

# LAFFERTY EQUIPMENT MANUFACTURING, INC.

## Installation & Operation Instructions

### REQUIREMENTS

#### Water:

Pressure range..... 35 to 125 PSI  
Temp. range..... Ambient to 160° F

#### Hose:

I.D. .... 1/2" ONLY  
Standard Length ..... 50'

### OPTIONS

#### All Stainless Steel Accessories

- Hose Rack ..... # 224150
- Jug Racks
  - 1 Gallon
    - Round ..... # 224200
    - Square ..... # 224205
  - 2 ½ Gallon ..... # 224210
    - 8 ½" x 10 ½"  
(inside dimensions)
  - 5 Gallon ..... # 224215
    - 12" x 12"  
(inside dimensions)

### Model # 975515 Uni-Body Soft Brush Airless Foamer Complete



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

501-851-2820



### Safety & Operational Precautions

#### SAFETY PRECAUTIONS

- **Manufacturer Assumes No Liability For The Use Or Misuse Of This Unit.**
- **Backflow prevention:** Follow all local codes for preventing backflow into the water supply before installing / operating equipment.
- **Personal Safety**
  - Wear protective clothing, gloves and eyewear when working with chemicals.
  - Always direct the foam discharge away from people or electrical devices.
  - If water pressure exceeds 100 PSI, remove the discharge ball valve.

- Turn off water when unit is not in use.
- Follow the chemical manufacturer's safe handling instructions.
- **Regular equipment maintenance** should include checking all hoses, tubes, clamps and connections. (See also, *Preventive Maintenance, page 4.*)

#### OPERATIONAL PRECAUTIONS

- Do not substitute brush head or hose sizes. (See "Requirements.") The unit will not work properly with brush heads or hoses of any other size.
- Mount unit above chemical supply to prevent siphoning.

## TO INSTALL *(Refer to Illustration, Next Page.)*

**Read all Safety and Operational Precautions on page 1.**

**Backflow prevention:** Follow all local codes for preventing backflow into the water supply before installing / operating equipment.

1. **Mount the unit** above chemical supply.
2. **Connect water supply.** (35 PSI water pressure minimum *after* backflow preventer.)
3. **Connect the hose assembly** as shown in the diagram.
4. **Select and install metering tip into chemical check valve.**  
Push the chemical tube over the check valve and immerse the chemical strainer into your chemical concentrate.  
For the strongest possible chemical dilution ratio, do not install a metering tip.

Water Flow Rate Chart	
Water Pressure	Airless Foamer Water Flow Rate
PSI	GPM
40	.41
50	.44
60	.45
70	.49
80	.50
90	.53
100	.56

Metering Tip Selection Formula	
(GPM x 128)	← See chart above for GPM and convert to oz. per min.
÷	
Dilution Ratio	← 20:1, 30:1, etc.
=	
Oz. per Min.	← Match to nearest number in the chart below.

Metering Tip Selection		
Metering Tip Color	Oz. per Min.	Dilution Ratio @ 40 PSI
Brown	.84	63:1
Clear	1.16	45:1
Bright Purple	1.4	38:1
White	2.0	26:1
Pink	2.7	19:1
Corn Yellow	3.4	15:1
Dark Green	4.0	13:1
Orange	5.3	9.9:1
Gray	6.1	8.6:1
Light Green	7.0	7.5:1
Med. Green	8.5	6.2:1
Clear Pink	9.2	5.7:1
Yellow Green	11.2	4.7:1
Burgundy	—	—
Pale Pink	—	—
Light Blue	—	—
Dark Purple	—	—
Navy Blue	—	—
Clear Aqua	—	—
Black	—	—
<b>No Tip</b>	<b>12.2</b>	<b>4.3:1</b>

The dilution ratios provided above are approximate values. Your actual dilution ratio may be higher or lower, due to variations in water temperature and chemical viscosity.

### How to Select the Correct Metering Tip

- The dilution ratios provided in the Metering Tip Selection Chart, at right, are based on water-thin chemical with a consistent water pressure of 40 PSI. (Fluctuating water pressures alter dilution ratios.) Use the Metering Tip Selection Formula if you have water pressure other than 40 PSI.
- Due to varying chemical viscosities, you may need to increase the metering tip size. (See chemical label for dilution recommendation.)

