Lafferty Equipment Manufacturing, LLC
Installation & Operation Instructions

Model # BLU47 · Ultimate Wash System 6

REQUIREMENTS

Chemical Concentrate

Water

Temperature	up to 160°F
Pressure	40 - 125 PSI
Flow	2.3 GPM @ 40 PSI
Supply Line	1/2" ID

Hose

Discharge	1/2" ID x 10'

Nozzle

Shampoo/Conditioner and Rinse	5-Hole Nozzle

OPTIONS

Stainless Steel Hose Racks

Small Stainless Steel Hose Rack	# 224145

Stainless Steel Jug Racks

1 Gallon Round/Square	# 224200
1 Gallon Round/Square Locking	# 224200-L

Safe Flow Lid™ for 1 Gallon Jugs

Lid, Suction Tube, and Strainer	# 709101

Optional Foam Wand for Rich, Clinging Foam

Airless Foam Wand	# BLUE-528

WEIGHT & DIMENSIONS

Single Package

Shipping Weight	16 lbs.
Shipping Dimensions	28" x 19" x 8"

Lafferty EQUIPMENT MANUFACTURING LLC

CFS TECHNOLOGIES

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501-851-2820

WARNING! READ ALL INSTRUCTIONS BEFORE USING EQUIPMENT!

OVERVIEW

The Blue Mule Ultimate Wash System 6 is a wash & rinse system for applying up to 6 animal bathing products and rinsing through the same hose. This venturi injection system draws concentrated product from any sized container, mixes it with water and projects the accurately diluted solution through the fur-penetrating 5-hole spray nozzle. Use the ball valves to switch between products and simply close the product ball valves and open the rinse valve to spray fresh water. The Ultimate Wash System 6 is designed for animal bathing, but has countless other applications. This heavy-duty and easy-to-use system will outperform and outlast the competition through superior design and materials.

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

TO APPLY SHAMPOO & CONDITIONER

- CAUTION - NEVER OPEN THE INLET VALVES WITHOUT HOLDING THE NOZZLE FIRMLY! Open only one inlet ball valve at a time.

1. With the 5-hole nozzle in your hand:
2. Completely open the desired product ball valve then open the corresponding spray ball valve to begin applying the product.
3. Make final metering tip adjustments based on what product is being used and the "cleaning" results. Install a larger metering tip if necessary.
4. When finished applying close the Spray and the Shampoo ball valves.
5. Repeat steps 1-3 for the conditioner or other shampoo.
6. When finished, ALWAYS close all of the ball valves.

TO RINSE

- A gentle rinsing can be done by partially opening/closing the rinse valve for small animals or animals with sensitive skin.

1. With the 5-hole nozzle in your hand
2. Open the rinse ball valve on the unit and adjust the pressure to suit by partially opening/closing the valve.
3. When finished rinsing close the rinse ball valve.

FOAM WAND: If using the *optional* Airless Foam Wand, replace the 5-hole nozzle with the Airless Foam Wand to project foamy lather. Foaming typically uses less product than spraying because you will not need to run the system during the entire bath. You can rinse using the Airless Foam Wand, but the output pressure will be greatly reduced compared to the 5-Hole Nozzle. The chemical product must have foaming properties in order to produce foam using the Airless Foam Wand.

CHEMICAL COMPATIBILITY NOTE: The check valves on this unit are EPDM, which is compatible with a wide range of shampoos, conditioners, and other detergents. Some oil based or citrus scented products may be chemically incompatible with EPDM and cause the internal components to swell and stop drawing chemical. If this occurs, please contact us to discuss alternate check valve materials.

