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# OPERATOR & PARTS MANUAL

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ТМ

kaivac cleaning systems

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### **REVISION SHEET**

Release No.	Date	Revision Description

NOTE: Specifications and parts are subject to change without notice

**Kaivac, Inc.** 401 S. Third Street Hamilton, OH 45011

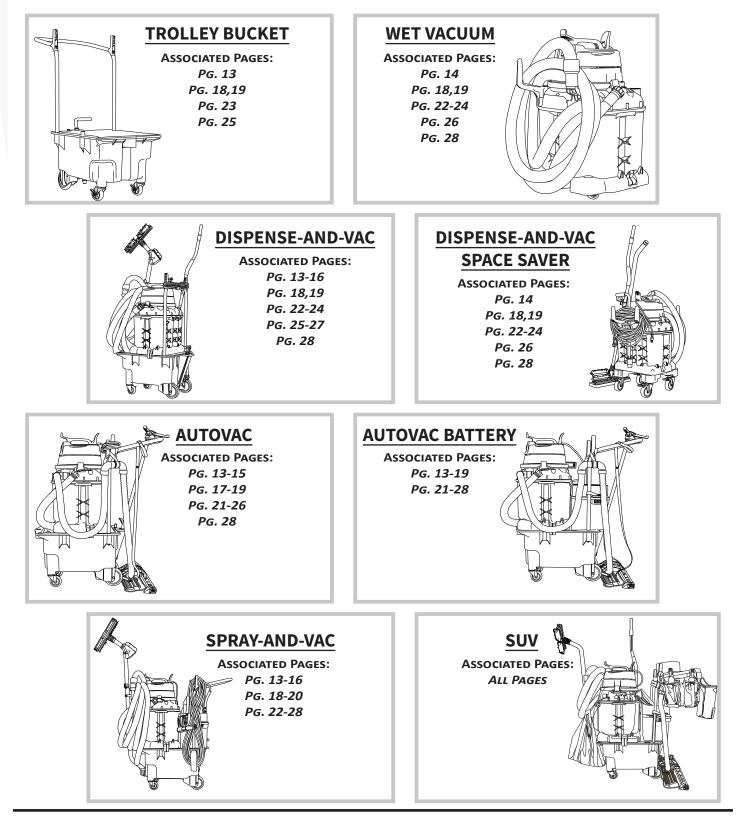
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#### **1.1 PRODUCT IDENTIFICATION**

Identify your system below to see the correct manual pages for your product.



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### **1.2 LIMITED WARRANTY PROTECTION PLAN**

5 YEAR TROLLEY/TANK AND 1 YEAR PARTS AND LABOR (EXCLUDING BATTERY) Kaivac warrants to the original purchaser/user that the vacuum tank and bucket body are free from defects in workmanship and materials under normal use for a period of Five Years, and the battery box body and components (excluding Lithium-ion battery), vacuum motor, and spray system are free from defects in workmanship and materials under normal use for a period of One Year. This warranty does not include accessories or wear items. Items EXCLUDED from coverage: Squeegee blades and wheels, hoses, seals, gaskets, cords, casters, HEPA filter cartridges, chemical feed caps, spray gun, GFCI, vacuum wand assembly and other accessory tools.

• *Please Note:* using inappropriate chemicals constitutes misuse of these machines. These machines are not meant to be used with high-foaming or corrosive chemicals. Please check with your distributor or with Kaivac if you have questions about your chemical.

<u>PRORATED BATTERY</u> – Kaivac provides this limited prorated warranty to the original purchaser/user for the battery, subject to the following restrictions:

- Kaivac warrants the battery against defects in workmanship and materials under normal use for the first 50 hours of use and will replace at no charge if a manufacturing defect occurs.
- After the first 50 hours of use of an OmniFlex battery, Kaivac will use the following equation to determine the prorated purchase price of a replacement battery box:

#### Battery Hour Meter Hours 300 hours **X** Battery Box List Price

• This prorated battery warranty does not apply if the battery has more than 300 hours of use or is more than 2 years past the date of purchase.

#### 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 OmniFlex battery box
  - Exposure to temperatures above the battery limits
  - Use of any charger besides the supplied OminFlex 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.

### **1.3 WARRANTY REGISTRATION FORM**

To be completed and mailed or faxed by the customer purchasing equipment. Return this warranty card within ten days of purchase.

Purchased By:	
Name:	Title:
Company:	
Street Address:	
City:Stat	e:Zip Code:
Phone Number:	FAX:
Date Purchased:// Where Purcha	ased:
I would like to receive updated information via email	YesNo
Email Address:	
OmniFlex	No-Touch Cleaning
OmniFlex Trolley-Bucket	□ KV1250
OmniFlex Wet Vacuum	□ KV1750
OmniFlex Dispense-and-Vac	□ KV2150
AutoVac	
AutoVac Battery	
OmniFlex Spray-and-Vac	
Serial Number (1):	Serial Number (2):
	for our warranty program.
Kaiva 401 S. Th Hamilton,	npleted forms to: c, Inc. ird Street OH 45011 L3) 896-8548
Page   7	www.kaivac.com

1-800-287-1136

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## 1.4 SAFETY PRECAUTIONS: CORDED UNITS ONLY

#### IMPORTANT SAFETY INSTRUCTIONS — SAVE THESE INSTRUCTIONS READ ALL INSTRUCTIONS BEFORE USING (THIS APPLIANCE)

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

#### **WARNING:** To reduce the risk of fire, electric shock, or injury:

- Turn off the unit before unplugging. Do not leave appliance when plugged in. Unplug from outlet when not in use and before servicing.
- Connect to a properly grounded outlet only. Do not remove ground pin. See Grounding Instructions below.
- Do not allow to be used as a toy. Close attention is necessary when used by or near children.
- Use only as described in this manual. Use only manufacturer's recommended attachments.
- Inspect cord prior to use. Do not use with damaged cord or plug. If appliance is not working as it should, has been dropped, damaged, left outdoors or dropped into water, return it to a service center.
- Do not handle plug or appliance 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 appliance over cord. Keep cord away from heated surfaces.
- Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
- Do not put any object into openings. Do not use with any opening blocked; keep free of dust, lint, hair, and anything that may reduce air flow.
- Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts. Turn off all controls before unplugging.
- Use extra care when cleaning on stairs.
- Do not use to pick up flammable or combustible liquids such as gasoline, or use in areas where they may be present.
- Do not pick up anything that is burning or smoking, such as cigarettes, matches or hot ashes.
- If using extension cord with appliance, make sure the connection is above the floor and away from exposure to liquid.
- Keep all connections dry and off the ground.
- To reduce the risk of injury, close supervision is necessary when a product is used near children.
- Stay alert watch what you are doing.
- Keep operating area clear of all persons.
- The Kaivac shall be disconnected from mains during cleaning or maintenance and when replacing parts or converting the machine to another function.
- Turn off all controls before unplugging.
- DO NOT overreach or stand on unstable support. Keep good footing and balance at all times.
- DO NOT operate without the float installed. If float is removed, reinstall by screwing back into place.
- Keep the cord away from heated surfaces.
- DO NOT leave appliance when plugged in. Unplug from outlet when not in use and before servicing.
- To Reduce The Risk Of Electric Shock Do not expose to rain. Store indoors.
- DO NOT use without dust bag and/or 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 appliance.
- This product comes with a grounded attachable extension cord. If damaged, replace with equivalent cord. This cord must be attached and mechanically secured using the provided cord connector to use the equipment.
- **WARNING** Improper connection of the equipment-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 appliance – if it will not fit the outlet; have a proper outlet installed by a qualified electrician.
- DO NOT operate the product when fatigued or under the influence of alcohol or drugs.
- Know how to stop the product and bleed pressures quickly. Be thoroughly familiar with the controls.
- Follow the maintenance instructions specified in the manual.

