Lafferty Equipment Manufacturing, LLC
Installation & Operation Instructions

Model # 974312-TD · Timed FT-WPS Asphalt Release W-25 Sprayer

REQUIREMENTS

Chemical Concentrate	
Temperature	up to 160°F
Pressure	20 to 60 PSI
Compressed Air	up to 4 CFM
Hose	1/2" ID x 25'
Nozzle	2540
Electric	120V

OPTIONS

Stainless Steel Hose Racks	
Small Stainless Steel Hose Rack	# 224145
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
Poly/Teflon and Kynar/Teflon Air Pumps (Poly/Santoprene Standard)	
Pump, WR Poly/Teflon, 3/8", 7GPM Max	# 710911
Pump, WR Kynar/Teflon, 3/8", 7GPM Max	# 710912
Alternate Chemical Check Valve - Viton Standard	
Check Valve, Chemical, PP(W), 1/4" (EPDM)	# 491401

Lafferty® EQUIPMENT MANUFACTURING LLC

CFS TECHNOLOGIES

www.laffertyequipment.com
501-851-2820

WARNING! READ ALL INSTRUCTIONS BEFORE USING EQUIPMENT!

OVERVIEW

The Timed FT WPS Asphalt Release W-25 Spray-All is a timed-delay chemical spray applicator for diluting and projecting asphalt release chemicals on to truck beds or tools to prevent asphalt from sticking. It is designed to work in facilities that have low or fluctuating water pressure. This system features a lockable, stainless steel enclosure and uses a rugged 3/8" Warren Rupp air-operated, double-diaphragm pump to draw water from an integrated float tank and drive the system. A venturi injector draws chemical concentrate from any container and blends it into the water stream to create an accurately diluted solution and then the solution is then projected through the discharge hose, 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

- **When connecting to a potable water supply follow all local codes for backflow prevention.**
- **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.
- For proper performance do NOT modify electrical control box.
- 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.
- NEVER mix chemicals without first consulting chemical manufacturer.
- Disconnect electrical power to the control box prior to opening it.
- Remove any packing material from inside the control box before operating.
- DO NOT use d-Limonene or other chemicals that are not compatible with the Santoprene diaphragms.

TO INSTALL (REFER TO DIAGRAM ON NEXT PAGE)

1. Mount the unit to a suitable surface above the chemical supply to prevent siphoning.
2. Connect the discharge hose.
3. When connecting to a potable water supply follow all local codes for backflow prevention.
4. Connect water supply. If water piping is older and has known contaminants install a filter.
5. Turn on water supply and fill the integral tank. Ensure the float turns off properly and does not overfill. It has been factory set. If it overflows remove lid and adjust the float.
6. Connect air supply. If air line is older and has known contaminants install a filter.
7. Mount the push button activation control box.

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.

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 OPERATE

- The unit has been tested and is ready to operate. The air pressure is preset at 70 PSI this will give 50 PSI on the injector. This is the optimum pump pressure. Test "as is" before making any adjustments.

- When the button is pushed the run timer will activate the unit for the preset time and time out. It will not reactivate until the time runs out on the both the run timer and the delay timer then the unit will reset and the button will work again

1. With the wand in hand direct the discharge in a safe direction and push the remote button.
2. Open the discharge ball valve to begin application.
3. Wait several seconds for pump to prime and the chemical to be drawn up the tube and all the air to be expelled from the hose, this will take several seconds the first time.
4. Final dilution ratio adjustments will now have to be made. You may have to try different sized metering tips until application results are acceptable.

METERING TIP SELECTION

METERING TIP COLOR	OZ/MIN	DILUTION RATIO @ 50 PSI
Brown	0.56	329:1
Clear	0.88	209:1
Bright Purple	1.38	134:1
White	2.15	86:1
Pink	2.93	63:1
Corn Yellow	3.84	48:1
Dark Green	4.88	38:1
Orange	5.77	32:1
Gray	6.01	31:1
Light Green	7.01	26:1
Med. Green	8.06	23:1
Clear Pink	9.43	20:1
Yellow Green	11.50	16:1
Burgundy	11.93	15:1
Pale Pink	13.87	13:1
Light Blue	15.14	12:1
Dark Purple	17.88	10:1
Navy Blue	25.36	7:1
Clear Aqua	28.60	6:1
Black	50.00	4:1
No Tip Ratio Up To:		3:1

