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# USER MANUAL

**MODEL NUMBER:  
FI-BP-15N  
FI-BP-15NK  
FI-BP-15NV  
AND RELATED UNITS**

**15 Gallon Battery-Powered Portable Foam  
Unit**

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**English (Original Instructions)**

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## READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT



### Read this manual completely and understand the machine before operating or servicing it.

- Read all instructions before installing or operating unit.
- Always wear appropriate personal protective equipment (PPE) when operating or servicing unit.
- Always follow all chemical safety precautions and handling instructions provided by the chemical manufacturer and Safety Data Sheet (SDS).
- Never use unit if it is damaged or leaking.
- Always disconnect the battery before opening the unit back plate or servicing the unit.
- Do not use unit if the battery cover is not in place. Contact with chemicals can damage the battery.
- Avoid excessive use of discharge ball valve. Repetitive discharge in short bursts can cause overheating. Apply foam evenly without constant starting and stopping.
- Avoid foam or spray coming into contact with the unit. Contact with chemicals can damage the battery and other electrical components.
- Never point the discharge wand at yourself, another person, or any object you do not want covered in chemical.
- Always depressurize unit after use (as described in the After Use Instructions). Always store unit depressurized, with the discharge trigger gun or ball valve in the closed position.
- Do not exceed a fluid temperature of 100°F (37°C).
- Always flush the unit with fresh water for 5 minutes when switching from an alkaline to an acid or an acid to an alkaline.
- To prevent premature battery failure, do not store battery in a depleted state for long periods of time. Do not recharge battery until it has been used to power the unit for a minimum of 30 minutes of use.

### 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.



Always remember to recycle.

\*Specifications and parts are subject to change without notice.

## READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

OPTIONS	
	<b>Pump Seal Material</b>
FI-BP-15N	Santoprene ( <b>standard</b> )
	Viton ( <b>V</b> )
	Kalrez ( <b>K</b> )
Add bold option codes to item number as shown. For standard options, no option code is needed. Examples: <ul style="list-style-type: none"> <li>• FI-BP-15N (standard unit with Santoprene pump seals)</li> <li>• FI-BP-15NV (unit with Viton pump seals)</li> </ul>	

REQUIREMENTS	
Liquid temperature range	40-100°F (4.4-37°C)
Electrical requirements	120 VAC at 60 Hz, 2 amps (GFCI protected outlet) for battery charger only
Operating voltage	12 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	Battery
Battery charge time (from full depletion)	7.5 hours
Battery run time (from full charge)	Up to 2 hours of non-continuous run time
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	15 gallons (56.78 liters)
Discharge hose diameter/length	15 ft. (4.6 m) hose, with 1/2 in. (12.7 mm) inside diameter
Discharge wand/tip type	Stainless steel wand with 65° fan tip and ball valve
Output distance	5-6 ft. (1.52-1.83 m)
Output volume	4-5 gal/min (15-18.93 l/min) of foam
Flow rate*	2 gal/min (7.6 l/min)
Pump seals	Santoprene, Viton, or Kalrez
Wheel type	Two 10 inch non-marking wheels

\*Dilution rates and flow rates given are based on chemical with viscosity of water and factory air pressure settings.

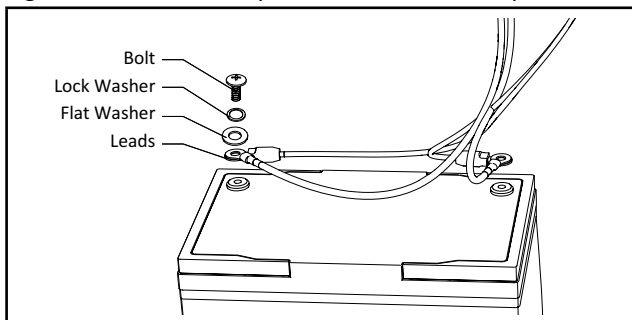
## READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

# WARNING

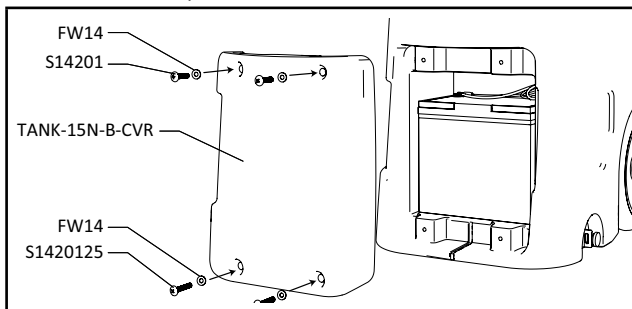
### Battery Instructions

#### To Install battery:

1. Remove packaging from around battery.
2. Verify that the power button (PBS-12V) is in the OFF (extended) position.
3. Verify the battery charger is not connected to charge port and not plugged into a power outlet.
4. Connect red leads to the red terminal and the black leads to the black terminal. (Warning: It is important to connect the leads to the correct terminal. Connecting battery incorrectly may cause irreparable damage to the battery.)
5. Put lock washer onto bolt first, follow by flat washer. Tighten bolt into battery to secure the leads in place.



