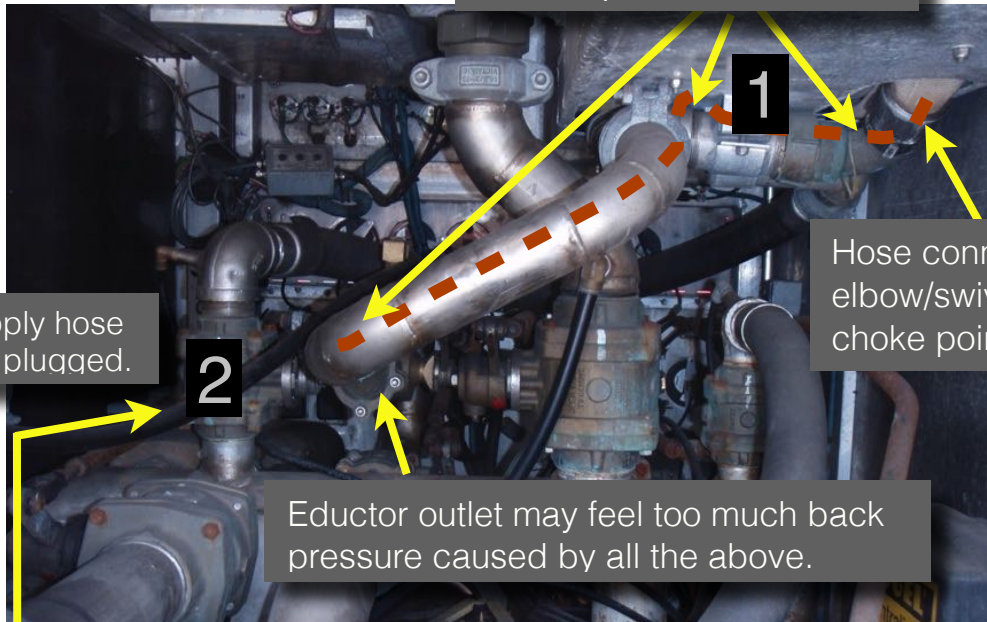


To many elbows or turns.



Hose connection elbow/swivel is a choke point.

Eductor supply hose too small or plugged.

Eductor outlet may feel too much back pressure caused by all the above.



1. Eductors can only stand 130 psi back pressure when operating at 200 psi. Fire hose connection swivel & plumbing elbows will contribute hidden back pressure. Two-hundred feet of 1.75" hose and a 100 psi nozzle will put 130 psi pack pressure at a 95 gpm eductor's hose connection swivel. The loss in the connector swivel, flex hose or piped elbows can create enough added back pressure to shut the system down, especially where 125 gpm bi-pass eductors are used. Subtracting a section or two of hose will usually get you going again. Another trick is to try 2" hose or a matching 75 psi nozzle.
2. Concentrate supply hose may be too small. Need 1" for alcohol resistant foam. Six percent setting moves six gpm concentrate with a 95 gpm eductor, and a little more than seven gpm at 125.
3. Concentrate supply hose may fall apart at fittings if air-brake hose is used. The "O" rings at connectors can dissolve over time in the presence of solvents used in most A or B foam compounds. Picture shows 5/8" hose - too small for this 125 system.
4. Strainers will cause lean proportioning where viscous AR-AFFF are in use.
5. Trace amounts of class A or regular AFFF concentrate in contact with alcohol resistant (AR) concentrate will cause the AR foam to do bad things in the system's plumbing or tank. A-B systems sharing common supply plumbing are famous for causing such system fatal conditions. The strainer (left) shows polymerized material caused by contact of class A wetting alcohol or regular AFFF dispersing solvents.

**NOTE: AR-AFFF's are slime-like gels. The most alcohol resistant and longest lasting versions tend to be quite thick but thin as they move through eductor system plumbing. National's Universal Gold 1x3% is UL approved for use with eductors. Electric discharge side proportioning systems (FoamPro® 1600 & 2000) will not tolerate Universal Gold. There is now a low viscosity 3%, fluorine free (AR-F3) version. Contact me for data, MSDS and procurement details - FoamGuy@mac.com**



**Step 3** WATER **last**  
**Step 2** EDUCTOR  
**Step 1** FOAM **first**  
FLUSH

VALVE	VALVE POSITION FOR		
	FOAM	WATER ONLY	FLUSH (3 M)
WATER	OPEN	OPEN	OPEN
EDUCTOR	OPEN (200 PSI)	CLOSE	OPEN (100 PSI)
FOAM	OPEN	CLOSE	CLOSE
FLUSH	CLOSE	CLOSE	OPEN

CLASS A/B  
125 GPM

OFF  
PERCENTAGE  
FOAM  
3  
9  
EM

## Reordered Operation Steps Akron & Elkhart

Open foam tank valve first.  
Open eductor valve second.  
Open water (charge line) last.

Fill dry hose with solution at 50 psi, then throttle to 200 psi.

If water is first, it has to be discharged before solution arrives. Could be near 20 second lag.