

Lafferty Equipment Manufacturing, LLC Installation & Operation Instructions

Model # BLU35 · Easy Brush Low Volume Ultimate Wash System

REQUIREMENTS

Chemical Concentrate

Water

Temperature	up to 160°F
Pressure	50 to 125 PSI
Flow	0.45 GPM @ 50 PSI
Supply Line	1/2"

Hose	3/8" ID x 50'
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Nozzle	Easy Brush Foamer or #10 Bullet Adjustable Foam Nozzle
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OPTIONS

Stainless Steel Hose Racks

Large Stainless Steel Hose Rack	# 224150
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Stainless Steel Jug Racks

1 Gallon Round/Square	# 224200
1 Gallon Round/Square Locking	# 224200-L
2 ½ Gallon (8 ½" x 10 ½")	# 224210
5 Gallon Round/Square Locking (12" x 12")	# 224214
5 Gallon Round/Square (12" x 12")	# 224215

Safe Flow Lid™ for 1 Gallon Jugs

Lid, Suction Tube, and Strainer	# 709101
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Alternate Check Valve - EPDM Standard

Check Valve, Chemical, PP/Viton, 1/4"	# 491315
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**WARNING! READ ALL
INSTRUCTIONS BEFORE
USING EQUIPMENT!**

OVERVIEW

The Blue Mule Easy Brush Low Volume Ultimate Wash System is a foam and rinse station with multiple attachments. This venturi injection system draws chemical concentrate from any sized container, mixes it with water and projects the accurately diluted solution as wet clinging foam through a brush foamer, or an adjustable foam nozzle. Remove the quick connect foam brush or nozzle and adjust the ball valves to rinse using a spray gun. Mount anywhere 50-125 PSI water is available. Foam continually flushes debris from the bristles. Great for jobs that require scrubbing with a soft touch. The soft bristled brush is suitable for use on paintwork and other delicate surfaces.

SAFETY & OPERATIONAL PRECAUTIONS

- When connecting to a potable water supply follow all local codes for backflow prevention.
- **WARNING:** Severe damage to your facility, or contamination of your potable water supply, can occur without proper backflow prevention.
- 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 safety goggles 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.
- Never leave inlet ball valves on when unit is not in use.
- Follow the chemical manufacturer's safe handling instructions.
- NEVER mix chemicals without first consulting chemical manufacturer.

TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

If you are connecting to a potable water supply follow all local codes for backflow prevention.

1. Mount the unit to a suitable surface above the chemical supply to prevent siphoning.
2. Connect hose(s) as shown in the diagram.
3. Flush any new plumbing of debris before connecting water.
4. Connect water supply. Install a water filter if water piping is older or has known contaminants.

Set the chemical dilution ratio by threading one of the color coded metering tips into each chemical check valve. See chemical labels for dilution ratio recommendation or consult your chemical supplier.

- For the strongest dilution ratio do NOT install a colored metering tip.
- The dilution ratios in the metering tip chart are based on water thin chemicals with a viscosity of 1CPS.
- Thicker chemicals will require a larger tip than the ratios shown in the chart.
- Application results will ultimately determine final tip color.
- Select the tip color that is closest to your desired chemical strength and thread it into the tip holder. **DO NOT OVER-TIGHTEN.**
- Push the chemical tube over the check valve barb and place the suction tube in the chemical concentrate.
- If necessary, cut suction tube(s) to length before attaching suction strainer.

TO OPERATE

Always make sure the discharge is closed or pointed in a safe direction before turning inlet valve on. Discharge can be shut off at any time during operation but should not be left off for long periods of time with the inlet valve on.

TO FOAM

1. With the brush foamer handle in hand open the inlet ball valve.
2. Open the discharge ball valve to begin application.
3. Make final metering tip adjustments based on foaming and cleaning results.
4. If more than enough foam is present close the discharge ball valve until more is needed.
5. When application is completed, close the discharge ball valve, return to the unit and close the inlet ball valve. Re-open the discharge ball valve to relieve pressure in hose then close the discharge ball valve.
6. Rinse before the foam dries.

