

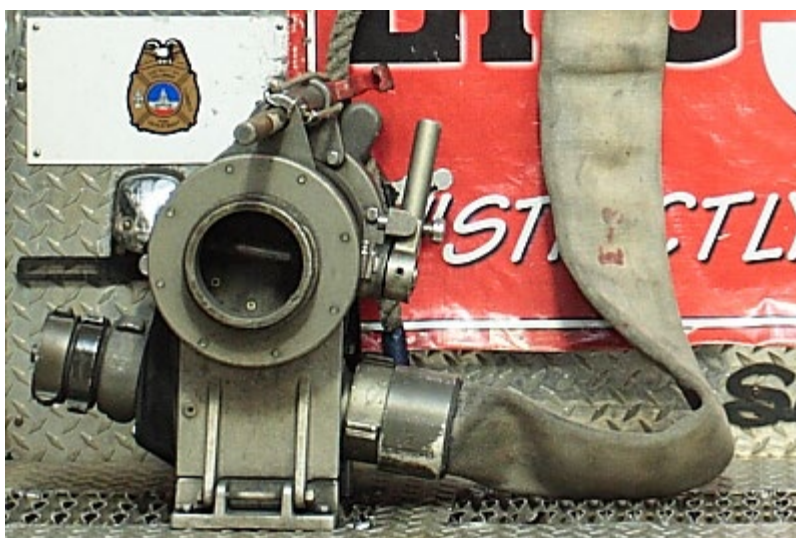
Mystery Engines and Hydrant Values (Updated)

11/01/10 56 W, 2 I - + 10 - 12

What are we looking at here? Hint, it's Engine 3. Hint again, it's not Raleigh, Durham, Cary, or Chapel Hill.



Nov. 1 update. Here's a closer picture of the hydrant valve that sparked (ha) the subsequent discussion.



DC E3

Jonah - 10/30/10 - 08:32

Second that, recognize the badge decal and lettering style of "E 3" vertically on the rear corner anywhere! Yes, I know I have too much time

on my hands....or maybe it's just that I like to check out other departments wagons....

Silver - 10/30/10 - 09:41

Sure is ... here's their Web site:

<http://www.3hose.com/>

Trevor - 10/30/10 - 12:50

Definitely DC engine 3

PGtruckie ([Email](#)) - 10/30/10 - 16:53

Does anyone locally have a website dedicated to their company/station like the DC E3 site?

Emily - 10/31/10 - 06:29

@Emily; nowadays, you're seeing more and more Facebook groups for companies versus websites. Sure, there are plenty of company sites out there. But now, it's a whole lot easier to create a Facebook group for your company, plus it's cheaper!!

<http://www.DurhamFire.net> is a good site for the Bull City. I've considered doing one for the RFD, but right now I just don't have the time.

Silver - 10/31/10 - 09:29

A future look into what the tail boards of Raleigh engines will resemble soon. Hydrant assist valves cometh. DC appears to be using the "Humat Valve." RFD is planning to use the TFT Oasis Valve — <http://www.tft.com/literature/library/fi..>

A.C. Rich - 10/31/10 - 10:00

Hope it comes with a good mounting bracket not something homemade. 3 man crew + 1000' 5" in road = sore back and headache.

Rob Mitchell - 10/31/10 - 10:57

Hahaha, that's weird as I was juuuusssstttttt thinking the same thing!

Silver - 10/31/10 - 10:58

Chief Rich, could you please explain the benefits of this valve when you get a second? Upon reviewing the link I don't understand how the benefits could outweigh the cost especially during a time of cutbacks. The way I look at the two examples with the first being the valve on the hydrant is the only way this scenario would be beneficial is if the first-due caught their own hydrant. Is this a future plan of attack for Raleigh? If not, why not just have the 2nd-due who's job is water supply to lay a line from the attack pumper to the hydrant (something I've always recommended) and boost pressure through the water supply engine? Even if the attack pumper was sitting next to a hydrant you would still have to hook up this valve to the hydrant and run dual lines to the water supply pumper to boost pressure. Why not just hook up the 50' LDH to the side of the attack pumper and roll it back to the water supply pumper and they could use their 50' LDH and hook to the hydrant thus boosting pressure. This would totally eliminate the need for a valve. The second example of in-line relay operations shows the valve somewhere between the hydrant and attack pumper. I assume the valve would need to be placed at the 1000' mark as recommended for boosting pressure on 5" LDH. Aren't we already supposed to do that with a pumper? Wouldn't that eliminate the need for the valve?

