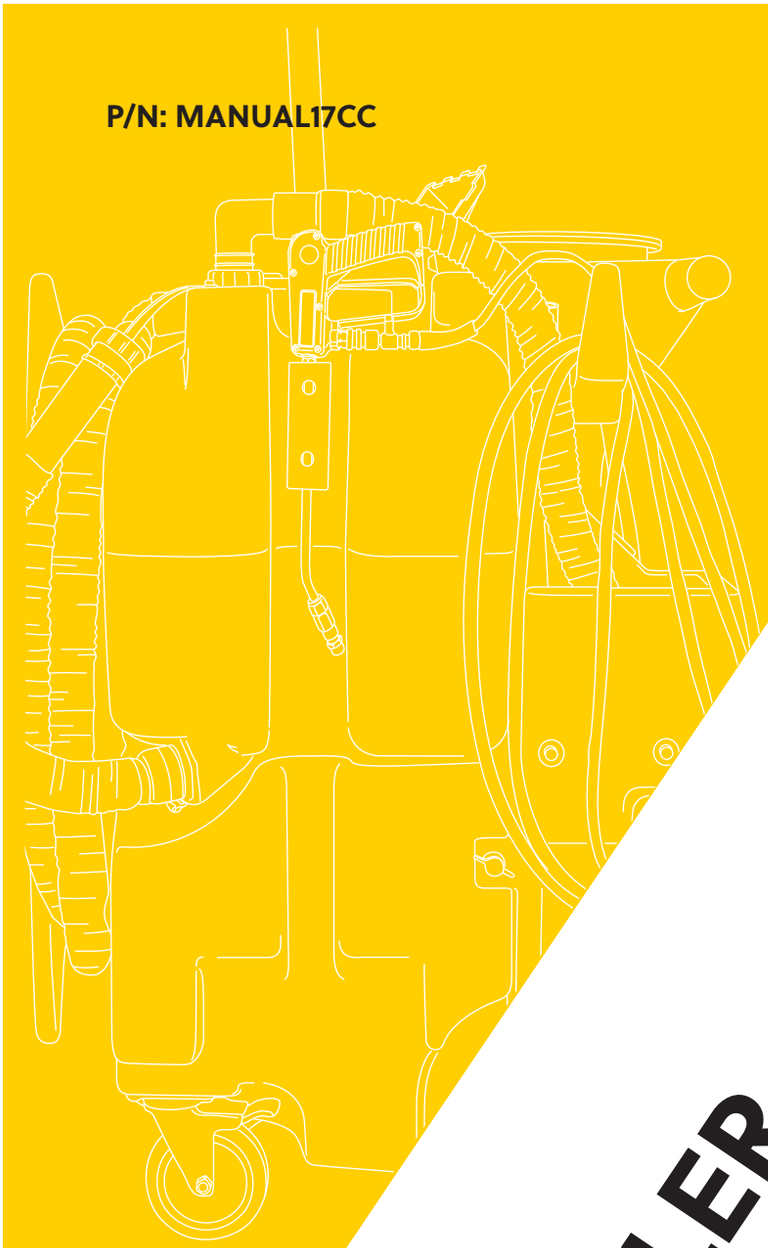
P/N: MANUAL17CC



COOLER CLEANER OPERATOR & PARTS MANUAL

KAIVAC®

www.kaivac.com

REVISION SHEET FOR MANUAL17CC

Release No.	Date	Revision Description
1	12/16/19	Release of Quick Change Power Pack CC
2	08/03/20	Updated imagery and parts
3	01/18/2024	Manual Revise and Safety Revise
4	08/29/2025	Safety Information, Battery Information, Part Numbers

Kaivac, Inc.
2680 Van Hook Ave.
Hamilton, OH 45015
Customer/Technical Support
1-800-287-1136

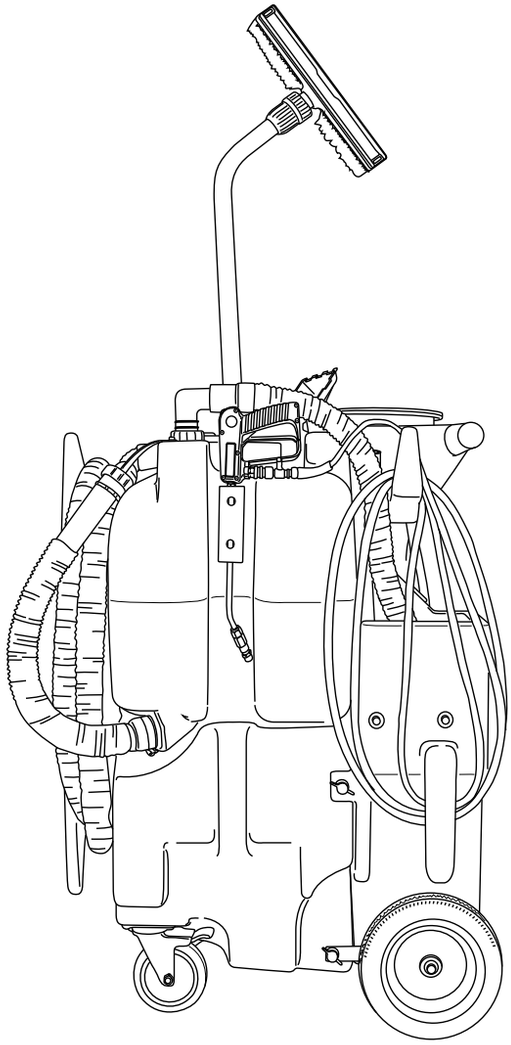
⚠ WARNING

Do not attempt to operate the unit before reading and understanding this manual. Pay close attention to all WARNINGS, CAUTIONS and NOTICES. **Failure to do so may cause serious personal injury or death, and/or damage to property or your Kaivac product.**
NOTE: Specifications and parts are subject to change without notice.
For most up to date safety information, visit kaivac.com

Operator & Parts Manual – Table Of Contents

1.1 Product Identification

Cooler Cleaner Unit



1.2 Warranty Registration

Thank you for purchasing a Kaivac product. Please take a few moments to register your product at kaivac.com/warranty.

Why register?

- Ensure your warranty coverage
- Simplify warranty service in the future with your information on file
- Be the first to know about upgrades, issues, new options and special offers.

1.3 Limited Warranty Protection Plan

The Kaivac has been engineered and tested to provide long lasting performance. This warranty covers defects in workmanship or materials under normal use and service from the date of purchase.

Kaivac, Inc. warrants the following components to be free from defects in materials and workmanship for these time periods:

1. Extended Warranty for end users who use only Kaivac chemicals for the life of the unit.
   - 5 years on rotationally molded parts
   - 3 years on other parts (excluding wear items)
   - 1 year on labor
2. Standard Warranty (for approved non-Kaivac chemicals)
   - 1 year parts and labor
3. Chemicals that have not been approved by Kaivac (If uncertain, please contact Kaivac to verify your chemical before using).
   - No warranty

Battery Program Details

- Battery Warranty covers 2 years on a defective Battery.
- Battery Warranty covers the replacement of the Battery unit.
- Battery replacement remains under Warranty only for the remaining Warranty period of the original Battery unit (for a maximum of 2 years from the date of purchase of the unit).

WARRANTY LIMITATIONS:

- This warranty does not assume responsibility for damage or faulty performance caused by misuse or abuse, or where repairs or modifications have been made or attempted. Kaivac will make the final determination on whether the damage falls under this limited warranty for manufacturer's defects.
- The following actions constitute misuse or neglect of the battery that void the warranty of the battery:
  – Any modifications to Kaivac equipment may nullify any warranty
  – Improper installation of the Quick Change battery
  – Exposure to temperatures above and below the battery limits
  – Use of any charger besides the supplied Kaivac® charger
  – Dropping the battery box
  – Long term storage of the battery without maintaining a battery charge of 25 to 40% capacity
- Under no circumstances will Kaivac be liable for any loss, damage, expenses or consequential damages arising in connection with the use or inability to use Kaivac's product. This warranty is in lieu of any other warranty expressed or implied, including any warranty of merchantability or fitness for a particular purpose.

All Kaivac replacement parts are guaranteed for 90 days from the date of installation. Normal wear items such as wheels, hoses, seals, gaskets, cords, casters, squeegees and GFCI are excluded from warranty coverage.
All warranty claims must be accompanied by a Return Authorization Number (RAN), which is available by calling the Kaivac, Inc. Customer Service Department. No returns will be accepted without a RAN.
This warranty does not apply to return freight costs, damage or defect caused by accident, negligence, misuse, fire or repair done by anyone other than a Kaivac authorized repair center. In no event shall Kaivac, Inc. be liable for incidental or consequential damages, or any damages to persons or property.
Please Note: Under no circumstances will the seller be liable for any loss, damage, expenses or consequential damages arising in connection with the use or inability to use seller's product. Kaivac, Inc. reserves the right to make changes or improvements to its equipment without notice. Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty is in lieu of any other warranty expressed or implied, including any warranty of merchantability or fitness for a particular purpose.

1.4 Important Safety Instructions

SAVE THESE INSTRUCTIONS
CONSULT KAIVAC.COM FOR THE MOST UP TO DATE SAFETY PRECAUTIONS
READ ALL INSTRUCTIONS BEFORE USING (THIS UNIT)

WARNING
SAFETY ALERT WARNING indicates a hazardous situation which, if not avoided, COULD result in serious injury or death

CAUTION
SAFETY ALERT CAUTION indicates a hazardous situation which, if not avoided, COULD result in minor to moderate injury.

NOTICE
NOTICE provides key information by clarifying instructions.

When using an electrical unit, basic precautions should always be followed, including the following:

WARNING
RISK OF ELECTRIC SHOCK , FIRE, EXPLOSION, AND SERIOUS PERSONAL INJURY OR DEATH

GENERAL SAFETY INSTRUCTIONS (APPLICABLE TO CORDED AND BATTERY UNITS):

- For commercial use only.
- Use unit only as described in this Manual. Use only Kaivac's recommended attachments.
- Follow the maintenance instructions specified in this Manual.
- For indoor use only.
- Store indoors.
- Stay alert - watch what you are doing.
- Keep operating area clear of all persons.
- Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts.
- NO COMBUSTIBLES! Sparks inside the motor can ignite flammable vapors or dust. Do not use unit near combustible liquids and gases, or to pick up explosive dusts or gasoline.
- Know how to stop the unit and bleed pressures quickly. Be thoroughly familiar with the unit's controls before operating.
- DO NOT allow unit to be used as a toy and unit should not be operated by children. Close attention is necessary when used near children.
- Use extra care when cleaning on stairs.
- DO NOT operate the unit when fatigued or under the influence of alcohol or drugs.
- DO NOT put any object into unit's openings. Do not use with any of the unit's opening blocked; keep free of dust, lint, hair, and anything that may reduce air flow.
- DO NOT pick up anything that is burning or smoking, such as cigarettes, matches or hot ashes.
- DO NOT overreach or stand on unstable support. Keep good footing and balance at all times.
- DO NOT operate without the Vacuum Motor Float Cage installed. If float is removed, reinstall by screwing back into place.
- DO NOT use without filters in place.
- **Personal Protective Equipment (PPE): It is recommended to wear proper personal protective equipment as required by the chemical product label instructions used in conjunction with the unit. For Kaivac chemical products, refer to product label.**

SPRAY SYSTEM SAFETY INSTRUCTIONS:

- DO NOT spray liquid from the unit or attachments onto electrical outlets or any electrical devices.
- Risk of injection or injury to persons - DO NOT direct discharge stream at persons.
- INJECTION HAZARD: Unit can cause serious injury if the spray permeates the skin. Do not point the spray gun at anyone or any part of the body. In case of permeation, seek medical aid immediately.
- THIS UNIT IS CAPABLE OF PRODUCING 500 PSI (3447 kPa). To avoid rupture and injury, do not operate this pump with components rated less than 500 PSI (3447 kPa) working pressure (including but not limited to spray guns, hose, and hose connections); and before servicing, cleaning or removal of any part, shut off power and relieve pressure.
- High pressure cleaners, such as this unit, shall not be used by children, persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge or untrained personnel. Children should not play with the unit. Cleaning and user maintenance should not be performed by children.

CORDED UNITS SAFETY INSTRUCTIONS (APPLICABLE TO CORDED UNITS):

- Inspect cord and plug prior to use. Do not use with damaged cord or plug. If unit is not working as it should, has been dropped, damaged, left outdoors or dropped into water, do not use or charge and return unit to a Kaivac service center.
- Test the unit's ground fault circuit interrupter (GFCI) before each use.
- Turn off the unit before unplugging. Do not leave unit when plugged in. Unplug from outlet when not in use and before servicing.
- Turn off all controls before unplugging.
- Connect to a properly grounded outlet only. Do not remove ground pin on plug. See Grounding Instructions below.
- This unit may also have been provided with a ground fault circuit interrupter built into the power cord. If replacement of the plug or cord is needed, use only identical replacement parts.
- This unit comes with a grounded attachable extension cord. If cord is damaged, replace with equivalent 120v, 15amps, 14GA rated cord. This cord must be attached and mechanically secured using the provided cord connector to use the unit.
- The unit must be disconnected from any electrical or battery source when the unit is being cleaned or maintenance of unit or when replacing parts
- Keep all connections dry and off the ground.
- Keep the cord away from heated surfaces.
- If using extension cord with unit, make sure the connection is above and off the floor and away from exposure to liquid.
- DO NOT handle plug or unit with wet hands.
- DO NOT pull or carry by cord, use cord as handle, close a door on cord, or pull cord around sharp edges or corners. Do not run unit over cord. Keep cord away from heated surfaces.
- DO NOT unplug by pulling on cord. To unplug, grasp the plug, not the cord.

1.4 Important Safety Instructions (Continued)

SAVE THESE INSTRUCTIONS
CONSULT KAIVAC.COM FOR THE MOST UP TO DATE SAFETY PRECAUTIONS
READ ALL INSTRUCTIONS BEFORE USING (THIS UNIT) .

