



LM16VL-SF

[User Manual]

Please refer to your Parts Inventory Sheet when installing your marker.

Table of Contents

I.	Installation Instructions	1
	Step #1 Mount the Tank	
	Step #2 Wiring to Power and Installing Switch Box	
	Step #3 Mounting the Foam Chambers	
	Step #4 Plumbing the Air and Liquid Lines	
II.	Operating Instructions	4
	Mixing Your Foam Solution	
	Starting Up Your Foam Marker	
	Adjusting Your Foam Marker Output	
	Parts Diagram	
III.	Maintenance Requirements	6
	Common Filter Maintenance	
	Operating At Freezing Temperatures	

IMPORTANT:

YOUR SMUCKER FOAM MARKER COMES WITH A 2 YEAR MANUFACTURES WARRANTY. PLEASE SAVE YOUR RECEIPT FOR PROOF OF PURCHASE. CONTACT THE DEALER THAT YOU PURCHASED YOUR FOAM MARKER FROM WITH ANY WARRANTY ISSUES.

You can visit our smuckermfg.net website page for reference to all foam marker parts and diagrams. If you still have questions, give us a call and we can even help you locate your closest Smucker dealer.

Also, visit www.smuckermfg.net or ask your dealer about the other product lines we offer. We offer premium products at an affordable price. Take a look at our Weed Wipers, Calf Warmers, and VisionWorks camera systems for farm equipment on our website.

www.smuckermfg.net

www.redweeder.com

www.visionworkscameras.com

Mobile website for VisionWorks Cameras



Smucker Mobile website



Installation Instructions

Thank you for purchasing a LandMark™ Foam Marker, it has been built to produce high-quality foam marks with minimal service. In addition to producing great foam, the LandMark™ is also capable of keeping pace with high-speed sprayers.

Step #1 Mounting the Tank

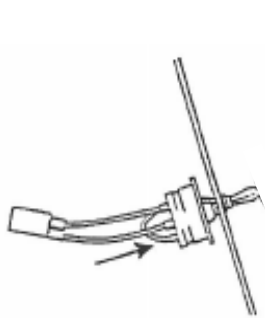
The first step is to mount your tank/pump assembly (LMSFVL) in a secure position. **You need to supply** 4 qty: 5/16" bolts to fit into the four inserts at the bottom of the tank assembly. You may also choose to mount your tank with ratchet tie down strap to secure to your tank assembly as pictured.



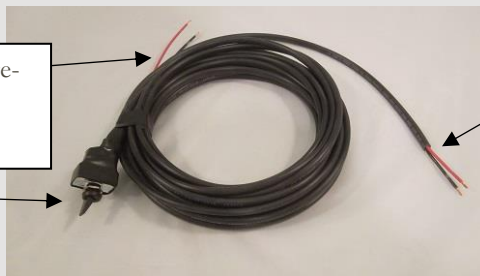
Note that
the tank

Step #2 Wiring to Power & Installing Switchbox

Next, you will need to permanently mount the power switch by drilling a 15/32" hole on your preferred mounting location. Feed the switch toggle through as pictured. Unscrew the nut and secure it down once mounted on your dash. Make sure that you do not allow the wire to come into contact with any sharp, hot, or moving surfaces.



This side will be pre-wired into your marker box.



Route this power lead into your 12V power source.

Route the power lead to a 12v power source by connecting the red wire to positive and the black wire to negative. Connecting the wires backwards will destroy your solenoids and void your warranty. To power your switchbox, simply run your 24 ft. cable from the tank assembly to your push to connect cord on your switch box.

Note: If two 6v batteries are used, connect the red wire to the positive post connected to the starter, and the black wire to a ground. You can find a wiring schematic on our website.

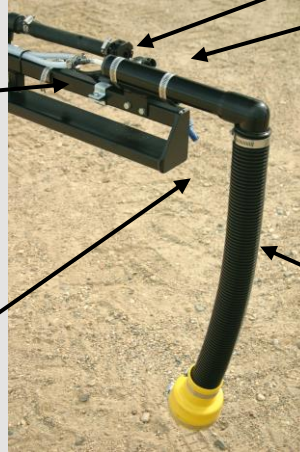
Step #3 Mounting the Foam Chambers

We have included metal brackets to mount the foam chamber/nozzle assemblies. Weld or U-bolt (**not provided**) your brackets so that your foam chamber sits in the metal cradle near the end of each boom (as pictured below). Each foam chamber mounts on the bracket with two #24 clamps (CL0024). This kit contains four #24 hose clamps (two for each foam chamber). Mount the chamber/nozzle assemblies so that the nozzles are pointed down. If possible, the nozzles should be outside the spray pattern. The 24" drop nozzle can be cut to a length of your choice.



