



**CSA B109.2:21**  
National Standard of Canada



# Liquefied natural gas vehicle installation code



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*CSA B109.2:21*

***Liquefied natural gas vehicle  
installation code***

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# Contents

Interprovincial/Territorial Gas Advisory Council	4
Technical Committee on Natural Gas Transportation	6
Subcommittee on Natural Gas for Vehicles Installation Code	9
Preface	12
<b>1 Scope</b>	<b>13</b>
1.1 Application	13
1.2 Exclusions	13
1.3 Units of measure	13
1.4 Pressure references	13
1.5 Mandatory and informative provisions	13
<b>2 Reference publications</b>	<b>14</b>
<b>3 Definitions</b>	<b>16</b>
<b>4 General</b>	<b>19</b>
4.1 Application	19
4.1.1 Document conflict	19
4.1.2 Manufacturer instructions conflict	19
4.1.3 Installer responsibilities	19
4.2 Approvals	19
4.2.1 General approvals	19
4.2.2 Variances	19
4.2.3 Used LNG tanks and NGV components	19
<b>5 System requirements</b>	<b>20</b>
5.1 Materials	20
5.1.1 Temperature compatibility	20
5.1.2 Temperature rating	20
5.1.3 Brazing material	20
5.1.4 Oxy-fuel gas welding prohibition	20
5.1.5 Furnace butt-welding prohibition	20
5.2 Avoiding LNG trapping	20
5.3 Alterations prohibited	20
5.4 Repairs	21
5.5 LNG tank(s)	21
5.5.1 In accordance with code	21
5.5.2 Service temperature	21
5.5.3 Appurtenances	21
5.5.4 Vacuum insulation	21
5.5.5 Tank fill level	21
5.5.6 Holding time	21
5.5.7 Hold time tests	22

5.5.8	LNG tank marking	22
5.6	LNG tank isolation	22
5.6.1	LNG tank shutoff valves	22
5.6.2	Other methods of isolation	23
5.7	LNG tank and assembly mounting	23
5.7.1	General	23
5.7.2	Mounting	23
5.7.3	Installation on exterior of vehicle	23
5.7.4	Attachment requirements	23
5.7.5	Attachment hardware and brackets	24
5.7.6	Location of LNG tank	24
5.7.7	LNG tank protection	24
5.8	Fuelling receptacle	24
5.8.1	Fuelling receptacle compliance and specifications	24
5.8.2	Fuelling receptacle installation	25
5.8.3	Fuel backflow prevention	25
5.8.4	Fuelling receptacle clearance	25
5.8.5	Receptacle atmospheric venting prevention	25
5.9	LNG tank pressure relief valves (PRV)	25
5.9.1	LNG pressure relief valve (PRV) placement	25
5.9.2	LNG tank PRV requirements	25
5.10	Defuelling connector	26
5.10.1	Defuelling connector requirements	26
5.10.2	Defuelling connector installation	26
5.11	Fuel system components	27
5.11.1	Components' compliance	27
5.11.2	Isolation from heat sources	27
5.11.3	Isolation from battery terminals	27
5.12	Vent lines and ventilation	27
5.13	Pressure gauges	28
5.14	Pumps	28
5.15	Vaporizers	28
5.16	Pressure regulator	29
5.16.1	Pressure regulator mounting requirements	29
5.16.2	Pressure regulator protection	29
5.16.3	Pressure regulator relief valve	29
5.17	Piping and tubing, hose, and fittings	29
5.17.1	Fuel lines — General requirements	29
5.17.2	Fuel lines upstream of the vaporizer	30
5.17.3	Fuel lines downstream of the vaporizer	30
5.17.4	Fuel connection with towed vehicle	30
5.17.5	Piping and tubing pass through	30
5.17.6	Unacceptable piping, fitting, and joint components	30
5.17.7	Pipe and tube fitting pressure connections	30
5.17.8	Rigid fuel lines	31
5.17.9	Flexible fuel line requirements	31
5.18	System testing	31
5.18.1	Leak testing	31
5.18.2	General requirements	31

