

User Manual



LiteFlex 19 (LF19)

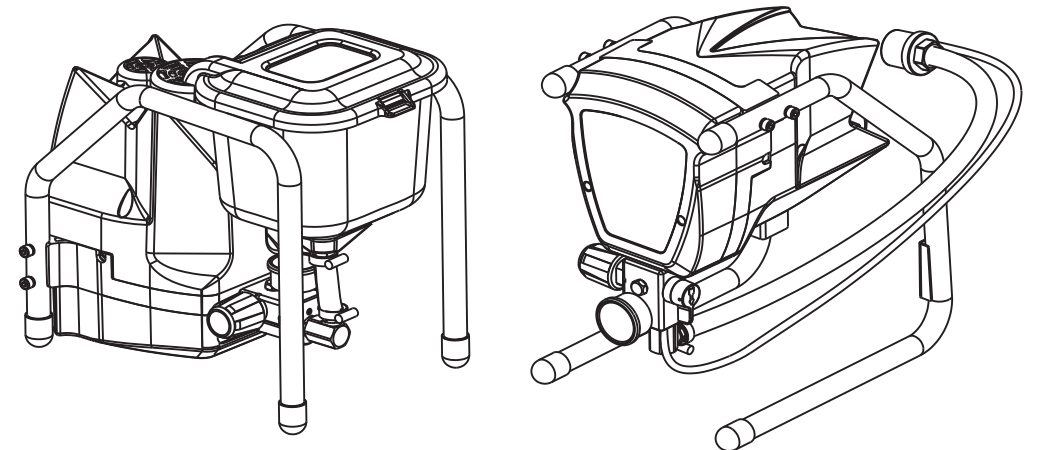
Portable Electric Airless Sprayer

(Max Working Pressure 19 Mpa, 2756 psi)



Important Safety Instructions

Please read this manual and related product documents carefully before use.
Do not operate the machine until you fully understand all operating procedures.
Keep this manual for future reference.



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Warning

Important Grounding Information:

Please read this manual before operating to fully understand all instructions regarding proper use and safety warnings.

The following information will help you determine when to use the grounding wire and clamp provided with the sprayer.

Check the paint container label to determine whether the material is a flammable oil-based coating. Request the Safety Data Sheet (SDS) from your supplier.

Both the container label and the SDS will indicate the material composition and specific safety precautions.

Paints, coatings and cleaning materials are generally categorized as follows:

Grounding Required?	Paint Type	Description
No	Water-based	Label indicates it can be cleaned with soap and water.
Yes 	Oil-based	Label indicates the material is combustible and can be cleaned with mineral spirits or non-flammable solvent. Use in outdoor or well-ventilated indoor areas with fresh air. Follow grounding instructions in this manual.
Yes 	Flammable	Contains flammable solvents such as xylene, toluene, naphtha, MEK, lacquer thinner, acetone, alcohol, or turpentine. Label indicates flammability. Use outdoors or in well-ventilated indoor areas with fresh air. Follow grounding instructions when using this type of paint.

Warning

The following warnings apply to the setup, operation, grounding, maintenance, and repair of this equipment. The exclamation mark symbol indicates general warnings, while other hazard symbols indicate specific dangers related to certain procedures. When these symbols appear in this manual, on the equipment, or on warning labels, refer to the related instructions. Additional hazard symbols and warnings not listed in this section may appear in relevant parts of this manual.

	
 	FIRE AND EXPLOSION HAZARD – Grounding Oil-based and flammable materials can generate static electricity during spraying or flushing. In the presence of solvent or paint fumes, static discharge may cause fire or explosion. To reduce the risk of fire or explosion when spraying such materials: · Properly connect the grounding wire and clamp to a true earth ground. · Stop operation immediately if you see static sparks or feel a shock. Do not resume operation until the issue is identified and corrected. · Ensure that all components of the spray system—including the pump, hose assembly, spray gun, and all objects in and around the spray area—are properly grounded to prevent static discharge. · Use only HVBAN grounded high-pressure airless spray hoses. See Grounding Instructions on page 7. · Ensure all containers and collection systems are grounded to prevent static discharge. Do not use liners unless they are anti-static or conductive.
   	FIRE AND EXPLOSION HAZARD Flammable vapors in the work area (such as solvents and paint fumes) can ignite or explode. To avoid fire or explosion: · Do not spray flammable or combustible materials near open flames or ignition sources (e.g., cigarettes, motors, electrical equipment). · Do not use coatings or solvents that contain halogenated hydrocarbons. · Do not spray flammable or combustible fluids in enclosed or confined spaces. · Ensure the spray area is well ventilated with sufficient fresh air. · During spraying, flushing, cleaning, or servicing, place the pump at least 20 feet (6.1 meters) away from the spray area in a well-ventilated location. Do not spray the pump unit. · Do not smoke or spray in the presence of sparks or open flames. · Do not operate light switches, engines, or other spark-generating devices in the spray area. · Keep the area clean and free of paint or solvent containers, debris, and other flammable materials. · Know the materials you are spraying. Read all Safety Data Sheets (SDS) and container labels for paints and solvents. Follow the safety guidelines provided by the material manufacturers. · Always keep a functioning fire extinguisher in the work area.

