

LAFFERTY EQUIPMENT MFG., INC.

INSTALLATION / OPERATION INSTRUCTIONS

EXTERNAL CHEMICAL TANK FOAMERS

Requirements

40 – 80 PSI Air — Up to 8 SCFM
3/4" I. D. Discharge Hose

Water Temperature

Ambient to 140° F



Model # 925505, 5 Gallon External Chemical Tank Foamer
Model # 925510, 10 Gallon External Chemical Tank Foamer
(with 25' hose, ball valve, wand, and nozzle)

Ask about our *Internal Chemical Tank Foamers*

INSTALLATION AND OPERATION INSTRUCTIONS EXTERNAL CHEMICAL TANK FOAMERS

This unit was designed with the safety of the operator in mind.

**UNDER NO CONDITION SHOULD ANY TYPE OF CHEMICAL BE PLACED INSIDE THE WATER TANK.
MANUFACTURER ASSUMES NO LIABILITY FOR USE OR MISUSE OF THIS UNIT.**

TO OPERATE (See Parts Diagram, Facing Page)

1. Pull wire handle up to unlock the tank lid. Then, remove the lid from the tank, making sure the "O" ring remains attached. Fill tank with water (hot or cold). Then replace the tank lid, *making sure the "O" ring seats properly*. Lock wire handle in place. Ensure the pop-off/relief valve on the lid is down (closed).
2. Make sure the air ball valve is closed. Then, connect your compressed air line (3/8" minimum) to the foamer.
3. The tank pressure air regulator (top) comes preset at 60 PSI and the foam consistency air regulator (bottom) comes preset at approximately 20 PSI.
4. *Stapled to these instructions, with a matching color-coded chart, are metering tips which control your chemical to water dilutions.* Tank pressure is preset at **60 PSI**. You will need to know 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. Multiply the **gallons per minute** by the number of **ounces of chemical needed per gallon** of water.
 - B. Match answer 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 selected metering tip does not produce desired foam consistency, increase tip size until desired foam consistency and cleaning results are achieved.]**
 - C. Install selected tip into solution check valve. Then, push chemical tube over the check valve. Place a one gallon jug of FOAMING chemical concentrate in the jug rack on the foam cart. Immerse the chemical strainer into your chemical concentrate.

EXAMPLE OF METERING TIP SELECTION

External Tank Foamer at 60 PSI

- 60 PSI = .61 GPM
- 4 ounces of chemical per gallon of water
- $.61 \times 4 = 2.44$
- $2.44 \approx 2.7$ for thin chemical (pink tip)
(thicker chemicals will require a larger tip)

6. Make sure the discharge ball valve is closed. Then, open the air ball valve. Allow time for pressure to build up. While firmly holding foam wand, ***point the discharge away from yourself and others.*** Then, open the discharge ball valve and observe foam quality.
7. Foam consistency can be changed by adjusting the air pressure with the bottom air regulator and/or by installing a different metering tip.

AIR REGULATION PROCEDURES

- Air pressure is very important for proper operation; air pressure (bottom regulator) must be LOWER than tank water pressure. Pull out adjustment knob on **bottom 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.
8. Foam from the bottom and work up.
 9. Rinse before foam dries or reapplication will be necessary.

TO SHUT DOWN OR REFILL TANK

1. Turn off the air supply line (directly above jug rack).
2. Relieve tank pressure completely, using the pop-off/relief valve.
3. Open foam discharge valve to relieve pressure in the foam hose, then re-close the valve.
4. Store unit or refill tank with potable water.

NOTE: When the foamer will be out of service for extended periods, the risk of residual chemical build-up is increased. To prevent build-up, remove chemical tube from chemical concentrate and place in warm water. Completely open the discharge ball valve for 30 seconds to flush. Check and/or clean chemical strainer.

