# Lafferty Equipment Manufacturing, LLC
# Installation & Operation Instructions

## Model # 974323-TD · Timed FPV-MM Asphalt Release Sprayer

## REQUIREMENTS

**Chemical Concentrate**
**Static Tank of Water**

| | |
|---|---|
| **Compressed Air** | up to 4 CFM |
| **Hose** | 1/2" ID x 25' |
| **Nozzle** | 2520 |
| **Electric** | 120V |

## OPTIONS

**Stainless Steel Hose Racks**

| | |
|---|---|
| Small Stainless Steel Hose Rack | # 224145 |

**Stainless Steel Jug Racks**

| | |
|---|---|
| 2 ½ Gal. (8 ½" x 10 ½") | # 224210 |
| 5 Gallon (12" x 12") Round/Square | # 224215 |

**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 |

## WEIGHT & DIMENSIONS

**Single Package**

| | |
|---|---|
| Shipping Weight | 54 lbs. |
| Shipping Dimensions | 26" x 25" x 16" |




Lafferty® EQUIPMENT MANUFACTURING LLC

CFS TECHNOLOGIES

www.laffertyequipment.com
501-851-2820

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

## OVERVIEW

The Timed FPV-MM Asphalt Release Sprayer is a chemical spray applicator for diluting and projecting asphalt release chemicals on to truck beds or tools to prevent asphalt from sticking. Designed for facilities with low or no water pressure. This system features a lockable, stainless steel enclosure and uses a cost-effective 1/4" Flojet air-operated, double-diaphragm pump to draw chemical concentrate and water from separate static tanks and blend them to create virtually any dilution ratio. The solution is then projected through the hose, trigger gun, wand and fan nozzle. When the activation button is pushed, a dual-timer controls the length of application and the delay time which prevents the driver from immediately restarting the system.

## 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 chemicals that are not compatible with Viton diaphragms.
- For proper performance do NOT modify electrical control box.
- Manufacturer assumes no liability for the use or misuse of this unit.
- Disconnect electrical power to the control box prior to opening it.
- Remove any packing material from inside the control box before operating.

**UNIT FLOW RATES**

| PSI | GPM |
|---|---|
| 60 | 2.00 |

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

1. Mount the unit above chemical and water containers to prevent siphoning.
2. Securely attach the larger clear suction tube to the pump and place the strainer in a static container of water.
3. DO NOT attach to a PRESSURIZED water source.
4. Attach a compressed airline to the inlet ball valve. DO NOT TURN ON

**How to Set Your Dilution Ratio:**

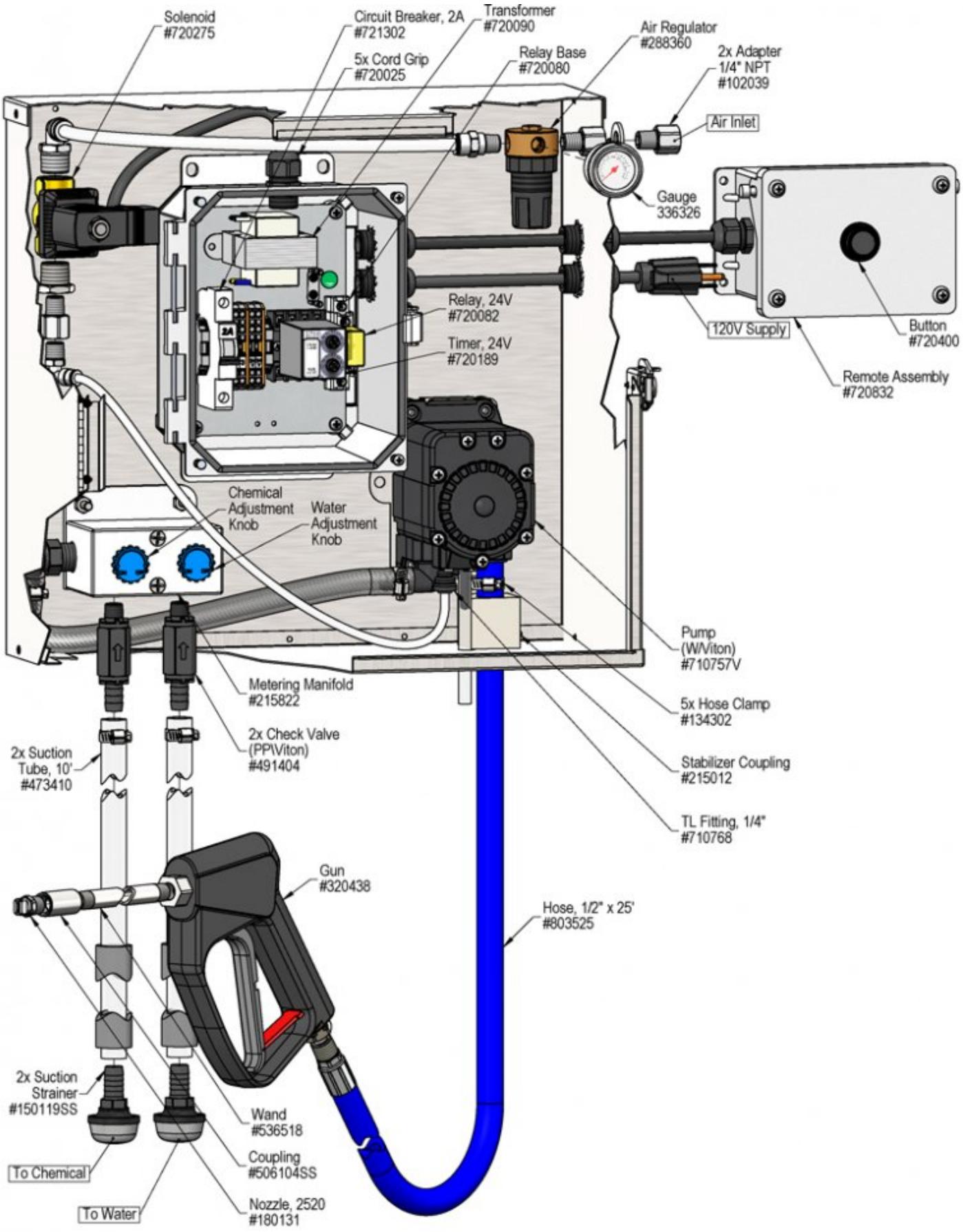
- The adjustment knobs allow you to achieve wide range of dilution ratios.
- Turn adjustment knobs counterclockwise to increase flow or clockwise to decrease flow.
- For a starting place turn the water knob completely clockwise (closed) then turn 2 turns counterclockwise (open).
- Then turn the chemical knob completely clockwise (closed) then counterclockwise (open) in 1/4 to 1/2 turn increments until required dilution ratios are achieved.
- If ratios can't be achieved with the chemical knob all the way counterclockwise start turning water knob clockwise to shift more draw to the chemical side.

