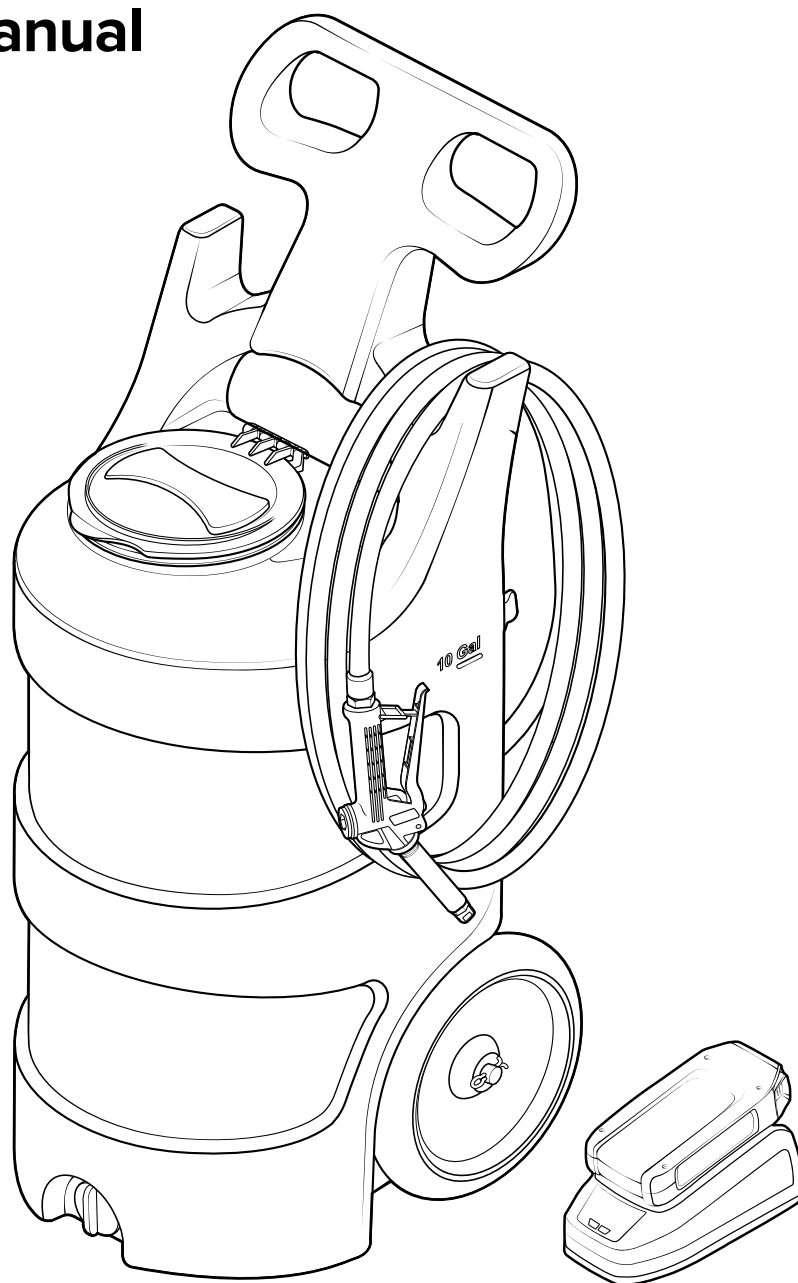


# 10 Gallon Battery Powered Portable Spray Unit

## Operation Manual

SP-BP-10N



READ ALL INSTRUCTIONS BEFORE USING OR  
SERVICING THIS UNIT. KEEP THIS MANUAL IN A  
LOCATION THAT IS READILY AVAILABLE TO USERS  
AND SERVICE TECHNICIANS.

English (Original Instructions)



Scan this code for  
operation manual



# Safety

## **WARNING**

PEOPLE OR OBJECTS CAN BE HURT OR DAMAGED IF THIS UNIT IS NOT USED CORRECTLY!



Failure to read all the instructions before operating the unit may result in personal injury or death from the improper use or the chemical solution. Anyone handling, operating or using the unit must read and understand the instructions in the manual. The buyer assumes all responsibility for safety and proper use in accordance with the instructions.



Using or servicing the unit without appropriate personal protective equipment (PPE) may result in serious injury such as burns, rashes, eye, throat or lung damage and death. Always wear PPE as indicated in the Safety Data Sheet (SDS) when using or servicing the unit. Protect eyes, skin, and lungs against drifting spray.



Chemical solutions may pose a health risk and death if they contact the skin or eyes, are inhaled or swallowed. Always read and follow all chemical safety precautions and handling instructions provided by the chemical manufacturer and the SDS associated with the chemical solution before using the unit.



Pressure within the equipment may cause an unexpected release of the chemical solution and cause serious injury such as burns, rashes, eye damage, throat or lung damage and death. Always depressurize and clean the unit after each use. Never leave the unit unattended while pressurized.

Using the unit with fluid temperatures above 100°F (37.8°C) may result in scalding, burns, serious injury or death. DO NOT use a solution with a temperature above 100°F (37.8°C).

Some components may be hot during and after use. Use caution when servicing or handling the equipment.



Operating the unit when damaged or leaking may result in exposure to chemical solutions, serious injury or death. Never use the unit if it is damaged or leaking.

Use of hydrocarbons and flammable products may result in explosions, fire and serious injury or death. Never use hydrocarbons or flammable products with the unit.



Mixing an alkaline with an acid may result in a chemical reaction. Overheating of the mixture may cause it to splatter caustic compounds or release hazardous fumes, gas and vapors. Always flush the unit with fresh water thoroughly when switching from an alkaline to an acid or an acid to an alkaline.

Never point the discharge wand at yourself, another person, or any object you do not want covered in chemical.



Keep battery box lid closed and latched at all times unless accessing battery. Do not use with lid open or damaged. Do not expose unit to liquids, cleaning solutions, or rain. The battery pack is not waterproof. Do not submerge in liquid. If battery pack gets wet, allow to dry before further use.

Using the unit with unapproved devices may result in a risk of fire, shock or personal injury. Only use with 24V Equip Series compatible equipment.

When not in use, store unit indoors in a cool, dry location. Keep unit away from unauthorized users. To prevent premature battery failure, do not store battery in a depleted state for long periods of time.

# Safety

## **WARNING**

### First Aid Instructions:

- Failure to follow first aid instructions may result in death or serious personal injury.
- If battery liquid comes in contact with skin, wash immediately with soap and water, then neutralize with lemon juice or vinegar.
- If battery liquid gets in your eyes, flush with clean water for a minimum of 10 minutes, then seek immediate medical attention.
- If battery liquid is swallowed, seek immediate medical attention.

### State of California Proposition 65 Warning:

- The battery can expose you to chemicals, including cobalt, lithium, manganese, nickel, oxide, and carbon black, which are known to the State of California to cause cancer and reproductive harm. For additional information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## **NOTICE**

Refer to the separate manuals supplied with the battery and charger for additional safety precautions and instructions.

Servicing or modifying this unit with parts not listed in this manual may cause the unit to operate improperly. Do not use unauthorized parts when servicing the unit.

### Protect the Environment



Please dispose of packaging materials, old machine components, and hazardous fluids in an environmentally safe way according to local waste disposal regulations

# Product Overview

## Requirements

Liquid temperature range	40-100°F (4.4-37.8°C)
Electical requirements	100-240 VAC at 60 Hz, 3 amp max (GFCI protected outlet) for battery charger only
Operating voltage	24 VDC
Chemical compatibility	Chemical products used with this equipment must be formulated for this type of application and compatible with unit materials and pump seals. For more information on chemical compatibility, consult the manufacturer or SDS for your product or contact our customer service department.