TANK WATER PRESSURE	40 PSI	50 PSI	60 PSI	70 PSI	80 PSI
EXTERNAL TANK FOAMER WATER FLOW RATE	.50 GPM	.55 GPM	.61 GPM	.67 GPM	.70 GPM

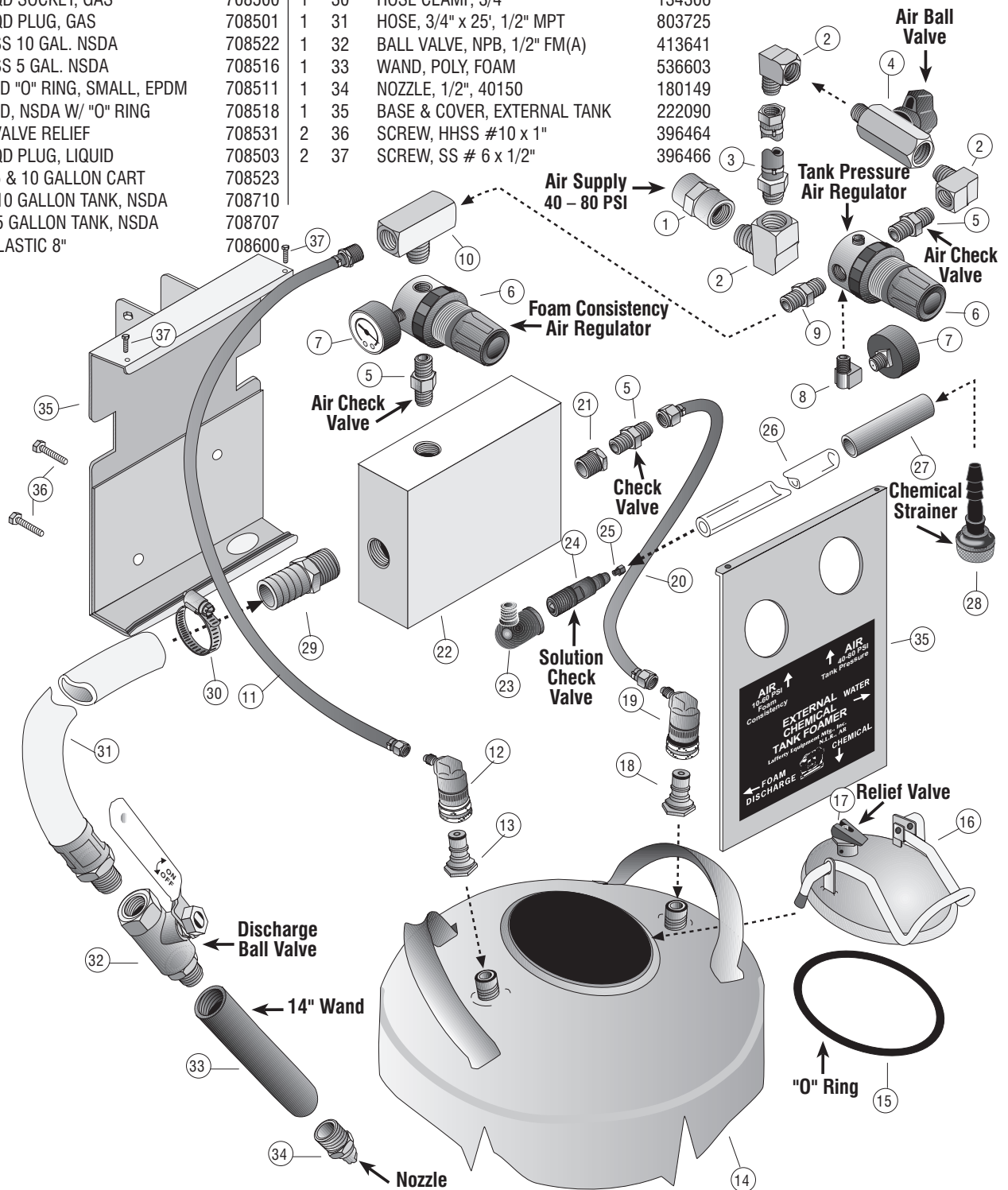
The number under each color in the chart below represents the
average ounces of water-thin chemical which will pass through the tip per minute.

