City of Greencastle Fire Department	Training Division

Instruction page:

April 2013

Fire Suppression: 1410 Hose Lead-Outs	Each shift shall review materials below and schedule practical's with Lt. John Shafer
EMS: Audit & Review	Schedule with Lt. Poole
Safety/Bluecard: YouTube Simulation	Each member shall watch the following video acting as the IC that has already assumed command from Engine 1 that is operating onscene. While watching the video determine what resources you will need and give according to C.A.N http://youtu.be/lfKgQwMqi0s
Specialized: Rescue Tools	Each shift shall make sure each member is proficient at starting and running all rescue tools on R-1,T-1 and Eng. 1
Misc.: Air Bag Ops.	If you have not already done this as part of your stabilization training then each shift shall set up and lift a vehicle with Air Bags off of R-1
Hazmat: Module 2	Each member is assigned on the Target Safety account
Officer: IMT Concepts	Conducted by Chief Newgent at monthly officers meeting

Engine Company Operations

NFPA 1001

Hose Lead Outs

Leading Out

We are going to simulate a fire attack at an occupied 2-story building. This building is not sprinklered or standpiped. Your challenge will be to determine the best method of getting hoselines to various objective points described below. The advancement of a hoseline into a structure such as this apartment building will take coordination and require the officer to make several decisions regarding the layout. One of the first questions is to determine how much hose is necessary. To do this, three factors have to be calculated (estimated):

1. How much hose to get from the engine to the door
2. How much hose to get from the door to the fire location
3. How much hose to get to potential exposure areas

Additional lines will also be required for other objectives and they will also need to be placed into service in the correct length and size. Methods of advancement will vary according to manpower and hose bed finish. Most of these operations will require line use other than preconnects and apparatus operators must be able to supply the correct pressures.

Hose Lead-Outs

Line Selection

- What choices for attack do you have on your engine for this scenario?
- How much hose does each of those choices give you? What type of nozzle would you prefer for this operation, why?
- Where will your preconnect line get you based on the information presented? Will this allow you to meet your objectives?
- What about the back-up line?
- Where will it come from and go to?

Other Factors and Considerations

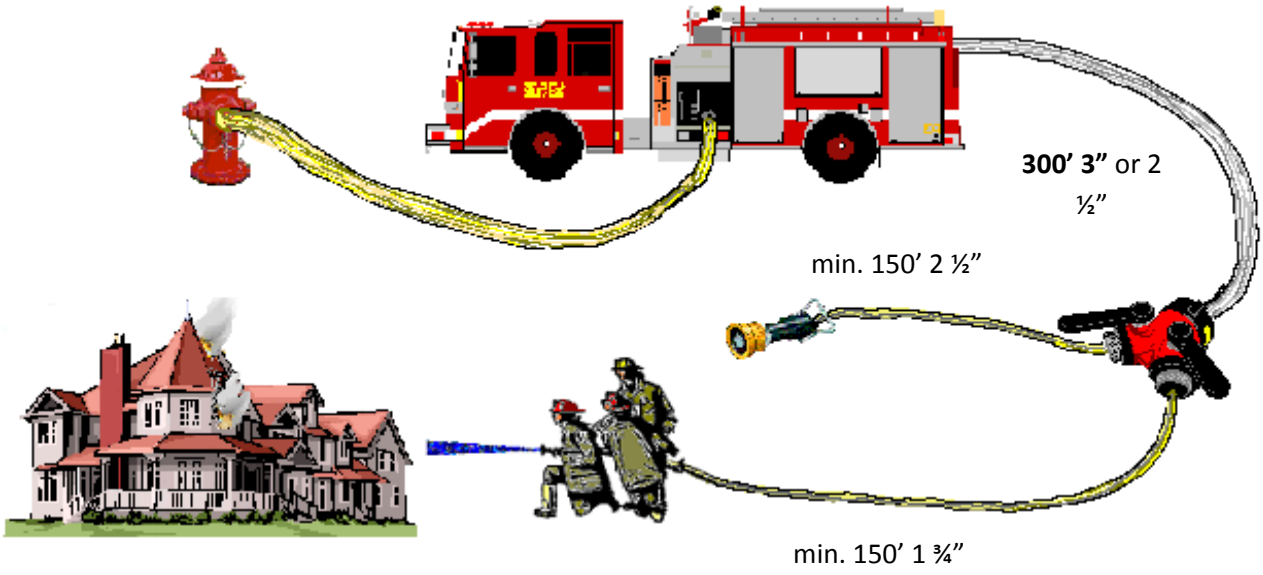
- Hydrant is present
- No standpipes are present for this drill
- Fire appears to be on 2nd floor
- What alternatives are available to get lines to the upper floors other than a stairway advance?
- How can lines be lengthened once they are deployed and in use?