## Specifications

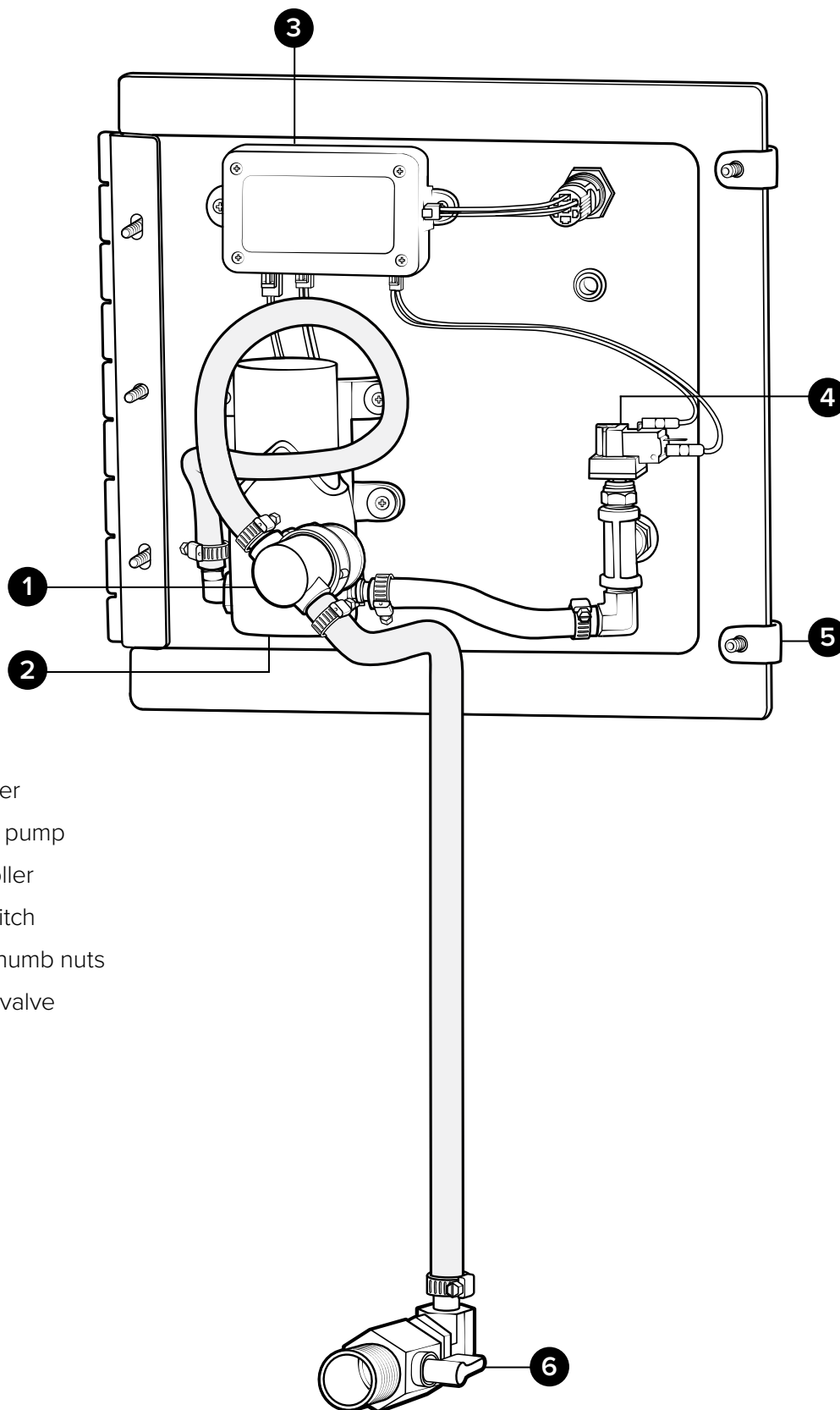
Power type	Lithium-ion battery
Battery charge time	1 hour 10 minutes
Battery run time	Up to 4 hours of continuous use
Chemical pickup type	Draws from pre-mixed solution
Number of products unit can draw from	One product
Suction line diameter	3⁄8 in. (9.5 mm) inside diameter
Capacity	10 gallons (37.9 liters)
Discharge line length/diameter	12 ft. (3.7 m) hose, with 3⁄8 in. (9.5 mm) inside diameter
Discharge wand/tip type	Polypropylene spray gun with 80° fan tip
Output distance	2-6 ft. (0.3-1.8 m)
Output volume	0.8-0.9 gal/min (3-3.4 l/min)
Flow rate*	0.8-0.9 gal/min (3-3.4 l/min)
Pump seals	Santoprene diaphragm, Viton check seals
Wheel type	Two 10 inch (25.4 cm) non-marking wheels.

\*Flow rates given are based on chemical with viscosity of water.

# Product Components

Get to know the SP-BP-10N components that you will need to use, adjust or assemble.

