

# Lafferty Equipment Manufacturing, LLC Installation & Operation Instructions

## Model # 977844 • Magnetic AP-PD Asphalt Release Spray System

### REQUIREMENTS

#### Ready-to-Use Chemical Solution

**Compressed Air** up to 10 CFM

**Minimum Air Supply Line** 3/8"

**Hose** 3/4" ID x 40'

**Nozzle** #180193SS

**Electric** 120V

### OPTIONS

#### Heater Assembly

Retro-Fit Heater Assembly # 720981

#### Drum & Tote Stick Lengths & Seal Materials

Drum Stick, 33" (Viton or EPDM) # 491643 / 491643-E

Drum Stick, 48" (Viton or EPDM) # 491648 / 491648-E

Drum Stick, 54" (Viton or EPDM) # 491645 / 491645-E

Tote Stick, 33" (Viton or EPDM) # 491653 / 491653-E

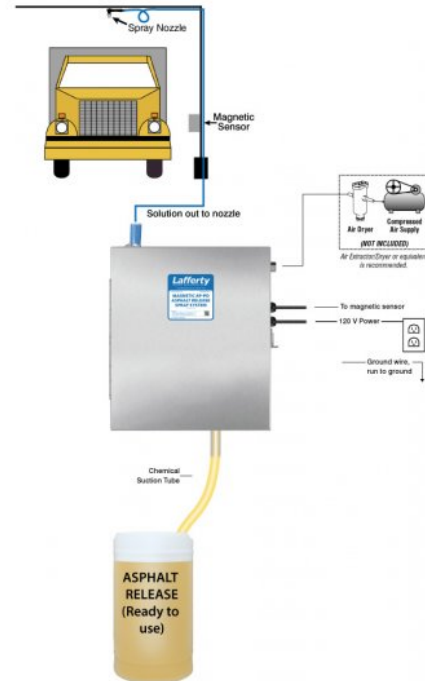
Tote Stick, 48" (Viton or EPDM) # 491654 / 491654-E

Tote Stick, 54" (Viton or EPDM) # 491656 / 491656-E

#### Level Masters Provide an Automatic Supply of Ready-to-Use Chemical

Level Master (Various Tank Sizes) # 989304

Gemini Level Master (Various Tank  
Sizes) # 989316



[www.laffertyequipment.com](http://www.laffertyequipment.com)

501-851-2820

**WARNING! READ ALL  
INSTRUCTIONS BEFORE  
USING EQUIPMENT!**

### OVERVIEW

The Magnetic AP-PD Asphalt Release Spray System is a magnetic sensor activated, time delayed, asphalt release applicator that mounts to a user-supplied drive-through arch for spraying asphalt truck beds. This system uses compressed air to drive a rugged Sandpiper air-operated, double-diaphragm pump which draws ready-to-use chemical from a static tank. When a truck comes into range of the magnetic sensor, a delay timer allows the driver to position the truck under the spray nozzle before spraying begins and a run timer applies release agent for a pre-set time or until the vehicle leaves the spraying area, whichever is first.

## SAFETY & OPERATIONAL PRECAUTIONS

- See Additional Safety Precautions included with the Electrical Control Box Installation Information
- Always consider electrical shock hazard when working with and handling electrical equipment. If uncertain, consult an Electrician. Electrical wiring should only be done by a qualified Electrician, per Local and State Electrical Codes.
- 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 eye-wear when working with chemicals.
- Always direct the discharge away from people and electrical devices.
- Follow the chemical manufacturer's safe handling instructions.
- DO NOT use d-Limonene or other chemicals that are not compatible with the Santoprene diaphragms.
- TEFLON upgrade is available.

## TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

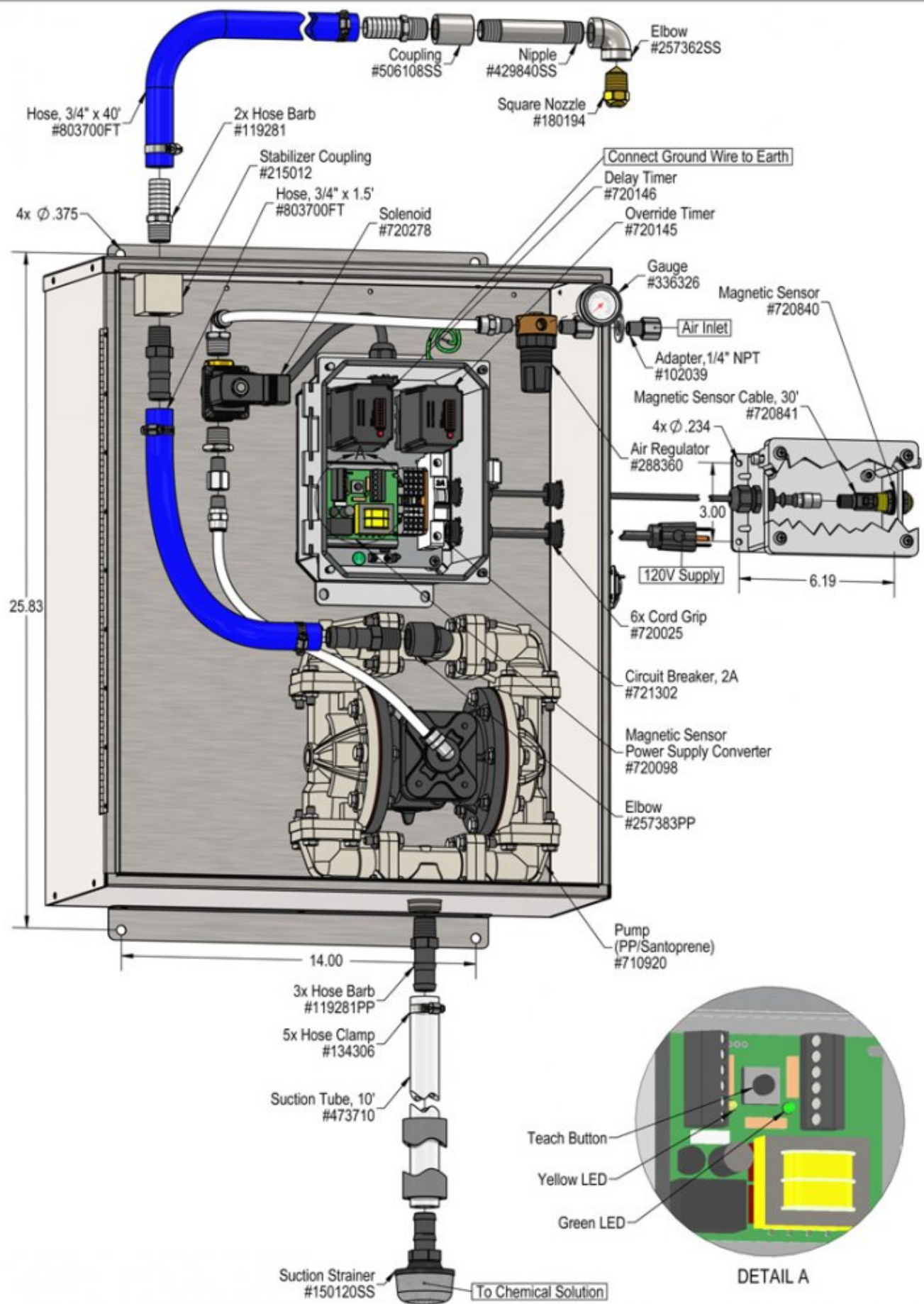
1. Mount the unit to a solid, secure surface within 15' of the drive lane. Mount above RTU chemical solution container.
2. Do NOT connect to electricity yet.
3. Construct a mounting pole/arch, then mount the nozzle assembly as shown in the illustration on page 1. To prevent dripping after each cycle leave a loop in the hose to make the nozzle higher than the bottom of the loop.
4. Mount Magnetic Sensor and perform set-up procedure. *See separate Insert "Installation and Set-up Instructions for Magnetic Sensor"*
5. Connect the 3/4" chemical solution suction tube to the hose barb. Secure the tube with the clamp – do not over-tighten. Immerse suction tube into a container of water for initial testing.
6. Connect your clean, dry compressed air supply to the system as shown in the illustration. (Air Extractor / Dryer is recommended.)
7. Make sure the system is not plugged in to a power source. Remove control box cover. The box contains two timers (Delay & Override).  
**Delay Timer:** This timer allows you to set the time to the approximate number of seconds needed from the time the truck triggers the magnetic sensor until the truck bed is positioned underneath the nozzles. Set the timer by pushing the combination of dip switches that will equal the total number of seconds you need for the delay.  
**Override Timer:** This timer controls the maximum amount of time the sprayer will operate for. Set the timer by pushing the combination of dip switches that equal the total number of seconds you need the system to spray. Note: if the truck exits before this time has elapsed the spray will stop.
8. Replace the control box cover.
9. Plug the power cord into a 120 VAC power outlet. Activate your air supply.

### TO TEST

1. Perform "test runs" with water only and make any necessary timer adjustments, and any nozzle and magnetic sensor sensitivity adjustments.
2. After several successful test runs have been made you are ready operate.
3. Immerse suction tube into the chemical solution container.

## TO OPERATE

1. Once adjustments have been made to timers, drive the first truck through and make any last adjustments as needed.
2. The unit is ready for operation.



## Troubleshooting Guide

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Air pump will not run or pump solution. B) Will not draw chemical. C) Pump runs too fast with no output. D) Unit comes on and runs continuously	1,3,4,5 1,2,3,4,5 2 4,5	6,7,10,11 7,8,9 7,8,9,10

Possible Cause / Solution	
Startup	Maintenance
<b>1. Air adjustment too low</b> ◦ Open air ball valve fully. Adjust air regulator slowly clockwise. Optimum air pressure is 60 PSI.  <b>2. Chemical tube not immersed in container or container empty</b> ◦ Immerse tube or replenish.  <b>3. Discharge ball valve closed or hose kinked</b> ◦ Open ball valve / Straighten the hose.  <b>4. Timer not set properly or malfunctioned</b> ◦ See Timer Adjustment on page 2 or replace timer.  <b>5. May have electrical problems</b> ◦ Have a qualified electrician check electrical connections. ◦ Ensure circuit breaker (5 amp) has not been tripped. ◦ Make sure magnetic sensor is functioning properly. If necessary, reset the background and sensitivity.	<b>6. Air regulator clogged or failed</b> <b>Clean or replace.</b>  <b>7. Chemical strainer clogged up</b> ◦ Clean or replace.  <b>8. Vacuum leak in suction line.</b> ◦ Tighten the connection(s).  <b>9. Chemical tube stretched out where tube attaches or pin hole/cut in tube sucking air.</b> ◦ Cut off end of tube or replace tube.  <b>10. Problem with air pump</b> ◦ Refer to air pump instruction manual  <b>11. Use of an oiler in the airline will cause pump to stall</b> ◦ Use only clean, dry air.

**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.

