

# ***Power-Flite***®

## **Portable Battery Powered Mister**

Operations and Maintenance Manual  
For Commercial Use Only



Model No. PP200-Q02-U



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# INTRODUCTION

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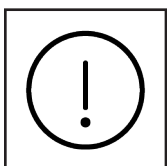
## Warranty

Within 30 days of purchase, to activate product warranty, go to: <https://www.powr-flite.com/warranty-registration>  
For warranty information go to [www.tornadovac.com](http://www.tornadovac.com).



## Warning Labels

Prior to operating the Portable Battery Powered Mister, read and understand completely this owner's manual paying special attention to warning labels. These labels indicate a potentially hazardous situation that could result in death or serious injury if not avoided. Use only as described in this manual.



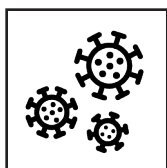
## Important

There are no owner serviceable parts inside this machine. Removal of screws and accessing internal components will void all warranty claims.



## Personal Protection Equipment (PPE)

Personal Protection Equipment (PPE) should be worn during the operation of this machine. Chemicals can remain airborne for some time after application and therefore safety glasses and masks are recommended. Gloves should be worn any time chemicals are handled.



## Center for Disease Control (CDC)

Only products shown on LIST N from the Center for Disease Control (CDC) should be used through this machine in order to kill viruses including SARS-CoV-2 (COVID-19). It is important to follow mixture ratios exactly as indicated on product label. Follow manufacturer's recommendation of disposal of all chemicals used in this machine.

# POLARIZATION INSTRUCTIONS

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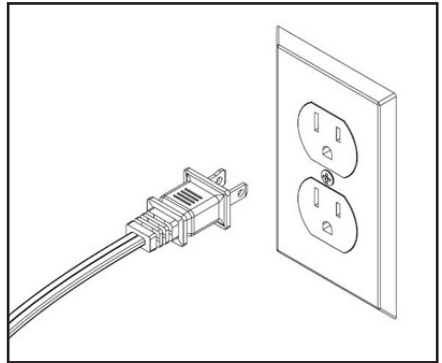
Your new Powr-Flite unit is a high quality, precision-made product. All parts used in the manufacturing of this unit have passed rigid quality control standards prior to assembly. Please safeguard the original receipt/invoice given at the time of purchase. If you experience any problems with your unit during the warranty period, the original receipt/invoice will act as proof of purchase.

**Upon receipt, inspect outer box for exterior damage. Unpack all internal parts, ensure all items are present according to the owner's manual, and review components for damage.**

Each unit is tested and thoroughly inspected prior to shipping. If damage is discovered, immediately notify the transportation company that delivered your machine and request an inspection. As a manufacturer, we are unable to act upon any claim for concealed damage and you must originate the claim. Be sure to keep the carton, packing inserts, and carrier's receipt until the inspector has verified your claim.

## Charger Polarization Instructions

The battery charger is equipped with a 2-wire, polarized AC power cord with one blade wider than the other. This plug fits in the power outlet only one way and is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact an electrician to replace the obsolete outlet. Do not defeat the safety purpose of the polarized plug.



# IMPORTANT SAFETY INSTRUCTIONS

**Read and understand this owner's manual and all labels on the unit before operating. Safety is a combination of common sense, staying alert, and knowing how your unit works. To reduce the risk of personal injury or damage to your unit use only as indicated in this manual.**

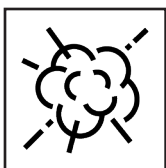
**IMPORTANT:** The manufacturer cannot accept responsibility for damage caused when the appliance is not used according to the instructions, or for uses other than those for which it was intended.

