CSA/ANSI HGV 4.3:22

National Standard of Canada
American National Standard

Test methods for hydrogen fuelling parameter evaluation

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Preface

This is the fourth edition of CSA/ANSI HGV 4.3, *Test methods for hydrogen fuelling parameter evaluation*. It supersedes the previous editions published in 2019, 2016, and 2012.

This edition includes a new compressed hydrogen storage system category Class D, and includes revisions to factory and site acceptance testing requirements.

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 Test Methods for Hydrogen Fuelling Parameter Evaluation, under the jurisdiction of the Technical Committee on Hydrogen 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.

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

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CSA/ANSI HGV 4.3:22
Test methods for hydrogen fuelling parameter evaluation

1 Scope

1.1
This Standard establishes the test method, criteria, and device to evaluate a hydrogen fuelling station dispensing system (hereinafter referred to as a "dispenser") as it relates to achieving the protocols specified in SAE J2601 and SAE J2799. The testing evaluation applies to dispensers designed to fill vehicle storage systems following the prescribed protocols defined in SAE J2601 that target rapid fills, while respecting temperature, pressure, and fuel density safety limits.

Note: *This Standard is a minimum requirement. Manufacturers can take additional safety precautions.*

1.2
This Standard was developed for and is intended to be used with the specific editions of SAE J2601 and SAE J2799 as referenced in Clause 2.

1.3
For dispensers with the capability for communications with the vehicle, these test methods include the approach to confirm the requirements specified in SAE J2799 and SAE J2601.

1.4
Newly manufactured dispensers should be tested according to this Standard prior to initial operation of the dispenser for fuelling vehicles. This Standard is also intended to provide test methods for validation of existing dispensers.

1.5
Unless otherwise specified, the requirements in this Standard apply to the verification of SAE J2601 compliant hydrogen fuelling stations (HFS).

1.6
In the case of conflict between this Standard and federal, provincial/territorial, state, or local requirements, the governmental requirements take precedence.

1.7
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.

1.8
All references to pressure throughout this Standard are to be considered gauge pressure unless otherwise specified.