Warning

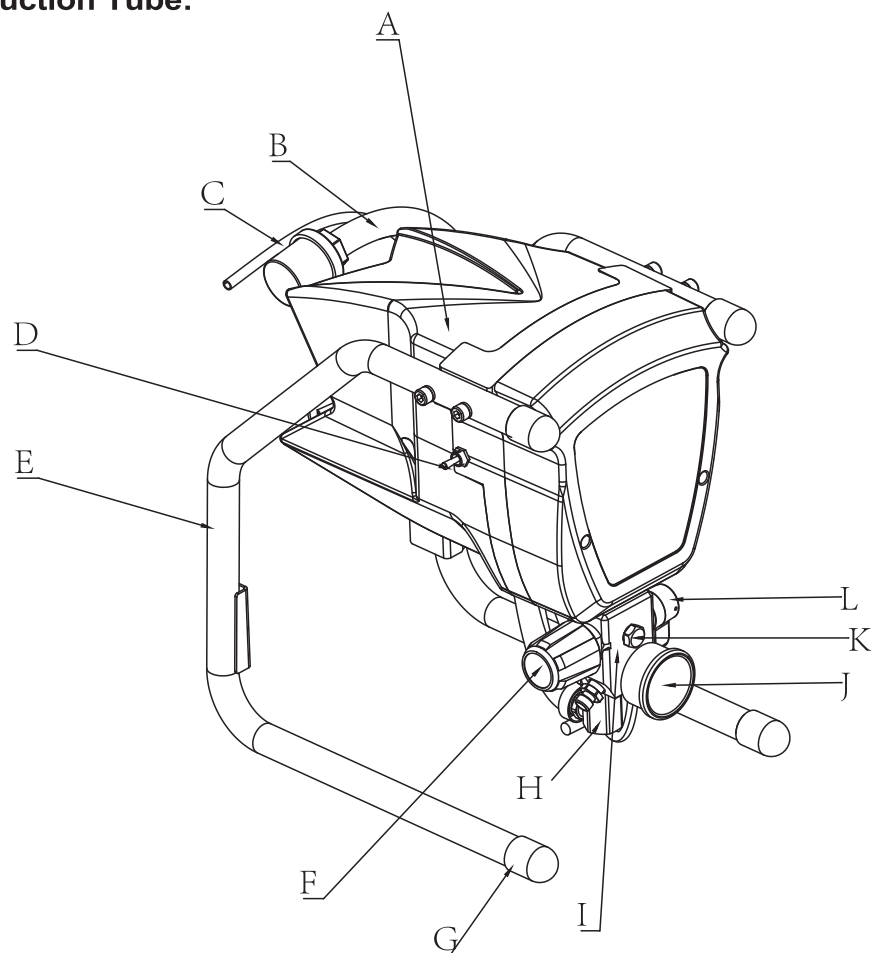
     	Skin Injection Hazard High-pressure spray can inject toxic fluid into the body and cause serious injury, possibly leading to amputation. Seek immediate medical attention if injection occurs. - Never aim the spray gun at yourself, others, or animals. - Keep hands and body away from the spray stream. Never use any part of your body to check for leaks. - Always use the spray tip guard. Do not spray without the tip guard properly installed. - Be extremely careful when cleaning or changing the spray tip. If the spray tip becomes clogged, follow the Pressure Relief Procedure to turn off and depressurize the unit before removing and cleaning the tip. - Even after powering off, the unit may still be pressurized. Do not leave the equipment energized or pressurized when unattended. - Always perform the Pressure Relief Procedure before leaving the machine unattended, or before cleaning, servicing, or removing any parts. - Inspect hoses and components regularly for signs of wear, damage, or leaks. Replace any damaged parts immediately. - This system can generate working pressures up to 2756 psi (190 bar, 19 MPa). Use only components and accessories rated for at least this pressure. - Always engage the trigger lock when not spraying. Ensure the trigger lock is functioning correctly. - Make sure all connections are secure before operation. - Know how to quickly shut off the unit and release pressure. Be thoroughly familiar with all controls.
	Equipment Misuse Hazard – Personal Injury Risk Misusing the equipment can result in serious injury or death. - Always wear proper gloves, goggles, and a respirator or face mask when spraying. - Do not operate or spray near children. Keep children away from the sprayer at all times. - Do not overreach or stand on unstable surfaces. Maintain proper footing and balance at all times. - Stay alert and focused on the operation. - Do not operate the equipment while tired, under the influence of drugs, alcohol, or medication. - Do not twist, kink, or excessively bend the hose. - Do not expose the hose to pressures or temperatures beyond its rated limits. - Do not pull or lift the unit by the hose. - Do not use a hose shorter than 25 feet (7.6 meters) when spraying. - Do not alter or modify the equipment. Unauthorized modifications may void safety certifications and create hazards. - Use the sprayer only in dry locations. Do not expose the unit to water or operate in the rain. - Operate only in well-lit areas. - Ensure the unit is suitable for the rated voltage and that the working environment meets the required safety conditions.

Warning

    	High-Pressure Aluminum Parts Hazard Using incompatible fluids with aluminum components under high pressure may cause a dangerous chemical reaction and equipment rupture. Failure to follow this warning may result in death, serious injury, or property damage. - Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents, or liquids containing such solvents. - Do not use chlorine bleach. - Many other fluids may contain chemicals that react with aluminum. Consult your material supplier for chemical compatibility information. - Know how to quickly shut off the unit and release pressure. Be thoroughly familiar with all controls.
	Moving Parts Hazard Moving parts can pinch, cut, or sever fingers and other body parts. - Keep clear of moving parts. - Do not operate the equipment with guards removed or covers open. - The equipment may start unexpectedly. Before inspecting, moving, or servicing the unit, always follow the Pressure Relief Procedure and disconnect all power sources.
	Toxic Fluid or Fume Hazard Toxic fluids or vapors can cause severe injury or death if splashed into the eyes or skin, inhaled, or accidentally ingested. - Read the Safety Data Sheets (SDS) to understand the specific hazards of the fluids used. - Store hazardous fluids in approved containers and dispose of them according to local regulations.
	Personal Protective Equipment (PPE) Always wear appropriate personal protective equipment in the work area to reduce the risk of serious injury, including eye injury, hearing damage, inhalation of toxic fumes, and burns. Required PPE includes, but is not limited to: - Safety goggles and hearing protection. - Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturers.

