

Lafferty Equipment Manufacturing, LLC Installation & Operation Instructions

Model # 910930-PF · 3-Bar Pump Fed Truck Foam Arch

REQUIREMENTS

Ready-to-Use Chemical Solution (Minimum 55 PSI at Unit)

Supply Line	1" ID
Temperature	up to 160°F
Pressure	55-125 PSI
Flow	Variable-up to 16 GPM
Hose/Pipe	1-1/2"

Compressed Air up to 14 CFM

Nozzles

Top Bar	4040
Side Bars	6530

OPTIONS

Stainless Steel Central Pump System

1" AODD Pump (Santoprene)	# 919060SS
Teflon Upgrade	# 710943

Level Masters Provide an Automatic Supply of Ready-to-Use Chemical

Level Master (Various Tank Sizes)	# 989304
Gemini Level Master (Various Tank Sizes)	# 989316

Drum & Tote Sticks Available

Alternate Check Valve (Viton Standard)

TL Check Valve, PVC / EPDM, 3/8"	# 491456-E
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**WARNING! READ ALL
INSTRUCTIONS BEFORE
USING EQUIPMENT!**

OVERVIEW

The 3-Bar Pump Fed Truck Foam Arch is an adjustable, drive-through foam applicator for washing large vehicles. This unit receives ready-to-use chemical solution from a user-supplied central chemical feed system and injects compressed air to greatly increase volume and coverage ability. Rich, clinging foam is projected from multiple nozzles for complete coverage. The solution flow rate and foam consistency for each foam bar can be adjusted "on-the-fly" during operation.

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.
- For pressures over 100 PSI, remove the discharge valve or lower pressure
- Follow the chemical manufacturer's safe handling instructions.
- Turn off solution supply and air when unit is not in use for extended periods.

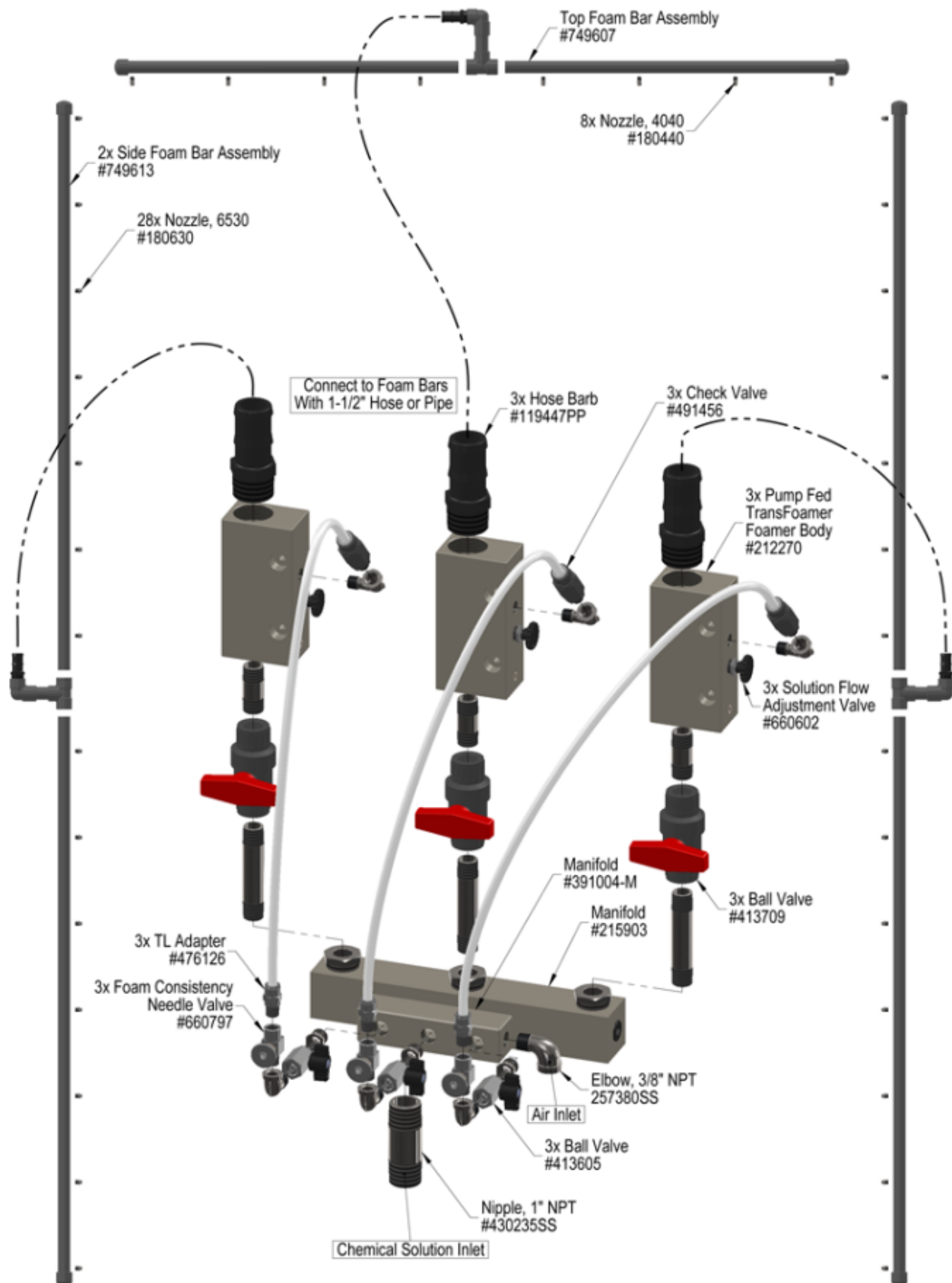
TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