6. Place cover onto the unit. Secure cover by using shorter screws (S14201) into the top inserts, and longer screws (S1420125) in to the bottom inserts. (Warning: Inserting the incorrect screw can cause irreparable damage to the rotomolded tank).



#### To charge battery:

1. Verify that the power button (PBS-12V) is in the OFF position.
2. Plug the charger into a GFCI protected 110 VAC power outlet.
3. Plug the charger (BC12V-NC72) into the charging port (BCP12V). NOTE: The charger will begin in standby mode, indicated by an orange LED. In standby mode, the charger is not providing any power.
4. Press MODE button on charger until correct mode is selected. Blue LED under 12V Cold is the correct mode.

5. Do not remove charger until green light appears under 100% on the battery charger.
6. After battery has been charged, disconnect charger from charging port by removing plug from charger port. Do not unplug by pulling wire.
7. Replace the protective cap on the charging port.

Note: To prevent premature battery failure, do not store battery in a depleted state for long periods of time.

#### Operation Instructions:

8. Follow all instructions from the chemical manufacturer. Fill the tank with water and the advised percentage of chemical concentrate.
9. Press the power button (PBS-12V) to turn the unit ON.
10. Point the discharge wand in a safe direction and slowly open the discharge ball valve (HV60) to activate the unit.
11. While the unit is running and discharging product, adjust the needle valve (NV18), located inside the control box, to regulate the wetness or dryness of the foam:
  - a. Close needle valve completely in clockwise direction.
  - b. Open needle valve in counter-clockwise direction 2 complete turns.
  - c. Continue to open valve in ¼ turn increments allowing 30 seconds between adjustments until proper consistency of foam is achieved.

#### After Use Instructions:

1. Flush the unit with fresh water for 5 minutes.
2. Press the power button (PBS-12V) to turn the unit OFF, and open the discharge ball valve (HV60) to relieve any pressure remaining in the system.
3. Close the discharge ball valve (HV60) after all pressure has been relieved from the system. Store the unit with the ball valve in the closed position.

#### Maintenance Instructions:

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

Note: Before performing any maintenance, ensure that the unit has been turned OFF and depressurized according to the "After Use Instructions" above. Always disconnect the battery before opening the unit back plate.

- Inspect the air pump (P56/P56K/P56V) for wear and leaks.
- Inspect all hoses for leaks or excessive wear. Make sure all hose clamps are in good condition and properly secured.
- Check the suction line and strainer (STR38-IL) for debris or blockages, and clean as needed.

## READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

# WARNING

### Best Charging Practices:

- Make sure you are using a charger that provides the proper voltage for your battery.
- Do not speed up charging time or increase voltage for a fast charge. This will result in overcharging the battery. Batteries that are overcharged will over heat. Excessive heat can destroy a battery in as little as a few hours. Overcharging kills batteries.
- Do not use a lower charging voltage than required for your battery. By doing so, the battery will never be fully charged. Undercharging leads to reduced capacity creating a battery that needs to work harder than fully charged batteries. Undercharging and overworking leads to shortened battery life.

### Best Maintenance Practice:

- For maximum battery life and performance, batteries should be recharged as soon as possible after each use. Batteries should be stored in a fully charged state. Storing in a discharged state will kill the battery.
- Disconnect the charger after the battery has been fully charged. Continuous over charging or under charging is the worst thing for a SLA battery.
- Check the battery terminals for corrosion and/or battery deformation. A deformed battery or corrosion on the terminals is subject to failure.