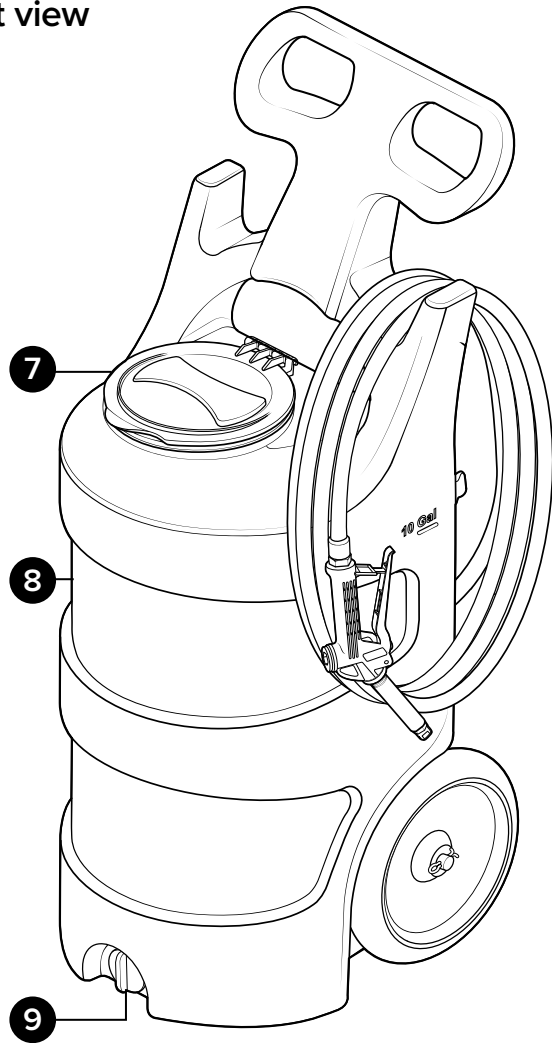
## Back plate assembly • Inside view



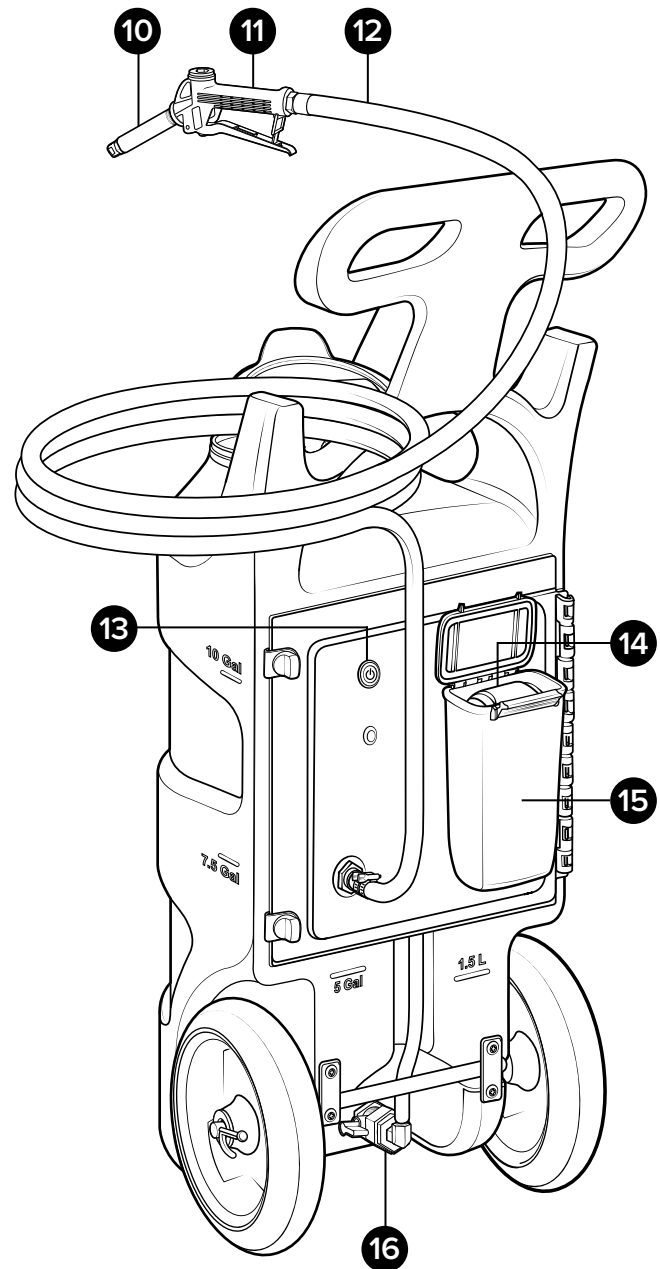
1. In-line strainer
2. Electric fluid pump
3. Relay controller
4. Pressure switch
5. Back plate thumb nuts
6. Suction line valve

# Tank Assembly

Front view



Back view



- 7. Hinged lid
- 8. Solution tank
- 9. Drain plug
- 10. Discharge wand
- 11. Poly spray gun
- 12. Discharge hose
- 13. Power button
- 14. Battery
- 15. Battery box
- 16. Suction line valve

# Using your unit

## Operating Instructions

1. Remove battery and charger from packaging. Ensure battery is fully charged. Refer to charge level indicator table in battery manual for more information.
2. Once fully charged, insert battery into the receiver until properly secure. Close lid and secure the latch.

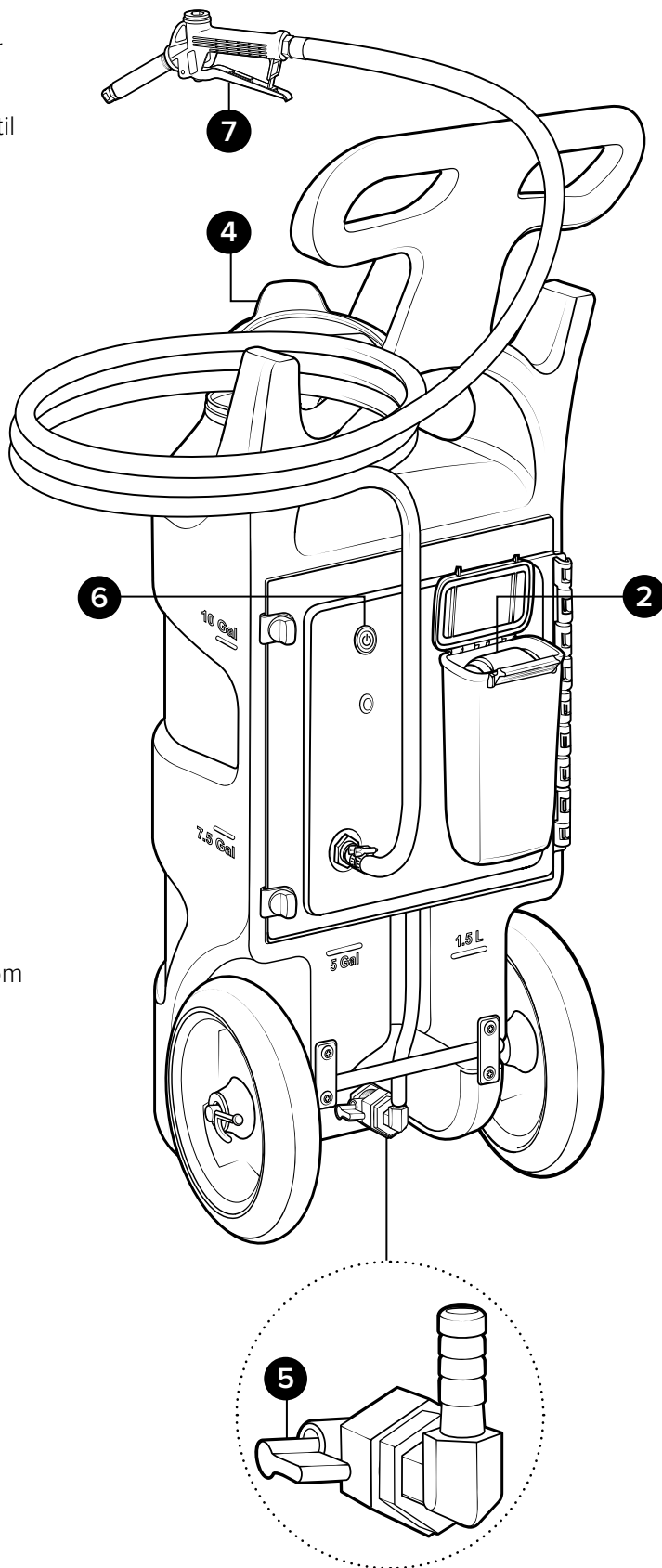
**NOTE:** Keep battery box lid closed and latched unless accessing battery. Do not operate unit with lid open or damaged.

3. Verify drain plug is securely closed.
4. Following all instructions from chemical manufacturer, fill the solution tank with pre-mixed solution.
5. Verify suction line valve at the base of the suction line is open, allowing fluid into the suction line.
6. Press the power button to turn on the unit.
7. Slowly squeeze trigger handle to begin spraying. Release trigger handle to stop.

## After Use Instructions

**NOTE:** For proper handling and disposal procedures refer to chemical SDS.

8. Solution should be removed from unit after each use. This can be done in two ways:
  - a. Unthread drain plug from front of tank and drain solution into an approved location.
  - b. Place discharge wand into approved container. Activate unit until all solution has been flushed from the system.
9. Press power button to turn off unit. Squeeze trigger handle to relieve remaining pressure.
10. Before using unit with another chemistry, thoroughly flush with water.



# Maintenance

## **WARNING**

Performing any maintenance with the unit pressurized, may result in serious injury or death. Always ensure that the unit has been depressurized, before conducting any maintenance. Servicing or modifying unit with parts not listed in this manual may cause the unit to operate improperly. Do not use unauthorized parts when servicing the unit.

