

SERVICE INSTRUCTION

79651-00 INSTALLATION AND SETUP KIT FOR VECTOR SOLO APPLICATOR

This kit contains all the necessary equipment to install a new Vector Solo applicator, as well as the equipment required for maintenance and troubleshooting to ensure maximum performance.

Included in this kit are the following items:

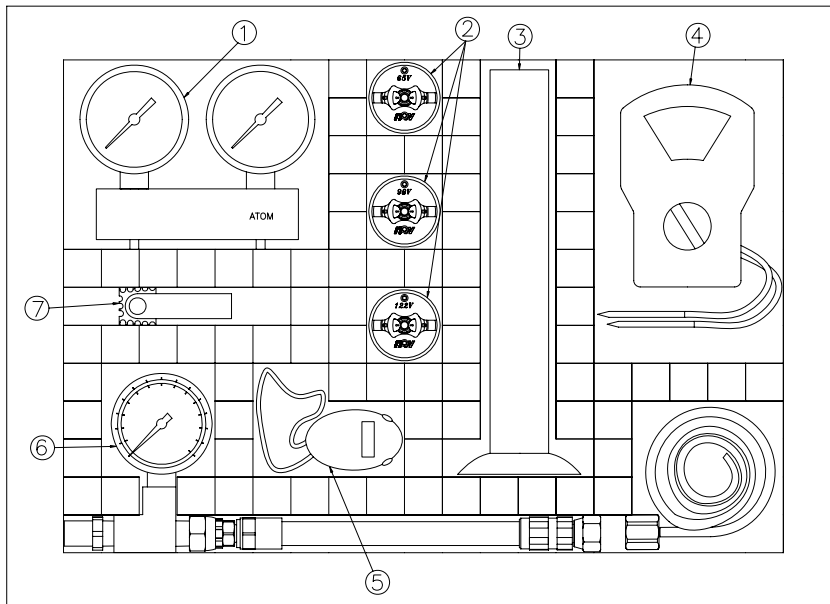


Figure 1: Installation Kit Layout

INSTALLATION AND SETUP KIT - PARTS LIST	
Item #	Description
1	Cap Pressure Test Gauges
2	Test Air Caps (65V, 98V, and 122V)
3	100 mL Graduated Cylinder
4	Analog Voltmeter
5	Stop Watch
6	Test and Maintenance Kit
7	Wet Film Gauge

Below is a detailed description and proper usage instructions for each item in the kit:

Items 1 and 2 - Cap Pressure Test Gauges and Test Air Caps

The cap pressure test gauges (Item 1) are used along with the test air caps (Item 2) to measure the fan and atomization air pressures at the air cap. To use the cap pressure test gauges and test air caps, follow these steps:

1. Hook the applicator to main air. Turn main air on.
2. Remove the retaining ring and air cap from the applicator.
3. Place one of the test air caps (Item 2) onto the applicator. To determine which test air cap to use, look at the original air cap that was just removed from the applicator. On one of the faces, it will say 65V, 98V, or 122V. Select the test air cap with the same numbers as on the air cap.
4. Put the retaining ring back onto the applicator and tighten.
5. Determine which gauge measures the atomization air cap pressure. This will be the gauge located above the word "atom" on the gauge mounting bracket.

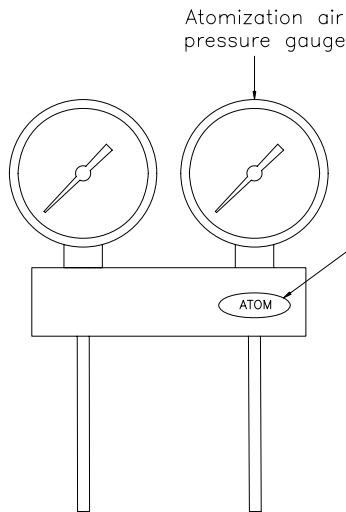
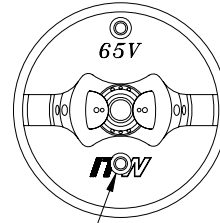


Figure 2: Locate Atomization Air Pressure Gauge On Item 2

6. Next, determine which barbed fitting on the air cap is the atomization air barb. This will be the one located closest to the center of the air cap.



located closest to center-Atomization

Figure 3: Locate Atomization Air Barb Fitting On Test Air Cap

7. Place the tubing coming out from directly underneath the atomization air pressure gauge onto the atomization air barb on the air cap.