### 1.4 SAFETY PRECAUTIONS: CORDED (CONTINUED)

#### SPRAY SYSTEM WARNINGS (ONLY):

- Do not spray liquid from the Kaivac onto electrical outlets or any electrical devices.
- Risk of injection or injury to persons do not direct discharge stream at persons.
- INJECTION HAZARD: Equipment can cause serious injury if the spray permeates the skin. do not point the gun at anyone or any part of the body. in case of permeation, seek medical aid immediately.
- This system 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 shall not be used by children, persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge or untrained personnel. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
- This product 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.
- Test the ground fault circuit interrupter (GFCI) before each use.

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

This machine was supplied with a ground-fault circuit-interrupter(GFCI) built into the plug of the power-supply cord. This 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.

This appliance 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 appliance.

#### **GROUNDING INSTRUCTIONS**

This product 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 product is equipped with a cord having an equipment-ground-ing 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 does and ordinances.

#### FOR INDOOR USE ONLY

INTENDED FOR COMMERCIAL USE

WARNING — To Reduce the Risk of Electric Shock — Do not expose to rain. Store indoors.

### 1.5 SAFETY PRECAUTIONS: BATTERY OPERATED UNITS ONLY

#### IMPORTANT SAFETY INSTRUCTIONS — SAVE THESE INSTRUCTIONS READ ALL INSTRUCTIONS BEFORE USING (THIS APPLIANCE)

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

#### **WARNING:** To reduce the risk of fire, electric shock, or injury:

- Battery Box Securing Straps MUST be secured around handle and attached from Vacuum prior to use. Failure to do so can result in product damage.
- ONLY USE with Kaivac, Inc. battery, OBATT series, and charger, CHARG36V series.
- When charging, make sure charger has at least 6 inches of clearance on all sides for adequate air flow.
- DO NOT charge batteries outdoors.
- DO NOT attempt to repair, service or modify the batteries or charger. Contact Kaivac Technical Support with any issues.
- DO NOT short-circuit the battery or charger terminals with conductive items such as paper clips. This can deliver high current, resulting in hear and fire.
- Keep sparks and flames away from batteries.
- DO NOT crush, drop, incinerate or damage the Battery Box. Do NOT use a Battery Box that has been damaged in any way. DO NOT incinerate the battery even if it is non-working or severely damaged. The battery can explode in a fire.
- DO NOT expose a Battery pack or appliance to fire or excessiver temperature. Exposure to fire or temperature above 265°F (130°C) may cause explosion.
- DO NOT use or store the OmniFlex System or Battery Box in wet or moist conditions, or near flammable or combustible materials.
- DO NOT charge or store Battery Box for extended time (1 month or more) in temperatures below 40°F (4°C).
- If fumes smelled from battery, discontinue use immediately, place inside a metal canister in a well-ventilated area.
- Prevent unintentional starting. Ensure the switch is in the off-position before connecting to battery pack, picking up or carrying the appliance. Carrying the appliance with your finger on the switch, or energizing an appliance that has the switch on invites accidents.
- Disconnect the battery pack from the appliance before making any adjustments, changing accessories, or storing appliance. Such preventive safety measures reduce the risk of starting the appliance accidentally.
- When battery pack 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. Shorting the battery terminals together may cause burns or a fire.
- Under abusive conditions, 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.
- Do not use a battery pack or appliance that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.

#### Charger/Electrical Warnings:

- For commercial or residential use.
- Connect charging cord to a properly grounded outlet only. See Grounding Instructions.
- DO NOT plug in Charger while Vacuum Head is in ON position. It may damage the system.
- Follow all charging instructions and do not charge the battery pack or appliance 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.
- DO NOT leave charger plugged in when not in use.
- DO NOT operate charger if it has received a sharp blow, been dropped, or damaged in any way.
- DO NOT use charger if it has a damaged cord or plug. DO NOT carry charger by cord.
- DO NOT pull on charger cord to unplug. Grasp and pull the plug, not the cord.
- 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.

#### Vacuum and operation warnings:

- NO COMBUSTIBLES! Sparks inside the motor can ignite flammable vapors or dust. Do not use near combustible liquids and
  gases, or to pick up explosive dusts or gasoline. Do not pick up anything that is burning or smoking such as cigarettes or hot
  ashes.
- DO NOT plug Battery in while Vacuum Motor is in ON position. It may damage the system.

#### 1.5 SAFETY PRECAUTIONS: BATTERY OPERATED (CONTINUED)

- CHECK FLOAT on Vacuum Motor and clean before each use. Clogged screen may lead to loss of suction.
- DO NOT allow to be used as a toy. Close attention is necessary when used by or near children.
- Use only as described in this manual. Use only manufacturer's recommended attachments.
- DO NOT put any object into openings. Do not use with any opening blocked; keep free of dust, lint, hair and anything that may reduce air flow.
- Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts.
- Use extra care when cleaning on stairs.
- DO NOT use without Vacuum Motor Float Cage in place.

#### SPRAY SYSTEM WARNINGS (ONLY):

- Do not spray liquid from the Kaivac onto electrical outlets or any electrical devices.
- Risk of injection or injury to persons do not direct discharge stream at persons.
- INJECTION HAZARD: Equipment can cause serious injury if the spray permeates the skin. do not point the gun at anyone or any part of the body. in case of permeation, seek medical aid immediately.
- This system 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 shall not be used by children, persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge or untrained personnel. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by chilcren without supervision.

This product comes with a grounded attachable extension cord. If damaged, replace with 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 equipment.

#### **QUICK RELEASE INSTRUCTIONS**

- 1. To diconnect the motor from the Battery Pack, pull the button on the electrical connector toward you and turn the electrical connector counter-clockwise 90 degrees to disengage the motor electrical cord from the Battery Pack.
- 2. Then to remove the Battery Pack from the OmniFlex unit, detach the straps which wrap around the metal handle. Then while standing at the rear of the OmniFlex, grab the Battery Pack on either side and pull it away from the OmniFlex unit.
- 3. To reconnect the Battery Pack to the electrical motor, insert the motor electrical connector into the Battery Pack outlet aligning the key features of the electrical connector into the outlet keyway. Press the connector into the outlet and turn clockwise 90 degrees until the connector locks into place.

#### **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 appliance 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.

WARNING — Improper connection of the equipment-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 appliance – if it will not fit the outlet; have a proper outlet installed by a qualified electrician.

This appliance 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 appliance.