When using an electrical unit, basic precautions should always be followed, including the following:

BATTERY UNITS SAFETY INSTRUCTIONS (APPLICABLE TO BATTERY UNITS):

- **Never use a battery that has been damaged in any way.** Damaged batteries may exhibit unpredictable behavior.
- **Never use or charge a damaged battery pack.**
- ONLY USE with Kaivac, Inc. battery, and charger.
- Inspect the battery before each use for damage, dents, cracks, or holes.
- If included with legacy unit, the battery splash cover must remain in place. Without the battery splash cover, the battery housing may become damaged which may cause the battery to malfunction, which can result a fire, explosion, personal injury, and/or property damage.
- If your unit contains a chemical-resistant plastic protective helmet, consult the Helmet Addendum for additional instructions and warnings.
- Exposure of units to airborne polyunsaturated fats in the food service industry may cause deterioration of battery components. Failure to inspect and use as instructed may result in fire explosion, personal injury, or property damage.
- Under certain conditions, including damage or liquid infiltrating the battery's interior cells, the battery may emit smoke, sparks, or fire. Liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.
- Stop use immediately if the battery or unit sparks or shows signs of fire. And may result in fire.
- If unit or battery emits fumes, smoke, sparks, or fire, discontinue use immediately. Do not touch battery. If unit can be safely moved, move outside to a well ventilated fire safe area away from people or combustible material.
- DO NOT attempt to repair, service or modify the batteries or charger. Contact Kaivac Technical Support with any issues.
- Disconnect the battery from the unit before making any adjustments, changing accessories, or storing unit. Such preventive safety measures reduce the risk of starting the unit accidentally.
- When charging battery, make sure charger or unit has at least 6 inches of clearance on all sides for adequate air flow.
- When battery is not in use, keep it away from other metal objects like paper clips, coins, keys, nails, screws or other small metal objects that can make a connection from one terminal to another. Connecting or shorting the battery terminals together may cause burns or a fire.
- Keep heat sources, sparks, and flames away from batteries.
- Prevent unintentional starting. Ensure the switch is in the off-position before connecting to battery, picking up or carrying the unit. Do not carry the unit with your finger on the switch. Energizing an unit that has the switch on invites accidents.
- DO NOT allow battery to be submerged in water.
- DO NOT use a battery that has been submerged in water, or if water has infiltrated the battery housing even if it appears to be working.
- DO NOT charge batteries outdoors.
- DO NOT short-circuit the battery or charger terminals with conductive items such as paper clips. This can deliver high current.
- DO NOT crush or drop the battery.
- DO NOT expose a battery or unit to fire or excessive temperature. Exposure to fire or temperature above 265ºF (130ºC) may cause explosion.
- DO NOT use or store the NTC System or battery in refrigerated areas, in environments when the battery is in direct contact with liquids, or near flammable or combustible materials.
- DO NOT charge or store battery for extended time (1 month or more) in temperatures below 40ºF (4ºC).
- DO NOT remove any part of the battery, charging unit, or unit: If your unit has a chemical-resistant plastic protective helmet, do not remove it.
- DO NOT plug battery in while Vacuum Motor is in ON position. It may damage the system.
- DO NOT incinerate the battery even if it is non-working or severely damaged. The battery can explode in a fire.
- DO NOT leave battery connected to charger once the charger light is green. Leaving battery on charger will diminish the life of the battery
- **Never dispose of the battery in the trash. It is important that your old, damaged battery is disposed of and/or returned as instructed by Kaivac Customer Care/Technical Support at 1-800-287-1136.**

1.4 Important Safety Instructions (Continued)

SAVE THESE INSTRUCTIONS
CONSULT KAIVAC.COM FOR THE MOST UP TO DATE SAFETY PRECAUTIONS
READ ALL INSTRUCTIONS BEFORE USING (THIS UNIT)

When using an electrical unit, basic precautions should always be followed, including the following:

CHARGER/ELECTRICAL WARNINGS:

- Inspect the charger, cords, and connections prior to each use.
- Follow all charging instructions and do not charge the battery or unit outside of the temperature range specified in the instructions. Charging improperly or at temperatures outside of the specified range may damage the battery and increase the risk of fire.
- Connect charging cord to a properly grounded outlet only. See Grounding Instructions.
- DO NOT use charger if it has a damaged cord or plug.
- DO NOT operate charger if it has received a sharp blow, been dropped, or damaged in any way.
- DO NOT handle charger, including charger plug and charger terminals, with wet hands while charger is plugged in or while inserting plug into electrical outlet.
- DO NOT leave charger plugged in when not in use.
- DO NOT plug in charger while Vacuum Head is in ON position. It may damage the unit's electrical system.
- DO NOT pull on charger cord to unplug. Grasp and pull the plug, not the cord.
- DO NOT carry charger by cord.

1.5 Battery Information

Keep Batteries at Room Temperature: Store between 32 and 113 degrees F (0ºC to 45ºC). Avoid battery exposure to extreme temperatures. If shelving battery longer than (1) month, deplete battery to 50% charge during storage period (two bars on the battery indicator).

Batteries Lose Capacity Over Time: Batteries naturally deteriorate over time whether being used or not. If battery use instructions are properly followed, batteries deteriorate at a rate of approximately 10% run time per year but may vary by patterns of use.

Fully Discharge vs. Partial Discharge and the Effect on Battery Cycles: Unlike lead acid batteries, the Lithium-ion battery used with Kaivac equipment is not damaged by full or partial discharging. The expected battery hours of use are approximately 600 hours and 400 charge cycles. If you discharge battery only to 80%, then the user can expect to get more cycles (500 cycles). With dual batteries make sure to alternate batteries per charge in order to maximize for life capacity.

Extended Storage: It is recommended to discharge to 50% capacity (two bars on the battery indicator) and store in a cool location (between 32ºF to 113ºF or 0ºC to 45ºC). To avoid battery impact, store battery laying down on its side on lowest shelf, and secured. If battery is dropped or experiences an impact or damage, discontinue use and replace. Never use a damaged battery, as a damaged battery may act in an unpredictable manner resulting in fire, explosion, property damage, or personal injury.

Battery Gauge: The Kaivac provided battery comes with a built-in Battery Gauge or which shows the approximate run time for the current charge remaining.

Replacement - End of Life: Rechargeable batteries eventually wear out. When your Kaivac Battery run time is less than 55% (i.e. 50 minutes for non-quick change and 33 minutes for Quick Change batteries), Kaivac recommends replacing your battery. Regardless of run time, contact Kaivac to replace your battery after 4 years. Consult kaivac.com for information on recycling your old battery through a licensed disposal facility.

⚠WARNING
RISK OF FIRE, EXPLOSION, PROPERTY DAMAGE, OR SERIOUS INJURY OR DEATH

DO NOT DISCARD BATTERY INTO TRASH! It is important to recycle your old batteries at your local authorized battery recycling facility or by calling 1-800-USA-CLEAN (1-800-872-2532) and selecting Option 3.

Battery Specifications	
Weight	With Box, 11 lbs. (4,9 kg)
Body Material	Injection Mold Polypropylene
Dimensions (H x W x D)	18 x 7 x 5 in. (45,7 x 17,8 x 12,7 cm)
Voltage	36V DC
Battery Capacity	15 A-hr
Battery Current	15 A DC
Battery Type	Lithium-Ion
Approx. Run Time BOL (Beginning of Life)	60 minutes
Approx. Run Time EOL (End of Life)	35 minutes (discontinue use and take to recycling center)
Battery Box Receptacle	IP65 / IP67 (not required for UL)
Run Time Hour Meter	Acts as “odometer for battery” and runs only when motor switch is ON
Approx. Charge Cycles	400 @ 100% discharge / 500 @ 80% discharge
Cut off Voltage (fully discharged)	30V
Charger Specifications	
Approx. Charge Time	5 hours
Charger Amps	4 Amps
Charge Voltage	42V DC
Charger Voltage	110-240VAC / 36VDC (240VAC version only needs correct plug for wall outlet)
Charging Robustness	No special instructions
Battery Charge Memory	None
Battery Charge Gauge	Yes, LED Indicator
Approx. Charge Cycles	400 @ 100% discharge / 500 @ 80% discharge
Storage/Inventory:	
Storage & Operation Ambient Temp	32ºF (0ºC) to 113ºF(45ºC)
Storage & Shipping Charge	40-60% Charge (35-38VDC)

1.6 Grounding Information

Grounding: Corded Units

GROUND FAULT CIRCUIT INTERRUPTER PROTECTION (*for spray systems only)*

If your unit is a corded unit, it has been supplied with a ground-fault circuit-interrupter(GFCI) built into the plug of the power-supply cord. This GFCI device provides additional protection from the risk of electric shock. Should replacement of the plug or cord become necessary, use only identical replacement parts that include GFCI protection.

If your unit is a corded unit, it is for use on a nominal circuit and has a grounding attachment plug. Make sure that the appliance is connected to an outlet having the same configuration as the plug. No adapter should be used with this unit.

GROUNDING INSTRUCTIONS

If your unit is a corded unit, it must be grounded. If the unit should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This unit is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local electrical codes and ordinances.

Improper connection of the unit-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the unit by removing the ground pin on the plug – if the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

This unit comes with a grounded attachable extension cord. If damaged, replace with Kaivac® (OEM) cord, or if necessary an equivalent cord rated 120V, 15 amps, 3-wire, 14 GA. This cord must be attached and mechanically secured using the provided cord connector to use the unit.

Grounding: Battery Units

GROUNDING INSTRUCTIONS

The charger must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This unit is equipped with a cord having equipment grounding conductor and grounding plug. The plug must be inserted into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Improper connection of the unit-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the unit by removing the ground pin on the plug – if the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

This unit is for use on a nominal circuit and has a grounding attachment plug. Make sure that the unit is connected to an outlet having the same configuration as the plug. No adapter should be used with this unit.

1.6 Grounding Information (Continued)

Make sure your extension cord is in good condition and is the correct size for your unit. Table 1 shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gage number, the heavier the cord. An undersized extension cord will cause a drop in line voltage resulting in loss of power and overheating.

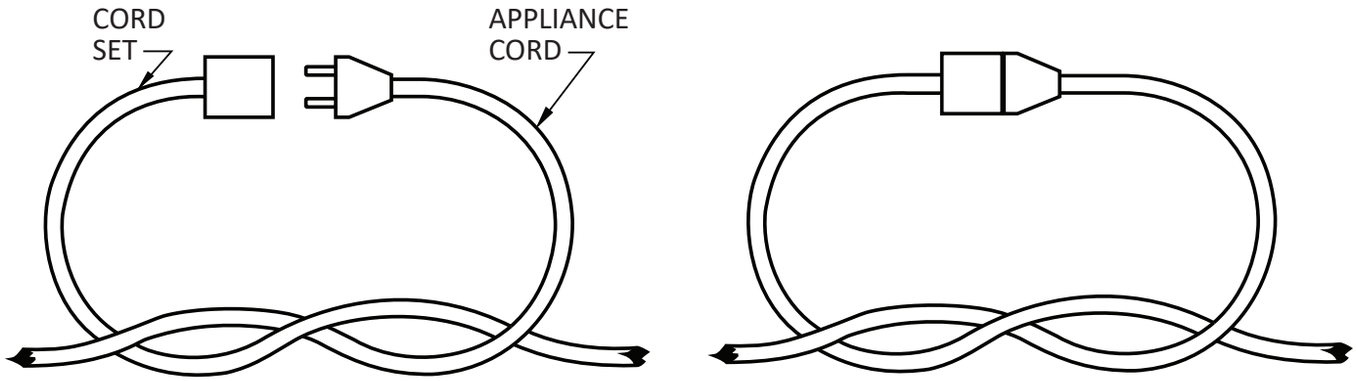
Use only three-wire outdoor extension cords that have three-prong grounding receptacles that accept the unit's plug.

To reduce the risk of personal injury due to a loose electrical connection between the unit's plug and extension cord, firmly and fully attach the unit plug to the extension cord. Periodically check the connection while operating the unit to ensure it is fully attached. Do not use an extension cord that provides a loose connection. A loose connection may result in overheating, fire, and increases the risk of a burning.

To reduce the risk of disconnection of the unit's cord from the extension cord during operations:

- Make a knot as shown in Figure 1 below:

Figure 1 - Method of securing the appliance cord to the extension cord set



(A) TIE CORD AS SHOWN

(B) CONNECT PLUG AND RECEPTACLE

Table 1 - Minimum gauge for extension cords

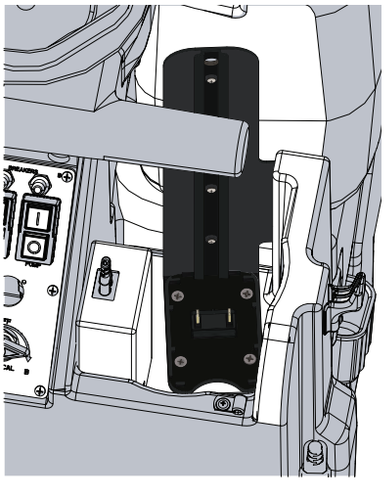
Ampere rating		Volts	Total length of cord			
			7.62 m (25 ft)	15.24 m (50 ft)	30.48 m (100 ft)	45.72 m (150 ft)
More than, A	Not more than, A	120 V	mm^2 (AWG)			
0	6	—	0.82 (18)	1.3 (16)	1.3 (16)	2.1 (14)
6	10	—	0.82 (18)	1.3 (16)	2.1 (14)	3.3 (12)
10	12	—	0.82 (18)	1.3 (16)	2.1 (14)	3.3 (12)

2.1 Battery Doc and Charging

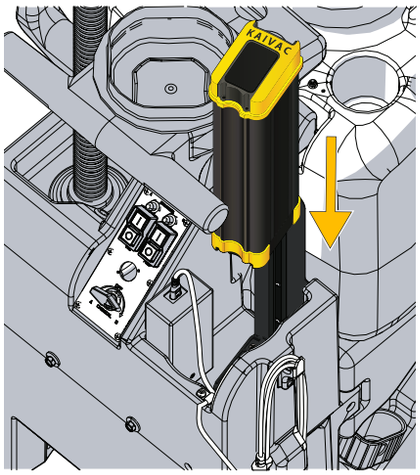
WARNING
RISK OF FIRE, EXPLOSION, PROPERTY DAMAGE, OR PERSONAL INJURY OR DEATH

Inspect battery, housing, plug, cord, splash cover (if applicable), and helmet (if applicable) for damage, including cracks, separation, dents, holes, missing, pieces, and fraying cord or wires. Do not use a damaged unit or a unit with a damaged battery. Check all cords, hoses, and spray lines for damage prior to use. If damage is found, do not continue until proper repairs are completed.
If using a legacy unit equipped with a fabric splash cover, ensure the cover is flipped over the battery top. Newer battery models may also be equipped with a chemical-resistant plastic protective helmet and fabric splash cover, ensure splash cover is flipped over helmet top.
Do not remove helmet.

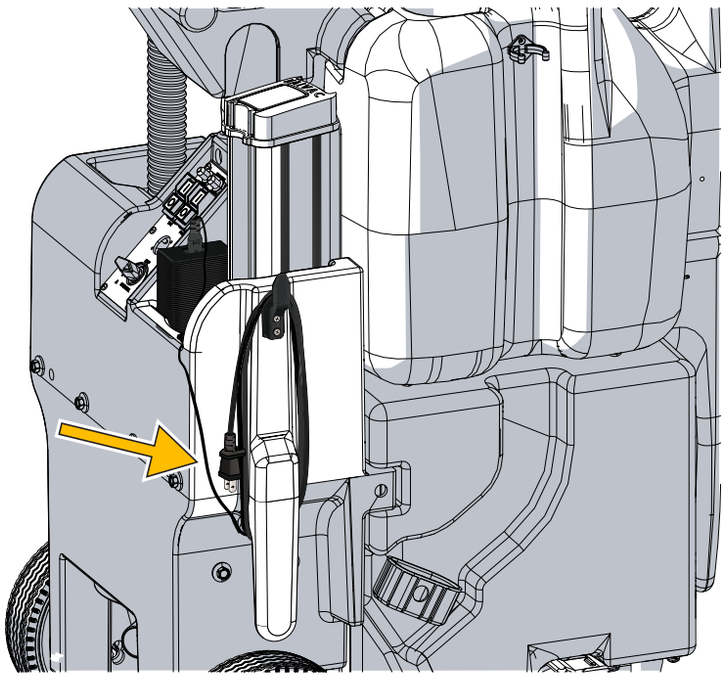
The bracket or housing mounted on the black box is where the battery will be mounted.



