Lafferty Equipment Manufacturing, LLC
Installation & Operation Instructions

Model # 940005 · Liberty Sprayer

REQUIREMENTS

Ready-to-Use Chemical Solution

Compressed Air	up to 4 CFM
Hose	1/2" ID x 50'
Nozzle	2506 or 2510

OPTIONS

Stainless Steel Hose Racks	
Large Stainless Steel Hose Rack	# 224150
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
Level Masters Provide an Automatic Supply of Ready-to-Use Chemical	
Level Master (Various Tank Sizes)	# 989304
Gemini Level Master (Various Tank Sizes)	# 989316
Alternate Seal Materials - Santoprene Standard	
Viton Upgrade: Flojet Air Pump & Check Valves	# 710756
Kalrez Upgrade: Flojet Air Pump & Check Valves	# 710755

WEIGHT & DIMENSIONS

Single Package	
Shipping Weight	26 lbs.
Shipping Dimensions	22" x 19" x 9"

Lafferty® EQUIPMENT MANUFACTURING LLC

CFS TECHNOLOGIES

www.laffertyequipment.com
501-851-2820

WARNING! READ ALL INSTRUCTIONS BEFORE USING EQUIPMENT!

OVERVIEW

The Liberty Sprayer is a chemical spray applicator for projecting ready-to-use chemical solution on to a variety of surfaces. This unit features a stainless steel enclosure and uses a cost-effective Flojet air-operated, double-diaphragm pump to draw pre-diluted chemical from a user-supplied tank. The solution is then discharged through the hose, wand and fan pattern spray nozzle. Includes 2 nozzles projecting a low or medium volume spray.

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.

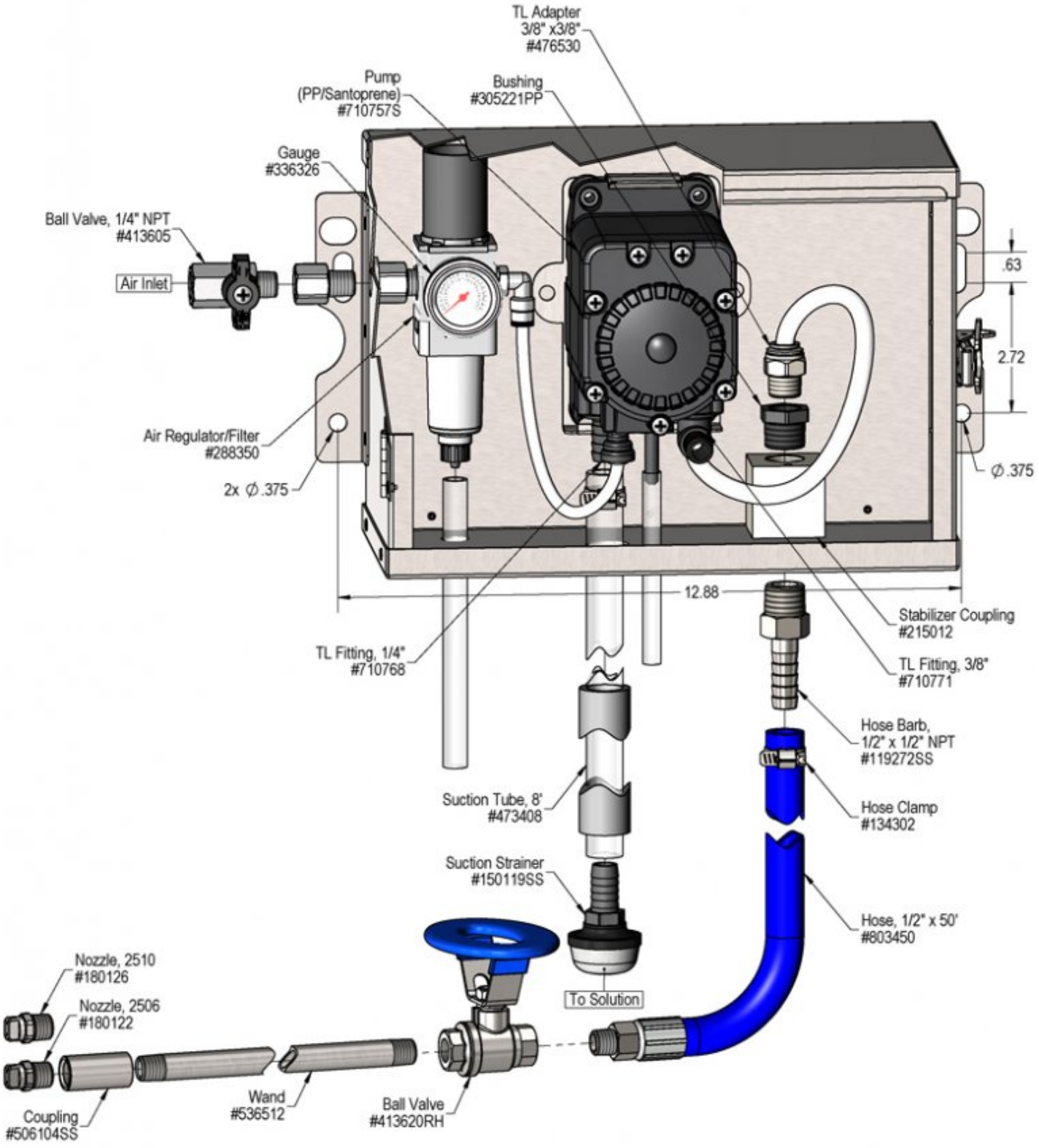
TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