**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 appliance.

#### WARNING — To Reduce the Risk of Electric Shock — Do not expose to rain. Store indoors.

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# **1.6 BATTERY INFORMATION**

**Keep Batteries at Room Temperature:** That means storing between 32 and 80 degrees F (0°C to 27°C). The worst thing that can happen to a lithium-ion Battery is to have it exposed to elevated temperatures. Heat is by far the largest factor when it comes to reducing Battery life.

**Batteries Lose Capacity Over Time:** Batteries naturally deteriorate over time whether being used or not. Batteries deteriorate at a rate of 10% run time per year. You can expect to get 80 to 90 minutes of run time the first year and during the second year you will get approximately 71 to 81 minutes of run time.

**Fully Discharge vs. Partial Discharge and the Effect on Battery Cycles:** Unlike lead acid batteries typically used in auto scrubber, the Kaivac Battery is not damaged by fully discharging. The BMS (Battery Management System) has a cutoff voltage of 30V which protects the Battery from experiencing full discharge. Running the Battery to full discharge will reduce the amount of charge cycles. The expected hours of use are approximately 600 hours. For example, if running to full discharge, you would expect 400 cycles. If you run to 80% discharge, then you would expect to get more cycles (500 cycles).

**Extended Storage:** It is recommended to discharge to 40% capacity (35V) and store in a cool location (between 32°F to 80°F or 0°C to 27°C). **Hour Meter:** The hour meter is like an odometer on a car. It only runs when the Battery is discharging or running the motor. Therefore, it displays the number of hours that the Battery has run. Each 0.1 reading on the hour meter equates to 6 minutes of run time. A normal Battery should provide 540 to 600 hours of run time.

Battery Gauge: The Kaivac Batteries come with a built-in Battery Gauge or "Fuel Gauge" which shows the approximate run time remaining.

Average Sq-Ft per Run Time: 40,000 - 55,000 sq.ft. depending on cleaning area.

Average Cleaning Rate: 20,000 sq.ft/gal.

Average Water Usage: 1,000 sq.ft/gal.

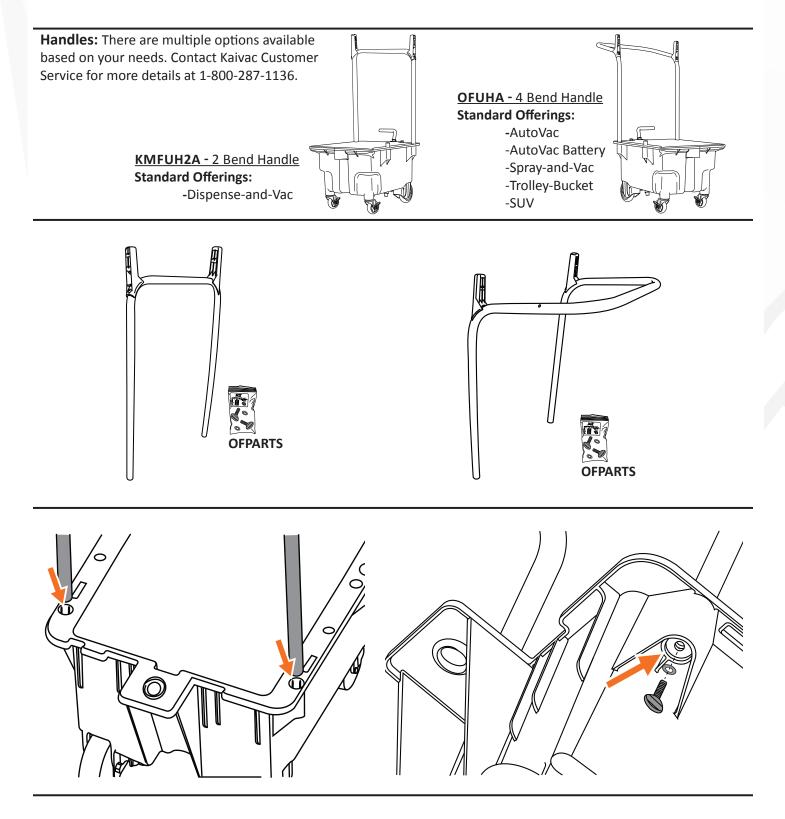
Disposal: Properly dispose of Battery at a local recycling location.

Battery Box Specifications					
Weight	16.8 lbs. (7,6 kg)				
Body Material	Injection Mold Polypropylene				
Dimensions (H x W x D)	13.5 x 19.5 x 10 in. (34,3 x 49,5 x 25,4 cm)				
Voltage	36V DC				
Battery Capacity	20 A-hr				
Battery Current	15 A DC				
Battery Type	Lithium-Ion				
Approx. Run Time BOL (Beginning of Life)	75 to 85 minutes				
Approx. Run Time EOL (End of Life)	50 minutes (discontinue use and take to recycling center)				
Battery Box Receptacle	IP67 w/ cover (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				
Cutof Voltage (fully discharged)	30V				
Charger Specifications					
Approx. Charge Time	5.5 hours				
Charger Amps	5 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	32°F (0°C) to 80°F(27°C)				
Storage & Shipping Charge	40-60% Charge (35-38VDC)				

Customer/Technical Support 1-800-287-1136

2.0 Assembly

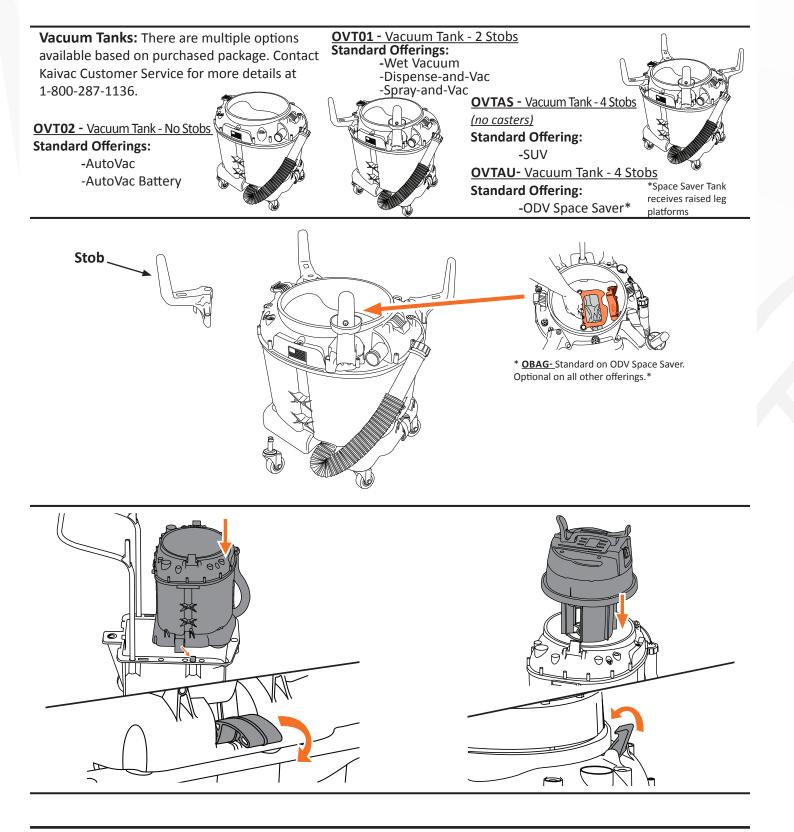
### 2.1 ATTACHING HANDLE TO TROLLEY BUCKET



