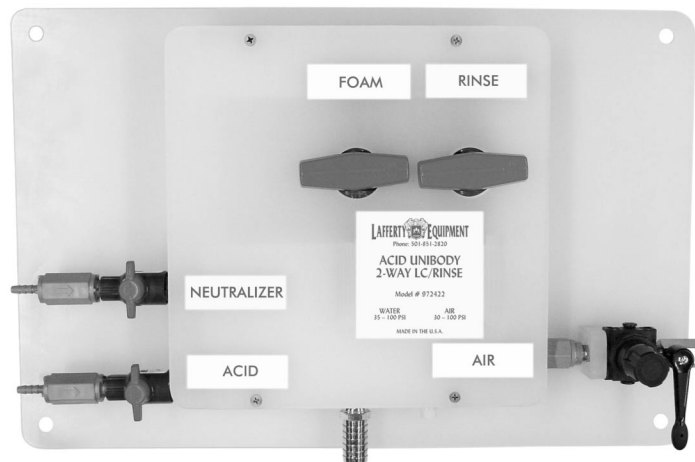


LAFFERTY EQUIPMENT MFG., INC. INSTALLATION / OPERATION INSTRUCTIONS

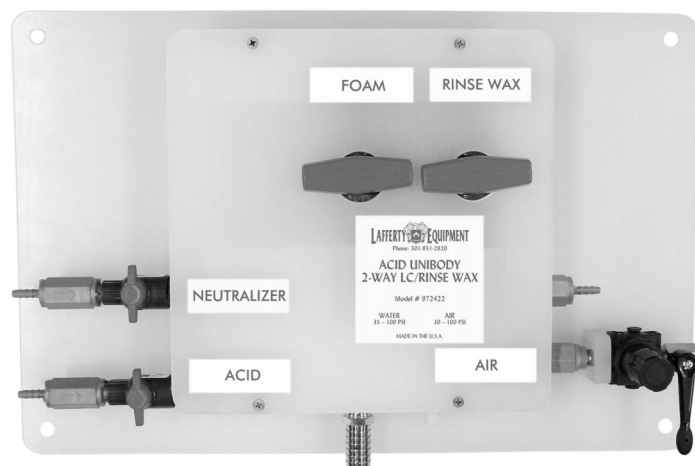
ACID UNIBODY 2-WAY LC FOAM / RINSE *and* ACID UNIBODY 2-WAY LC FOAM / RINSE WAX

Requirements

- 35 – 100 PSI Water — Up to 15 GPM
- 30 – 100 PSI Air — Up to 7 SCFM
- 3/4" I. D. Discharge Hose, 40' maximum



Model # 972412
Acid Unibody 2-Way LC Foam / Rinse Complete
(with 40' hose, ball valve, foam wand and 50250 nozzle)



Model # 972422
Acid Unibody 2-Way LC Foam / Rinse Wax Complete
(with 40' hose, ball valve, foam wand and 50250 nozzle)

**For better control of chemical use,
ask about our Timed Systems.**

INSTALLATION / OPERATION INSTRUCTIONS

ACID UNIBODY 2-WAY LC FOAM / RINSE

and ACID UNIBODY 2-WAY LC FOAM / RINSE WAX

CAUTION: ALWAYS OBSERVE GOOD SAFETY HABITS. WEAR PROTECTIVE CLOTHING, GLOVES, AND EYE WEAR. DIRECT DISCHARGE AWAY FROM YOURSELF AND OTHERS. SHUT STATION DOWN AFTER EACH USE! NEVER LEAVE STATION UNATTENDED WITHOUT CLOSING ALL INCOMING VALVES.

