# Lafferty Equipment Manufacturing, LLC Installation & Operation Instructions

#### Model # 943634 · Freedom 2.5 / 2.5 Foamer

REQUIREMENTS			
Ready-to-Use Chemical Solution			
Compressed Air	up to 14 CFM		
Hose	3/4" ID x 50'		
Nozzle	50250		
OPTIONS			
Stainless Steel Hose Racks Large Stainless Steel Hose Rack		# 224150	
Level Masters Provide an Automatic Supply of Ready-to-Use Chemical			
Level Master (Various Tank Sizes)		# 989304	
Gemini Level Master (Various Tank Sizes)		# 989316	
Drain Foamer Attachment			
Drain Foamer Attachment (Freedom, 2.5 & Liberty, 2.5)		# 538245	
Air Pump Diaphragm Options - Sant	•		
Teflon Diaphragm Upgrade For 1/2" A	ır	# 710010	

#710919





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## **OVERVIEW**

Pump

The Freedom 2.5 / 2.5 Foamer is a dual-hose, medium-to-high volume foam applicator for projecting foaming chemicals on to any surface up close or at distances up to 15 feet. This unit features a stainless steel enclosure and uses a rugged 1/2" Sandpiper air-operated, double-diaphragm pump to draw ready-to-use chemical from a user-supplied tank. It injects compressed air into the solution to greatly increase volume and coverage ability and projects rich, clinging foam through the hose, wand and nozzle. Dual discharge assemblies can be used separately or simultaneously.

## **SAFETY & OPERATIONAL PRECAUTIONS**

- For proper performance do NOT modify, substitute nozzle, hose diameter or length
- Manufacturer assumes no liability for the use or misuse of this unit.
- Wear protective clothing, gloves and eye-wear when working with chemicals.
- Always direct the discharge away from people and electrical devices.
- Follow the chemical manufacturer's safe handling instructions.
- DO NOT use d-Limonene or other chemicals that are not compatible with the Santoprene diaphragms.
- TEFLON upgrade is available.

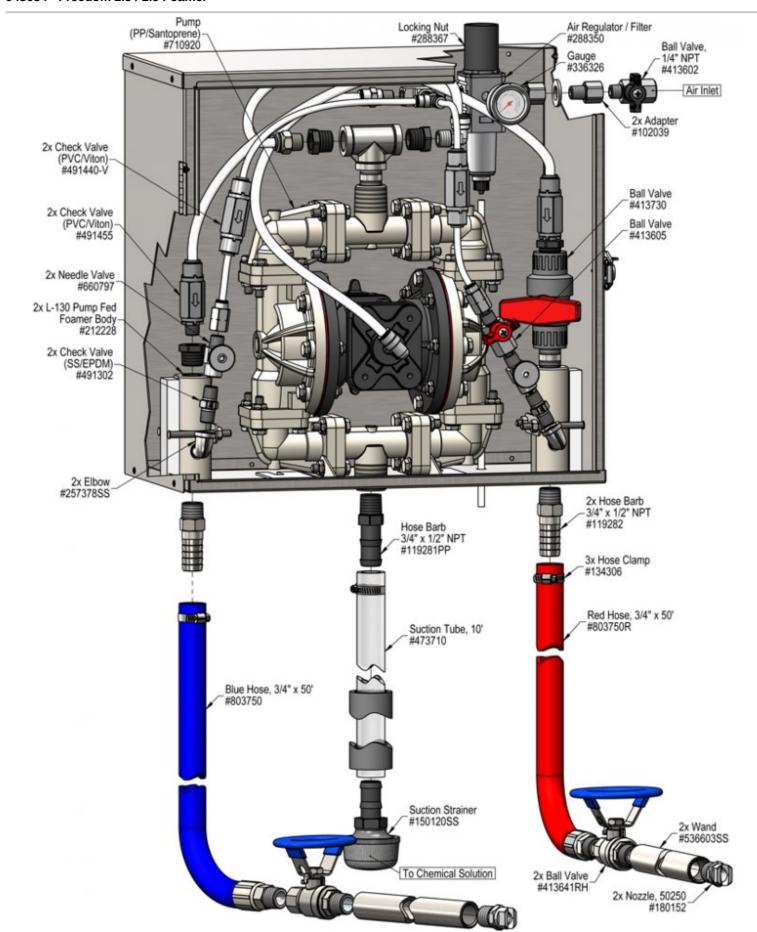
#### TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

- 1. Mount the unit above solution supply level to prevent siphoning.
- 2. Place the strainer in the chemical solution(s).
- 3. Attach the discharge hose.
- 4. Attach a compressed airline to the air inlet ball valve. DO NOT TURN ON.
- 5. Air Filter/Dryer recommend.

