

# FIRE EQUIPMENT MANUFACTURERS' ASSOCIATION



Saving Lives, Protecting Property.

## **REMOVAL FROM SERVICE OF OBSOLETE FIRE EXTINGUISHERS**

The members of the Fire Equipment Manufacturers Association (FEMA) are in the business of providing the very best hardware for fighting fires. Portable fire extinguishers are a critical component of a balanced fire protection plan. Extinguishers are a proven tool that can be used in the beginning stages of a fire to significantly minimize the risk of death, injury, and property loss. Manufacturers invest heavily in research and development to find an optimum combination of hardware and extinguishing agent. Operator safety and fire fighting performance are the primary concerns as extinguishers are brought to the market.

The members of the National Association of Fire Equipment Distributors (NAFED) and other qualified fire equipment distributors know that an essential part of good fire protection is maintaining equipment so that it will be ready anytime that an emergency occurs. The protection of life and property should not be compromised. Therefore the service of portable fire extinguishers has to be done according to recognized standards.

Questions sometimes arise about maintaining extinguishers versus removing from service extinguishers manufactured by companies no longer in business (such as General Fire Extinguisher Company, Fyr-Fyter, Power-Pak, Norris, RC Industries, and others) and about extinguishers that have been declared obsolete by existing manufacturers or extinguishers whose parts or recharge agent is no longer available. There is no question about removing from service the extinguishers that have been the subject of product recalls or extinguishers that have been ordered removed from service by authorities (such as carbon tetrachloride, chlorobromomethane, soldered or riveted self generating soda acid & chemical foam, gas cartridge water type that are operated by inverting the extinguisher to rupture the cartridge.)

History has shown us that the use of components not specified as part of an extinguisher's listing can cause dangerous and even life threatening results. Pressure relief devices, safety disks, and gauges as well as o-rings and valve stems are made to exact tolerances. Substituting non-listed parts can be extremely dangerous to service technicians and to users. Hoses and nozzles are matched to chemical characteristics to give measured flow rates and nozzle pressures. Extinguisher shell and agent must be compatible. Agent quality including the amount of active agent & chemical fines and inert materials is unique to each extinguisher type and manufacturer. Non-listed extinguisher agents with different flow characteristics have been shown to fail to discharge effectively. Agents must be tested with each individual extinguisher by a nationally recognized testing laboratory to assure required discharge times, discharge range, discharge flow rates and fire performance. Extinguisher users must be able to count on the listed performance of an extinguisher for their safety.

FEMA offers the following information to help clarify when a fire extinguisher should no longer be kept in service due to its lack of a recognized listing.

## **CODES & STANDARDS**

There are legal requirements that call for the provision and maintenance of “listed” fire extinguishers. Most states have adopted NFPA 10 through their building and fire prevention codes. OSHA has required “listed” extinguishers since its enactment in 1970. If an extinguisher is no longer considered “listed” it cannot be used to satisfy the requirements of the states or the federal government.

FEMA members produce extinguishers according to Underwriters Laboratories Inc. (UL) standards including ANSI / UL 8, ANSI /UL 154, ANSI /UL 299, ANSI / UL 626, and ANSI / UL 1093. Extinguishers are tested for performance per ANSI / UL 711. The combination of hardware and agent are incorporated as part of an extinguisher’s listing.

The 2002 edition of NFPA 10 tells us that extinguishers “... shall be listed and labeled ...” (1.3.1), “No fire extinguisher shall be converted from one type to another, nor shall any fire extinguisher be converted to use a different type of extinguishing agent ...” (6.4.1.4), and that maintenance must be done using “... the proper types of tools, recharge materials, lubricants and manufacturer’s recommended replacement parts or parts specifically listed for use in the fire extinguisher” (6.1.4). NFPA 10 further informs us that “...Only those agents specified on the nameplate or agents proven to have equal chemical composition, physical characteristics and fire extinguishing capabilities shall be used. Agents listed specifically for use with that extinguisher shall be considered to meet these requirements” (6.4.3.1).

Federal regulations contained in 29 CFR Part 1910 state that “ ... Only approved portable fire extinguishers shall be used to meet the requirements of this section” (1910.157 (c)(2). The definition of “approved” is found in 1910.155 (3) “...Equipment is listed if it is a kind mentioned in a list which is published by a nationally recognized testing laboratory which makes periodic inspections of the production of such equipment and which states that such equipment meets nationally recognized standards ...”

Additional federal requirements contained in 29 CFR 1910.1200 Hazard Communication Standard are meant to assure that chemicals entering the workplace match the labels on their containers. Labels on extinguishers meet this requirement only if the corresponding extinguishing agent is inside the extinguisher.