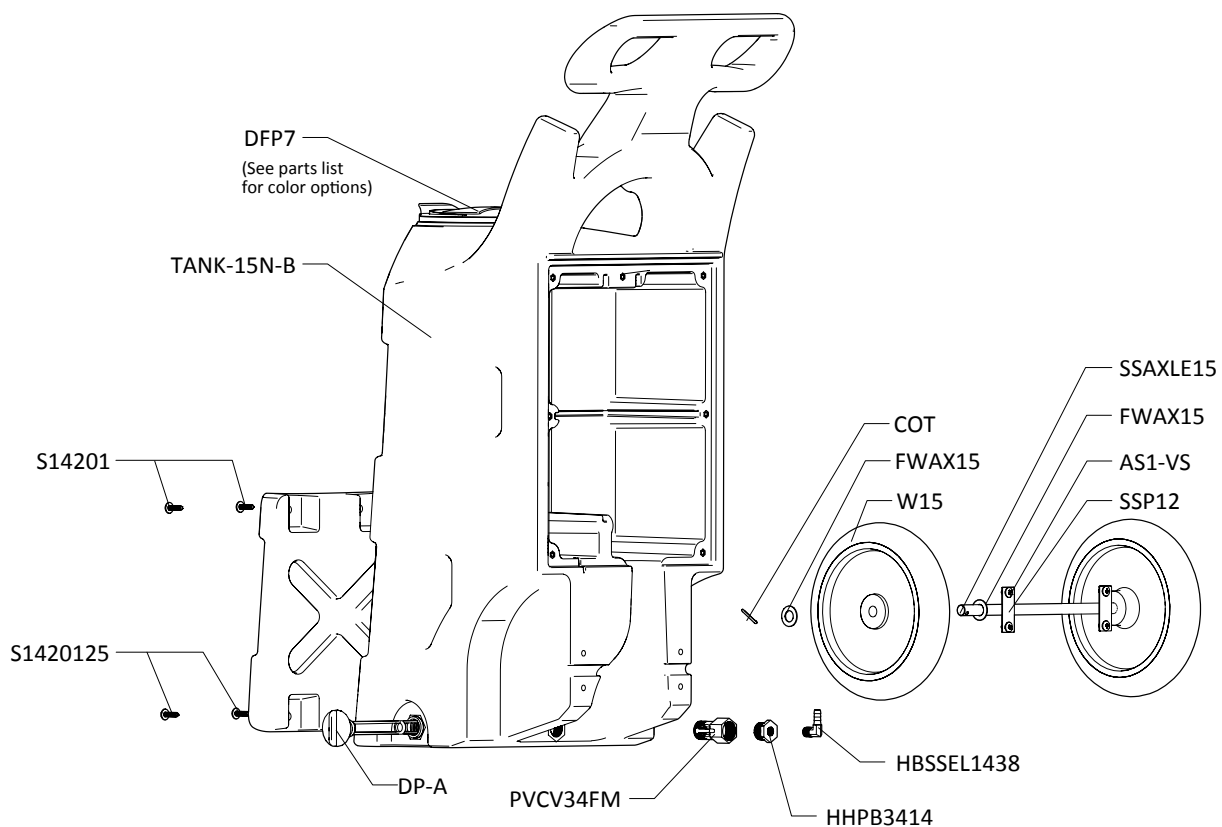
### Troubleshooting Instructions:

- Check to ensure the discharge hose is uncoiled properly, and that there are no kinks that could obstruct fluid flow.
- If needle valve (NV18) valve is open too far, the pump (P56/P56K/P56V) will cycle improperly due to lack of air pressure. If this occurs, reset needle valve as described in Operation Instruction #4.
- Make sure proper foaming chemical and concentration is being used.
- If air passes through the pump (P56/P56K/P56V) without cycling, the pump needs to be replaced.
- If foam comes out wet, no matter where the needle valve (NV18) is positioned, the check valve (CV14QF) may need to be replaced.
- Check for plugged strainer (STR38-IL). Replace strainer if necessary. Strainer must be used.
- Check the mixing material (MIX2) by removing the SMQC-FT to access the mixing material. If the mixing material has a lot of foreign particles in it, make sure the strainer (STR38-IL) is still in place. Clean and replace mixing material.

