

Eco-Tip for 6/16/19

New Acronym to Reuse, Recharge, and Be Safe with Fire Extinguishers

By David Goldstein, VCPWA, IWMD

When using a fire extinguisher, remember the acronym “PASS.” Fire extinguisher trainers say it stands for the following four steps: **P**ull and twist the pin holding the lever in place; **A**im at the base of the fire; **S**queeze the lever; and **S**weep the nozzle side to side.

When buying, maintaining, and eventually discarding a fire extinguisher, another acronym could be “PICK.” This stands for the following four steps: purchase a high-quality extinguisher; inspect it regularly to ensure it is fully charged; charge it if it is rechargeable; and keep it out of both curbside recycling and garbage curbside carts when you are done with it.

Most people purchase fire extinguishers at home improvement stores for only about 35 dollars, and even these can be recharged, according to Colin Morrison, owner of Conejo Simi Fire Protection, a company providing fire extinguisher inspection, maintenance, and recharging service. However, he notes these inexpensive fire extinguishers are generally regarded as “disposable” because recharging costs around 25 dollars, and extinguishers with plastic nozzles sometimes leak after being recharged. Instead, he advises, if someone wants to reduce waste, they should buy a better extinguisher, usually in the range of 70 dollars, from a professional fire service company. These extinguishers, usually with metal rather than plastic heads, are also more reliable in an emergency, and the reason for this reliability takes us to the second letter of the PICK acronym.

Inspecting a fire extinguisher primarily involves ensuring the pin is still in place and checking the gauge to ensure the indicator needle points to the right, generally in a green section of the panel. Cheaply made fire extinguishers could appear to be fully charged, but in fact, their indicator needle could be stuck. Rarely, but also possible, the top layer of the powder inside a fire extinguisher could clump, which may result in a blockage of the nozzle during operations, according to Morrison. Captain Brian McGrath, Ventura County Fire Department Public Information Officer, notes that the potential problem of clumping powder is not confined to just low-quality extinguishers, so he recommends shaking all extinguishers quarterly.

Higher quality extinguishers are seldom purchased for home use, but they are universally used at locations such as businesses, schools, and churches. California law requires inspections of extinguishers at these locations every year, and every six years extinguishers in these locations must be emptied and disassembled for inspection. Every 12 years, extinguishers at these locations must be filled with water and pressure tested. Most high-quality extinguishers are recharged rather than discarded.

This recharging of high-quality fire extinguishers explains the third letter of the PICK acronym, representing “charge.” The purchase price is higher, but recharging, rather than discarding, eventually recovers the cost. Recharging service is available from fire service

companies; there are several in Ventura County, and they can be found through an internet search. Local fire stations do not provide recharge service.

Keeping extinguishers out of curbside carts is the final part of the “PICK” acronym. If still charged, extinguishers crushed by compactors typical in the solid waste industry pose dangers to refuse collectors, sorters, and other solid waste workers. Even if discharged, empty extinguishers pose a danger to curbside recycling systems. At Gold Coast Recycling and Transfer Station, in Ventura, the first step in the sorting process involves pickers who try to remove items potentially damaging to the rotating disc screens of the second step, but sorters are not perfect; some pieces of metal get past them and can lodge between the discs, potentially damaging equipment and requiring sorting lines to stop for repairs.

Instead, bring charged extinguishers to household hazardous waste collection events or fire extinguisher service companies. Bring discharged extinguishers to a scrap metal recycling center. Metal recyclers are usually not the same as recycling centers accepting bottles and cans; they are larger sites, typically paying by the pound for scrap metal.

Ventura County is the home of one unusual form of extinguisher recycling. Meggitt Safety Systems, in Simi Valley, recycles the gas from halon fire extinguishers. Rather than accepting drop-offs directly from the public, they have a contractor, Halon US, collect from fire extinguisher service companies, demolition contractors, computer room operators, and other users. Due to its damage to the ozone layer, halon was banned from new extinguishers in 1994; however, to induce current owners of halon extinguishers to recycle, rather than vent, their extinguishers, the U.S. Environmental Protection Agency exempted aircraft from restrictions on use of halon, provided that the aircraft use halon recycled from extinguishers. This exemption made halon valuable. Indeed, for its weight and volume, halon is still the best fire suppressant, so halon is essential to aircraft operators, according to Steve Newhouse, owner of Halon US. The rate of halon recycling from businesses and the public is on pace to sustain the aircraft industry to the year 2040, according to Newhouse.