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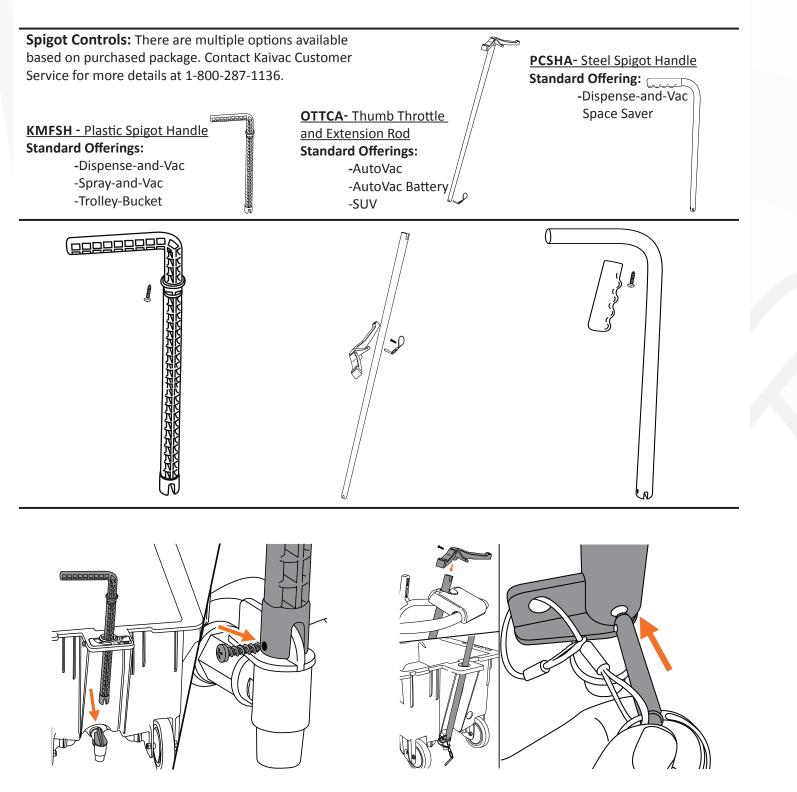
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# 2.2 VACUUM TANK ASSEMBLY



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# 2.3 Spigot/Extension Rod Assembly



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### 2.4 BATTERY BOX/PUMP BOX ASSEMBLY

**Battery/Pump Box:** There are multiple options available based on purchased package. Contact Kaivac Customer Service for more details at 1-800-287-1136.

> \*OBATT - Battery Box Standard Offerings: -Dispense-and-Vac

-AutoVac Battery

-SUV

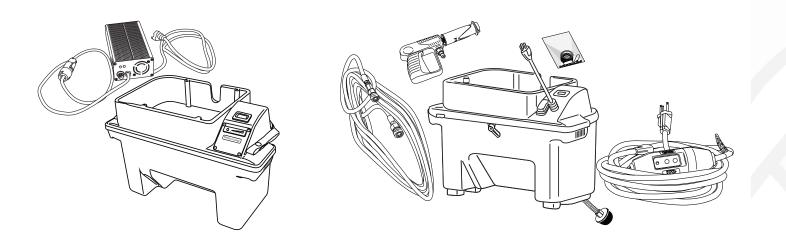
\*See Battery Box Assembly parts diagram on page 27 for full list of part numbers and options depending on location or package.

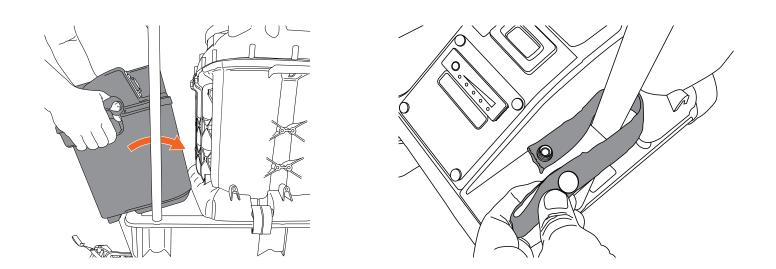
\*\*OSU50 - Pump Box

Standard Offerings: -Spray-and-Vac

-SUV

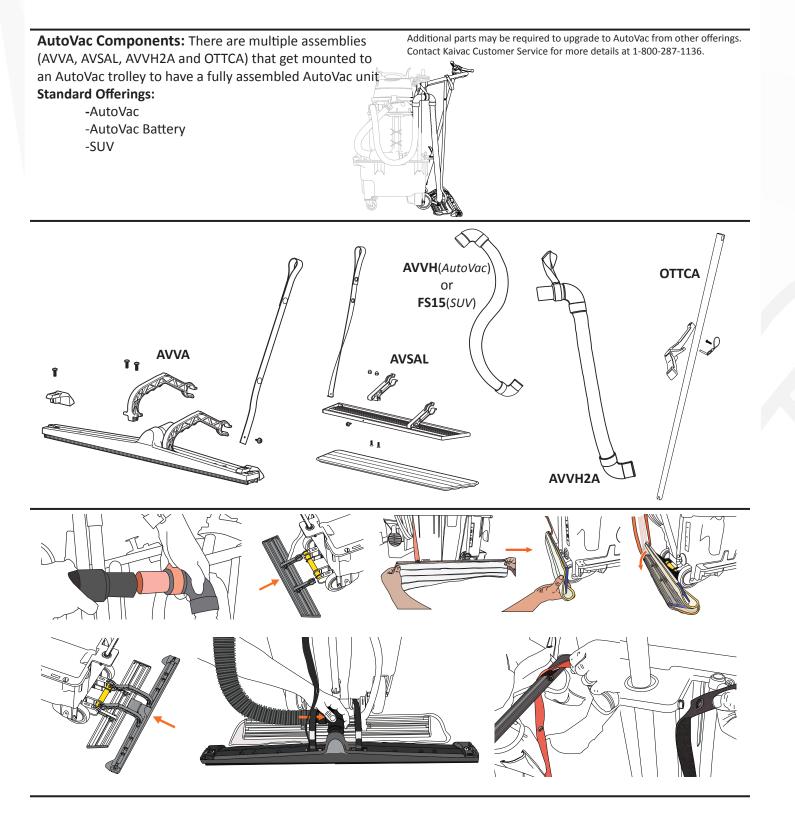
\*\*See Pump Box Assembly parts diagram on page 27 for full list of part numbers and options depending on location or package.





