



LandMark 1400

[User Manual]

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

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IMPORTANT:

**PLEASE RETURN YOUR OWNERS REGISTRATION CARD WITHIN THE NEXT 10 DAYS TO
ACTIVATE YOUR WARRANTY.**

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. For best results, please read and follow the installation and operating instructions below. Please refer to your Parts Inventory Sheet when installing your marker.

Step #1 Mounting your Tank

The first step is to mount your tank/pump assembly (LM0003-OEM-NT & LM6014) 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. Next we recommend you use a ratchet tie down strap to secure to your tank assembly as pictured (2 strap for 14 gallon). Note: You may mount your tank wherever you please.



Note that the tank pictured is a 25 gallon tank, not a 14 gallon.

Step #2 Wiring to Power And Installing Switchbox

Next, you will need to route the power lead to the operator's area and mount the switch box (EL8103) with zip ties or **your own bolts** wherever you please in your operating area. Make sure that you do not allow the wire to come into contact with any sharp, hot, or moving surfaces.



Route the power lead to a 12v power source by connecting the red wire to positive and connect 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. We have included a wiring schematic in your catalog and our website (FAQ) for your reference.

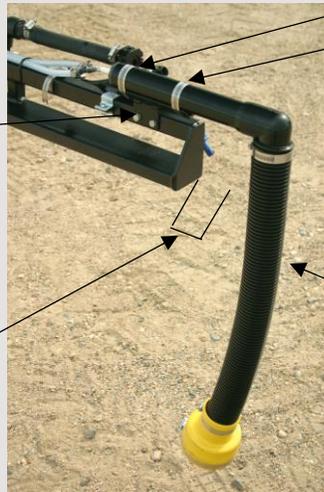
Step #3 Mounting the Foam Chambers

We have included metal brackets (FM1007) to mount the foam chamber/nozzle assemblies (FM100B-99). 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). Therefore 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

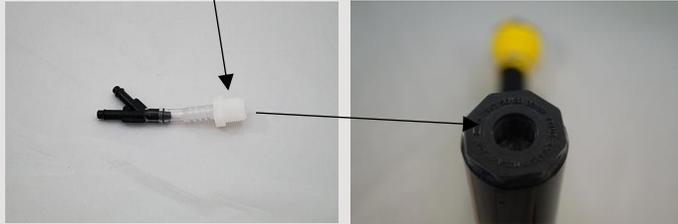
If you want to make, "ribbon" foam that lays on top of standing crops...the boot can be removed and you can order the optional, "ribbon kit" part number (HE1114).



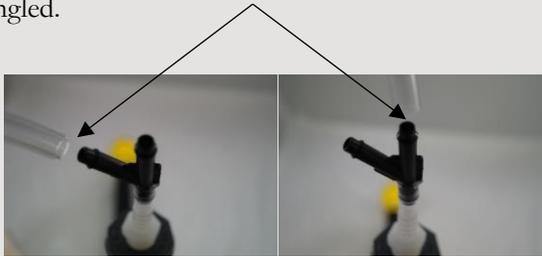
Ribbon kit

Step #4 Plumbing the Liquid and Air Lines

First, screw your Y-connectors (HY14AS QTY: 2) into the inserts on the foam chambers with a wrench.



Then connect your 1/4" tubing lines (VL0140) to each "Y" connector (both ends as pictured), and run the lines along the boom frames toward the tank/compressor assembly. Cut your tubing accordingly for each line. Make sure there is excess tubing where your spray boom folds up to prevent the lines from getting tangled.



The white control box should be labeled, as shown in the picture below, and you must connect the 1/4" tubing (One side labeled as air line right and left, and the other one should be labeled liquid line right and left). Plug your tubing accordingly with right foam chamber Y-connector having an air (Air R on tank assembly) and water (Liquid R on tank assembly) line running to it. Similarly, plug your left foam chamber Y-connector with an air (Air L on tank assembly) and water (Liquid L on tank assembly) line running to it. Below you will see a picture of what you should be seeing on your control box.



Finally, secure the tubing lines along the boom and sprayer frame with the nylon ties provided (NY108H). Be careful to not kink or pinch the lines with the ties provided. You should be ready to go! 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's very important that you do not use, "hard" water. You will get, "soupy" foam if you have hard water, so a water softener is recommended if you have hard water.

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.

