

# *TerranearPMC Safety Share*

## **Week of January 9, 2012- Zen and the Art of Fire Extinguisher Maintenance**

Fire extinguishers are a vital part of any firefighting strategy, whether it's for the home, office or field work. Even the best fire prevention and fighting procedures are useless if the fire extinguisher does not work when you need it. The basic operation of the stored pressure extinguisher is this: The fire extinguisher itself is a low pressure cylinder containing an expellant gas, usually nitrogen, and the extinguishing media which is typically a dry chemical such as ammonium phosphate for ABC or BC fires. However, water and carbon dioxide are also typical fire extinguishing materials, although they can only be used on certain fires (water should NEVER be used when flammables catch fire!). When the pin is removed from the top handle and the handle pressed downward against the bottom carrying handle, the valve stem moves downward in the valve head and the agent is released under pressure through a siphon tube, up past the compression spring and past the valve stem and valve head, out through the hose and nozzle or nozzle.

Here are a few things to that should be done to ensure your fire extinguishers are ready should their services be necessary. These steps should be used on a regular basis, but are not complicated or time consuming.

Inspect fire extinguishers at least once per month. Check the pressure gauge, noting if the needle is pointed in the little green space. If it is pointed to the left, it means that the pressure is too low; to the right, the pressure is too high. In either case, the fire extinguisher needs to be removed from service. Check the hose to make sure it is in good condition (not frayed) and it is clear of obstructions that will inhibit the flow of fire extinguishing agent from putting out a fire. This includes ensuring that the nozzle is intact. Monthly inspections should be documented. That means having a tag or label on the fire extinguisher with the date and initials of the person that performed the inspection (pretty simple, yes?).

Especially at field locations, it is important to walk around the area and make sure the fire extinguishers are mounted or located in highly visible locations and located in easily accessible places while near locations where a fire is most likely to occur.

Recharge the extinguisher once it has been used. Any use, even for a few seconds, will cause a loss of pressure that will affect future performance if it is not recharged and serviced. This should be done quickly to make sure you have it ready when needed.

There should always be a clear pathway to fire extinguishers and should never be not blocked by equipment, materials or other objects that could interfere with their accessibility. Realizing that you cannot reach a fire extinguisher when it is needed can result in severe loss as the difference between a few seconds can be critical.

Make sure the pin is properly inserted in the handle and the tamper seal or plastic tie is intact. This ensures that the fire extinguisher will not be activated by accident. Inspect the vessels to make sure

there are no dents, leaks, rust, chemical deposits and/or other signs of abuse/wear. Wipe off any corrosive chemicals, oil, gunk etc. that may have deposited on the extinguisher. If the extinguisher is damaged, replace it immediately!

Some manufacturers recommend shaking your dry chemical extinguishers once a month to prevent the powder from settling/packing.

Read the information on the fire extinguisher. There should be letters and pictures indicating the classes of fires it is capable of extinguishing should appear only on the front of the extinguisher; nothing else should be placed on the front to distract from the information. The rating number that indicates the extinguishing capability, information on how much dry chemical should be in the fire extinguisher, and the suitable temperatures in which the agent will operate are on the label.

The manufacture date will tell you two important items about the fire extinguisher you are inspecting. The date is found in one of three places: on the label, stamped on the bottom outside edge of the cylinder, or stamped to the underside of the extinguisher. Some companies place a sticker showing the date of manufacture.

This date is important because every five years (for extinguishers carried in vehicles) or 12 years (for those not carried in vehicles, i.e., at businesses or offices) from the date of manufacture or from the last “hydro” sticker test date, the fire extinguisher cylinder is to be hydrostatically tested (“hydro tested”). Hydrostatic testing involves pressurizing the cylinder under water pressure at test pressure. If the cylinder passed the hydro test, the inside cylinder is dried by hot air on a drying rack before it is reassembled and a hydro sticker is placed on the fire extinguisher cylinder.

There are two types of hydrostatic test stickers that you may see: 1) non- DOT cylinder, three times the gauge pressure or to the manufacturer’s recommendation on the label, the pressure, year, and month the test was performed, 2) DOT cylinder, which displays a “RIN” retested identification number sticker, the cylinder tested to twice the gauge pressure or to the manufacturer’s recommendation, month and year the test was performed. All test information will be on the label.

And another very important point: The acronym PASS. Any person that has been trained to use fire extinguishers should be familiar with this term. PASS stands for:

- P Pull (the pin that secures the handle)
- A Aim (the fire extinguisher at the base of the fire)
- S Squeeze (the handle – which means don’t be heavy-handed)
- S Sweep (using a sweeping motion, continuing to aim at the base of the fire)

Fire extinguishers are useful to extinguish fires at the initial stage. If the fire gets too big (such as a field trailer catching fire), contact the fire local fire department. Fighting the fire with a portable fire extinguisher at this stage will not be effective and can place you and fellow workers in danger.

Never regret. If it’s good, it’s wonderful. If it’s bad, it’s  
experience.

- Victoria Holt (aka Eleanor Hibbert) British Author