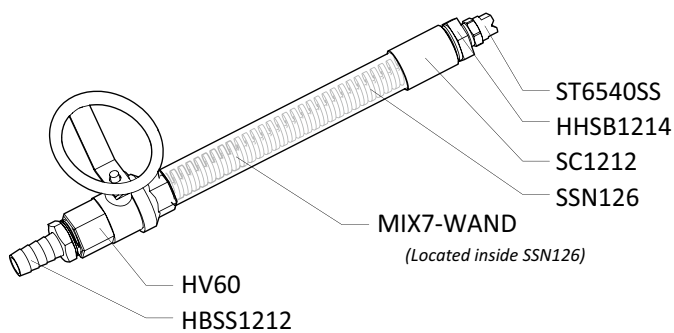
BATTERY TROUBLESHOOTING GUIDE		
PROBLEM	CAUSE	SOLUTION
Power light will not turn on	• Blown fuse	• Replace fuse (FU40-ATO)
	• Battery leads are backwards or disconnected	• Connect leads to correct terminals
Power switch light will not stop blinking	• Depleted battery	• Completely recharge battery
	• Bad battery	• Replace battery (BSLA-12V55)
	• Bad control relay	• Replace control relay (LVRC-12V-40F)
Power switch light is on but unit is not running (when it has previously been operating)	• Unit overheating from extended use	• Turn unit off and let cool at least 1 hour
Battery will not completely charge	• Bad battery	• Replace battery (BSLA-12V55)
	• Bad charger	• Replace charger (BC12V-NC72) or charging port (BCP12V)
Battery discharges too quickly	• Battery was stored in depleted state for long periods of time	• Replace battery (BSLA-12V55)
	• Battery has reached life expectancy	• Replace battery (BSLA-12V55)
	• Battery was charged and run for short periods of time (not allowed to fully charge or discharge)	• Replace battery (BSLA-12V55)

**READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT**

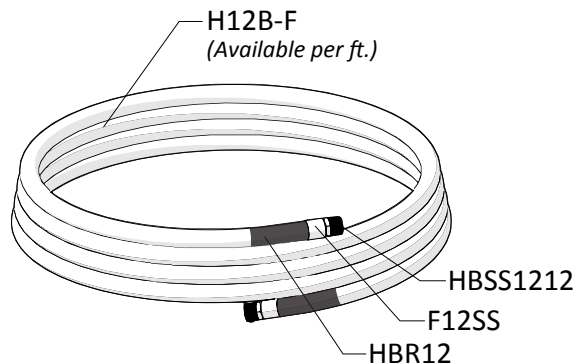
**TANK ASSEMBLY  
ITEM NUMBER: TANK-15N-B-A**



**WAND ASSEMBLY  
ITEM NUMBER: SSWA-BP**



**DISCHARGE HOSE  
ITEM NUMBER: H12-15HBR**



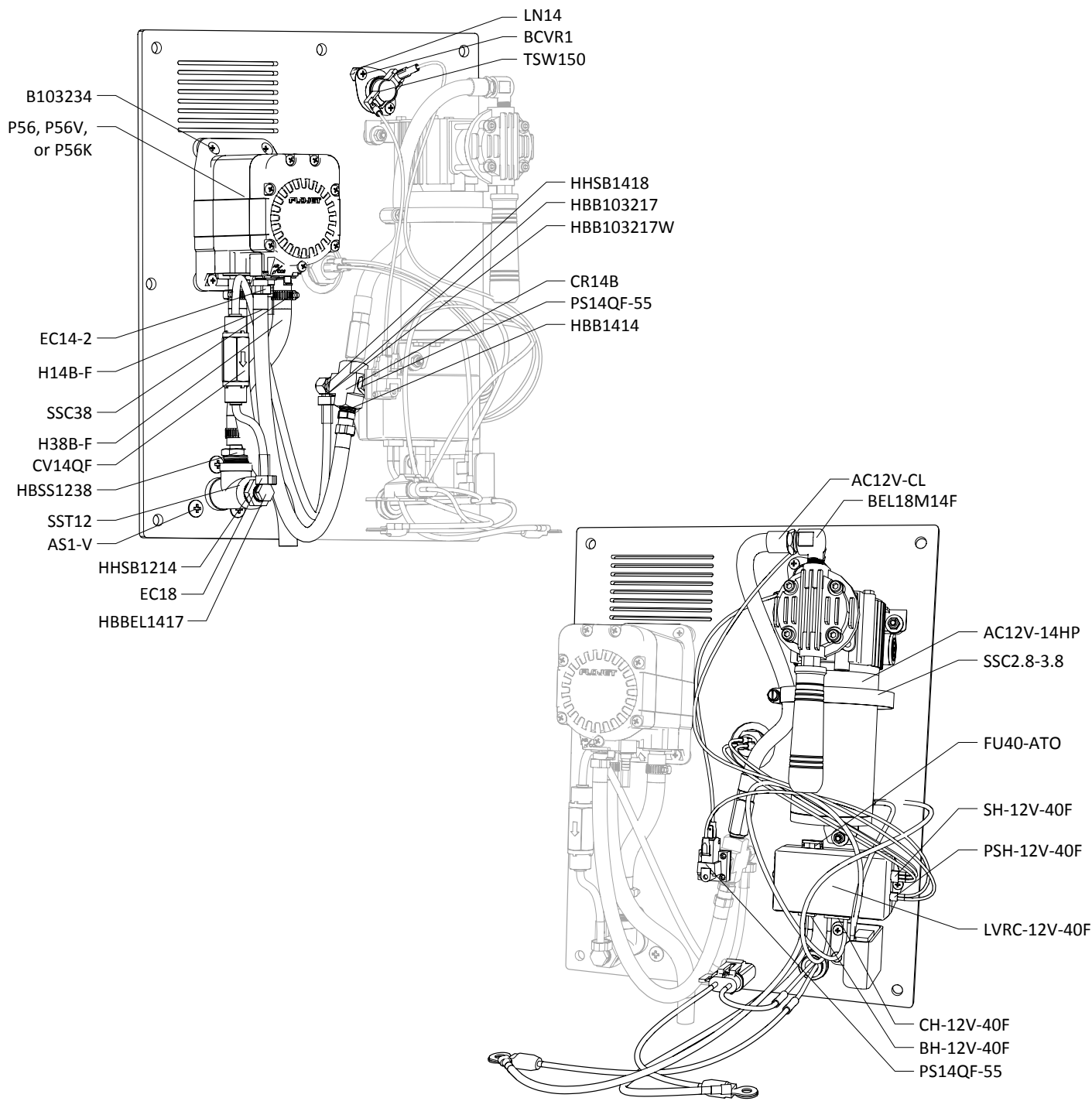
**READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT**

