CSA GROUP™

CSA/ANSI LNG 4.4:20

National Standard of Canada
American National Standard

Breakaway devices for liquefied natural gas (LNG) dispensing systems for natural gas vehicles (NGV)

Approved American National Standard
ANSI

Standards Council of Canada
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Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users to judge its suitability for their particular purpose.

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National Standard of Canada
American National Standard

CSA/ANSI LNG 4.4:20

Breakaway devices for liquefied natural gas (LNG) dispensing systems for natural gas vehicles (NGV)

Interprovincial Gas Advisory Council

American National Standards Institute, Inc.

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Contents

Preface

This is the first edition of CSA/ANSI LNG 4.4, *Breakaway devices for liquefied natural gas (LNG) dispensing systems for natural gas vehicles (NGV)*.

This publication represents a Standard for safe operation, substantial and durable construction, and performance testing of breakaway device components for natural gas vehicle LNG dispensing systems, within limitations given in the scope of this Standard.

This Standard is based on proven engineering principles, research, and the combined expertise of gas utilities, manufacturers, users, and others having specialized experience.

Nothing in this Standard is to be considered in any way as indicating a measure of quality, safety, and compliance with the provisions it contains. It is designed to allow compliance of products which might exceed that specified in the provisions herein. In its preparation, full recognition has been given to possibilities of improvement through ingenuity of design. This Standard is subject to revision as further experience and investigation might show it is necessary and desirable.

Users of this Standard are advised that the devices/products/activities within its scope might be subject to regulation at the federal, state, provincial, or local levels. Users are strongly urged to investigate this possibility through appropriate channels. In the event of a conflict with this Standard, the federal, state, provincial, or local regulations should be followed.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

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

This Standard was prepared by the Subcommittee on Breakaway Devices for Liquified Natural Gas Vehicle Dispensing Systems, 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 Gas Advisory Council.

This Standard 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.

This Standard has been approved by the American National Standards Institute (ANSI) as an American National Standard.

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 Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
3) *This Standard 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 Standard.*
4) *To submit a request for interpretation of this Standard, please send the following information to* ***inquiries@csagroup.org*** *and include "Request for interpretation" in the subject line:*
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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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   c) *wording of the proposed change; and*
   d) *rationale for the change.*

CSA/ANSI LNG 4.4:20
Breakaway devices for liquefied natural gas (LNG) dispensing systems for natural gas vehicles (NGV)

1 Scope

1.1 General

1.1.1

This Standard applies to newly manufactured LNG dispenser fuelling and vent hose emergency breakaway shutoff devices, hereinafter referred to as devices.

Notes:

1) *Devices covered in this Standard are intended to be used on an LNG dispenser certified to CSA LNG 4.1 and with an LNG refuelling connector in accordance with ANSI/CAN/CSA-ISO 12617.*
2) *Both "one-time use" or "reusable" devices are covered in this Standard.*
3) *Devices can be installed "in line" or rigidly mounted at the transition from rigid piping to flexible hose at the dispenser end.*

1.1.2

Devices covered by this Standard are intended to

a) minimize the escape of natural gas by automatically shutting off the flow of LNG from the dispenser and control the depressurization of the hose; and
b) minimize damage to the vehicle fuel tank and dispenser when a vehicle is driven off with the fuelling nozzle attached to the vehicle's fuelling receptacle.

1.1.3

Devices covered by this Standard are intended for use with liquefied natural gas, a fluid in the liquid state at cryogenic temperatures that is composed predominantly of methane and that can contain minor quantities of ethane, propane, nitrogen, or other components normally found in natural gas.

1.1.4

Installation and inspection of these devices is subject to requirements in accordance with NFPA 52, CSA B108, Part 2, or other standards, as applicable, and the authority having jurisdiction (AHJ).

1.1.5

This Standard does not apply to hose breakaway devices for

a) rail locomotive dispensing systems;
b) marine vessel bunkering systems; and
c) compressed natural gas dispensers.

1.1.6

Annex A contains items that are unique to Canada.