CSA GROUP™

CSA/ANSI NGV 4.4:21

National Standard of Canada
American National Standard

Breakaway devices for natural gas dispensing hoses and systems

Approved American National Standard
ANSI

Standards Council of Canada
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National Standard of Canada
American National Standard

CSA/ANSI NGV 4.4:21

Breakaway devices for natural gas dispensing hoses and systems

Interprovincial
Gas Advisory Council

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Contents

Preface

This is the second edition of CSA/ANSI NGV 4.4, *Breakaway devices for natural gas dispensing hoses and systems*. It supersedes the previous edition published in 1999.

The major changes to this edition include the following:
- addition of vent line breakaway devices to the scope of the document;
- addition of requirements for self-separating vent line breakaway devices;
- addition of requirements for non-self-separating vent line breakaway devices;
- removal of shear valves from the scope of the document;
- addition of ozone testing for nonmetallic parts;
- updated marking requirements to current industry standards; and
- reformatting to current CSA editorial procedures.

This Standard represents a standard for safe operation, substantial and durable construction, and performance testing of breakaway devices for natural gas dispensing hoses and systems, within limitations given below and 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 beyond compliance with the provisions it contains. It is designed to allow compliance of products which may exceed what is 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 may 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 and Valves for 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/Territorial 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:*
   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 Standard is subject to review within 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:*
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   c) *wording of the proposed change; and*
   d) *rationale for the change.*

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Breakaway devices for natural gas dispensing hoses and systems

1 Scope

1.1 Inclusions

This Standard applies to newly produced compressed natural gas vehicle (NGV) dispenser fuelling hose emergency main line breakaway devices and vent line breakaway devices, herein to be referred to as devices.

1.2 Main line breakaway inclusions

Main line breakaway devices covered by this Standard are intended to

a) minimize the escape of natural gas by automatically shutting off the flow of gas from the dispenser and control the depressurization of the downstream hose; and
b) separate the fuelling hoses attached to the vehicle from the dispenser during an unintended drive-off event.

1.3 Vent line breakaway inclusions

Vent line breakaway devices covered by this Standard are intended to separate the vent line hose attached to the vehicle from the dispenser during an unintended drive-off event.

1.4 Exclusions

The Standard is not applicable to home or private use vehicle refuelling appliances.

1.5 Pressure references

All references to pressure throughout this Standard are to be considered gauge pressures unless otherwise specified.

1.6 Terminology

In this Standard, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the Standard; “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 Standard.

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.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.