DIRECTIVE

PLASTIC VENTING

This directive is being issued by a provincial safety manager pursuant to section 30 of the Safety Standards Act.

Date of Issue: November 07, 2016

Directive No: D-G5 070628 5
Revision: 05

General Details

This current directive replaces revision number three and prior requirements with respect to BH Gas Venting Systems. This change is based on findings and comparisons with authorities having jurisdiction across North America, and what has been implemented regarding these venting system types.

In summary, this directive:

- Confirms the existing code provisions which require the use of ULC S636 certified plastic venting, and
- Allows existing venting to be used with new appliances in specified circumstances.

Specific Details

Clause 8.9.6 of CSA B149.1 requires plastic vents to be certified to ULC S636 Standard for Type BH Gas Venting Systems.

This requirement was put in place several years ago due to the investigated failures in a number of existing plastic gas venting systems throughout Canada, predominantly ABS plastic pipe and fittings. Noted failures have included stress cracking and melting. This could result in a carbon monoxide (CO) safety hazard in homes causing personal injury to the occupants.

Clause 8.9.6 affects all new appliance installations and replacement installations. For example, if an existing water heater is replaced with a new water heater, the code requires that the existing plastic venting be completely replaced with a certified ULC S636 plastic venting system.

Existing appliances and their plastic venting systems will not require action until replacement of the appliance in the usual course, as this requirement is not retroactive to installations made prior to its formal adoption.

BH gas venting systems must be installed as per the manufacturers certified installation instructions and comply with the maximum flue gas temperature the venting material could be exposed to.

Appliance Replacement

There may be situations where the replacement of the entire vent is not possible or is impractical due to specifics of that particular installation. For those situations, the holder of a valid installation permit may use the existing vent provided that all of the following conditions are met:

1. It is not possible to replace the entire vent;

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2. The first five feet immediately downstream of the appliance is replaced with vent that is:
   a. Suitable for the appliance; and,
   b. Certified to ULC S636.

3. The existing vent is visually inspected and found in good working order (cracked or damaged vent is not allowed to be repaired - the entire vent shall be replaced).

4. The existing vent is pressure tested as follows:
   a. Use of air or an inert gas;
   b. A minimum test pressure of positive or negative 7 inches water column shall be applied to the entire length of the existing plastic vent but shall not exceed a pressure of 2 psig at any time;
   c. The minimum test pressure of +/- 7 inches water column shall be measured by either a pressure gauge or equivalent device and, if a gauge is used, the minimum diameter shall be 3 in (75 mm) and the maximum range shall exceed the test pressure by at least 15% but not more than 300%. The pressure gauge or equivalent device shall be calibrated to read in increments of not more than 2% of the maximum dial reading of the pressure gauge;
   d. The minimum test pressure shall be applied for at least 5 minutes and at least 75% of the test pressure shall be retained (if less than 75% pressure is retained, the entire vent must be replaced);
   e. Where it is not possible to reach the vent termination due to elevation or other access issues, it is permissible to test up to the interior side of the outside wall piece. This will require cutting the vent at the inside of the wall-piece, testing remaining concealed interior vent and installing a S636 certified coupling to re-attach the vent to the wall-piece;

5. If a vent fails the pressure test, the entire venting system shall be replaced with vent suitable for the appliance and certified to ULC-S636.

Note: **ABS components affixed to and shipped as part of the appliance -** ABS vent components integral to the appliance are considered to be approved as part of the appliance and are not required to be UL S636 certified. Vent components supplied loose must be ULC S636 certified components (PVC or CPVC).

Any form of cellular core vent material will not be accepted, all existing cellular core venting material shall be replaced at the time of appliance replacement

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References:
Safety Standards Act
Gas Safety Regulation
CSA B149.1 **-** Natural gas and propane installation code
ULC S636 Standard for Type BH Venting Systems

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