Hose Lead Out Drill Instructions

- All shifts shall conduct forward single engine lead out. (skill sheet attached)
- All shifts shall conduct reverse single engine lead out. (skill sheet attached)
- Both forward & reverse lead out drills shall be conducted at training site.
- Crews will need to advance hose into burn container up the stairs to the small burn room.
- Two bales of straw can be lit on fire in the small burn room with door of burn room left open prior to drill starting. To give smoke conditions on the hose advance.
- NO wood or other materials than the bales of straw shall be permitted on these drills.
- **All members shall wear full PPE with SCBA while in smoke filled container.**

Greencastle Fire Department

Standard on Training for Initial Fire Attack
NFPA 1410 Evolutions
Offensive Single Engine: Hand line—Reverse Lead Out



Objective: Using a 2 ½" gated wye appliance, place an initial attack line (1 ¾") of minimum 150' and a back-up line (2 ½") of minimum 150' in-service, using units and staffing of the average number of personnel that ordinarily respond.

EVOLUTION DESCRIPTION:

A fire attack scenario utilizing a reverse lead out with a wye appliance and two hose lines of a minimum of 150' each capable of a total flow of 300gpm within 4 minutes from the start of the evolution. Engine shall be permitted to charge the initial attack line with tank water, hydrant supply shall be established **before** back-up line is in place. A 300' supply line to the wye appliance of minimum 2 ½" shall be used. Hydrant suction hose shall be used between engine and the hydrant.

EVALUATION CRITERIA:

All lines shall be completely deployed from hose beds.

All nozzles shall be flowing minimal acceptable pressures.

Time begins at signal from officer until water is flowing at required pressure from both lines and supply line has been established.

RECOMMENDED MAXIMUM TIME: 4 MINUTES

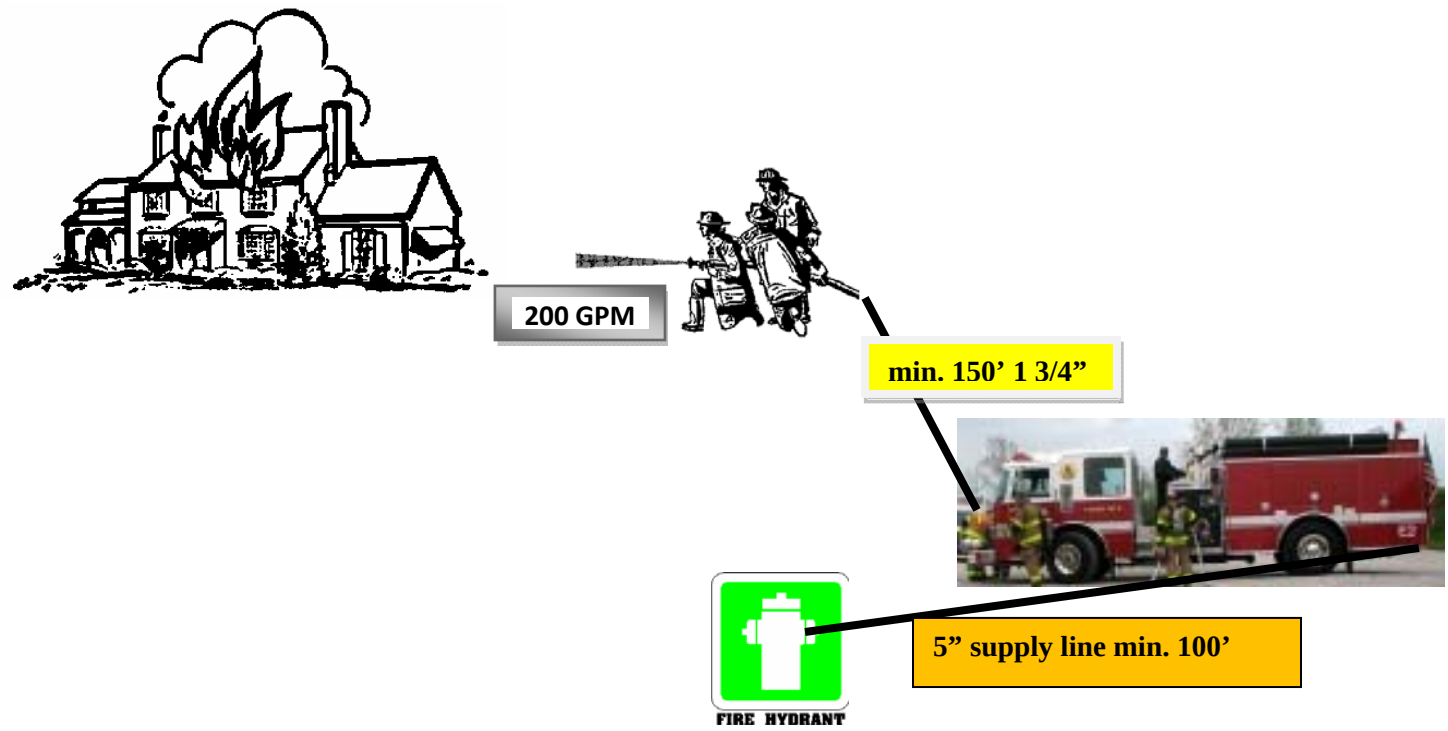
Reference: NFPA 1410, 2000 Edition; Training for Initial Emergency Scene Operations