Customer/Technical Support 1-800-287-1136

#### 2.5 AUTOVAC PARTS ASSEMBLY

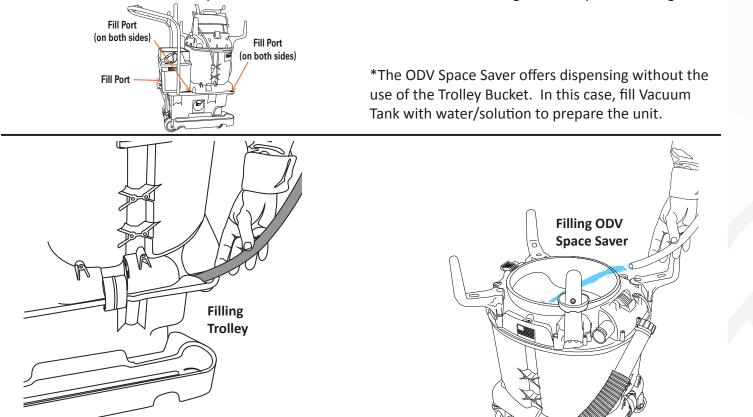


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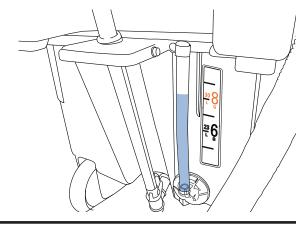
### 3.1 FILLING THE UNIT

For all offerings that make use of the OmniFlex Trolley-Bucket (AutoVac, AutoVac Battery, Dispense-and-Vac, Spray-and-Vac and SUV) there are multiple Fill Ports available to fill the Bucket with a hose or other source. The Fill Port at the rear of the Trolley-Bucket is most convenient to access when using Chemical packets or Jugs.



Note the location of the Sight Gauge on the back of the Trolley-Bucket.

The Trolley-Bucket has a label with graduated markings. Gallon markings are displayed for 5 to 9 gallons. For lesser quantity needs, the bottom of the label represents 4 gallons. For higher volume needs, the top of the label represents 10 gallons. Filling over 10 gallons is not recommended.



<u>CAUTION</u>: Before filling with solution, ensure the spigot is in the "OFF" position.



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. Do not add chemical to Trolley-Bucket if using Pump Box set-up.

TIP: IF A CHEMICAL IS BEING USED, USE ONLY THE RECOMMENDED DILUTION.

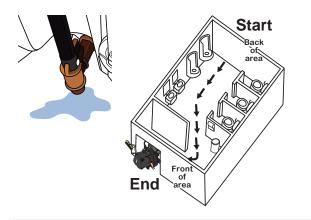
Customer/Technical Support 1-800-287-1136

### 3.2 DISPENSE-AND-VAC OPERATION

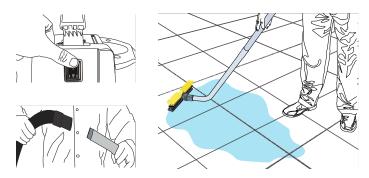
Cleaning with OmniFlex Dispense-and-Vac mode is better, safer and faster than cleaning with a mop. You apply fresh cleaning solution to the floor, spread and lightly brush into grout lines, then vacuum away all soils and liquids.

After the unit has been filled with the appropriate amount of water/solution, turn the Spigot handle counter clockwise to MAX position. Beginning at the rear of the area, begin dispensing solution, moving towards the front of the area.

Beginning at the rear of the area, begin dispensing solution, moving towards the front of the area. Park unit so that it blocks entry to area.



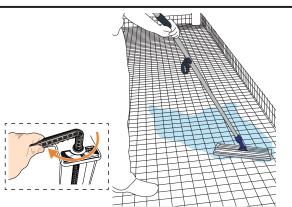
Turn Vacuum Motor to ON. Attach Vacuum Wand to Vacuum Hose (if not already connected).



Vacuum floor surface diagonally to grout lines, reaching under shelves, seating etc.

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Turn Spigot clockwise to the OFF position. Use Spreader Tool in back-and-forth motion to cover floor with cleaning solution. \**Agitate Spreader Tool over troubled or extra soiled areas to get a deeper clean*\*

**Slap & Tap:** Once Vacuuming is complete, keep motor running. Slap Vacuum Wand on floor 3-4 times to dislodge debris from squeegee head. Then, invert Wand and Tap 4-5 times to dislodge any fluids or substance from Wand.



Then Turn OFF Motor.

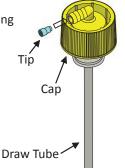
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### 3.3 SPRAY-AND-VAC OPERATION

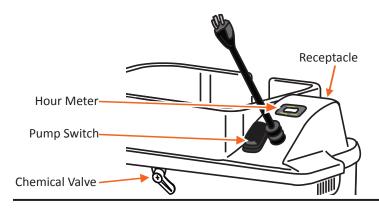
The OmniFlex Spray-and-Vac system combines the 500 psi OmniFlex Pump System with the Wet Vacuum and the Trolley-Bucket for extreme soil removal. It empowers workers to clean hygienically without touching contaminated surfaces.

#### WARNING: DO NOT PUT CHEMICAL IN TROLLEY-BUCKET RESERVOIR WHEN USING PUMP! DOING SO WILL CAUSE PRODUCT DAMAGE.

To prepare the cleaning chemical, make sure the Draw Tube is inserted into the Chemical Jug. Insert the Metering Tip as shown (see Metering Tip Selection Chart on the Metering Tip Bag). Then screw the Chemical Cap onto the Chemical Jug and make sure the clear Chemical Line is connected to the Chemical Cap.

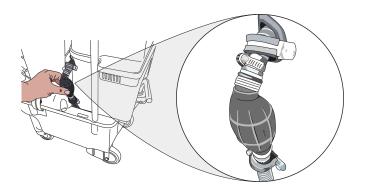


Review Control Panel. Make sure Pump Switch and Chemical Valve are in OFF position prior to plugging in. If using with OmniFlex Vacuum Motor, plug in the Vacuum Cord into control panel Receptacle.



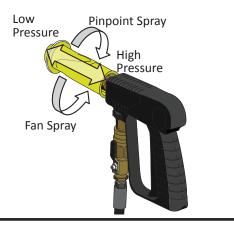


Plug in and press the Black Test button on the GFCI (Ground Fault Circuit Interrupter), then Red Light should turn off. Then press the Red Reset button and Red Light should come on.



**To prime the pump:** Squeeze Brimer Bulb 10 times prior to initial startup, or if pump has been run dry for any length of time.

Operate the Spray Gun as shown. Chemicals applied in the Low Pressure setting only. Chemicals must be cleared from the Spray Line prior to High Pressure rinsing. To do this, turn OFF the Chemical Valve, then spray in Low Pressure settings for 15 seconds.



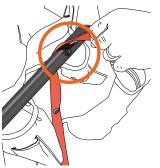
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### 3.4 AUTOVAC OPERATION

The AutoVac feature is a walk-behind system for high speed cleaning of hard surface areas. It cleans as well and as fast as a walk-behind or ride-on auto scrubber at a fraction of the cost.

After the unit has been filled with the appropriate amount of water/solution, ensure that the orange AutoVac Connector on the side of the cart is connected in place.

Lower the Microfiber Pad and Wide-area Squeegee Head by lifting the orange Strap on the rear handle to unsnap it, and lower the pad and Squeegee Head.



To begin cleaning floor area with AutoVac:

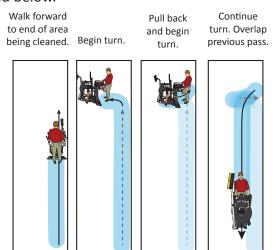


Use Thumb Throttle to dispense solution through the Spigot. Turn dial on Thumb Throttle to #2. Increase if you need to dispense solution at a faster rate.