## Maintaining Your Unit

**To keep your unit operating properly, periodically perform the following maintenance procedures:**

- Inspect the pump for wear and leaks.
- Inspect all hoses for leaks or excessive wear. Verify all hose clamps are in good condition and properly secured.
- Check the suction line and strainer for debris. Clean as needed.
- Store battery in a half-charged state and maintain battery every 3-6 months.

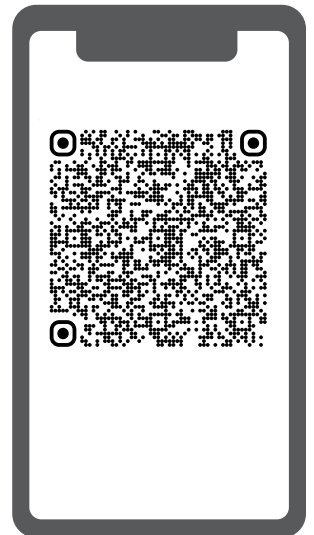
## Servicing Your Unit

**To service your unit, refer to the service manual which includes:**

- Troubleshooting procedures.
- Detailed parts breakdowns and illustrations.
- Part numbers of serviceable components and assemblies.



**Scan this code for  
service manual**

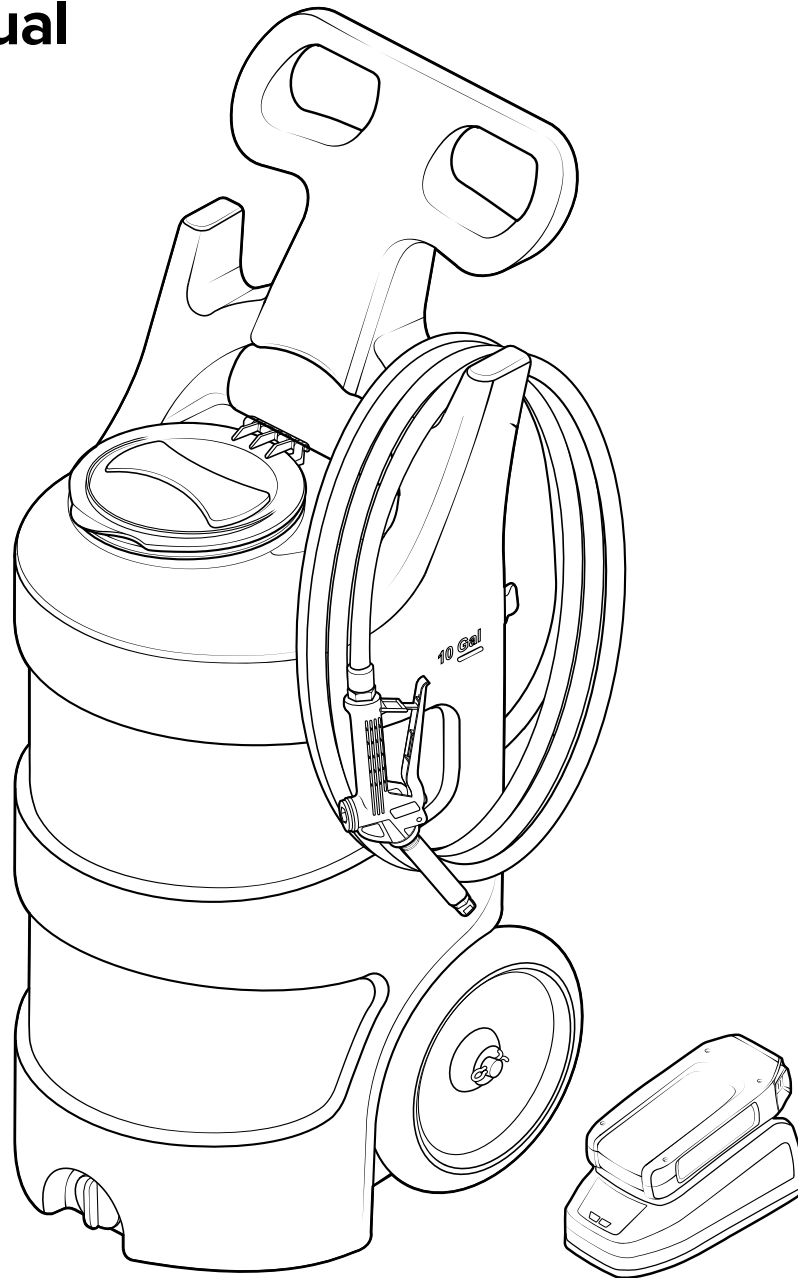




# 10 Gallon Battery Powered Portable Spray Unit

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Keep battery box lid closed and latched at all times unless accessing battery. Do not use with lid open or damaged. Do not expose unit to liquids, cleaning solutions, or rain. The battery pack is not waterproof. Do not submerge in liquid. If battery pack gets wet, allow to dry before further use.

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## **NOTICE**

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# Service Guide

## **WARNING**

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**To keep your unit operating properly, periodically perform the following maintenance procedures:**

- Inspect the pump for wear and leaks.
- Inspect all hoses for leaks or excessive wear. Verify all hose clamps are in good condition and properly secured.
- Check the suction line and strainer for debris. Clean as needed..
- Store battery in a half-charged state and maintain battery every 3-6 months.

## Servicing Your Unit

**Most repairs on the unit can be performed with the following tools:**

- |                         |                                |
|-------------------------|--------------------------------|
| • Crescent wrench (2x)  | • #2 Phillips head screwdriver |
| • ¼ in. (7 mm) hex bit  | • #3 Phillips head screwdriver |
| • Flat head screwdriver | • Hose cutters                 |
| • Thread seal tape      | • Knife                        |

## Troubleshooting Your Unit

If your unit is not operating properly, try using these troubleshooting tips:

Issue	Solution
Pump is cycling improperly	<ul style="list-style-type: none"> <li>• Verify pump did not fail from chemical attack, or electrical malfunction.</li> <li>• Ensure proper chemical and concentration are being used.</li> <li>• Verify product is getting to the pump with these steps: <ol style="list-style-type: none"> <li>1. Make sure the tank has chemical solution in it.</li> <li>2. Ensure the suction line valve is open completely.</li> <li>3. Inspect suction line and strainer for debris or damage.</li> </ol> </li> <li>• If these steps are confirmed, the pump may need to be replaced.</li> </ul>
The unit operates at a reduced pressure	<ul style="list-style-type: none"> <li>• Inspect suction line and strainer for debris or damage. Clean or replace as needed. To prevent damage to the unit, the strainer must always be used.</li> <li>• Inspect discharge hose assembly for build up.</li> </ul>
Battery will not completely charge	<ul style="list-style-type: none"> <li>• Place a secondary battery on the charger. If the secondary battery charges as expected, it indicates that the initial battery is faulty and should be replaced.</li> <li>• If the problem continues to occur, the charger is bad. Replace battery charger.</li> </ul>
Battery discharges too quickly	<ul style="list-style-type: none"> <li>• Battery has reached life expectancy. Replace battery.</li> </ul>
Power button LED slow flashing	<ul style="list-style-type: none"> <li>• Dead battery, charge battery.</li> </ul>
Power button LED fast flashing	<ul style="list-style-type: none"> <li>• Compressor startup failure. Reset with a power cycle.</li> <li>• A faulty pump or compressor may need to be replaced.</li> </ul>
Battery/charger fault light is flashing	<ul style="list-style-type: none"> <li>• Refer to the separate manuals supplied with the battery and charger for more information regarding indicator and fault lights.</li> </ul>

