



Kahnawa:ke Labor Office  
Department of  
Occupational Safety and Health

## Portable Generator Safety



Generate Power  
Not Hazards

## A Cooperative Effort

*The Kahnawa:ke Department of Occupational Safety and Health along with Mohawk Self Insurance are working closely to reduce workplace injuries. Workplace injuries cost employers, employees, insurance providers and families thousands of dollars each year. By providing the tools through promoting safety, providing training and or training materials and continued safety awareness, together we can reduce workplace injuries.*



P.O. Box 720  
Kahnawa:ke Mohawk Territory  
via Quebec, Canada J0L 1B0

Phone: (450) 632-9595  
Fax: (450) 638-9974  
E-mail: [chelsea.phillips@mck.ca](mailto:chelsea.phillips@mck.ca)

# “Safety” Is No Accident



Kahnawa:ke Labor Office  
Department of  
Occupational Safety and Health

P.O. Box 720  
Kahnawa:ke Mohawk Territory  
via Quebec J0L1B0  
Phone: (450) 632-9595  
Fax: (450) 638-9974  
E-mail: [Louis.stacey@mck.ca](mailto:Louis.stacey@mck.ca)

## Electrical Hazards

Portable generators are internal combustion engines used to generate electricity. They are useful when temporary or remote power is needed. In places like worksites, at home during power outages, disaster sites, camping areas and for providing power to cabins, but they can be hazardous if not used properly. The primary hazards which must be avoided when using generators are: shock and electrocution, carbon monoxide poisoning, fire and burns.

The same hazards are present with electricity created from generators as from normal utility-supplied electricity. The following precautions can prevent shock and electrocution hazards:

- ◆ Keep generator dry and use on dry surfaces. Protect generator from rain or wet conditions with a canopy.
- ◆ Make sure generator is properly grounded. (Refer to manufacturers instructions for proper grounding methods)

- ◆ Never attach a generator directly to the electrical system of a structure (home, office, trailer, etc.) unless a qualified electrician has properly installed it with an appropriate transfer switch.
- ◆ Never plug a generator into a wall outlet. (\* Also known as backfeeding)
- ◆ Plug appliances directly into generator using manufacturer supplied cords or heavy duty 3-prong grounded extension cords.
- ◆ Never use damaged or frayed cords.
- ◆ Do not use electrical equipment / tools which have been submerged in water.
- ◆ Use ground fault circuit interrupters (GFCIs), especially in damp areas and areas containing conductive materials such as metal decking.
- ◆ Regardless of GFCI use, equipment used in wet or damp areas must be listed and approved for those conditions.
  - ◆ **Plugging a generator into a wall outlet or improperly connecting a generator to house wiring can cause an electrocution risk to utility workers and others served by the same utility.**

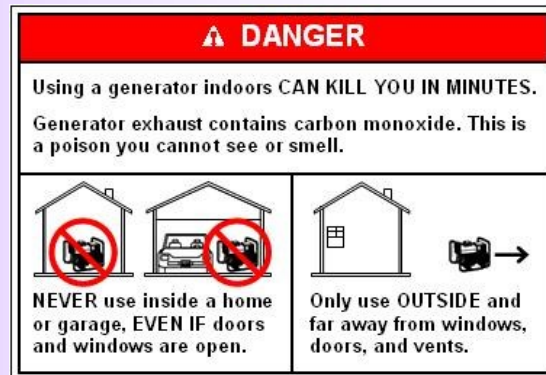
## Carbon Monoxide (CO)

Carbon monoxide is a colorless, odorless, toxic gas. When used in a confined space, generators can produce high levels of CO within minutes. Every year people die from CO poisoning due to

### using a generator indoors or in partially enclosed or confined spaces along with inadequate ventilation of generators.

- ◆ Never use a generator indoors or in enclosed spaces such as homes, cabins, garages, basements, crawlspaces, sheds or similar areas.
- ◆ Only use generators OUTDOORS and place far away from doors, windows and vents which could allow CO to enter and build up in occupied spaces.
- ◆ If you or others start to feel sick or show symptoms of CO poisoning, GET TO FRESH AIR IMMEDIATELY.
- ◆ Symptoms include shortness of breath, dizziness, fatigue, headaches and nausea.

**Remember you cannot see or smell CO, even if you do not smell fumes you may still be exposed to carbon monoxide gas.**



## Fire and Burn Hazards

**Fires are a major cause of loss of life and property. Generators not used or maintained properly can result in fires which could be devastating. The following are a few tips to follow which will prevent your generator from catching on fire.**

- ◆ Operation of a generator may create sparks that can start fires around dry vegetation. A spark arrestor may be required, the operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.

**Fuel and fuel vapors are highly flammable and extremely explosive. Fire or explosion can cause severe burns or death.**

- ◆ Turn the generator off and let it cool for at least two minutes before removing the fuel cap.
- ◆ Loosen the cap slowly to relieve pressure in the tank.
- ◆ Only fill or drain fuel outdoors in a well-ventilated area.
- ◆ DO NOT overfill the fuel tank.
- ◆ Always keep fuel away from sparks, open flames, pilot lights, heat and other sources of ignition.

- ◆ DO NOT light or smoke cigarettes.
- ◆ Gasoline and other generator fuels should be stored and transported in approved non glass containers that are properly marked labeled.
- ◆ When transporting or servicing generator, make sure the fuel shutoff valve is in the OFF position and disconnect the sparkplug.
- ◆ Keep fuel containers away from heat

## Noise and Vibration Hazards

generating devices.

- ◆ DO NOT store fuel in your home, store fuel away from living areas.
- ◆ DO NOT overload the generator.
- ◆ When storing the generator, store away from sparks, open flames, pilot lights, heat and other sources of ignition.
- ◆ When operating the generator, DO NOT move or tip the generator during operation. DO NOT tip the generator or allow fuel or oil to spill. **Generator engines vibrate and create noise. Excessive noise and vibration could cause hearing loss and fatigue that may affect your job performance.**
- ◆ Keep portable generators as far away as possible from the work areas and gathering spaces.
- ◆ Wear hearing protection as required.