CSA GROUP™

CSA/ANSI NGV 6.1:21
National Standard of Canada
American National Standard

Compressed natural gas (CNG) fuel storage and delivery systems for road vehicles

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National Standard of Canada
American National Standard

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Compressed natural gas (CNG) fuel storage and delivery systems for road vehicles

Interprovincial Gas Advisory Council

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Preface

This is the third edition of CSA/ANSI NGV 6.1, *Compressed natural gas (CNG) fuel storage and delivery systems for road vehicles*. It supersedes the previous edition published in 2018.

The first edition of CSA/ANSI NGV 6.1 was a Recommended Practice that provided a recommended standard practice for vehicle fuel systems. It was written in mandatory language to accommodate its adoption by anyone wishing to do so. The second edition transitioned to a National 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 Vehicle Fuel Systems for Natural Gas, under the jurisdiction of the Natural Gas Transportation Technical Committee 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 approved by the American National Standards Institute (ANSI) as an American National Standard.

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

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   d) *rationale for the change.*

CSA/ANSI NGV 6.1:21
Compressed natural gas (CNG) fuel storage and delivery systems for road vehicles

1 Scope

1.1 Applicability

This Standard applies to the design, installation, inspection, repair, and maintenance of the fuel storage and delivery system used as a provision for motive power. This Standard specifically addresses

a) On-road vehicles (highway vehicles);
b) Off- road vehicles (mining and construction); and
c) Powered industrial trucks (forklifts and TUGs).

Note: *This Standard is intended to cover the fuel storage and delivery system as defined in Figure 1. Elements downstream of the regulation device(s) or stage(s) such as the low pressure delivery line and injectors are not included in the Scope of this Standard.*

1.2 Exclusions and future editions

1.2.1 Exclusions

This Standard does not apply to

a) stationary engines;
b) mobile equipment using natural gas as a fuel for other than propulsion;
c) electronic control module or controls strategy of a fuel management system;
d) storage or utilization of natural gas on marine vessels or rail vehicles;
e) liquefied natural gas (LNG) fuel storage systems; or
f) compressed natural gas (CNG) gaseous portion of LNG vehicles.

1.2.2 Future editions

Future editions of this Standard might include

a) liquefied natural gas (LNG) fuel storage system;
b) compressed natural gas (CNG) portion of an LNG vehicle;
c) storage or utilization of natural gas on boats or trains;
d) recreational all-terrain vehicles; and
e) motorcycles.

1.3 Pressure references

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

1.4 Units of measure

The values given in SI units are the units of record for the purposes of this Standard. 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.*