Place battery onto bracket rail, lowering it down into place. If unit is equipped with splash cover, place splash cover over top of battery.

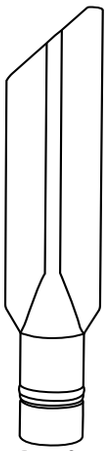


The Charging Cord is pointed out below. Plug into wall outlet to charge. Unplug when unit is in use.

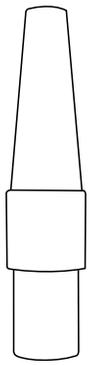


2.2 Tools

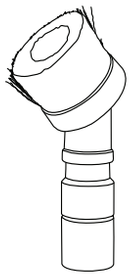
Listed below are placement instructions.



Crevice Tool (VT3A)

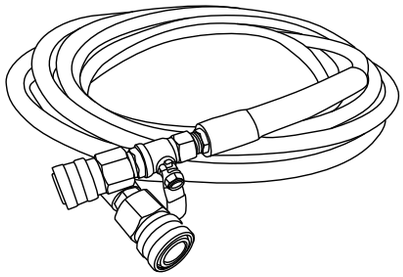


Drain Stopper (CVS13A)

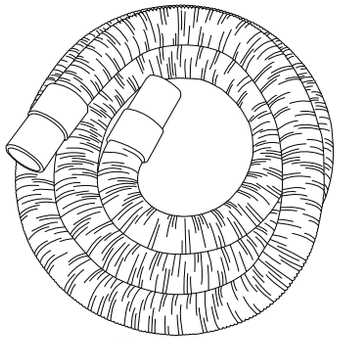


Dusting Brush (VT4A)

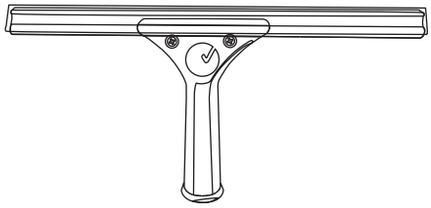
Fan Lift Tool (WALSPA)



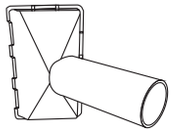
Pressure Hose (PH15)



Vac Hose (FS18)

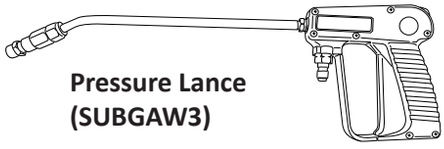


Window Squeegee (CAA04)

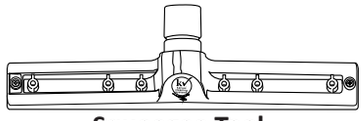


Gulper Tool (CVS14A)

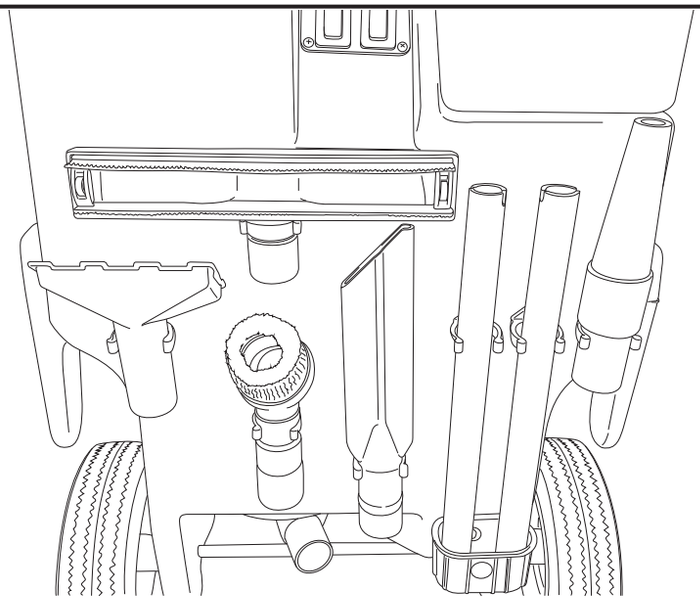
Nylon Brush (NBRUSH)



Pressure Lance (SUBGAW3)



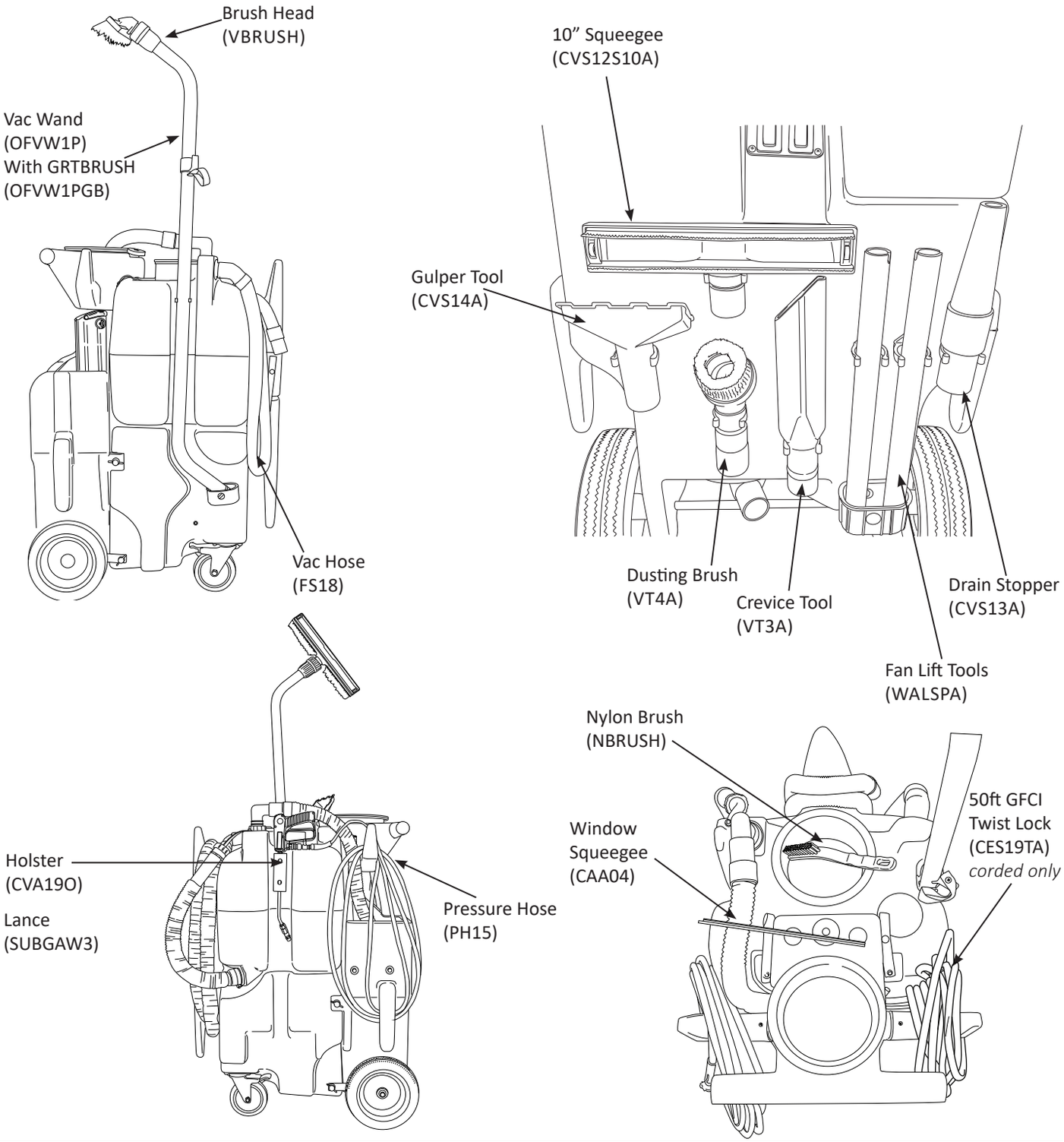
Squeegee Tool (CVS12S10A)



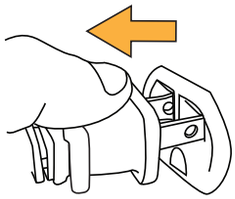
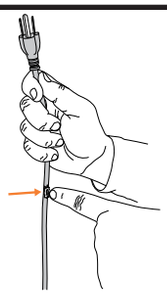
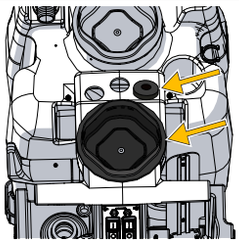
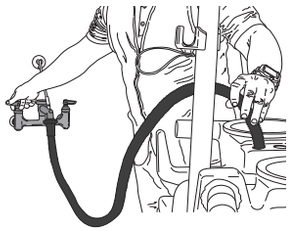
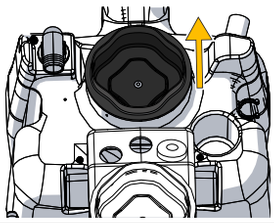
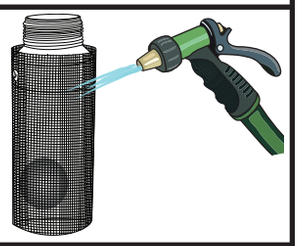
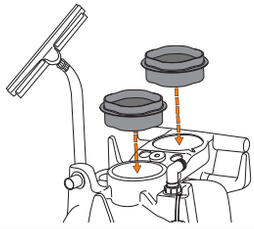
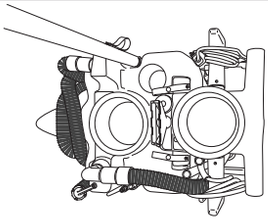
Ensure all tools are placed in the appropriate locations as shown above.

2.3 Tool Arrangement

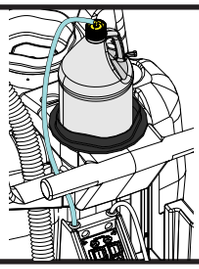
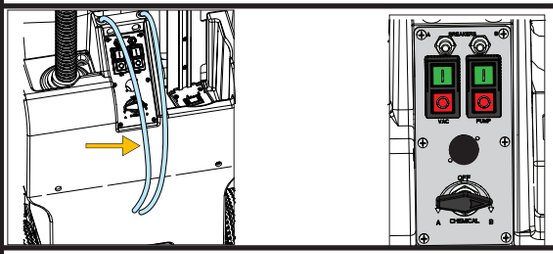
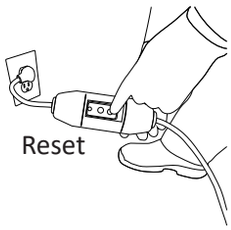
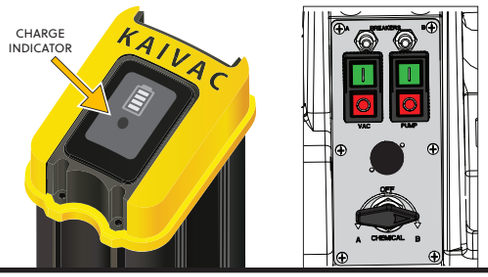
Cooler Cleaner Tool Arrangement



2.4 Preparation For Use

1. Unplug the charger from the battery if applicable. **WARNING** RISK OF ELECTRIC SHOCK Avoid getting water on the unit.	
2. Inspect battery, housing, plug, cord, splash cover (if applicable), and helmet (if applicable) for damage, including cracks, separation, dents, holes, missing, pieces, and fraying cord or wires. **WARNING** RISK OF ELECTRIC SHOCK OR FIRE Do not use a damaged unit or a unit with a damaged battery. Check all hoses and spray lines for damage prior to use. If damage is found, do not continue until proper repairs are completed.	
3. Remove the water tank lid, or locate the Universal Fill Hose. Fill unit with clean, cool water. ***NOTICE*** Do NOT add chemical through this location of the unit.	 
4. Clean and spray the Float Cage located inside the Vacuum Tank. Ensure Float Cage is in place. Clean Float Cage regularly. **CAUTION** RISK OF INJURY Do not use if Float Cage is not in place.	 
5. Make sure Vac Lid Jug Holders are firmly on Vacuum Tank.	
6. Check unit for all tools and supplies needed to complete task. See Tool Arrangement in Section 2.3 of this manual.	

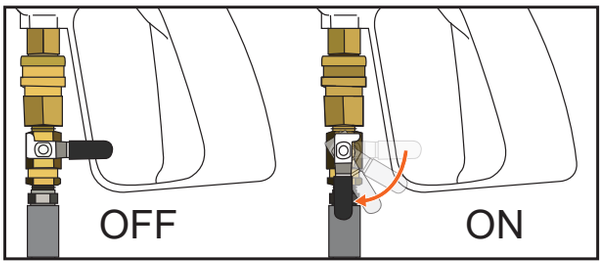
2.4 Preparation For Use *(Continued)*

7. Prepare the cleaning solution you will be using by attaching the chemical feed line and cap to the top of your chemical bottle. Then select the proper metering tip. (See placard for metering tip information) **NOTICE** Use only Kaivac approved chemicals.	
8. If using a cleaning product that foams, use a foam inhibitor to cut excess. Pour 2 capfuls of inhibitor in the Vac Hose with Vac running to coat inside of Hose. **CAUTION** Risk of motor damage Foaming chemicals in tank may damage Vac Motor.	
9. If unit has chemical valve, when using unit with chemical jug, locate the valve on the switch panel. Turn valve to side “A” or side “B” depending on the chemical line connected to the jug. For no chemical, switch valve to “OFF” position.	
10. If using a corded unit, plug in unit and test GFCI (Ground Fault Circuit Interrupter) to ensure it is working properly. You are now ready.	
11. If using a battery unit, ensure the battery is fully charged and in place. If unit is equipped with a splash cover, ensure it is in place over the battery. Power on unit using the switch panel, you are now ready. **NOTICE** Some battery models may contain a chemical-resistant plastic protective helmet. Do not remove helmet.	