RescueRanger - 10/31/10 - 10:58

While those that know me know that I'm a "truck guy" at heart, I'll weigh in on the Engine Ops topic and I pretty much agree with RR. When these valves became a hot topic, I started a topic on firehouse.com to discuss them across the nation to see what everyone else does. The replies were interesting, and the replies I saw from the bigger city guys that chose to contribute were pretty much the same; "use another engine as the valve to boost if needed".

I realize our Fire Chief wants a water supply established when the first due arrives at a working fire, a water supply other than the booster tank. Since we are bare-bone staffing, I still think something such as this would work for us, it's a concept used other places and I've seen it done first hand.

- First due engine sees they have a working fire pulling into the block. This engine spots a hydrant, and then a member (I've seen the Driver do it, and I've seen a guy from the back do it) hops off the engine, wraps the hydrant and drops the bag. They get back on the rig and then pull down to the house on fire. Nobody is left at the hydrant to turn it in, and the line is left dry. When you train on it, this can be done very quickly.

- Second in engine stops at the hydrant (aka "picks up their line"), makes connections, and then is ready to boost if needed. If not, they don't

have to. This gets the second engine away from the fire building, the first engine has laid a line and is ready to receive water, and reduces the expense of having to purchase the valves.

- In the event that it appeared to be "nothing showing", but then a working fire is discovered, the second in engine "lays out", from the attack engine to a hydrant.

I fetched the discussion I created from firehouse.com, check it out. The methods of implementing the device have changed from when I posted the topic, but it's interesting to see what others have to say based on their usage. <http://forums.firehouse.com/forums/showt.>

Silver - 10/31/10 - 11:53

Forgot to add this too; using the concept I listed above, companies need to know their territory and where "water is good and water is bad". Sort of hard to do within three years time, before you're transferred, but what can ya' do...

Silver - 10/31/10 - 11:55

Silver is right. There are many other perspectives – such as the simple ability to see how much is burning when you turn onto the street.... It is also sometimes very difficult to lay out when the ladder is positioned properly = road closed. Heck, the first due laying in will block the ladder more than often. So, laying in vs. 2nd due really equals the same time consumed when size up and line deployment are considered. Good questions by RR and I and many others have asked the same question... It is agreed that reverse laying for bigger water is more cost effective overall, but to me the perspective is truly value based, especially if the initial water supply is already committed.

WHAT IT DOES – – – In essence, the hydrant assist valve allows us to do is overcome friction loss in 5" when higher flows are required from the initial lay and the hydrant is already committed (for example, the fire escalates rapidly). Hydraulically, friction loss will increase x4 for every x2 increase in GPM and it is very noticeable in 5" as flows increase in longer lays, such as supplying ladder trucks. Popular belief is that the hydrant assist valve will "make more water" when in fact all it does is basically place the hydrant beside the engine (via boosting). Indeed, a simple "working fire" does not need the higher flows, so we are all OK with the existing approach (2nd due laying the supply); however if the incident escalates, more water will be needed. The device is a good tool for its intended use, however it is the frequency of the use that is also debatable. RFD is probably going to venture into laying in "wet" via officer's discretion and that conjures up many discussions on size-up delays and initial attack strategy due to our tradition. It can be altered, but will take some time. In addition, in RFD we will (probably) see the valve connected to ALL hydrants – no matter what. There is MUCH debate as a simple reverse lay to the hydrant will accomplish the same outcome, but there will be delays or interruptions in the water flow/supply. I can see it used both ways. I'm open to change, but I prefer true testing before decisions are made. We have tested three of these devices at #8 and they all do what they are designed to do – overcome FL in the supply line. Procedural change and personnel adaptation is now the factor.

