

Carbon Monoxide Hazards

Small Gasoline-Powered Engines and Tools

The National Institute for Occupational Safety and Health (NIOSH) has published an alert to warn people about carbon monoxide (CO) poisoning from small gasoline-powered engines and tools. The alert was developed jointly by NIOSH, the Colorado Department of Public Health and Environmental (CDPHE), the U.S. Consumer Product Safety Commission (CPSC), the Occupational Safety and Health Administration (OSHA), and the U.S. Environmental Protection Agency (EPA).

Small Gasoline-powered engines and tools present a serious health hazard. These engines produce high concentration of carbon monoxide, a poisonous gas that can cause illness, permanent neurological damage, and death. Because it is colorless, odorless, and non-irritating, carbon monoxide (CO) can overcome exposed people without warning. Often, there is little time before they experience symptoms that inhibit their ability to seek safety. Prior use of equipment without incident has sometimes given the users a false sense of safety; such users have been poisoned on subsequent occasions.

Recommendations for preventing carbon monoxide poisoning have been developed by the joint agency for employers, equipment users, tool rental agencies, and tool manufacturers.

All employees and equipment users should:

- Prohibit the use or operation of gasoline-powered engines or tools inside buildings or partially enclosed areas unless gasoline engines can be located outside and away from air intakes. Use of gasoline-powered tools inside, where the engine exhaust can accumulate, can be fatal.
- Learn to recognize the signs and symptoms of carbon monoxide overexposure; headaches, nausea, weakness, dizziness, visual disturbances, change in personality, and loss of consciousness. Any of the signs or symptoms can occur within minutes after the equipment is turned on.
- Consider the use of tools powered by electricity or compressed air, if they are available and can be used safely.
- Use personal carbon monoxide monitors where potential sources of carbon monoxide exists. These monitors should be equipped with audible alarms to warn workers when carbon monoxide concentrations exceed permissible levels.
- Conduct a workplace survey to identify all potential sources of carbon monoxide exposures.
- Educate workers about the source and conditions that would result in carbon monoxide poisoning, as well as the symptoms and controls of carbon monoxide exposure.

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- Substitute gasoline-powered equipment with less hazardous equipment, if possible. Use equipment that allows for the placement of gasoline-powered engines outdoors at a safe distance from the air entering the building.
- Monitor employee carbon monoxide exposures to determine the extent of the hazard.

Equipment users should also:

- Immediately turnoff equipment and leave the area, if symptoms occur.
- Call 911 or applicable local emergency number of medical attention or assistance, if symptoms occur. “Do Not” drive a motor vehicle – get someone else to drive to a health care facility.
- Stay away from the work area until the tools have been turned off and carbon monoxide concentrations have fallen below acceptable levels.
- Watch coworkers for signs of carbon monoxide toxicity.

Tools and equipment manufacturers should:

- Design tools and equipment that can be used safely indoors.
- Provide warning labels for existing and new gasoline-powered equipment. For example, “Warning - Carbon Monoxide Produced During Use Can Kill. Do Not Use Indoors Or In Other Inadequately Ventilated Areas.”
- Provide recommendations for equipment maintenance to reduce carbon monoxide emissions.
- Recommend the use of portable, audible carbon monoxide monitors (CO) with small gasoline-powered engines. Tool rental agencies should: place warning labels on gasoline-powered tools and equipment. For example: “Warning - Carbon Monoxide Produced During Use Can Kill. Do Not Use Indoors Or In Other Inadequately Ventilated Areas.”
- Tell renters that the tool/equipment should not be used indoors and explain why.
- Recommend safer tools for the intended use, if available.
- Have portable, audible carbon monoxide (CO) monitors for rent and encourage their use.
- Provide renters with educated materials similar to this information sheet.

Contact your local Great American Loss Prevention Specialist for additional information.

The loss prevention information and advice presented in this brochure are intended only to advise our insureds and their managers of a variety of methods and strategies based on generally accepted safe practices, for controlling potentially loss producing situations commonly occurring in business premises and/or operations. They are not intended to warrant that all potential hazards or conditions have been evaluated or can be controlled. They are not intended as an offer to write insurance coverage for such conditions or exposures, or to simply that Great American Insurance Company will write such coverage. The liability of Great American Insurance Company is limited to the specific terms, limits and conditions of the insurance policies issued.
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