## SETTING THE TIMER

1. Make sure the system is not plugged in to a power source. Remove control box cover. The box contains one timer with "Run & Delay" adjustment knobs.
   **Run:** This mode allows you to set the length of time you want the unit to run each time the operator presses the remote button. Turn the knob to set the run time (0-6 Minutes).
   **Delay:** This mode allows you to set the length of time you want the unit to to be inactive after each application. Turn the knob to set the delay time (0-6 Minutes).
2. Replace the control box cover.
3. Plug the power cord into a 120 VAC power outlet. GFI recommended.
4. Turn on your air and/or water supply (if applicable).
5. Push the remote button to activate the timer and make any last adjustments needed.
6. The unit is ready for operation. The run mode will activate the unit for the preset run time, turn off, and will not reactivate until the time runs out on the delay mode. Then the unit will reset.

**TO SPRAY**

1. Make final chemical ratios adjustments as needed to the metering manifold
2. With the trigger gun in hand push the remote button.
3. Pull the trigger on the trigger gun to begin application.
4. The run timer will activate the unit for the preset time and turn the unit off. The delay timer will prevent the unit from activating till the preset time runs out, then the button will reset.


Solenoid
#720275
Circuit Breaker, 2A
#721302
Transformer
#720090
5x Cord Grip
#720025
Relay Base
#720080
Air Regulator
#288360
2x Adapter
1/4" NPT
#102039
Air Inlet
Gauge
336326
Relay, 24V
#720082
Timer, 24V
#720189
120V Supply
Button
#720400
Remote Assembly
#720832
Chemical
Adjustment
Knob
Water
Adjustment
Knob
Pump
(W/Viton)
#710757V
Metering Manifold
#215822
5x Hose Clamp
#134302
2x Check Valve
(PP\Viton)
#491404
Stabilizer Coupling
#215012
2x Suction
Tube, 10'
#473410
TL Fitting, 1/4"
#710768
Gun
#320438
Hose, 1/2" x 25'
#803525
2x Suction
Strainer
#150119SS
Wand
#536518
Coupling
#506104SS
To Chemical
To Water
Nozzle, 2520
#180131

# Troubleshooting Guide

| Problem | Possible Cause / Solution | |
|---|---|---|
| | Startup | Maintenance |
| A) Air pump will not run or pump solution. | 1,5 | 8,13,14 |
| B) Unit will not draw chemical or water. | 2,5 | 9,10,11,12,13 |
| C) Using too much chemical | 3 | |
| D) Cleaning results unacceptable | 4 | |
| E) Pump runs too fast with no output. | | 9,10,11,12,13 |
| F) Unit doesn't come on when when button is pushed. | 6,7 | |

## Possible Cause / Solution

### Startup

1. **Air adjustment too low**
   - Open air ball valve fully. Adjust air regulator slowly clockwise. Optimum air pressure is 90 PSI.
2. **Water or chemical tube not immersed in container or container empty**
   - Immerse tube or replenish.
3. **Dilution too strong**
   - Turn chemical knob slightly clockwise or water knob counterclockwise
4. **Dilution too weak**
   - Turn chemical knob slightly counterclockwise or water knob clockwise
5. **Discharge hose kinked**
   - Straighten the hose.
6. **Timer failed/Controller not set properly or malfunctioned**
   - Replace timer.
   - See Controller manual.
7. **May have electrical problems**
   - Ensure circuit breaker (5 Amp) has not been tripped.
   - Have a qualified electrician check electrical connections.

### Maintenance

8. **Air regulator clogged or failed**
   - Clean or replace.
9. **Water or chemical check valve stuck or clogged**
   - Clean or replace.
10. **Chemical or water strainer clogged up**
    - Clean or replace.
11. **Vacuum leak in metering manifold or suction side of the pump**
    - Check and tighten the hose clamp connections. After unit has been in service the plastic fittings could have "relaxed" and may need tightened too.
    - **NOTE: This is the most common problem when the unit will not draw water or chemical**
12. **Chemical or water tube stretched out where tube slides over hose barbs or pin hole/cut in tube sucking air.**
    - Cut off end of tube or replace tube, add a hose clamp. Do not over tighten
13. **Problem with air pump**
    - Refer to air pump instruction manual
    - Pump suction and discharge manifolds are loose, tighten bolts.
14. **Use of an oiler in the airline will cause pump to stall**
    - 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.