

Information on Fire Extinguishers

Back in the mid-1990s, I was asked the question as to whether or not the portable fire extinguishers used throughout the Station are being maintained properly. I have recently been asked questions about how to maintain extinguishers again. I will take this opportunity to refresh this subject with everyone.

What I have done, here in St. Paul, is completely convert to dry chemical fire extinguishers. The reason I did this was to simplify my maintenance requirements. Regardless of the type of extinguisher, the National Fire Code requires a monthly inspection. The annual maintenance was the part that bothered me. I wanted to know what I was paying someone each year to do.

There is no national certification requirement to qualify people to perform maintenance on portable fire extinguishers. Some state and local governments may or may not have licensing requirements. When I inquired about testing in the state of Minnesota, the fire department told me to talk to the fire extinguisher manufacturer or distributor. There is no local government certification here. It is felt that the manufacturer/distributor knows best how to maintain their fire extinguisher. (In a large metropolitan area like this one it is easy to find manufacturers/distributors.)

What I learned from the various manufacturers/distributors is that for a dry chemical fire extinguisher, the yearly maintenance procedures are so simple that I can do it. I asked them what if any training program they had and they told me they had a short video to show people. Training was achieved through use of the video, working with experienced individuals, and just plain doing it. (Some companies didn't even have a video.) They graciously allowed me to view the video.

Since the Forest Service is the authority having jurisdiction, I made the decision that I would train myself on performing the annual maintenance on dry chemical extinguishers. The only time here in St. Paul that we have to pay someone to maintain the fire extinguisher is every six years. That is the mid-point of the 12-yr hydrostatic testing requirement. Every six years, the contents of the extinguisher have to be emptied and refilled. (In reality, we do not do this in St. Paul. It is cheaper for us to simply buy new extinguishers. We use the old ones to provide yearly fire extinguisher training to employees.)

The rest of this document is basically the nuts and bolts of taking care of portable fire extinguishers. The following information on proper maintenance was obtained from Standard 10 Chapter 4 & 5 of the National Fire Code published by the National Fire Prevention Association.

To summarize: portable fire extinguishers require monthly & annual inspections, and periodic testing.

o Monthly

A "quick-check" of extinguishers by designated personnel. Personnel do not require special training to perform the quick check. Inspections should check for at least the following items:

- a) Location in designated place.
- b) Obstructions to access or visibility.
- c) Operating instructions on nameplate are legible and facing outward.
- d) Seals and tamper indicators are not broken or missing.
- e) Determine fullness by weighing or "hefting."
- f) Examine extinguishers for obvious physical damage, corrosion, leakage, or a clogged nozzle.
- g) Pressure indicator is in the operable range position.

At least monthly, the date of the inspection and the initials of the inspector shall be recorded. A record shall be kept of those extinguishers, which required corrective action.

o Annually

Maintenance is a thorough examination of the extinguisher. It's intended to give maximum assurance that an extinguisher will operate effectively. Maintenance procedures include a thorough examination of the three basic elements of an extinguisher: mechanical parts, extinguishing agent, and expelling means. (During annual maintenance it is not necessary to internally examine non-rechargeable, carbon dioxide, or stored pressure extinguishers except stored pressure types containing a loaded stream agent.)

Check the extinguisher:

- Guage
- Weight
- Pin lock
- Inspection tag
- Hose – cuts, wear, blocking
- Thread damage
- Corrosion (clean if possible)

Trained persons with the proper equipment shall perform maintenance, servicing, and recharging. Each extinguisher shall have a tag securely attached that indicates the month and year of maintenance and the person performing the service. The same tag shall also indicate whether or not recharging was performed.

o Periodic

Portable extinguishers must be hydrostatically tested in accordance with the following schedule:

EXTINGUISHER TYPE	TEST INTERVAL (YEARS)
Soda-Acid	Note 1
Cartridge-Operated Water and/or Antifreeze	Note 1
Stored Pressure Water, Loaded Stream, and/or Antifreeze	5
Wetting Agent	5
Foam	Note 1
AFFF (Aqueous Film Forming Foam)	5
Dry Chemical with Stainless Steel Shells	5
Carbon Dioxide	5
Dry Chemical, Stored Pressure, with Mild Steel Shells, Brazed Brass Shells, or Aluminum Shells	12
Halogenated Agents	12
Dry Powder, Cartridge- or Cylinder-Operated, with Mild Steel Shells.	12
NOTE 1: These extinguishers have had a 5-year hydrostatic test interval. When the next regular hydrostatic test date arrives, extinguishers of this type shall not be tested but removed from service.	
NOTE 2: All types of extinguishers with copper or brass shells joined by soft solder are prohibited from hydrostatic testing. (See 5-1.3(f).)	
Note 3: Stored pressure water extinguishers with fiberglass shells (pre-1976) are prohibited from hydrostatic testing due to manufacturer's recall.	

A qualified contractor must perform hydrostatic testing.

Those extinguishers with a 12-year hydrostatic test interval will be subject to a 6-year maintenance procedure that includes emptying the tank contents. A qualified contractor must perform this procedure.

o Exemption

Extinguishers having non-refillable, "disposable", containers are exempt.

A qualified contractor can be obtained through the "yellow pages." Caution must be exercised when obtaining the services of a contractor since there is no national certification requirement to perform this type of service. Some state and local governments may or may not have licensing requirements. Typically, there are enough contractors available that choosing one is not a difficult task.

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