Reattach with next button snap to hold orange Strap in place.

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Walk back and forth across the area to be cleaned, using a three point turn approach when reaching turns, as detailed below.



TIP: TO USE UP THE SOLUTION IN THE PAD, TURN THE THUMB THROTTLE TO OFF APPROXIMATELY 50' IN ADVANCE OF FINISHING THE FLOOR.

Once complete, lift the orange Strap to raise the Spreader Pad and Squeegee Head and snap into place.



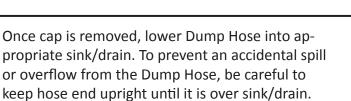
Use included Vacuum Tool to pick up any remaining liquids or drips on the floor.

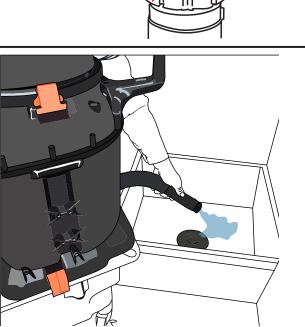
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### 3.5 Emptying Vacuum Tank

If the Vacuum Motor shuts off before the job is complete, the Vacuum Tank may be full and need to be emptied. Lift the Vacuum Motor to check liquid level inside the Vacuum Tank. If unit is full or your job is complete, follow the instructions below to empty Tank into appropriate sink/drain

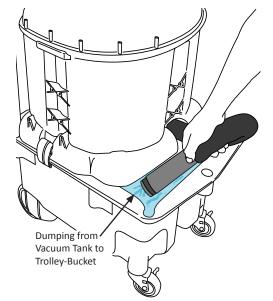
To begin the dumping process, you must first press down on the Cap and turn counter-clockwise





PRESS DOWN

TURN

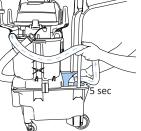


- TIP: With Dispense-and-Vac, you can extend your cleaning range with the following procedure:
- 1. Thoroughly clean Vacuum Tank.
- 2. Fill Vacuum Tank and Trolley-Bucket with diluted cleaning solution.
- 3. Dispense solution onto floor.
- 4. When Trolley-Bucket is out of solution, use Dump Hose to refill Trolley from Vacuum Tank.
- 5. Continue Dispensing.

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## 4.1 DAILY MAINTENANCE: CLEANOUT

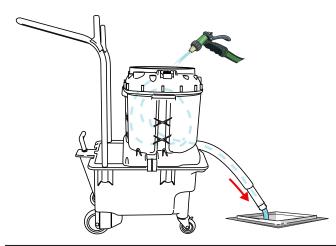
When work is complete, vacuum excess cleaning solution from the bucket for 5 seconds to clean out and degrease the Vacuum Hose.

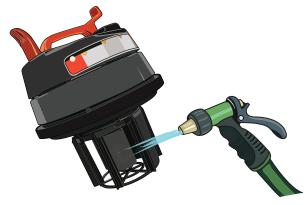


Alternatively, you can also turn Vacuum on and dispense solution into Vacuum Hose as shown to clean Hose and Tank.



Rinse Vacuum Tank thoroughly at clean-up sink, preferably with hot water.

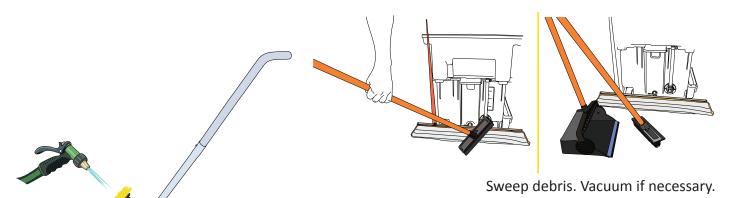




Remove debris from float ball and wire mesh Float Cage housing with hot water.

Rinse the Wand brushes to clear any debris, and wipe dry.

For AutoVac or SUV, scrub debris from Spreader Pad with broom.



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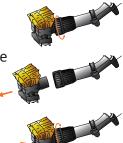
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## 4.2 REPLACEMENT (MONTHLY)

The following tasks should be performed monthly to keep your system operating at peak performance.



Check for worn Squeegee Blades. Worn blades cause streaking and loss of vacuum suction. Unscrew cuff at end of Vacuum Wand, remove old Squeegee Head and replace with new every 6-8 **\*** weeks for optimal performance.



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

### 4.3 **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. For battery units, charge may be too low for heavy soils.
- 6. 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 correct Chemicals.
- 3. Battery may need recharged or replaced.

#### • OTHER ISSUES? CONTACT TECHNICAL SUPPORT

#### PHONE:

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

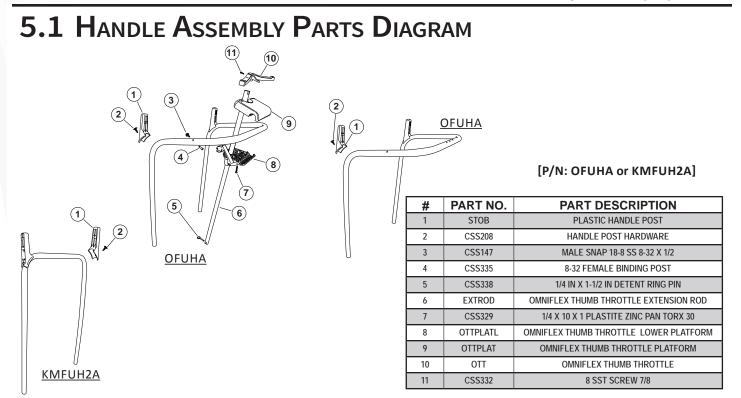
International: 1-513-887-4600

#### EMAIL:

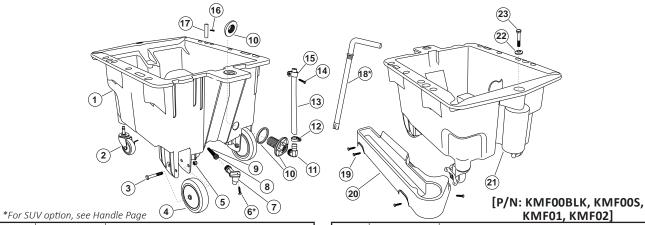
info@kaivac.com

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

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#### 5.2 TROLLEY-BUCKET ASSEMBLY PARTS DIAGRAM



		$\sim$	KMF01, KMF02
	11	CSS333	90 DEG BRASS 1/2 NPT X 1/2 BH
	12	CSS114	NYLON SNAP GRIP CLAMP SIZE F
	13	ST9	SIGHT TUBE 9 INCH
	14	CSS208	8 X 1/2 SS TRUSS SCREW
	15	CPS70	HOSE TIE DOWN, BLACK
	16	CSS17A	8 SST SCREW 3/4
	17	OTP	OMNIFLEX TROLLEY POST .85 DIA X 3.5 LNG
	18	KMFSH	OMNIFLEX SPIGOT HANDLE BLACK
	19	CSS17A	8 SST SCREW 3/4
	20	KF013A	SIDE TRAY FOR KAIMOTION FLEX
	21	KMFCW	KAIMOTION FLEX COUNTERWEIGHT
	22	CSS337	1/2 IN WASHER 1 1/8 IN OD
	23	CSS336	1/2 - 13 X 3/4 HEX CAP SCREW
_			