## WARNING:

- Fully assemble mister before operating.
- Use and store in a dry location.
- Do not allow machine to be used as a toy. Close attention is necessary when used by or near children.
- Do not use charger with damaged cord or plug. If appliance or charger is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, contact an authorized service center for service.
- Do not pull or carry charger by cord, use cord as a handle, close a door on the cord, or pull cord around sharp edges or corners.
- Keep cord away from heated surfaces.
- Do not unplug charger by pulling on cord. To unplug charger, grasp the plug, not the cord.
- Do not handle charger, including charger plug and terminals with wet hands.
- 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.
- To ensure disinfection, follow chemical manufacturer's recommendation of dwell time (how long the disinfectant sits on a surface) prior to removal. Dispose of wipe down towel properly or allow disinfectant to air dry in place.
- Do not charge the unit outdoors.
- Only charge in temperatures between 32° - 113°F (0° - 45°C).
- Do not open, crush, expose to heat above 212°F (100°C) or incinerate the battery even if it is severely damaged.
- Use battery only with charger supplied.
- Battery and charger have no serviceable parts and cannot be repaired. Replace only with battery and/or charger part numbers shown in this manual.

## SAVE THESE INSTRUCTIONS

# IMPORTANT SAFETY INSTRUCTIONS



## Pressurized Equipment Warning

Unit is under high pressure when machine is activated. If leaks are visible around coiled hose connections, replace hose immediately with part number shown in this manual. If pump continues to run when the trigger is not depressed, turn machine OFF, discontinue use and return to an authorized service center.



## Flammability Warning

**NEVER** fill unit with flammable chemicals. Do NOT use in an area where flammable fumes are present.



## State of California Proposition 65 Warnings

**WARNING:** This product contains one or more chemicals known to the state of California to cause cancer.

**WARNING:** This product contains one or more chemicals known to the state of California to cause birth defects or other reproductive harm.



## Chemical Warning

Straight bleach should never be used solely in this unit. When sodium hypochlorite, a component found in bleach, dissolves in water, two substances form which play a role in both disinfection and oxidation. Manufacturer's recommendations must be followed for the chemical being used to ensure the proper balance is achieved that will disinfect and not oxidize the metal components found in this machine. It is recommended to flush the entire system thoroughly with clean water after use and prior to storage. Store unit dry and empty for prolonged periods following a system flush. Use only water-based chemicals to clean machine.





## Intended Use

Do NOT modify this unit in any way or adapt it for any other use. Modification of this unit in any way will void all warranties and could create safety hazards.

# SPECIFICATIONS

Pressure (Max.)	130 PSI / 9 BAR
Weight (Empty)	3.9 LBS / 1.8 KG
Weight (Full of Solution)	≤7.5 LBS / 3.4 KG
Dimensions (HxWxL)	12" x 4" x 8" / 305 x 102 x 203 mm
Voltage	10.8 VDC
Flow	1.75 GPH / 6.6 LPH
Run Time	6 Hours Continuous
Tank Capacity	1/2 Gallon / 2 Liters
Hose Length	2' - 10' Stretch
Battery Recharge	90 Minutes
Battery Storage	32° - 140° F / 0° - 60° C
In Tank Filter	YES
Anti Skid/Mark-Free Pads	YES

	Never dispose of lithium-ion batteries in your regular trash or recycling bin. Batteries must be disposed of properly.
	Always remember to recycle



# BOX CONTENTS

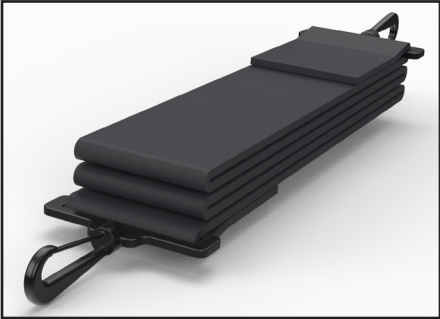
Upon initial receipt of unit, open box and ensure all parts are included as shown below:



Wand Assembly



Coiled Hose



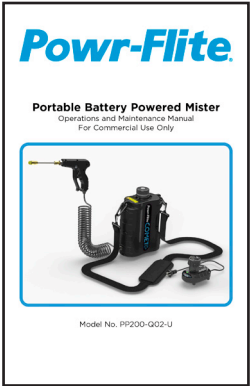
Strap Assembly



Battery Charger



Mister Assembly



Owners Manual



Battery

# OPERATING INSTRUCTIONS

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## Initial Assembly

1. Remove all contents from box and ensure all components are present per the BOX CONTENTS section of this manual.
2. Firmly attach one end of hose to the wand assembly and the other end to the machine ensuring the hose is fully inserted (Figure 1 on page 13).
3. Attach the shoulder strap to the unit. The mister can be used with the carrying handle or the shoulder strap (Figure 2 on page 13).