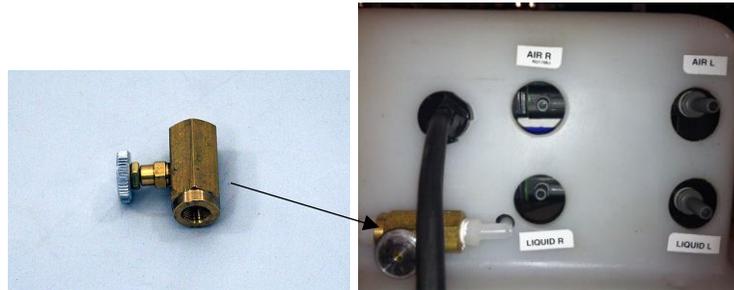
If you are using a brand other than our Field Mark® Foam Concentrate, follow the manufacturer's instructions.

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.

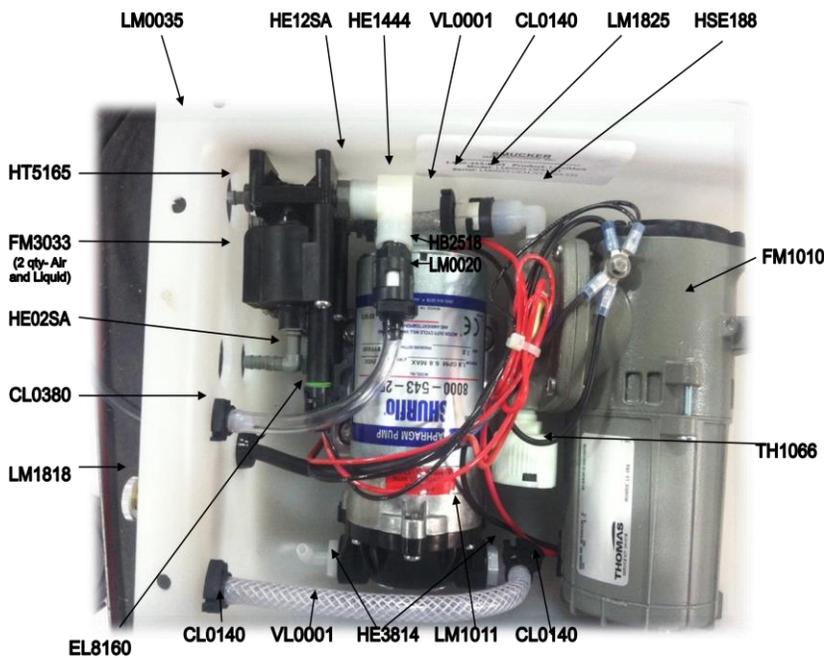
Adjusting Your Foam Marker Output

While in the field, you may choose to adjust your marker to produce foam at a faster rate to produce more foam drops. 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 isn't being blocked...this can easily be cleaned by reaching into the tank..

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.

When operating in temperatures overnight...reach into your tank and pull the suction tube out to expose it to the air. 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.

Policies and Information

Prices

Smucker MFG Inc. reserves the right to make changes in design, material, specifications, or price without notice or liability thereof. Prices are subject to change without notice, and orders will be processed according to prices in effect at the date of shipment unless notified otherwise.

Prices are FOB from Harrisburg, Oregon based on availability unless otherwise specified.

Shipments

United Parcel Service and common carrier will be prepaid and charged to the customer unless otherwise specified.

Call for quotes on special orders and orders outside the continental US.

Return Policy

No merchandise should be returned to Smucker Mfg., Inc. for credit unless accompanied by a return authorization number from our company. You will receive credit for the full amount of the return, if the merchandise is returned within 30 days of the invoice date. Any merchandise that is not returned within 30 days of the invoice date is subject to a restocking fee of 15%. Contact your Smucker dealer for return information.

Merchandise that has been special ordered cannot be returned for credit. Non-stock items returned for credit will be subject to vendor's return policy.

Damaged merchandise-shortages

Check merchandise immediately upon receiving shipment. Damages and shortages due to carrier damage must be claimed with the delivery carrier. Shortages must be claimed with Smucker Mfg. Inc. within five days of receiving the shipment.

Warranty for Distributed products

No one shall make any warranty, either implied or expressed, as to the performance, efficiency, or other capability that has not been stated in the manufacturer's guaranty.

The manufacturer's policy will determine any replacement of defective materials or workmanship, installation, use, and other causes beyond the replacement of defective parts.

Warranty for manufacturer's products

All products manufactured by Smucker Mfg. carry an industry leading guaranty, extending two full years from the date of purchase. Should there be any sort of defect or failure in that period with the unit or part(s), contact the Smucker Mfg. dealer that you purchased from for detailed information.

Contact

Please contact the dealer you purchased the product from for any questions concerning your purchase.