Safety First

by Gary Bunzer, the RV Doctor

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Safety devices designed for RV use help keep you safe while on the road, so it's important to familiarize yourself with your RV's safety systems and keep them working properly. Often in my live seminars, I tell those attending, "If there was a single subject all participants within the entire RVing spectrum would agree, from trade organizations, to design engineers, manufacturers, dealers, suppliers, RV service technicians to RV owners, that subject would center on the importance of RVing safety. Personal safety being paramount followed closely by product or equipment safety. It stands to reason, that the first rule of successful RVing might just be: Never compromise the safety factor!"

Webster further opines; "safe•ty \\ 1: the condition of being safe from undergoing or causing hurt, injury or loss. To protect against failure, breakage or accident." I think we can all agree that safety is crucial and proportional to the level of our RV enjoyment.

Literally every major system on the typical RV requires a conscientious safety sensibility including the propane system, the 12-volt and 120-volt electrical systems, even the plumbing systems (think ground contamination and the spread of bacteria when evacuating holding tanks). Many redundant safety features are built into most of the devices and appliances we utilize when we travel. Most RVers would be quite unaware of most of them, but all RVers should be aware of certain other safety related devices and their necessity for periodic attention. What follows is certainly not a complete list of all the safety gadgets found within the RVing realm, but those presented here are crucial for continued personal and product RVing safety.

Keep your RV smoke detector free of dust and equipped with a fresh battery.

Smoke Alarm

Every RV should be equipped with at least one smoke alarm. The smoke alarm should be battery powered in case of a power outage in the middle of the night and mounted on the ceiling. If your RV has a separate bedroom (one partitioned by some type of door or divider), it is a code requirement that it be equipped with a smoke alarm.

Most all smoke alarms today use an ionization chamber and a source of ionizing radiation to detect smoke. This type of smoke detector is relatively inexpensive and much better at detecting the smaller amounts of smoke produced by fires common to RVs. They too, have an effective lifespan and should be replaced periodically. Like all other RV listed components, smoke detectors should abide by UL 217.

The ionization chamber, by the way, incorporates airflow slots that are prone to gathering dust. As part of an annual maintenance program for the electronic safety devices, it is recommended to remove the outside cap of the smoke alarm and carefully wipe away any dust that may inhibit air into and through the ionization chamber cover. Do not remove the cover of the chamber; just carefully remove all remnants of dust.

Propane System

Obviously carrying around a flammable gas such as propane must be approached with utmost care. One important mandate to consider is to never fill any propane container more than 80% full. Most all DOT cylinders and ASME tanks are now equipped with an OPD (Overfill Prevention Device), or a stop-fill device that prevents that from happening, though older containers may not be so equipped. Also, DOT cylinders must be periodically recertified in order to retain code compliancy. Have a Certified or Master Certified RV technician check yours for proper certification.

There are also three vital tests to be performed at least annually, more often in some cases. The propane regulator lock-up test, a delivery line pressure test and a timed, pressure drop test are paramount to RVing safety. Any Certified or Master Certified RV technician can perform these three tests.

A propane detector will alert you to a dangerous gas leak that could lead to an explosion.

Propane Gas Detector

Manufactured with varying levels of sophistication, some propane gas detectors may be equipped with a 12-volt DC solenoid valve that fully closes when propane gas is detected at the sensor. They will all emit a shrill, audible alarm when propane is detected inside the RV. All LP gas detectors, like most "sensor" type devices, have a limited life expectancy. Most RV propane detectors should be considered for replacement every five to seven years. All RV propane detectors must be listed for RV use and built to the specifications of UL 1484. They should be mounted close to the floor since propane is heavier than air.

Propane gas detectors can be periodically tested by opening the valve

on an inexpensive butane cigarette lighter near the sensor port on the detector. Do not ignite the flame on the lighter, but simply open the lighter's valve, releasing some of the butane. The alarm should sound within a couple of seconds. Test the detector at least twice per year in this manner. The detector pictured here happens to be a combination propane and carbon monoxide (CO) detector.

Carbon Monoxide Detector

Carbon monoxide (CO), a poisonous gas produced primarily by incomplete combustion of any fossil-based fuel in an appliance or engine, is the No. 1 cause of poisoning deaths in the US. It is colorless, tasteless and odorless, making it easy for a person or pet to be easily overcome without much advance warning. In or near an RV, CO can originate from a motorhome engine, any of the four LP-burning appliances, gas fireplaces, charcoal grills and RV generators.

Carbon monoxide is produced by incomplete fuel combustion from an engine or appliance and is a silent killer.

Be sure to follow the manufacturer's installation instructions when replacing or installing the CO monitor. Some suggest mounting on a wall about five feet up from the floor. Since CO is slightly lighter than air, others recommend mounting on the ceiling. Most all RV CO detectors are battery powered so remember to replace its battery twice every camping season. UL 2034 is the governing document for CO monitors. Keep in mind, they must also be listed for use in a recreation vehicle.