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

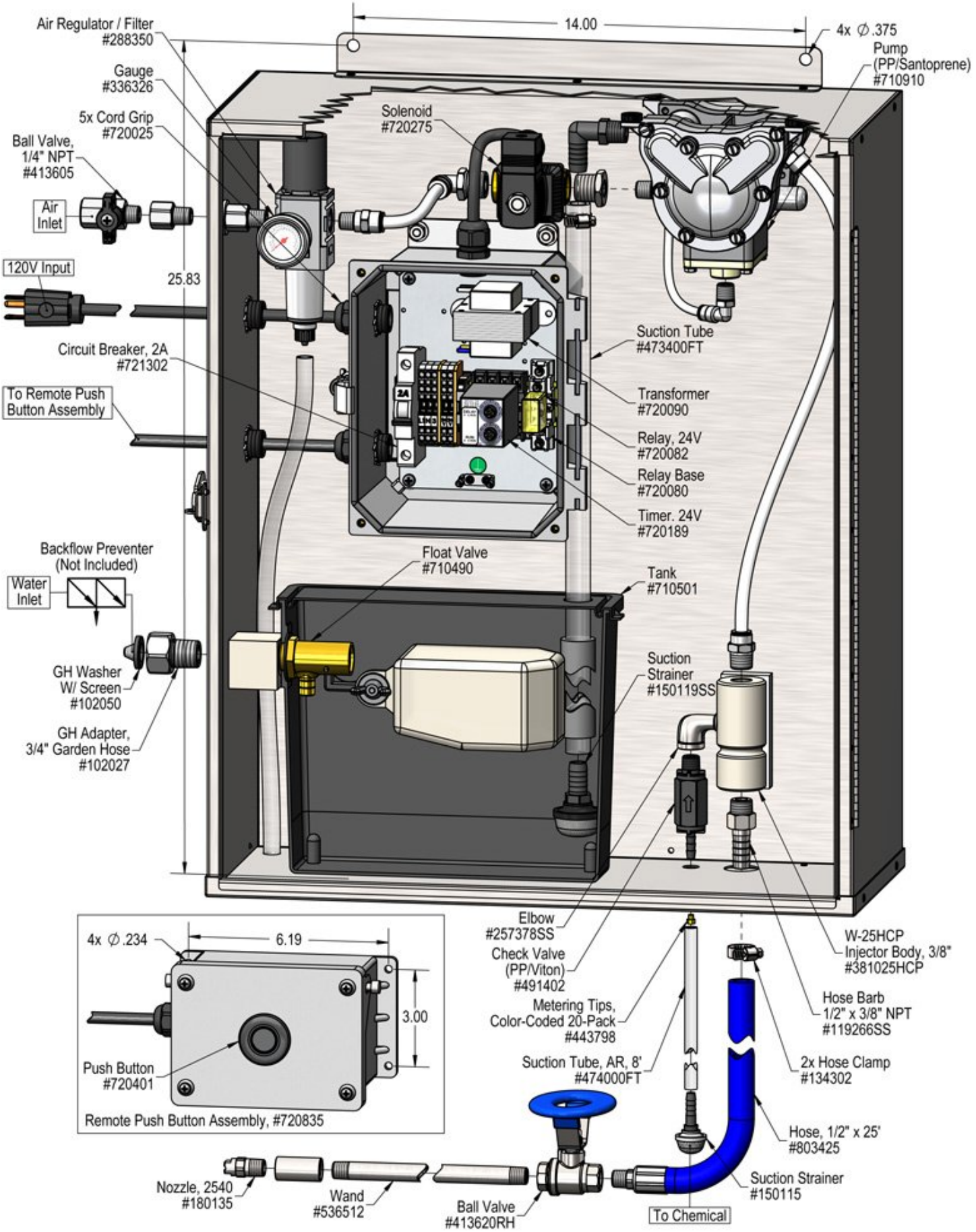
FORMULA

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
50	1.44


Air Regulator / Filter
#288350
Gauge
#336326
5x Cord Grip
#720025
Ball Valve,
1/4" NPT
#413605
Air
Inlet
120V Input
25.83
Circuit Breaker, 2A
#721302
To Remote Push
Button Assembly
Backflow Preventer
(Not Included)
Water
Inlet
GH Washer
W/ Screen
#102050
GH Adapter,
3/4" Garden Hose
#102027
14.00
4x ∅.375
Pump
(PP/Santoprene)
#710910
Solenoid
#720275
Suction Tube
#473400FT
Transformer
#720090
Relay, 24V
#720082
Relay Base
#720080
Timer. 24V
#720189
Float Valve
#710490
Tank
#710501
Suction
Strainer
#150119SS
Elbow
#257378SS
Check Valve
(PP/Viton)
#491402
Metering Tips,
Color-Coded 20-Pack
#443798
Suction Tube, AR, 8'
#474000FT
W-25HCP
Injector Body, 3/8"
#381025HCP
Hose Barb
1/2" x 3/8" NPT
#119266SS
2x Hose Clamp
#134302
Hose, 1/2" x 25'
#803425
Suction Strainer
#150115
To Chemical
4x ∅.234
6.19
3.00
Push Button
#720401
Remote Push Button Assembly, #720835
Nozzle, 2540
#180135
Wand
#536512
Ball Valve
#413620RH

Troubleshooting Guide

Problem	Possible Cause / Solution	
	Startup	Maintenance
A) Air pump will not run or pump solution.	1,5	8,12,13
B) Unit will not draw chemical or water.	2,5	9,10,11,12
C) Using too much chemical	3	
D) Cleaning results unacceptable	4	
E) Pump runs too fast with no output.		9,10,11,12
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**
   - Use a smaller metering tip.
4. **Dilution too weak**
   - Use a larger metering tip.
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. **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.
12. **Problem with air pump**
    - Refer to air pump instruction manual
13. **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.