#	PART NO.	PART DESCRIPTION
1	KMFBLK	OMNIFLEX TROLLEY BLACK
2	KMFCSTR3	LOCKING CASTER
2	OFCSTR	OMNIFLEX 3 IN CASTER NO BRAKE
3	CSS302	3/18 - 16 X 2 3/4 HEX SCREW WHEEL
4	WH5KMF2	5 IN DIA REAR WHEEL
5	CSS311	3/8 - 16 NYLON LOCK NUT
6	CSS214	10 - 14 X 3/4 SCREW FOR SPIGOT
7	KMB20R	OMNIFLEX SPIGOT BROWN PLASTIC
7	KMB20SR	SUV 2 HOLE BROWN PLASTIC SPIGOT ASSEMBLY
8	CPS39V	VITON O-RING
9	CPS07	PLASTIC FINGER FILTER
10	CSS330	1/2 IN GREY BULKHEAD FITTING

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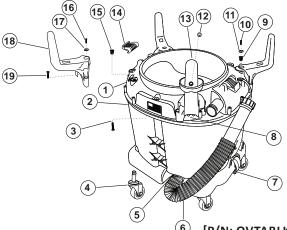
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**5.0** Parts Diagrams and Specifications

#### 5.3 VACUUM HEAD ASSEMBLY PARTS DIAGRAM (2 (14) (15) (3) (13) 4 10 5 (6) 7 A A (8) 9 (10) (11)-(12)

	I <b>J DIA</b> J1, VMUK1, V	MANY MAWDZ, VMAWDZ240V(AUS,EU
<i>,</i> #	PART NO.	PART DESCRIPTION
1	CSS17A	8 SST SCREW 3/4 IN
2	OVMHAN	OMNIFLEX VAC MOTOR HANDLE BLACK
2	OVMHANO	OMNIFLEX VAC MOTOR HANDLE ORANGE
3	ZD10TC	OMNI VAC MOTOR TOP COVER
4	ZD10MC	OMNI VAC MOTOR MIDDLE COVER
5	ZD10MR	OMNI VAC MOTOR MIDDLE RING
5	ZD10MR36	OMNI VAC MOTOR MIDDLE RING — 36V
6	ZD10BC	OMNI VAC MOTOR BOTTOM COVER
7	FCINT	FLOAT CAGE PLASTIC INTERFACE
8	CSS318	5/6" SS PHILLIPS FOR ZD 10/FCINT
9	CVS26	OMNIFLEX FLOAT BALL
10	ZD10	STAINLESS STEEL FLOAT CAGE
11	CSS313	SCREW #7 PANHEAD PHIL SS 1/2 IN
12	ZD10B	OMNI VAC MOTOR BASKET
13	CSS315DC	ELEC. MALE PLUG 36VDC 20A
13	CSS315AU	AUS PLUG IP44
13	CSS315UK	UK PLUG IP44
14	CORDCON	VELCRO CORD CONNECTOR (OPTIONAL)
15	EXT15	15 FT 120V EXTENSION CORD
15	EXT15EU	15 FT 240V EXTENSION CORD EUROPEAN
15	EXT15UK	15 FT 240V EXTENSION CORD UK
15	EXT15AUS	15 FT 240V EXTENSION CORD AUSTRALIA

### 5.4 VACUUM TANK ASSEMBLY PARTS DIAGRAM

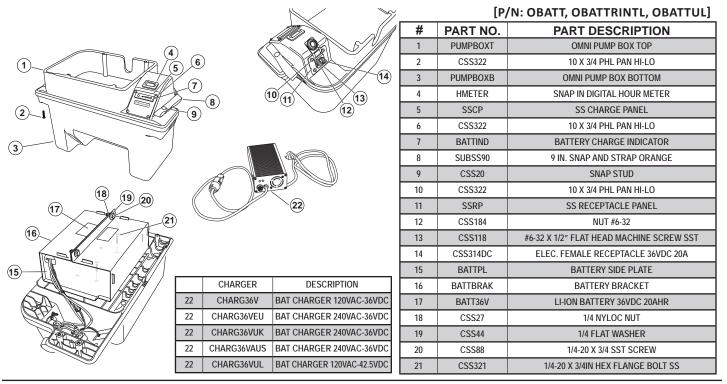


6	) [P/N: OVTABLK,	<b>OVT01</b>	OVT02	OVTAU.	OVTAS]	
~		00101	,	, ,		

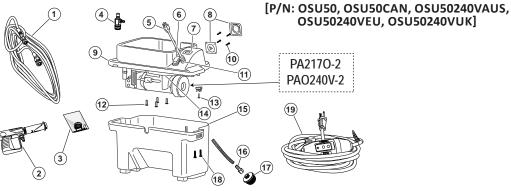
					BLK, 0V101, 0V102, 0V1A0, 0V1A3]
#	PART NO.	PART DESCRIPTION	10	CSS209	8-32 X 3/4 ROUND HEAD MACHINE SCREW
1	OVTTBLK	OMNIFLEX VAC TANK TOP BLACK	11	CSS306	WASHER BONDED NEOPRENE 1/4ID X 5/8OD
2	OVTBBLK	OMNIFLEX VAC TANK BOTTOM BLACK	12	CSS208	8 X 1/2 SS TRUSS SCREW
3	CSS325	8 X 3/4 TORX PAN PLAST	13	VHDT	VAC HOSE DRIP TRAY
4	VTCSTR	OMNIFLEX VAC TANK CASTER 2 IN	14	CLASP1	OMNIFLEX CLASP UPPER
5	CSS03	1 9/16 - 2 1/2 HOSE CLAMP	15	CSS211	8/32 IN. INSERT FOR MOLDS
6	DH25	25" X 1.5" DUMP HOSE 2" CUFF	16	CSS209	8-32 X 3/4 ROUND HEAD MACHINE SCREW
7	CLASP2	OMNIFLEX CLASP LOWER	17	CSS306	WASHER BONDED NEOPRENE 1/4ID X 5/8OD
8	OSTOB2	OMNIFLEX MULTI PURPOSE POST - HOSE PORT	18	OSTOB	OMNIFLEX MULTI PURPOSE POST
9	CSS211	8/32 IN. FOR MOLDS	19	CSS322	10 X 3/4 PHL PAN HI-LO

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#### 5.5 BATTERY BOX ASSEMBLY PARTS DIAGRAM



