Lafferty Equipment Manufacturing, LLC
Installation & Operation Instructions

Model # 943620 · Portable 20 Gallon Freedom 2.5 Foamer

REQUIREMENTS

Ready-to-Use Chemical Solution

Compressed Air	up to 9 CFM
Hose	3/4" ID x 40'
Nozzle	50250

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

Air Pump Diaphragm Options - Santoprene Standard

Teflon Diaphragm Upgrade For 1/2" Air Pump	# 710919

WEIGHT & DIMENSIONS

Single Package

Shipping Weight	130 lbs.
Shipping Dimensions	44" x 44" x 54"

Ships on a pallet



Lafferty EQUIPMENT MANUFACTURING LLC

CFS TECHNOLOGIES

www.laffertyequipment.com
501-851-2820

WARNING! READ ALL INSTRUCTIONS BEFORE USING EQUIPMENT!

OVERVIEW

The Portable 20 Gallon Freedom 2.5 Foamer is a 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 an all stainless steel cart assembly and uses a rugged 1/2" Sandpiper air-operated, double-diaphragm pump to draw ready-to-use chemical from the 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. Provides 8 minutes of foaming time per fill.

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.

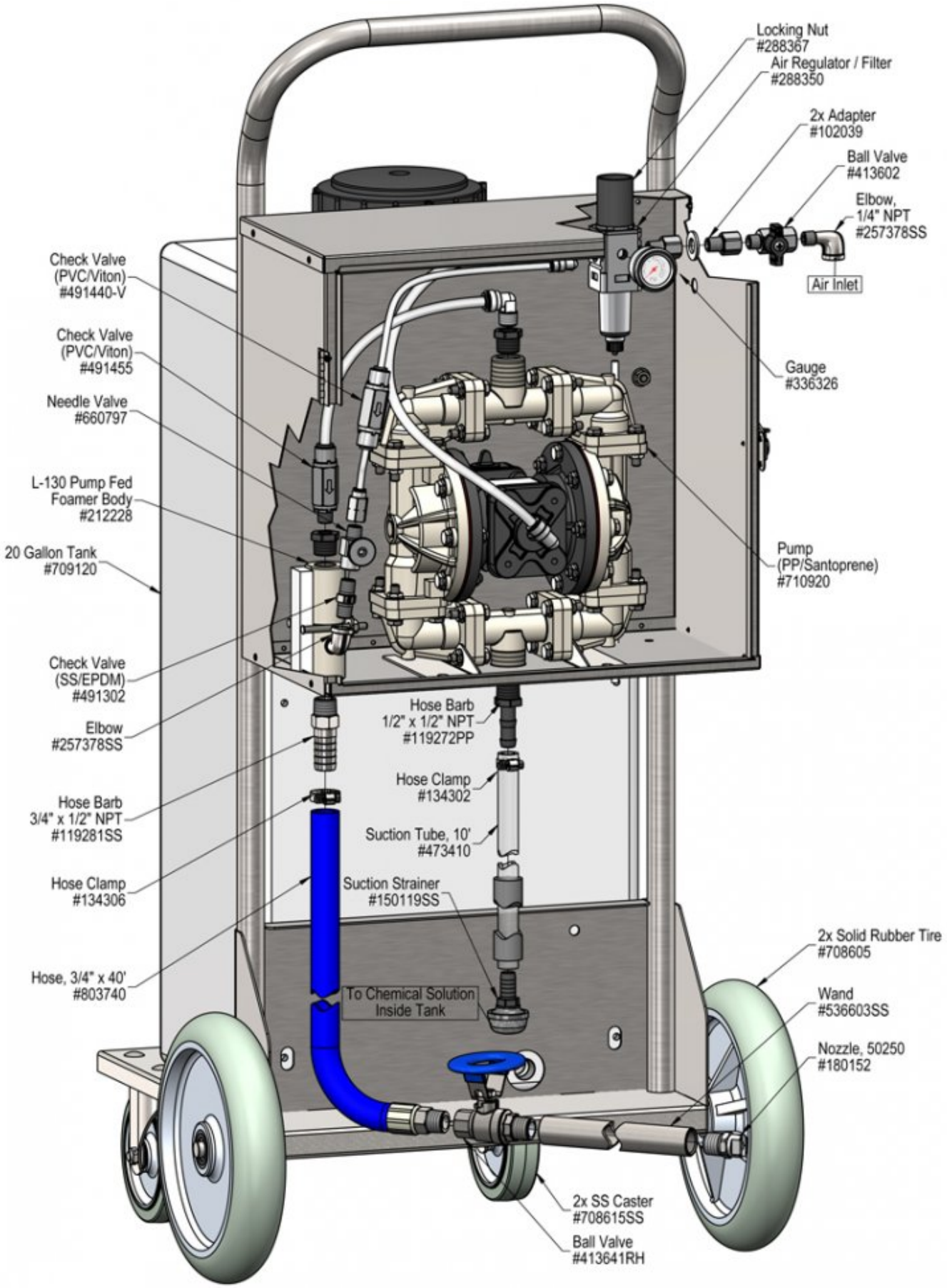
TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

1. 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 at approximately 1/2 turn. To adjust foam consistency, turn the foam consistency needle valve counterclockwise a maximum 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:
    - 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.
9. Rinse the work surface before the foam dries.


Locking Nut
#288367
Air Regulator / Filter
#288350
2x Adapter
#102039
Ball Valve
#413602
Elbow,
1/4" NPT
#257378SS
Air Inlet
Gauge
#336326
Check Valve
(PVC/Viton)
#491440-V
Check Valve
(PVC/Viton)
#491455
Needle Valve
#660797
L-130 Pump Fed
Foamer Body
#212228
20 Gallon Tank
#709120
Pump
(PP/Santoprene)
#710920
Check Valve
(SS/EPDM)
#491302
Elbow
#257378SS
Hose Barb
1/2" x 1/2" NPT
#119272PP
Hose Clamp
#134302
Hose Barb
3/4" x 1/2" NPT
#119281SS
Suction Tube, 10'
#473410
Hose Clamp
#134306
Suction Strainer
#150119SS
2x Solid Rubber Tire
#708605
Hose, 3/4" x 40'
#803740
To Chemical Solution
Inside Tank
Wand
#536603SS
Nozzle, 50250
#180152
2x SS Caster
#708615SS
Ball Valve
#413641RH

Troubleshooting Guide

Problem	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

1. **Inlet ball valve partially closed or air pressure too low.**
   - Completely open air inlet ball valve. Optimum air pressure is 60 PSI.
2. **Foam consistency needle valve open too much**
   - Adjust the needle valve slowly clockwise until foam stabilizes.
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.
   - 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.
5. **Dilution too weak**
   - Add more chemical to solution container.
6. **Improper chemical**
   - Ensure product is recommended for foaming and/or the application
7. **Soil has hardened on surface**
   - Always rinse foam before it dries.

Maintenance

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.