FOAMPRO
A Safe Fleet Brand

OEM NFPA 1901/1906 Foam Single-Point Injection Proportioner Test Procedure

2000 / 3000 Series Foam Systems

1) Foam pump 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. A graduated bucket to collect and calibrate foam concentrate. A stop watch to measure volume unit/time of foam concentrate flow. A load valve to control system back pressure capable of maximum flow of the foam system pump. Appropriate pressure gauge to measure back pressure.

   On larger systems, it may be practical to use a calibrated flowmeter instead of a graduated collection container and recirculate the foam concentrate.

3) System performance is dependent 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, whichever is less.

4) Water and foam concentrate can be tested separately on FoamPro 2000 and 3000 series systems as follows:

   A) Test main waterway flowmeter at the three (3) test points shown on applicable OEM Certification test chart (If the water pump cannot 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 foam pump at three (3) test points shown on OEM Certification test chart.
      1) Turn the “Cal/Inject” valve to the Calibrate position (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 graduated bucket.
      3) Enter “Simulated Flow” mode and set the water flow rate to the value listed in the chart for the flowmeter size.
      4) Set the percent (%) concentrate to the corresponding value specified in the chart.
      5) Press the “ON” button 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 5 seconds electric driven, 20 seconds hydraulic) to assure prime and stabilization. Note the volume of concentrate in the bucket and start the stop watch.
      8) Run the system for several minutes. Note the volume in the bucket and time on the stop watch. (Note: Longer run time will increase measurement accuracy)
      9) Divide the volume change in the bucket (total concentrate pumped during the timed period) by the number of minutes on the stop watch. 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 remaining two (2) rows of the OEM Certification Test chart. All three scenarios must meet NFPA guidelines without re-calibrating.

5) If system has multiple concentrate tanks, repeat step B for each additional tank.

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NFPA 1901 / 1906
Model 3012 Foam System Certification

Certified Manufacturer Type Test

Range	Waterflow	Range	Back Press. PSI	Foam %	Range	Foam Cap. (gpm)
Min	10	Min	0	1.0%	Min	0.1
Max	320	Max	350	3.8%	Max	12.0
Min	10	Max	350	1.0%	Min	0.1
Max	320	Min	0	3.8%	Max	12.0
Mid	155	Mid	150	7.7%	Mid	12.0

Range	Waterflow	Range	Back Press. PSI	Foam %	Range	Foam Cap. (gpm)
Min	15	Min	0	0.7%	Min	0.1
Max	520	Max	350	2.3%	Max	12.0
Min	15	Max	350	0.7%	Min	0.1
Max	520	Min	0	2.3%	Max	12.0
Mid	260	Mid	150	4.6%	Mid	12.0

Range	Waterflow	Range	Back Press. PSI	Foam %	Range	Foam Cap. (gpm)
Min	20	Min	0	0.5%	Min	0.1
Max	750	Max	350	1.6%	Max	12.0
Min	20	Max	350	0.5%	Min	0.1
Max	750	Min	0	1.6%	Max	12.0
Mid	400	Mid	150	3.0%	Mid	12.0

Range	Waterflow	Range	Back Press. PSI	Foam %	Range	Foam Cap. (gpm)
Min	30	Min	0	0.3%	Min	0.1
Max	1150	Max	350	1.0%	Max	12.0
Min	30	Max	350	0.3%	Min	0.1
Max	1150	Min	0	1.0%	Max	12.0
Mid	600	Mid	150	2.0%	Mid	12.0

Range	Waterflow	Range	Back Press. PSI	Foam %	Range	Foam Cap. (gpm)
Min	55	Min	0	0.2%	Min	0.1
Max	1980	Max	350	0.6%	Max	12.0
Min	55	Max	350	0.2%	Min	0.1
Max	1980	Min	0	0.6%	Max	12.0
Mid	1020	Mid	150	1.2%	Mid	12.0

Range	Waterflow	Range	Back Press. PSI	Foam %	Range	Foam Cap. (gpm)
Min	80	Min	0	0.1%	Min	0.1
Max	3050	Max	350	0.4%	Max	12.0
Min	80	Max	350	0.1%	Min	0.1
Max	3050	Min	0	0.4%	Max	12.0
Mid	1200	Mid	150	1.0%	Mid	12.0