LiteFlex19 Components Identification

With Suction Tube:

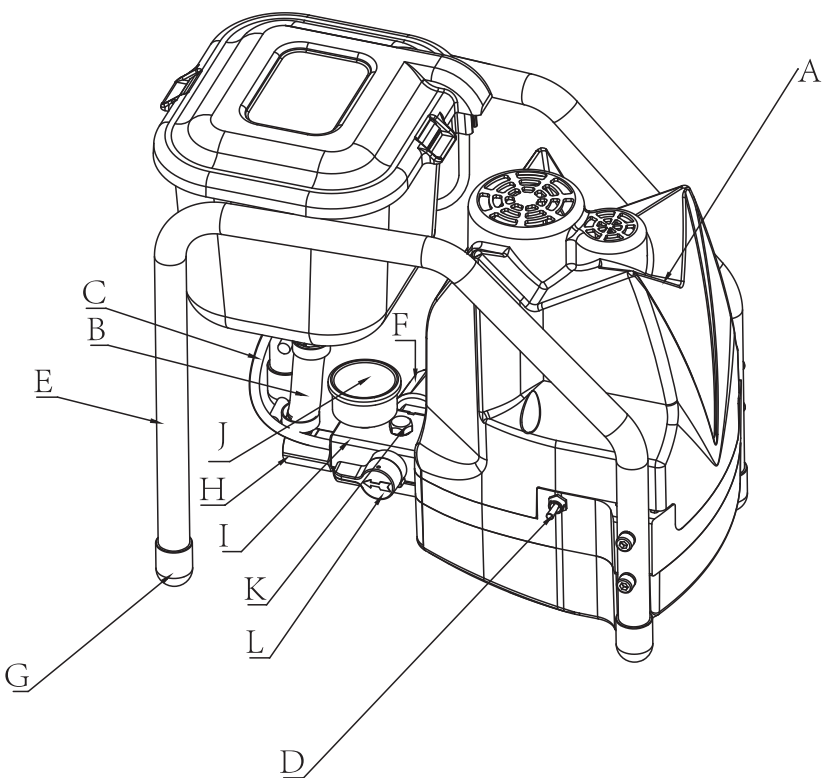


NO.	DESCRIPTION	QTY.
A	Machine Cover	1
B	Suction Tube	1
C	Prime Tube	1
D	Power Switch	1
E	Rack	1
F	Pressure Control Switch	1

NO.	DESCRIPTION	QTY.
G	Rubber Feet	4
H	Suction Tube Connector Base	1
I	Housing	1
J	Pressure Gauge	1
K	Outlet Valve	1
L	Prime Valve	1

LiteFlex19 Components Identification

With Hopper:



NO.	DESCRIPTION	QTY.
A	Machine Cover	1
B	Suction Tube	1
C	Prime Tube	1
D	Power Switch	1
E	Rack	1
F	Pressure Control Switch	1

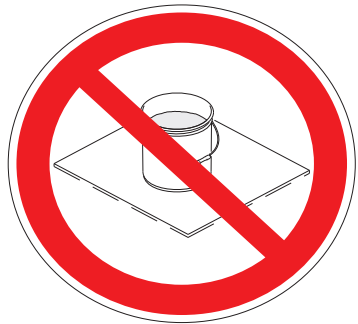
NO.	DESCRIPTION	QTY.
G	Rubber Feet	4
H	Suction Tube Connector Base	1
I	Housing	1
J	Pressure Gauge	1
K	Outlet Valve	1
L	Prime Valve	1

Grounding

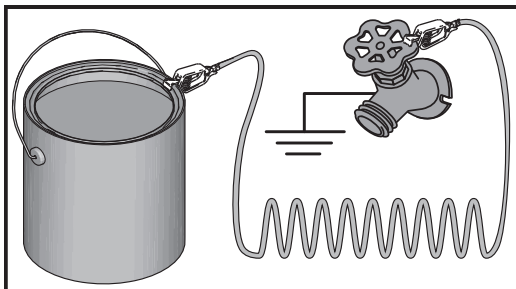
Paint Containers:

For solvents and oil-based materials: follow local regulations. Use only conductive metal paint containers placed on a grounded surface, such as concrete floors.

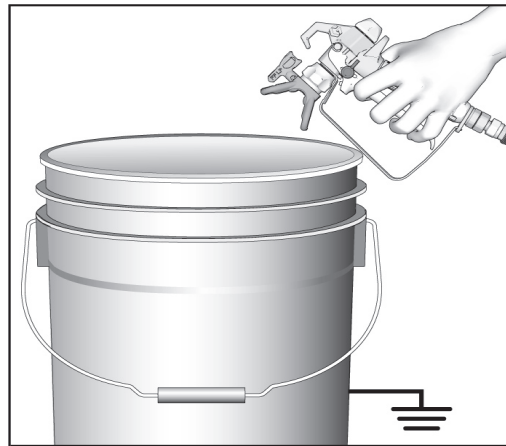
Do not place paint containers on non-conductive surfaces, such as paper or cardboard, as this may affect grounding continuity.



Always ground metal paint containers: connect a grounding wire to the container. Attach one end of the wire to the paint container and the other end to a true earth ground, such as a water pipe.



