B149.3-15

Code for the field approval of fuel-related components on appliances and equipment

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Preface

This is the fifth edition of CSA B149.3, *Code for the field approval of fuel-related components on appliances and equipment*. It supersedes the previous editions published in 2010, 2005, and 2000 by the Canadian Standards Association (CSA) as CSA B149.3, and in 1989 by the Canadian Gas Association (CGA) as CAN/CGA-B149.3.

This Code brings together for the convenience of users the applicable requirements for appliances and equipment, originally published as part of the CSA B149.1 and CSA B149.2 Codes.

In this 2015 edition, where a major change or addition to the previous edition of the Code has been made, the clause, table, or figure affected is identified by the symbol delta (Δ) in the margin. Users of the Code are advised that the change markers in the text are not intended to be all-inclusive and are provided as a convenience only; such markers cannot constitute a comprehensive guide to the revisions made to the Code. Care must therefore be taken not to rely on the change markers to determine the current requirements of the Code. As always, users of the Code must consider the entire Code and any local amendments.

The CSA B149.3 Code Committee, which is responsible for preparing this Code, consists of members of the provincial gas inspection authorities, natural gas utilities, propane distributors, appliance, equipment, and accessory manufacturers, certification organizations, and representatives from the Heating, Refrigeration and Air Conditioning Institute of Canada, the Mechanical Contractors Association of Canada, and federal government departments. This Code has been formally approved by the CSA B149.3 Technical Committee on the Code for the Field Approval of Fuel-Related Components on Appliances and Equipment and by the Interprovincial Gas Advisory Council.

Notes:

(1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*

(2) *Although the intended primary application of this Code is stated in its Scope, it is important to note that it remains the responsibility of the users of the Code to judge its suitability for their particular purpose.*

(3) *This Code was developed by consensus, which is defined by* CSA Policy governing standardization — Code of good practice for standardization *as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Code.*

(4) *To submit a request for interpretation of this Code, please send the following information to* ***inquiries@csagroup.org*** *and include "Request for interpretation" in the subject line:*
(a) define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;
(b) provide an explanation of circumstances surrounding the actual field condition; and
(c) where possible, phrase the request in such a way that a specific "yes" or "no" answer will address the issue.
Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization *and are available on the* Current Standards Activities *page at* ***standardsactivities.csa.ca****.*

(5) *This Code is subject to review five years from the date of publication. Suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to* ***inquiries@csagroup.org*** *and include "Proposal for change" in the subject line:*
(a) Standard designation (number);
(b) relevant clause, table, and/or figure number;
(c) wording of the proposed change; and
(d) rationale for the change.

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1 Scope

Δ **1.1**
This Code contains the requirements for fuel-related ***components*** and ***accessories*** and their assembly on an ***appliance*** utilizing gas, downstream of the ***manual shut-off valve*** specified in Clause 6.18.2 of CSA B149.1. Clause 13 of this Code contains additional requirements for process ovens, including bakery ovens, process furnaces, and atmosphere generators operating at approximately atmospheric pressure and used by industry for the processing of materials. Recommended requirements for liquid and solid fuel-burning ***appliances*** are located in Annex H (liquids) and Annex I (solids).

Δ **1.2**
This Code does not apply to
(a) installations in marine pipeline terminals;
(b) gas where used as a feedstock in petroleum refineries or chemical plants;
(c) gas designated for storage or handling, or both, at liquefied petroleum gas bulk plants;
(d) gas where used for natural gas for vehicles;
(e) a new ***appliance*** for which there is an ***approved*** Standard;
(f) a manually operated ***appliance*** with an input not exceeding 20 000 Btuh (6 kW) used for industrial applications; and
(g) other fuels not covered in this Code and used in combination with gas.

Δ **1.3**
When another fuel is used in the installation and in combination with gas, the safe operation of that fuel shall be ***approved***.

1.4
Requirements contained herein apply only to that portion of an ***appliance*** using gas as defined in Clause 1.7, atmosphere gas, and ***reaction gas***.

1.5
The requirements contained in this Code apply
(a) to new non-***certified appliance***s and ***equipment*** of all inputs for which there is no ***approved*** Standard;
(b) when the upgrading of an existing ***certified*** or non-***certified appliance*** is required; and
(c) to programmable logic controllers or microprocessor-based controls used for flame safety.

1.6
The requirements contained in this Code may be used to replace or supplement an ***approved*** Standard with the permission of the ***authority having jurisdiction***.

1.7
When the term "gas" is used, the requirements of this Code include, and apply equally to, any of the following gases or mixtures of them: natural gas, manufactured gas, propane, propane air, propylene, butane (normal butane or isobutane), and butylene.

1.8
The values given in yard/pound units are the standard. The values given in parentheses are for information only.

1.9
In this Code, unless ***approved*** otherwise by the ***authority having jurisdiction***, "shall" indicates a mandatory requirement; "should" indicates a recommendation or that which is advised but not mandatory; and "may" indicates an advisory or optional statement. Notes to the text do not include mandatory or alternative requirements. The purpose of a note is to separate from the text explanatory or informative material that is not properly a part of this Code. Notes to figures and tables, however, are considered part of the figure or table and may be written as mandatory requirements. Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

2 Reference publications
This Code refers to the following publications, and where such reference is made, it shall be to the edition listed below, including all amendments published thereto.

CSA Group
Note: *CGA Standards,* Recommended Practices, and Codes *are now published by CSA.*
CAN1-6.4-M79 (R2011)
Automatic gas ignition systems and components

ANSI Z21.21-2012/CSA 6.5-2012
Automatic valves for gas appliances

ANSI Z21.78-2010/CSA 6.20-2010
Combination gas controls for gas appliances

ANSI Z21.15-2009/CSA 9.1-2009 (R2014)
Manually operated gas valves for appliances, appliance connector valves and hose end valves

CGA 3.11-M88 (R2014)
Lever Operated Pressure Lubricated Plug Type Gas Shut-Off Valves

CGA 3.16-M88 (R2014)
Lever Operated Non-Lubricated Gas Shut-Off Valves

CAN/CGA-8.1-M86 (R2011)
Elastomeric Composite Hose and Hose Couplings for Conducting Propane and Natural Gas

CAN1-8.3-77 (R2011)
Thermoplastic Hose and Hose Couplings for Conducting Propane and Natural Gas

B139 Series-15
Installation code for oil-burning equipment

B140 Series of Standards