- **Side bars are designed to give 13'6" coverage and can be shortened depending on the vehicle to be cleaned or desired coverage.**

1. Mount the unit to a suitable surface above the chemical supply to prevent siphoning.
2. Decide how much coverage you will need. The side bars as shipped will cover 13'6" and can be shortened, from the cut ends. For best performance take a equal number of nozzles from each bar to keep the feed in the middle.
3. Assemble and glue the bars together making sure the nozzles line up straight.
4. Firmly attach each bar to your support structure (not included)
5. Connect a 1 1/2" discharge hose from the foamers to the bars as shown in the diagram. Or the bars can be hard plumbed using 1 1/2" pipe ONLY. Use at least 20' of hose or pipe in between the foamer and the bar to create good quality foam. **Do not use too many elbows or other restrictions, they WILL hurt foam quality and overall performance. Use "sweeps" of hose, not elbows.**
6. Turn all ball valves to the off position. Connect 1" RTU chemical supply. To prevent blockage in the foamer, flush any new plumbing of debris before connecting and /or install a filter.
7. Connect compressed air supply. If piping is older with known contaminants, install a filter.

TO FOAM

1. Final chemical dilution, water flow and air adjustments will now have to be made.
2. Start out with a stronger chemical solution than you think you will need till the foamer is foaming correctly. Then you can back off on the dilution.
3. Turn on the solution and air ball valve to the first bar to be set up.
 - Wait a few seconds and observe foam consistency and quantity.
 - If foam consistency is too dry or too wet turn the foam consistency needle valve knob slightly counterclockwise for dryer and clockwise for wetter foam. **Do not use too much air, we foam cleans better.**
 - If all nozzles are not projecting foam, slightly turn the blue "solution flow adjustment knob" counterclockwise to add more solution. Wait after each adjustment to see the results. Results are not instant.
 - Continue adding/decreasing solution via the blue "flow adjustment knob" on the side of each foamer body till all nozzles are projecting foam. Increase/decrease till results are acceptable. Be PATIENT.
 - Medium wet foam will give the best cleaning results! Very dry foam will NOT clean as well!
 - You will have to try different chemical ratios, air and solution flow settings until foam consistency and cleaning results are acceptable. Once this is set and you are satisfied with the results you are ready to start application. Now you can try to decrease the chemical concentration based on foaming and cleaning results. If you get too weak and the foam starts sputtering adjusting the air will not help, add more chemical.
3. Do this for each bar, once all bars have been set and tested turn all the ball valves on. To activate turn on your solution supply and air supply for manual activation. (See separate instructions for timed controls)



Troubleshooting Guide

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Foam surges and/or hose "bucks". B) Foam will not fill up all nozzles. C) Foam too wet or doesn't clean.	1, 2, 3, 4, 6, 7, 8 1, 2, 3, 4, 7, 8 2, 3, 4, 6, 7	9,11 10

Possible Cause / Solution	
Startup	Maintenance
1. Air volume too high or too low ◦ Adjust the needle valve slowly counterclockwise for dryer foam clockwise for wetter foam. 2. Use of an oiler in the airline will cause poor foam quality ◦ Use only clean, dry air. 3. Inlet ball valve not completely open ◦ Completely open the ball valve. 4. Not enough chemical - ◦ Make sure you solution is strong enough 5. Solution flow needle valve open too little/too much ◦ Turn knob clockwise for less, counterclockwise for more. 6. Improper chemical ◦ Ensure product is recommended for the application. 7. Discharge hose too long or wrong size or kinked ◦ Straighten the hose or replace with correct hose. 8. Solution pressure or volume too low ◦ Increase solution pressure or adjust flow valve.	9. Soil has hardened on surface ◦ Always rinse foam before it dries ◦ Reapplication may be necessary. 10. Air check valve failed ◦ Replace. 11. Chemical or water scale build-up may have formed in the foamer body causing low flow rate ◦ Follow Preventive Maintenance instructions below, using hot water and/or descaling acid. Carefully remove fittings and soak entire foamer body in descaling acid.

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.