TO INSTALL (See Parts Diagram, Facing Page)

1. Mount the unit to a suitable surface.
2. **Unit supplied without a backflow preventer. To prevent possible chemical back up into the water system, comply with local plumbing codes and install appropriate backflow preventer.** Then, connect your 35 – 100 PSI water (3/4" minimum) and air lines to the unit.
3. Connect the discharge hose to the hose barb and secure with the clamp. **[Hose must be 3/4" I.D.]**
4. Connect the wand assembly to the hose. **[Use only the 50250 nozzle supplied with the unit.]**
5. Stapled to these instructions, with a matching color-coded chart, are metering tips which control your chemical to water dilutions. **[THIS IS A HIGH CONCENTRATE FOAMER. Although metering tips and selection instructions are provided, do not install a tip if you want to achieve the strongest possible chemical concentration.]** If you will be using a metering tip, you will need to know the water pressure and the number of ounces of chemical needed per gallon of water to determine the correct tip color. (See chemical label for manufacturer's recommendation.)
 - A. Locate your water pressure in the chart. The number below it is your water flow rate in **gallons per minute**.
 - B. Multiply the **gallons per minute** by the number of **ounces of chemical needed per gallon** of water.
 - C. Match answer(s) to the nearest number in the metering tip selection chart. **[The tip selection chart is based on water-thin chemical. Thicker chemicals will require a larger metering tip. If the selected metering tip does not produce desired foam consistency, increase tip size until desired foam consistency and cleaning results are achieved.]**
 - D. Install selected metering tips into solution check valves.
 - E. Push the chemical tubes over the check valves. Immerse the chemical strainers into your chemical concentrates.

EXAMPLE OF METERING TIP SELECTION
Acid LC Foamer at 60 PSI

- 60 PSI = 1.54 GPM
- 8 ounces of chemical per gallon of water
- 1.54 x 8 = 12.32
- 12.32 ≈ 12.5 for thin chemical (Burgundy tip) (thicker chemicals will require a larger tip)

TO FOAM

1. While firmly holding the wand, **point the discharge away from yourself and others.** Then, open the discharge ball valve.
2. Open the acid ball valve, the foam ball valve, and the air ball valve. Observe foam quality.
3. Foam consistency can be changed by adjusting the air pressure.

AIR REGULATION PROCEDURES

Air pressure is very important for proper operation; air pressure must be LOWER than water pressure. Pull out adjustment knob on **air regulator**, and turn it *slowly clockwise* to increase air pressure until desired foam consistency is achieved. Make only slight adjustments, then wait to see the results. If the flow of foam surges and/or hose "bucks," you must decrease the air pressure by *slightly* turning the regulator **counterclockwise** until the foam stabilizes. "Fine tune" your adjustments by making *slight* turns **clockwise and/or counterclockwise** until foam is desired consistency. Once adjustments are made, push lock **air regulator**. If foam consistency is too wet or hose is still "bucking," try installing a larger **metering tip** and/or see Troubleshooting Guide (pg. 4).

4. Foam from the bottom and work up to prevent streaking.
5. When the acid application is completed, close the discharge ball valve. Next, return to the unit and close the acid ball valve. Then, open the neutralizer ball valve. Return to the cleaning area and open the discharge ball valve to apply neutralizer. Expect a strong blast of foamy solution. Allow a few seconds for acid to clear the line.
6. After neutralizing, close the discharge ball valve. Return to the unit and close the neutralizer ball valve, foam ball valve, and air ball valve.

TO APPLY RINSE or RINSE WAX

1. Make sure all ball valves are closed. Then, open the rinse (or rinse/wax) ball valve and apply.
2. When finished, return to the unit and close the rinse (or rinse/wax) ball valve.
3. For proper storage between uses, relieve the pressure in the hose by opening the discharge ball valve. While firmly holding the wand, slowly open the air ball valve to clear out the hose. Expect a strong blast. Close the air ball valve and the discharge ball valve before storing the unit.

