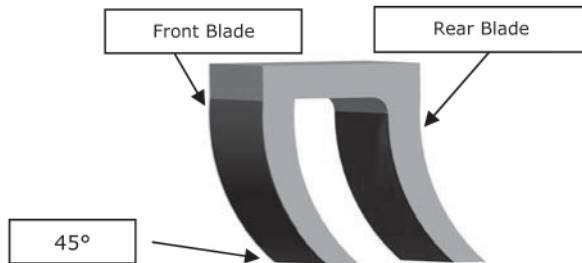
1. Verify that the brake on the left hand wheel locks the wheel when active.
2. Otherwise adjust as follows:
  - Unscrew the **jam nut**.
  - Loosen the **pad screw** to achieve the right adjustment.
  - Verify the adjustment with a functional test
  - Tighten the **jam nut** to assure a right adjustment.



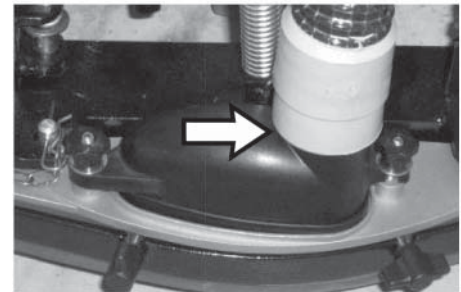
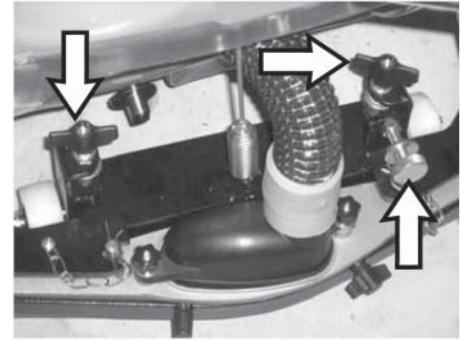


# SQUEEGEE ADJUSTMENT

1. Adjust the inclination adjuster of the squeegee blade until the blade has a common inclination over its entire length.
2. Adjust the height of the wheels using the knob checking that the blade has an inclination between 30 and 45 degrees.



3. Verify the cleanliness and sealing of the squeegee hose adapter.



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## CHECK LIST

### Functional check of the machine

- ☐ Check the functionality of switches.
- ☐ Check the functionality of the switch lever.
- ☐ Check the functionality of the brush deck.
- ☐ Check the functionality of the brush motor.
- ☐ Check the functionality of the solenoid valve.
- ☐ Check the functionality of the vacuum motor.
- ☐ Check the functionality of the brakes.
- ☐ Check the functionality of batteries and power cables.

### Functional test of the machine

- ☐ Fill up the tanks completely and verify the sealing.
- ☐ Verify the sealing of all the water plant and that the water is dispensed through the brush.
- ☐ Adjust the inclination and the height of the squeegee blades doing a functional test.
- ☐ Adjust the inclination of the brush deck and do a functional test.
- ☐ Check the efficiency of the parking brake.
- ☐ Verify the forward and backward movement, acceleration and braking.

### Final test

- ☐ Check all the functions: washing, drying and movement.

| MAINTENANCE SCHEDULE  |                                                         |       |                                       |     |     |     |       |
|-----------------------|---------------------------------------------------------|-------|---------------------------------------|-----|-----|-----|-------|
|                       | Stealth ASD20BT                                         |       | RECOMMENDED SERVICE INTERVALS (HOURS) |     |     |     |       |
|                       |                                                         | DAILY | 50                                    | 100 | 200 | 400 | 1,000 |
| BATTERIES             | Check water level add if necessary                      | DAILY |                                       |     |     |     |       |
|                       | Check cables, connections and plugs                     |       | 50                                    |     |     |     |       |
|                       | Check cleanliness of machine battery tray               |       |                                       |     | 200 |     |       |
| ELECTRIC              | Check tightness of electric contacts and fuses          |       | 50                                    |     |     |     |       |
|                       | Check state of electric cables crossing the machine     |       |                                       |     |     | 400 |       |
| SOLUTION TANK         | Check cleanliness of solution filter                    | DAILY |                                       |     |     |     |       |
|                       | Check water valves and hoses to the brush head          |       | 50                                    |     |     |     |       |
|                       | Check all water connection from the tank to the brushes |       |                                       |     | 200 |     |       |
| RECOVERY TANK         | Check cleanliness of the tank                           | DAILY |                                       |     |     |     |       |
|                       | Check filter and float system                           | DAILY |                                       |     |     |     |       |
|                       | Check vacuum and drain hoses                            | DAILY |                                       |     |     |     |       |
|                       | Check vacuum gasket and drain hoses plugs               |       |                                       | 100 |     |     |       |
| BRUSH HEAD            | Check spraying guard and right brush inclination        |       | 50                                    |     |     |     |       |
|                       | Check state of bearings                                 |       |                                       |     |     | 400 |       |
|                       | Check brush attachments                                 |       |                                       |     | 200 |     |       |
|                       | Check wear of rotating brushes                          |       | 50                                    |     |     |     |       |
| BRUSH MOTOR           | Check cleanliness of air cooling inlet                  |       |                                       | 100 |     |     |       |
|                       | Check carbon brushes                                    |       |                                       |     |     | 400 |       |
|                       | Check amp draw and noise level                          |       |                                       |     |     |     | 1,000 |
| VACUUM MOTOR          | Check noise level and cleanliness of the inlet hose     |       | 50                                    |     |     |     |       |
|                       | Check carbon brushes                                    |       |                                       |     | 200 |     |       |
|                       | Check vacuum performance, replace if necessary          |       |                                       |     |     |     |       |
| SQUEEGEE              | Check cleanliness of the squeegee blades and shoe       | DAILY |                                       |     |     |     |       |
|                       | Check wear of rear squeegee blade                       |       | 50                                    |     |     |     |       |
|                       | Check wear of front squeegee blade                      |       |                                       | 100 |     |     |       |
|                       | Check squeegee structure and machine support            |       |                                       | 100 |     |     |       |
|                       | Check lever and lifting cable                           |       |                                       |     |     | 400 |       |
| Suggested replacement |                                                         |       |                                       |     |     |     |       |

