

# Lafferty Equipment Manufacturing, LLC Installation & Operation Instructions

## Model # 941220-LF · Portable 20 Gallon Liberty LF Foamer

### REQUIREMENTS

#### Ready-to-Use Chemical Solution

Compressed Air	up to 6 CFM
Hose	3/4" ID x 40'
Nozzle	40100

### OPTIONS

#### Proportioning / Filling Options

1-Way Ball Valve Mixing Station (4 GPM)	# 985100
1-Way Push Lever Mixing Station (4 GPM)	# 981100
High Volume Mixing Station (9.9 GPM)	# 985835

#### Drain Foamer Attachment

Drain Foamer Attachment (Freedom, 2.5 & Liberty, 2.5)	# 538245
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#### Alternate Seal Materials - Santoprene Standard

Viton Upgrade: Flojet Air Pump & Check Valves	# 710756
Kalrez Upgrade: Flojet Air Pump & Check Valves	# 710755



[www.laffertyequipment.com](http://www.laffertyequipment.com)

501-851-2820

**WARNING! READ ALL  
INSTRUCTIONS BEFORE  
USING EQUIPMENT!**

### OVERVIEW

The Portable 20 Gallon Liberty LF Foamer is a "low volume" foam applicator for projecting foaming chemicals on to any surface up close or at distances up to 9 feet. This unit features an all stainless steel 4-wheel cart and lockable enclosure and uses a cost-effective Flojet air-operated, double-diaphragm pump to draw ready-to-use chemical from the 20 gallon tank. It injects compressed air into the solution to greatly increase volume and coverage ability and projects rich, clinging foam through the discharge hose, wand and fan nozzle.

## SAFETY & OPERATIONAL PRECAUTIONS

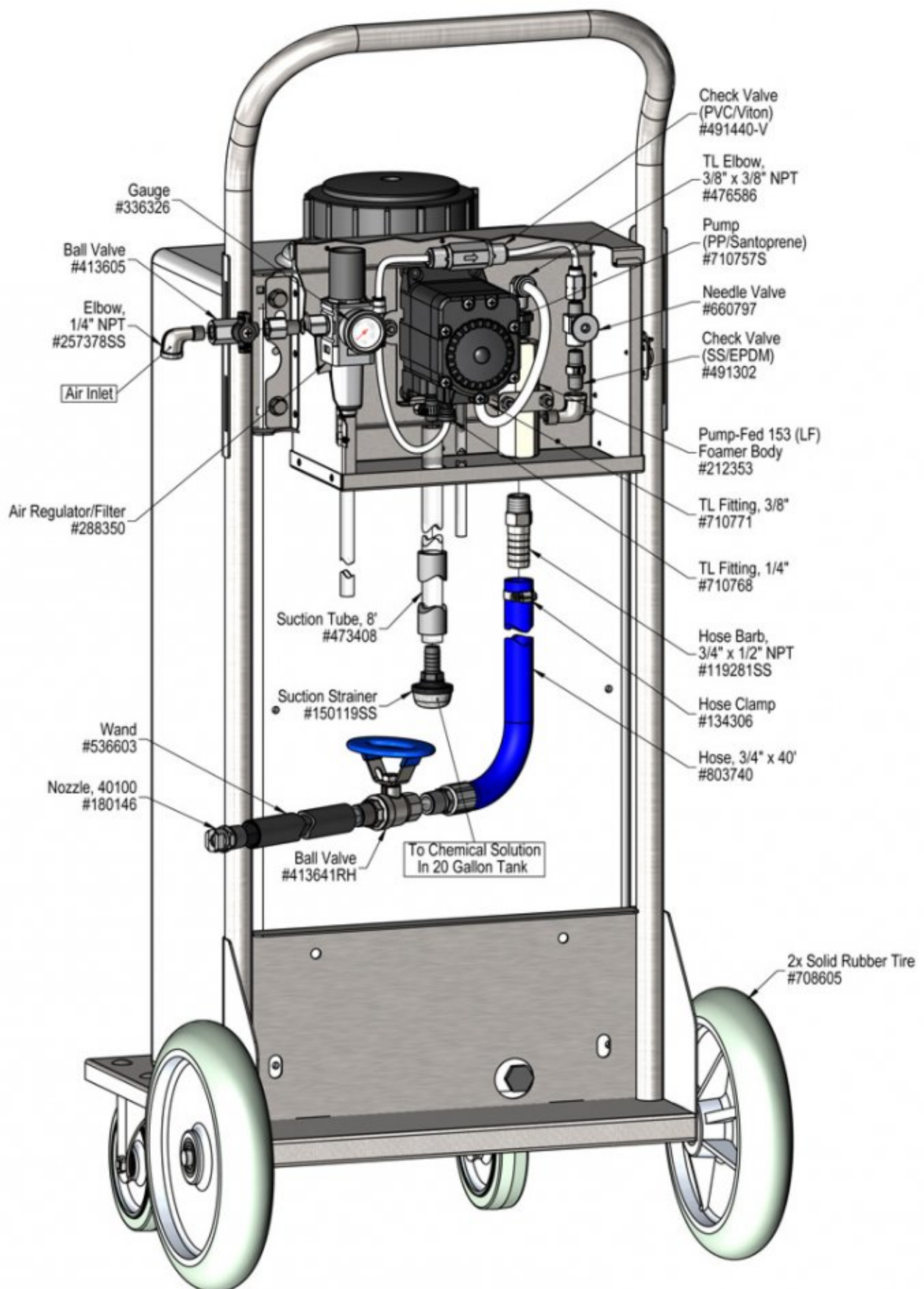
- For proper performance do NOT modify, substitute nozzle, hose diameter or length
- Manufacturer assumes no liability for the use or misuse of this unit.
- Wear protective clothing, gloves and eye-wear when working with chemicals.
- Always direct the discharge away from people and electrical devices.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

