RV Fire Safety

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Fire Extinguishers

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National Fire Protection Association (NFPA) 1192 specifies requirements for fire extinguishers in RVs, not Recreational Vehicle Industry Association (RVIA). Fire extinguishers must be within 24" of the primary exit door in an RV and have a minimum rating of 5-BC. UL and ANSI also cover requirements for extinguishers.

Fire extinguishers are classified by fire type. The A, B, C rating system defines the kinds of burning materials each fire extinguisher is designed to fight.

TIP: A fire extinguisher with the general class rating of ABC is recommended for carrying in a vehicle.

U.S. System of Fire Classification by Fuel Type:

Class A - Ordinary combustibles such as wood, paper, cloth, trash and plastics.

Class B - Flammable liquids: gasoline, petroleum oil, paint and flammable gases - propane and butane.

Class C - Energized electrical equipment such as motors, transformers and appliances (shut off the power and the Class C fire becomes one of the other classes of fire).

Class D - Combustible and flammable metals such as potassium, sodium, aluminum and magnesium.

Class K - Fires in cooking oils and greases such as animal and vegetable fats.

A number in front of the A, B, or C (1-A, 2-A…) indicates the rating size of fire the unit can extinguish.
For example:
1-A can extinguish an 8x8 foot wood panel and the cylinder holds 6 lbs. of flame retardant.
2-A can extinguish a 10x10 panel and hold 12 lbs. retardant.
. . .
10-A 17x17 foot panel at 17 lbs.

NOTE: The small 2-1/2 pound fire extinguisher installed by most RV manufacturers contains only enough retardant for about 8-10 seconds. Coach manufacturers figure this is adequate to provide you with enough time to exit the RV.
I suggest getting a 5 pound extinguisher for an RV.

Multi-purpose dry chemical fire extinguisher is the most common type of portable fire extinguisher for use in RVs. The extinguishing agent creates a barrier between oxygen and the fuel to stop the fire. Typically rated BC or ABC. They are typically red and range in size from 2-1/2 to 20 pounds.

IMPORTANT TIP: Due to road vibration and bumps, dry powder in fire extinguishers can become compacted in the bottom of the cylinder. Once a month, or before each trip, remove the extinguisher from its mounting bracket, turn it upside down, and shake it to loosen the powder. Check the pressure gauge to make sure there is still adequate pressure. If the gauge shows low or empty, the extinguisher should be recharged or replaced right away. Never test the fire extinguisher by doing a partial discharge. If you would like to shoot off a burst to get a feel for handling an extinguisher, ask at the refill station when getting your extinguisher refilled.

TIP: Inspection - dry chemical extinguishers need to be emptied and inspected internally every 6 years and hydrostatically tested every 12 years. (Or just throw it away and get a new one).

Halotron I - Class B C Fire Extinguisher is a rapidly evaporating liquid that leaves no residue. Warning: the contents can be an incapacitating agent. Full discharge of the extinguisher in a van without adequate ventilation could be a hazard. Powder extinguishers can leave a residue that ruins aluminum or electrical components. These extinguishers DO NOT.

Carbon dioxide fire extinguisher can be used on Class B and C fires. Carbon Dioxide fire extinguishers work by removing oxygen from the fire triangle and also by removing the heat with their very cold discharge. Never use carbon dioxide fire extinguishers in a confined space like inside a van RV with anyone inside.

Element personal fire extinguisher – this new type of extinguisher claims to chemically interrupt the chain of combustion. The Element safely and effectively puts out fires without the mess, toxicity, or danger associated with a traditional extinguisher. It can be stored at temperatures from -140F to +320F and in damp environments. The gas from Element is claimed to be safe to breathe, non-corrosive and non-toxic.

Cons – need to be very close to the flames, and they are not certified for use in the USA. They may be ineffective in strong winds.

NOTE: In North America, Underwriters Laboratories (UL), the Element is **not tested OR certified** since it is not a compressed gas cylinder. They prefer that all extinguishers operate by the same method, so anyone can grab your extinguisher and (hopefully) know how to use it. **Someone coming to your assistance may not understand how to operate the Element Extinguisher quickly.**

Fire Blanket - For a kitchen fire, consider using a Fire blanket instead of blasting powder everywhere.

Solar Panel fire – Occasionally, you hear of a solar panel catching fire like what Walmart experienced. You can turn off the switch inside, but what if the short is before the switch? Many fire departments now carry heavy tarps to cover the panels and block the sunlight to power them down.

Warning: Fire extinguisher zip tie – Our extinguisher had this white tag to keep the pin from falling out. I tried to break it off by hand. It isn't easy, and I had to go find a pair of scissors to cut it off. Isn't it strange to put something like that on an item that needs to be used in a quick response? Do you always carry scissors with you?

Safety Equipment

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Smoke Detectors – The best way to prevent fires in an RV is to become aware of any danger. A smoke detector is the simplest way to reduce your risks. RVers should have a dual-sensor detector, which is one that employs both ionization and photoelectric technologies. A smoke detector should be tested before each trip. The battery once a year (or per the manufacturer's recommendations). Smoke detectors should be **replaced every 10 years**.

Placement – Since heat and smoke rise, smoke detectors are mounted on the ceiling and at least 10 feet away from cooking appliances.

Wi-Fi - Another option with smoke detectors is a Wi-Fi enabled smoke detector. With an internet connection, you could receive a message while away from your RV or when it's in storage.

Carbon Monoxide (CO2) Detectors – CO2 gas is invisible, odorless, and can be deadly. Typically, RV furnaces, water heaters, and generators cause the most problems for RVers**. Never use the propane stove or oven to heat the RV.** Co2 can even be from someone else's generator when camping in close quarters.

Placement - for a C02 detector is about 5 feet from the floor, as carbon monoxide rises as air warms up, but it can stay close to the ground in a cool and enclosed space. Make sure the detector is close to where most everyone sleeps. Some symptoms of CO2 poisoning are: intense headache, dizziness, vomiting, chest pain, confusion, sleepiness, and death.

LP Detector – device is capable of detecting small quantities of propane gas leaking within your RV. Propane gas can leak from stoves, heaters, propane refrigerators, or water heaters or from any connection in the gas line. They should be replaced every 5 years. Most LP detectors are powered by the house battery, so there could be a parasitic drain when the coach is in storage. If the detector alert goes off, do not turn on/off any electrical switches and exit the RV. Turn the propane off at the tank and open doors and windows to dissipate the gas.

Placement – Propane is heavier than air, so it should be placed lower than your bed.

Induction Stoves and microwave ovens – More and more RV manufacturers are moving away from using propane for refrigerators and stove tops. Induction stoves are capable of heating quicker than propane and don't produce a lot of heat in the RV. From the fire safety aspect, induction doesn't emit Co2 or leak propane. Eliminating the propane open flame also greatly reduces the possibility of a grease fire or catching a paper towel on fire.

Cons – Induction tops require the use of ferromagnetic cookware. The cooktop surface is easily scratched or cracked. If you aren't used to them, they can overcook food more quickly.