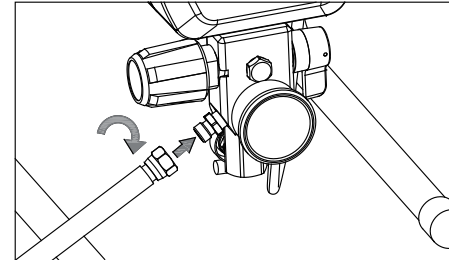
To ensure continuous grounding when cleaning up sprayer or relieving pressure: securely attach the metal part of the spray gun to the grounded metal paint container before starting to spray.



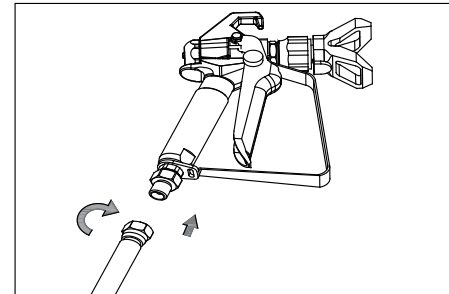
Installation

When unpacking the sprayer for the first time or after long-term storage, please follow the steps below to install it correctly:

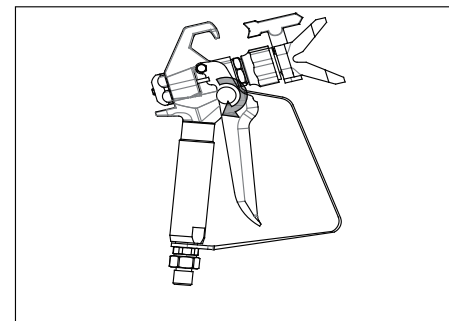
1. Use a wrench to tighten the high-pressure hose clockwise onto the gun connection.



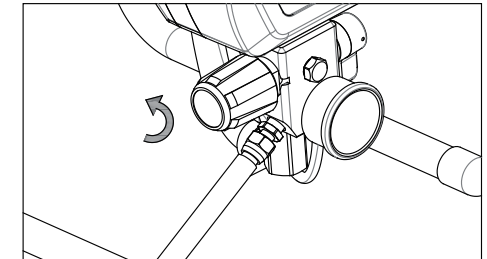
2. Use a wrench to connect the other end of the high-pressure hose to the spray gun, tighten it.



3. Engage the spray gun trigger lock to prevent accidental trigger activation.



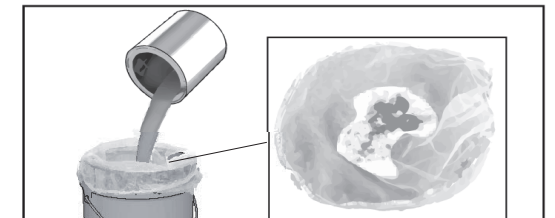
4. Turn the pressure control switch counterclockwise to the lowest pressure setting.



5. After opening the sprayer packaging for the first time, remove the suction tube filter and check for any blockages or debris inside. Clear any blockages before use.

6. Filter the paint

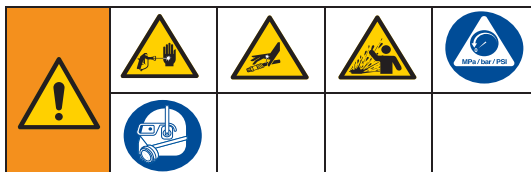
To avoid clogging the suction tube or nozzle with lumps or debris, filter the paint before use. Use a paint filter or other filtration device (not included) placed above a clean hopper, then slowly pour the paint into the filter to remove impurities.



Pressure Relief

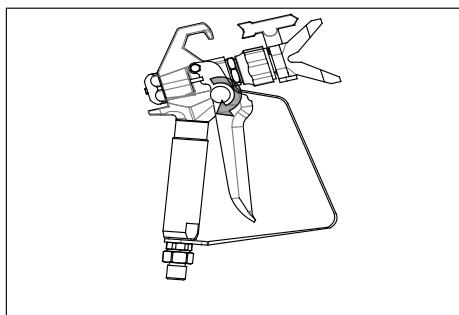


When you see this symbol, perform the pressure relief procedure.

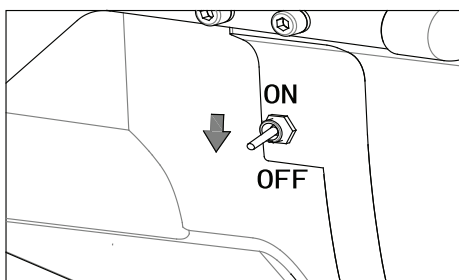


The equipment remains pressurized until manually relieved. To prevent serious injury from pressurized fluid (such as skin injection or fluid splashes), always follow the pressure relief procedure when stopping the sprayer, before cleaning, inspecting, or servicing the equipment.

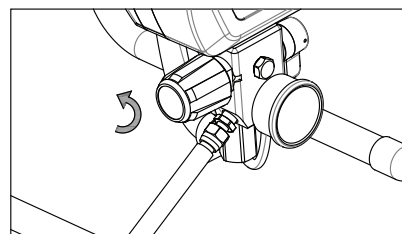
1. When stopping spraying, engage the spray gun trigger lock to prevent accidental trigger pull.



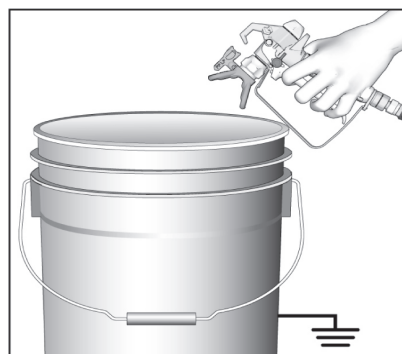
2. Switch the Power Switch to the OFF position to turn off the machine.