**PLATE ASSEMBLY - Inside View**

ITEM NUMBER (Santoprene pump): PA-BP-15N

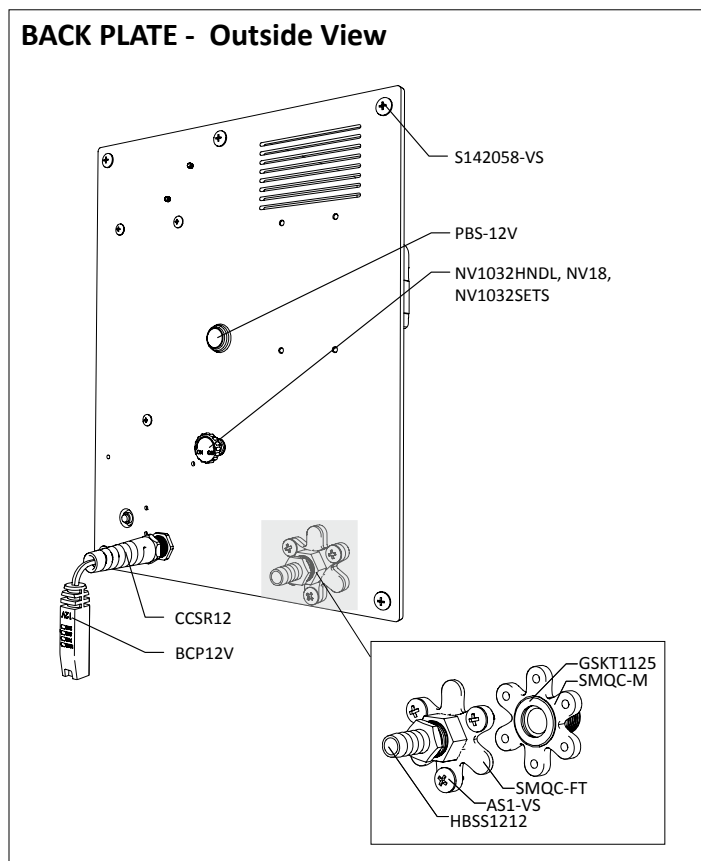
ITEM NUMBER (Kalrez pump): PA-BP-15NK

ITEM NUMBER (Viton pump): PA-BP-15NV

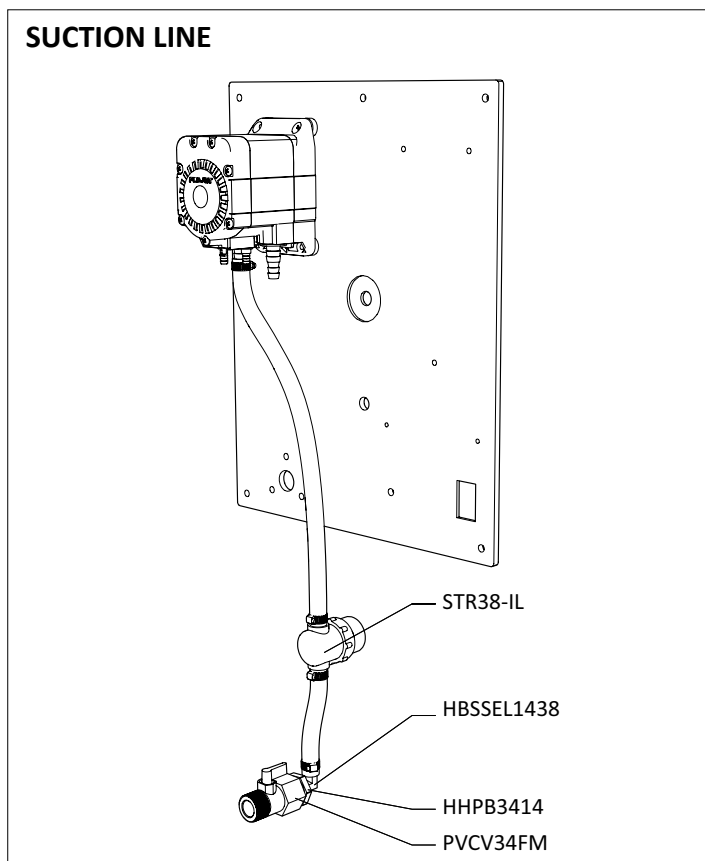


## READ ALL INSTRUCTIONS BEFORE OPERATING EQUIPMENT

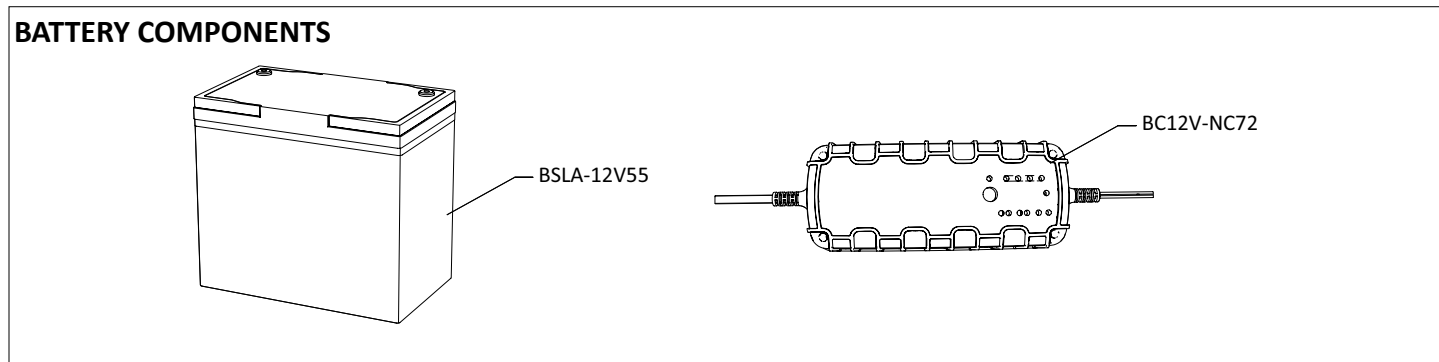
### BACK PLATE - Outside View



### SUCTION LINE



### BATTERY COMPONENTS





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ITEM NUMBER	DESCRIPTION
AC12V-14HP	BARE COMPRESSOR DC 12V 1/4HP -1.2 CFM
AC12V-CL	COMPRESSOR LEAD FOR AC12V-STAINLESS
AS1-VS	1/4-20 X 1/2 PHIL TRUSS MACH SCREW 19-8 W/516 ORANGE VIBRASEAL PATCH
B10321	10-32 X 1 PHIL TRUSS MACH SCR 18-8
B103234	10-32 X 3/4 PHIL TRUSS MACH SCR 18-8
B8X58	8-15 x 1/2 FLAT PHIL TY-A 18-8 PLN
BC12V-NC72	7.2 AMP 12V BATTERY CHARGER
BCP12V	BATTERY CHARGING PORT FOR BC12V-NC72
BCVR1	10-32 X 1/2 PHIL PAN HEAD SS
BEL18M14F	BRASS ELBOW 1/8IN MPT X 1/4IN FPT
BH-12V-40F	BATTERY HARNESS FOR LVRC-12V-40F-BLACK AND RED WIRES
BH-CP-10F	BATTERY HARNESS TO CHARGING PORT CONNECTOR - 10 AMP FUSE
BSLA-12V55	55 AMP HOUR SEALED LEAD ACID BATTERY
CCSR12	STRAIN RELIEF CORD GRIP-1/2IN NPT
CH-12V-40F	COMPRESSOR HARNESS FOR LVRC-12V-40F-BROWN AND YELLOW WIRES
COT	1/8 X 1 COTTER PIN 18-8 S/S
CR14B	1/4 FEMALE BRASS CROSS
CV14QF	PVC QUICK CONNECT CHECK VALVE 1 LB-HASTELLOY SPRING-EP SEALS
