

Construction Codes Advisory

Promoting construction of safe, healthy, habitable buildings

Carbon Monoxide and Smoke Alarms – Protecting People in Their Homes

Information at a Glance

Effective July 1, 2022, all *buildings* in Saskatchewan with sleeping rooms are required to provide early warning protection against the effects of carbon monoxide (CO) poisoning, smoke and fire.

The installation of CO and smoke alarms is the most effective way of accomplishing this requirement.

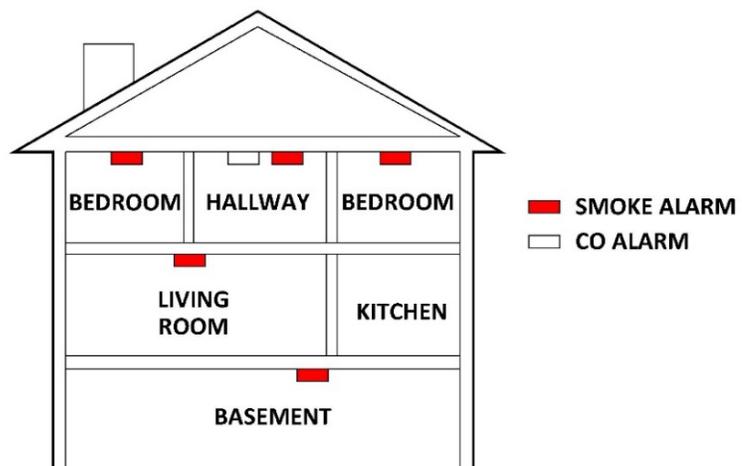
When a *building* with sleeping rooms contains a fuel-burning *appliance*, or an attached vehicle parking garage, CO alarms must be installed:

- inside each sleeping room; **OR**
- outside each sleeping room within 5 meters (16 feet) of each sleeping room door.

When a *building* contains sleeping rooms, smoke alarms must be installed:

- on each floor level of a *building*, including the level with sleeping rooms, with the smoke alarm located between the sleeping rooms and the remainder of the floor; **AND**
- inside each sleeping room.

An example house, that meets the new requirements for CO alarms and smoke alarms, is shown below.



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Owners with existing CO alarms, smoke alarms and/or combination CO/smoke alarms must replace the existing devices at their expiry dates. If the original expired alarm was hardwired into a normal household electrical connection and was interconnected the replacement alarm must be hardwired into a normal household electrical connection and be interconnected. A replacement alarm must also be provided with battery backup if the original alarm had a battery backup.

For devices that connect to a normal household electrical connection; a tamper-resistant, non-replaceable 10-year battery is the preferred battery choice when compared to devices that utilize a replaceable battery, such as a 9-volt, AAA, AA, C or D type battery.

Owners installing CO alarms, smoke alarms and/or combination CO/smoke alarms in locations where not previously installed, must only use alarms powered with a tamper-resistant non-replaceable 10-year battery.

All alarms must be fastened at a height recommended by the manufacturer, or in the absence of manufacturer's recommendations, installed on or near the ceiling. All alarms should be tested regularly.

Owner Responsibilities for CO Alarms and Smoke Alarms

The *owner* of each *building*, or the *owner* of each *suite* within a *building*, that contains a sleeping room, is responsible for ensuring the required CO and smoke alarms are installed, maintained and tested in accordance with these requirements.

Definitions

Suite means a single room or series of rooms of complementary use, operated under a single tenancy, and includes dwelling units, individual guest rooms in motels, hotels, boarding houses, rooming houses and dormitories as well as individual stores and individual or complementary rooms for *business and personal services occupancies*. (When used in this advisory, it does not include application to individual stores and individual or complementary rooms for *business and personal services occupancies*.)

Appliance means a device to convert fuel into energy and includes all components, controls, wiring and piping required to be part of the device by the applicable standard referred to in this Code.

Carbon Monoxide Alarm Questions and Answers

What do Saskatchewan residents need to know about carbon monoxide?

CO is an invisible, odourless and tasteless gas that can build up to lethal concentrations in an enclosed space without the occupants being aware of it. CO is commonly produced by malfunctioning fuel-burning *appliances* or vehicle exhaust. Exposure to CO can cause flu-like symptoms such as headaches, nausea, dizziness, and more serious effects such as confusion, drowsiness, loss of consciousness and death.

CO poisoning is a threat to Saskatchewan residents. Between 2018 and 2020, an average of 1,200 CO incidents were reported annually to SaskEnergy. Between 2015 and 2019, the Saskatchewan Coroners Service reported 16 accidental deaths attributed to CO poisoning.

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What are the common sources of carbon monoxide in a *building*?

CO forms when a fuel-burning *appliance* converts fuel to heat. All *buildings* that have a residential occupancy, and that contain a fuel-burning *appliance*, and/or an attached vehicle parking garage, must be equipped with CO alarms. This is due to the potential buildup of CO gas due to fuel-burning *appliance* operation or vehicle exhaust emissions.

What types of CO alarms are acceptable?

All CO alarms must conform to CAN/CSA-6.19, “Residential Carbon Monoxide Alarming Devices”.

What should an *owner* do with existing hard-wired and interconnected CO alarms?

Existing hard-wired and interconnected CO alarm systems that contain more than one hard-wired and interconnected CO alarm device must be maintained.

If on July 1, 2022, an *owner’s* existing hard-wired and interconnected CO alarm system has alarms that have not exceeded the expiry date listed on the device, then these alarms are permitted to remain until they have reached their expiry date.

If on July 1, 2022, a CO alarm has reached its expiry date, it must be replaced.

What if an *owner* has existing hard-wired and interconnected CO alarms that are not in all required locations?

The *owner* will need to install additional CO alarms to meet these requirements.

What if an *owner* doesn’t have any existing CO alarms?

The *owner* will need to install new CO alarms to meet these requirements. In this case, the new CO alarms do not need to be hard-wired and do not need to be interconnected.

Smoke Alarm Questions and Answers

What type of smoke alarms are acceptable?

All smoke alarms must conform to CAN/ULC-S531, “Smoke Alarms”

What should an *owner* do with existing hard-wired and interconnected smoke alarms?

Existing hard-wired and interconnected smoke alarm systems, that contain more than one hard-wired and interconnected smoke alarm device must be maintained.

If on July 1, 2022, an *owner’s* existing hard-wired and interconnected smoke alarm system has smoke alarm devices that do not exceed the expiry date listed on the device, then these alarms are permitted to remain until they have reached their expiry date.

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If on July 1, 2022, a smoke alarm has reached its expiry date, it must be replaced.

What if an *owner* has existing hard-wired and interconnected smoke alarms that are not in all required locations?

The *owner* will need to install additional smoke alarms to meet the requirements. In this case, the additional smoke alarms do not need to be hard-wired and interconnected with the existing system.

What if an *owner* doesn't have any existing smoke alarms?

The *owner* will need to install new smoke alarms to meet the requirements. In this case, the new smoke alarms do not need to be hard-wired and do not need to be interconnected.

Combination CO/Smoke Alarms

Combination CO/smoke alarms can serve a dual purpose of detection and warning for both CO and smoke. They can also provide cost savings where two separate devices are required, such as outside each sleeping room within 5 meters (16 feet) of each sleeping room door. Alternatively, combination CO/smoke alarms may be placed in any location that either a CO alarm or smoke alarm is required.

All combination CO/smoke alarms must conform to both CAN/CSA-6.19, "Residential Carbon Monoxide Alarming Devices" and CAN/ULC-S531, "Smoke Alarms".

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