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.**
- **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.**
- **2 nozzles are provided a 2506 (.7 GPM) and a 2510 (1.2 GPM). Select one and install it.**

1. With the wand in hand direct the discharge in a safe direction and open the discharge ball valve and the air ball valve.
2. Wait several seconds for pump to prime. IF after 30 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.
3. When spraying 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.
    - Store the hose on optional hose rack.
4. Rinse the work surface before the spray dries.


TL Adapter
3/8" x3/8"
#476530
Pump
(PP/Santoprene)
#710757S
Bushing
#305221PP
Gauge
#336326
Ball Valve, 1/4" NPT
#413605
Air Inlet
.63
2.72
Ø .375
Air Regulator/Filter
#288350
2x Ø .375
12.88
Stabilizer Coupling
#215012
TL Fitting, 1/4"
#710768
TL Fitting, 3/8"
#710771
Hose Barb,
1/2" x 1/2" NPT
#119272SS
Suction Tube, 8'
#473408
Hose Clamp
#134302
Suction Strainer
#150119SS
Hose, 1/2" x 50'
#803450
To Solution
Nozzle, 2510
#180126
Nozzle, 2506
#180122
Coupling
#506104SS
Wand
#536512
Ball Valve
#413620RH

Troubleshooting Guide

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Air pump will not run or pump solution.	1,3,4	5,6,9,10
B) Will not draw chemical.	1,2,3	6,7,8
C) Pump runs too fast with no output.	2	6,7,8,9

Possible Cause / Solution

Startup

1. **Inlet ball valve partially closed or air pressure too low.**
   - Completely open air inlet ball valve.
2. **Chemical tube not immersed in container or container empty**
   - Immerse tube or replenish.
3. **Discharge ball valve closed or hose kinked**
   - Open ball valve / Straighten the hose.
4. **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.

Maintenance

5. **Air regulator clogged or failed**
   - Clean or replace.
6. **Chemical strainer clogged up**
   - Clean or replace.
7. **Vacuum leak in suction line.**
   - Tighten the connection(s).
8. **Chemical tube stretched out where tube attaches or pin hole/cut in tube sucking air.**
   - Cut off end of tube or replace tube.
9. **Problem with air pump**
   - Refer to air pump instruction manual.
   - https://www.xylem.com/en-us/products-services/pumps-packaged-pump-systems/pumps/positive-displacement-pumps2/diaphragm-pumps/air-operated-diaphragm-pumps/g57-air-operated-double-diaphragm-pump/documentation/
   - Replace pump.
10. **Use of an oiler in the airline will cause pump to stall**
    - Use only clean, dry air.

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.