In recent correspondence, UL has clarified for us that an extinguisher would not be considered listed unless that extinguisher was serviced according to the manufacturer’s manuals. Parts used for service must be those shown on the nameplate and in the manufacturer’s manuals. Extinguisher agents must be that shown on the nameplate or be an agent that is specifically UL Classified for use in the specific manufacturer model extinguisher being recharged. When proper parts or agent are not used or are not available, the listing cannot be maintained.

## **LIABILITY**

Liability for servicing these extinguishers, particularly those manufactured by companies that have long been out of business, rests solely with the extinguisher service company and its components supplier. No one else is around to answer questions either in or out of court. Only the insurance policies of the fire extinguisher service company and the end-user are available to back up any problems during an incident. Given the age and antiquated design of the extinguisher, an argument could be made that problems are more likely to arise with older, outdated equipment than with newer equipment that meets current design standards. Warranties, even if the manufacturer of the equipment is still in business, have long since expired. An older extinguisher could have been made by a quality conscious manufacturer that is still in business but that same manufacturer recommended that the units be removed from service and has not made parts available.

Service companies that use recognized parts and agents protect their license, will help avoid claims against their products liability insurance policy, and will protect their good reputation and public trust.

## **ANTIQUATED EXTINGUISHERS**

In today's tight labor market with costs for energy, insurance, vehicles and real estate soaring, it is a mistake to assume that labor-intensive service work on antiquated extinguishers is always profitable. Without using some form of Activity Based Costing, it is difficult to determine exact costs of service. A 24-year-old extinguisher that is due for its second hydrostatic test (and which should have had two 6-year service maintenance recharges) must be removed from its location and an extinguisher of equal or greater rating put in its place. It will be carried to a service company truck, tagged for tracking and transported to the shop. At the shop it will be unloaded, discharged, labeled for disassembly, hydrostatically tested, dried, recharged and then transported back to the end-user where it is placed back in service and the loaner is picked up. Many end-users have a policy regarding replacement costs. If the cost of repairs/service work exceed a certain percentage (often 50%) of the cost to replace the equipment, they would rather replace it and take advantage of a new warranty. However if service is done and assuming that it doesn't leak, how much time has been spent in total on this extinguisher? And at the end of all of that time, the end-user has a 24-year-old extinguisher. If a service company uses parts or agent not approved, what happens if it leaks? What happens if it fails to discharge properly? What happens if someone is injured?

## **CONCLUSIONS**

There are extinguishers in the marketplace that should be removed from service because they are obsolete. This should be done first and most importantly to insure life safety. We are in the business of protecting life and property. Federal and state regulations require approved and listed extinguishers for code compliance. Federal requirements require contents in an extinguisher to match the label. Underwriters Laboratories, Inc. requires servicing to be performed using parts and recharge agents that will maintain the extinguisher's listing. Improper parts or agent will cause the extinguisher to lose its status as listed.

By removing obsolete extinguishers customers get new equipment that meets current standards. Both the service company and the customer will benefit from a fresh factory

warranty and the liability issue is avoided. At the same time the service company will likely benefit from a more profitable transaction.

**Prepared by the members of FEMA's Portable Division**

**Visit our website on Balanced Fire Protection at – [www.femalifesafety.org](http://www.femalifesafety.org)**



333 Pfingsten Road  
Northbrook, Illinois 60062-2096  
United States Country Code (1)  
(847) 272-8800  
FAX No. (847) 272-8129  
<http://www.ul.com>

February 28, 2001

Ms. Susan Young  
Fire Equipment Manufacturers Association (FEMA)  
1300 Sumner Avenue  
Cleveland, OH 44115-2851

Subject: UL Listings of Fire Extinguishers

Dear Ms. Young:

The following information is provided to assist FEMA members in clarifying the requirements to maintain the UL Listing of a fire extinguisher in the field.

1. To maintain its UL Listing, a fire extinguisher is to be serviced and maintained in accordance with NFPA 10, the instructions on the extinguisher nameplate and the manufacturer's Service and Owner's Manuals.
2. The use of any parts or agent not specifically identified on the extinguisher nameplate or in the manufacturer's Manuals, or the use of an agent that is not specifically UL Classified for use in recharging the specific manufacturer and model of fire extinguisher, does not maintain the UL Listing for that fire extinguisher, and therefore, would not be considered UL Listed.
3. When the proper service parts or agent for recharging are no longer available for a specific model UL Listed fire extinguisher, the Listing for that extinguisher cannot be maintained in accordance with the extinguisher nameplate, the manufacturer's manuals and NFPA 10, and therefore, would not be considered UL Listed.

Sincerely,

A handwritten signature in cursive script that reads "Emil W. Misichko".

EMIL W. MISICHKO (Ext. 42036)  
Engineering Group Leader  
Conformity Assessment Services  
Department 3011CNBK  
E-Mail: [Emil.W.Misichko@us.ul.com](mailto:Emil.W.Misichko@us.ul.com)