Metal Brackets

Notice that the nozzles are pointed down and allow space outside the spray pattern.



#24 Clamps



24" drop nozzle

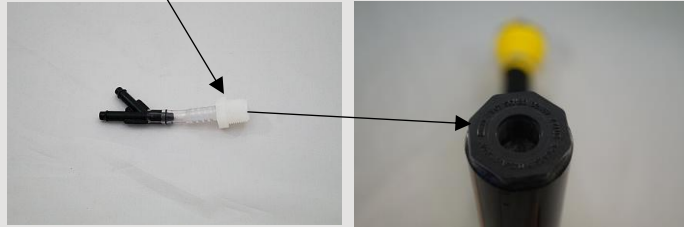
If you want to make, "ribbon" foam that lays on top of standing crops...the boot can be removed and you can order the optional, "ribbon kit" part number (HE1114).



Ribbon kit

Step #4 Plumbing the Liquid and Air Lines

Next, screw your Y-connectors into the female pipe thread on the foam chamber.

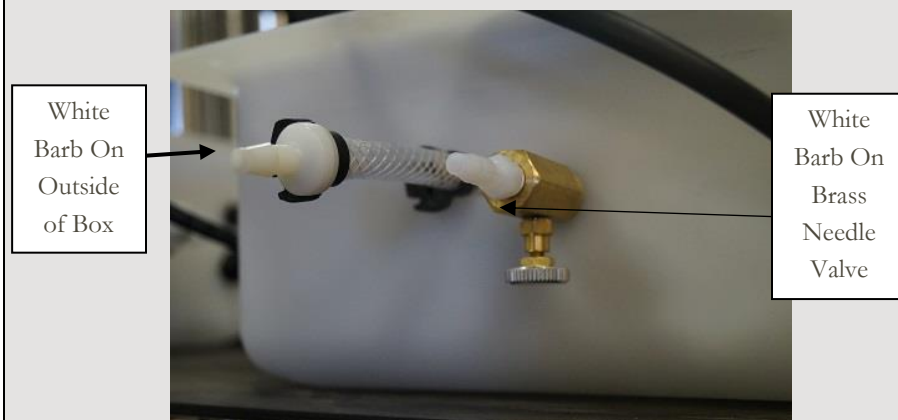


Connect the 1/4" tubing to the "Y" connector (air to one, liquid to the other), and run the lines along the booms frame toward the tank/compressor assembly.

Cut the tubing accordingly for each line. **Make sure there is excess tubing where your spray boom folds up to prevent the lines from getting tangled.**



One of your tubing lines should be connected to the white barb (on brass needle valve), and the other tubing line should be connected to the white barb on the outside of the box. Below you will see a picture of what you should be seeing on your control box.



Finally, secure the tubing lines along the sprayer boom with the nylon ties provided. Be careful to not over tighten & pinch the lines with the ties provided. Make sure that your push to connect power chord is connected, and then follow our operating instructions to start making foam.

Operating Instructions

Mixing Your Foam Solution

To ensure the highest-quality foam marks, we recommend using our Field Mark® Foam Concentrate (FOC001). You can try other foam concentrates if you please, but it is very important that you do not use, “hard” water. You will get, “soupy” foam if you have hard water. We recommend using a water softener if you know have hard water. The key to making good foam with this injection marker, is having the proper ratio of soap to water by adjusting the “soap” and, “water” valves. This ratio can be affected by the water hardness and soap quality. Soft water is essential for making quality foam. When using an 80:1 foam concentrate...the factory default settings on the valves are as follows.

Factory Default settings:

Your valves on your foam marker have been pre-set to the following:

- 3 ¼ turns on the water valve
- 3/8 turn on the soap valve

Mixing Instructions:

First, fill your tank with clean water and then add foam concentrate. When using 80:1 Field Mark® Foam Concentrate, use the following rates with your lid as your measurement and pour 1-1/5 cups (or 1-1/5 lids) of solution in your 6-gallon tank with water. Remember to plug the hole in the lid to prevent leaks.

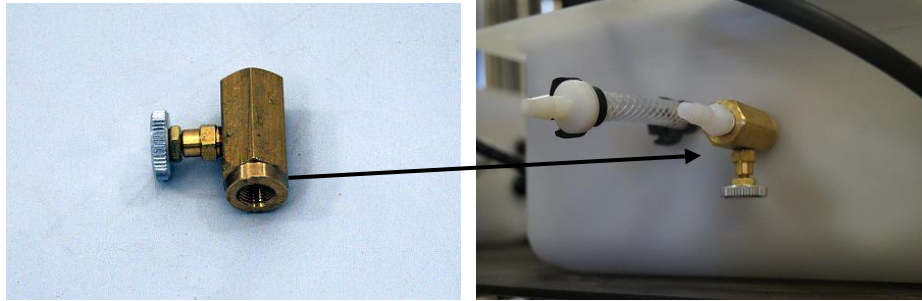
If you are using a brand other than our Field Mark® Foam Concentrate, follow the manufacturer’s instructions.