# Tank Assembly

Front view

**TNKA-10N-BK:**

10 gallon natural tank assembly - black\* lid - includes drain plug, wheels, suction valve, and backplate thumb nuts

**LDA-7BK:**

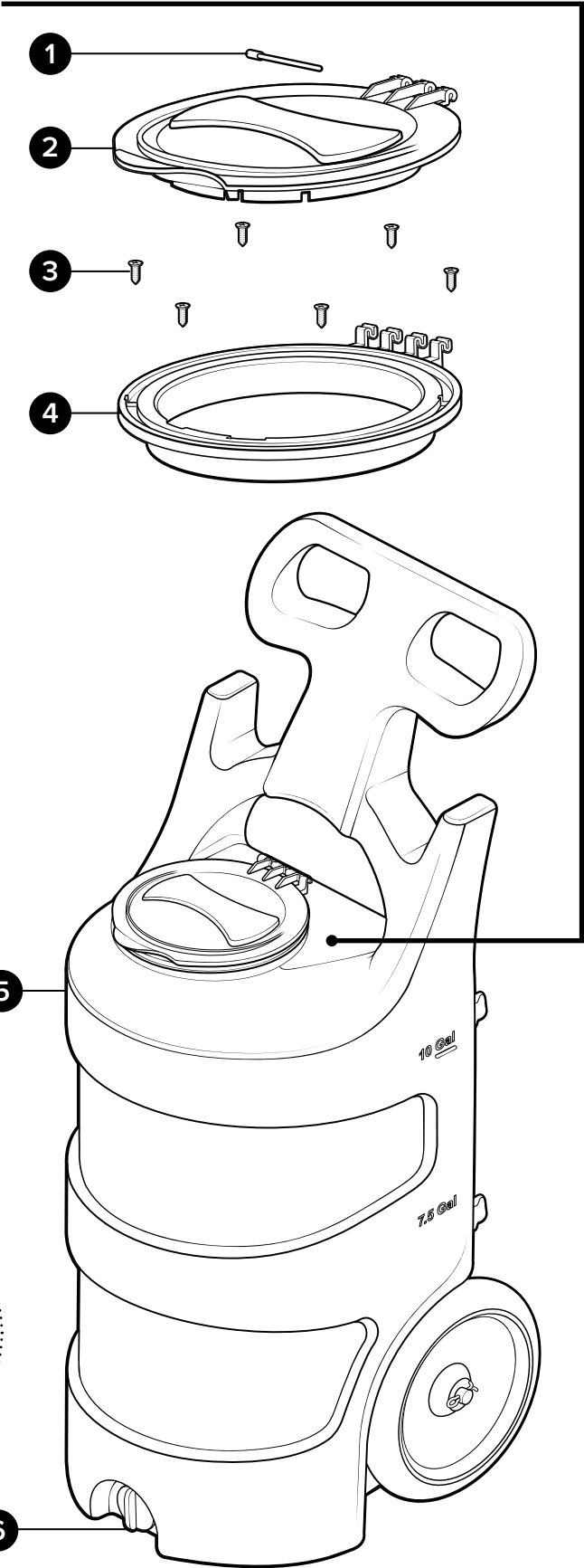
Lid assembly - includes 7 in. black\* lid, lid flange, hinge pin, and mounting screws

Item number		Description
1	LD-PIN	Hinge pin for 7 in. lid and flange
2	LD-7BK-LID	7 in. cap - polyethylene - black*
3	S812-FH	#8 x ½ in. screw - stainless - flat head Phillips
4	LD-7BK-FLNG	7 in. lid flange - polyethylene - black*

\* Additional colors available, see datasheet for options.

Item number		Description
5	TNK-10N	10 gallon natural tank
6	DPA	Drain plug assembly for portable units - includes gasket

**LDA-7BK**



**TNKA-10N-BK:**

10 gallon natural tank assembly - black\* lid - includes drain plug, wheels, suction valve, and backplate thumb nuts

Back view

**BPTNA:**

Back plate thumb nut assembly - includes bolt, thumb nut, and tether

Item number	Description	
1	BST1420118-VS	¼-20 x 1 ½ in. set bolt - stainless - Vibra-Seal
2	TN1420	¼-20 thumb nut - brass insert - assembled with tether

**VLVA-PVCV34:**

Suction valve assembly - includes valve, bushing, and elbow

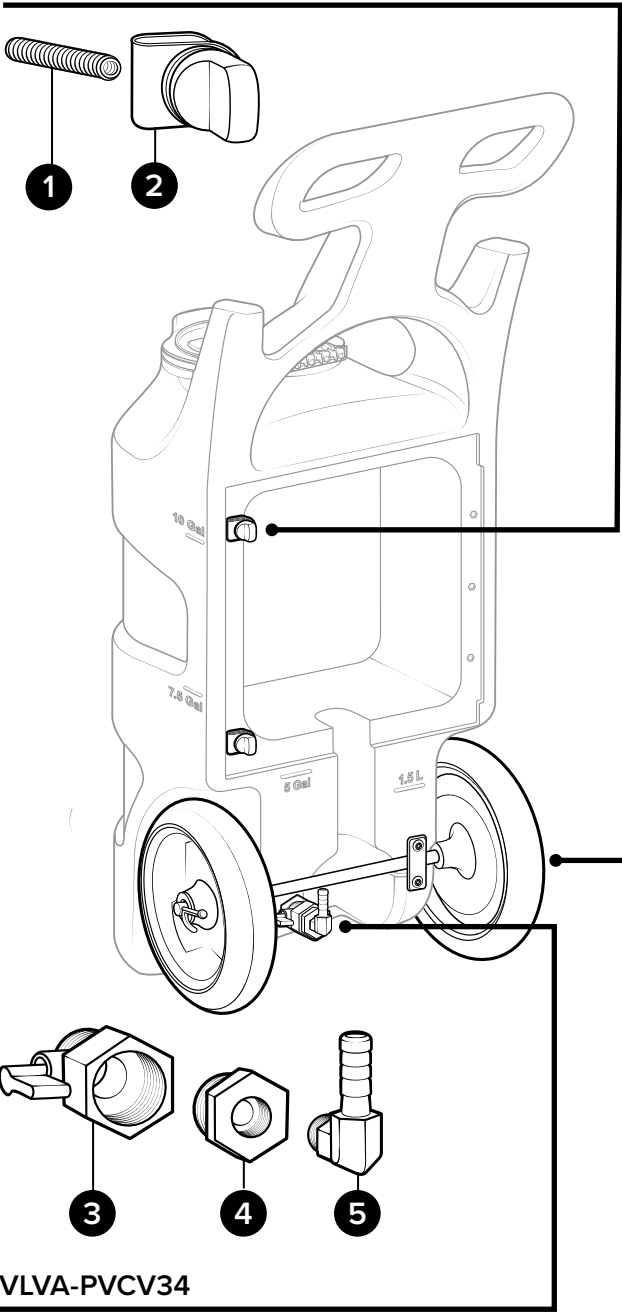
Item number	Description	
3	PVCV34FM	PVC valve ¾ in. FPT x ¾ in. MPT
4	HHPB3414	Hex head poly bushing ¾ MPT x ¼ FPT
5	HBSEL1438	Stainless hose barb ¼ MPT x ¾ barb elbow

