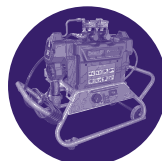




AMPED  
EQUIPMENT



# TROUBLESHOOTING



## PJR REACTOR E<sup>15P</sup> & E<sup>8P</sup>

Understanding Error Codes and Reactor Pump Status Indicators, Dials, and Controls.



## VEE-AIR 1<sup>SP</sup> APPLICATOR

Troubleshooting the V-Manifold and Vee-Air 1SP Spray Tip Applicators, Maintenance, + More..



## SPRAY PATTERNS + TIPS OF THE TRADE

Tips for Bead + Spray Patterns, Air-Purge, Cleaning, and Flushing PJR Equipment.



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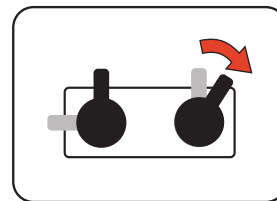
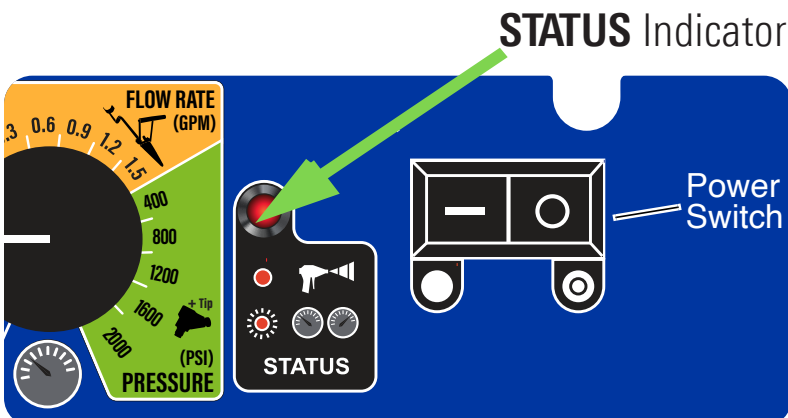


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# Troubleshooting

## Status Codes

Determine the status code by counting the number of times the status indicator blinks.



In this example, B side pressure is higher, so use the B side valve to balance pressures.

2. Reduce pressure of higher component by **slightly** turning Recirc/Spray valve for that component toward Recirc, until gauges show balanced pressures.

**NOTE:** Turn Recirc/Spray valve only enough to balance pressure. If turned completely, all pressure will bleed off.

3. Check fluid inlet strainers and fluid filters at gun.

## Status Code 1: Pressure Imbalance

**NOTE:** The unit does not check for pressure imbalance at setpoints less than 250 psi (1.75 MPa, 17.5 bar). The unit does not check for pressure imbalance for 10 seconds after entering pressure mode.

Unit senses pressure imbalance between components A and B, and warns or shuts down, depending on settings of DIP switches 1 and 2. To turn off automatic shut-down and/or tighten pressure tolerances for status code 1, see **Status Code 1 and 2 Settings**.