METERING TIP SELECTION

METERING TIP COLOR	OZ/MIN	DILUTION RATIO @ 40 PSI	
		SPRAY	RINSE
Brown	0.56	526:1	—
Clear	0.88	335:1	—
Bright Purple	1.38	213:1	—
White	2.15	137:1	—
Pink	2.93	100:1	—
Corn Yellow	3.84	77:1	—
Dark Green	4.88	60:1	—
Orange	5.77	51:1	—
Gray	6.01	49:1	—
Light Green	7.01	42:1	—
Med. Green	8.06	37:1	—
Clear Pink	9.43	31:1	—
Yellow Green	11.50	26:1	—
Burgundy	11.93	25:1	—
Pale Pink	13.87	21:1	—
Light Blue	15.14	19:1	—
Dark Purple	17.88	16:1	—
Navy Blue	25.36	12:1	—
Clear Aqua	28.60	10:1	—
Black	50.00	—	—
No Tip Ratio Up To:		7:1	—

The dilution ratios above are approximate values. Due to chemical viscosity, actual dilution ratios may vary.

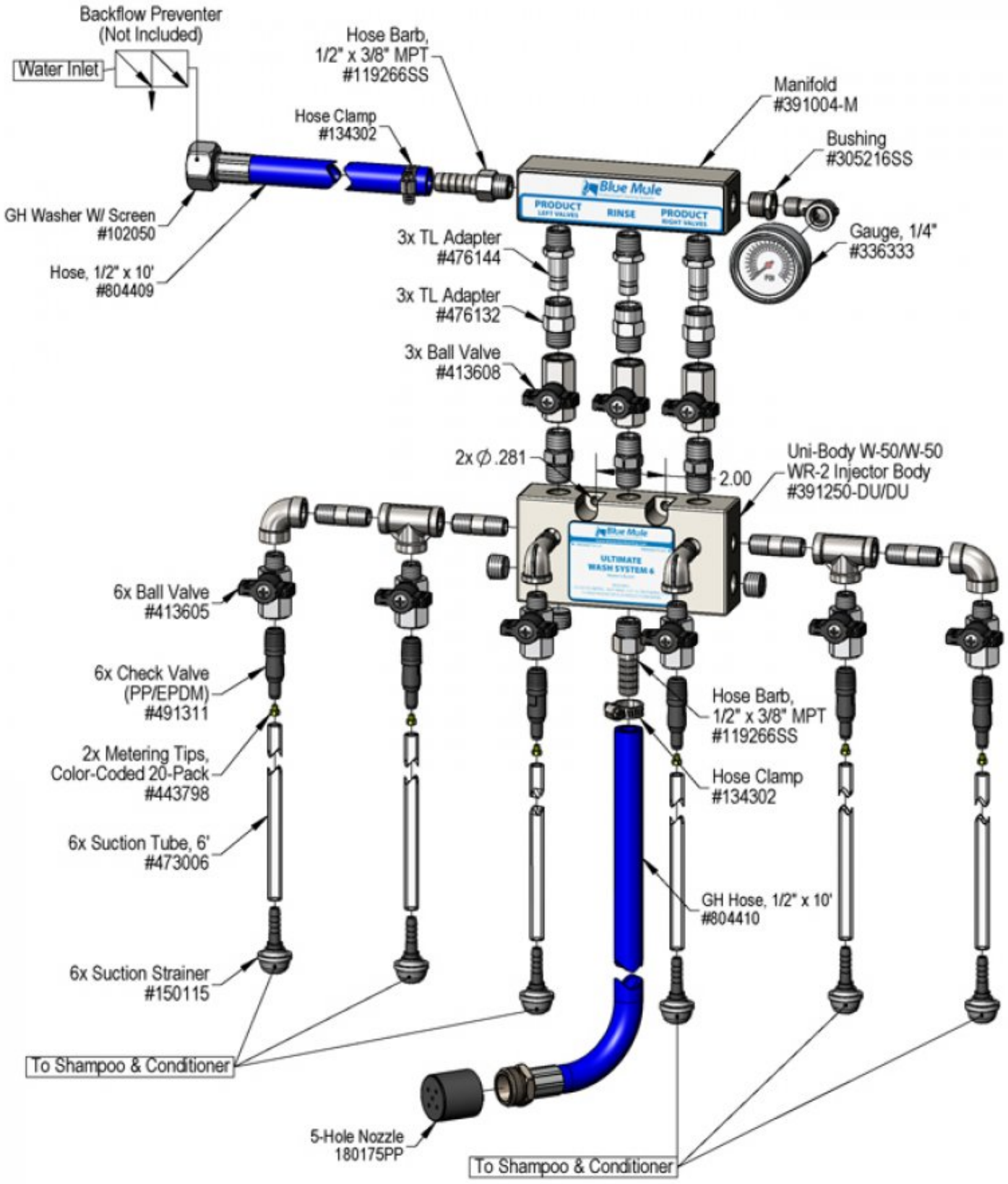
FORMULA

GPM × 128 ÷ Desired Dilution Ratio = oz/min

- *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	
	SPRAY	RINSE
35	2.15	4.68
40	2.30	5.00
50	2.57	5.59
60	2.82	6.12
70	3.04	6.61
80	3.25	7.07
90	3.45	7.50
100	3.64	7.91
110	3.81	8.29
120	3.98	8.66
125	4.07	8.84


Backflow Preventer
(Not Included)
Water Inlet
Hose Barb,
1/2" x 3/8" MPT
#119266SS
Hose Clamp
#134302
Manifold
#391004-M
Bushing
#305216SS
GH Washer W/ Screen
#102050
Hose, 1/2" x 10'
#804409
Blue Mule
PRODUCT
RINSE
PRODUCT
Gauge, 1/4"
#336333
3x TL Adapter
#476144
3x TL Adapter
#476132
3x Ball Valve
#413608
2x Ø .281
2.00
Uni-Body W-50/W-50
WR-2 Injector Body
#391250-DU/DU
ULTIMATE
WASH SYSTEM 6
6x Ball Valve
#413605
6x Check Valve
(PP/EPDM)
#491311
2x Metering Tips,
Color-Coded 20-Pack
#443798
6x Suction Tube, 6'
#473006
6x Suction Strainer
#150115
Hose Barb,
1/2" x 3/8" MPT
#119266SS
Hose Clamp
#134302
GH Hose, 1/2" x 10'
#804410
To Shampoo & Conditioner
5-Hole Nozzle
180175PP
To Shampoo & Conditioner

Troubleshooting Guide

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Unit will not draw chemical	1, 4, 5, 6, 7	8, 9, 10, 11, 12, 13
B) Dilution too weak	2, 4, 5	8, 9, 10, 11, 12, 13
