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B109-14

Natural gas for vehicles installation code — Part 1 Compressed natural gas

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Preface

This is the second edition of CSA B109, *Natural gas for vehicles installation code — Part 1 Compressed natural gas.* It supersedes the previous edition published in 2001.

This Code was prepared by the Subcommittee on Natural Gas for Vehicles Installation Code, under the jurisdiction of the Technical Committee on Natural Gas Powered Vehicles and Fuelling and has been formally approved by the Technical Committee and 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 publication 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 publication.*

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.*

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5) *This Code is subject to review five years from the date of publication, and 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

1.1

This Code applies to the installation, inspection, repair, and maintenance of the fuel storage and delivery system installed in powered industrial truck applications and on road vehicles for use with compressed natural gas (CNG) or the compressed natural gas portions of an LNG fuel system. This includes fuel systems on self-propelled vehicles for the provision of motive power.

This does not apply to vehicles (including their containers) tested and qualified under the Canadian *Motor Vehicle Safety Regulations*.

1.2

This Code does not apply to

a) stationary engines;
b) mobile equipment using natural gas as a fuel for other than propulsion;
c) LNG fuel storage system*;
d) electronic components of a fuel management system;
e) storage or utilization of natural gas on boats or trains;
f) all terrain vehicles;
g) motorcycles; and
h) vehicles (including their containers) qualified under the Canadian *Motor Vehicle Safety Regulations*.

** Part 2 of this Code will be published at a later date and will include coverage for the liquid portion of LNG Fuel Systems.*

1.3

All references to “psi” throughout this Code are to be considered gauge pressures, unless otherwise specified.

1.4

This Code contains SI (Metric) corresponding to the English units, the purpose being to allow the Code to be used in SI (Metric) units. *American National Standard for Metric Practice*, IEEE/ASTM SI 10 or ISO 80000-1, *Quantities and units — Part 1: General*, is used as a guide in making metric conversion from English units. If a value for a measurement and a corresponding value in other units are stated, the first stated value is to be regarded as the requirement. The given corresponding value may be approximate. If a value for a measurement and a corresponding value in other units are both specified as a quoted marking requirement, the first stated unit, or both, are to be provided.

Where the word “gallon” is used in this Code, it indicates a U.S. Gallon equivalent to 3.785 liters water capacity.