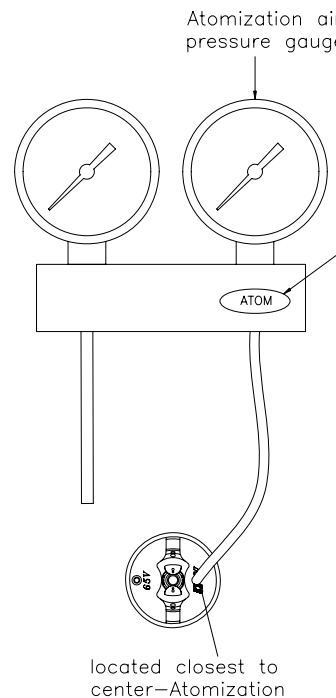


Figure 4: Connect Atomization Air Gauge to Atomization Air Fitting

8. Place the other tube onto the other barb of the air cap. This will measure the fan pressure.

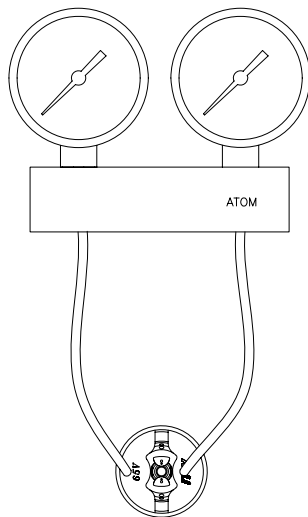


Figure 5: Connect Fan Air Gauge to Fan Air Fitting

9. Trigger the applicator and record the pressures on the test gauges.

10. Disassemble by removing the tubing from the air cap, removing the retaining ring and test air cap from the applicator, and replacing the test air cap with the original air cap. Tighten the retaining ring.

Items 3 and 5: Graduated Cylinder and Stopwatch

These items can be used to determine the fluid flow rate in ml/min (cc/min), when another fluid regulation system is not in place, or may be out of calibration. To determine the flow rate of a material, follow these steps:

1. Turn off voltage and main air.
2. Load paint into the applicator. Allow the paint to flow from the applicator for several seconds to ensure that the line is filled with paint and there are no air bubbles.
3. Trigger the applicator for several seconds.

4. Place the graduated cylinder in the stream of the paint and begin to collect the material. While doing this, simultaneously start the stopwatch. The goal is to begin timing as soon as the first drop of paint enters the graduated cylinder.

5. Allow the stopwatch to run for 30 seconds. As soon as the 30 second mark is reached, remove the graduated cylinder from the paint stream and untrigger the applicator. The goal here is to end paint collection in the graduated cylinder as soon as the 30 second mark is reached.

6. Stop the stopwatch.

7. Place the graduated cylinder on a flat surface.

8. Read the number of ml the paint filled the container to in 30 seconds.

9. Multiply the number of ml by 2. This is your flow rate in ml/min (cc/min). Example: If your graduated cylinder reads 50 ml after 30 seconds of paint flow, then your flow rate is $50 \text{ ml} \times 2 = 100 \text{ ml/min}$ (100 cc/min).

Items 4 and 6: Analog Voltmeter and Test and Maintenance Kit

Item 4 is an Analog Voltmeter. It will display the number of volts supplied to it. Item 6 is the Test and Maintenance Kit (79870-00). These two items can help determine if an applicator is functioning properly and if not, the source of the problem.

The parts contained in the 79870-00 Test and Maintenance Kit includes:

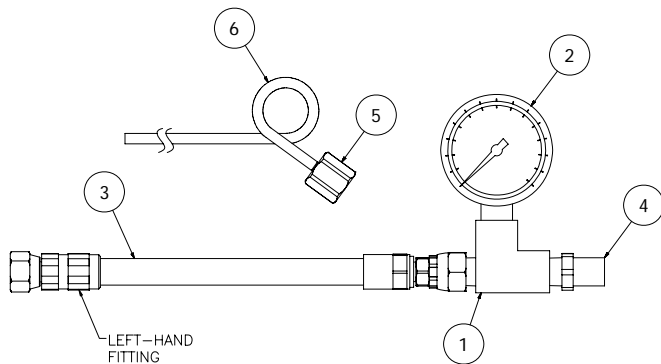


Figure 6: 79870 Test and Maintenance Kit Items

79870 TEST AND MAINTENANCE KIT	
Item #	Description
1	Brass Tee Fitting
2	100 psi Pressure Gauge
3	6" Air Hose Assembly
4	Left Hand Male Fitting
5	Barb Fitting
6	Tubing

The 79870 Test and Maintenance Kit allows the user to determine the inlet pressure at the base (handle) of the Vector Solo 79900 series hand-held applicators. The 79870 Test and Maintenance Kit also allows the user to test the 79835 Power Module Assembly on the Vector Solo 79900 applicator.