A.C. Rich - 10/31/10 - 12:37

Oh, BTW, I don't think we need the devices. If they are a MUST, then at minimum place them on the quint ladders for that occasion where they make their own water supply for the "big one," but keep them off the engines (a compromise). Water supply procedure and alarm assignment upgrades would close the other gaps. As one of Silver's FH forum posters stated "our valve is a Triple Combination, Class A pumper." I could not agree more.

A.C. Rich - 10/31/10 - 13:19

Thanks for your insight, Chief. After reading your perspective I feel these valves would have minimal benefit to the department and the cost for the valves could be much better spent on better nozzles (such as the ones attached to the highrise pack that never gets used) and larger diameter handlines.

RescueRanger - 10/31/10 - 14:04

To those who are not in favor of these valves, how many of you all have actually used them? Perhaps instead of being critical, we should embrace change and strive to change the "this is how we've always done it" mentality.

KP - 10/31/10 - 15:49

@KP – I would agree with your statement if all posts against the valve didn't have any merit to them. I don't see how using the valve would make me change my mind on it. I've learned the purpose of the valve and how it functions. I agree that there may be times when the valve would be beneficial. However, the posts against the valve contain an actual discussion and give both positives and negatives on it. In my opinion, the negatives outweigh the positives and therefore reassure me that the money could be better spent. Maybe you could provide some useful information about how these valves would be such a benefit instead of trying to start a flame war.

RescueRanger - 10/31/10 - 15:56

I've used them and performed flow tests on 3 different manufacturers (Humat, Akron, and TFT). They all work well, but you've got to read between the lines here. Are they really needed? Embracing change is much different than definition of need. Again, it all boils down to what the organization values.

A.C. Rich - 10/31/10 - 16:35

In planning and training for their deployment, what consideration has been given for when the first due engine arrives, lays the valve and LDH out, and then potentially blocks ingress for others, such as the ladder? I think that this lends credibility to placing them on the ladder companies.

Olson - 10/31/10 - 17:46

If all proceeds as I understand, the valve will be connected to hydrants anytime a water supply is established. The planning and training is in progress by the Engine Ops Committee and should be out early next year. Operationally, there should be significant changes except for officer discretion as to whether to lay in with the 1st due or to call for the 2nd due to supply. I agree, the ladders are a better fit as it's typically their operation that necessitates the larger water supply (but that to may be debated). To give KP due merit, it is indeed a change we can live with. Heck, I'm OK with the use and subsequent changes to procedures. Gonna just roll with it from here.

A.C. Rich - 10/31/10 - 18:23

I'm good with the changes as well, just was hoping the funds would be used for nozzles, like RR described above. We shouldn't be flowing 95 gpm's on our main attack lines (yes I know 125 gpm is a setting, but if you look city wide a majority are on 95 gpm). And, why would you limit the "hi-rise nozzles" to the worst possible fires we could face? If you'd put them on the inch and a half's, we'd get more hands on training with them as well as increase our gpm flow.

Silver - 10/31/10 - 20:29

I for one, am surprised to see that DCFD still uses 2 1/2" (or is it 3"?) for supply line. I know that there are several "big" departments that still use it like San Fran and FDNY... guess it is just a "we've always done it that way" type of thing. Can anyone shed any light on the lack of 4" or 5" for these big cities? I assume that the Humat valve you see on this DCFD rig is largely due to the friction loss in the smaller diameter supply line, but I know nothing of their water system or practices in DC.

I love the set-up on the back of this engine; minute man loads for the handlines! At my department we have gone with the "Cleveland" load for the last 100' or 150' (depends on whether it is a cross-lay or courtyard lay) and it works decently. The minute man and the Cleveland let you take more with you on your shoulder than the flat load that most departments seem to use around here, so I prefer both to the flat load. As with anything, the more you train with it, the more fluid your actions become.