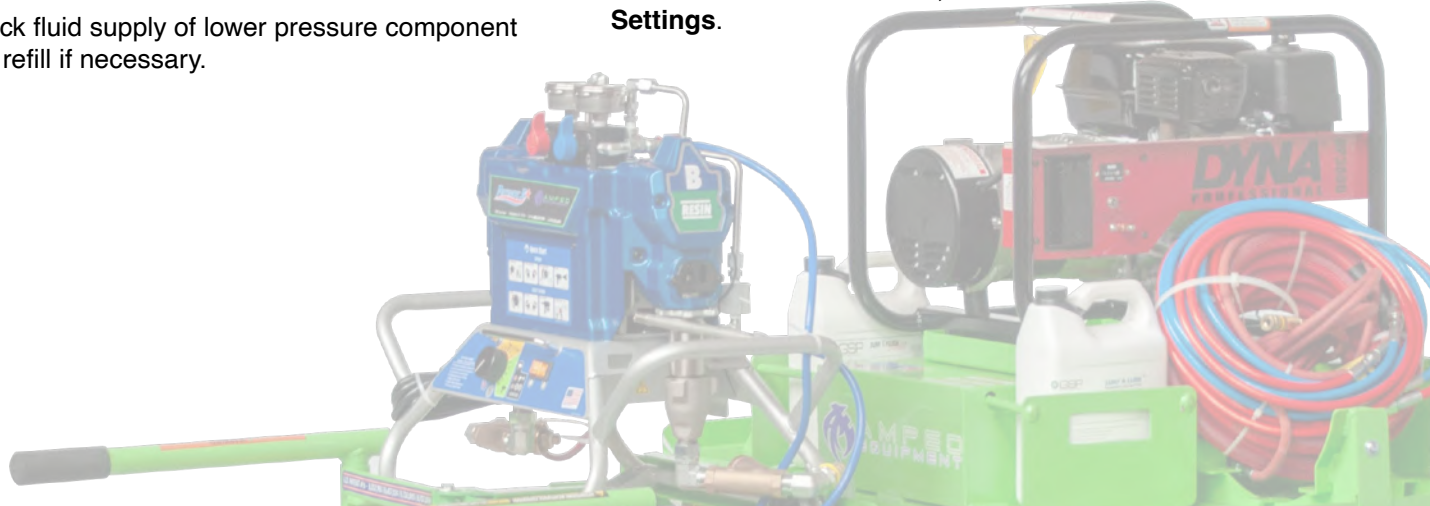
1. Check fluid supply of lower pressure component and refill if necessary.

## Status Code 2: Pressure Deviation from Setpoint

**NOTE:** The unit does not check for pressure deviation at setpoint less than 400 psi (2.8 MPa, 28 bar).

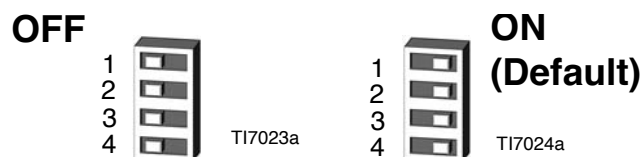
Unit senses pressure deviation from setpoint, and warns or shuts down, depending on settings of DIP switches 3 and 4. If equipment cannot maintain enough pressure for a good mix at the gun, try using a smaller mix chamber or nozzle.

To turn off automatic shutdown and/or tighten pressure tolerances for status code 2, see **Status Code 1 and 2 Settings**.



## Status Code 1 and 2 Settings

1. Locate switch SW2 on the control board.
2. Set the four DIP switches to the desired positions. See FIG. 48 and Table 2.



**FIG. 48. DIP Switch (SW2) Settings**

**Table 2: Status Code 1 and 2 Settings**

DIP Switch and Function	Left	Right (default setting)
<b>DIP Switch 1</b> If selected, causes shutdown or displays a warning if the pressure imbalance exceeds selection made in DIP Switch 2	WARNING	SHUTDOWN
<b>DIP Switch 2</b>  If selected, causes <i>shutdown</i> if A and B pressure imbalance is greater than  If selected, causes <i>warning</i> if A and B pressure imbalance is greater than	500 psi (3.5 MPa, 35 bar) (60% if < 800 psi [5.6 MPa, 56 bar] running)	800 psi (5.6 MPa, 56 bar) (70% if < 800 psi [5.6 MPa, 56 bar] running)
	300 psi (2.1 MPa, 21 bar) (50% if < 800 psi [5.6 MPa, 56 bar] running)	500 psi (3.5 MPa, 35 bar) (60% if < 800 psi [5.6 MPa, 56 bar] running)
<b>DIP Switch 3</b> If selected, causes shutdown or displays a warning due to deviation of pressure from setpoint exceeds selection made in DIP Switch 4	WARNING	SHUTDOWN
<b>DIP Switch 4</b> Causes warning if deviation of pressure from setpoint is greater than	300 psi (2.1 MPa, 21 bar) (25% if < 800 psi [5.6 MPa, 56 bar])	500 psi (3.5 MPa, 35 bar) (40% if < 800 psi [5.6 MPa, 56 bar])

## Status Code 3: Transducer A Failure

1. Check transducer A electrical connections (J3) at board, page 34.
2. Reverse A and B transducer electrical connections at board, page 34. If error moves to transducer B (Status Code 4), replace transducer A, page 33.

