

What Are Your Weak Links?

BY CRAIG H. SHELLEY

AN OLD ADAGE STATES, “A chain is only as strong as its weakest link.” At a marine fire-fighting symposium in which I participated, this adage came true. The drill being conducted involved placing portable pumps onboard a vessel to supply water to a simulated fire on a ship offshore. When participants placed both pumps onboard the vessel, they realized that one of the pumps had a dead battery, preventing it from starting—weak link number one. No problem, they thought, we’ll jump-start it using the battery of the second pump. As they prepared to jump-start the battery, they realized there were no jumper cables—weak link number two. They then noticed that the pumps were too

tery got during the previous tour? It is not good to have a radio cease to operate in the middle of a major operation.

How many of you carry a spare thermal imaging camera battery with you when you enter a burning structure? Have you practiced changing the battery in a dark, hot, and smoky atmosphere?

Portable saw blades and fuel. When your team operates a portable saw for ventilation, do you have on hand additional saw blades and fuel at the point of operation? During a critical ventilation assignment, what will happen if the saw blade becomes ineffective? Can you replace it on-scene? You may have the blades, but do you have the appropriate wrenches? If you run out of fuel, is the appropriate fuel

the cylinder so that we could install a full cylinder rapidly. At times, mission success depended on rapidly returning to the operations at hand. Today, you can change cylinders without wrenches, but there are cases where the coupling is overly tightened and may require a wrench or channel locks to budge it. Do you carry such a tool in your pocket?

What if mission success depended on a rapid SCBA bottle change but no full cylinders were available? Does your unit carry enough spare cylinders? Do you check them at the beginning of each shift to ensure they are full?

Webbing and rope. Before it was the norm, I always carried a 25-foot piece of nylon rope in my pocket for a variety of

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far apart, preventing the use of jumper cables anyway—weak link number three. I always say, “We can have a \$1 million piece of equipment, but unless it works, we have a \$1 million hat rack.”

WEAK LINKS

After the symposium, I began thinking, “What weak links do other departments have?” Here are some weak links that could lead to mission failure.

Batteries. As a young firefighter in a heavy rescue, I was taught early that keeping spare batteries with the equipment is invaluable. Our unit carried an array of meters, all using different battery sizes and configurations. We didn’t keep the batteries installed but rather taped them together in the proper configuration for rapid installation. We also kept spare sets with the meter.

We carried spare portable radio batteries on the vehicle as well. At the beginning of each tour, we put a fresh battery in our radios and charged the one we removed. How did we know how much use the bat-

mixture readily available to quickly refill?

Standpipe kits. Look inside your standpipe kit. Do you carry a spare hand wheel for the gate valve in case the wheel is missing at the floor of operation? If you carry a spare wheel but find the valve stem stripped, do you have at your disposal a pipe wrench to open the valve? What about a spare nozzle?

In a major fire department, a firefighter was trapped in a large commercial fire. The engine company immediately hooked up to the standpipe system to begin an aggressive attack but found that the nozzle in the standpipe kit was defective. How many departments regularly check the standpipe kit for the proper equipment and then ensure that it works? Simply greasing the pipe wrench will ensure it will operate smoothly when needed.

Self-contained breathing apparatus (SCBA). In the old days, when we needed a wrench to change cylinders on our SCBA, each of us carried an appropriate wrench to quickly remove

uses. Many times I was assigned to the roof position and had to ventilate top-floor windows. If my tool did not reach, I could tie the rope to the tool and use it to extend the tool’s reach to effect ventilation of the windows below. A bunker gear pocket devoid of this short piece of rope could become the weak link during an operation. Do you carry a piece of webbing for use in rescue or to secure an object? This webbing may mean the difference between removing a victim to safety and having to wait for assistance.

Foam operations. Most of our apparatus carry foam-proportioning equipment; the foam-proportioning eductor is ready to be placed inline, and the five-gallon pails of foam concentrate are standing by. Then we find that the caps on the concentrate pails were tightened by a 500-pound gorilla. Do you keep a wrench readily available with the concentrate to open the caps? Do you carry a set of channel lock pliers to open the caps?

Many departments have large-scale refineries or bulk flammable liquid stor-

age facilities in their response areas. Preincident response plans have identified where you can obtain bulk supplies of foam concentrate. You may also have identified delivery mechanisms. Great! Now, when the concentrate is delivered, do you know how you will open the many containers (drums, totes, etc.) and deliver the concentrate to the point where you will inject it into the water stream? Have you identified and practiced the techniques required to achieve the concentrate delivery? At any point in the operation, a weak link may appear, jeopardizing mission efficiency and success.

Hydrant operations. When I was on a ladder company, I was amazed by the speed at which the engine company could stretch and place a hoseline in operation. I watched the engine company chauffeur (pump operator) check the hydrant wrench to make sure it was operable, greasing the adjustment threads when necessary. He then checked to make sure he had a working pipe wrench in the same compartment or sometimes under the driver's seat. He

then checked the spare 2½- and 4½-inch hydrant caps. What attention to detail! I later learned that many times the hydrant spindle nuts were worn down to the point that a standard hydrant wrench could not be used. By having the pipe wrench available and maintaining it, he lost no time in opening the hydrant.

If a hydrant cap was missing, a quick remedy was to place one of the caps already available right on the hydrant. Rubber plugs were also available to close an open outlet if the threads were destroyed. They may sound like simple fixes, but if they are not available, the weak links could affect the speed and efficiency of operations.

Check for weak links at the beginning of each shift. If you take the time to look at your operations and think through all the possible weak links, you can prepare for any eventuality. Think of everything. Don't assume everything will come together when necessary. Be proactive! In many cases, the smallest item can hinder a successful operation. What are your weak links? ●

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