The procedure to test the inlet pressure at the base (handle) of the Vector Solo applicator is as follows (see Figures 6 and 7):

1. Connect the left-hand fitting of the 79727 Air Hose to the left-hand male fitting [4] of the 79870 Test and Maintenance Kit.
2. Connect the right-hand fitting of the 6" air hose assembly [3] to the brass tee fitting [1].

3. Connect the left-hand fitting of the 6" air hose assembly [3] to the air inlet fitting on the 79900 Vecto Solo applicator.

4. Connect the user's 79727 Air Hose to inlet air.

5. Turn on main air. Trigger the applicator with the kV switch on high (down position). Read the pressure at the 100 psi pressure gauge [2] in the 79870 Test and Maintenance Kit. This pressure should be 40 psi with air flowing (applicator triggered) for proper functioning of the 79900 Vector Solo applicator.

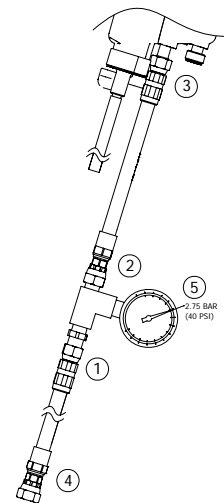


Figure 7: Testing the Pressure at the Base (Handle) of the Applicator

The procedure to test the 79835 Power Module Assembly on the Vector Solo 79900 applicator is as follows:

1. Remove the 79835 Power Module Assembly from the handle.

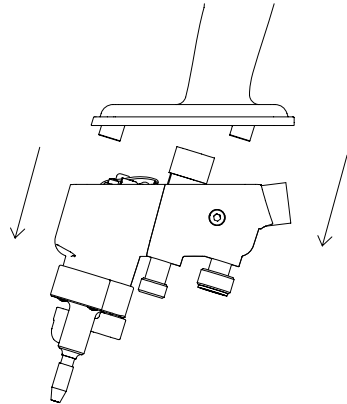


Figure 8: Remove Power Module from Handle

2. Connect the barb fitting [5] to the brass tee fitting [1]. Place the tubing [6] on the end of the barb fitting.

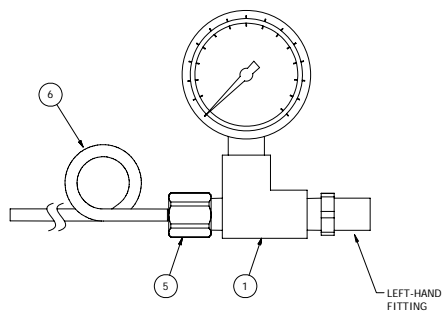


Figure 9: Connect Barb and Tubing to Tee Fitting

3. Connect the left-hand fitting of the 79727 Air Hose to the left-hand male fitting [4] of the 79870 Test and Maintenance Kit.

4. Insert the tubing [6] into the smaller diameter hole in the top of the air fitting in the power module.

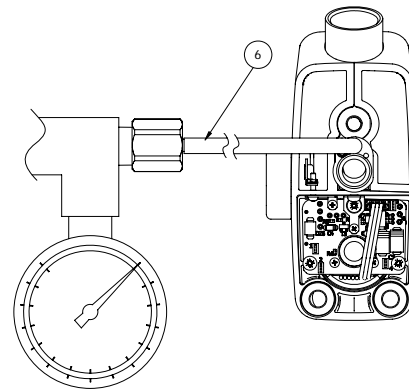


Figure 10: Connect Tubing to the Air Fitting

5. Connect a wire from test point 2 (on the PC board in the power module) to a true earth ground.

6. Connect the Analog Voltmeter from the Installation Kit to test points 1 and 2.

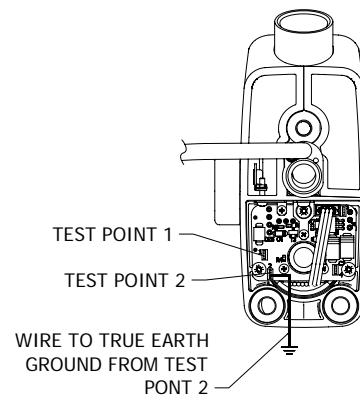


Figure 11: Connect the PC Board to the Analog Voltmeter and True Earth Ground

7. Connect the 79727 Air Hose to main air.

8. Turn the dial on the Analog Voltmeter so that it can read DC voltage in the 50V range.

9. Turn on main air and set the pressure so the pressure gauge [2] in the 79870 Test and Maintenance Kit reads 25 psi (1.7 bar). The voltage kV setpoint lever should be in the high voltage position (down). The Analog Meter should read approximately 15V DC.