## Battery Charging

1. Remove battery and battery charger from individual boxes.
2. Plug charger AC cable into 115V wall socket and insert battery into charger. Battery was designed to fit into charger only one way to ensure alignment of charging ports.
3. If the battery needs charging, the light on the charger will turn red. When charging is complete, the red light will turn green. Flashing green light indicates charger is in stand-by mode.

## Battery Installation

	<p><b>It is important to NOT install a battery into a unit that is turned ON. Verify the switch is in the OFF position prior to inserting battery.</b></p>
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1. Once the battery is fully charged, insert battery in the port located underneath the main unit (Figure 3 on page 14).
2. Insert battery into port and push until tabs engage. Battery will only insert into port one way.
3. To remove battery, simultaneously depress tabs on side of battery and pull out (Figure 4 on page 14).
4. Charge as required.

	<p><b>Do NOT turn unit ON without verifying there is fluid in the machine. Running the system dry will damage the pump.</b></p>
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# OPERATING INSTRUCTIONS


## Battery Charger Label Definitions




1. Lights flash red and green – bad battery.
2. Lights solid red – battery charging.
3. Lights flash green – standby mode. Charger plugged in and waiting for battery to be inserted.
4. Lights solid green – battery fully charged.
5. Lights flash red – battery too hot to charge. Will begin charging once battery cools.

# OPERATING INSTRUCTIONS


## Operation

	<p><b>Prior to filling tank, remove battery from unit and place away from wet area.</b></p>
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1. Remove cap from tank.
2. Pour the recommended amount of disinfectant into the ½ gallon tank and fill about ¼ of the way with clean water. Replace cap and gently shake contents to mix disinfectant with water. Remove cap and fill to full (F) line. Note that the solution level can be viewed through the solution level window on either side of the unit.
3. Ensure exterior of unit is dry prior to adding battery.
4. Install battery as outlined under the battery installation section located on page 8.
5. Turn switch to the ON position. You will hear the pump come on to build pressure for spraying. Pull trigger on wand until uniform spray is discharged from end of wand and to assist in the self priming feature.
6. Pump will come on each time trigger is pulled and will run shortly after release to keep pressure on the system. This will repeat during use.

	<p><b>When the product is brand new and/or has not been used for an extended period, it could take up to 30 seconds for fluid to reach the end of the wand. Continue pulling trigger at startup until a strong flow of mist is observed exiting the wand.</b></p>
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7. To apply, use a natural up and down or side to side motion ensuring complete coverage by overlapping.
8. Over a period of approximately 5 minutes of non-use with the unit ON, pressure may drop enough to “bump” the pump back on for a split second. This is to serve as a reminder that the unit is still ON and should be turned off if use is not intended to keep the battery from draining.
9. Allow disinfectant to remain on the surface for the required amount of time based on manufacturer’s recommendations. Wipe with clean, dry rag if required following disinfection.

	<p><b>Read and understand the requirements of the disinfectant used. Dwell time, or the amount of time a solution must remain on a surface, should be known for maximum effectivity. Do not oversaturate.</b></p>
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# OPERATING INSTRUCTIONS

## After Use

1. Upon completion of disinfection, empty contents of tank into an approved storage container.
2. Add ¼ gallon (half full) of clean water to the tank and replace cap.
3. Turn unit ON, pull spray trigger, and allow clean water to flush through system, making sure to follow proper disposal of the water being flushed through the system as there will be residual chemical found in the spray (Follow chemical manufacturer's recommendation for disposal).
4. Turn unit OFF, pull spray trigger again to relieve back pressure on unit.
5. Remove battery.
6. Empty contents of tank and store dry.

