

Gasoline Storage and Generator Maintenance

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In an emergency, 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

If possible, use a UL listed approved gasoline safety can. A safety can will have the following features:

- Galvanized steel construction to withstand physical abuse,
- A 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,
- A spring loaded self-closing lid to prevent spills and that controls vapor release,
- An internal flame arrester that prevents flashback ignition if a fire occurs.

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 that 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, gasoline can theoretically 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 or in/near your house. The gasoline should be stored in a separate well-ventilated area with no electrical equipment, AC switches and no open flames. Keep a fire extinguisher for flammable liquids on hand but not in the same storage shed.

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, adding the stabilizer and putting it at the back of your fuel stash – first in, first out.

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 to warm the system, then
- Turn off or stop the supply of fuel. After the motor sputters to a stop indicating that the carburetor and supply lines are empty,
- Drain the gas tank. If your tank doesn't have a plug or drain valve, use a siphon to get as much fuel out as possible.

ALWAYS store the generator dry of fuel.

Remember to replace the engine oil every 50 hours of operation. 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 using your generator six to eight hours in a 24-hour period. 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. For radio work, most generators will consume at about 1 gallon of gas per hour so plan on eight gallons per 24 hours of operation.

Alternative Fuels

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 runs cleaner, and the oil lasts longer on natural gas. These kits are 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, commonly used on barbecue grills, is the equivalent of 5 gallons of gasoline. Natural gas is ideal when available, generally at fixed locations like EOCs, fire stations, etc. Check to determine if you will be allowed to tap into their feed and to determine the hookup hardware required.