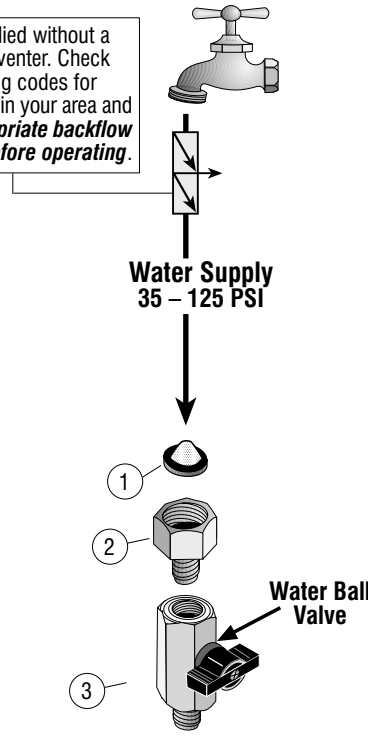
## TO OPERATE

1. **Direct the discharge away from people and electrical devices.**  
Open ball valves in order:  
1) water valve; 2) discharge valve.  
**To prevent streaking, apply foam from the bottom and work up.**
2. When application is finished, 1) close the discharge ball valve; 2) return to the unit and close the water ball valve; 3) briefly re-open the discharge ball valve to relieve pressure in the hose. 4) Store hose on optional hose rack.  
**Rinse the vehicle before the foam dries.**

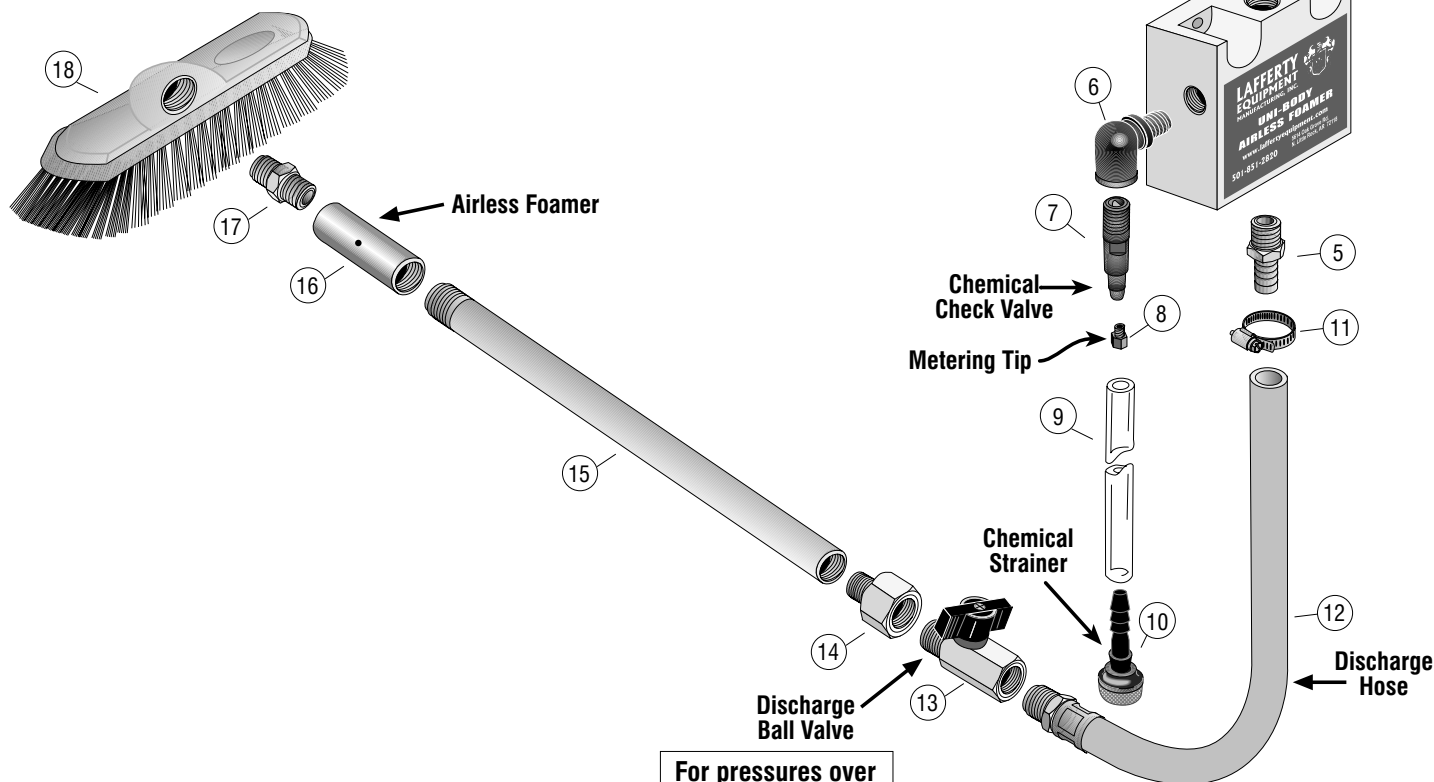
**⚠ Always turn off water when unit is not in use.**