## Customer Support

If your system fails to function properly and is not addressed below, contact customer support at 1-800-880-2913. User/freight damage will not be covered.

## Troubleshooting

Issue	Possible Cause	Action
Wand Does Not Spray	<ul style="list-style-type: none"><li>• Low battery voltage</li><li>• Battery not fully installed</li><li>• Clogged tip</li><li>• Low fluid level</li></ul>	Charge battery Ensure battery fully installed. Clean tip Fill tank
Machine will not turn on	<ul style="list-style-type: none"><li>• Low battery voltage</li><li>• Defective Switch</li><li>• Pump Failure</li></ul>	Charge battery Call customer support Call customer support
Low Solution Flow	<ul style="list-style-type: none"><li>• Clogged tip</li><li>• Not enough solution in tank</li><li>• Clogged tank filter</li><li>• Vacuum Lock</li></ul>	Clean tip Fill tank Clean in tank filter See next page
Water Visible Under Machine	<ul style="list-style-type: none"><li>• Loose plumbing connection</li><li>• Water spilled during filling</li></ul>	Call customer support Dry unit and re-observe
Light not coming on charger when battery inserted	<ul style="list-style-type: none"><li>• Confirm charger plugged in</li><li>• Confirm power to plug</li><li>• Defective battery or charger</li></ul>	Plug in charger to 115V outlet Flip breaker switch Call customer support

# OPERATING INSTRUCTIONS

## Troubleshooting



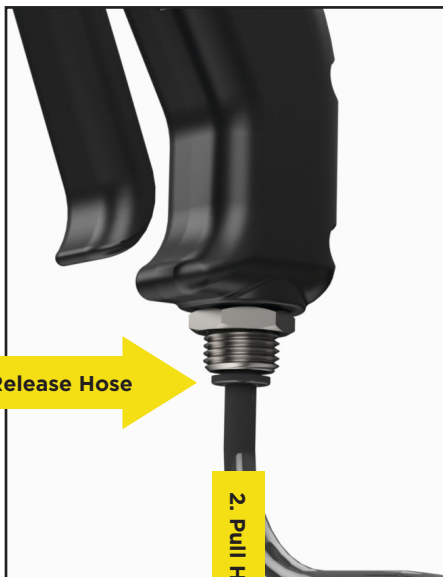
Occasionally air may enter the system and can cause a vacuum lock. This is indicated by a greatly reduced flow of liquid out of the end of the wand. Follow the steps below to correct.

1. Turn machine OFF.
2. Pull wand trigger to remove all pressure from system.
3. Pull black plastic towards wand while pulling coiled hose out of fitting.



1. Pull Black Plastic Up to Release Hose

4. Point free end of hose into approved container.
5. Turn unit ON until solution flows freely out of end of hose.
6. Turn unit OFF.
7. Replace coiled hose back into wand by simply pushing free end of hose back into fitting until fully seated. **It is not necessary to pull the black plastic back as hose will self lock when fully inserted.**



