

**REQUIREMENTS FOR PROPANE CYLINDERS USED WITH  
BARBECUES and OTHER PORTABLE APPLIANCES**

**Subject: Outdoor Propane Appliances located on Decks and Balconies**

This bulletin has been jointly developed by Safety Services and the Gas Technical Council on behalf of the Fire Technical Council to inform owners and occupants in multi-storey residential buildings of the requirements associated with the installation of barbecues on “**Outdoor Decks and Balconies**”.

**Occupants** are reminded that the **Natural Gas and Propane Installation Code (CSA-B149.1)** and the **Propane Storage and Handling Code (CSA-B149.2)** both contain requirements for the placement and safe use of barbecues on balconies. However, after a building is occupied it is the **Fire Safety Codes Officer** who is the **authority having jurisdiction** and who performs enforcement in conjunction with building owners when necessary.

If the owner(s) of a building allows propane barbecues and other appliances to be installed on their outdoor decks and/or balconies, then the barbecues, cylinders or any other items shall be installed in accordance with the manufacturer’s certified instructions and the B149 Code requirements as follows:

- (a) The barbecues and portable appliances shall be certified by a recognized certification organization (i.e. CSA, ITS, ULC and cUL);
- (b) Be equipped with a maximum of one 20-lb cylinder per installation;
- (c) The cylinder shall be equipped with a QCC-1 (Quick Closing Coupling) connection valve which incorporates an Over Fill Protection Device (OPD);
- (d) The balcony shall be of an open design and shall not be located below grade;
- (e) The balcony shall be of sufficient size to provide adequate clearance to combustible materials as required by the barbecue manufacturer’s instructions;
- (f) While being transferred through the building for refill purposes, the cylinder QCC-1 valve shall be closed and equipped with a protective cap;
- (g) The transfer by elevator shall be by freight or service elevators or by a passenger elevator only if no passengers are permitted on the elevator other than the person in control of the cylinder; and

- (h) A cylinder that is damaged, leaking, or due for prescribed re-examination, shall not be filled but shall be removed from service.

The definition of owners and their responsibilities under the Safety Codes Act are as follows:

“**Owner**” includes a lessee, a person in charge, a person who has care and control and a person who holds out that the person has the powers and authority of ownership or who for the time being exercises the powers and authority of ownership.

### **Owners, Care and Control**

The owner of any thing, process or activity to which this Act applies shall ensure that it meets the requirements of this Act, that the thing is maintained as required by the regulations and that when the process or activity is undertaken it is done in a safe manner.

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## **CSA B149.1 - NATURAL GAS AND PROPANE INSTALLATION CODE**

### **4.1.3**

An **appliance, accessory, component, equipment**, or any other item shall be installed in accordance with the manufacturer's **certified** instructions and this Code.

### **Suitability of Use**

#### **4.5.1**

An **appliance** shall not be installed unless it is designed for use with the type of gas to which it is to be connected and is suitable for the pressure supplied.

#### **4.5.2**

The use of an **appliance, accessory, component, equipment**, or material shall be prohibited where a hazard is created.

### **Appliance Clearances to Combustible Material**

#### **4.13.1**

The clearances required in Clause 7 between an **appliance** and **combustible** material shall be considered minimum without protection and shall be measured from the **appliance**, disregarding either the **burner** or any other projecting component.

#### **4.13.2**

The clearances to **combustible** material specified in Clause 7 shall not be reduced unless

- (a) such reduced clearance is **certified** as safe by a nationally recognized certification organization acceptable to the **authority having jurisdiction**, and so marked on the **appliance** nameplate; or
- (b) protection is provided for the **combustible** material, and such protection and such reduced clearance are in accordance with Table 4.1.

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## **CSA B149.2 - Propane Storage and Handling Code**

### **Cylinder Systems**

**6.1.6** A steel **cylinder** shall be kept painted with light colours that are reflective.

**6.1.7** Each **cylinder** shall be provided with a relief **valve** that meets the requirements of CAN/CSA-B340.

**6.1.8** The relief **valve** shall have direct communication at all times with the vapour space of the **cylinder**.

**6.1.9** A refillable **cylinder** with a capacity of 45 lb (20 kg) or less not equipped with a CGA No. 791 cylinder connection device shall be equipped with an effective gas-tight seal by the use of a plug, cap, or other equally effective device. A sealing plug or cap for the **valve** outlet shall be attached to the cylinder portion of a cylinder connection device. The sealing plug or cap shall bear the following marking: "PLACE CAP ON CYLINDER VALVE OUTLET WHENEVER THE CYLINDER IS NOT CONNECTED FOR USE".