#### 5.6 PUMP BOX ASSEMBLY PARTS DIAGRAM



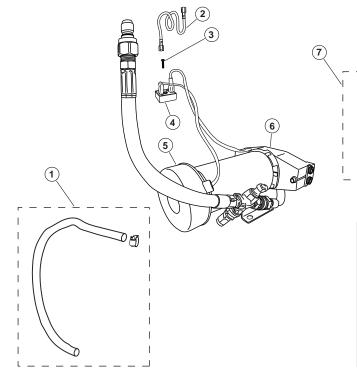
#	PART NO.	PART DESCRIPTION	8	CSS314UK	ELEC RECEPTACLE W/COVER UK
1	PH45	45 FT 500 PSI PRESSURE HOSE	8	CSS314AUS	ELEC RECEPTACLE W/COVER AUS
2	SUBGAKW	SPRAY GUN	9	PUMPBOXT	OMNIFLEX PUMPBOX TOP
3	MTIPSNEW	METERING TIPS PACK	10	CSS322	10 X 3/4 PHI PAN HI-LO
4	CPS12JQC	CHEMICAL INJECTOR	11	STRAIN	STRAIN RELIEF
5	PC1	POWER CORD WITH S. RELIEF 120V	12	CSS321	1/4-20 X 3/4IN HEX FLANGE BOLT SS
5	CES20EU	50 FT RCD CORD W/FREE WIRE END	13	CSS206	NYLON SCREW FOR RECTIFIER
5	CES20UK	50 FT RCD CORD W/FREE WIRE END	14	KF017	PUMP MOUNTING INSERT 1/4IN
5	CES20AUS	50 FT RCD CORD W/FREE WIRE END	15	PUMPBOXB	OMNIFLEX PUMPBOX BOTTOM
6	5ACBS	250V RATED 5A BREAKER SWITCH	16	CPS90	WATER LINE END BRASS BARB
7	HMETER	HOUR METER FOR PUMP	17	MFILT	WATER LINE FILTER
8	CSS314	ELEC RECEPTACLE W/COVER 120V	18	CSS322	10 X 3/4 PHL HI-LO
8	CSS314EU	ELEC RECEPTACLE W/COVER EU	19	GFCI25	25 FT 14 GA GFCI CORD 125V

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5.7 AUTOVAC ASSEMBLY PARTS DIAGRAM						
	$\begin{array}{c} AVVA \\ \hline \\ 23 \\ 22 \\ 22 \\ 12 \\ 10 \\ 10 \\ 10 \\ 10 \\ 10$					
#	PART NO.	PART DESCRIPTION		11	SUBSSSAL	SPREADER ASSEMBLY STRAP LONG
1	CSS20	SNAP STUD		12	CSS20	SNAP STUD
2	KF017	1/4 IN INSERTS FOR HITCH		13	UWMP-26	AUTOVAC MICROFIBER PAD
3	CSS133	5/16 SPLIT WASHER FOR HITCH			AVVA	AUTOVAC VACUUM ASSEMBLY
4	CSS187	1/4-20 PAN HEAD SCREW FOR HITCH		14	CVS12-28	28" SQUEEGEE HEAD ASSEMBLY
	AVHA	AUTOVAC HITCH ASSEMBLY		15	STEEL	S/S WHEEL ASY FOR SQUEEGEE HEAD
5	AVB	MOUNTING BRACKET		16	CVA03BK	AUTOVAC SQUEEGEE BLADE
6	AVH	AUTOVAC CYLINDRICAL HITCH		17	STEELC	AUTOVAC WHEEL REPLACEMENT
	AVSA	AUTOVAC SPREADER ASSEMBLY		18	CSS20	SNAP STUD
7	CSS190	ARM MOUNTING SCREWS		19	SUBSSVA	VAC ASSEMBLY SNAP STRAP
8	AVMFH	MICROFIBER PAD HOLDER		20	AVVARM	VACUUM PLASTIC ARM
9	AVMFARM	SPREADER PLASTIC ARM BLACK		21	CSS191	#12-24 X 5/8 SCREW FOR ARM
10	CSS102	ACORN NUT FOR ARM		22	AVVP	PLASTIC VAC CORD PLOW
11	SUBSSSA	SNAP STRAP FOR SPREADER		23	CSS191	#12-24 X 5/8 SCREW FOR ARM

### 5.8 500 PSI PUMP ASSEMBLY PARTS DIAGRAM



# \_ \_ \_ \_ \_ \_ \_ [P/N: PA2170-2 OR PAO240V-2]

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#	PART NO.	PART DESCRIPTION		
1	WLOMNI	WATER LINE & CLAMP		
2	JWB	CONNECTOR JUMPER WIRE		
3	CSS206	RECTIFIER MOUNTING SCREW		
4	RECT217	500 PSI RECTIFIER		
5	P217AM-0	500 PSI MOTOR REPLACE-RECTIFIER & BRKT INCLUDED		
5	PUMP217O240VDC	500 PUMP REPLACEMENT 240V		
6	PUMPSPARE217	PUMP HEAD ONLY REPLACEMENT		
7	RLOMNI	RETURN LINE & CLAMP		

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# 5.9 PRODUCT SPECIFICATIONS

Battery Box Specifications	
Weight	16.8 lbs. (7,6 kg)
Body Material	Injection Mold Polypropylene
Dimensions(H x W x D)	13.5 x 19.5 x 10 in. (34,3 x 49,5 x 25,4 cm)
Voltage	36V DC
Battery Capacity	20 A-hr
Battery Current	15 A DC
Battery Type	Lithium-Ion
Approx. Run Time BOL (Beginning of Life)	75 to 85 minutes
Approx. Run Time EOL (End of Life)	50 Minutes (discontinue use and take to recycling center)
Battery Box Receptacle	IP67 w/cover (not required for UL)
Run Time Hour Meter	Acts as "odometer for Battery" and runs only when motor switch is ON
Cutoff Voltage (fully discharged)	30V
Charger Specifications	
Approx. Charge Time	5.5 hours
Charger Amps	5 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	32°F (0°C) to 80°F (27°C)
Storage & Shipping Charge	40-60% Charge (35-38VDC)
Vacuum Wand Specifications	
Body Material	1-piece aluminum;
14 Inch Squeegee Head with Brushes	
Vacuum Hose:	15' crush-proof and grease-resistant hose
Cleaning Width:	14" with Vacuum Wand. 28" with rear-mounted AutoVac attachment
Squeegee Head Replacement:	Detachable no tools required
Cleaning Pads:	(5) 26" orange and gray wet microfiber pads
Solution Tank Specifications:	
Solution Tank Capacity	10 Gallons (37,9 I)
Solution Tank Material:	Injection Mold Polypropylene
Variable flow Spigot:	Yes

# 5.9 PRODUCT SPECIFICATIONS (CONTINUED)

Vacuum Tank Specifications	
Vacuum Tank:	10 Gallons (37,85 I)
Vacuum Tank Material:	Injection Mold Polypropylene
Vacuum Tank Clean-out:	100% (easy flush)
Vacuum Tank Casters:	None
Method of Dumping:	Drain Hose
Dump Hose:	26" (66.04 cm) long
Toilet Dumping:	Yes
Vacuum Tank Clean-out:	100% via Dump/Drain Hose
Vacuum Motor Lift:	62" (157,48 cm)
Vacuum CFM:	77 cfm (2180,40 l/min)
Decibels (dB):	75 dB
Removable Motor:	Yes
Weight:	55 lb. (24,9 kg)
Size:	(H x L x W): 41" x 32" x 19" (104,1 x 81, 3 x 48,3 cm)
Hard Rubber Tires:	(2) 5" (12,7 cm)
Casters:	(2) 3" (7,62 cm)
Handle:	Metal with Posts (removable)
Parking Brake:	No
Training Materials:	Yes
Tote Bag:	Yes
10 Inch Squeegee Head:	No (optional)