## Status Code 4: Transducer B Failure

1. Check transducer B electrical connections (J8) at board, page 34.
2. Reverse A and B transducer electrical connections at board, page 34. If error moves to transducer A (Status Code 4), replace transducer B, page 33.

## Status Code 5: Excessive Current Draw

Shut off unit and contact distributor before resuming operation.

1. Locked rotor: motor unable to turn. Replace motor, page 38.
2. Short on control board. Replace board, page 33.
3. Worn or hung up motor brush causing arching of brush at commutator. Replace brushes, page 39.





## Status Code 6: High Motor Temperature

Motor is running too hot.

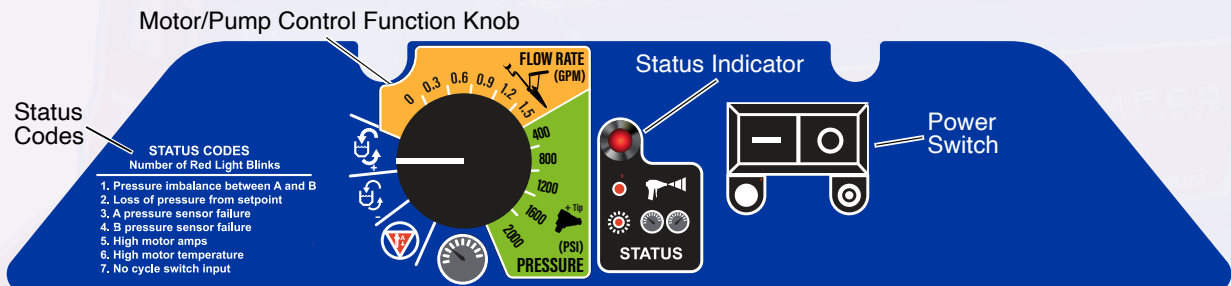
1. Motor temperature too high. Reduce pressure duty cycle, gun tip size, or move Reactor E-8p to a cooler location. Allow 1 hour for cooling.
2. Check fan operation. Clean fan and motor housing.

## Status Code 7: No Cycle Counter Switch Input

Have not received input from cycle counter switch for 10 seconds after selecting Recirculation Mode.

1. Check cycle counter switch connection to board (J10, pins 5, 6), page 34 (figure control module wiring connections).
2. Check that magnet (224) and cycle counter switch (223) are in place under B side motor end cover (227). Replace if necessary.

## Controls and Indicators:



**Fast Recirc**

Fast recirculation speed.



**Slow Recirc**

Slow recirculation speed.



**Park**

Stops motor and automatically parks pumps.



**Static Mix**

Use Flow Rate settings 1-5 to dispense polyurethane materials through a static mixer gun or V-Manifold.