I never have been a big fan of telling your officers that they HAVE to catch a hydrant... Where I work, most judgment calls are left to the first arriving unit officer to do what he or she is paid to do, and that is make an educated decision about how to proceed. There are several ways of doing everything, and as long as you reach your objective, I don't care how it was done as long as it was done efficiently! I do like the compromise that Silver brought forth about the first due catching the hydrant dry and laying in to start operations. I have always disagreed with the first due wasting time with securing a water source, delaying size-up and getting a handline deployed in an offensive situation. All of this depends largely on manpower; we run with 3 personnel on every apparatus. Another factor is how close your second due engine is... depends largely on your area.

What does everyone have for flow rates on their small attack lines? We run 75 psi fogs at 175gpm and a smoothbores at 165gpm; either way, there is a big difference in darkening down the fire versus the old 95gpm that I was used to!

Bob P. - 11/01/10 - 11:32

Funny how a blog about a "mystery engine" has turned into a somewhat discussion on operations. Excellent thoughts/points by everyone and good debate. Now my take...having used these HAV (Hydrant Assist Valve) things in the past, I didn't like them. Like Silver and others said, it's a lot of money to spend on top of a \$400k valve already on the scene. My experience with HAV is that they are more trouble than they are worth, but that's just my opinion. But I see the thought behind putting them on all the engine cos. in Raleigh and using them on all fires where a water supply is established, it's called repetitions. How many working fires in single family dwellings does Raleigh run a year versus "major" fires? If you get the "reps" in on the small fires, you will be more proficient at the "major" fires when the HAV will truly be needed, the same as training.

Now... on the other issues (who handles water supply and handlines, etc) I don't work for Raleigh, so I have no dog in that fight. But my thoughts on these issues are: I LIKE the idea of the first arriving Engine co. laying a "dry" line in the manner Silver described and letting the second arriving engine co. "pick it up". Having trained and operated both ways, I favor the first arriving engine "laying out", you will be surprised how much easier it actually makes the whole scene go. IF done correctly and in my experience, it does not block out the ladder truck, but the KEY here is done correctly! Also, I am not a fan of 1 1/2" hose lines with 95 gpm nozzles. In my opinion, that's just asking for trouble

with all of the things burning in houses these days that release alot more BTU's than in years past. Again, just my thoughts.

@ Bob- to try to answer your questions on the no LDH on DCFD engines...it is pretty much due to their fireground operations plan. In DC there is a fire hydrant on every corner in the District (including alleys) so you are only looking at an average of 150'-200' of supply line and their procedure is to layout EVERYTIME a structure fire is dispatched, not just if they see smoke. In fact, 2 engine cos. "lay out" on all dispatched structure fires, first arriving "lays out" to the Alpha side and I believe it's still the third arriving that "lays out" down the Charlie side of the structure (usually an alley) Do that several times a day. But, not to sound like a smartass, it works for them, just like having 300' and 400' pre connects work them, but you'd never see that around here. I too, like the minuteman load for pre connects, but unfortunately I have been unable to convince the administration at my department to go to them, or hell even try it out for that matter. I also like the "Cleveland" load that you guys run, saw it in action at the live burn and was impressed with it. I like shouldering hose as opposed to dragging it across the ground. Never have been a fan of flat loads and never will be a fan of them.

All good discussions and very interesting information/opinions. It reminds of a conversation I had with some folks the other day about the differences between how "they" fight fire and the way "we" fight fire. "They" being the metro DC and other "northern" cities/areas and "we" being the Raleigh/Wake Co area. Having come from that area and fighting fire in that "style" prior to relocating here, I simply say it is different, not better or worse, just different. In Raleigh and surrounding areas, there are alot of detached single family dwellings, while in those areas, there are alot of highrises, apartment complexes, townhomes, and etc. BUT....Look out Raleigh and surrounding areas, that type of construction is coming here. Look how the Downtown skyline has changed over the last couple of years, so it may be time for change in tactics, who knows? Only time will tell.

Stay safe out there folks.

Wayne - 11/01/10 - 13:21

Closer view of hydrant value added.