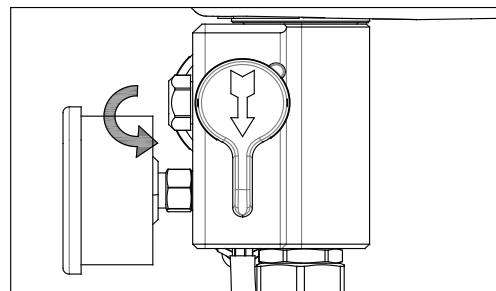
3. Turn the Pressure Regulator Knob counterclockwise to the lowest pressure setting.



4. Hold the spray gun firmly against the bucket and point it into the bucket. Release the trigger lock and squeeze the spray gun trigger to relieve pressure.



5. Engage the trigger lock again.
6. Place the Prime Tube into the bucket and move the Prime Valve to the return position to relieve pressure.



7. If you suspect the nozzle or hose is clogged or pressure is not fully relieved:

- a. Slowly loosen the spray tip guard retaining nut or the hose end fitting to gradually release pressure.
- b. Continue loosening until the nut or fitting is fully removed.
- c. Clear any clogs from the airless hose or nozzle.

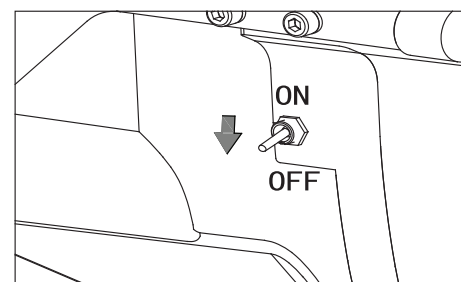
Startup



Flushing Stored Fluids:

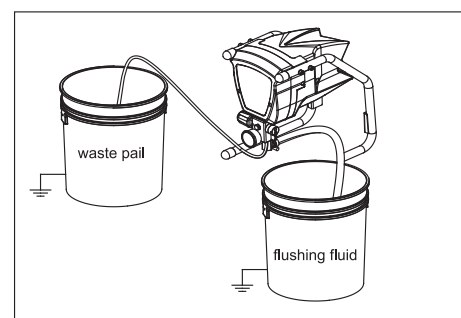
The sprayer system contains a small amount of test fluid from factory testing. Before first use, be sure to flush out the test fluid from the sprayer.

1. Perform the Pressure Relief Procedure (see page 9).
2. Turn the Power Switch off.

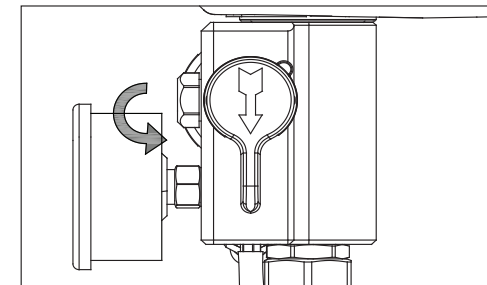


Flushing Procedure for Suction Tube Type:

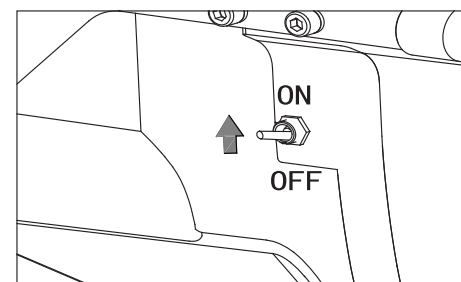
1. Place the Prime Tube into a waste bucket and the Suction Tube into the flushing fluid.



2. Set the Prime Valve to the prime position to relieve pressure.



3. Plug in the power cord.
4. Turn on the Power Switch.



5. After the sprayer starts pumping, allow the flushing fluid to flow from the Prime Tube into the waste bucket for 30 to 60 seconds.

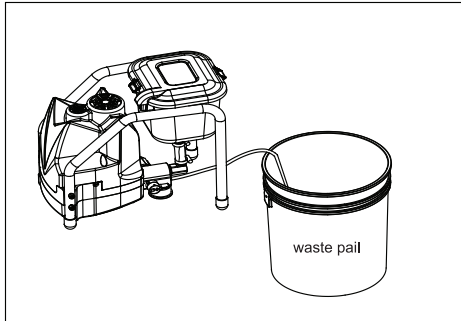
6. Turn off the Power Switch.

7. Check the equipment and hoses for leaks. If leaks are found, perform the Pressure Relief Procedure (see page 9), then retighten all connections and repeat the startup steps. If no leaks are detected, proceed to the next operation.

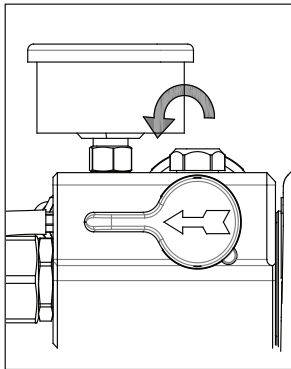
Startup

Flushing Procedure for Hopper Type

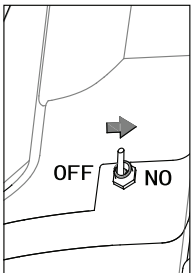
1. Place the Prime Tube into the waste bucket, and add approximately 2 liters of flushing fluid into the hopper.



2. Set the Prime Valve to the prime position to relieve pressure.



3. Plug in the power cord.
4. Turn on the Power Switch.



5. After the sprayer starts pumping, allow the flushing fluid to flow from the Prime Tube into the waste bucket for 30 to 60 seconds, until the hopper is emptied.

