



Clean and Easy

One of the easiest ways to protect firefighters is to ensure the proper care of their gear — but not every department does. **BY BILL BROOKS**

Firefighters put their lives on the line daily to protect the safety of their communities, yet their own safety can be compromised due to improper cleaning of their gear. The National Fire Protection Association has enacted regulations to ensure the proper cleaning and decontamination of turnout gear, but not all

fire departments have adopted the best practices associated with these rules.

Choosing to clean gear on-site does not need to be a difficult or time-consuming process, and with the help of an experienced distributor, fire departments can ensure the safety of their workers.

Battling a fire is dangerous, but so

are the carcinogens left on firefighters' gear after they have returned to the station. There have been more than 70 organic agents identified in smoke from fires. A few of the known carcinogens include carbon monoxide, benzene and nitrogen dioxide.

Although easy and common, using a hose to spray gear with water will not remove these toxins, which can pose serious health risks. Think about it: Would you work in the woods all day, hose down your jeans and think they are cleaned? Most likely, you would put them in the washing machine — so why then, is washing fire gear any different?

Gear needs to be thoroughly cleaned every time that it has come in contact with a fire. Due to the unpredictable nature of fires and the cost of gear, for many departments it is inconvenient and too expensive to ship gear to an outside service for cleaning.

For safety, price and convenience, it is best if fire stations have laundry machines on the premises. Advanced machines and controls are allowing fire stations to fully comply with NFPA 1851 and, more importantly, to keep firefighters safe.

Due to the unique fabrics used in protective fire gear, special wash cycles are required for the washing machines. The water in the washing machine must not exceed 105°F and the extraction speeds must not exceed 100 G-force. The G-force requirement is necessary due to



the sensitivity of the Nomex fibers found in fire gear, which will separate under higher G-forces.

When choosing a machine, it is critical to select a washer that offers the ability to customize the wash cycle. For example, some machines allow users to choose the water temperature and water

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level specific to their needs. With these options, departments could reduce water and energy costs.

All machines are not created equal. A machine used in a fire station is not a home-style washer. Some machines offer advanced capabilities, such as the ability to generate detailed reports concern-

ing machine usage. These reports can be used to verify that all NFPA standards have been followed, and give firefighters and the safety officers the peace of mind that their gear has been thoroughly cleaned of harmful carcinogens.

All Dried Up

The NFPA regulations for cleaning and decontamination also apply to how protective gear is dried. It is not allowed to be tumble-dried in a traditional large dryer due to the potential separation of fibers.

A very common practice among departments is to lay gear outside to dry, but the NFPA 1851 guidelines state that gear is not to be dried in direct sunlight. However, gear that is hung in the station or in the hose tower can take days to dry, which makes an on-site drying option essential. This way the gear is quickly ready for the next call.

Departments can use a PPE drying cabinet that is designed to allow hung gear to dry from the inside out. As with the wash water, the temperature inside the cabinet cannot be higher than 105°F. Since high temperatures are not allowed, a PPE drying cabinet circulates air inside and around the gear to increase drying efficiency. But the hot air is not allowed to fully dry the gear, according to the standards. Instead, once all the moisture is removed, the heat must be turned off, though the air can continue to circulate. If this is done properly in an efficient drying cabinet, six sets of gear can be ready to use in as little as three hours.

Since laundering at the fire station requires a time commitment, it is recommended that one shift launder the clothes for the next shift. This way, when a shift arrives, they will have clean gear to complete their day's work.

When a department decides that they will launder their equipment on-site, choosing which machines to install can feel overwhelming. This is where an experienced distributor can help.

An experienced distributor will lead a firehouse through the process of selecting machines based on its specific needs and will be able to program the wash cycles needed to clean its fire gear. The distributor also can assist with the equipment layout and in training the firefighters to operate the machines. Lastly, a distributor familiar with the fire industry will be able to provide the department with a list of appropriate chemicals needed to thoroughly clean the gear to NFPA standards.

When all regulations are followed, not only will the fire station be in compliance and firefighters will be safe in their gear, but the fire department also may be eligible for government grants. State and federal organizations award grants every year to departments that maintain the safety of their employees, and laundry can be included in these applications.

Thoroughly cleaned protective gear not only is nice to have, but is required by the NFPA. Working with a qualified distributor will help fire departments to choose machines that will meet their unique needs and to learn processes that fully comply with the standards. This in turn will ensure the safety of their firefighters — which is what this is all about. ■



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