*\*The equivalent French wording is "METTRE LE BOUCHON SUR LA SORTIE DU ROBINET LORSQUE LA BOUTEILLE N'EST PAS UTILISÉE".*

**6.4.4** A **cylinder** that is damaged, leaking, or corroded beyond TC limits, or is due for prescribed re-examination, shall not be filled but shall be removed from service.

**6.5.1.2** Except as permitted in this Code, a **cylinder** that contains propane liquid or vapour shall not be stored or used inside any **structure**.

**6.5.3.1** A **cylinder** not connected for use shall be stored outdoors.

### **Installation of Cylinders**

**6.7.2** Except as permitted in Clauses 6.5, 6.7.3, 10, and 11.9(b) of this Code and Clause 5.2.2 of CSA B149.5, a **cylinder** shall be installed outside a **building**, with the discharge from the **cylinder** relief **valve** not less than

- (a) 3 ft (1 m) on a horizontal plane from any **building opening** when the opening is below the level of the relief **valve** discharge;
- (b) 10 ft (3 m) on a horizontal plane from the air intake of any **appliance** or air-moving **equipment**; and
- (c) 10 ft (3 m) on a horizontal plane from any source of **ignition**.

Items (b) and (c) shall not apply to an **appliance** when the **cylinder** retention means is incorporated and **certified** as part of the **appliance**.

**6.7.3** Notwithstanding the requirements in Clauses 6.5 and 6.7.2, a **cylinder** containing a maximum of 5 lbs (2.5 kg) of propane, which is not connected to any other **cylinder**, may be connected for use indoors with the permission of the **authority having jurisdiction**.

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## 6.8 Roof Top Installation of Cylinder Systems

- 6.8** A **cylinder system** may be installed on a flat roof of a **building**, provided that
- (a) the roof is of **noncombustible** construction with a 2 h fire-resistance rating;
  - (b) the load on the roof does not exceed the design load;
  - (c) the total capacity of a **cylinder(s)** connected to any one manifold is not greater than 200 lbs (90 kg) of propane;
  - (d) each manifold of **cylinders** is separated from each other by a fire separation of 1 h fire-resistance rating or by a clear 50 ft (15 m) space separation;
  - (e) the **cylinders** are located in areas where there is free air circulation and at a distance of at least 10 ft (3 m) horizontally from any **building opening, appliance** air intake, or air-moving **equipment**;
  - (f) during transfer of each **cylinder** from the point of delivery to the roof and from the roof to the point of pick-up, each **cylinder valve** outlet is plugged and the **valve** protecting cap or collar is in place;
  - (g) transfer in accordance with Item (f) by elevator shall be by freight or service elevators, or by passenger elevator if no passengers are permitted on the elevator other than the maintenance or delivery personnel involved with the **cylinder**;
  - (h) **hose** is not used to conduct propane;
  - (i) each installation is reported in writing by the **installer** to the fire department concerned; and
  - (j) the **building** is sprinklered if it contains a high-hazard industrial occupancy.

### Note:

In **Clause 6.8** the items (f) and (g), have been used to establish the minimum requirements for transferring a 20-lb propane cylinder through a building to a balcony and from a balcony for refilling purposes.

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## Transportation of Cylinders

This is a reminder to the owners of propane cylinders that the transportation of cylinders shall comply with the Transportation of Dangerous Goods Regulations of Transport Canada.

In addition the CSA -B149.2 Code indicates the following:

- A cylinder shall not be transported or stored within a vehicle except when the vehicle is provided with a means to vent the cylinder carrying space to the outdoors.
- Any cylinder being transported shall be secured to prevent damage.
- Any cylinder shall be transported in a position so that the cylinder relief valve is in direct communication with the vapour space of the cylinder at all times.