2.5 Unit Components

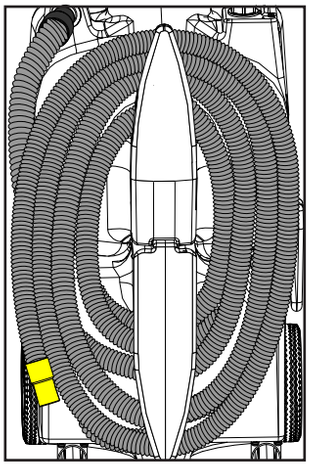
CAUTION
RISK OF INJURY

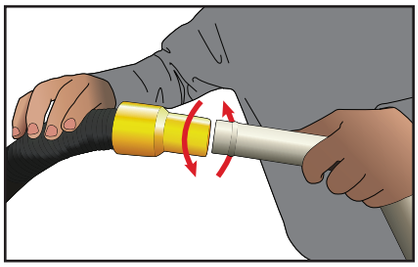
For the safety of self and others, do not point the spray lance at others or self. Spray only the intended object.



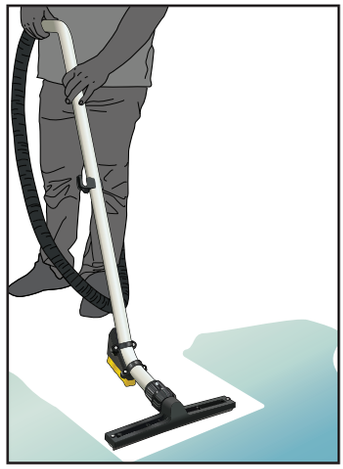
To turn Spray Lance off or on, switch the valve connected to Spray Lance as shown.
The Spray Lance is connected to the Spray Line.

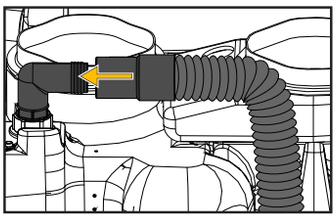
To use Spray Lance, simply connect spray line and pull trigger.





Locate the vacuum hose on the back of the unit. Ensure hose cuff is connected to the port at the top of the unit. Using the other end of the hose, attach the hose cuff to the vacuum wand and power on the unit to begin using floor squeegee.

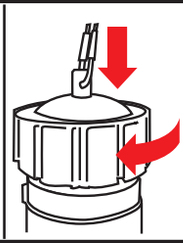




Ensure elbow hose is connected at top of unit.

CAUTION
RISK OF INJURY

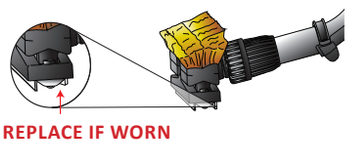
DO NOT DISCONNECT AND DO NOT USE AS VACUUM

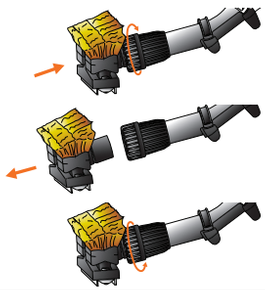


Ensure dump hose is secured to cap-and-tether. Check this daily.

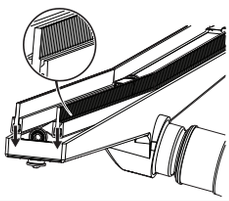
Dump excess from the vacuum tank by unscrewing the cap.

Check for worn squeegee blades. Worn blades cause streaking and loss of vacuum suction. Unscrew cuff at end of Vac Wand, remove old head and replace with new every 6-8 weeks for optimal performance.





BLADE RIBS FACING OUT.



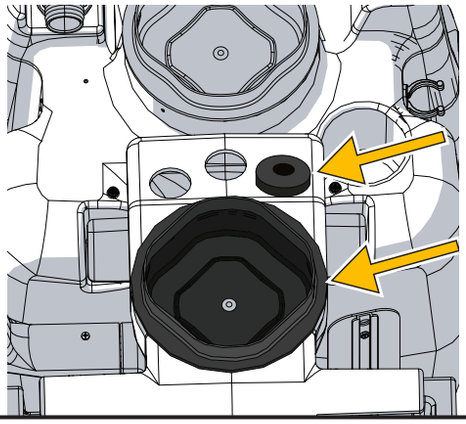
IMPORTANT: If cuff is removed, ensure Brass Ring stays in place.

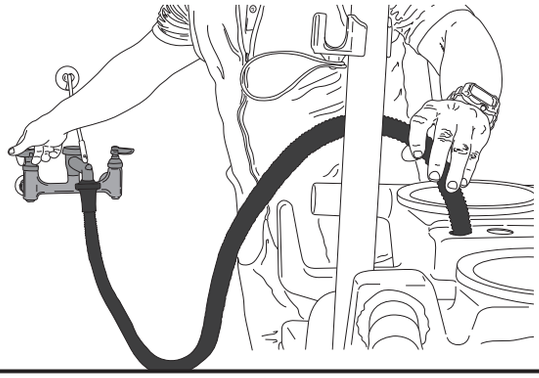
2.6 Filling The Unit

WARNING
RISK OF FIRE, EXPLOSION, PROPERTY DAMAGE, OR SERIOUS INJURY OR DEATH

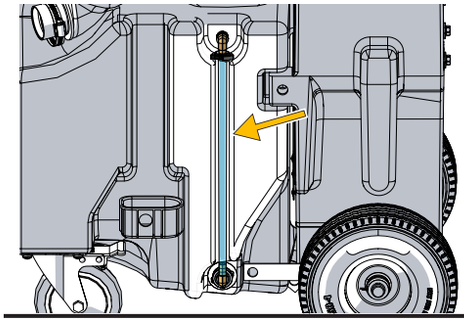
If unit contains battery splash cover, before filling the unit, be sure the battery splash cover is in place and secure.

For No-Touch-Cleaning units, there are designated filling areas. The first area is accessed by running water through the Universal Fill Hose from a spigot. On the 1700/2700 models, the other is found by lifting the jug holder at the top of the unit that is connected to the Water Tank. Remove the jug holder to reveal the inside for the secondary fill location.





Note the location of the Sight Gauge on the side of the Water Tank. Use the Sight Gauge feature to see how much water is in the unit. If water is low, ensure you refill the tank by using the fill port. The Sight Gage will help see the water level, do not overfill or overflow from the tank will occur.



NOTICE

If unit has chemical valve, fill the tank with Kaivac or Kaivac approved Chemicals. Follow the proper dilution instructions on bottles or dispenser. For accuracy and convenience, use Kaivac proportioned chemical packets.

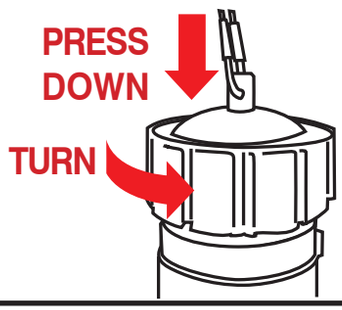
IF A CHEMICAL IS BEING USED, USE ONLY THE RECOMMENDED DILUTION. HIGH FOAMING CHEMICALS MAY CAUSE PREMATURE VAC MOTOR DAMAGE.

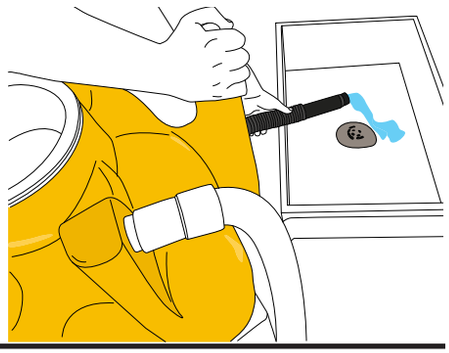
2.7 Emptying Vacuum Tank

If the Vacuum Motor shuts off before the job is complete, the Vacuum Tank may be full and need to be emptied. Lift the vac lid jug holder on the top of the unit to see if tank is full. If unit is full or your job is complete, follow the instructions below to empty Tank into appropriate sink/drain.

To begin the dumping process, you must first press down on the Dump Hose Cap and turn counter-clockwise. Once cap is removed, lower Dump Hose into appropriate sink/drain.

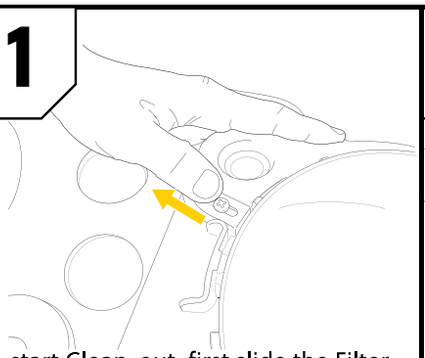
NOTICE To prevent an accidental spill or overflow from the Dump Hose, be careful to keep hose end upright until it is over sink/drain.





2.8 Debris Filter Instructions

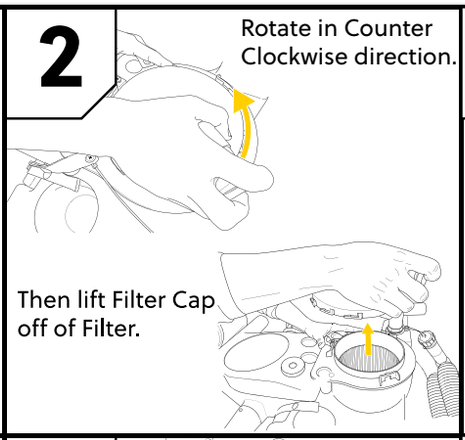
1



To start Clean-out, first slide the Filter LOCK away from the Filter Cap as shown above.

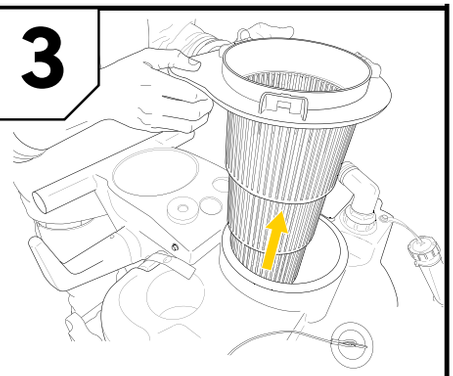
2

Rotate in Counter Clockwise direction.



Then lift Filter Cap off of Filter.

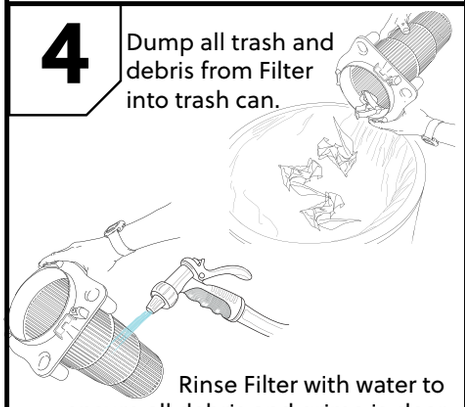
3



Lift Filter up, and out of Vac Tank as shown above.

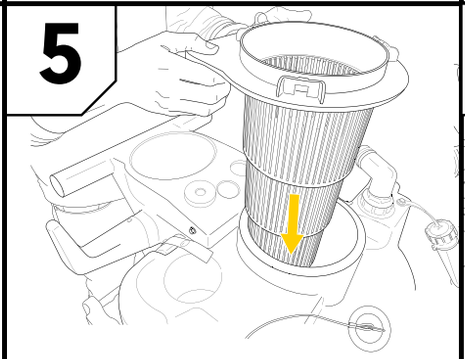
4

Dump all trash and debris from Filter into trash can.



Rinse Filter with water to ensure all debris and grime is clear.

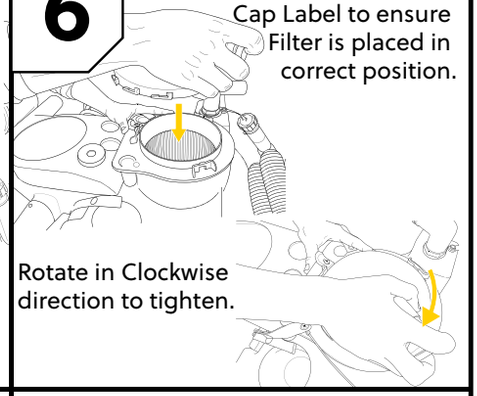
5



To replace, lower Filter down, and into Vac Tank, as shown above.

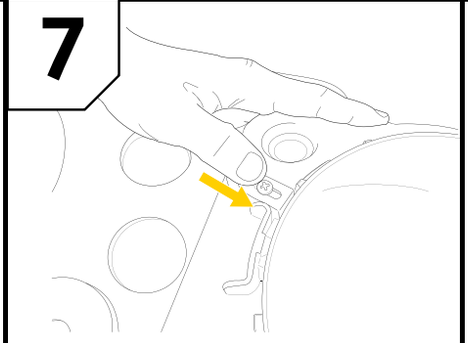
6

Follow Instructions on Filter Cap Label to ensure Filter is placed in correct position.



Rotate in Clockwise direction to tighten.

7



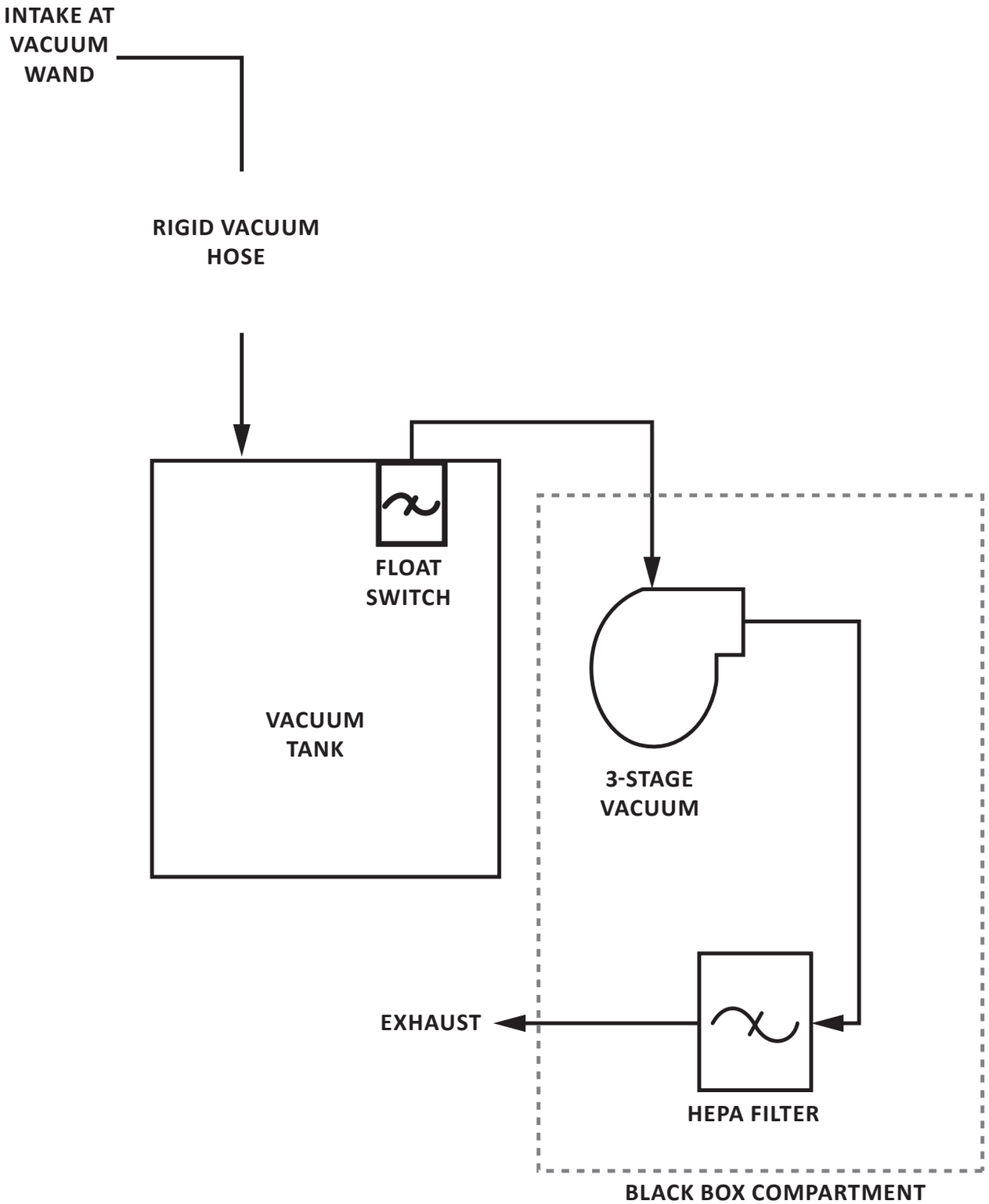
Slide Lock forward, towards the Filter Cap to ensure Cap is securely locked into place.