Legeros - 11/01/10 - 15:31

Enjoying the discussion on this topic, brothers.

I don't have any experience with using hydrant valves aside from familiarization, so if you guys at RFD choose to start using them I'm curious to see what y'all think in the long run. I've heard folks proclaim the benefits of always laying in or always laying out; I see benefits in each depending on the situation, and I have issues with using the word "always" (and "never") in fireground management, so I say the first-due should make the right decision for the situation as they know it.

Rather, what I wanted to comment on was the hoseload stuff. Minuteman and Cleveland loads are impressive indeed. But even the old flat load can be carried on the shoulder and deployed properly by a single firefighter in lengths of 200' or less. In order for that to work, the load should get flipped 180 degrees as it is being pulled out of the bed/tray. That puts the nozzle end on the bottom, and thus the hose pays out from the top. Making the flip is not all that difficult once practiced, and thus the hose goes where we want it to go without all that dragging and kinking and such.

When the length of the hoselay is 250' or more, the flat load is no longer manageable by a single FF for shoulder carry and deployment, so other loads such as the minuteman are preferred. But from my limited knowledge of how your engines are setup in that area, preconnects over 200' are rare. I don't know if y'all teach the flip, but if not maybe it's something you'd wanna consider...or maybe it just needs to be reinforced.

Just an outsider's two cents, of course.

attic.rat - 11/01/10 - 21:02

@ Attic.rat- My question about flipping the flat load over as you described...what's the point? You would be better off with the minuteman or "Cleveland" load. That is the point behind running with these two loads on your pre-connects versus running a flat load. Several people at my department try to run the hose like that and tell us all that that is the way to run it, again I say...if you want to shoulder the hose, DON'T USE A FLAT LOAD, use a minuteman or something like the "Cleveland" load. Just my opinion on it though...

Wayne - 11/02/10 - 07:44

what is the wooden wedge for placed in the hose bed.

unknown - 11/02/10 - 11:53

I was told by some PG firemen that the wedges are for chocking doors. when they come to grad the minute man lay they also grab a wedge or

two to take with them.

DH CAPT - 11/02/10 - 11:57

Wayne:

It all comes down to what firefighters and departments feel most comfortable with, and I reckon tradition is one of the biggest factors in that. My point was only to say that the flat load can be shouldered if proper technique is used.

Some folks say that they don't like the minuteman because the nozzles they use are large, and unless there's some allowance made for nozzle placement (putting it in a clamp outside of the hosebed, or flipping it back on top of the load) then they don't care for the way it offsets the height of the load — which could cause a deployment issue in some preconnect trays. Also, if the minuteman is used on a crosslay setup, it becomes a "directional" hose load, meaning that it's meant to deploy off the apparatus on the side where the nozzle is. It can still be used from the other side of the apparatus, but either the nozzle comes off the truck behind the nozzleman OR the nozzleman reverses the direction of his deployment until he has removed the load from the apparatus. [The latter of those is the approach I favor: face the direction that the nozzle's facing as you shoulder the load.]

As for the Cleveland load, it is somewhat bulky due to the nature in which it's loaded. Some departments might have problems with getting it in and out of their hosebeds, crosslays or trays if there's not much room to work — problems that departments sometimes face with another bulky load, the triple layer. My opinion is that the Cleveland is best suited for high-rise packs; I don't care for it in preconnect form. Watch one of the videos put out by the guys at Bellingham (WA) in their basic firemanship series and you'll see that any shoulder load can be dropped in a method that gives you that nifty coil — again, it's all about technique.

Every load has advantages and disadvantages; it's up to the user and the department to determine what is most important for their situation and what compromises or adjustments they must accept in order for their choice of hoseloads to work out properly.

attic.rat - 11/02/10 - 19:58

My question is, where on the tailboard of our newer Pierces is this contraption going to mount?

Good conversation though. While I don't really see the need for the HAV (I like using a pumper instead), I look forward to learning more about them. I will also say that IF we have options as a first due officer, I look forward to having another tool in the toolbox.

firedriver - 11/02/10 - 20:25

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