

KNW-152
Gasoline Storage and Generators Maintenance
Written by Kerry Mallory-AE5JY

In an emergency situation, having a supply of gasoline will be most helpful for your generator or automobile. This may prompt you to think about storing gasoline.

Safe Storage

Use a UL listed and FM approved gasoline safety can. Don't use those cheap plastic gas containers. A safety can will have the following features:

- Galvanized steel construction to withstand physical abuse,
- Handle to allow easy pouring and carrying the heavy load,
- A pressure relief cap that vents automatically to prevent rupture or explosion in case of fire,
- Spring loaded self-closing lid to prevent spills and controls vapor release,
- Internal flame arrestor prevents flashback ignition.

There are two types of cans. Type 1 cans use the same opening for filling and pouring. Type 2 cans have one spout with a flexible metal hose for pouring and a separate opening for filling. Type 1 cans will be less expensive. These safety cans are typically 5 gallons. You can find 1 gallon cans as well but not as easily.

Cans should not be filled beyond their designed capacity which is about 95% of their total capacity. This will allow room for the gasoline to expand due to higher temperatures.

If you plan to store gasoline you should add a preservative. Add the preservative to the fresh gasoline right after you fill the can. The makers of Sta-Bil state their product will preserve gasoline for 12 months or, if you double the dose, two years. Fuel stabilizers are sold in hardware, home supply, automotive, and outdoor equipment stores. With stabilizer, theoretically gasoline can last up to six months but preferably should be used within three months. After three months of storage, use the gas in your automobile and purchase new fuel. Preservatives will NOT restore spoiled gasoline. Spoiled gasoline needs to be disposed of at an approved hazardous waste facility.

Do not store gasoline near your generator, in, or near your house. The gasoline should be stored in a separate well ventilated area with no electrical equipment and no open flames. Keep a fire extinguisher for flammable liquids on hand.

Some municipalities limit the amount of gas you can store at home, so check with your local fire department. It's a good idea to rotate your fuel stock, putting the older gas in your other outdoor power equipment or automobile, refilling that can and putting it at the back of your fuel stash.

Generator Maintenance

Avoid storing fuel in your generator's tank. With the use of 10% Ethanol, the fuel will break down within a few weeks and form gum and varnish in your fuel system that will clog your carburetor, leading to a costly repair. When your generator is going to be stored for a period of time: run the generator for about 10 minutes, then turn off or stop the supply of fuel. This will cause the generator to run out of gas and in the process drain most of the fuel from the

carburetor. If your carburetor has a drain plug, use it to completely drain the fuel from the carburetor bowl.

Next drain your generator fuel tank. Store the generator dry of fuel. Remember to replace the engine oil every 50 hours. You may ask why every 50 hours. Well by then the engine will have run the equivalent of around 3000 miles. The oil breaks down faster in a generator than an automobile.

Amount of Fuel

How much gas you store will depend on the fuel consumption rate of your specific generator. The higher the wattage capacity of your generator, the more gas it will burn per hour of operation. Figure on using your generator six to eight hours out of each day. For typical household generators rated around 2,500 to 3,500 watts, 25 gallons of fuel is enough to sustain your critical systems for three to four days. Most generators will consume at least 1 gallon of gas per hour.

Alternative Fuel

You may consider converting your generator to tri-fuel by the addition of a carburetor conversion kit. These kits will allow your generator to run on gasoline, propane, or natural gas. The generator actually runs cleaner and the oil lasts longer on natural gas. These kits are fairly easy for a handy person to install and are designed specifically for your generator's engine. The kits can be purchased online. A 20 lb propane bottle, like commonly used on a grill, is the equivalent of 5 gallons of gasoline.