3.1 Unit & Battery Maintenance

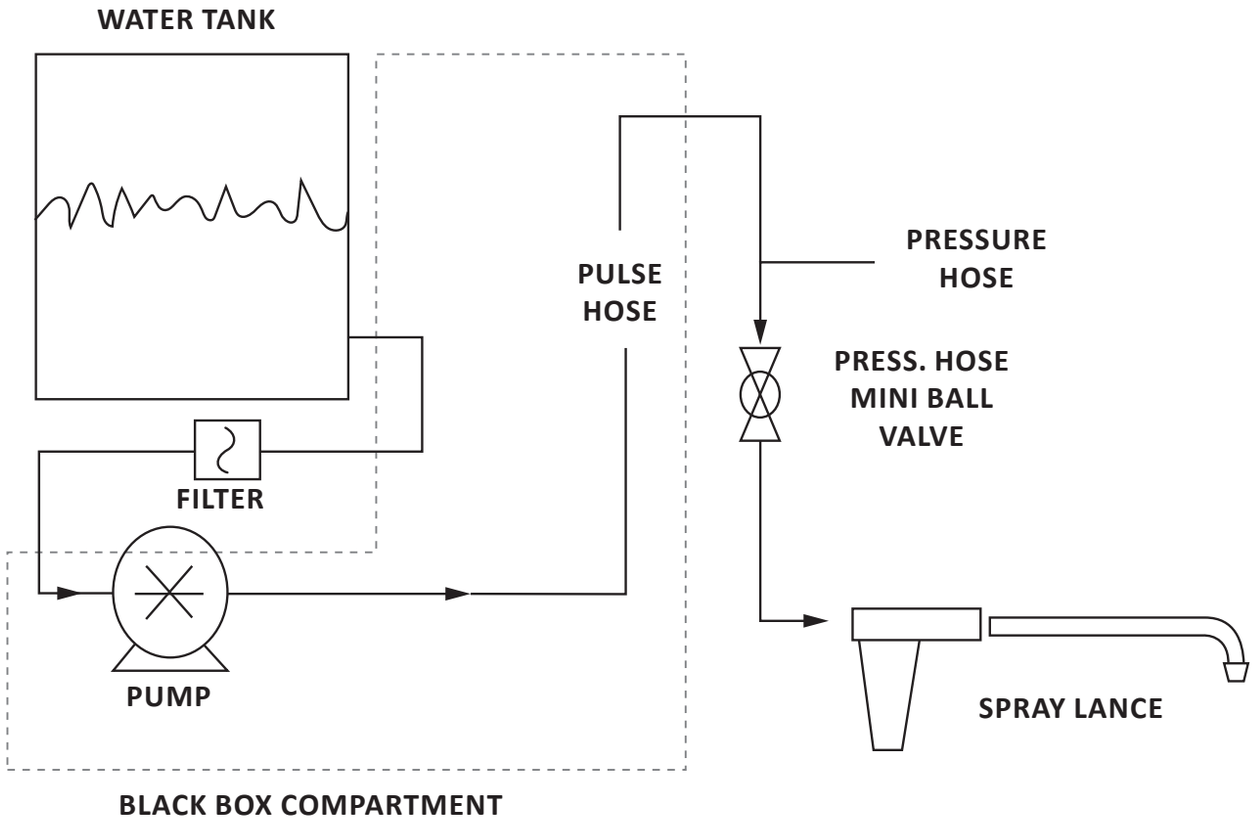
Always unplug unit before servicing unit or inspecting.

ITEM	PROCEDURE
Floor Squeegee	• Check condition of squeegee blades and wheels on the floor tool. • Rough floor surfaces will cause the blades and wheels to wear out more quickly Replace as necessary.
Spray Gun	• Check spray pattern. If spray pattern will not pinpoint, clean orifice by removing it with an Allen wrench and flushing. Replace if needed. • If nozzle becomes difficult to move from high to low pressure, lubricate nozzle with lithium grease.
Pressure Hose	• Wipe clean after each use. • Check for cuts or frays in the hose jacket, particularly at the end of the fittings. Replace hose if cuts are found.
Water Tank	• Check condition of filter in water tank. Clean as needed. • Empty the water tank to prevent mildew and bacteria growth. Empty tank by dipping the vacuum hose into the water tank and transferring the water to the vacuum tank.
Vacuum Tank	• Empty and flush vacuum tank. • Clean and disinfect. • Check the float shutoff screen to be sure it is not blocked or dirty. A plugged filter screen restricts airflow and results in reduced suction.
Leaks	• Be alert for leaks around hoses, fittings, spray wand, tanks or elsewhere. • Discontinue use until leaks are repaired.
Electrical System	• The ground fault circuit interrupter (GFCI) must be tested before each use. • Electrical cord must be inspected for tears or cuts in the insulation. • Inspect plug and be sure ground pin is in place.
Vacuum Wand	• Use a wire or coarse brush with acid cleaner to remove residue from threads on the coupling and coupling nut. Apply grease when done.
HEPA Filter	• Replace every 3-6 months depending on use.
Float Cage	• Ensure cage is sprayed and cleaned daily to remove debris.
Battery Maintenance	• Inspect battery, plugs, cords, splash cover (if included), and chemical-resistant plastic protective helmet (if included) before charging and after charging. • Charge and store battery indoors. • If included, the battery splash cover must remain in place. Without the battery splash cover, the battery housing may become damaged which may cause the battery to malfunction, which can result a fire, explosion, personal injury, and/or property damage. • Always keep helmet affixed to top of battery if your battery is so equipped. • To view the battery, temporarily move the splash cover (if included). Replace the splash cover after inspection. Do not use unit if battery shows any damage, including cracks, dents, holes, fraying, or missing pieces. • Once your battery run time is less than 55% (50 minutes for non-quick change and 30 minutes for quick change batteries), contact Kaivac to replace your battery. Regardless of run time, replace your battery after 4 years. Consult Kaivac.com for information on recycling your old battery. • DO NOT attempt to repair, service or modify the batteries or charger. Contact Kaivac Technical Support with any issues. • DO NOT use or store the NTC System or battery in refrigerated areas, in environments when the battery is in direct contact with liquids, or near flammable or combustible materials. • DO NOT charge or store battery for extended time (1 month or more) in temperatures below 40ºF (4ºC). • DO NOT use a battery or appliance that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury. • If unit is smoking or sparking, move outside to a fire-safe location immediately. If possible, disengage battery from unit, notify management, and call Kaivac Technical Support at 800-287-1136, Ext. 2
Splash Cover (if included)	• Inspect splash cover for damage. • Clean and dry the splash cover. • Be sure the splash cover is secure.