Sensor-Equipped Detector Maintenance

All the devices listed above contain some form of electronic circuitry and a sensor of some type and the basic maintenance required by these devices is relatively simple for all RVers to perform. All battery-powered devices should have new batteries installed at the beginning and in the middle of each camping season. It is also advisable to carry spare batteries during lengthy RVing excursions, just in case. All the detectors mentioned above will come equipped with a test function, typically a simple push of a test button will let the user know the horn is still in operating condition. Test each of the devices prior to and once each week during every RV excursion.

Periodically, it will be necessary to wipe down the face of all detectors with a dry cloth. Dust accumulation and blocked sensor ports can minimize a sensor's effectiveness and further reduce its useful life. Never paint an electronic detector or use cleaning agents, waxes or polish on them. Simply keep them free from dust and other airborne contaminants.

Likewise, most of the safety devices mentioned above come stamped or otherwise labeled with an estimated or suggested replacement date. Always adhere to the manufacturer's suggested replacement date. It's simply not worth the risk of a device malfunctioning in order to gain a few more months' use. Consider it cheap insurance!

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Fire Extinguishers

It's been said you can't have too many fire extinguishers on board as you travel, but the minimum number should be three. Most RV manufacturers will mount one near the entry door of the coach. In addition, it is recommended to keep one in the bedroom area and have one accessible from outside the coach, such as in a storage compartment, perhaps near the generator, if so equipped.

All RVers should become familiar

Fire extinguishers are your first defense against automotive and RV fires, so have at least three on board.

SXC photo by Steve Carboni

with the different types of fires and fire extinguishers available. The most common type associated with RVs is a B:C type; a dry powder extinguisher containing sodium bicarbonate. All motorized RVs are required to have at least one 10B:C extinguisher while towable RVs require one 5B:C extinguisher at a minimum. As mentioned above, most safety experts recommend a minimum of three extinguishers in or on all recreation vehicles. The number associated with the type indicates how many square feet that extinguisher can effectively cover. So a single 10B:C extinguisher can be used over an area of 10 square feet against a type B or type C fire.

All fire extinguishers require periodic inspections to be sure they are fully charged and in proper working condition. If any doubt exists, always have them inspected by a professional fire safety company. B:C extinguishers can and do leak pressure over time.

Proximity Tester

A simple device called a proximity tester can easily determine if stray alternating current (AC) electricity is present on the skin or other metallic component of the RV. Many RVers carry a voltmeter or VOM and possibly a plug-in circuit analyzer with them as they travel, and that's a good thing. But open grounds, reversed polarity and other

A proximity tester detects stray alternating current (AC) on metallic surfaces from faulty wiring and can protect you against accidental electrocution.

electrical anomalies associated with faulty extension cords or miswired campground pedestals can result in deadly voltage on the skin of an RV. A non-contact, proximity tester will indicate when voltage above 20-volts AC is present.

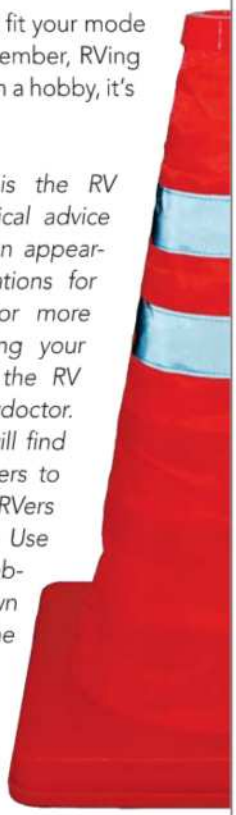
If stray voltage is detected on the metallic parts of any RV, immediately disconnect from shore power and call a Certified or Master Certified RV technician and contact the campground administrator or maintenance staff. Do not plug the RV in until the fault is located and repaired. Relatively inexpensive, non-contact proximity test devices should be found in every RVers tool kit.

Non-Technical Safety Equipment

Safety flares, traffic cones, triangles, warning lamps, and similar devices are also important to consider when traveling in an RV in case of an on-the-road breakdown. Every Camping World store will have an assortment of these non-technical safety devices in stock, so take a casual stroll down that aisle the next time you visit your local store to see

which devices best fit your mode of RVing. And remember, RVing is indeed more than a hobby, it's a lifestyle! H

Gary Bunzer is the RV Doctor. His technical advice columns have been appearing in RV publications for over 30 years. For more tips on maintaining your RV and enjoying the RV lifestyle, visit rvdoctor.com, where you will find hundreds of answers to questions from RVers seeking his advice. Use the link on the website to send your own questions to the RV Doctor.



High-visibility safety cones tell passing vehicles to steer clear when your RV is on the side of the road.