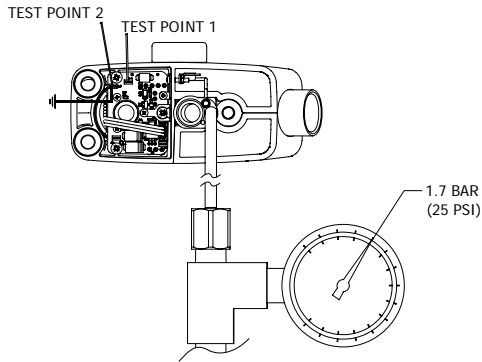


Figure 12: Set Pressure Gauge to 25 psi

Item 7: Wet Film Gauge

Item 7 is a wet film gauge. The wet film gauge will allow you to measure the thickness of paint on the surface of a part before the paint dries. To measure the thickness of the wet paint on a surface, follow these steps:

1. Spray paint onto the surface of the object.
2. Lay the object flat.
3. Select the side of the gauge with the thickness you desire located on it.
4. Place the combs of the gauge on the part, keeping the combs perpendicular to the part surface.

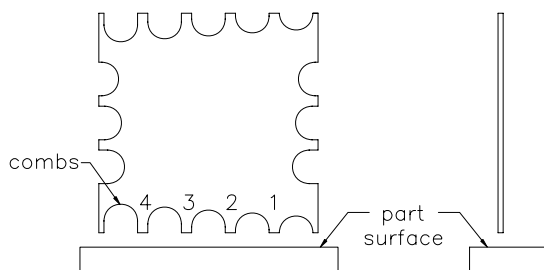


Figure 13: Place Wet Film Gauge Perpendicular to Part Surface

5. Drag the combs along the part surface, keeping them perpendicular to the surface at all times.

6. Lift the gauge off of the part.

7. Look at the combs. The thickness of the paint is indicated by the lack of paint on the recessed groove on the comb. For example: if there is paint in the recess of the 2 mil groove and none on the 3 mil groove, then the thickness of the paint is between 2 and 3 mils.

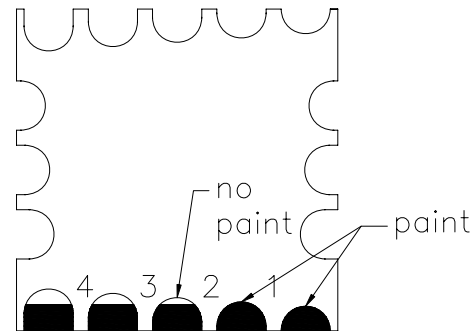


Figure 14: Paint Thickness Indicated By Presence/Lack of Paint On Recessed Grooves

To aid with process consistency, the following "Maps Manual Application Process Sheet" is used in this Service Instruction. It may be used for initial setup and commissioning of the applicator or for documentary regular process checks (you may make copies of this page). Use of Installation and Setup Kit 76591-00 with Test and Maintenance Kit 79870-00 may be used to obtain the process information from the Maps sheet.

MAPS

MANUAL APPLICATION PROCESS SHEET

Customer Data			
Customer:		Date:	
Location:		ITW Representative:	
Cust. Contact:		Product Desc:	
Cust. Phone #:		Product Substrate:	
Distributor:		Material Use:	Prime Base Clear
Dist. Contact:		Material Base:	Water Solvent
Dist. Phone:		Material Compound:	1K 2K 3K

Atomizer / Material Data						
ITEM	Current	Trial 1	Trial 2	Trial 3	Trial 4	Final
Gun Type						
Gun Part Number						
Gun Serial Number						
Air Cap						
Fluid Nozzle						
Air Line ID						
Air Line Length						
Fluid Line ID						
Fluid Line Length						
Material Viscosity						
Material % Solids						
Material Resistivity						

Process Data						
Air Supply Pressure						
Air Pressure @ Gun Inlet						
Test Cap Gauge: Fan						
Test Cap Gauge: Atom						
Pattern Size (@ 10 in)						
Fluid Flow Rate (cc/min)						
Approx. spray time per part						
Approx. flow per part (cc)	0	0	0	0	0	0
Conveyor Speed (ft/min)						
Approx. Mil Wet						
Approx Mil Dry						
Part - Ground Continuity						

Comments

Manufacturing

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Telephone: 800/ 233-3366 Fax: 419/ 470-2071

Technical Support Representative will direct you to the appropriate telephone number for ordering Spare Parts.