Starting Up Your Foam Marker

Once your machine has been powered up, flip the toggle switch to the right or the left to start making foam. Foam solution and air will travel to one of the chambers and start generating foam. If you want to generate foam on the other side, simply flip the switch.

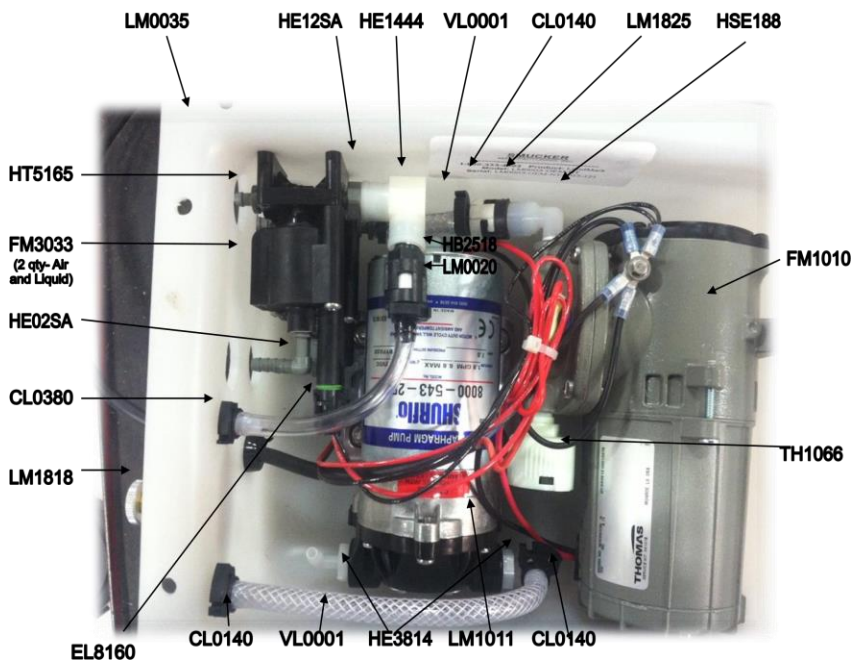
Adjusting Your Foam Marker Output

While in the field, you may choose to adjust your marker to produce foam at a faster rate. To adjust your foam output, stiffness, and volume simply adjust the brass needle valve pictured.



Note: If the needle valve is opened too far, the foam chambers will flood and produce wet, sloppy foam. You should be able to produce a drop every second if you adjust the nozzle to optimum speed. In most spraying applications this is more than enough marks per foot. You can conserve your foam by turning down the liquid flow when a desired foam consistency is achieved.

Diagram of the LandMark Foam Marker components for systems build after January 2013



PART #	DESCRIPTION
CL0140	CLAMP, FOR 1/4" REINFORCED
CL0380	CLAMP, NYLON HOSE, 3/8
EL8160	WP DISCONNECT WIRE LEAD
FM1010	PUMP, FM 12V, W/FILTER
FM3033	3-WAY SOLENOID VALVE
HB2518	BUSHING 1/4" X 1/8"
HE02SA	1/4 TUBE X 1/4 HB ADAPTER ELBOW
HE1444	1/4" FPT X 1/4" FPT EL
HE3814	HE, 3/8 X 1/4
HSE188	1/8" STREET EL
HT5165	1/4 TUBE X 1/4 HB ADAPTER
LM0035	PLASTIC ENCLOSURE FOR FM, WHITE
LM1011	PUMP, LM SHUR FLO ASSY
LM1818	VALVE, NEEDLE, BRS 1/8X1/8

Maintenance Requirements

Common Filter Maintenance

There are two filters on the air pump (one felt that needs replaced when it turns black...and one sponge that can be blown out over time). There is a filter at the bottom of the tank that should be checked regularly to make sure the flow of liquid is not being blocked...this can easily be cleaned by reaching into the tank. Algae in the water tank may plug the water filter...if this happens, take the necessary measures to control algae growth.

Operating at Freezing Temperature

When operating in temperatures at, or below freezing, one to two cups of ethylene-glycol-based antifreeze may be added to five gallons of foam solution.

If your system will be exposed to freezing temperatures overnight...reach into your tank and pull the foam solution out. When you reach the bottom of the tank, then proceed to run the system for 10-15 seconds to clear the foam solution from the pump and solenoids.

For long term storage...drain the tank of foam solution and run fresh water through the entire system. While the unit is still running, blow air through the suction tube until the system is dry. Flip the power switch to dry the other side.