CALL #	QTY.	PART #	DESCRIPTION
1	1	102050	WASHER, VINYL, GH, W/SCREEN
2	1	102023	ADAPTER, NPB, FGH X 3/8" MPT
3	1	413612	BALL VALVE, NPB, 3/8" FMB
4	1	391010	3/8" UNI-BODY W-10PP INJECTOR BODY
5	1	119266	HOSE BARB, NPB, 1/2" X 3/8" MPT
6	1	257379	ELBOW, ST., PP, 1/4"
7	1	491311	CHECK VALVE, CHEMICAL, PP/VITON, 1/4"
8	1	443794	METERING TIPS-COLOR CODED (10 SMALLEST)
9	1	473006	TUBE, PVC, 1/4" X 6"
10	1	150115	STRAINER, CHEMICAL, HASTELLOY, 1/4"
11	1	134302	HOSE CLAMP, 1/2"
12	1	803650	HOSE, BLUE, 1/2" X 50', 1/2" MPT (ONE END)
13	1	413617	BALL VALVE, NPB, 1/2" FMB
14	1	102041	ADAPTER, NPB, 3/8" MPT X 1/2" FPT
15	1	535150	FOAM BRUSH LANCE, 44"
16	1	536790	WAND, SS, A-10 AIRLESS BRUSH FOAMER ATTACHMENT
17	1	429008	NIPPLE, NPB, HEX, 1/2"
18	1	535100	FOAM BRUSH HEAD

Foamer supplied without a backflow preventer. Check local plumbing codes for requirements in your area and **install appropriate backflow preventer before operating.**



Drawing not "To Scale"



For pressures over 100 PSI, remove the discharge ball valve.

# Troubleshooting Guide

## Model # 975515 • Uni-Body Soft Brush Airless Foamer Complete

PROBLEM	Possible Cause / Solution Categories	
	WATER	CHEMICAL
A) Unit will not draw chemical.	1, 2, 3, 4, 6	7, 8, 9, 10, 11, 12, 14
B) Water flowing into chemical container.		7
C) Using too much chemical.		13
D) Foam does not clean/perform properly.		12, 14
E) Chemical solution backing up into water line.	5	

### Possible Cause / Solution

WATER	CHEMICAL
<p><b>1. Water pressure too low or water temperature too high</b></p> <ul style="list-style-type: none"> <li>• Increase water pressure or decrease water temperature.</li> </ul>	<p><b>7. Chemical check valve stuck or clogged</b></p> <ul style="list-style-type: none"> <li>• Clean or replace.</li> </ul>
<p><b>2. Water ball valve or discharge ball valve not completely open</b></p> <ul style="list-style-type: none"> <li>• Completely open the water and discharge ball valves.</li> </ul>	<p><b>8. Chemical tube not immersed in chemical or chemical depleted</b></p> <ul style="list-style-type: none"> <li>• Immerse tube or replenish.</li> </ul>
<p><b>3. Water strainer screen clogged</b></p> <ul style="list-style-type: none"> <li>• Clean or replace the water strainer screen. [See diagram, page 3.]</li> </ul>	<p><b>9. Chemical strainer or metering tip blocked</b></p> <ul style="list-style-type: none"> <li>• Clean or replace chemical strainer and/or metering tip.</li> </ul>
<p><b>4. Discharge hose wrong size or kinked; must be 1/2" I.D., 50' standard length (65 PSI water pressure is required for 75' total hose length)</b></p> <ul style="list-style-type: none"> <li>• Straighten the hose.</li> </ul>	<p><b>10. Chemical tube stretched out where tube slides over check valve or pin hole/cut in chemical tube (sucking air in)</b></p> <ul style="list-style-type: none"> <li>• Cut off end of tube or replace tube.</li> </ul>
<p><b>5. No backflow preventer installed</b></p> <ul style="list-style-type: none"> <li>• Install appropriate backflow preventer onto water line.</li> </ul>	<p><b>11. Vacuum leak in chemical pick-up connections</b></p> <ul style="list-style-type: none"> <li>• Tighten the connection(s).</li> </ul>
<p><b>6. Water scale or chemical build-up may have formed in the injector body causing poor or no chemical pick-up</b></p> <ul style="list-style-type: none"> <li>• To descale, carefully remove fittings and soak <i>entire</i> injector body in descaling acid.</li> </ul>	<p><b>12. Chemical build-up may have formed in the injector body causing poor or no chemical pick-up</b></p> <ul style="list-style-type: none"> <li>• Follow Preventive Maintenance instructions below, using hot water. In extreme cases, carefully remove fittings and soak <i>entire</i> injector body in descaling acid.</li> </ul>
	<p><b>13. Dilution too strong</b></p> <ul style="list-style-type: none"> <li>• Install smaller metering tip. <i>See pg. 2 for instructions.</i></li> </ul>
	<p><b>14. Dilution too weak</b></p> <ul style="list-style-type: none"> <li>• Install larger metering tip. <i>See pg. 2 for instructions.</i></li> </ul>

**PREVENTIVE MAINTENANCE:** When the unit will be out of service for extended periods, remove chemical tube from chemical concentrate and place in water. Completely open the water and discharge ball valves for a few seconds to flush chemical and help prevent chemical build-up. Check and/or clean chemical strainer; replace if missing.