TO FOAM

1. With foam wand in hand open the inlet ball valve.
2. Open the discharge ball valve to begin application.
3. To switch to a wide or narrow pattern turn the Bullet nozzle clockwise 1/4 turns.
4. Make final metering tip adjustments based on application results.
5. When foaming is completed, close the discharge ball valve then close the inlet ball valve.
6. Briefly re-open the discharge ball valve to relieve pressure in hose. Rinse the work surface before foam dries.

TO RINSE

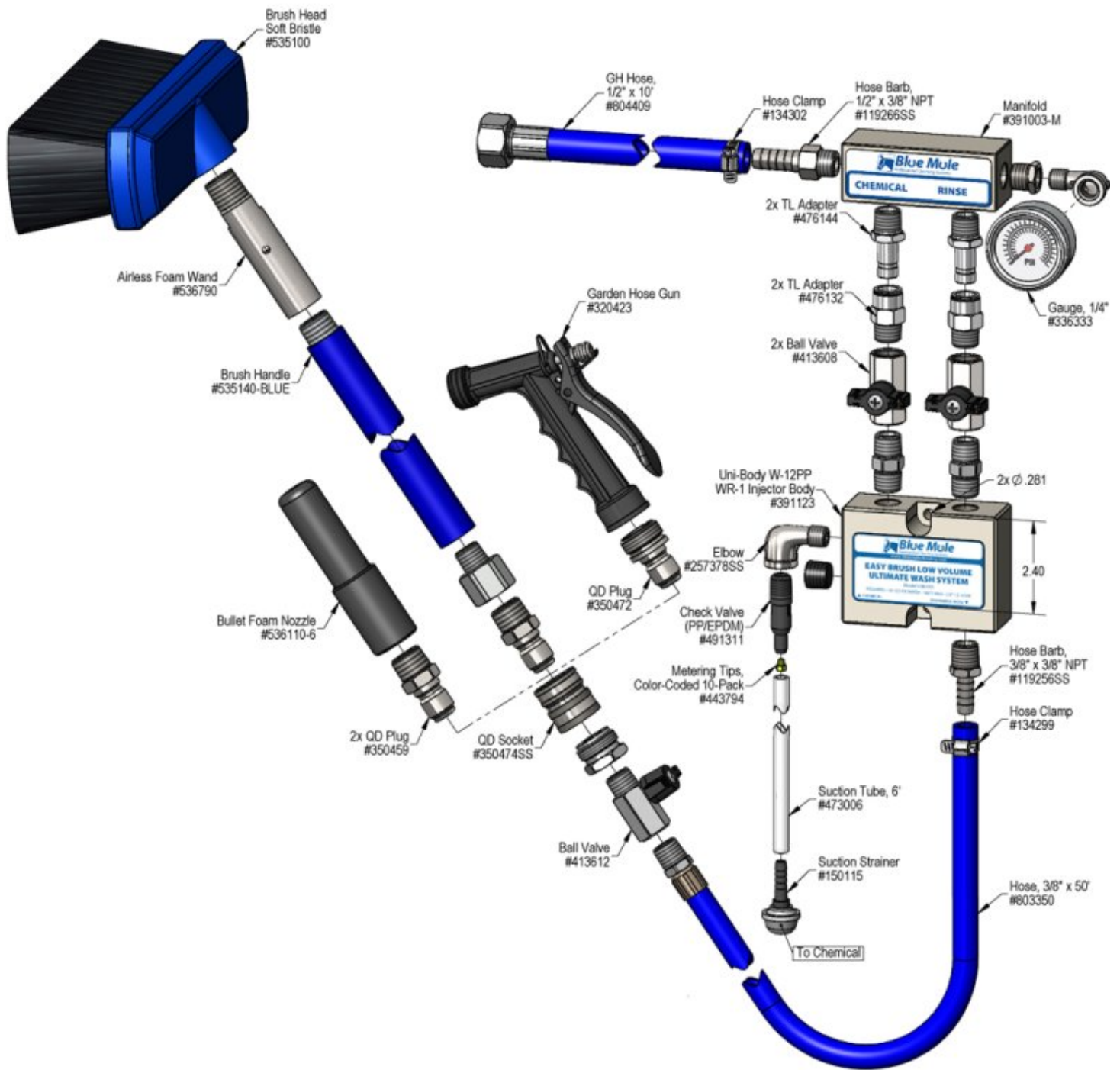
- **Always** relieve pressure in hose before quick disconnecting between the foam wand and trigger gun.
1. Relieve the pressure in the hose and quick connect the gun to the hose.
 2. Open the inlet rinse ball valve and squeeze the trigger to rinse.
 3. When finished, release the trigger, return to the unit and close the rinse ball valve.
 4. Briefly squeeze the trigger to relieve pressure in the hose.