2. Pull Hose Down

# ASSEMBLY AND MAINTENANCE

## Assembly Instructions

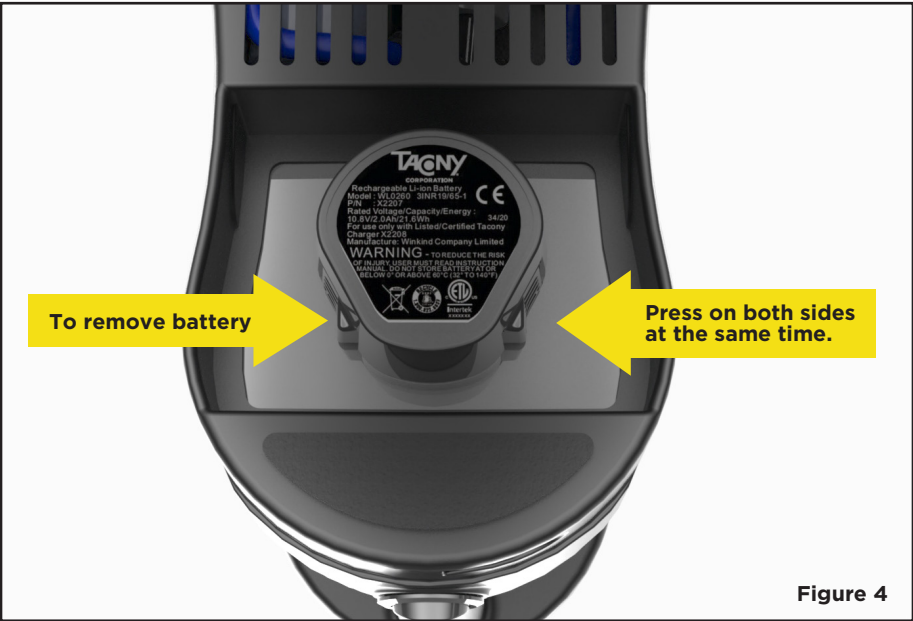
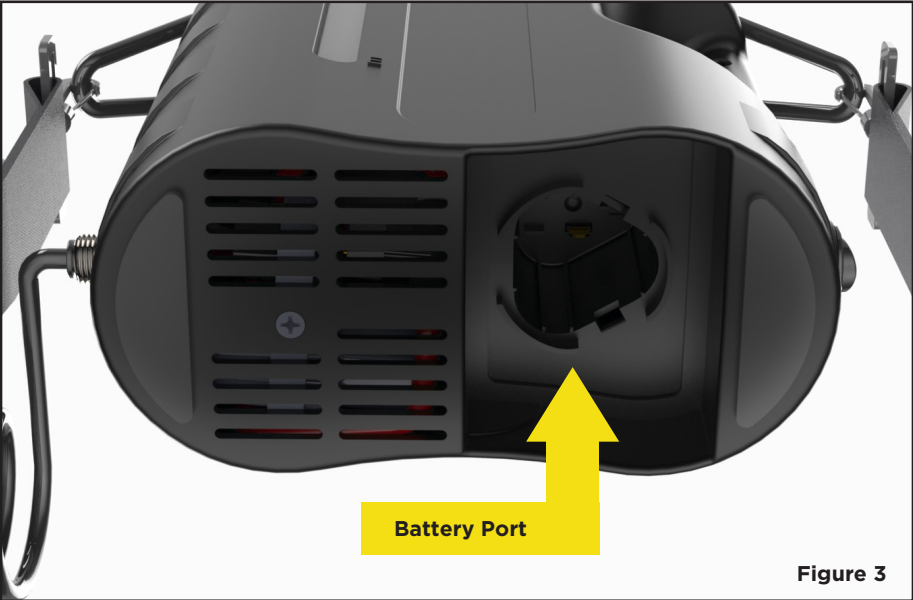


Push hose FULLY into fitting. Once fitting bottoms out, tug on tubing to ensure snug fit.



# ASSEMBLY AND MAINTENANCE

## Battery Installation



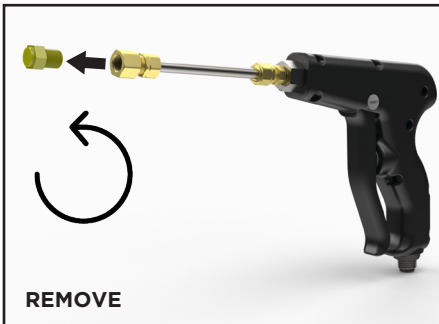
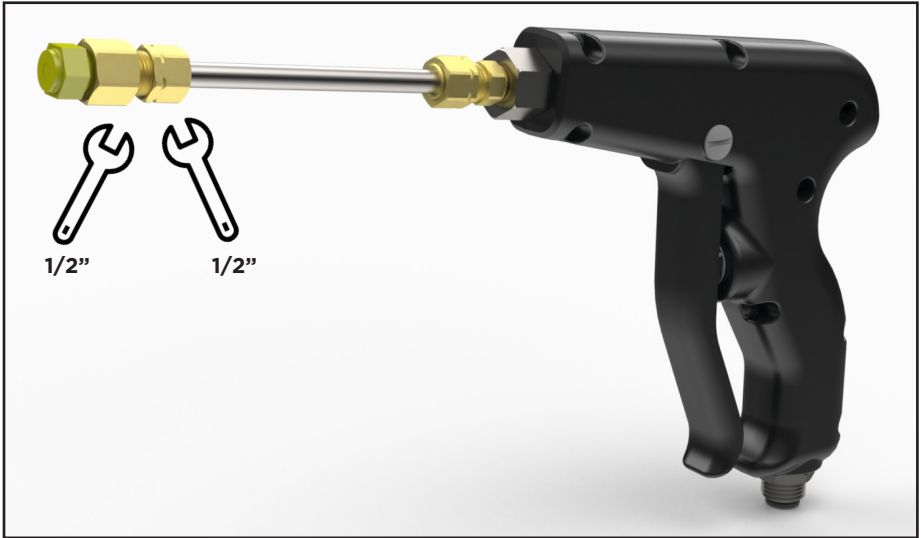