#### **TO OPERATE**

- <u>Always</u> make sure the discharge ball valve is closed or pointed in a safe direction before turning the air on. Ball valve can be shut off at any time during operation but should not be left unattended for long periods of time. Expect a strong blast when re-opening ball valve.
- The unit has been tested and is ready to operate, the air pressure preset at 60 PSI. This is the optimum pump pressure. Test "as is" before making any adjustments.
- The foam consistency knob is pre-set at approximately 1/2 turn. To adjust foam consistency, turn the foam consistency needle valve counterclockwise a <u>maximum</u> of 1 turn for drier foam and clockwise for wetter foam. Wait several seconds after each adjustment to see the results.
- 1. With the foam wand in hand direct the discharge in a safe direction and open the discharge ball valve.
- 2. To prime the pump, slightly open the air inlet ball valve to make the pump cycle very slow where it will prime. Once the solution reaches the pump open the air valve all the way.
- 3. Do NOT run the pump dry. This can cause damage to the pump.
- 4. Always slightly open the inlet ball valve until the pump primes.
- 5. IF after several seconds the pump hasn't primed turn off the air, remove the suction tube and fill with water and replace. Once the diaphragms are wet priming is not an issue. Open air ball valve to resume set up.
- 6. If the flow of foam surges, the needle valve is open too much or the chemical concentration is too weak, reduce the air flow by turning the needle valve slowly clockwise until the foam flow stabilizes. Or add more chemical concentrate.
- 7. A medium-wet foam will give the best cleaning results! Very dry foam will NOT clean as well!
- 8. When foaming is complete:
  - o Close the discharge ball valve.
  - Promptly return to the unit and close the air ball valve.
  - $\circ$  Briefly re-open the discharge ball valve to relieve pressure in the hose.
- 9. Rinse the work surface before the foam dries.

If only one foam hose will be used, open the stainless steel pump enclosure and close the air and solution ball valves for the second foamer body.



# **Troubleshooting Guide**

Problem	Possib	Possible Cause / Solution	
	Startup	Maintenance	
A) Air pump will not pump or runs with no output.	1, 2, 3, 4	8, 9, 10, 11, 12, 13	
B) Foam surges and/or hose "bucks".	1, 2, 3, 4, 5, 6	8, 11, 12	
C) Foam output too wet.	1, 2, 3, 4, 5, 6	8, 11, 12	
D) Foam output too dry.	2		
E) Cleaning results not acceptable.	2, 5, 6, 7		
F) Chemical solution getting into airline		10	

Possible Cause / Solution			
Startup	Maintenance		
<ol> <li>Inlet ball valve partially closed or air pressure too low.         <ul> <li>Completely open air inlet ball valve. Optimum air pressure is 60 PSI.</li> </ul> </li> <li>Foam consistency needle valve open too much         <ul> <li>Adjust the needle valve slowly clockwise until foam stabilizes.</li> </ul> </li> <li>Discharge ball valve not completely open or Discharge hose kinked• Completely open the discharge ball valve / straighten hose</li> <li>Solution tube not completely immersed in chemical or container empty         <ul> <li>Immerse tube or replenish chemical.</li> <li>If pump has run dry, manually prime the pump: Remove the clear suction tube and fill the tube with water or chemical solution and reconnect.</li> </ul> </li> <li>Dilution too weak         <ul> <li>Add more chemical to solution container.</li> </ul> </li> <li>Improper chemical         <ul> <li>Ensure product is recommended for foaming and/or the application</li> </ul> </li> <li>Soil has hardened on surface         <ul> <li>Always rinse foam before it dries.</li> </ul> </li> </ol>	8. Solution strainer blocked  Clean or replace  9. Air regulator failed Clean or replace  10. Air or water check valve(s) failed Clean or replace  11. Discharge hose too long or wrong size or kinked Straighten the hose See "Requirements" for correct hose diameter and length  12. Nozzle size too small or missing See "Requirements"  13. Problem with air pump Refer to air pump instruction manual Repair or replace		

PREVENTIVE MAINTENANCE: When the unit will be out of service for extended periods, place chemical tube(s) in water and flush the chemical out of the unit to help prevent chemical from drying out and causing build-up. Periodically check and clean chemical strainer and replace if missing.

