Lafferty Equipment Manufacturing, LLC
Installation & Operation Instructions

Model # 941106 · Liberty Foamer

REQUIREMENTS

Ready-to-Use Chemical Solution

Compressed Air	up to 6 CFM
Hose	3/4" ID x 50'
Nozzle	40150

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
Alternate Seal Materials - Santoprene Standard	
Viton Upgrade: Flojet Air Pump & Check Valves	# 710756
Kalrez Upgrade: Flojet Air Pump & Check Valves	# 710755

Lafferty
EQUIPMENT MANUFACTURING LLC
CFS TECHNOLOGIES

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WARNING! READ ALL INSTRUCTIONS BEFORE USING EQUIPMENT!

OVERVIEW

The Liberty Foamer uses ready-to-use foaming chemicals to produce a medium volume of rich, clinging foam that is projected up to 10 feet. The stainless steel enclosure protects components, including a cost-effective Flojet air-operated, double diaphragm pump that draws pre-diluted chemical from a user-supplied tank and provides solution pressure for generating foam. The foamer body injects compressed air into the solution to create the foam that greatly increases in volume and coverage ability as it passes through the 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.

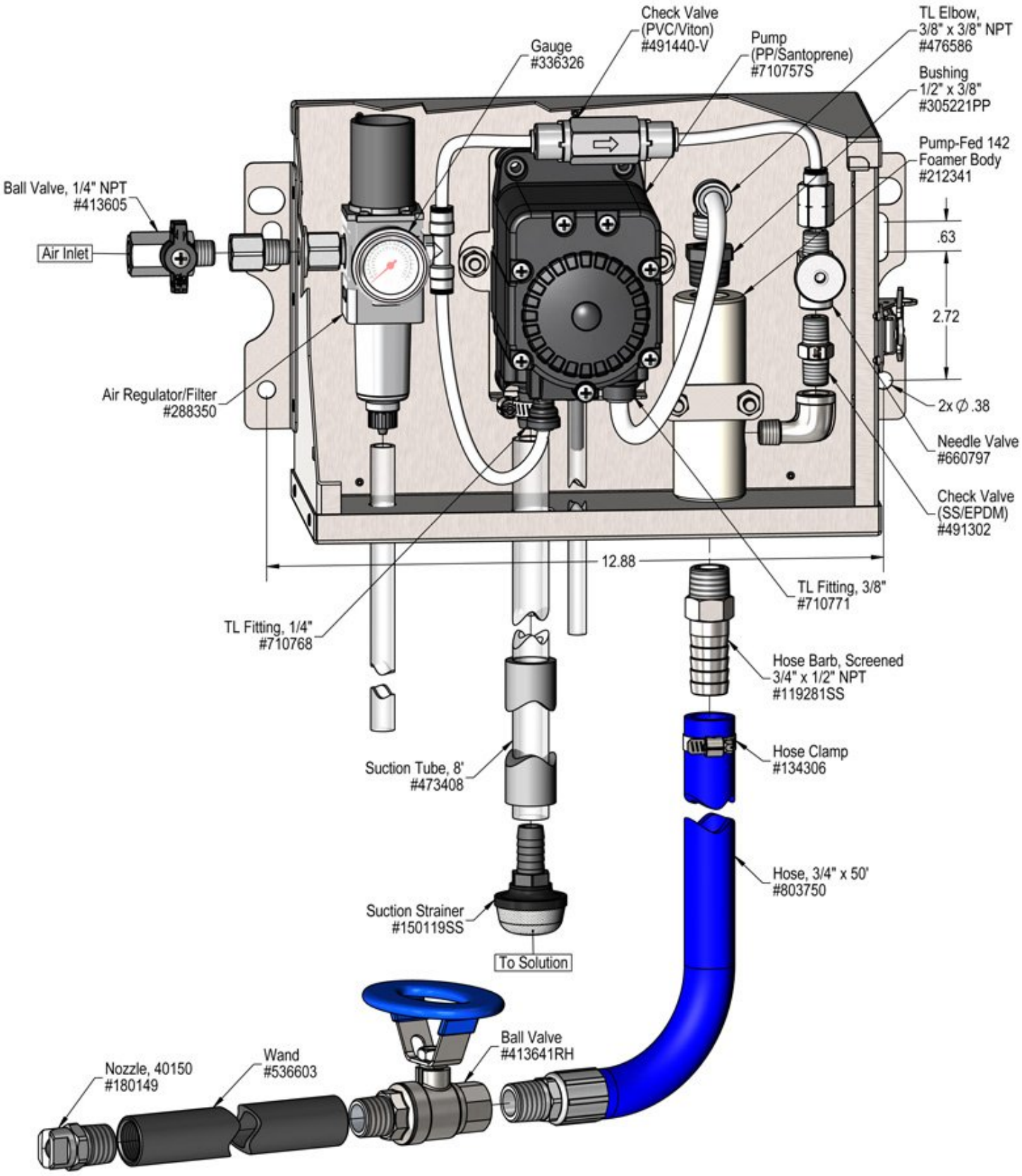
TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

1. 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

- **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.


Check Valve
(PVC/Viton)
#491440-V
Gauge
#336326
Pump
(PP/Santoprene)
#710757S
TL Elbow,
3/8" x 3/8" NPT
#476586
Bushing
1/2" x 3/8"
#305221PP
Pump-Fed 142
Foamer Body
#212341
Ball Valve, 1/4" NPT
#413605
Air Inlet
.63
2.72
2x Ø .38
Air Regulator/Filter
#288350
Needle Valve
#660797
Check Valve
(SS/EPDM)
#491302
12.88
TL Fitting, 3/8"
#710771
TL Fitting, 1/4"
#710768
Hose Barb, Screened
3/4" x 1/2" NPT
#119281SS
Hose Clamp
#134306
Suction Tube, 8'
#473408
Hose, 3/4" x 50'
#803750
Suction Strainer
#150119SS
To Solution
Ball Valve
#413641RH
Nozzle, 40150
#180149
Wand
#536603

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

1. **Inlet ball valve partially closed or air pressure too low.**
   - Completely open air inlet ball valve.
2. **Foam consistency needle valve open too much**
   - 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.
3. **Discharge ball valve not completely open or Discharge hose kinked**
   - Completely open the discharge ball valve / straighten hose
4. **Solution tube not completely immersed in chemical or container empty**
   - Immerse tube or replenish chemical.
5. **Dilution too weak**
   - Add more chemical to solution container.
6. **Improper chemical**
   - Ensure product is recommended for foaming and/or the application
7. **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 & other factors)**
   - WAIT several seconds to allow the ice particles to melt and blow out, at which time the pump will automatically resume pumping.
8. **Soil has hardened on surface**
   - Always rinse foam before it dries.

Maintenance

9. **Solution strainer blocked**
   - Clean or replace
10. **Air regulator failed**
    - Clean or replace
11. **Air or water check valve(s) failed**
    - Clean or replace
12. **Discharge hose wrong size or kinked (See REQUIREMENTS, page 1).**
    - Straighten the hose
13. **Nozzle size too small or missing**
    - See REQUIREMENTS, page 1.
14. **Problem with air pump**
    - Refer to air pump instruction manual.
    - https://www.xylem.com/en-us/brands/Flojet/flojet-products/g57-air-operated-double-diaphragm-pump
    - Replace pump.

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.