6. Turn off the Power Switch.

7. Check the equipment and hoses for leaks. If leaks occur, perform the Pressure Relief Procedure (see page 9), retighten all connections, and repeat the startup steps. If no leaks are found, proceed to the next step.

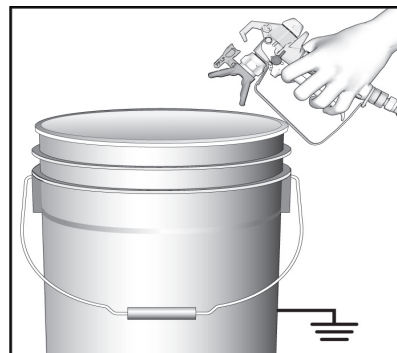
With Paint

Transfer the Suction Tube to the paint bucket and immerse it in the paint. For hopper-type equipment, slowly pour paint into the hopper, which holds approximately 5.2 liters.

1. Turn on the Power Switch.
2. After pumping begins, wait patiently until paint flows steadily from the Prime Tube.
3. Turn off the Power Switch.

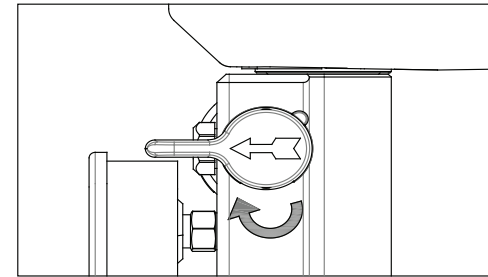
Starting to Spray with the Spray Gun

1. Hold the spray gun firmly against and point it into the waste bucket.



Startup

2. Release the trigger lock.
3. Turn on the Power Switch.
4. Rotate the Prime Valve to the spray position.

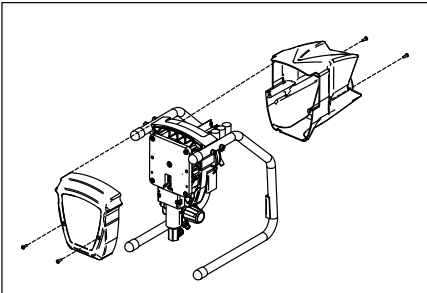


5. Squeeze the spray gun trigger until paint flows from the spray gun.

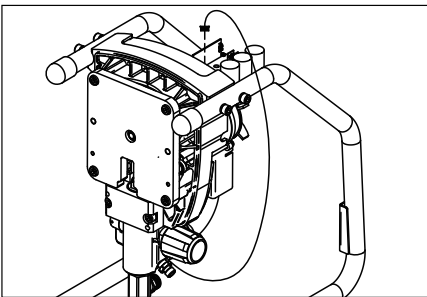
6. Release the trigger and engage the trigger lock. Then place the Prime Tube into the paint bucket (for hopper type, insert the Prime Tube into the hopper and clamp it onto the hopper).

LiteFlex Pump Assembly & Maintenance

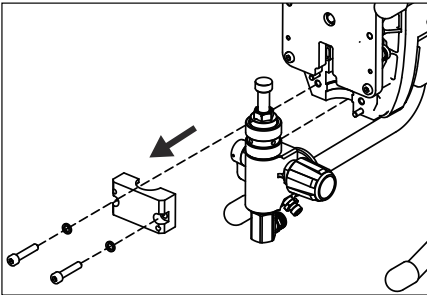
Pump Assembly Removal



1. Remove the Front Cover and Machine Cover.

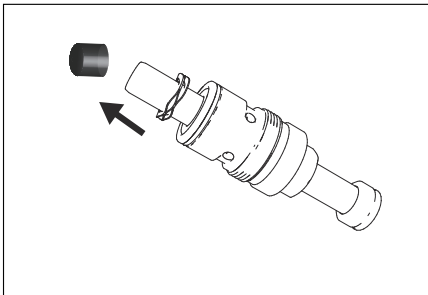


2. Detach the sensor.

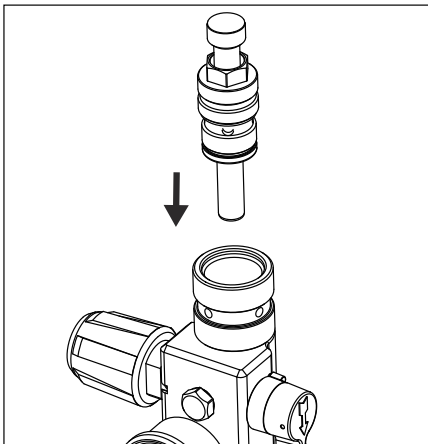


3. Remove the two bolts on the Pump Connections mounting block, take off the mounting block, and pull out the Pump Connections.