DFP7	7 INCH HINGED CAP ASSEMBLY - INCLUDES BLACK CAP, LID FLANGE AND HINGE PIN
DFP7-GN	7 INCH HINGED CAP ASSEMBLY - INCLUDES GREEN CAP, LID FLANGE AND HINGE PIN
DFP7-RD	7 INCH HINGED CAP ASSEMBLY - INCLUDES RED CAP, LID FLANGE AND HINGE PIN
DFP7-YL	7 INCH HINGED CAP ASSEMBLY - INCLUDES YELLOW CAP, LID FLANGE AND HINGE PIN
DFP7-C	7 INCH FILL CAP POLYETHYLENE BLACK
DFP7-C-BL	7 INCH FILL CAP POLYETHYLENE BLUE PANTONE
DFP7-C-GN	7 INCH FILL CAP POLYPRO GREEN PANTONE
DFP7-C-RD	7 INCH FILL CAP POLYETHYLENE RED PANTONE
DFP7-C-YL	7 INCH FILL CAP POLYETHYLENE YELLOW PANTONE
<i>DFP7-F</i>	7 INCH TANK LID FLANGE POLYETHYLENE
<i>DFP7-PIN</i>	HINGE PIN FOR 7 INCH FILL CAP AND FLANGE
DP-A	DRAIN PLUG ASSEMBLY FOR NATURAL PORTABLE UNITS - INCLUDES PLUG AND GASKET
<i>DP</i>	FRONT DRAIN PLUG FOR PORTABLE UNIT POLYETHYLENE
<i>DP-G</i>	FKM LATHE CUT 60 DUROMETER
EC14-2	OETIKER CLAMP 13.8
EC18	OETIKER CLAMP - 11.3
F12SS	STAINLESS .875 ID FERRULE FOR 1/2 INCH HOSE
FW14	1/4 X 5/8 OD FLAT WASHER 18-8 PLN

ITEM NUMBER	DESCRIPTION
FWAX15	FLAT AXLE WASHER
FWP12	7/8 ID X 1.5 OD X 0.05 THK SSFW
GSKT1125	VITON 1/16 in THICK-.75 in ID-1.125 IN OD
GSKT-7R70-12	BLACK SOFT URETHANE FOAM GASKET TAPE - 1/2" WIDE x 3/16" THICK - ACRYLIC ADHESIVE
H12B-F	1/2 INCH BLUE HOSE-HYBRID TPE-Available per ft.
H14B-F	1/4 INCH BLUE HOSE-HYBRID TPE-Available per ft.
H14BU	1/4in OD BLUE POLYURETHANE TUBING - Available per ft.
H14C	1/4in ID CLEAR POLYVINYL TUBING - Available per ft. (3/8 in OD)
