

Firehouse.com WEEKLY DRILL

DRILL # 33: DRAFTING

Introduction

From time to time, fire departments respond to incidents that require them to improvise operations. Drafting is one of those improvised operations that we don't really train on as much as we probably should. Responding to an incident that requires a drafting operation is not the time to get out the owner's manual on how to draft.

If your department has any designated drafting sites, now is the time to review their whereabouts. If at all possible, each site should be visited with the firefighters to give them an opportunity to see the site and ask questions about it. If you currently do not have any draft sites, but are thinking of establishing some, there are a few things you should know.

- Any drafting site should have enough water to meet the rated capability of the pumper utilizing it
- It is important that the water be clean; stay away from salt water
- Swimming pools are excellent sources; however the water is limited to the size of the pool
- The site has to have room enough to accommodate and support the apparatus being used

Once the site has been determined and the apparatus has been placed, we can set up the operation.

- Remove the hard suction hose from the apparatus
- Make sure hose gaskets are in good shape and free of debris
- Place the strainer on the hard suction hose (if using a barrel strainer, remember to attach a piece of rope to hold it up so it doesn't pull in dirt and debris)
- Couple hose sections together and tighten with a rubber mallet
- Assure all valves and drains are closed tightly
- Attach discharge lines to the pump

Priming the Pump

Priming the pump is the next step. The engine RPMs need to be increased to the manufacturer's recommendations. A general rule of thumb is to increase RPM to 1,000. Activate the priming pump and keep it operating until the discharge pressure gage indicates a



pressure increase of between 50-100 psi. The priming pump should accomplish this procedure within about 30 seconds; any longer than 30 seconds and the process should be stopped. Re-examine everything and check all couplings, outlets and intakes for tightness. One small air leak will prevent the pump from achieving prime. Once all checks have been done, begin the process over again. Once obtaining this 50-100 psi, discontinue operating the primer pump.

Once the discharge pressure reaches 100 psi, begin opening the discharge outlet slowly, while at the same time increasing the engine pressure. A steady stream of discharge water should be seen coming from the nozzle. Bring the engine pressure up to the desired pressure to sustain the operation. Additional discharge lines can be operated, as long as the pump has not reached its capacity and they are opened slowly. During sustained operations, it is important that the strainer be monitored for debris that could clog the operations.

When shutting down the operation, we should decrease the engine pressure, take the pump out of gear, drain the pump and remove all hoses. After any drafting operation it is important to back flush the pump.

Remember that lift is based on atmospheric pressure, which is 14.7 psi. For this reason we cannot draft water that is 34 feet below the pump. In reality, the maximum lift we will be able to achieve will be about 25 feet.

—Prepared by Russell Merrick