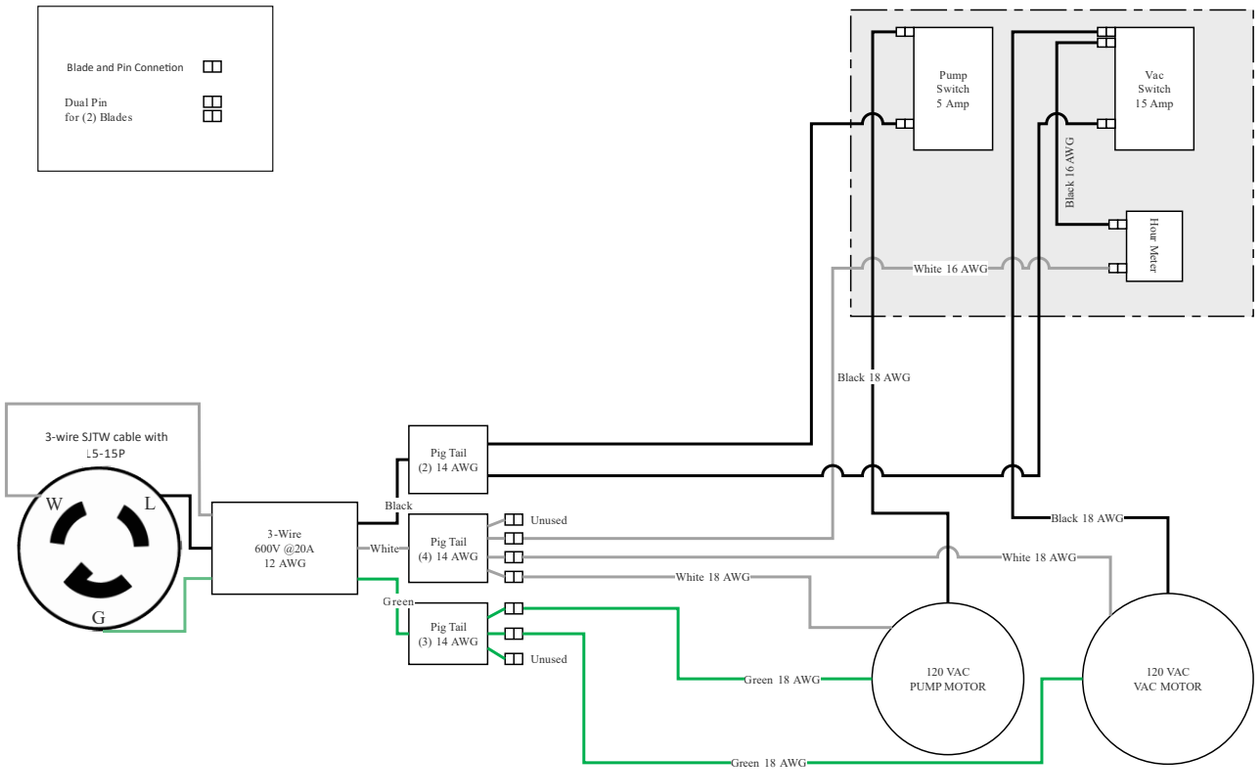
3.2 Vacuum Diagram



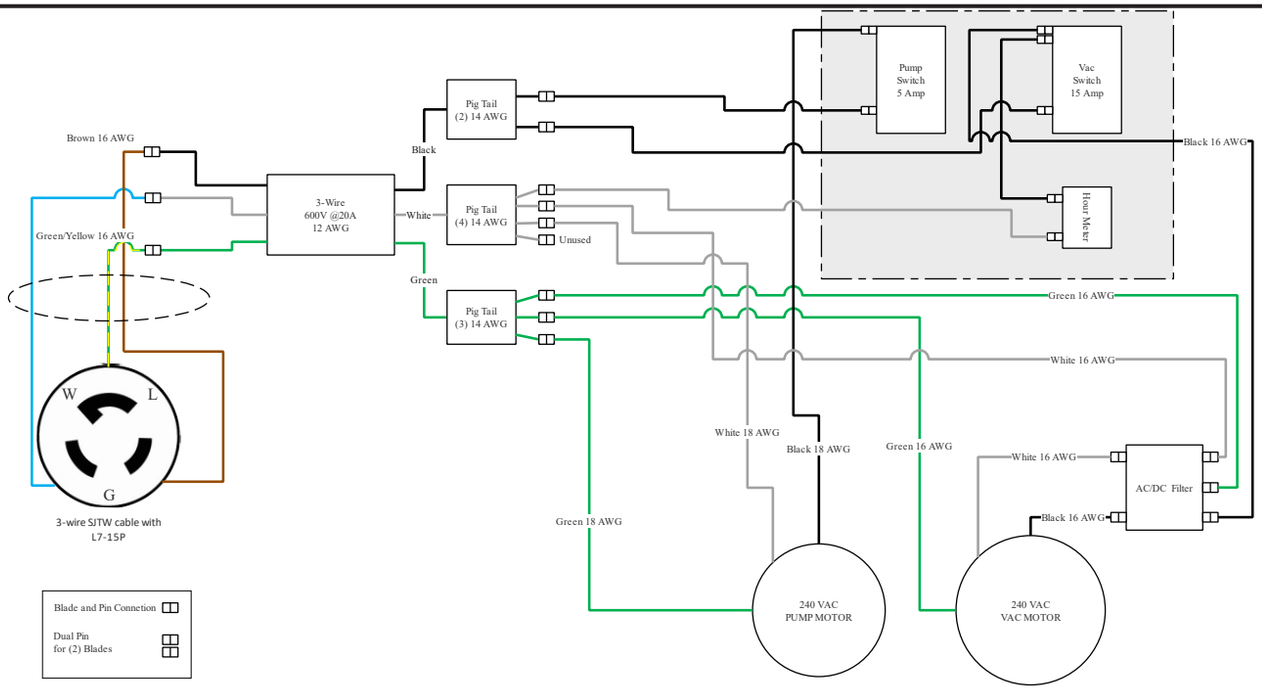
3.3 Pump Diagram



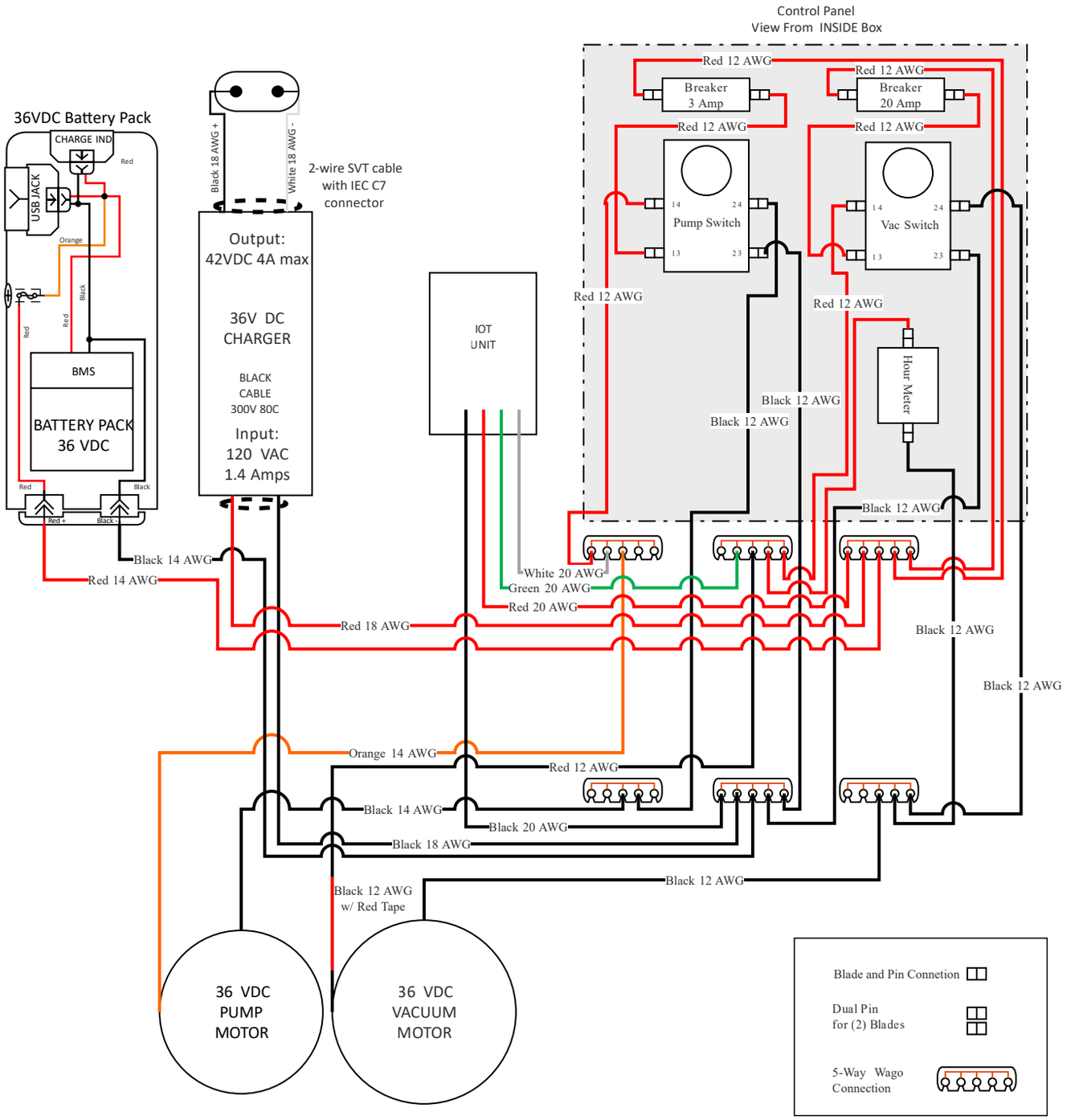
3.4 AC (Corded) Standard Unit Electrical Diagram



3.5 AC (Corded) Intl. Unit Electrical Diagram



3.6 DC (Battery) Standard Unit Electrical Diagram



4.1 Troubleshooting Tips

- **Poor Vacuum Pickup**
  1. Check Squeegee Blades. If blades are worn or damaged, replace Squeegee Head.
  2. Clean float cage.
  3. Check for leaks in the Vacuum Hose or Gasket.
  4. Check for clogged Vacuum Hose.
  5. Check to see if float ball was tripped.

- **Vacuum Shuts Off Prematurely**
  1. Check Float Cage; clean if dirty.
  2. Cleaning Chemicals may be producing too much foam. Use Kaivac approved chemicals.

- **Other Issues? Contact Technical Support**

Phone:

United States and Canada: 1-800-287-1136

International: 1-513-887-4600

Email:

info@kaivac.com

For Technical Support Contact Form go to: https://www.kaivac.com/contactus.php
and choose Technical Support tab.

4.2 TROUBLESHOOTING

Always unplug unit before inspecting or servicing.

AREA	PROBLEM	POSSIBLE CAUSE	
Electrical	No Power to pump or vac motor	Unit not plugged in	Plug unit in
		Switch not “on”	Check switches for “on”
		GFCI tripped	Test and reset GFCI
		Building circuit overloaded	Check and reset circuit
		Switch wires loose	Disconnect power and check for loose wire
		Connections loose	Disconnect power and check for loose wire under panel
	Electrical burning smell WARNING RISK OF FIRE, SERIOUS INJURY, OR DEATH TURN UNIT OFF IMMEDIATELY.	Vac motor brushes worn	Remove vac motor and repair
		Vac motor hung up	Release pressure on hose and jog vac switch, or replace
		Pump motor hung up	Release pressure on hose and jog pump switch, or replace
Vacuum System	No/Weak vacuum	Vac tank full	Empty vac tank
		Squeegee blades or wheels worn	Replace wheels or blades and check periodically
		Float shutoff screen dirty	Spray off float screen to clean
		Float ball stuck	Tap float and release/clean
		Damaged hose	Cut and repair/replace
		Dump hose plug missing	Contact dealer and replace
		Access lid not right	Tighten lid hand tight
		Vacuum hose plugged	Flush hose to remove debris
		Too much liquid in vac hose	Allow air in when vacuuming
		Vac hose still wrapped	Unwrap vac hose fully
		Exhaust plugged	Clean exhaust port and HEPA filter
		Leak in vac tank	If repairable, clean and dry affected area and seal with silicone
		HEPA filter clogged	Remove HEPA filter and clean
	Moisture from exhaust	Vac tank full	Dump vac tank
		Float shutoff missing	Replace
		Excessive foam in vac tank	Use defoamer
Blow Dry System	No air flow	Hose disconnected	Reconnect hose
	Moisture from exhaust	Water in blow hose	Dry blow line
	Suction, not blow action	Vacuum hose connected to vac tank	Reconnect to vac motor exhaust hose

4.2 Troubleshooting (Continued)

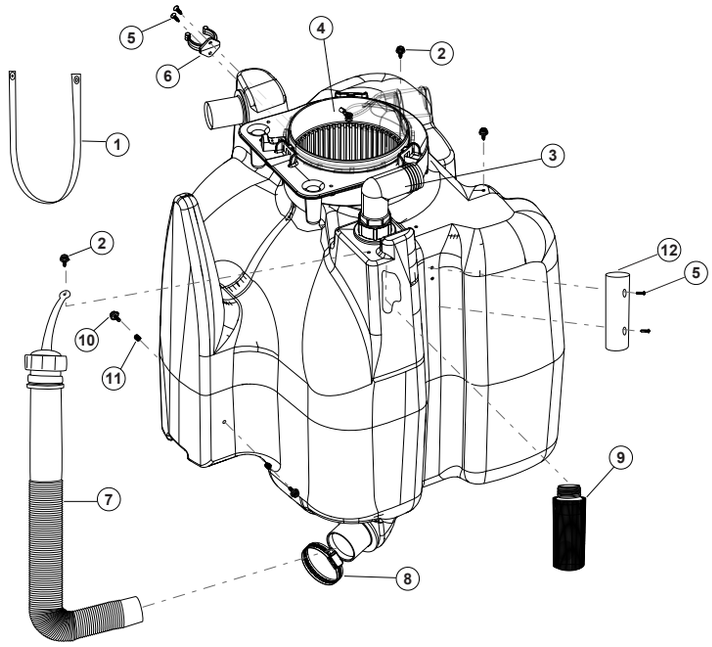
AREA	PROBLEM	POSSIBLE CAUSE	SOLUTION
High Pressure System **WARNING** Always unplug unit before inspecting or servicing. RISK OF ELECTRICAL SHOCK, FIRE, SERIOUS INJURY, OR DEATH	No water from pump or low pressure	Out of water	Fill water tank
		Gun nozzle plugged	Remove orifice with Allen wrench and clean
		Air in pump (vapor lock)	Use power prime technique
		Gun orifice missing	Replace orifice
		Water tank filter plugged	Clean tank and filter
		In-line bowl filter plugged	Remove filter cover and clean
		Bowl filter lid loose	Gently tighten bowl cover
		Pressure hose damaged	Repair or replace
		Quick disconnect leaking	Tighten or replace
		Injector plugged	Remove safety cap from chemical and blow small amounts of compressed air into line
		Pulse hose damaged	Repair or replace
		Regulator failed	Replace
		Hose kinked	Unkink and check for damage
		Seals in pump need replaced	Remove and replace seals
	Bad fan pattern or pinpoint pattern on gun	Debris in nozzle	Remove orifice with Allen wrench and clean
		Orifice damaged	Remove and replace
Chemical Injection System **WARNING** Always unplug unit before inspecting or servicing. RISK OF ELECTRICAL SHOCK, FIRE, SERIOUS INJURY, OR DEATH	No chemical flow	Out of chemical	Refill chemical
		Safety cap not secure	Check safety cap/tighten
		Chemical valve “off”	Check on/off valve
		Safety cap plugged	Replace cap
		Spray gun in wrong mode	Make sure gun nozzle is pulled out away from gun chemical mode
		Metering tip plugged	Check metering tip for clog
		Injector plugged	Remove safety cap from chemical and blow small amounts of compressed air into line
		Air entering system	Check for air entering system around chemical lines or injector
		Injector installed backwards	If fluttering or pulsing sound can be heard while spraying or when unit is running, it is possible that your injector is in backwards. Remove; reinstall.
		Kink in chemical line	Replace chemical line

4.2 Troubleshooting (Continued)

AREA	PROBLEM	POSSIBLE CAUSE	SOLUTION
Chemical Injection System continued	Not enough chemical	Metering tip plugged	Remove and clean
		Wrong metering tip	Check and replace per chart
	Chemical line blows off safety cap	Debris in injector	Remove safety cap from chemical and blow small amounts of compressed air into line
	Water back flows into chemical bottle	Bad seat on injector check valve	Check injector o-ring or replace
		Bad safety cap	Replace safety cap
Dump System	Dump hose will not empty tank	Dump hose cap not removed	Remove cap
		Clog in bottom of tank	Tip dump contents, remove debris
	Dump hose leaks	Hose cut	If leak is less than 4” from tank side, cut and reattach, or replace
		Clamp loose	Tighten hose clamp
		Dump cap missing	Replace cap
Wheels and Casters	Wheels will not roll; rubbing	Flat tires	Inflate tires to 30 p.s.i.
		Debris wrapped around axle	Check for debris on axle
		Bearings tight	Grease bearings
		Wheels too loose on axle	Remove wheel, add washers to take up slack
		Bearings falling out	Replace bearing assembly
Squeegee Head	Floor streaks	Worn blades or wheels	Replace wheels and/or blades
	Squeegee head does not easily rotate when installed on wand	Brass ring on wand not in groove	Loosen coupling nut and re-position head on groove
		Coupling nut too tight	Loosen 1/2 turn
	Head will not stay on wand	Coupling nut cracked	Replace
		Brass ring worn	Replace
	Premature blade wear	Squeegee wheels worn	Check wheels for wear/ replace
	Sucks to the floor too tightly	Squeegee wheels worn	Check wheels for wear/ replace
Battery **WARNING** RISK OF FIRE, EXPLOSION, AND SERIOUS INJURY, OR DEATH	Sparks/Burning/Fire/Smoke STOP USE IMMEDIATELY	Damage to battery or charger	Stop use immediately. Disconnect battery from charger, if possible. Unplug charger, if possible.

5.1 Cooler Cleaner Vac Tank Assembly

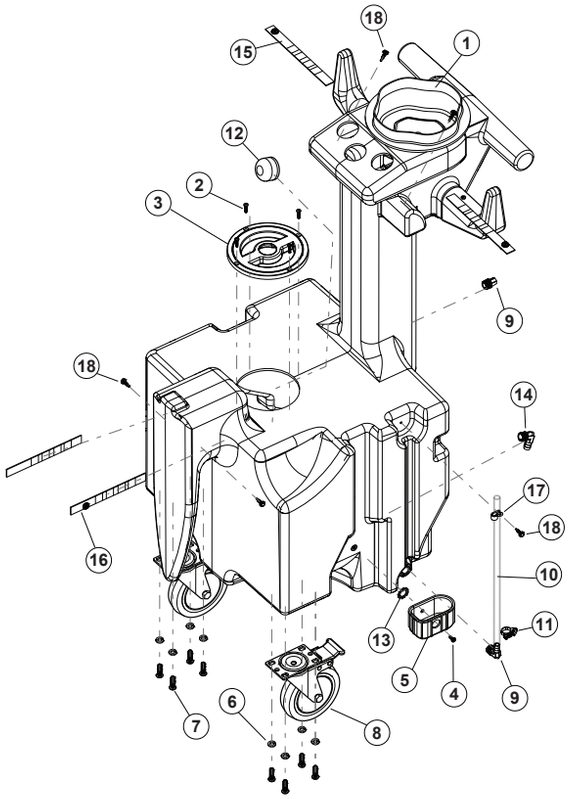
[P/N: VTA17GC]



#	PART NO.	PART DESCRIPTION
1	SUBSS22	STRAP - ASSEMBLY - SNAP 22IN BLACK
2	CSS20	SNAP STUD
3	CSS144	1 1/4 NPT X 1 1/2 HOSE BARB
4	DFILTA	VAC TANK DEBRIS ASSEMBLY
5	CSS17	#8 FLAT HEAD SQUARE SCREW
6	CSS14	13 CLAMP, FOR TOOLS
7	DH25	26" X 1.5" DUMP HOSE 2" CUFF
8	CSS03	1 9/16 - 2 1/2 HOSE CLAMP
9	KZFLOAT	FLOAT SHUT OFF
10	CSS147	SCREW - MACHINE - SNAP STUD - 18-8 SST
11	CSS145	INSERT - NON FLANGED - 8-32
12	CVA19O	HOSE CONNECTOR ORANGE W/MOUNTING HOLES

5.2 Cooler Cleaner Water Tank Assembly

[P/N: WTA17GC (Corded), WTA17GCV2(Battery)]