H38B-F	3/8 INCH BLUE HOSE-HYBRID TPE-Available per ft.
HBB103217	HOSE BARB 10-32 MPT X B4 FITTING
HBB103217W	FIBER WASHER FOR HBB103217 - W/ BARB
HBB1414	HOSE BARB 1/4 MPT X 1/4 BARB
HBBEL1417	HOSE BARB 1/4 MPT X .17 BARB ELBOW
HBR12	HOSE BEND RESTRICTOR - 1/2 INCH HOSE
HBSS1212	STAINLESS HOSE BARB 1/2 MPT X 1/2 BARB
HBSS1238	STAINLESS HOSE BARB 1/2 MPT X 3/8 BARB
HBSS1438	STAINLESS HOSE BARB 1/4 MPT X 3/8 BARB ELBOW
HHPB3414	HEX HEAD POLY BUSHING 3/4 MPT X 1/4 FPT
HHSB1214	HEX HEAD STAINLESS BUSHING 1/2 MPT X 1/4 FPT
HHSB1418	HEX HEAD STAINLESS BUSHING 1/4 MPT X 1/8 FPT
HV60	1/2IN STAINLESS BALL VALVE - WELDED NUT
LN1032	LOCKNUT 10-32 NPT
LN14	1/4-20 NE NYL INS LOCKNUT 18-8 PLN
LVRC-12V-40F	LOW VOLTAGE RELAY CONTROLLER-12V-40 AMP FUSE
<i>FU40-ATO</i>	40 AMP FUSE-ATO
<i>LVRC-12V-40F-P</i>	LOW VOLTAGE RELAY CONTROLLER-12V-NO AMP
MIX2	.625 OD x 2 IN BRUSH-OVERALL LENGTH 2.5 IN
MIX7	7 INCH WIRE TWISTED BRUSH-STAINLESS STEEL-13.5IN OVERALL LENGTH
MIX7-BEND	BEND AND TRIM MIX7
NV1032HNDL	BLACK HANDLE FOR NEEDLE VALVE
NV1032SETS	SET SCREW FOR HANDLE
NV18	NV2SV-B,6.5T DS,1/8M,10-32F-VALVE ONLY-NO SETS-NO HANDLE
P56	PUMP WITH SANTOPRENE SEALS - INCLUDES HOSE BARBS, AIR FITTING, AND EXHAUST BARB
P56K	PUMP WITH KALREZ SEALS - INCLUDES HOSE BARBS, AIR FITTING, AND EXHAUST BARB
P56V	PUMP WITH VITON SEALS - INCLUDES HOSE BARBS, AIR FITTING, AND EXHAUST BARB

