



Portable Generator Safety Tips

Portable generators are useful when temporary or remote electric power is needed, but they are hazardous when used improperly. The primary hazards to avoid when using a generator are carbon monoxide (CO) poisoning from the toxic engine exhaust, electric shock or electrocution, and fire from fuels.

Carbon Monoxide Hazards



NEVER use a generator in enclosed or partially-enclosed spaces. Generators can produce high levels of carbon monoxide (CO) very quickly. When you use a portable generator, remember that you cannot smell or see CO. Even if you can't smell exhaust fumes, you may still be exposed to CO.

If you start to feel sick, dizzy, or weak while using a generator, get to fresh air **RIGHT AWAY. DO NOT DELAY.** The CO from generators can rapidly lead to full incapacitation and death. If you continue to have these symptoms, get medical attention immediately. Inform medical staff that CO poisoning is suspected.

Follow these safety tips to protect against carbon monoxide (CO) poisoning:

- **NEVER** use a generator indoors including in homes, garages, basements, crawl spaces, and other enclosed or partially-enclosed areas, even with ventilation. Opening doors and windows or using fans will not prevent CO build-up in the home.
- Follow the safety instructions that come with your generator. Locate the unit outdoors and away (downwind) from doors, windows, and vents that could allow CO to come indoors.
- Install battery-operated CO alarms or plug-in CO alarms with battery back-up in your home, according to the manufacturer's installation instructions. The CO alarms should be certified to the requirements of the latest safety standards for CO alarms (UL 2034, IAS 6-96, or CSA 6.19.01).
- Test your CO alarms frequently and replace dead batteries.

Electrical Hazards



Follow these tips to protect against shock and electrocution:

- Keep the generator dry and do not use in rain or wet conditions. To protect from moisture, operate it on a dry surface. Dry your hands if wet before touching the generator. To prevent electrical shock, make sure your generator is properly grounded. Consult your manufacturer's manual for correct grounding procedures.
- Plug appliances directly into the generator. Or, use a heavy duty, outdoor-rated extension cord that is rated (in watts or amps) at least equal to the sum of the connected appliance loads. Check your appliances ratings, and add them up, do not exceed the generator's rating. Check that the entire cord is free of cuts or tears and that the plug has all three prongs, especially a grounding pin. Protect cords from damage by doors, windows or other pinch hazards.
- **NEVER** try to power the house wiring by plugging the generator into a wall outlet, a practice known as "back-feeding." This is an extremely dangerous practice that presents an electrocution risk to utility workers and neighbors served by the same utility transformer. It also bypasses some of the built-in household circuit protection devices.
- If you must connect the generator to the house wiring to power appliances, have a qualified electrician install the appropriate equipment in accordance with local electrical codes. Or, check with your utility company to see if it can install an appropriate power transfer switch.
- For power outages, permanently installed stationary generators are better suited for providing backup power to the home. Even a properly connected portable generator can become overloaded. This may result in overheating or stressing the generator components, possibly leading to a generator failure.

Don't overload the generator.

Do not operate more appliances and equipment than the output rating of the generator. Overloading your generator can seriously damage your valuable appliances and electronics. Prioritize your needs. A portable electric generator should be used only when necessary, and only to power essential equipment.



Use the proper power cords.

Plug individual appliances into the generator using heavy-duty, outdoor-rated cords with a wire gauge adequate for the appliance load. Overloaded cords can cause fires or worn shielding. Make sure the cords from the generator don't present a tripping hazard. Don't run cords under rugs where heat might build up or cord damage may go unnoticed.



Turn off all equipment powered by the generator before shutting down your generator.

Fire Hazards



Follow these tips to prevent fires:

Do not store fuel indoors or try to refuel a generator while it's running.

Gasoline (and other flammable liquids) should be stored outside of living areas in properly labeled, non-glass safety containers. They should not be stored in a garage if a fuel-burning appliance is in the garage. The vapor from gasoline can travel invisibly along the ground and be ignited by pilot lights or electric arcs caused by turning on the lights. Avoid spilling fuel on hot components. Put out all flames or cigarettes when handling gasoline. Always have a fully charged, appropriate fire extinguisher located near the generator and in the fuel storage area. Familiarize yourself with the proper use of the fire extinguisher. Never attempt to refuel a portable generator while it's running.

- Before refueling the generator, turn it off and let it cool down. Gasoline spilled on hot engine parts could ignite.

Avoid getting burned.

Many generator parts are hot enough to burn you during operation.

Read and adhere to the manufacturer's instructions for safe operation.

Don't cut corners when it comes to safety. Carefully read and observe all instructions in your portable electric generator's owner manual, it could save your life.

Source: Miami-Dade County Office of Safety, September 2005.

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