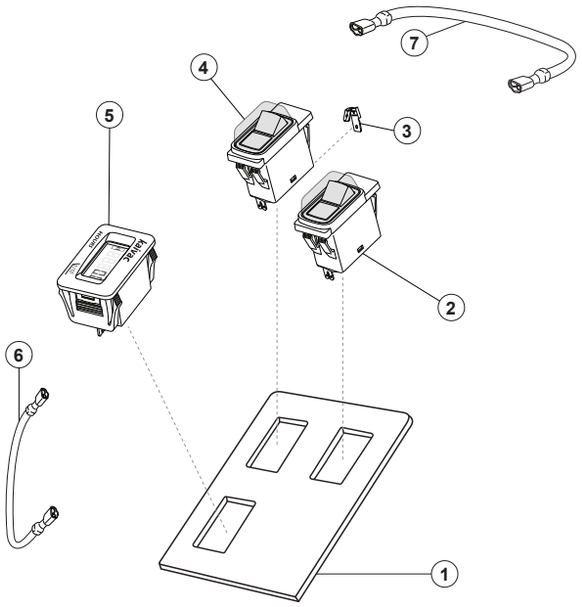


#	PART NO.	PART DESCRIPTION
1	GA0008	VAC LID, JUG HOLDER ASSEMBLY
2	CSS17A	8 SST SCREW 3/4
3	LID4	LID WITH TETHER 4 1/2 IN
4	HWS002	1/4 20 X 3/4 SS WIDE TRUSS SCREW
5	WDVTC	TOOL CUP
6	CSS133	5/16 SPLIT LOCK WASHER 300 SS
7	CSS132	5/16-18X1 BUTTON HEAD
8	CFS03	5 IN CASTER, MOUNTING PLATE
9	CSS204	FITTING - PLUG - BRASS - 3/8
10	ST15	SIGHT - TUBE - 3/8 ID 14 3/4IN
11	CSS21	SNAP GRIP HOSE CLAMP SIZE D
12	MFILT	MUSHROOM FILTER
13	CSS205	WASHER - EXT TOOTH LOCK - ZINC - 9/16
14	CSS158	90 DEG BRASS 3/8 NPT X 1/2 HOSE
15	SUBSS4	4 IN SNAP AND STRAP
16	SUBSS6	6 IN SNAP AND STRAP
17	HWM003	CABLE CLAMP 7/16 BLACK
18	CSS11	NO 10 X 3/4 SELF DRILLING

5.3 AC Switch Plate Assembly

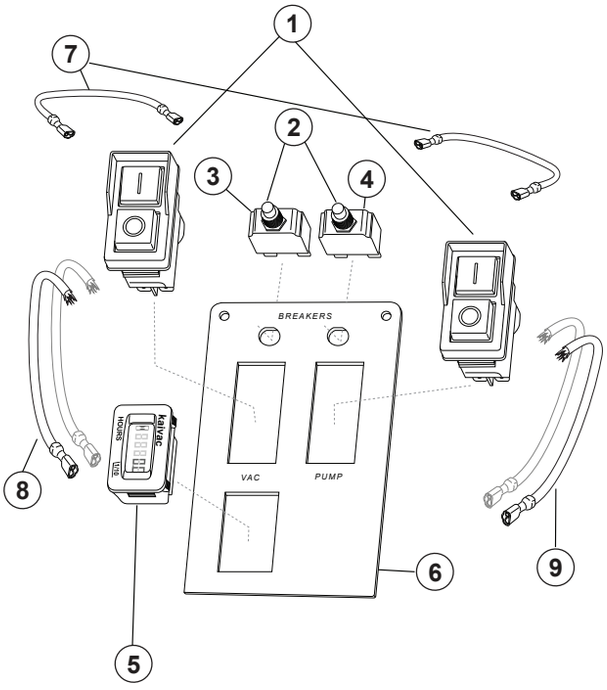
[P/N: SWPACC3]

#	PART NO.	PART DESCRIPTION
1	SWPCC3	SWITCH PANEL 2 SWITCH 1 HR METER
2	15ACBS	15 AMP VAC CIRCUIT BREAKER SWITCH
3	CSS123	QUICK CONNECT PIGGY BACK TERM
4	5ACBS	5 AMP PUMP CIRCUIT BREAKER SWITCH
5	HMETER	HOUR METER
6	JWB5	JUMPER WIRE BLACK 5 IN
7	JWW	JUMPER WIRE WHITE 12 IN



5.4 DC Switch Plate Assembly

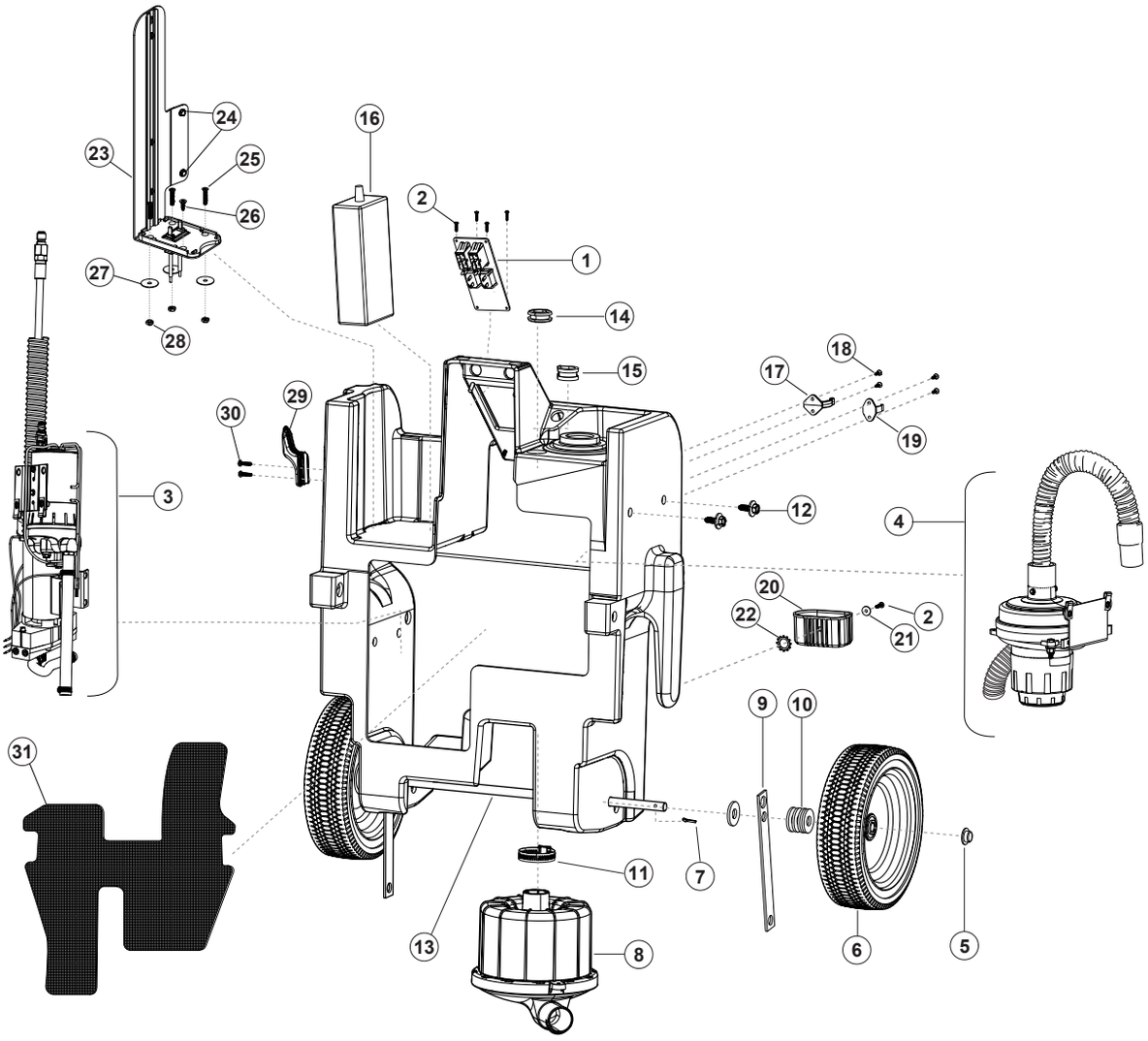
[P/N: SWPACC2]



#	PART NO.	PART DESCRIPTION
1	18AEMS2	18A ELECTROMAGNETIC SWITCH HEAVY DUTY
2	UBBC	UNIVERSAL BREAKER BUTTON COVER
3	20ACBB	20A CIRCUIT BREAKER BUTTON
4	3ACBB	3A CIRCUIT BREAKER BUTTON
5	HMETER	SNAP IN DIGITAL HOUR METER
6	SWPCC2	SWITCH PANEL RAW
7	JWR5	12 GA. JUMPER WIRE RED 5 IN
8	JWB12	JUMPER WIRE BLACK 1/4 F TO BARE
9	JWR12	JUMPER WIRE RED 1/4 F TO BARE

5.5 DC Battery Black Box Assembly

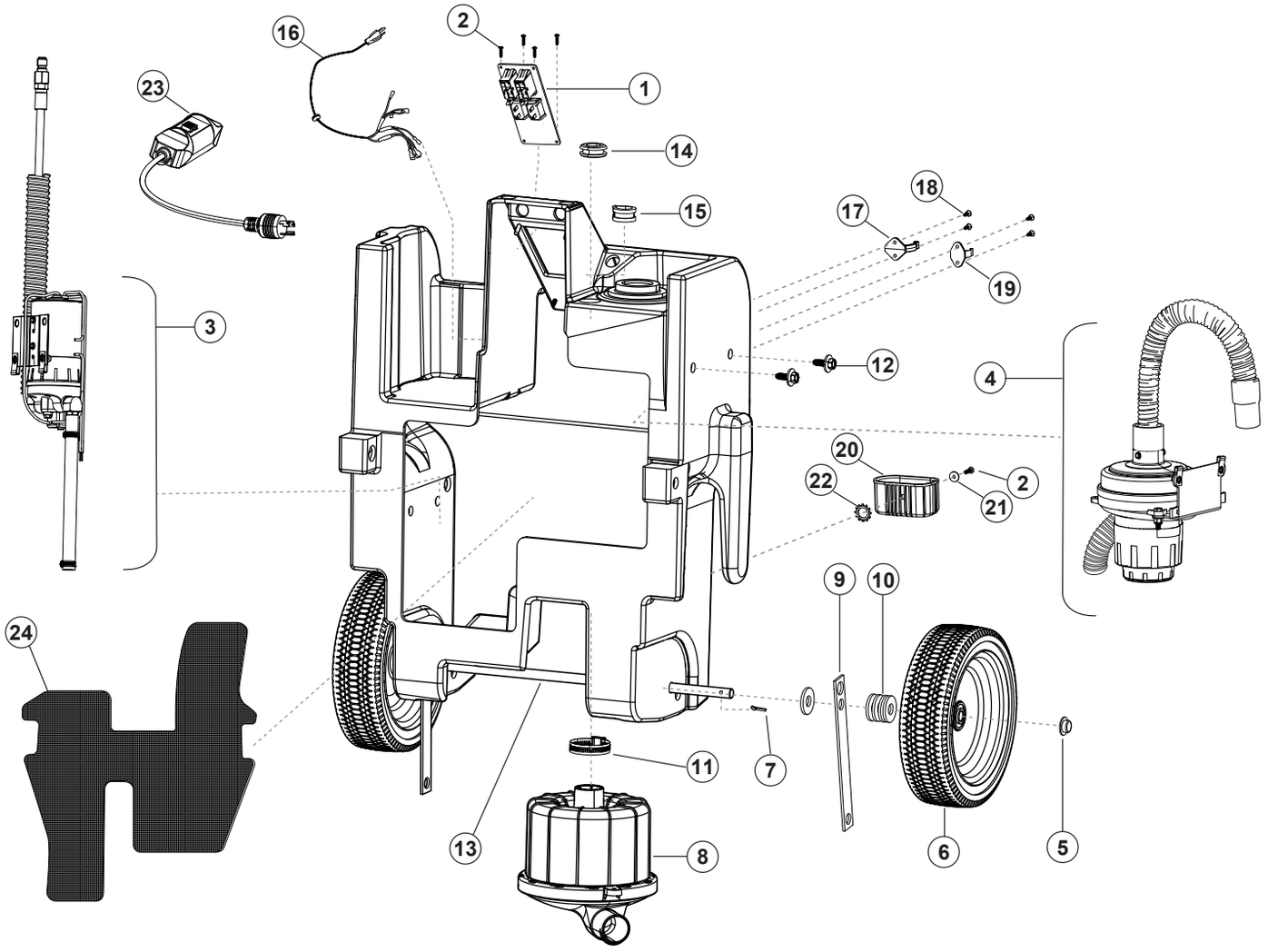
[P/N: BRCC01]



#	PART NO.	PART DESCRIPTION
1	SWPACC2	SWITCH PANEL ASSEMBLY
2	CSS17A	#8 SST SCREW 3/4
3	PM1D02	PUMP ASSEMBLY 36VDC ETL
4	VM3D09	VAC MOTOR ASSEMBLY 36VDC ETL - VMA1700BE
5	CSS01	1/2 IN PUSH CAP NUT
6	WHEEL8B	FLAT FREE TIRE 8 IN 1/2 HUB
7	CSS72	COTTER PIN 1/8 DIA X 11/4 LG
8	HEPAHA2	HEPA HOUSING ASSEMBLY
9	AXSTRAP	AXLE STRAP
10	CSS40	WASHER - FLAT - ZINC - 1/2
11	CSS39	CLAMP - HOSE - WORM - 1 1/16
12	CSS07	BOLT - MACHINE - HEX - FLANGED - BLACK OXIDE - 5/16
13	AX205	AXLE - 1/2 X 20.5 STAINLESS STEEL
14	CSS175	HARDWARE - GROMMET - BUNA
15	CSS130	CLAMP - VIBRATION DAMPING LOOP - 7/8
16	EACG00	CHARGER - INPUT 100-240VAC OUTPUT 42VDC 4A
17	CSS14	CLAMP - TOOL - 1 3/8 - 1 5/8
18	CSS17	SCREW - TAPPING - SQUARE - FLAT - ZINC - NO. 8
19	CSS15	CLAMP - TOOL - 7/8 - 1 1/8
20	WDVTC	TOOL TRAY - CUP OMNIFLEX
21	CSS373	WASHER - FLAT - 18-8 SST - NO. 6
22	CSS205	WASHER - EXT TOOTH LOCK - ZINC - 9/16
23	QCINT2A	QUICK CHANGE INTERFACE - 36VDC GEN 2 METAL
24	CSS11	SCREW - DRILLING - HEX - FLANGED - ZINC - NO. 10
25	CSS380	SCREW - MACHINE - PHILLIPS - FLAT - 18-8 SST - 10-24
26	CSS375	SCREW - TAPPING - PHILLIPS - FLAT - 18-8 SST - NO. 10
27	CSS95	WASHER - FLAT - 18-8 SST - NO. 10
28	CSS74	NUT - HEX - 18-8 SST
29	GP0010	GEN 2 CORD WRAP CLEAT
30	CSS17A	#8 SST SCREW 3/4
31	SPLATE17	GENERAL - RAW - PLATE - BACK 17001 & 27001

5.6 AC Corded Black Box Assembly

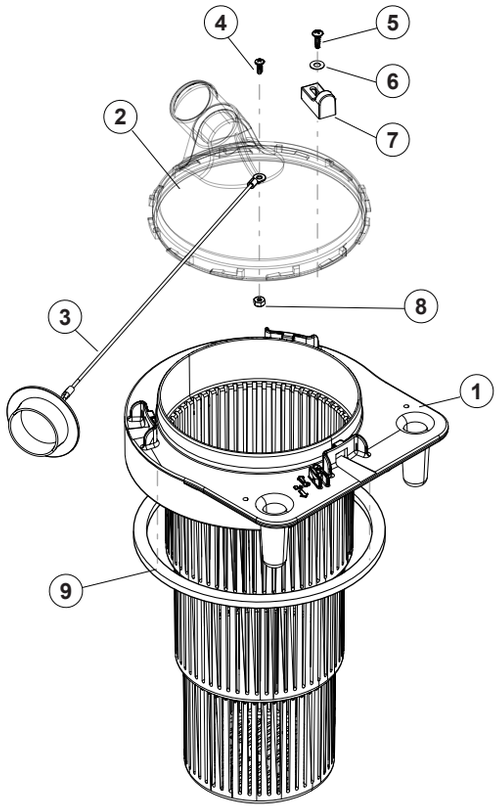
[P/N: BBACCMRE, BBACCM240VIR]



