

# LAFFERTY EQUIPMENT MANUFACTURING, INC.

## Installation & Operation Instructions

### Uni-Body Asphalt Release Spray-Alls and Airless Foamers

Model # 974112, W-25 Uni-Body Asphalt Release Spray-All Complete  
Model # 974113, W-50 Uni-Body Asphalt Release Spray-All Complete

Model # 974114, A-25 Uni-Body Asphalt Release Airless Foamer Complete  
Model # 974115, A-50 Uni-Body Asphalt Release Airless Foamer Complete

#### REQUIREMENTS

##### Water:

Pressure range ..... 35 to 150 PSI  
Temp. range ..... Ambient to 160° F

##### Spray-All

974112.....size 4040 nozzle  
974113.....size 2550 nozzle

##### Airless Foamer

974114.....A-25 Airless Foam Wand  
974115.....A-50 Airless Foam Wand

##### Hose:

I.D.....1/2" ONLY  
Standard Length .....25'



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

501-851-2820



#### Safety & Operational Precautions

##### SAFETY PRECAUTIONS

- **Backflow prevention:** Follow all local codes for preventing backflow into the water supply before installing / operating equipment.
- **Mounting:** Mount unit above chemical supply to prevent siphoning.
- **Personal Safety:**
  - Wear protective clothing, gloves and eyewear when working with chemicals.
  - Always direct the 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 nozzle, airless foam wand or hose sizes. (See "Requirements.") The unit **will not** work properly with nozzles, airless foam wands or hoses of any other size.

**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 to prevent siphoning.
2. **Connect the water supply and the hose assembly.**
3. **Select and install metering tip.** *If you want to achieve the strongest possible chemical dilution ratio do not install a metering tip.*

**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 water pressure of 40 PSI. 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.)
- Do not discard the remaining metering tips. Keep them for alternate dilution ratios or new chemicals.

4. Push the chemical tube (#10) over the metering tip holder (#8) and immerse the chemical strainer into your chemical concentrate.

**⚠ Make sure discharge ball valve is closed before opening water ball valve.**

**TO OPERATE**

1. Open the water ball valve. Completely open the discharge ball valve and spray the entire truck bed.  
**Do not overapply chemical. Overuse can cause slippery roads.**
2. When application is finished close the discharge ball valve and close the water ball valve.
3. Briefly re-open the discharge ball valve to relieve pressure in the hose.

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

Water Flow Rate Chart		
Water Pressure	Water Flow Rate	
	W-25/A-25	W-50/A-50
PSI	GPM	
40	1.34	2.10
50	1.46	2.28
60	1.54	2.49
70	1.59	2.67
80	1.76	2.80
90	1.80	3.00
100	1.91	3.20

**Metering Tip Selection Formula**

(GPM x 128) ← See chart above for GPM and convert to oz. per min.  
 ÷  
 Dilution Ratio ← 100:1, 50:1, etc.  
 =  
 Oz. per Min. ← Match to nearest number in the chart below.

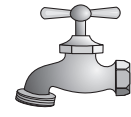
Metering Tip Selection			
Metering Tip Color	Oz. per Min.	Dilution Ratio @ 40 PSI	
		W-25/A-25	W-50/A-50
Brown	.84	204:1	320:1
Clear	1.16	148:1	232:1
Bright Purple	1.4	123:1	192:1
White	2.0	86:1	134:1
Pink	2.7	64:1	100:1
Corn Yellow	3.4	50:1	79:1
Dark Green	4.0	43:1	67:1
Orange	5.3	32:1	51:1
Gray	6.1	28:1	44:1
Light Green	7.0	25:1	38:1
Med. Green	8.5	20:1	32:1
Clear Pink	9.2	19:1	29:1
Yellow Green	11.2	15:1	24:1
Burgundy	12.5	14:1	22:1
Pale Pink	12.9	13:1	21:1
Light Blue	14.2	12:1	19:1
Dark Purple	17.6	10:1	15:1
Navy Blue	21.4	8:1	13:1
Clear Aqua	30.2	—	—
Black	40.4	—	—

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.

# Uni-Body Asphalt Release Spray-Alls and Airless Foamers

CALL #	QTY.	PART #	DESCRIPTION
1	1	102050	GH WASHER, VINYL, W/SCREEN
2	1	102023	GH ADAPTER, NPB, FGH x 3/8" MPT
3	1	413612	BALL VALVE, NPB, 3/8" FMB
4	1	391025HCP	3/8" UNI-BODY W-25PPHCP INJECTOR BODY
		391050HCP	3/8" UNI-BODY W-50PPHCP INJECTOR BODY
5	1	119266	HOSE BARB, NPB, 1/2" x 3/8" MPT
6	1	257378	ELBOW, ST., NPB, 1/4"
7	1	491400	CHECK VALVE, PVC, 1/4" FM
8	1	491308	METERING TIP HOLDER
9	1	443798	METERING TIPS-COLOR CODED (20)
10	1	473306	TUBE, PVC, 7/16" x 6'
11	1	150119SS	STRAINER, STAINLESS STEEL, 1/2"
12	1	134302	HOSE CLAMP, 1/2"
13	1	803425	HOSE, BLUE, 1/2" x 25', 1/4" MPT (ONE END)
14	1	413620	BALL VALVE, SS, 1/4" FF
15	1	536518	WAND, SS, 1/4" x 18", 1/4" MxM
16	1	506004	COUPLING, NPB, HEX, 1/4"
17	1	180440	NOZZLE, SS, 1/4" - 4040
		180137	NOZZLE, SS, 1/4" - 2550
18	1	305218	BUSHING, NPB, 1/2" x 1/4"
19	1	536625	WAND, PP, AIRLESS FOAM, A-25 (A-25 ONLY)
		536650	WAND, PP, AIRLESS FOAM, A-50 (A-50 ONLY)