# ASSEMBLY AND MAINTENANCE

## Spray Tip Replacement



The spray tip is made of plastic and will therefore require replacement over time. Use only the replacement tip listed in the parts section of this manual.



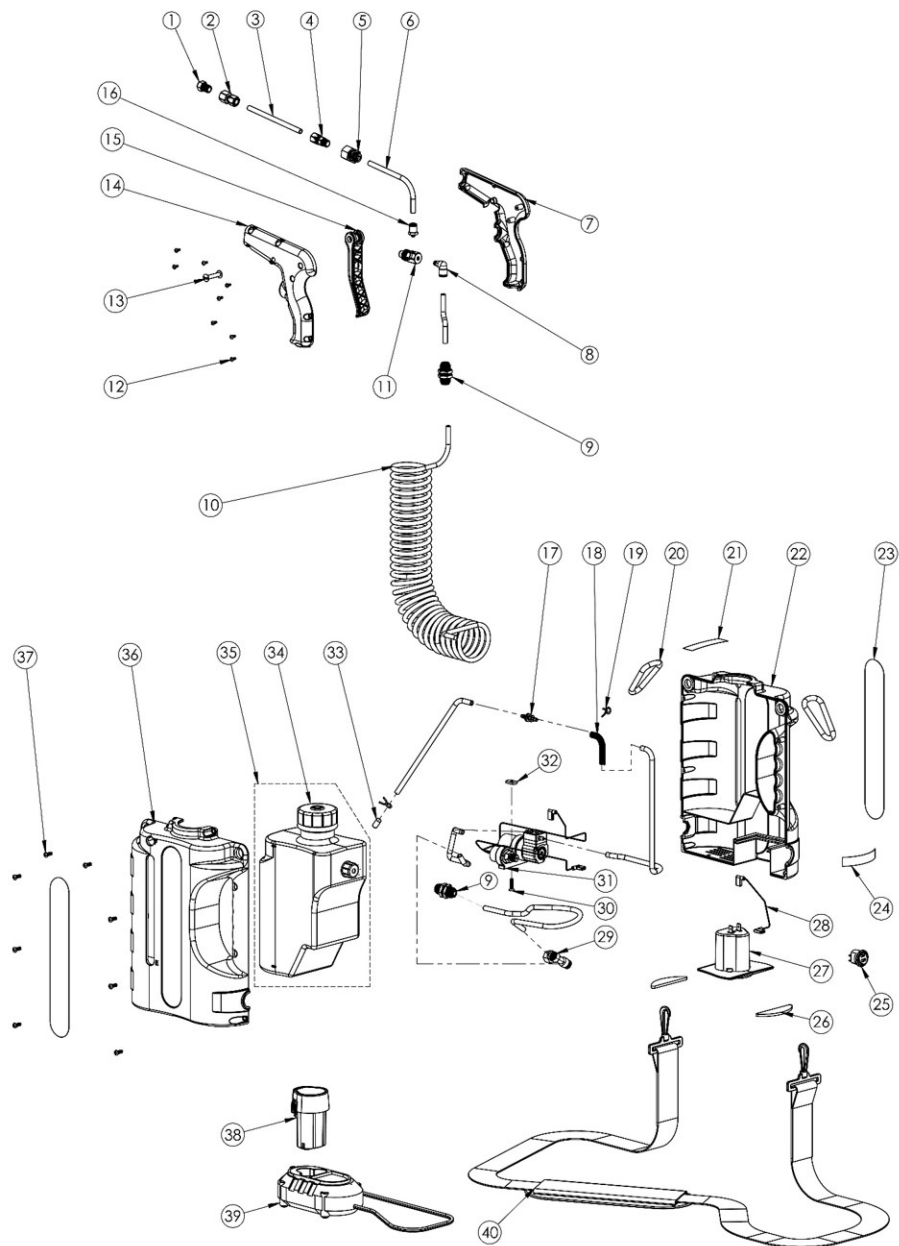
# ASSEMBLY AND MAINTENANCE

## Key Features



# ASSEMBLY AND MAINTENANCE

## Schematics



# PARTS LIST

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	X2216	Nozzle, Spray	1
2	X2215	Fitting, Adapter, ¼" Tube X ⅛" FNPT	1
3	X2214	Tubing, Stainless ¼" OD X ⅜" ID	1
4	X2213	Fitting, Adapter, ¼" Tube X ⅛" MNPT	1
5	X2212	Bulkhead, Female, ¼" Tube X ⅛" FNPT	1
6	X2223	Hose, Polyurethane, 1/4 OD X 5/32 ID, Blue, 180 PSI	2 FT
7	X2253	Shell, Wand, Right	1
8	X2220	Elbow, ¼" Tube X 10-32 UNF Male	1
9	X2221	Bulkhead, ¼" Tube	2
10	X2209	Hose, Coiled Pressure	1
11	X2211	Valve, Trigger	1
12	X2217	Screw, 4-20 X ¼", Thread Forming for Plastic	8
13	X2218	Binding Post, 8-32 X 13/64" OD X 1" Long	1
14	X2204	Shell, Wand, Left	1
15	X2205	Trigger, Wand	1
16	X2219	Adapter, ¼" Tube X 10-32 UNF Male	1
17	X2226	Plastic Bulkhead for Small Bottle Cap, ⅛" Hose Barb	1
18	X2249	Spring for Tubing Support Out of Bottle	1
19	X2250	Clamp, Hose, ¼"	2
20	X2229	Pear Link	2