METERING TIP SELECTION

METERING TIP COLOR	OZ/MIN	DILUTION RATIO @ 50 PSI
Brown	0.56	103:1
Clear	0.88	65:1
Bright Purple	1.38	42:1
White	2.15	27:1
Pink	2.93	20:1
Corn Yellow	3.84	15:1
Dark Green	4.88	12:1
Orange	5.77	10:1
Gray	6.01	10:1
Light Green	7.01	8:1
No Tip Ratio Up To:		4:1
The dilution ratios above are approximate values. Due to chemical viscosity, actual dilution ratios may vary.		
FORMULA		
GPM × 128 ÷ Desired Dilution Ratio = oz/min <ul style="list-style-type: none"> • See Unit Flow Rates chart for GPM • Use 20 for 20:1 dilution ratio, 30 for 30:1, etc. • Match calculated ounces per minute (oz/min) to nearest oz/min in Metering Tip Selection chart. 		

UNIT FLOW RATES

PSI	GPM
50	0.45
60	0.49
70	0.53
80	0.57
90	0.60
100	0.64
110	0.67
120	0.70
125	0.71



Troubleshooting Guide

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Unit will not draw chemical.	1, 2, 3, 4, 5	9, 11, 12, 13, 14, 15, 16
B) Using too much chemical.	7	
C) Foam/spray does not clean/perform.	6, 8	12, 13, 14, 16
D) Water back flowing into chemical		9
E) Solution backing up into water line.		10

Possible Cause / Solution	
Startup	Maintenance
1. Water pressure too low <ul style="list-style-type: none"> ◦ Increase water pressure (see requirements). 2. Inlet ball valve or discharge ball valve not completely open <ul style="list-style-type: none"> ◦ Completely open one inlet and the discharge ball valves. ◦ (2-Way Units make sure one chemical ball valve is open) 3. More than one unit ball valve is open <ul style="list-style-type: none"> ◦ Open only one unit ball valve at a time. 4. Discharge hose too long or kinked <ul style="list-style-type: none"> ◦ Straighten or shorten the hose. 5. Chemical tube not immersed in chemical or chemical depleted <ul style="list-style-type: none"> ◦ Immerse or replenish chemical 6. Improper chemical <ul style="list-style-type: none"> ◦ Ensure product is recommended for foaming and/or the application. 7. Dilution too strong even with smallest metering tip <ul style="list-style-type: none"> ◦ Some weak dilutions at lower water pressures are impossible to achieve with a metering tip. Pre-dilute your chemical until desired dilution ratio is achieved. 8. Dilution too weak <ul style="list-style-type: none"> ◦ Install larger metering tip. 	9. Chemical check valve stuck or clogged <ul style="list-style-type: none"> ◦ Clean or replace. 10. No backflow preventer installed <ul style="list-style-type: none"> ◦ Install appropriate backflow preventer onto water line. 11. Airless Foam Wand screen blocked <ul style="list-style-type: none"> ◦ Dried chemical build-up may be obstructing flow through the screen. Remove fittings and soak the entire wand in de-scaling acid. 12. Metering tip blocked <ul style="list-style-type: none"> ◦ Clean or replace metering tip. 13. Chemical tube stretched out where tube slides over check valve or pin hole/cut in chemical tube <ul style="list-style-type: none"> ◦ Cut off end of tube or replace tube. 14. Vacuum leak in chemical pick-up connection <ul style="list-style-type: none"> ◦ Tighten the connection. 15. Water inlet strainer screen clogged <ul style="list-style-type: none"> ◦ Clean screen or replace. 16. Chemical build-up or scale may have formed in the body causing poor or no chemical pick-up <ul style="list-style-type: none"> ◦ Remove fittings and soak entire body in de-scaling acid. Replace fittings being careful not to cross thread or over tighten.

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.

