

CARBON MONOXIDE ALARM HOME INSTALLATION

Carbon monoxide alarms, when properly installed, tested and maintained, are a valuable safety tool that can provide you and your family with warning to the presence of dangerous levels of carbon monoxide in your home. Treat the alarm signal as a real emergency each time.

If the alarm sounds and you are not experiencing any symptoms of carbon monoxide (CO) poisoning, press the reset button. If the alarm continues to sound, call the fire department immediately and leave your home until a professional checks to find the reason why the alarm sounded and any problems are fixed.

What is Carbon Monoxide (CO)?

Carbon monoxide is an invisible, odourless, colourless, tasteless and poisonous gas created when any carbon-based fuel is burned.

Symptoms of CO Poisoning

Common symptoms of CO poisoning include nausea, dizziness, muscle aches, vomiting, general weakness, loss of co-ordination, impaired judgment, confusion, drowsiness, headaches, or even death.

Carbon Monoxide in Homes

In the home, heating and cooking equipment are possible sources of carbon monoxide. Vehicles idling in an attached garage can produce dangerous levels of carbon monoxide. Back drafting chimneys and flues (common when ventilation fans are used in tightly sealed homes) may also allow combustion gases, including carbon monoxide, to enter the home.

Carbon Monoxide Home Alarms

The Alberta Building Code recognizes that the only means we have of warning occupants to the presence of carbon monoxide in the home is by installing carbon monoxide alarms in every new building that contains a residential occupancy and a fuel-burning appliance or an attached storage garage.



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To safeguard against the presence of CO gases that may place your life and the lives of your family at risk, the installation of CO alarms are also highly recommended for all existing homes.

Dual CO/Smoke Alarms

Carbon monoxide alarms do not serve as smoke alarms. However, it is important to note that dual CO/smoke alarms conforming to CAN/CSA-6.19, "Residential Carbon Monoxide Alarming Devices" and CAN/ULC-S531, "Smoke Alarms," are acceptable.

Spillage of Combustion Products

The Alberta Building Code addresses the potential for spillage from combustion appliances with requirements for makeup air and carbon monoxide alarms.

Depressurization caused by the principal ventilation system itself is not an issue in houses with balanced systems. However, appliances can malfunction and venting systems can fail.

Depressurization of the house by the ventilation system or other exhaust devices can cause the spillage of combustion products from certain types of combustion appliances. The types of appliances that are susceptible to pressure-induced spillage can generally be identified by the fact that they are vented through a natural draft chimney rather than through an arrangement of exterior venting that uses a fan to draw the products of combustion out of the house.

The likelihood of entry of CO is also increased if your house is depressurized in relation to the garage. This can readily occur due to the operation of exhaust equipment or simply due to the stack effect created by heating your home and when the temperature difference between outside and inside is the greatest.

Even at a relatively low level of depressurization, almost all fireplaces are spillage-susceptible. This also includes the ones with so called "airtight" glass doors and outside combustion air intakes, since most "airtight" doors are not really airtight. Even closed-type solid-fuel-burning appliances whose stoking doors are left open, can spill products of combustion into the house when operating in their "die down" or smoldering stages.

IMPORTANT: CO alarms provide a relatively low-cost means to warn occupants when depressurization is causing spillage of toxic combustion gases into a home.



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Carbon Monoxide Alarm Requirements

The Alberta Building Code states that certified carbon monoxide alarms are required in every building which contains a residential occupancy and also contains:

- a fuel-burning appliance; and/or
- an attached storage garage.

Labels found on certified carbon monoxide (CO) alarms are your assurance that the alarm was tested and that it conforms to established safety standards.

Carbon monoxide (CO) alarms must conform to requirements of the Canadian Standards Association CAN/CSA Standard 6.19 “Residential Carbon Monoxide Alarming Devices” as follows:

- Carbon monoxide (CO) alarms must be equipped with an integral alarm that satisfies the audibility requirements of CAN/CSA Standard 6.19 “Residential Carbon Monoxide Alarming Devices.”
- Carbon monoxide (CO) alarms must be mechanically fixed to a surface at a height recommended by the manufacturer.
- Carbon monoxide (CO) alarms must have no disconnect switch between the overcurrent device and the carbon monoxide alarm where the CO alarm is powered by the dwelling unit’s electrical system.

Both battery-operated (CO) alarms and (CO) alarms that are connected to the dwelling unit’s electrical system are acceptable.

There are several models on the market with different features such as power supply back up and indicators to let the user know when it needs to be replaced. Check your model type to ensure it has the features that you need.

Required Carbon Monoxide Alarm Locations

1. Where a room contains a solid fuel-burning appliance, a CO alarm conforming to CAN/CSA - 6.19-01, “Residential Carbon Monoxide Alarming Devices,” shall be mechanically fixed:
 - at the manufacturer’s recommended height where these instructions specifically mention solid-fuel-burning appliances; or
 - in the absence of specific instructions related to solid-fuel-burning appliances, on or near the ceiling.
2. Where a fuel-burning appliance is installed in a suite of residential occupancy, a CO alarm shall be installed:
 - inside each bedroom; or if outside the bedroom, within 5 m of each bedroom door, measured following corridors and doorways.



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3. Where a fuel-burning appliance is installed in a service room that is not in a suite of residential occupancy, a CO alarm shall be installed:
 - either inside each bedroom, or if outside the bedroom, within 5 m of each bedroom door, measured following corridors and doorways, in every suite of residential occupancy that shares a wall or floor/ceiling assembly with the service room; and
 - in the service room.
4. For each suite of residential occupancy that shares a wall or floor/ceiling assembly with a storage garage or that is adjacent to an attic or crawl space to which the storage garage is also adjacent, a CO alarm shall be installed:
 - inside each bedroom; or if outside the bedroom, within 5 m of each bedroom door, measured following corridors and doorways.

Homes containing a secondary suite must have carbon monoxide alarms in both the main dwelling and the secondary suite. These must be hard-wired and inter-connected so they will operate in unison.

Contact

Community and Technical Support branch of Municipal Affairs:

Hours: 8:15 am to 4:30 pm (open Monday to Friday, closed statutory holidays)

Toll free: 1-866-421-6929

Email: safety.services@gov.ab.ca

Please contact your local Fire Department for any questions regarding this Safety Tip.