21	X2260	Label, Attention, Clean After Use	1
22	X2201	Shell, Right	1
23	X2235	Label, Powr-Flite Branding	2
24	X2261	Label, Power Off to Install Battery	1
25	A328-1500	On/Off Switch	1
26	X2224	Anti Slip Pad w/HD Adhesive	2
27	X2203	Nozzle, Spray	1
28	X2259	Lead Wire, Power	1

## PARTS LIST

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
29	X2227	Swivel Tee, ¼" Tube Push to Connect X ⅛" FNPT	1
30	X2231	Screw, 8-32 X ⅝" FHMS ***Undercut*** Stainless	1
31	X2256	Pump, Pressure Switch and Silicone Pump Mount Assembly	1
32	X2264	Nut, Weld, 8-32	2
33	X2228	Internal Filter	1
34	X2258	Cap, Solution Bottle (Aftermarket Part)	1
35	X2202	Bottle, Fluid + Caps and Seals	1
36	X2200	Shell, Left	1
37	A732-8414	Screw, 8-18 HI-LO	8
38	X2207	Battery, Lithium Ion, 10.8V	1
39	X2208	Charger, Lithium-Ion Battery, Input 100-240V, Output 12V DC 1.5A with US AC Cable	1
40	X2206	Strap, Carry	1

[illegible]



# ***Powr-Flite***<sup>®</sup>

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Ft. Worth, TX 76140-1755  
Phone: 817-551-0700  
WWW.POWR-FLITE.COM



## **Record of Purchase**

Serial Number: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Dealer: \_\_\_\_\_

Phone Number: \_\_\_\_\_