



CSA/ANSI NGV 4.4:21
National Standard of Canada
American National Standard



Breakaway devices for natural gas dispensing hoses and systems



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*National Standard of Canada
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*CSA/ANSI NGV 4.4:21
Breakaway devices for natural gas
dispensing hoses and systems*



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Contents

Interprovincial/Territorial Gas Advisory Council	4
Technical Committee on Natural Gas Transportation	6
Subcommittee on Breakaway Devices and Valves for Natural Gas Vehicle Dispensing Systems	9
Preface	11
1 Scope	13
1.1 Inclusions	13
1.2 Main line breakaway inclusions	13
1.3 Vent line breakaway inclusions	13
1.4 Exclusions	13
1.5 Pressure references	13
1.6 Terminology	13
1.7 Units of measure	14
2 Reference publications	14
3 Definitions	15
4 General construction	16
4.1 Representative samples	16
4.2 Device design evaluation	17
4.3 Device construction	17
4.4 Operation temperature range	17
4.5 Main line breakaway separation bleed down	17
4.6 Vent line breakaway separation bleed down	17
4.7 Appropriate use of a main line breakaway used as a vent line breakaway	17
4.8 Vent line breakaway design types	17
4.9 Self-separation pressure for self-separating vent line designs	17
5 Materials	17
5.1 Material selection	17
5.2 Valve body materials	18
6 Connections	18
7 Instructions	18
7.1 Items unique to Canada	18
7.2 Manufacturer instruction overview	18
7.3 Manufacturer instructions for “one-time use” devices	18
7.4 Manufacturer instructions installation criteria	19
8 Markings	19
8.1 Items unique to Canada	19
8.2 Marking legibility requirements	19

8.3	Main line breakaway device markings	19
8.4	Vent line breakaway device markings	19
8.5	Certification marking	20
9	Performance	20
9.1	Room temperature test temperature	20
9.2	Test gases	20
9.3	Flow coefficient determination	20
10	Main line breakaway leakage	20
10.1	General	20
10.2	Method of test	20
11	Vent line breakaway leakage	21
11.1	General	21
11.2	Method of test	21
12	Main line breakaway hydrostatic strength	21
12.1	General	21
12.2	Method of test	21
13	Vent line breakaway hydrostatic strength	22
13.1	General	22
13.2	Method of test	22
14	Vent line breakaway self-separation strength	22
14.1	General	22
14.2	Method of test	22
15	Main line breakaway devices	22
15.1	General	22
15.2	Method of test	23
16	Vent line breakaway devices	23
16.1	General	23
16.2	Method of test	23
17	Material suitability tests	24
17.1	General	24
17.2	Air overaging test	24
17.3	Non-metallic synthetic material immersion test	24
17.3.1	General	24
17.3.2	Natural gas exposure	24
17.3.3	Compressor oil exposure	25
17.4	Corrosion resistance	25
17.4.1	General	25
17.4.2	Method of test	25
17.4.3	Ozone test	26

18	Electrical conductivity	26
19	Strength tests	26
19.1	Excess torque resistance	26
19.1.1	General	26
19.1.2	Method of test	26
19.2	Dropping for main line breakaway devices	26
19.2.1	General	26
19.2.2	Method of test	27
20	Main line breakaway device durability	28
20.1	General	28
20.2	Methods of test	28
20.2.1	Test type determination	28
20.2.2	Method of test 1	28
20.2.3	Method of test 2	28
21	Main line breakaway device twisting	28
21.1	General	28
21.2	Method of test	29
22	Manufacturing and production test plan	29
22.1	Manufacturer documentation	29
22.2	Manufacturer quality program	29
22.3	Production leakage test requirements	29
22.4	Production tests	29
22.5	Manufacturer test methods	29
22.6	Test record maintenance	30

Annex A (normative)	— Items unique to this country (Canada)	31
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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 observed.

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.*
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 - c) *wording of the proposed change; and*
 - d) *rationale for the change.*

CSA/ANSI NGV 4.4:21

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.