Branchville Vol. Fire Co. Water Supply Drill
23 February 2008

Firefighters and officers from Co. 11 went on a little mission today. They wanted to see how much water they could get their 1510 GPM pumper to flow.

But first they wanted to test their ability to quickly put large volumes of water into play.

Crews arrived on the scene with the expressed desire that from the time the parking brake was set they would be flowing 500 GPM in less than 2 minutes at least 50' away from the engine. While maintaining that initial 500 GPM flow they wanted to increase the flow to 1300 GPM within 5 minutes of the initial start time. Finally they wanted to see just how much water they could squeeze out of the hydrant. This was all to be accomplished with a three person crew.

Once the clock started the line man and the officer began to deploy the Akron Mercury Quick Attack monitor deluge set rated at 500 GPM @ 100 psi nozzle pressure (NP). This attack monitor was set at the end of 50' of 3" hose and pumped at about 120 psi engine pressure (EP).

While the crew was setting this up the driver took the Humat valve and connected it to the steamer of the hydrant and then into the piston intake valve on the officer's side of the engine using a 50' section of 4" hose. Because the driver knew that the objective was to expand the water supply he also placed a 2.5" to 4" stortz ¼ turn ball valve on the butt end of the hydrant. The static pressure from the single piece of 4" line attached to the Humat was 100 psi.

On opening the 500 GPM line the residual pressure was 80 psi. So with a bit of confidence we took it a little further and tried to add the 1.75" deck gun tip @ 80 psi NP. This combination should have given us a total of 1300 GPM. Unfortunately this was not to be as our intake pressure quickly dropped to near zero.

The next step was to employ the quarter turn ball valve. This was attached to 50' of 3" hose which went directly into an auxiliary intake on the driver's side of the engine. (This engine does not yet have a 6" to 2 2/1/2" gated siamese on the steamer connection of the engine. The other engine does.) By not having this piece we were forced to use that auxiliary intake and deal with the added flow restriction. This set up still did not allow us to flow 1300 GPM.

We then used our soft sleeve to hook up to the front of the humat, opened the butterly valve and began flowing water again. Unfortunately we noticed that the intake drain pipe was sheared and we had no way to shut the front intake drain. In spite of the "extra drain flow" we were able to reach the 1300 GPM mark but struggled to do so.

Satisfied that we could meet our initial goal we decided to up the ante to 1500 GPM. To do this we used a 1000 GPM tip on the deck gun and the 500 GPM portable monitor. We came close but no cigar.

Unwilling to quit the crew quickly disconnected the 3" hose from the quarter turn valve and replaced it with 100' of 4" hose. This hose was then gated down to 2-3" lines into the auxiliary intakes. With all this hose coming off of the hydrant we were flowing 1000GPM from the deck gun, 500 GPM from the portable gun, and still had some left over. So we added a 1 1/8" nozzle at 50 psi NP attached direct to a discharge. This brought the total flow to about 1765 GPM. ONE PUMPER, ONE HYDRANT.

The Branchville Vol. Fire Co., Station 11 in Prince George's County, MD operates two engines and two ambulances. While their first due area is mostly residential, the box alarm district includes large industrial complexes, many highrise residential and commercial structures ,strip malls, big box stores, major transportation routes such as Interstate 95, CSX, Maryland Commuter rail, and the D.C. METRO system. To top it all off there is still a place where drafting is required for fire flow. In other words the team has to be ready for just about anything.

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All photos by Jennifer Underwood