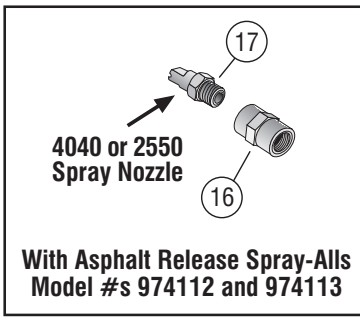
**IMPORTANT:** Unit supplied without a backflow preventer. Check local plumbing codes for requirements in your area and *install appropriate backflow preventer before operating.*



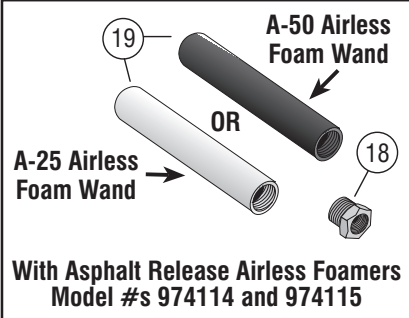
Water Supply  
35 - 150 PSI

Drawing not "to scale"

Water Ball Valve



OR



For proper operation, use **ONLY** the nozzle or Airless Foam Wand supplied with your Asphalt Release Spray-All or Airless Foamer.

18" SS  
Extension Wand

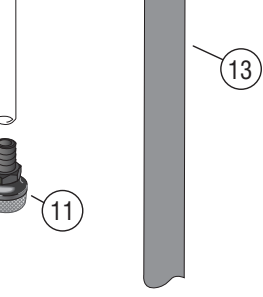
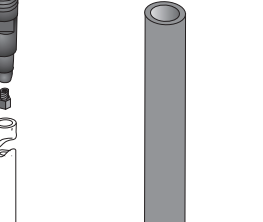
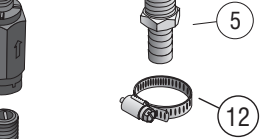
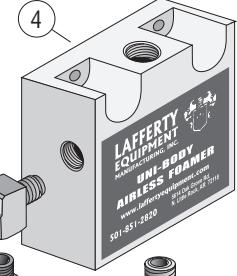
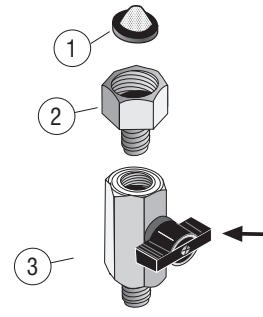
For pressures over  
100 PSI, remove the  
discharge ball valve.

Discharge  
Ball Valve

Chemical  
Check Valve

Metering Tip

Chemical  
Strainer



# Troubleshooting Guide

## Uni-Body Asphalt Release Spray-Alls and Airless Foamers

PROBLEM	Possible Cause / Solution Categories	
	WATER / SPRAY / FOAM	CHEMICAL
A) Unit will not draw chemical.	1, 2, 3, 4, 5, 6, 7	9, 10, 11, 12, 13, 14, 15
B) Water flowing into chemical container.		9
C) Using too much chemical.		15
D) Asphalt continues to stick to truck bed.	1	16, 17
E) Chemical solution backing up into water line.	8	

### Possible Cause / Solution

WATER / SPRAY / FOAM	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 (35 PSI <i>after</i> backflow preventer) <i>or</i> decrease water temperature.</li> </ul> <p><b>2. Water ball valve or discharge ball valve not completely open</b></p> <p><b>3. Water strainer screen clogged</b></p> <ul style="list-style-type: none"> <li>• Clean the water strainer screen. [See diagram, pg. 3.]</li> </ul> <p><b>4. Discharge hose wrong size or kinked; must be 1/2" I.D., 25' standard length</b></p> <p><b>5. Nozzle wrong size</b></p> <ul style="list-style-type: none"> <li>• Nozzle must match injector (see pg. 3).</li> </ul> <p><b>6. Airless foam wand wrong size</b></p> <ul style="list-style-type: none"> <li>• Airless foam wand must match injector (see pg. 3).</li> </ul> <p><b>7. Foam wand screen blocked</b></p> <ul style="list-style-type: none"> <li>• Dried chemical build-up may be obstructing screen. Back flush with hot water to remove debris.</li> </ul> <p><b>8. No backflow preventer installed</b></p> <p>Install appropriate backflow preventer onto water line.</p>	<p><b>9. Chemical check valve stuck or clogged</b></p> <ul style="list-style-type: none"> <li>• Clean or replace.</li> </ul> <p><b>10. 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>11. 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>12. 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>13. Vacuum leak in chemical pick-up connections</b></p> <ul style="list-style-type: none"> <li>• Tighten the connection(s).</li> </ul> <p><b>14. Chemical build-up may have formed in the injector body or foam wand 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 or foam wand in descaling acid.</li> </ul> <p><b>15. 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>16. 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> <p><b>17. Improper chemical</b></p> <ul style="list-style-type: none"> <li>• Ensure product is recommended for foaming and/or the application.</li> </ul>

**PREVENTIVE MAINTENANCE:** When the unit will be out of service for extended periods, remove chemical tubes 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.