**WHLA-AXL14:**

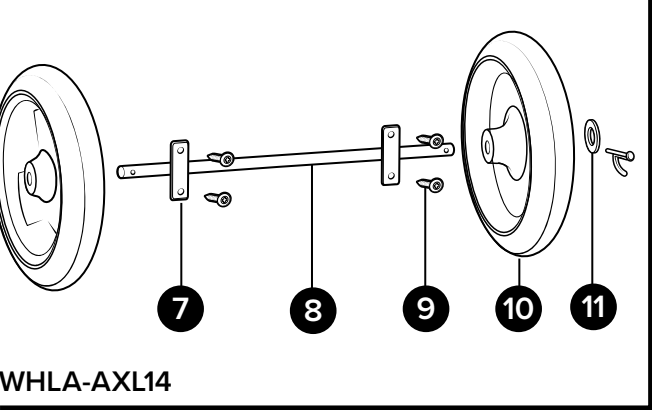
10 in. wheel assembly - includes 14 in. axle, axle plate, bolts, washers, and cotter pins

Item number	Description	
6	COT	Cotter pin - stainless - ⅛ in. x 1 in.
7	PLSS-AXL	Axle plate - stainless - 2.5 in. x 1 in. - 2 holes
8	AXL14	Axle - stainless - 0.625 dia. x 14.5 in.
9	B142012-VS	¼-20 x ½ in. bolt - stainless - truss head Phillips - Vibra-Seal
10	W10	Wheel - non-marking - 10 in.
11	FW58	Flat washer for 5⁄8 in. pipe - stainless - 0.687 id x 1.5 od x 0.07 thk

**BPTNA**



**VLVA-PVCV34**



**WHLA-AXL14**

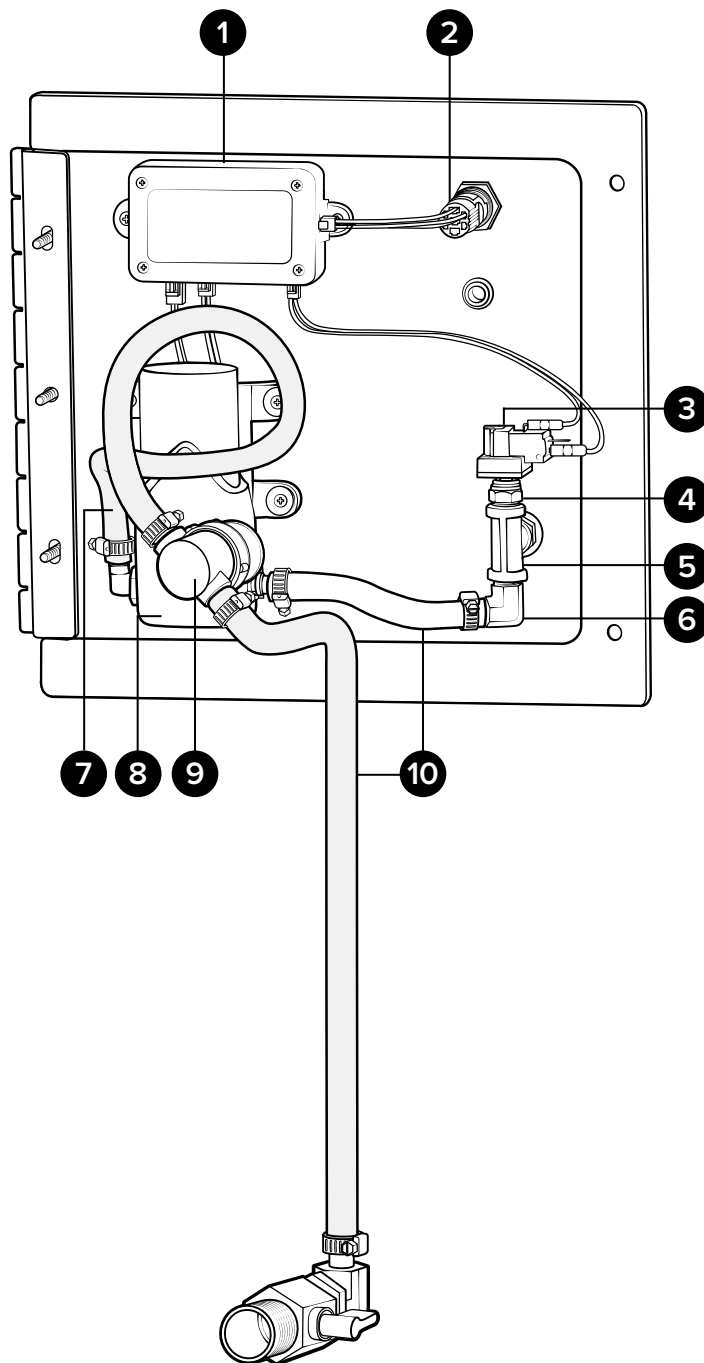
# Back Plate Assembly

Inside view

## PA-SP38-BP:

Plate assembly for portable spray battery unit - 24V  
battery and air compressor -  $\frac{3}{8}$  in. discharge hose barb

Item number	Description	
1	LVRC-24V-MC	Low voltage relay controller - 24 volt - with motor controller
2	PBSA-24V	Push button switch assembly - includes 24V LED locking switch and wire harness
3	PS14QFV-55	Pressure switch - $\frac{1}{4}$ quick fit - 55 PSI - Viton membrane
4	QF14P	Quick fit - $\frac{1}{4}$ MPT x $\frac{1}{4}$ od tube - polypropylene
5	SST14	Stainless tee $\frac{1}{4}$ FPT
6	HBSEL1438	Stainless hose barb $\frac{1}{4}$ MPT x $\frac{3}{8}$ barb elbow
7	H38BK-HT	$\frac{3}{8}$ in. black hose - high temp EPDM rubber - available per ft.
8	EP24VDC-1	24 VDC, 1 GPM open flow, 40 PSI max electric fluid pump, Viton seals, Santo diaphragm
9	STR38-IL	In-line strainer - $\frac{3}{8}$ barb - EPDM gasket - 20 mesh SS - black bowl
10	H38BL-F	$\frac{3}{8}$ in. blue hose - hybrid TPE - available per ft.