**Spray, Splatter  
Air-Purge**

Use Pressure psi settings 400-2000 psi (6-10) to spray 2-Part Adhesives + Air



# Troubleshooting Chart

Problem	Cause	Solution
Reactor E-8p does not operate.	No power.	Plug in power cord.
		Cycle Motor Power off  , then on  to reset breaker.
Motor does not operate.	Power turned on with function knob set to a run position.	Set function knob to Stop/Park  , then select desired function.
	Loose connection on control board.	Check connection at J11 (120 V). See page 33.
	Worn brushes.	Check both sides. Replace brushes worn to less than 1/2 in. (13 mm), see page 39.
	Broken or misaligned brush springs.	Realign or replace, page 39.
	Brushes or springs binding in brush holder.	Clean brush holder and align brush leads for free movement.
	Shorted armature.	Replace motor, page 38.
	Check motor commutator for burn spots, black pitting, or other damage.	Remove motor. Have motor shop resurface commutator, or replace motor, page 38.
	Failed control board.	Replace board. See page 33.
Fan not working.	Loose fan cable.	Check that cable is connected at fan and at J9 on control board. See pages 39 and 33.
	Defective fan.	Test and replace if necessary, page 39.
Pump output low.	Plugged fluid inlet strainer.	Clear, see page 21.
	Plugged disposable mixer.	Clean or replace.
	Leaking or plugged piston valve or intake valve in displacement pump.	Check valves. See pump manual.
One side doesn't come up to pressure in spray mode.	Dirty or damaged Recirc/Spray valve.	Clean or repair, page 30.
	Plugged fluid inlet strainer.	Clear, see page 21.
	Pump intake valve plugged or stuck open.	Clean pump intake valve. See page 31.

Problem	Cause	Solution
Pressure is higher on one side when setting pressure with function knob.	Pump intake valve partially plugged.	Clean pump intake valve. See page 31.
	Air in hose. Fluid is compressible.	Purge air from hose.
	Unequal size hoses or unequal hose construction.	Use matching hoses, or balance pressures before spraying.
Pressures are not balanced when running, but pressure is generated and holds on both strokes.	Unequal viscosities.	Check that A and B chemicals are within the chemical manufacturer's specified application temperature range.
		Change restrictor at mix point to balance back pressure.
	Restriction on one side.	Clean mix module or restrictor at mix manifold.
		Clean gun check valve screens.
Fluid leak in pump packing nut area.	Worn throat seals.	Replace. See pump manual.
Pressure doesn't hold when stalled against gun in spray mode.	Leaking Recirc/Spray valve.	Repair, page 30.
	Leaking piston valve or intake valve in displacement pump.	Repair. See pump manual.
	Leaking gun shutoff.	Repair. See gun manual.
Pressure is higher on B side during startup of recirculation, especially in High Recirc mode.	This is normal. Component B is typically higher viscosity than component A until the material is heated during recirculation.	No action required.
One gauge shows half as many pulses as the other when pumps are cycling.	Loss of pressure on downstroke.	Intake valve is leaking or not closing. Clean or replace valve; see page 31.
	Loss of pressure on upstroke.	Piston valve is leaking or not closing. Clean or replace valve or packings; see page 31.
Status indicator (red LED) not lit.	Motor Power switch off.	Cycle Motor Power off  , then on  to reset breaker.
	Loose indicator cable.	Check that cable is connected at J10 pins 1 (red) and 2 (black) on control board. See page 33.
	Failed control board.	Replace board. See page 33.

Problem	Cause	Solution
A side rich; lack of B side.	A side gauge is low.	B side restriction downstream of gauge. Check gun check valve screen, mix module, or mix manifold restrictor.
	B side gauge is low.	B side material supply problem. Check B side inlet strainer and pump intake valve.
B side rich; lack of A side.	A side gauge is low.	A side material supply problem. Check A side inlet strainer and pump intake valve.
	B side gauge is low.	A side restriction downstream of gauge. Check gun check valve screen, mix module, or mix manifold restrictor.

## Daily Reminder!

Apply a small amount of pump lube to each piston on the A-Side and B-Side pumps.





## Prevention Tips

1. Use white lithium grease for all fittings, threads, and plugs/caps for static mixing tips. This helps prevent material buildup and seals all possible passages for air and moisture.

2. Apply pump lube before and after each use to both pistons.

3. Letter label or color-code fittings, desiccant driers, plugs/caps and containers. This helps ensure that fittings and accessories stay on their designated A- or B-side.

4. Ensure all openings have been plugged unless being vented properly.

\*Replace desiccant driers when needed.

Blue = Good to use

Pink = Needs replaced

5. When in doubt, flush it out. Flushing your machine regularly and often will significantly increase the operating life of your PJR and reduce downtime on the jobsite.

**\*NOTE\* When Flushing:** Let flush sit for 20 minutes to dissolve any crystallization or build-up before putting in Surf-A-Lube or ISO Flush.

