

Contact Safety

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Mine Safety & Training Section

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Portable Generators

There are a great many uses for portable generators in mining. Nationwide there are deaths reported each year because the basic safety rules were not followed. Please, read the warnings and consider the following; Always read and follow the manufactures operating instructions before running a generator.

Carbon Monoxide (CO) Hazards

When used in a confined space, exhaust should be vented to the outside, generators can produce high levels of CO within minutes. When you use a portable generator, remember you cannot see or smell CO. Even if you do not 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. CO from generators can kill you very fast.

Electrical Hazards

Generators pose a risk of shock and electrocution, especially if they are used in wet conditions. If you must use a generator when it is wet outside, protect it from moisture and place it on a dry surface and make sure water cannot pool or run under the generator.

Also make sure your hands are dry before touching the generator. Use extension cords that are designed for outdoor usage, ensure they are designed for the wattage to be used, have all three prongs in place, and check cords for cuts and broken insulation. Make sure cords are uncoiled, coiled cords can build heat and cause a fire or failure. If cords must span a walkway or road way make sure they are protected. At least 5 feet of clearance should be maintained on all sides of the generator.

Fueling Practice

Never overfill the generator, always leave room for fuel expansion. Never fuel a generator while in operation. Always let it cool down a few minutes, remember the flash point for gasoline is 45 degrees below zero, and diesel fuel is 125 degrees above zero.

National Electrical Code

Adopted in all 50 states, the NEC is the benchmark for safe electrical design, installation, and inspection to protect people and property from electrical hazards.

In Summary:

Before starting a generator make sure there is proper ventilation. Make sure generator is on a dry, firm surface. Make sure generator is grounded as per manufactures and NEC250 recommendations. Also, make sure generator is not near any flammable material.

FPN: Portable generators that supply fixed wiring systems must be grounded in accordance with NEC 250.30 for separately derived systems if they supply a transfer switch that switches the neutral.

It is very important to follow manufactures safety recommendations.

For more information please refer to NEC 250

NEC 250.34 Generators- Portable and Vehicle Mounted

(A) Portable Generators. The frame of a portable generator is not required to be grounded to earth if:

- (1) The generator only supplies equipment or cord and plug – connected equipment through receptacles mounted on the generator, or both and
- (2) The metal parts of the generator and the grounding terminals of the receptacles are bonded to the generator frame.

(B) Vehicle - Mounted Generators. The frame of the generator is not required to be grounded to earth if:

- (1) The generator frame is bonded to the vehicle frame.
- (2) The metal parts of the generator and the grounding terminals of the receptacles are bonded to the frame.

Ground fault circuit interpreters (GFCI) type receptacles would be an added safety step to help prevent shock.



QUIZ

1. Carbon Monoxide is not a serious safety concern
True _____ or False _____
2. It is ok to fuel a generator while running?
True _____ or False _____
3. Cords should be _____ where they span walkways or road ways.
4. The flash point of gasoline is _____ degrees below zero.
5. The flash point of diesel fuel is _____ degrees above zero.
6. Extension cords should always be completely uncoiled to help stop heat buildup.
True _____ or False _____
7. You can be effected by Carbon Monoxide without seeing or smelling it.
True _____ or False _____

8. 5 feet of clearance should be maintained on all sides of the generator.

True _____ or False _____

If there is any specific topics you would like to learn more about please write on line below.

Employee: _____ Date: _____

Mine/Company: _____

Address: _____

City: _____ State: _____ Zip: _____