The aircraft exemption, and recycling by Meggitt Safety Systems, creates market demand for halon, inducing fire extinguisher service companies to collect it and facilitate the “k,” the last letter of the acronym PICK, even in cases where old extinguishers contain halon. The acronym is easy to remember because you have to start by picking the right fire extinguisher to purchase; pick one that can be recharged.

The first acronym, PASS, is easy to remember because you pass the extinguisher’s spray over the base of a fire to put it out.

To respond safely and correctly to a fire bigger than can be handled with an extinguisher, remember another acronym: RACE. Fire response trainers use this one to emphasize the following steps: Rescue people in immediate danger from the fire, if you can do so safely; alarm first responders by calling 911; confine fires by closing doors

and windows; extinguish small flare ups ignited by hazards such as flying cinders; and evacuate from areas in danger.

Notes:

Only fight a small, contained fire

Halon is bad for ozone. Not good anyway for some types of fires. Halotron substitute still bad for ozone. FE36 now used. BC rates. Still not AB or K

Clean, replace, recharge extinguishers.

Should be tested every five years?

Inspect every year.

The bodies of most fire extinguishers consist of steel, a recyclable material. If the extinguisher is empty, squeeze the trigger to ensure that the unit holds no pressure and remove the plastic top and trigger. Take the canister to any recycling facility that processes steel. If the extinguisher is full or partly full, your local fire company can safely discharge it for you.

<https://www.confires.com/blog/what-should-i-do-with-an-expired-fire-extinguisher/>

With proper care, fire extinguishers should last at least 10 to 12 years. At this age, your extinguishers require hydrostatic testing to verify the integrity of the outer shell. If it passes the test, you can recharge the extinguisher and continue using it for several more years.

You know you should dispose of an old fire extinguisher if:

- The canister is slowly losing pressure, even though you haven't used it in a long time.
- The hose or nozzle is cracked or clogged, which could make the extinguisher unreliable.
- The handle is wobbly or broken, making it difficult to hold.
- The pin is missing or damaged, which could result in an accidental discharge.
- The shell is damaged, creating a safety hazard.
- The inspection tag is missing, so you have no idea when maintenance last took place or what condition the canister is in.
- The shell fails the hydrostatic test, meaning it couldn't withstand pressures up to 500 psi.
- You've had the same disposable fire extinguisher for 12 years (this style can't be recharged).

Fire extinguishers manufactured in the past decade come in three varieties, water filled, gas filled and chemical filled extinguishers. With the exception of chemical filled extinguishers, both water filled and gas (CO₂) filled extinguishers are inert, and are not harmful. The dry chemical variety can cause irritation, so extra care should be taken with these units.

Colin Morrison

, such as ones typically sold at home improvement stores, do not have to be regarded as plastic ones can be recharged, but they leak, so it's better to buy one with a metal head. \$25 to recharge. Buying new at a home improvement store is just around \$35 for a standard five-pound fire extinguisher, meaning it has five pounds of powder. But if you pay \$70 at a fire extinguisher company, you can get a commercial one that can be recharged many times. These generally used just at locations such as businesses, schools, and churches. They buy expensive, reusable ones because California law requires inspections every year, and every six years extinguishers in these locations have to be emptied and disassembled for inspection. Every 12 years, extinguishers at these locations must be filled with water and pressure tested. These test cost approximately \$19 per unit in cases where several can be serviced at a single location, so nearly all regularly service their extinguisher rather than buying new ones, according to Colin Morrison, owner of Conejo Simi Fire Protection.

For residential use, look at gauge every few months. If shows pressure, it will probably work. However, there are cases where it will not work, even if the gauge shows pressure. The powder may get hard and not be able to come. The pressure may be gone, but the gauge may stick. Therefore, every five or six years, home fire extinguishers should be tested and serviced, according to Colin Morrison, owner of Conejo Simi Fire Protection.

Quality

Buy

Purchase

Metal

Observe

Inspect

Recharge

Service

Check

Pressure

Gauge

Test

Recycle –

Keep extinguishers out of curbside carts