C) Dilution too strong	3	
D) Water backing up into chemical container		8

Possible Cause / Solution

Startup

1. **Inlet ball valve not completely open or both inlet valves are open**
   - Completely open one inlet and the discharge ball valve.
2. **Not enough chemical - metering tip too small**
   - Install larger metering tip.
3. **No metering tip installed or metering tip too large**
   - Install smaller metering tip.
4. **Chemical tube not immersed in chemical or chemical depleted**
   - Immerse tube or replenish.
5. **Discharge hose too long or wrong size or kinked**
   - Straighten the hose or replace hose.
6. **Nozzle size too small (SEE REQUIREMENTS)**
7. **Water pressure or water volume too low/inlet piping too small causing poor chemical pick up**
   - Increase water pressure or water volume (see requirements)

Maintenance

8. **Discharge valve left closed with inlet valves open - chemical check valve stuck or failed**
   - Clean or replace check valve.
   - Close inlet ball valves when not in use.
9. **Chemical strainer or metering tip partially blocked**
   - Clean or replace chemical strainer and/or metering tip.
10. **Chemical tube stretched out or pin hole/cut in chemical tube**
    - Cut off end of tube or replace tube.
11. **Vacuum leak in chemical pick-up connections**
    - Tighten the connection.
12. **Water strainer clogged or missing/injector inlet orifice clogged**
    - Clean or replace strainer; check/clean inlet orifice for obstructions. DO NOT DRILL OUT.
13. **Chemical build-up may have formed in the injector body causing poor or no chemical pick-up**
    - Follow Preventive Maintenance instructions below, using hot water and/or de-scaling acid. When there is no draw at all, carefully remove fittings and soak entire injector body in de-scaling acid.

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.