Greencastle Fire Department

Standard on Training for Initial Fire Attack

NFPA 1410 Evolutions

Offensive Single Engine: Hand line—Forward Lead Out



Objective: To place a initial attack line (1 3/4) of min. 150’ using units and staffing of the average number of personnel that ordinarily respond.
Water supply shall be established with min.100’ of 5” supply hose.

EVOLUTION DESCRIPTION:
A forward lay using one engine and one supply line. Deploy min.100’of 5” hose from hydrant to fire scene. Crew shall deploy 1 hose lines (1 attack) capable of flowing a minimum of 200 GPM within 3 minutes from start of evolution. Engine shall be permitted to charge the initial attack line with tank water, hydrant supply shall be established **before** back-up line is in place.

EVALUATION CRITERIA:

□□ All lines shall be completely deployed from hose beds.
□□ All nozzles shall be flowing minimal acceptable pressures. Solid tips; 50psi Combo tips; 100 psi
□□ Time begins at signal from officer until water is flowing at required pressure from both lines and supply line has been established.

RECOMMENDED MAXIMUM TIME: 3 MINUTES

Reference: NFPA 1410, 2000 Edition; Training for Initial Emergency Scene Operations

TRAINING WITH RESCUE AIRBAGS AND CRIBBING

This evolution is something we should all be familiar with and the best way to prepare for a vehicle trapped under a vehicle is to simulate it and use your tools, over and over again until you can do it in your sleep... you just might have too.

In some situations, maybe it's ok not to use wood cribbing when there are minimal lift distances involved. Again, this is not always clear and as can be seen above, is common practice among fire departments to employ when using airbags.

There are lots of lists of cribbing and rescue airbags can do if the vehicle is upside down, and absolute justification for providing both victim and firefighter safety on scene.

Is bigger necessarily better?

USING RESCUE AIRBAGS AND CRIBBING EXAMPLE

Speaking from experience and being old enough to have worked with neighboring volunteer fire departments when they existed in my community, I had the opportunity to

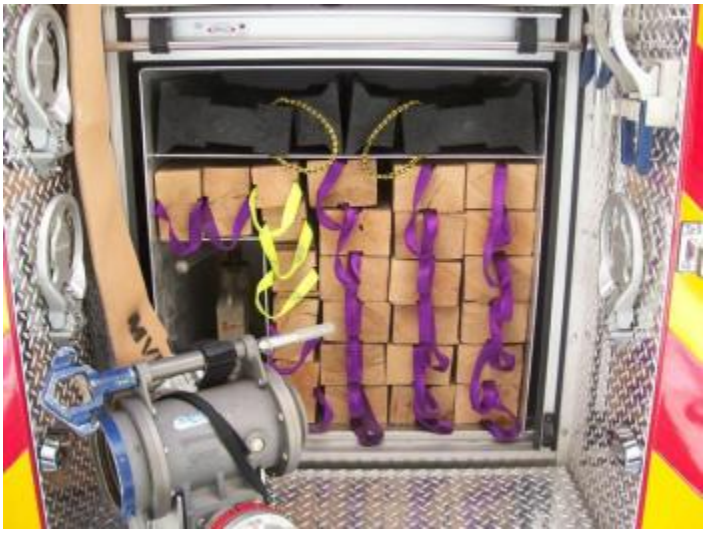
respond to a vehicle, driven by an elderly gentleman who ran over an elderly woman. Raising the vehicle using Jaws in conjunction with wood cribbing was not working for fears of failure and collapse back onto the victim. My engine was called in to assist and the guys on the call were my friends. The last thing I wanted to do was have my county engine show up the volunteers, creating hostility and animosity.

As we responded to the incident, I instructed my crew that our goal was to get on scene, use air bags in conjunction with our wood cribbing, using a coordinated set of commands and one person, my engineer, operating the air control for the filling and deflating or our Vetter Rescue airbags.

