Vermont Department of Public Safety

DIVISION OF FIRE SAFETY

OFFICE OF THE STATE FIRE MARSHAL, THE STATE FIRE ACADEMY AND THE STATE HAZ-MAT TEAM

www.firesafety.vermont.gov

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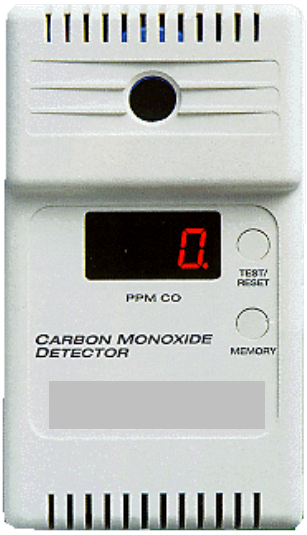
CARBON MONOXIDE ALARMS

CODE INFORMATION SHEET

2012

Unintentional carbon monoxide (CO) poisoning sends an estimated 10,000 people to the hospital emergency rooms for treatment each year nationwide, and claims more than 200 lives. Heating appliances that are not working properly are the major cause of unintentional carbon monoxide poisoning in Vermont. Other common sources include emergency generators or space heaters and motor vehicles left running in attached garages. Over the last five years there were over 800 CO incidents reported by fire departments in Vermont including 6 unintentional deaths from CO poisoning.



Carbon Monoxide Alarms (Detectors)
CO alarms are very reliable and provide excellent protection from CO. The installation of CO alarm gives a warning to people in a building of unhealthy or dangerous levels of CO before the symptoms of CO poisoning occur.

A CO alarm should be centrally located outside of each sleeping area in the immediate vicinity of the bedrooms.

Each CO alarm should be located on the wall, ceiling, or other location as specified in the manufacturer's installation instructions that accompany the unit.

A CO detector is not designed to detect smoke or heat.

A CO detector is not a substitute for a properly installed smoke detector. Combination smoke detector and CO detectors are available and should also be installed in accordance with the manufacturers instructions.

It is very important to be aware of the early signs of CO poisoning. Exposure to CO can mimic flu systems - headaches, dizziness, disorientation, nausea and fatigue. Higher levels of exposure will result in disorientation and drowsiness, leading to unconsciousness and death. Often the symptoms will be less when the person exposed to carbon monoxide leaves the building, only to have the symptoms reoccur when the person re-enters the building.

RULES REGARDING CO DETECTION AND PREVENTION

Act 19 of the 2005 Legislative Session established requirements for CO detection and prevention for both single-family dwellings and public buildings.

The law specifies that beginning July 1, 2005 new owner occupied single-family dwellings, and dwellings that are sold or transferred, must have a CO alarm installed in the immediate vicinity of any bedrooms. New construction must have CO alarms that are electrically wired in with battery back up.

Any residential buildings in which people sleep, including hotels, motels, and tourist homes, apartments and condos whether the units are owned or leased or rented, require CO alarms.

The National Fire Protection Association standard (NFPA 720) provides guidance on required locations for CO alarms CO detectors must be centrally located outside of each separate sleeping area in the immediate vicinity of the bedrooms. If a hall is more than 40 feet (12 meters) long,

Additional information on back

Combination Smoke and Carbon Monoxide Detectors - The law and the codes allow the use of photoelectric and carbon monoxide combination alarms.

Detectors that do not work cannot provide early warning and save you from Carbon Monoxide Poisoning. Keep alarms clean, and test them weekly. Replace detectors immediately if they are not working properly.

How long will my CO alarm last?
Like most electrical devices, CO alarms wear out. The life span for a CO Alarm is about five (5) years, after which it should be replaced.

You may want to write the purchase date with a marker on the back of your unit. That way, you'll know when to replace it. Always follow the manufacturer's instructions for replacement.

The dangers of carbon monoxide exposure depend on a number of variables, such as the occupant's health, activity level, time of exposure, and initial carboxyhemoglobin (COHb) level. Experience has shown that hazardous concentrations of carbon monoxide can accumulate in a residence, generally from improperly operating heating appliances, insufficient make-up air into the residence or space, or blocked chimneys or vents. However, there are many other potential sources of carbon monoxide within a home, including the following:

(1) Malfunctioning fossil fuel appliances
(2) Wood stoves
(3) Fireplaces
(4) Idling automobiles in attached garages
(5) Portable equipment such as gasoline-powered lawn and garden equipment
(6) Barbecues

Carbon monoxide is odorless, tasteless, and colorless; therefore, its presence is undetectable by smell, taste, or sight. Carbon monoxide alarms meeting the requirements of ANSI/UL 2034, and installed in accordance with the standards provide a significant level of protection against fatal carbon monoxide exposure.

Although carbon monoxide warning equipment might respond to gases produced by unwanted fires, CO alarms are not substitutes for smoke alarms and vice versa. Know the difference between the sound of smoke alarms and the sound of CO alarms.

Requirements of the Vermont Fire and Building Safety Codes & Vermont Law

NFPA 101

101:9.8- **Carbon Monoxide Detection**: shall be installed in accordance with NFPA 720, Standard for the Installation of Carbon Monoxide Warning (CO) Equipment in Dwelling Units,

101:9.8.1 -**Power for Carbon Monoxide Alarms**: All newly installed carbon monoxide alarms (detectors) in multiple unit dwellings, lodging or rooming houses, hotels and dormitories, or other buildings in which people sleep, shall be directly wired to a non-dedicated electrical branch circuit for the building and by battery. Carbon monoxide detectors in one-two family dwellings that existed on October 22, 2005, shall be permitted to be powered by any approved source (Plug in style) .

NFPA 720 covers the selection, application, installation, location, testing and maintenance of carbon monoxide warning equipment in all buildings in which people sleep.

720: 9.4.1.1 A carbon monoxide alarm or detector shall be centrally located outside of each separate sleeping area in the immediate vicinity of the bedrooms.

720: 9.4.1.2 Each alarm or detector shall be located on the wall, ceiling, or other location as specified in the installation instructions that accompany the unit.

Vermont Statutes

Title 9: Commerce and Trade Chapter 77: SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS § 2882. Installation

(a) A person who constructs a single-family dwelling shall install one or more smoke detectors, and one or more carbon monoxide detectors in the vicinity of any bedrooms in the dwelling in accordance with the manufacturer's instructions. In a dwelling provided with electrical power, detectors shall be powered by the electrical service in the building and by battery.

(b) A single-family dwelling transferred by sale or exchange shall contain one or more smoke detectors and one or more carbon monoxide detectors powered by the electrical service in the building or by battery, or by a combination of both, and installed in accordance with the manufacturer's instructions.