## Troubleshooting

1. Proper storage of material is essential. Ensure the material temperature of adhesive is always kept between 70°F–90°F.

2. Ensure both passages on the gun are clear by using a ¼" drill bit.

3. Ensure both fluid valves from the drum are in the "open" position.

4. Ensure both ends of the desiccant driers are completely open.

5. Ensure the Y-Screens are clear and free of debris or crystals. Clean or replace as needed.

6. Ensure hose assemblies from the drums are clear of debris or crystals. Replace if needed.

7. Ensure all fittings are completely secure and tightened with no fluid or air leaks.

8. Ensure hoses are free of all kinks and twists.

9. Ensure a new static mixing tip is being used after stopping for 30 seconds or longer.





## Blocked Spray Flow?

Clean Blocked V-Manifold or VA1SP Tip with Magnetic Cleaning Tool (any Allen Key will work as well):

Twist the Magnetic Hand Tool inside both thread ports of Vee Air-1<sup>SP</sup> Tip, as well as Air-Valve by simply unscrewing Knob.



## ALWAYS Grease Gun, Tip, and Threads!

**STEP 1:** Inject Lithium Grease into Both Grease-Ports of Static V-Manifold Applicator Gun.

**STEP 2:** Always Grease the Ports on the V-Manifold at the start of a new day of spraying.

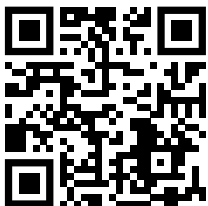
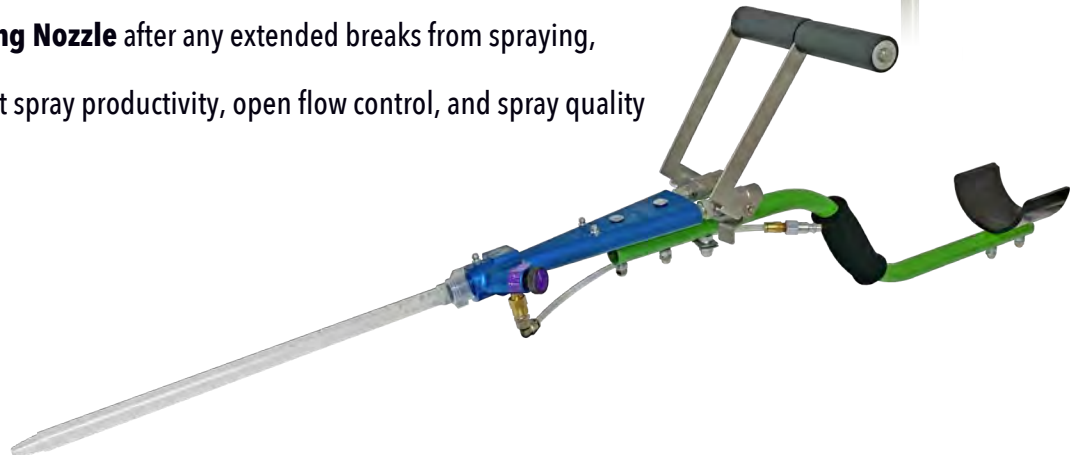
- A.) Always Grease inside ALL Threads of VA1-SP Tip in addition to V-Manifold.
- B.) Unscrew Air-Valve Knob and Grease the Air Valve-Stem Threads with White Lithium Grease.
- C.) Grease the Port on top of VA1-SP Tip and the Mounting Threads where V-Manifold Gun attaches.

**STEP 3:** Slowly turn VA1-SP Air-Valve Knob and let air flow through the system while V-Manifold is still closed.

- A.) Slowly pull down the V-Manifold handle to get A+B product flowing through Static Mixing Nozzle.
- B.) Begin feathering in your material & Adjust Pump Controls where Necessary.

