



## **OEM NFPA 1901 Foam Multi-Point Injection Proportioner Test Procedure**

### **AccuMax Series Foam Systems**

- 1) Foam pump, Line Controllers, and water flowmeters must be calibrated per Installation and Operation Manual before testing (Concentrate viscosity must be within the foam proportioner manufactures limits).
- 2) Tools needed for the test are a pitot tube or other calibrated flowmeter to test the system water flow rates. Flowmeter or other method to measure concentrate flow, a load valve to control system back pressure capable of maximum flow of the foam system pump and a pressure gauge to measure back pressure.
- 3) System performance is dependant on flowmeter/pipe size. Identify applicable OEM test points based on size of flowmeter installed. Maximum water flow is determined by the flowmeter range or the maximum water pump output, which ever is less.
- 4) Water and foam concentrate can be tested separately on FoamPro AccuMax series systems as follows:
  - A) Test waterway flowmeter at the three (3) test points shown on applicable OEM Certification test chart (If the water pump can not reach the maximum flowmeter rate at 150psi use maximum flow rate of the pump). Water flow rates displayed on the control head should be within 10% of pitot tube measurements.
  - B) Test the Line Controllers at three (3) test points shown on OEM Certification test chart.
    - 1) Turn the "Cal/Inject" valve to the Calibrate position for the Line Controller being tested (Foam system should be primed with no air in the lines).
    - 2) Attach pressure gauge and load valve to the "cal/inject" valve with a hose running to calibrated flowmeter.
    - 3) Enter "Simulated Flow" mode and set the water flow rate to the value listed in the chart for the Line Controller size. If the foam pump minimum flow rate is greater than the Line Controller minimum flow rate, use multiple Line Controllers simultaneously to increase foam pump flow so that the Line Controller minimum flow rate can be tested.
    - 4) Set the percent (%) concentrate to the corresponding value specified in the chart.
    - 5) Press the Master and Line Controller "ON" buttons to start the proportioner.
    - 6) Set the load valve back pressure to the corresponding value specified in the chart.
    - 7) Run the system for short period (Not less than 20 seconds) to assure prime and stabilization. Note flowmeter reading. Steps 7, 8, and 9 will need to be adjusted accordingly to suit the flow meter if used.
    - 8) Run the system for several minutes. Longer run time will increase measurement accuracy.
    - 9) The result must match the corresponding Foam (GPM) listed in the chart within NFPA accuracy requirements.  
(Note: NFPA allows -0% to +40% for solutions of less than 1% and -0% to +30% for solutions greater than 1%; or 1 percentage point whichever is less)
    - 10) Repeat this process for the remaining two (2) rows of the OEM Certification Test chart. All three scenarios must meet NFPA guidelines without re-calibrating.
- 5) Repeat Step 4 for each Line controller.
- 6) Test the foam pump capacity listed on the OEM Certification test chart through a Line Controller that is capable of the foam pump low end and a Line Controller that is capable of the foam pump high end. If one Line Controller can not reach the capacity of the foam pump, multiple Line Controllers may be required to test the foam pump capacity. Call FoamPro for assistance if needed.