Range	Waterflow	Range	Back Press. PSI	Foam %	Range	Foam Cap. (gpm)
Min	117	Min	0	0.1%	Min	0.1
Max	4500	Max	350	0.2%	Max	12.0
Min	117	Max	350	0.1%	Min	0.1
Max	4500	Min	0	0.3%	Max	12.0
Mid	2250	Mid	150	0.5%	Mid	12.0

Range	Waterflow	Range	Back Press. PSI	Foam %	Range	Foam Cap. (gpm)
Min	200	Min	0	0.1%	Min	0.1
Max	7800	Max	350	0.2%	Max	12.0
Min	200	Max	350	0.1%	Min	0.1
Max	7800	Min	0	0.2%	Max	12.0
Mid	3900	Mid	150	0.3%	Mid	12.0

OEM Certification Test

System Certified

1 1/2" Thread or 2" Victaulic

Flowmeter		Foam Pump Test Points					
Range	Test Points	Sim Water Flow	Set Foam %	Range	Back Press. PSI	Range	Foam (gpm)
Mid	60	400	1.5%	Mid	150	Mid	6.0
Min	10	100	0.1%	Min	0	Min	0.1
Max	320	400	3.0%	Max	350	Max	12.0

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2" Thread or 2 1/2" Victaulic

Flowmeter		Foam Pump Test Points					
Range	Test Points	Sim Water Flow	Set Foam %	Range	Back Press. PSI	Range	Foam (gpm)
Mid	160	400	1.5%	Mid	150	Mid	6.0
Min	15	100	0.1%	Min	0	Min	0.1
Max	520	400	3.0%	Max	350	Max	12.0

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2 1/2" Thread or 3" Victaulic

Flowmeter		Foam Pump Test Points					
Range	Test Points	Sim Water Flow	Set Foam %	Range	Back Press. PSI	Range	Foam (gpm)
Mid	250	400	1.5%	Mid	150	Mid	6.0
Min	20	100	0.1%	Min	0	Min	0.1
Max	750	400	3.0%	Max	350	Max	12.0

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3" Thread or 4" Victaulic

Flowmeter		Foam Pump Test Points					
Range	Test Points	Sim Water Flow	Set Foam %	Range	Back Press. PSI	Range	Foam (gpm)
Mid	375	400	1.5%	Mid	150	Mid	6.0
Min	33	100	0.1%	Min	0	Min	0.1
Max	1150	400	3.0%	Max	350	Max	12.0

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4" Thread or 5" Victaulic

Flowmeter		Foam Pump Test Points					
Range	Test Points	Sim Water Flow	Set Foam %	Range	Back Press. PSI	Range	Foam (gpm)
Mid	625	400	1.5%	Mid	150	Mid	6.0
Min	55	100	0.1%	Min	0	Min	0.1
Max	1980	400	3.0%	Max	350	Max	12.0

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Insertion Style Flowmeter in 5" Pipe

Flowmeter		Foam Pump Test Points					
Range	Test Points	Sim Water Flow	Set Foam %	Range	Back Press. PSI	Range	Foam (gpm)
Mid	1000	400	1.5%	Mid	150	Mid	6.0
Min	80	100	0.1%	Min	0	Min	0.1
Max	3000	400	3.0%	Max	350	Max	12.0

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Insertion Style Flowmeter in 6" Pipe

Flowmeter		Foam Pump Test Points					
Range	Test Points	Sim Water Flow	Set Foam %	Range	Back Press. PSI	Range	Foam (gpm)
Mid	1440	400	1.5%	Mid	150	Mid	6.0
Min	117	100	0.1%	Min	0	Min	0.1
Max	4500	400	3.0%	Max	350	Max	12.0

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Insertion Style Flowmeter in 8" Pipe

Flowmeter		Foam Pump Test Points					
Range	Test Points	Sim Water Flow	Set Foam %	Range	Back Press. PSI	Range	Foam (gpm)
Mid	2560	400	1.5%		150		6.0
Min	200	100	0.2%		0		0.2
Max	7800	400	3.0%		350		12.0

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Type tested to all known Class A and B Foam Concentrates including Alcohol Resistant Concentrates up to 2000 cps

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Installer Certification
Installed, Calibrated and Tested to FoamPro's Installation Recommendations and Purchaser's Performance Specifications

Tester _____

Date _____