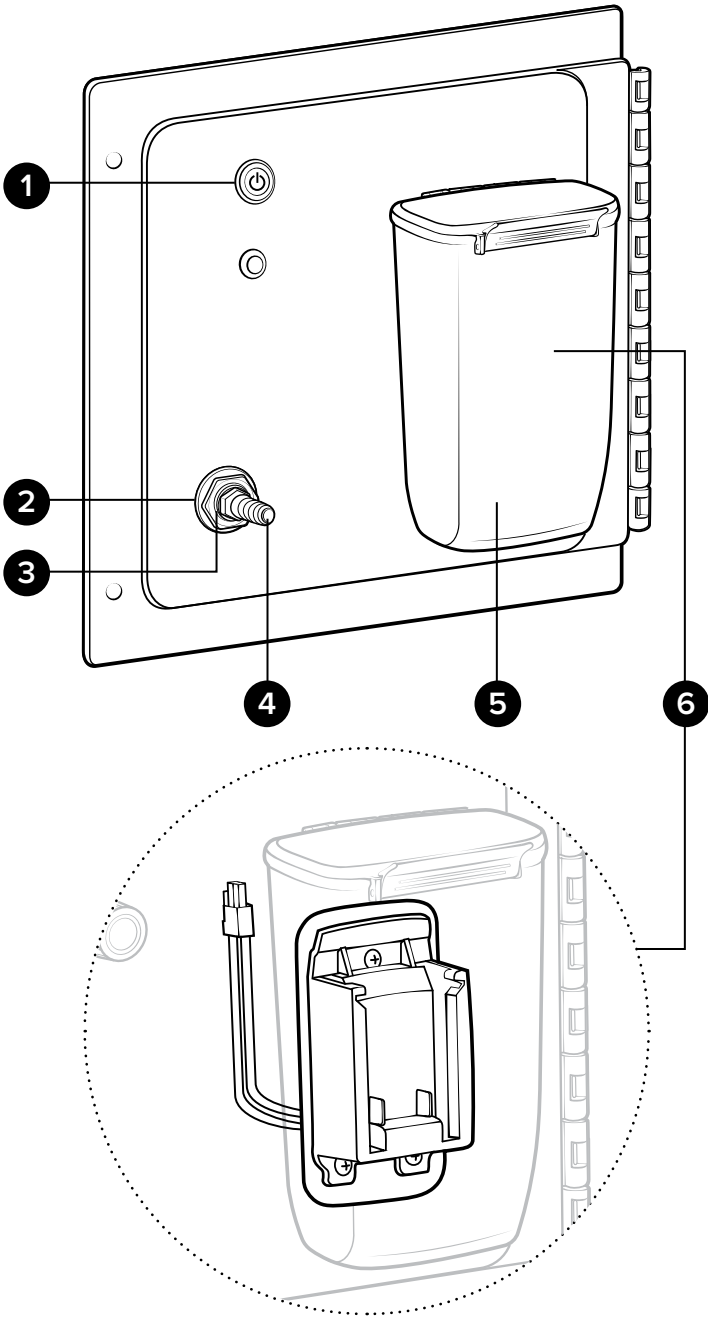
# Back Plate Assembly

Back view

**PA-SP38-BP:**

Plate assembly for portable spray battery unit - 24V  
battery and air compressor - 3/8 in. discharge hose barb

Item number		Description
1	PBSA-24V	Push button switch assembly - includes 24V LED locking switch and wire harness
2	SSSFN12	Serrated flange nut - stainless - 1/2 in.
3	SSA14BKH	Bulkhead adapter - stainless - 1/4 NPT x 1/4 NPSM
4	HBSS1438	Stainless hose barb 1/2 MPT x 1/2 barb
5	BLI-24V-BB	Battery box - includes box, lid, latch, pins, and gaskets
6	BLI-24V-RCVR	Battery receiver interface plate for BLI-24V system

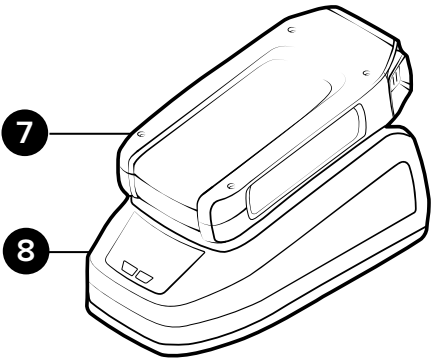


## Battery and Charger\*

\*not included with backplate assembly

Item number		Description
7	BLI-24V-4AH	Lithium ion battery - 24V 4Ah
8	BLI-24V-CHRG	Lithium ion battery charger - 24V - includes NA power cord

**NOTE:** Refer to battery and charger user manuals for more information.



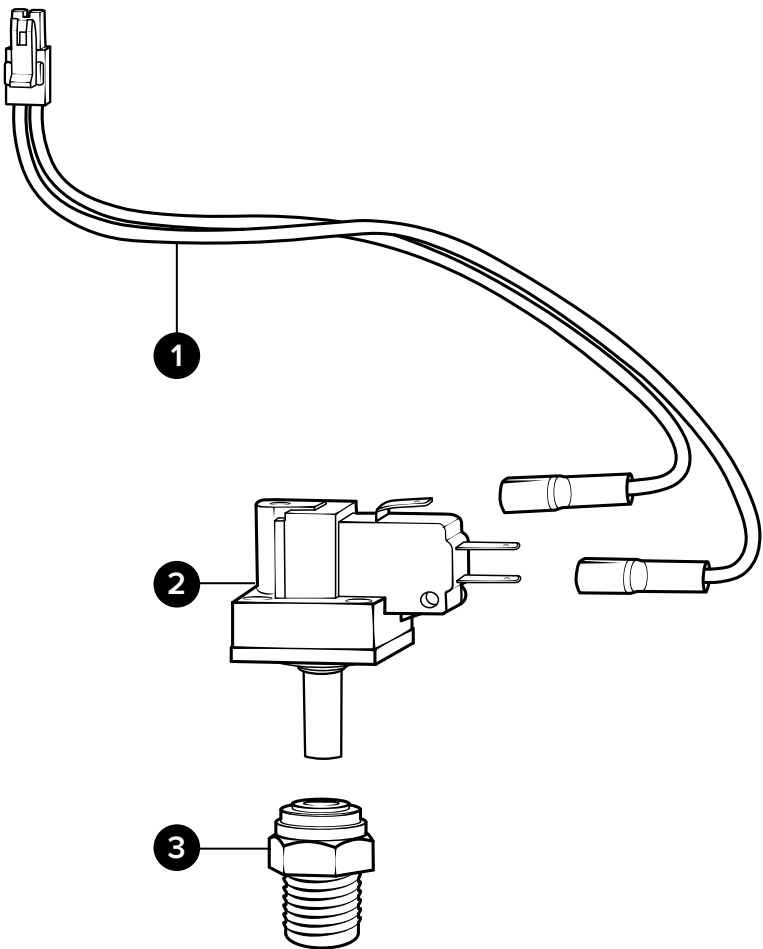
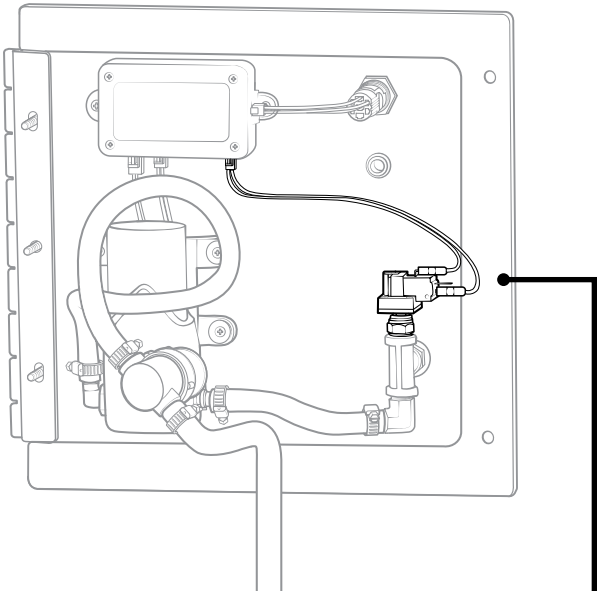
\*not included with backplate assembly

# Back Plate Sub-assemblies

**PSHA-BP:**

Pressure switch harness assembly - includes pressure switch, harness for 24V battery power, and quick fitting

Item number		Description
1	PSH-BP	Pressure switch harness for 24V battery power
2	PS14QFV-55	Pressure switch - ¼ quick fit - 55 PSI - Viton membrane
3	QF14P	Quick fit - ¼ MPT x ¼ od tube - polypropylene