## Problem With Static Mixer Flow?

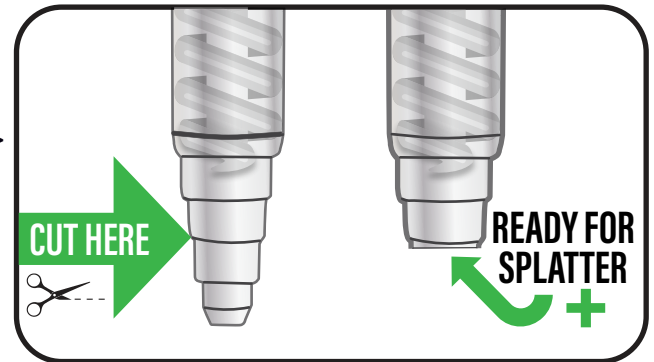
**\*Always Use a Fresh NEW Static-Mixing Nozzle** after any extended breaks from spraying, or overnight downtime to ensure the best spray productivity, open flow control, and spray quality from your VA1-SP setup.



## SPRAY PATTERNS, AIR-PURGE TIPS & REMINDERS:

### VEE-AIR-1SP SPLATTER PATTERN:

- 1.) Cut the tip of Static Mixing Nozzle if "Stepped" or "Pencil-Pointed" ->
- 2.) Then, let air flow through tip only.
- 3.) Then, slowly begin "feathering in material."

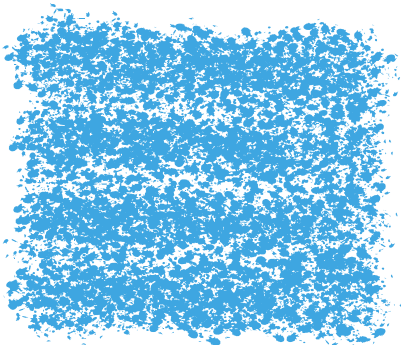


**FULL SPRAY PATTERN:** When using Vee-Air 1SP for Full Spray, use "stepped" or "pencil-pointed" Static Mixing Nozzle with more air-flow and low A+B material pressure to get a nice aerosolized type of full-spray pattern.

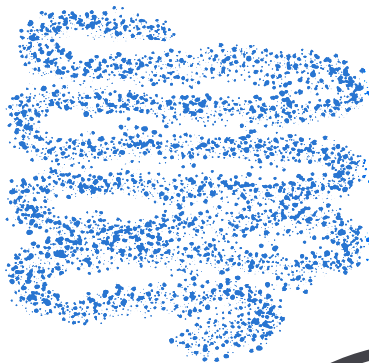
**STATIC BEAD:** Always remember to "SLOWLY" pull down on Manifold arm of your Applicator Gun to begin feathering in your A+B material, ensuring minimal material gets wasted or creates unnecessary messes on the job.

**AIR-PURGE, CLEANING & KEEPING TIP and LINES FREE & CLEAR:** Hold VEE-AIR Gun with Static Mixing Nozzle Tip pointed toward the ground. *ALWAYS* let the air flow through the gun for 15-20 seconds before & after runs of spraying material to ensure that the Gun and A+B lines don't get clogged.

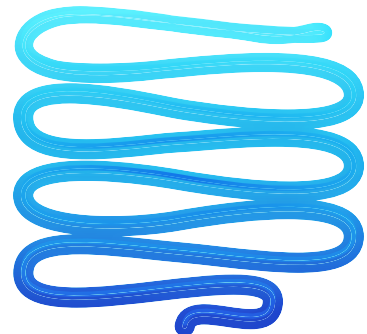
### FULL SPRAY



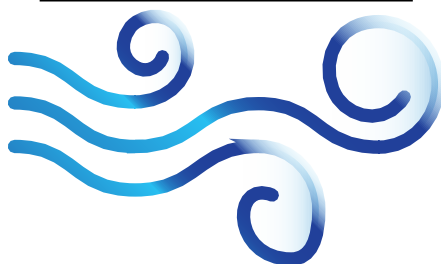
### SPLATTER



### BEAD



### AIR PURGE





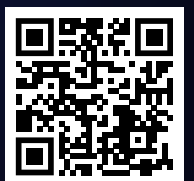


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