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

1. Fill the tank with ready to use solution to the desired level. Replace lid.
2. Attach a compressed airline to the inlet ball valve. DO NOT TURN ON
3. Air Filter/Dryer recommend.

## TO OPERATE

- **Always 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. To adjust foam consistency, turn the foam consistency needle valve counterclockwise for drier foam and clockwise for wetter foam. Make 1/4 turns only - do not overcompensate. 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 and the air ball valve.
  2. 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.
  3. A medium-wet foam will give the best cleaning results! Very dry foam will NOT clean as well!
  4. When foaming is complete:
    - Close the discharge ball valve.
    - Promptly return to the unit and close the air ball valve.
    - Briefly re-open the discharge ball valve to relieve pressure in the hose.
  5. Rinse the work surface before the foam dries.



## Troubleshooting Guide

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Air pump will not pump or runs with no output.	1, 2, 3, 4, 7	9, 10, 12, 13, 14
B) Foam surges and/or hose "bucks".	1, 2, 3, 4, 5, 6, 7	9, 12, 13
C) Foam output too wet.	1, 2, 3, 4, 5, 6	9, 12, 13
D) Foam output too dry.	2	
E) Cleaning results not acceptable.	5, 6, 8	

Possible Cause / Solution	
Startup	Maintenance
<ol style="list-style-type: none"> <li>1. <b>Inlet ball valve partially closed or air pressure too low.</b> <ul style="list-style-type: none"> <li>◦ Completely open air inlet ball valve.</li> </ul> </li> <li>2. <b>Foam consistency needle valve open too much</b> <ul style="list-style-type: none"> <li>◦ Adjust the needle valve slowly clockwise until foam stabilizes. Turn round handle slightly clockwise for wetter foam; open counterclockwise for dryer foam. Open a maximum of 1 turn.</li> </ul> </li> <li>3. <b>Discharge ball valve not completely open or Discharge hose kinked</b> <ul style="list-style-type: none"> <li>◦ Completely open the discharge ball valve / straighten hose</li> </ul> </li> <li>4. <b>Solution tube not completely immersed in chemical or container empty</b> <ul style="list-style-type: none"> <li>◦ Immerse tube or replenish chemical.</li> </ul> </li> <li>5. <b>Dilution too weak</b> <ul style="list-style-type: none"> <li>◦ Add more chemical to solution container.</li> </ul> </li> <li>6. <b>Improper chemical</b> <ul style="list-style-type: none"> <li>◦ Ensure product is recommended for foaming and/or the application</li> </ul> </li> <li>7. <b>Ice particles from condensation in air line — Air pump can periodically "freeze up" (stall) due to ice particles in the pump's exhaust (depending on air humidity &amp; other factors)</b> <ul style="list-style-type: none"> <li>◦ WAIT several seconds to allow the ice particles to melt and blow out, at which time the pump will automatically resume pumping.</li> </ul> </li> <li>8. <b>Soil has hardened on surface</b> <ul style="list-style-type: none"> <li>◦ Always rinse foam before it dries.</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>9. <b>Solution strainer blocked</b> <ul style="list-style-type: none"> <li>◦ Clean or replace</li> </ul> </li> <li>10. <b>Air regulator failed</b> <ul style="list-style-type: none"> <li>◦ Clean or replace</li> </ul> </li> <li>11. <b>Air or water check valve(s) failed</b> <ul style="list-style-type: none"> <li>◦ Clean or replace</li> </ul> </li> <li>12. <b>Discharge hose wrong size or kinked (See REQUIREMENTS, page 1).</b> <ul style="list-style-type: none"> <li>◦ Straighten the hose</li> </ul> </li> <li>13. <b>Nozzle size too small or missing</b> <ul style="list-style-type: none"> <li>◦ See REQUIREMENTS, page 1.</li> </ul> </li> <li>14. <b>Problem with air pump</b> <ul style="list-style-type: none"> <li>◦ Refer to air pump instruction manual.</li> <li>◦ <a href="https://www.xylem.com/en-us/brands/Flojet/flojet-products/g57-air-operated-double-diaphragm-pump">https://www.xylem.com/en-us/brands/Flojet/flojet-products/g57-air-operated-double-diaphragm-pump</a></li> <li>◦ Replace pump.</li> </ul> </li> </ol>

**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.