#	PART NO.	PART DESCRIPTION
1	SWPACC3	SWITCH PANEL ASSEMBLY
2	CSS17A	#8 SST SCREW 3/4
3A	PA1710W2E	PUMP ASSEMBLY 120VAC ETL
3B	PA1710W2240V	PUMP ASSEMBLY 240VAC INTL.
4A	VM1A01	VAC MOTOR ASSEMBLY 120VAC ETL - VMA1700E
4B	VM2A01	VAC MOTOR ASSEMBLY 240VAC - VMASM240V INTL.
5	CSS01	1/2 IN PUSH CAP NUT
6	WHEEL8B	FLAT FREE TIRE 8 IN 1/2 HUB
7	CSS72	COTTER PIN 1/8 DIA X 11/4 LG
8	HEPAHA2	HEPA HOUSING ASSEMBLY
9	AXSTRAP	AXLE STRAP
10	CSS40	WASHER - FLAT - ZINC - 1/2
11	CSS39	CLAMP - HOSE - WORM - 1 1/16
12	CSS07	BOLT - MACHINE - HEX - FLANGED - BLACK OXIDE - 5/16
13	AX205	AXLE - 1/2 X 20.5 STAINLESS STEEL
14	CSS175	HARDWARE - GROMMET - BUNA
15	CSS130	CLAMP - VIBRATION DAMPING LOOP - 7/8
16A	PCKV1A	POWER CORD MOLDED W/ GROMMET
16B	PCKV1TA	POWER CORD MOLDED W/ GROMMET W/ ETL TWIST LOCK
17	CSS14	CLAMP - TOOL - 1 3/8 - 1 5/8
18	CSS17	SCREW - TAPPING - SQUARE - FLAT - ZINC - NO. 8
19	CSS15	CLAMP - TOOL - 7/8 - 1 1/8
20	WDVTC	TOOL TRAY - CUP OMNIFLEX
21	CSS373	WASHER - FLAT - 18-8 SST - NO. 6
22	CSS205	WASHER - EXT TOOTH LOCK - ZINC - 9/16
23*	CES20I	POWER CORD - RCD - 50FT 3 CONDUCTOR YELLOW - W/INTL TWIST-LOCK
24	SPLATE17	GENERAL - RAW - PLATE - BACK 17001 & 27001

* International units only.

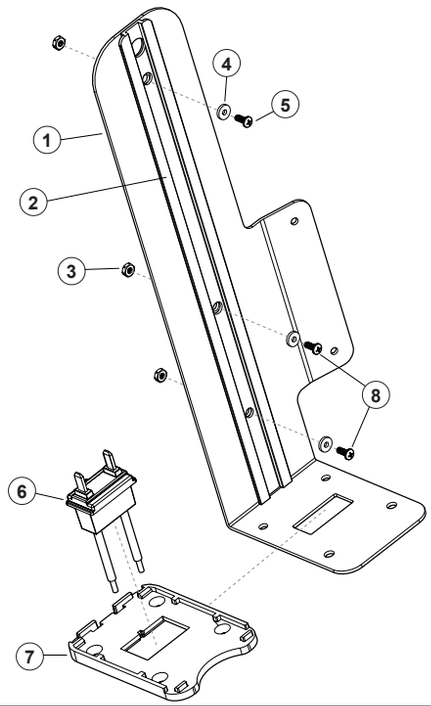
5.7 Debris Filter Assembly



[P/N: DFILTA]

#	PART NO.	PART DESCRIPTION
1	DFILT	FILTER - DEBRIS - RAW - BODY
2	HCOVERC	FILTER - DEBRIS - RAW - COVER CLEAR
3	DFT	ASSEMBLY - CAP & TETHER
4	CSS183	SCREW - MACHINE - PHILLIPS - PAN - 18-8 SST
5	CSS383	PHILLIPS - PAN - 18-8 SST - NO. 10
6	CSS382	WASHER - FLAT - 316 SST - NO. 10
7	DFILTSL	DEBRIS - RAW - SLIDE LOCK
8	CSS374	NUT - HEX - LOCKING - 18-8 SST
9	HWM001	GASKET - ROUND

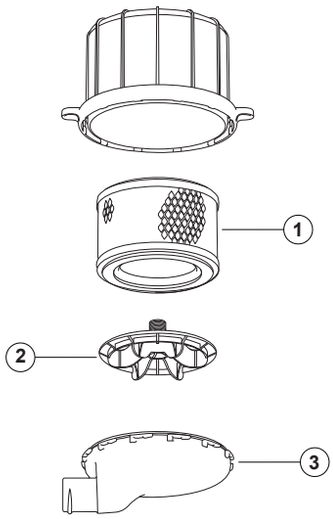
5.8 Battery Interface Assembly



[P/N: QCINT2A]

#	PART NO.	PART DESCRIPTION
1	NTCPPBRAK	NTC POWER PACK BRACKET
2	BINTRAIL	BATTERY INTERFACE GUIDE RAIL
3	CSS184	NUT - HEX - 18-8 SST
4	CSS109	WASHER - FLAT - 18-8 SST - 1/8
5	HWS001	SCREW - MACHINE - PHILLIPS - PAN - 18-8 SST
6	BINTPLUG	BATTERY INTERFACE WIRE HARNESS & PLUG
7	BINTBASE	BATTERY INTERFACE PLUG BASE
8	CSS183	SCREW - MACHINE - PHILLIPS - PAN - 18-8 SST

5.9 HEPA Assembly

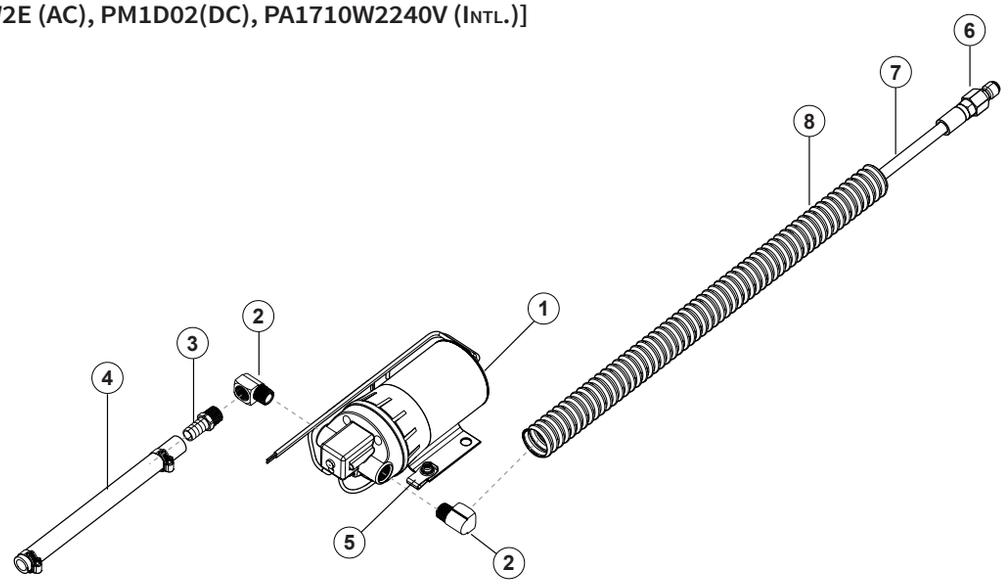


[P/N: HEPAHA2]

#	PART NO.	PART DESCRIPTION
1	HEPA	HEPA FILTER
2	FKEEP2	HEPA FILTER KEEPER
3	HCOVER	HEPA COVER

5.10 Cooler Cleaner Pump Assembly

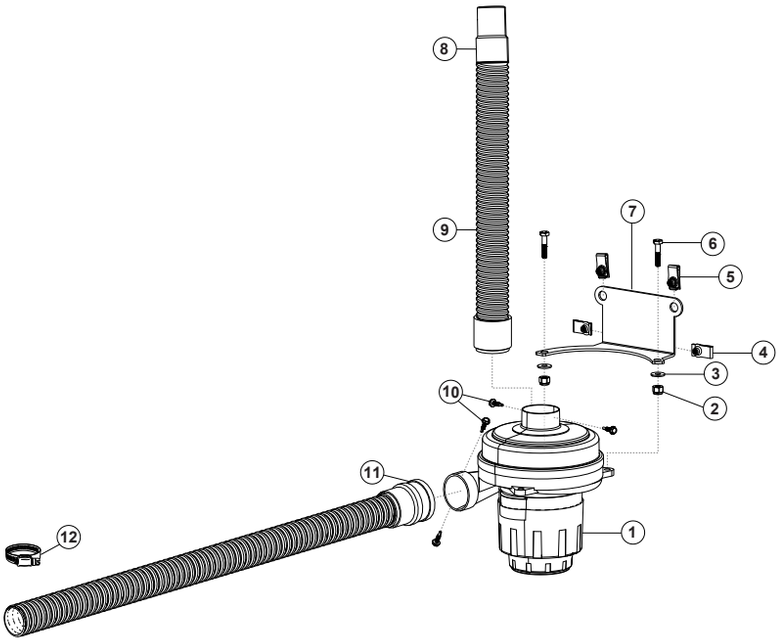
[P/N: PA1710W2E (AC), PM1D02(DC), PA1710W2240V (Intl.)]



#	PART NO.	PART DESCRIPTION
1A	PUMP100C	PUMP 100PSI 36 VDC (DC)
1B	PUMP100B	PUMP 100PSI 115 VAC (AC)
1C	PUMP100D	PUMP 100 PSI 240VAC (INTL.)
2	CPS64	ELBOW 90 - BRASS - 3/8F X 3/8M
3	CPS20	ADAPTER - BRASS - 3/8M X 1/2M BARB
4	WL1750	WATER LINE
5	CSS08	NUT - CLIP ON - BLACK STEEL - 5/16-18
6	CPS38	FITTING - BRASS - 3/8F X 3/8M QD PLUG
7	PHASM	PRESSURE HOSE RAW 500PSI
8	PHG17U	PULSE HOSE GUARD 20 IN.

5.11 Cooler Cleaner DC Vac Motor Assembly

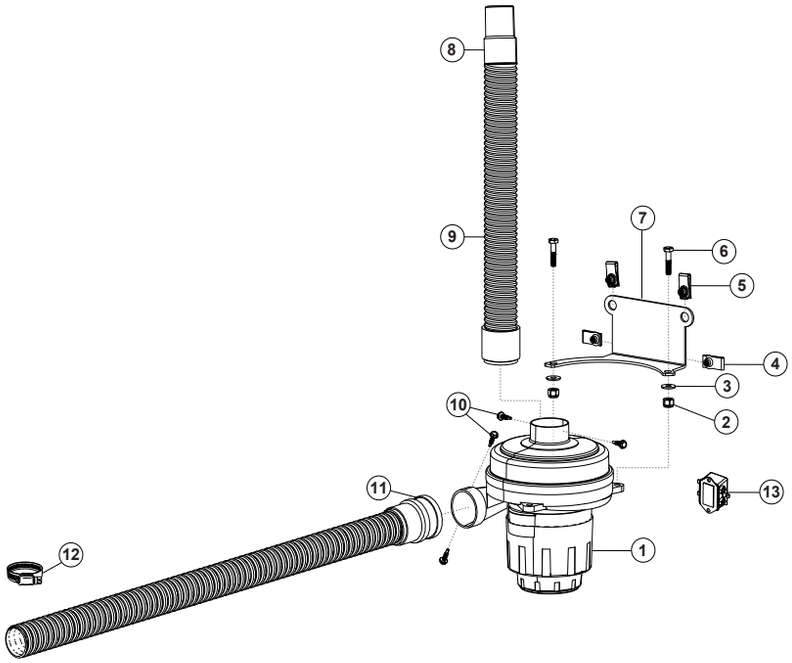
[P/N: VM3D09]



#	PART NO.	PART DESCRIPTION
1	CVM36V	2 STAGE VAC MOTOR 36VDC
2	CSS27	NUT - HEX - LOCKING - ZINC - 1/4-20
3	CSS44	WASHER - FLAT - ZINC - 1/4 - .313ID X .750OD
4	CSS153	NUT - CLIP ON - BLACK STEEL - 1/4-20
5	CSS08	NUT - CLIP ON - BLACK STEEL - 5/16-18
6	CSS203	BOLT - MACHINE - HEX - ZINC - 1/4-20 X 1 1/4IN
7	VBRAK4	BRACKET - VAC MOTOR - 1700 2700
8	CVS08A	CUFF - RIGID 1 1/2 BLACK
9	VMH27A	VAC MOTOR HOSE - RAW - INTAKE 28IN 1700 17001
10	CSS11	SCREW - DRILLING - HEX - FLANGED - ZINC - NO. 10 X 3/4IN
11	VEH19	VAC MOTOR HOSE - RAW - EXHAUST 18 1/4IN 1700 17001 2100 27001
12	CSS39	1 1/16 - 2 WORM HOSE CLAMP

5.12 Cooler Cleaner AC Vac Motor Assembly

[P/N: VM1A01, VM2A01 (Intl.)]



#	PART NO.	PART DESCRIPTION
1A	HEVM1	HIGH EFFICIENCY 120V VAC MOTOR
1B	HEVM1240V	HIGH EFFICIENCY VAC MOTOR 240V (INTL)
2	CSS27	NUT - HEX - LOCKING - ZINC - 1/4-20
3	CSS44	WASHER - FLAT - ZINC - 1/4 - .313ID X .750OD
4	CSS153	NUT - CLIP ON - BLACK STEEL - 1/4-20
5	CSS08	NUT - CLIP ON - BLACK STEEL - 5/16-18
6	CSS203	BOLT - MACHINE - HEX - ZINC - 1/4-20 X 1 1/4IN
7	VBRAK4	BRACKET - VAC MOTOR - 1700 2700
8	CVS08A	CUFF - RIGID 1 1/2 BLACK
9	VMH27A	VAC MOTOR HOSE - RAW - INTAKE 28IN 1700 17001
10	CSS11	SCREW - DRILLING - HEX - FLANGED - ZINC - NO. 10 X 3/4IN
11	VEH19	VAC MOTOR HOSE - RAW - EXHAUST 18 1/4IN 1700 17001 2100 27001
12	CSS39	1 1/16 - 2 WORM HOSE CLAMP
13*	CSS135	AC/DC EMC/RFI FILTER (INTL)

* 240V Vac Motors Only