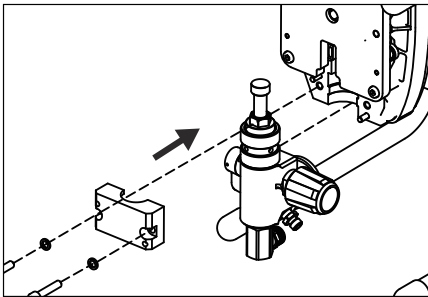
Pump Assembly Installation



1. Remove the protective cap from the end of the piston rod.



2. Invert the Pump Connections, and manually insert the new piston rod.



3. Install the Pump Connections into position and secure with the mounting block.

Troubleshooting



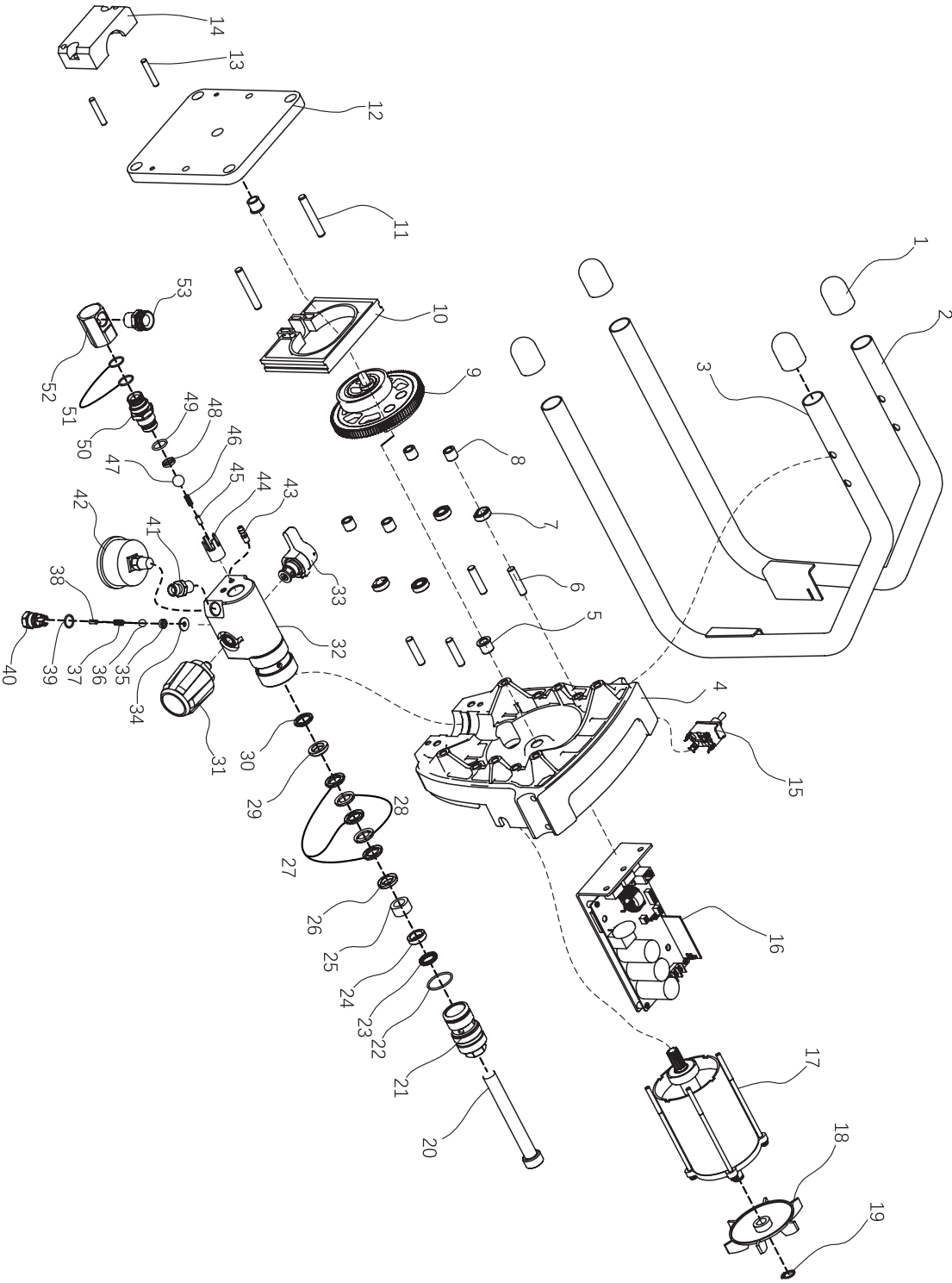
Note:
 1. Before servicing the equipment, please perform the Pressure Relief Procedure (see page 9).
 2. The troubleshooting solutions provided in the table are the most common methods.
 3. If the problem cannot be resolved using the methods listed, please contact HVBAN or an authorized distributor immediately.

Problem	Cause	Solution
Motor does not run	Pressure Regulator Knob is at minimum setting	Turn the Pressure Regulator Knob clockwise to increase pressure.
	Pump is stuck (coating inside pump has hardened or fluid is frozen)	Turn off the Power Switch. If the internal fluid is frozen, do not operate the machine. Place the equipment in a warm area for a few hours until thawed, then restart. Forced operation may damage the motor, control board, or other moving parts. If the fluid has hardened, check whether the paint has solidified. If hardened, refer to Cleaning & Disassembly, (page 13). If the pump still doesn't work after inspection, contact HVBAN or an authorized distributor.
	Motor or control system failure	Contact HVBAN or an authorized distributor immediately.
Sprayer runs, but does not suck in or deliver fluid	Prime Valve is in "Spray" position	Switch the Prime Valve to prime position until fluid comes out from the spray gun.
	Coating contains debris	Filter the paint.
	Paint is too thick	Dilute the paint as needed.
	Pump strainer is clogged or suction pipe not fully submerged	Clean the strainer and ensure the Suction Tube is completely immersed in the paint.
	there is debris in intake housing and inlet ball parts	Disassemble the lower pump, clean or replace the Inlet Valve and Ball.
	Suction tube leaking	Check suction tube connections for looseness or damage.

