

Fuel Safety Bulletin

2009-02

Common venting of appliances utilizing different fuels

Dated: March 23, 2009

Revised: December 1, 2011

Recently, we have been asked whether appliances utilizing different fuels may be vented into a single common chimney. The following are the applicable code clauses.

Clauses 5.1.2, 5.1.3, 5.1.4, 5.2.5.10 and 5.2.5.11 of the *CSA B139-09 Installation Code for Oil-Burning Appliances* state;

5.1.2

Gas-fired appliances may be connected to the same venting system that serves an appliance fired by fuel oil (see [Clause 5.2.5.10](#)).

5.1.3

Except as permitted by [Clause 5.1.4](#), an oil-burning appliance shall not be connected to a venting system that serves an appliance fired by solid fuel (see [Clause 5.2.5.10](#)).

5.1.4

Only a solid-fuel-fired appliance (e.g., an add-on boiler or furnace or a combination appliance) that is certified for use in conjunction with a certified oil-burning appliance may be connected to the same vent system as the certified oil-burning appliance or appliances. A certified multi-fuel appliance may be vented through a single vent system.

5.2.5.10

When two or more appliances are connected to the same vent,

- (a) the appliances shall be oil- or gas-fired or designed and certified for use in conjunction with oil-fired equipment;
- (b) the appliances shall be located on the same storey;
- (c) the vent outlet pressure of each appliance shall be negative;
- (d) each appliance shall be equipped with an individual draft control, unless otherwise certified, so as to maintain the over-fire pressure (draft) specified by the appliance manufacturer;
- (e) the vent connectors of the appliances shall be connected directly to a common vent connector of adequate cross-sectional area and as close to the chimney as practicable or directly to the chimney vent with the vent connector from the smallest appliance on top. A solid-fuel-fired appliance shall be connected below (upstream of) any oil-fired appliance connection;
- (f) the chimney vent shall be capable of venting the flue gas by natural draft when all appliances are firing at the same time, or a mechanical flue-gas exhauster shall be used; and
- (g) notwithstanding Item (e), an oil-fired appliance may be connected to a common vent serving two or more oil-only-fired appliances, in excess of the chimney vent capacity, provided that the appliances are equipped with a means to ensure that only the number of appliances the chimney is capable of venting (as determined in accordance with [Clause 5.2.2.4](#)) shall operate simultaneously at any time.

Note: *When the vents of two or more appliances are connected to a single chimney vent via a common vent or manifold, wye ("Y") connections offer less resistance to flue-gas flow than tee ("T") connections.*

5.2.5.11

When a chimney flue serving a liquid-fuelled appliance also serves a gas-fuelled appliance, the gas-fuelled appliance vent connector shall be

- (a) through a separate flue opening above the flue pipe connected to the liquid-fuelled appliance; or
- (b) connected into a shop-fabricated branch fitting that is located
 - (i) in a dwelling unit not more than 750 mm (30 in) from the flue entrance; and
 - (ii) in other than a dwelling unit, as close as practicable to the chimney.

Clauses 8.12.3, 8.12.4, 8.12.5 and 8.12.6 of the *CSA B149.1 Natural Gas and Propane Installation Code* state;

8.12.3 An appliance installed in a dwelling unit shall not be connected to a flue serving

- (a) a solid-fuelled appliance; or
- (b) a solid-fuelled fireplace unless the opening from the fireplace to the flue is permanently closed.

8.12.4 When a chimney flue serving an appliance that burns a liquid fuel also serves a gas-fuelled appliance, the gas-fuelled appliance vent connector shall be

- (a) through a separate flue opening above the flue pipe connection from the liquid-fuelled appliance; or
- (b) connected into a shop-fabricated branch fitting that is located
 - (i) in a dwelling unit, not more than 30 in (750 mm) from the flue entrance; and
 - (ii) in other than a dwelling unit, as close as practicable to the chimney.

8.12.5 When two or more openings are provided into one chimney flue, they shall be at different levels.

RULING: OIL : (a) May be connected with a gas-fired appliance

(b) May be connected with a solid-fuel-burning appliance which is certified for use in conjunction with a certified oil-burning appliance

GAS (Propane/Natural gas) : (a) May be connected with an oil-fired appliance

(b) May NOT be connected with a solid-fuel-fired appliance of any type.

SOLID FUEL : (a) May be connected with an oil-fired appliance, but ONLY if it is certified for use in conjunction with a certified oil-burning appliance

(b) May NOT be connected with a gas-fired appliance of any type.

NOTE: The National Building Code requires that all appliances entering a chimney be located on one level and enter the chimney on that level.

Dale C. Stewart
Chief Inspector, Fuel Safety