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

EXTERNAL CHEMICAL TANK FOAMERS

QTY.	CALL #	DESCRIPTION	PART #	QTY.	CALL #	DESCRIPTION	PART #
1	1	COUPLING, HEX, 1/4"	506668	1	19	TANK, QD SOCKET, LIQUID	708504
3	2	ELBOW, ST., 1/4"	257378	1	20	HOSE 10" LIQUID EXT.	708547
1	3	HOSE ASSEMBLY, AIR, 27"	195180	1	21	BUSHING, 3/8" X 1/4"	305216
1	4	BALL VALVE, 1/4" FMB	413605	1	22	FOAMER BODY, EXTERNAL TANK	212108
3	5	CHECK VALVE, AIR, SS, 1/4"	491306	1	23	ELBOW, ST., POLY, 1/4"	257379
2	6	REGULATOR, AIR, 1/4" (NON-REL.)	288362	1	24	CHECK VALVE, SOL., VITON BALL, 1/4"	491311
2	7	GAUGE, AIR, 1/8"	336326	1	25	METERING TIPS, SET (20)	443798
1	8	ELBOW, ST., 1/8"	257374	1	26	TUBE, CHEMICAL, 1/4" x 6'	474745
1	9	NIPPLE, HEX, 1/4"	429686	1	27	WEIGHT, CHEMICAL TUBE	475100
1	10	TEE, BRANCH, 1/4"	690488	1	28	STRAINER, CHEMICAL, SS(BLUE), 1/4"	150113
1	11	HOSE ASSEMBLY, LIQUID, 16"	708543	1	29	HOSE BARB, 3/4" x 1/2" MPT, SCREEN	119282
1	12	TANK, QD SOCKET, GAS	708500	1	30	HOSE CLAMP, 3/4"	134306
1	13	TANK, QD PLUG, GAS	708501	1	31	HOSE, 3/4" x 25', 1/2" MPT	803725
1	14	TANK, SS 10 GAL. NSDA	708522	1	32	BALL VALVE, NPB, 1/2" FM(A)	413641
1	14	TANK, SS 5 GAL. NSDA	708516	1	33	WAND, POLY, FOAM	536603
1	15	TANK LID "O" RING, SMALL, EPDM	708511	1	34	NOZZLE, 1/2", 40150	180149
1	16	TANK LID, NSDA W/ "O" RING	708518	1	35	BASE & COVER, EXTERNAL TANK	222090
1	17	TANK, VALVE RELIEF	708531	2	36	SCREW, HHSS #10 x 1"	396464
1	18	TANK, QD PLUG, LIQUID	708503	2	37	SCREW, SS # 6 x 1/2"	396466
1	not shown	TANK, 5 & 10 GALLON CART	708523				
1	not shown	BAND, 10 GALLON TANK, NSDA	708710				
1	not shown	BAND, 5 GALLON TANK, NSDA	708707				
2	not shown	TIRE, PLASTIC 8"	708600				



TROUBLESHOOTING GUIDE

for

EXTERNAL CHEMICAL TANK FOAMERS

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 and/or hose "bucks."	•	•	•	•		•	•	•	•		•		•	•	•		•		•
C) Foam output too wet.		•	•	•	•	•	•	•			•	•	•	•	•		•		•
D) Foam output too dry.	•															•			
E) Water flowing into chemical container.										•									
F) Foam does not clean properly.											•						•	•	

POSSIBLE CAUSE / SOLUTION

- Air pressure too high for available tank water pressure** – Adjust the **bottom** air regulator slowly counterclockwise.
- Use of an oiler on the airline will cause poor foam quality** – Use only clean, **dry** air.
- Inadequate air supply** – Open air inlet valve fully. Adjust **bottom** air regulator slowly clockwise.
- Air regulator(s) clogged or failed** – Clean or replace air regulator(s).
- Air check valve(s) clogged or failed** – Clean or replace the air check valve(s).
- Foam hose too long or wrong size or kinked; must be 3/4" I.D.** – Supplied with 25' hose. Maximum **recommended** length is 40'.
- Nozzle size too small** – Must be a 40150 nozzle.
- Discharge ball valve not completely open** – Completely open the discharge ball valve.
- Tank is empty (no water)** – Follow refill tank procedure (pg. 3).
- Solution check valve clogged or failed** – Clean or replace solution check valve.
- Improper chemical** – Ensure product is recommended for foaming and/or the application.
- Chemical tube not immersed in chemical or chemical depleted** – Immerse tube or replenish.
- Chemical strainer or metering tip blocked** – Clean or replace chemical strainer and/or tip.
- 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.
- Vacuum leak in chemical pick-up assembly** – Tighten the connection(s).
- Chemical to water ratio too high** – Install **smaller** tip.
- Chemical to water ratio too low** – Install **larger** tip.
- Soil has hardened on surface** – Reapplication may be necessary. Always rinse foam **before** it dries.
- Water scale or chemical build-up may have formed in the foamer body causing poor pick-up** – To descale, carefully remove body and soak *entire* foamer body in descaling acid.

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