5.18.3	LNG tank conditioning (cool down)	32
5.18.4	Gas/vapour leak testing	32
5.18.5	Liquid leak testing	32
5.18.6	Pressure measurement	32
<b>6</b>	<b>Vehicle requirements</b>	<b>32</b>
6.1	Labels and vehicle literature	32
6.1.1	Vehicle owner's manual supplement(s)	32
6.1.2	Vehicle labelling	33
6.1.3	External vehicle label requirement	33
6.1.4	Label(s) at the vehicle fill receptacle(s)	33
6.2	Approach, departure, or breakover clearances	33
6.2.1	General	33
6.2.2	Road clearance	33
6.2.3	Clearance for industrial trucks	34
6.3	Maximum weight	34
6.4	Multifuel and dual fuel vehicles	34
6.4.1	Multifuel vehicles	34
6.4.2	Dual fuel vehicles	34
6.5	Wiring and electrical connectors	34
6.6	LNG fuel level indicator	34
6.7	Gas detection for LNG vehicles	35
6.7.1	Methane detection system requirement	35
6.7.2	Methane detection system functionality	35
6.7.3	Methane detection disconnection provisions	35
6.7.4	Methane detection system activation	35
6.7.5	Methane detection system audible alarm	35
6.7.6	Methane detection system visual alarm	35
6.7.7	Methane detection system inspection and maintenance	35
<b>7</b>	<b>Periodic inspection</b>	<b>36</b>
<b>8</b>	<b>Vehicles involved in collision, fire, or explosion</b>	<b>36</b>
<b>9</b>	<b>Personnel safety and training</b>	<b>36</b>
<b>10</b>	<b>Parking of LNG vehicles</b>	<b>36</b>

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Annex A (informative)	— Corrosion and other external exposure	37
Annex B (informative)	— Sample labels	38
Annex C (informative)	— Recommended training	39

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# Preface

This is the first edition of CSA B109.2, *Liquefied natural gas vehicle installation code*. It supersedes the previous editions published in 2017 and 2014 as Part 2 of CSA B109, *Natural gas for vehicles installation code*.

CSA B109.1 is applicable to compressed natural gas (CNG). CSA B109.2 is applicable to liquefied natural gas (LNG).

Changes in this edition include the following:

- a) revisions to clarify wording and references, tables, and figures;
- b) resolved conflicts identified with other documents;
- c) provided consistency and clarification between this Code and CSA B109.1;
- d) corrected metrication values; and
- e) harmonized definitions with other industry codes and standards.

CSA Group acknowledges that the development of this Code was made possible, in part, by the financial support of Natural Resources Canada.

This Code was prepared by the Subcommittee on Natural Gas for Vehicles Installation Code, under the jurisdiction of the Technical Committee on Natural Gas Transportation and the Strategic Steering Committee on Transportation and has been formally approved by the Technical Committee and the Interprovincial/Territorial Gas Advisory Council.

This Code has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

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- 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.*
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  - d) *rationale for the change.*

# CSA B109.2:21

## ***Liquefied natural gas vehicle installation code***

### **1 Scope**

#### **1.1 Application**

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

Federal or provincial regulatory requirements might supersede the requirements of this Code.

#### **1.2 Exclusions**

This Code does not apply to

- a) stationary engines;
- b) mobile equipment using natural gas as a fuel for other than propulsion;
- c) electronic components of a fuel management system;
- d) storage or utilization of natural gas on marine vessels or rail vehicles or transportation by tanker truck;
- e) recreational all-terrain vehicles; and
- f) motorcycles.

#### **1.3 Units of measure**

The values given in SI units are the units of record for the purposes of this Code. The values given in parentheses are for information and comparison only.

##### **Notes:**

- 1) *IEEE/ASTM SI 10 or ISO 80000-1 can be used as a guide when converting imperial units to metric units.*
- 2) *Where the word "gallon" is used in this Code, it indicates a U.S. gallon equivalent to 3.785 L water capacity.*

#### **1.4 Pressure references**

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

#### **1.5 Mandatory and informative provisions**

In this Code, "shall" is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the Code; "should" is used to express a recommendation or that which is advised but not required; and "may" is used to express an option or that which is permissible within the limits of the Code.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.