| WEAR ITEMS |                                              |
|------------|----------------------------------------------|
| PART #     | DESCRIPTION                                  |
| E88268     | Pad Holder                                   |
| E88269     | Brush Poly 0.55 MM Tuft                      |
| E88271     | Brush Grit Tuft                              |
| E88272     | Brush Deck Splash Guard                      |
| E86169     | Blade Strap                                  |
| E83417     | Squeegee Blade, Central Shore 33             |
| E83987     | Squeegee Blade, Central Shore 40             |
| E83650     | Squeegee Blade, Central, Oil Resistant       |
| E11767     | Battery 12V 130 AH Wet                       |
| E88030     | Battery 12V 110AH AGM                        |
| E88035     | Charger 24VDC 12AMP 120VAC EXT AGM WET RSB50 |

# BETCO US WARRANTY POLICY

## 10 year coverage

Subject to the conditions stated below, Betco warrants parts and labor on rotationally molded polyethylene tanks/housings and injection molded vacuum head assemblies to be free from defects in materials and workmanship for a period of ten years to the original purchaser.

## 3 Year Coverage

Subject to the conditions stated below, Betco warrants parts and labor on all other Betco components to be free from defects in materials and workmanship for a period of three years to the original purchaser.

## 1 Year Coverage

Subject to the conditions stated below, Betco offers a limited warranty on parts and labor on the following equipment: parts and accessories to be free from defects in materials and workmanship for a period of one year to the original purchaser.

- DM Series Vacuums: #85506-00, #85507-00
- Bac Pac Lite Vacuum: #85903-00
- FiberPRO® Floor Dryer: #85507-00
- WORKMAN™ Series Vacuums: #85024-00, #85025-00, #85026-00, #85027-00
- CV100T Vacuum: #85023-00
- All Tools and Accessories
- All Battery Chargers
- All Batteries are pro-rated for 1 year

### **Allowable Travel Time Warranty Reimbursement:**

Eligible equipment: All battery and propane powered equipment products. Warranty period: 90 days from date of sale to the original purchaser. A maximum 60 mile round trip at 44 cents per mile will be allowed for warranty consideration.

### **Propane Machine Warranty:**

Honda engines are warranted by Honda for a period of 2 years against manufacturer defects. Kawasaki engines are warranted by Kawasaki for a period of 2 years against manufacturer defects. All other components (except wear items)\* are warranted by Betco for a period of 3 years.

**\*Wear Items exempt from Warranty consideration include but may not be limited to: power cords, transport wheels, vacuum bags, belts, squeegee blades, pad drivers, clutch plates, handle grips, filters, screens, throttle cables, brushes and carbon brushes.**

Subject to the conditions and exceptions stated in this warranty, Betco warrants the Betco products to be free from defects in material and workmanship, under normal use and service, for the periods listed under the warranty policy to the original purchaser. At any time during the warranty period, Betco will furnish replacement parts for the Betco parts to the original purchaser. Such parts will be furnished and charged including transportation costs, to the original owner through any Betco authorized Service Distributor. If the original part is returned within the warranty policy period from date of delivery for inspection by Betco and is found to be defective the owner will be credited for the cost of replacement parts plus shipping and handling. Replacement parts that have become defective through wear or abuse are not included in this warranty.

This warranty does not apply to damage or defect caused by accident, misuse, Negligence, fire, or to any Betco product which has been serviced or repaired by other than an authorized Betco Service Distributor or Betco factory personnel. This warranty is void if products are used for any purpose other than that which was intended. There are no other warranties expressed or implied. In no event shall Betco be liable for incidental or consequential damages or any damage to person or property. (Please note some states do not allow the exclusion or limitations for incidental and consequential damages)