Troubleshooting

Problem	Cause	Solution
Pump draws fluid properly, but poor spraying effect	Spray tip may be clogged	Clean the tip obstruction. Rotate the spray tip 180°.
	Paint contains debris	Filter the paint
	Pressure too low	Turn the pressure regulator knob to increase pressure
	Gun filter is clogged	Clean or replace the filter
	Selected tip is too large and incompatible with the sprayer	Replace with a proper spray tip
	Spray tip is worn	Replace with a new spray tip
	Tip gasket is worn	Replace with a new tip gasket
	Strainer or suction tube is clogged partly or not fully immersed in paint	Clean the strainer and ensure the suction tube is fully immersed in paint
	Paint is too thick	Thin the paint
	High-pressure hose is too long	Replace with properly length hose
Spray gun can't spray when pull the trigger	Nozzle plugging	Clean the tip
	Unable to draw fluid normally	Refer to the previous item
Leakage at the prime tube interface	The prime valve leakage or damage	Replace the prime valve
Coating leakage from the pump body interface	Pump body sealing ring is worn	Replace the pump sealing ring
Motor heats up and operates intermittently (Motor overheating will cause automatic shutdown and may damage the machine)	The ventilation holes on the machine cover are blocked or there is an object covering the spraying machine	Remove the blockage and expose the spraying machine to the air
	Motor needs to be replaced	Return the equipment to the manufacturer or an authorized dealer for repair

LF19 Exploded Parts Diagram



LF19 Exploded Parts Diagram

NO.	DESCRIPTION	QTY.
1	CAP, leg	4
2	Frame Leg Assembly (Left)	1
3	Frame Push Assembly (Right)	1
4	Motor Base Assembly	1
5	Motor Base Bearing	2
6	Bearing Positioning Pin	4
7	NSK Deep Groove Ball Bearing	4
8	Bearing Sleeve	4
9	Gear Assembly	1
10	Yoke	1
11	Front Cover Positioning Pin	2
12	Front Cover Assembly	1
13	6*35 Positioning Pin	2
14	Pump Clamp	1
15	Power Switch	1
16	Control Board	1
17	Motor	1
18	Motor Fan	1
19	Shaft Retaining Ring $\phi 11$	1
20	Piston Rod	1
21	Pump Assembly	1
22	O-Ring 30.7*27.3*1.71	1
23	Skeleton Oil Seal 14*21*4 (FKM)	1
24	Pump Nylon Sleeve	1
25	Pump Felt Ring	1
26	Pump Pressure Ring	1
27	V-Ring	3

NO.	DESCRIPTION	QTY.
28	Leather Seal	2
29	Support Ring	1
30	Multi-layer Wave Spring	1
31	390 Pressure Regulator Knob (M10×1.0)	1
32	LiteFlex LF19 Pump Assembly	1
33	Prime Valve	1
34	Outlet Valve Copper Gasket	1
35	Out Valve Alloy	1
36	7.938 Tungsten Steel Ball	1
37	Outlet Valve Spring	1
38	Outlet Valve Spring Stop Pin	1
39	NBR O-Ring 14.9*11.9*1.5	1
40	Outlet Valve Seat	1
41	Cylinder Screw	1
42	40MPa Axial Pressure Gauge(Small)	1
43	Prime Tube Connector	1
44	Ball Guide	1
45	Ball Guide Spring Set Pin	1
46	Ball Guide Spring	1
47	12.7 Tungsten Carbide Ball	1
48	Inlet Valve Alloy	1
49	NBR O-Ring 18*14.2	1
50	Inlet Valve Seat	1
51	NBR O-Ring 18*15*1.5	2
52	Suction Tube Fitting Base	1
53	Suction Tube Connector	1

Technical Specifications

LiteFlex19 (LF19) Portable Electric Airless Sprayer	
Model	LF19
Voltage	220V, 3.6A, 50~60HZ
Max. Working Pressure	19 Mpa, 2756 psi
Flow Rate	1.9 L/min
Max. Nozzle Size	0.019"
Fluid outlet size	1/4 inches
Sound power, ISO3741	95.4 DbA
Motor Type	800W Brushless DC Motor, 5300 rpm/min, 1 HP
Wetted parts	Stainless Steel, PTFE(Polytetrafluoroethylene), Leather, Galvanized Carbon Steel, UNMWPE(Ultra-High Molecular Weight Polyethylene), Nitrile Rubber(NBR)
Spray Gun	
Model	HB131 / HB133
Max. Working Pressure	5400psi / 370bar / 37mpa
Gross weight	0.7 kg
Inlet	1/4 npsm male
Max. material temperature	50°C

Warranty Terms

General Warranty:

HVBAN products are covered by a one-year warranty from the date of invoice (unless otherwise stated in writing). The warranty covers defects in manufacturing and materials. Replacement or repair of any component included in the product is only valid when performed by an authorized distributor. This warranty applies only to equipment that has been installed, operated, and maintained in accordance with HVBAN's written recommendations. HVBAN shall not be liable for any failure, damage, or wear caused by improper installation, misuse, corrosion, insufficient or improper maintenance, negligence, accident, tampering, or replacement of non-HVBAN parts. Defective equipment must be returned to an authorized HVBAN distributor, who will verify and process the claim. If a product defect is confirmed, HVBAN will repair or replace the defective part at no cost. If inspection of the equipment reveals no defects in materials or workmanship, HVBAN reserves the right to charge a reasonable fee, which may include parts, labor, and shipping costs.

The following situations are not covered by the warranty:

- Damage or failure due to improper use or assembly.
- Damage or failure caused by use of parts other than original or recommended accessories.
- Damage resulting from inadequate protection.
- Normal wear and tear of consumable components.

Warranty will be void under the following conditions:

- Payment delays or other contractual breaches.
- Unauthorized modification or repair of equipment.
- Serial number is damaged or removed.
- Damage resulting from incorrect use or operation, such as tipping, collision, or other abnormal events.
- Any disassembly, tampering, or repair not authorized by HVBAN.