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ITEM NUMBER	DESCRIPTION
PBS-12V	Push button switch with 12 volt led light
PL15NB	1/4 IN BLACK BACK PLATE FOR TANK-15N-B
PL15NB-IN	1/4 IN BLACK INSERT PLATE FOR TANK-15N-B CAVITY
PS14QF-55-FH	PRESSURE SWITCH - 1/4 QUICK FIT - 55 PSI - DROP SHIPPED TO HARNESS MANUFACTURER
PSH-12V-40F	PRESSURE SWITCH AND HARNESS FOR LVRC-12V-40F-RED WIRES
PVCV34FM	PVC VALVE 3/4in FPT X 3/4in MPT
QF14P	QUICK FIT-1/4 MPT X 1/4 OD TUBE-POLYPROPYLENE
S103238SS	10-32 x 3/8 PHILLIPS PAN 18-8 SS
S14201	1/4 20 Pan Head Screw - 1 inch Stainless
S1420125	1/4 20 Pan Head Screw 1 and 1/4 inch Stainless
S142058-VS	1/4-20 X 5/8 PHIL TRUSS MACHINE SCREW 18-8 W/#516 VIBRASEAL ORANGE PATCH
SC1212	S.S. COUPLER 1/2in BY 1/2in
SH-12V-40F	SWITCH HARNESS -ON/OFF- FOR LVRC-12V-40F-GRAY, ORANGE AND YELLOW WIRES
SMQC-FT	PLATE QUICK CONNECT FPT
SMQC-M	PLATE QUICK CONNECT MPT

ITEM NUMBER	DESCRIPTION
SSAXLE15	SS AXLE .625 DIA X 15.45 IN
SSC2.8-3.8	STAINLESS SCREW BAND CLAMP TO SECURE MULTIPLE HOSES
SSC38	STAINLESS SCREW BAND CLAMP FOR 3/8 IN HOSE
SSN126	STAINLESS PIPE NIPPLE 1/2 MPT X 1/2 MPT- 6 IN LONG
SSP12	STAINLESS STEEL AXLE PLATE - 2.5 inch X 1 inch - 2 HOLE
SSST	SCREEN DISC .687 DIA. 10 X 10 MESH @ .020 DIA. 300 SERIES S.S.
SST12	STAINLESS TEE 1/2 FPT
ST6540SS	SPRAY TIP-65 DEGREE-4.0 GPM-STAINLESS
STR38-IL	IN LINE STRAINER-3/8 BARB-EPDM GSKT-20 MESH SS
TANK-15N-B-CVR	15 GALLON NATURAL BATTERY TANK COVER
TSW150	THERMAL SWITCH 150 DEGREE
W15	NONMARKING WHEEL FOR PORTABLE UNITS
WC14RT14	INSULATED WIRE CONNECTOR - #14-16 RING TERMINAL - 1/4 INCH STUD