What I was not prepared for was the ladies right leg wrapped four times around the drive shaft, with multiple compound fractures, a damn good set of lungs and vocal chords and about 300 tourists watching and video taping what we were doing. Lifting the vehicle high enough for me to get underneath the vehicle safely (and with confidence) required systematic raising of the vehicle using a combination of air bags and wood cribbing. Once the vehicle was raised, a clear work area was made to enable gentle removal of the leg around the driveshaft and transfer of the patient to the spine board, and subsequent transportation to the local hospital where she was treated for both internal injuries and multiple fractures.

The key point of our response was too quickly assemble our equipment and leave the scene sans any emotions, grandstanding or complements. Get in, get out... Everyone was happy that day and my crew worked together as a team because we had a plan and used our equipment the way it was designed.

CRIBBING ENGINE COMPANY STORAGE AND QUANTITIES



There are lots of lists of cribbing and rescue airbags for you to choose from.

- How much is enough?
- What would you share with others to be the minimum inventory for do-it-yourself wood cribbing?

- What would you consider a minimum engine company inventory keeping in mind that we are not talking about providing a lumber yard for USAR related emergency responses, just plain old simple cribbing?

How many of the following would you recommend for an engine company to carry?

1. 2 x 4
2. 2 x 4 shims
3. 4 x 4
4. 4 x 4 wedges
5. 4 x 6
6. step chocks

Rescue Evolution Review and Refresher Training

Fire Chief Ben Waller's Rule of Opposites

"If what you're doing isn't working, do the opposite."

The Rule of Opposites has some corollaries;

1) If you can't pull, push. We used to pull a lot of steering columns with chains and either spreaders and come-alongs. Then crumple zones came along, and we figured out that was often a better technique to push the dashboard with rams.

2) If you can't lift, dig. Heavy lifting is not always possible, especially when the object is very unstable. You may be able to dig the victim out without risking the unstable object toppling, especially if heavy lift capability is not quickly available.

3) If you can't lower, raise. If you are working a vertical rescue on a 500-foot elevation and you only have 300 feet of rope, you won't be able to lower the patient to the ground. It takes more work, but you can simply complete the pickoff and raise the patient to the

top, then use the trail, road, elevator, or helicopter to complete the patient evacution.

4) If you can't cut, dissasemble. I realize that this is not, strictly speaking, an opposite, but it's the rule of thumb for heavy machinery extrication. Industrial and farm machinery is made to last, and it is often tougher than our hydraulic cutters, saws, and even cutting torches. A simple ratchet set and a can of WD-40 can make an otherwise difficult extrication into a literal "nuts and bolts" exercise.

5) If one simple machine won't work, try another simple machine.
If an lever isn't working, try an inclined plane. If you are trying to lift a heavy object and can't get enough leverage, try driving cribbing wedges under the edges of the objects. It's amazing what a few wedges can lift.

6) When terminating, reverse the rescue. Stabilizing rescue and extrication scenes can be very complicated. If you're going to remove shoring from a trench or cribbing from a wrecked vehicle, it's usually a good idea to take the shoring/cribbing down in the reverse order that you built it. If you shore trench panels in the "middle-top-bottom" sequence, then the shores should be removed in the reverse order; "bottom, top, middle". We need to be just as careful about using the Rule of Opposites for rescue termination as we do when extricating the patient. Corollary #6 is also used when bedding aerial ladders. We unbed the ladder after stabilizing the truck in order to rescue or flow the ladder pipe, so we should bed the ladder prior to retracting the stabilizers. Ditto for lateral stabilization. The IFSTA aerial operations manual calls for stabilizing the uphill side first, then jacking the downhill side so that the truck is within 5 degrees or so of level. This keeps the uphill side from forcing the low side down and risking tipping the truck or overextending a stabilizer. When retracting the stabilizers, we should store the downhill side first in order to follow the Rule of Opposites.

The most important corollary is **7) If something isn't safe, make it safe.** We deal with inherently dangerous situations every day. We can't control how unsafe the original incident is, but we can make it as safe as possible by wearing appropriate PPE, completing good size-up, developing and following a sensible Incident Action Plan, using Safety Officers, establishing collapse zones, demanding 100% personnel accountability, stamping out freelancing, wearing our seat belts, and staying out of Born Losers.

I'm sure that there are more of these out there. I'd be interested in hearing your ideas. Oh, and now I'll follow Corollary **8) When you want to learn, don't talk.**

Corollary 9) Reverse the entrapment mechanism.
An example is the dash roll technique in frontal vehicle collisions. In most cases, the entrapment mechanism for the driver and front-seat passengers is that the dashboard and steering wheel/column get forced *down and in* on the patients. In this case, the Rule of Opposites calls for using our tools to move the dashboard *up and out* - the opposite of the entrapment mechanism. The same goes for structural components

collapsed onto a patient - we use air bags, cribbing and pry bars, or bolting and a crane to reverse the mechanism.

Thanks to Fire Chief Ben Waller, Hilton Head Fire Department for this information originally posted here