WATER PRESSURE	40 PSI	60 PSI	80 PSI	100 PSI
RINSE/WAX WATER FLOW RATE	8.60 GPM	9.90 GPM	11.10 GPM	12.30 GPM
ACID LC FOAMER WATER FLOW RATE	1.34 GPM	1.54 GPM	1.76 GPM	1.91 GPM

The number under each color in the chart below represents the **average ounces of water-thin chemical which will pass through the tip per minute**.

METERING TIP SELECTION IN OUNCES PER MINUTE (AVERAGE)																				
COLOR	Brown	Clear	Bright Purple	White	Pink	Corn Yellow	Dark Green	Orange	Gray	Light Green	Medium Green	Clear Pink	Yellow Green	Burgundy	Pale Pink	Light Blue	Dark Purple	Navy Blue	Clear Aqua	Black
Thin Chemical	0.84	1.16	1.4	2.0	2.7	3.4	4.0	5.3	6.1	7.0	8.5	9.2	11.2	12.5	12.9	14.2	17.6	21.4	30.2	40.4

TROUBLESHOOTING GUIDE

ACID UNIBODY 2-WAY LC FOAM / RINSE and ACID UNIBODY 2-WAY LC FOAM / RINSE WAX

PROBLEMS WITH FOAMER	POSSIBLE CAUSE / SOLUTION																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
A) Foamer will not draw chemical.	•			•		•	•	•	•	•			•	•	•	•			
B) Foam surges, hose bucks, or foam is poor quality.	•	•	•	•		•	•	•	•		•	•		•	•	•		•	
C) Foam output too wet.		•	•	•	•	•	•	•			•	•	•	•	•	•		•	
D) Foam output too dry.	•			•															
E) Water flowing into chemical container.										•									
F) Foam does not clean properly.												•						•	•
G) Water/chemical backing up into air line.					•														

PROBLEMS WITH RINSE WAX	POSSIBLE CAUSE / SOLUTION																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
A) Rinse/wax injector draws little or no chemical.						•		•		•	•			•	•	•	•	•	
B) Water flowing into chemical container.										•									
C) Chemical concentration too strong.																		•	
D) Chemical concentration too weak.						•		•		•	•			•	•	•		•	

POSSIBLE CAUSE / SOLUTION

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> 1. Air pressure too high for available water pressure – Adjust the air regulator slowly counterclockwise. 2. Use of an oiler on the airline will cause poor foam quality – Use only clean, dry air. 3. Inadequate air supply – Open air inlet valve fully. Adjust air regulator slowly clockwise. 4. Air regulator clogged or failed – Clean or replace air regulator. 5. Air check valve clogged or failed – Clean or replace the air check valve. 6. Water pressure too low or fluctuating – Increase water pressure or install a water regulator to stabilize pressure. 7. Foam hose too long, wrong size, or kinked; must be 3/4" I.D. – For pressures below 40 PSI, 25' is the maximum length recommended; for pressures over 40 PSI, 40' is the maximum. Straighten the hose. 8. Nozzle size too small – Must be a 50250 nozzle. 9. Water inlet and discharge ball valves not completely open – Completely open water and discharge ball valves. | <ol style="list-style-type: none"> 10. Solution check valve clogged or failed – Clean or replace solution check valve. 11. Water inlet screen clogged – Disconnect unit from water source. Clean or replace screen. 12. Improper chemical – Ensure product is recommended for foaming and/or the application. 13. Chemical tube not immersed in chemical or chemical depleted – Immerse tube or replenish. 14. Chemical strainer or metering tip blocked – Clean or replace chemical strainer and/or tip. 15. Chemical tube stretched out where tube slides over check valve or pin hole/cut in chemical tube – Cut approximately 1/2" off end of tube or replace tube. 16. Vacuum leak in chemical pick-up assembly – Tighten the connection(s). 17. Chemical to water ratio too high – Install smaller tip. 18. Chemical to water ratio too low – Install larger tip. 19. Soil has hardened on surface – Reapplication may be necessary. Always rinse foam before it dries. |
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