

Rural Fire Command by Larry Davis

Installment 27 — February 2005

Fluid Motion, Part 5

More tips: saving time & manpower

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REFI RURAL FIREFIGHTING INSTITUTE

Training America's Rural Fire & Emergency Responders

A Message the Author, Larry Davis

In October 2002, I started writing the monthly "Rural Fire Command" column for *FireRescue Magazine*. Since that time, the RFC column has been carried in just about every subsequent issue of the magazine.

As time has passed, several readers have contacted me about obtaining back issues of the column. Some expressed an interest in acquiring the articles in Powerpoint format for use in training programs.

This led to, my adaptation of the RFC columns to the PowerPoint format. These PowerPoint programs are being made available through the combined efforts of *FireRescue Magazine* and the Rural Firefighting Institute.

People and Time Savers

Compared to taking a hydrant and laying a supply line, drafting operations are more demanding in terms of people and time. When fire situations require drafting operations, they are generally cases in which both manpower and time are critical. When plenty of people are at the draft site, hooking up suction may not be so bad. However, in most cases it's best to do anything that can be done to simplify the operation. Some ideas that other departments have used follow.



Figure 1. Connecting suction hose can be time consuming and labor intensive. Two people can work against each other very easily — the secret is: for the person holding the male threaded suction to look away from the connection. By doing this, firefighter 1 won't be moving the male end one way and firefighter 2 moving the female end another way.

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Time and People Savers

- Nikiski Suction Boom & Sling
- Alternative Suction Connections
- Longer Lengths of Suction Hose
- 8" Suction
- Put Adapters Where You Need Them

Nikiski Suction Boom & Sling

In the mid1980s, the Nikiski (Alaska) Fire Department had two 2000-gpm pumpers built. Each was equipped with a boom and sling to allow the engineer to connect the pumper to a dry hydrant without needing additional personnel. Figure 2 shows the boom and sling in use.



Figure 2. This Nikiski (AK) engineer connected the 6" suction to the dry hydrant and had water flowing in less than 2 minutes from the time the engine stopped. Swinging the boom and sling outward holds the suction hose in position so it can be easily connected with one person.

Alternative Suction Connections

Historically we have used traditional 4-1/2", 5", and 6" suction hose with threaded connections. While the NST threads are course, they aren't all that easy to connect — as can be seen in Figure 1.

Once the connection is made and hand tightened — as it is supposed to be, someone generally gets a rubber mallet or bowling pin and beats on the suction handles to tighten the connection. Of course, this generally helps wreck the suction gasket in the female end.

There are two alternative connections that work great with suction hose. These are Storz and Camlok connections. Storz connections on suction hose can greatly reduce the time and effort required to connect suction. However, an ever better option is the Camlok type connection.



Figure 3. The Washington (RI) Fire Department replaced the conventional 6" suction on this engine with Kochek PVC suction equipped with Storz connections. In addition, they replaced two 10' lengths with a 28' length which, because of its flexibility, can be carried as shown.



Figure 4. The Rockville (MD) uses Kochek Long-Handle Storz connections on its suction hose. Because Storz wrenches are required to fully tighten Storz suction connections, Kochek invented Storz couplings with folding long handles. The handles eliminate the need for wrenches and once tightened, fold out of the way.



Figure 5. The Essex (CT) Fire Department utilizes Kochek 6" Camlok connections on its suction hose. The male connection has a groove around it while the female end has two ears that lock into the male groove to make the connection.



Figure 6. Two firefighters connect two lengths of suction equipped with Camlok fittings to supply a Firovac vacuum tanker. The male end is slipped into the female. The two levers are then snapped tight to make the connection.



Figure 7. The driver of the Firovac tanker connects the Camlok suction hose to an intake to the tanker.By rotating the hose so the levers are in the vertical position, the connection can be made by first securing the bottom lever and then the top — no wrenches, mallets, or bowling pins needed.



Figure 8. A 3" lo-level strainer equipped with a male Camlok connection.

Longer Lengths of Suction Hose

Another thing that can be done to help make suction connections easy is to use longer length of suctions. Figure 9 shows a situation in which 60 feet of suction had to be laid out to reach a pond. While the lift was minimal, no the less, the six 10' lengths had to be used to reach the pond. With the advent of PVC suction, some fire departments have opted for longer lengths of suction hose to simplify operations.



Figure 9. To set up a tanker fill site in Amenia (NY) we had to use 60 feet of suction hose to reach a pond.

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Figure 10. If the apparatus is long enough, 15- and 20-ft lengths of suction hose are practical.



Figure 11. The Glastonbury (CT) Fire Department replaced three 10-ft ,lengths of suction with one 38-ft length of Kochek 5" suction equipped with long-handle Storz connections.

8" Suction

The Refinery Terminal Fire Company of Corpus Christi, Texas utilizes Hale 3000-gpm rear-mounted pumps on their industrial foam pumpers. These pumpers are equipped with three 6" intakes. The original suction hose used was 8" hose with 6" threaded connections. RTFC's Foam-6 is equipped with an 8" center intake and two 6" intakes. Kochek made 8" suction with 8" NST threaded connections for use on the center intake. Figure 12 shows the pump intakes and suction hose used.



Figure 12. Kochek 8" threaded suction feeds the center 8" intake while 8" suction with Kochek 6" threaded connections supplies the left 6" intake.



Figure 13. Rural departments could use 8" suction with 6" threaded, Storz, or Cam-Lok connections to help increase the delivery to pumpers..

Put Adapters Where You Will Need Them

The Brookside Engine Company of Mendham Twp (NJ) wanted to ensure they could connect to intake lines no matter where they went. And, rather than hiding adapters in a compartment, decided to put them where they would be needed — on the pump intake.



Figure 14. The Brookside Engine Co. of Mendham Twp. (NJ) put adapters where they will be needed. From left to right: 6" NST male suction intake, 6" NST female to 5" Storz, 5" Storz to 4" Storz, 4" Storz to 2-1/2" threaded female, and 2-1/2" threaded plug.

More to Follow

These photos show some of the tips and tricks that have been used by other departments to help reduce time and people requirements while increasing delivery rates from drafting operations.

For Questions or comments on this or any of the Rural Fire Command articles, contact the author at Idavis@RFI411.org

About the Author



Larry Davis is a full member of the Society of Fire Protection Engineers, a Certified Fire Protection Specialist, and a Certified Fire Service Instructor II with more than 30 years experience as a fire service instructor. He is Vice President of GBW Associates, and Chairman of the Rural Firefighting Institute.

Davis has conducted more than 400 Rural Firefighting Tactics and Rural Water Supply Operations seminars throughout the United States and Canada. In addition, he has written numerous fire service texts, including *Rural Firefighting Operations*, books I, II, and III. Most recently, Davis co-wrote the *Rural Firefighting Handbook* and *Foam Firefighting Operations*, book I with Dominic Colletti. *Rural Fire Command* — *February 2005* — *by Larry Davis*



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To obtain any or all of the other PowerPoint versions of the Rural Fire Command column, contact Larry Davis at:

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Visit the RFI website at <u>www.rfi411.org</u> to learn of the other training resources available by Larry Davis.

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