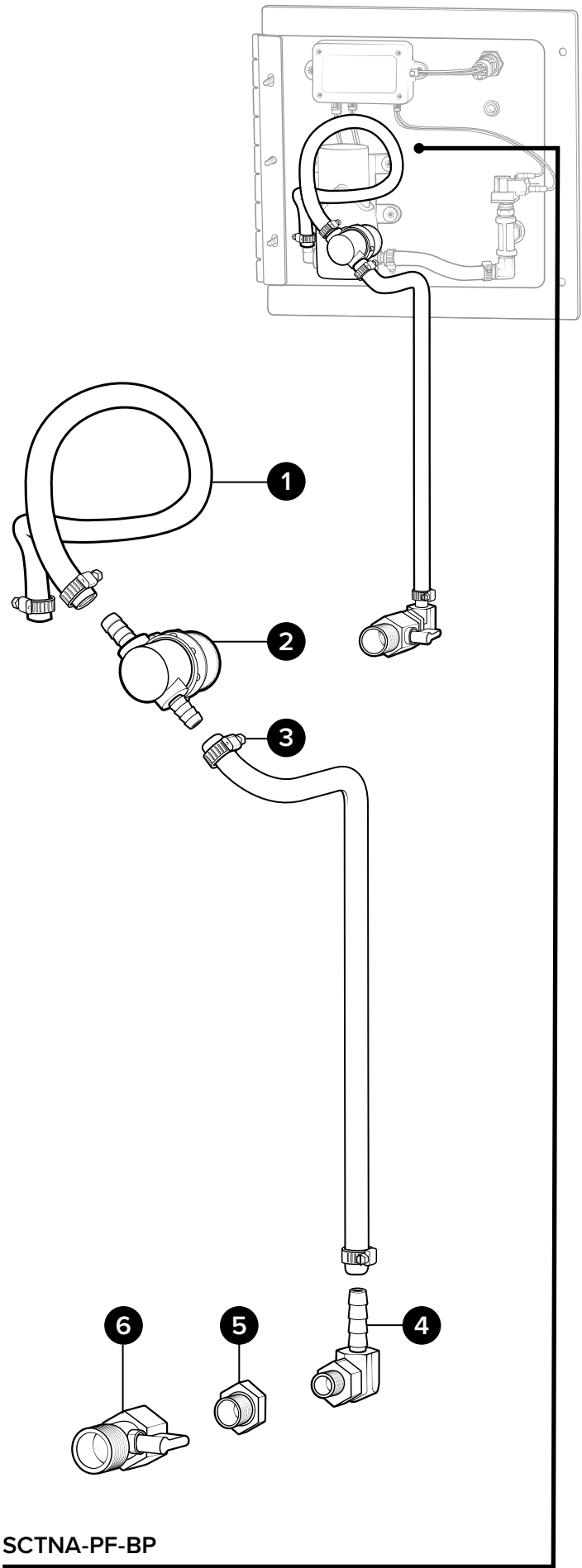
**PSHA-BP**

# Suction Assembly

**SCTNA-PF-BP:**

Suction assembly for battery equipped units - includes suction valve, hose, and in-line strainer

Item number		Description
1	H38BK-HT	¾ in. black hose - high temp EPDM rubber - available per ft.
2	STR38-IL	In-line strainer - ¾ barb - EPDM gasket - 20 mesh SS - black bowl
3	SSC38	Stainless screw band clamp for ¾ in. hose
4	HBSSEL1438	Stainless hose barb ¼ MPT x ¾ barb elbow
5	HHPB3414	Hex head poly bushing ¾ MPT x ¼ FPT
6	PVCV34FM	PVC valve ¾ in. FPT x ¾ in. MPT



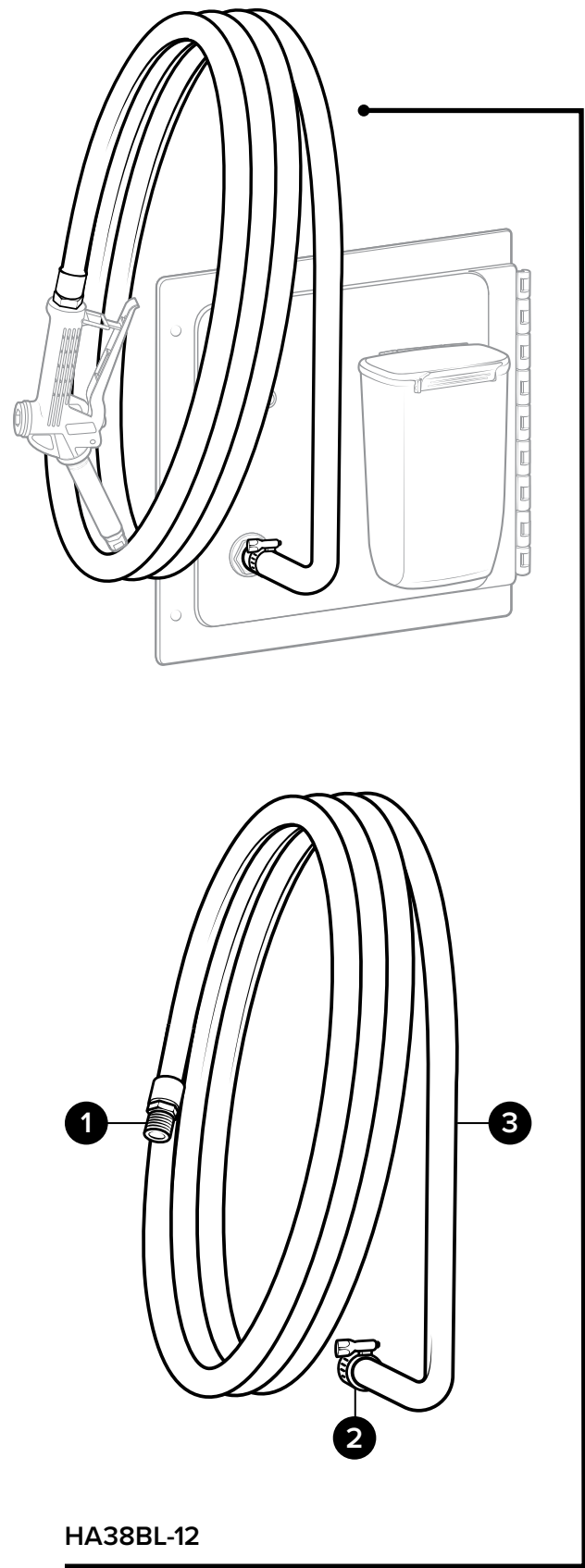
# Hose Assembly

**HA38BL-12:**

Hose assembly - 12 ft. of 3/8 in. blue\* hose - includes ferruled hose barb

Item number		Description
1	HBSS1238	Stainless hose barb 1/2 MPT x 1/2 barb
2	SSC38	Stainless screw band clamp for 3/8 in. hose
3	H38BL-F	3/8 in. blue* hose - hybrid TPE - available per ft.

\* Additional colors available, see datasheet for options.



# Wand Assembly

**PSGA384-ST8020:**

Poly spray gun assembly for 3/8 in. hose - includes 4 in. black poly wand, ST8020SS spray tip, hose barb, and screw band clamp

Item number		Description
1	ST8020SS	Spray tip - 80 degree - 2.0 GPM - stainless - 1/4 MPT
2	PW12M14F4	1/2 in. NPT and 1/4 in. FNPT wand - black UHMW - 4 in. long
3	PSG12	Poly spray gun with 2x 1/2 in. straight thread - gray handle with red clip - 316SS internal spring - includes 2x o-ring
4	HBSS1238	Stainless hose barb 1/2 MPT x 3/8 barb
5	SSC38	Stainless screw band clamp for 3/8 in. hose

