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# CERTIFICATE OF ACCREDITATION

*This is to attest*

## **UNDERWRITERS LABORATORIES OF CANADA INC.**

#9669 201 STREET, LANGLEY, BRITISH COLUMBIA V1M 3E7, CANADA

### **Testing Laboratory TL-782**

has met the requirements of AC89, *IAS Accreditation Criteria for Testing Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date January 25, 2026



*International Accreditation Service*  
Issued under the authority of IAS management

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# SCOPE OF ACCREDITATION

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## UNDERWRITERS LABORATORIES OF CANADA INC.

Location	Address	Contact Name	Contact Phone	Scope Pages
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### TL-782

<b>Mechanical</b>	
Addendum 13: Global technical regulation No. 13	<p>Global technical regulation on hydrogen and fuel cell vehicles</p> <p>Section 5.1 Performance requirements – Compressed Hydrogen Storage System</p> <p>Section 5.1.1 Verification tests for baseline metrics</p> <p>Section 5.1.2 Verification test for performance durability (hydraulic sequential tests)</p> <p>Section 5.1.3 Verification test for expected on-road system performance (pneumatic sequential tests)</p> <p>Section 5.1.4 Verification test for service terminating system performance in Fire</p> <p>Section 5.1.5 Verification test for performance durability of primary closures</p> <p>Section 6.2 Test procedures for the compressed hydrogen storage system</p>
Addendum 13: Global technical regulation No. 13, amendment 1:2023	<p>Global technical regulation on hydrogen and fuel cell vehicles</p> <p>Section 5.1 Performance requirements – Compressed Hydrogen Storage System</p> <p>Section 5.1.1 Verification tests for baseline metrics</p> <p>Section 5.1.2 Verification test for performance durability (hydraulic sequential tests)</p> <p>Section 5.1.3 Verification test for expected on-road system performance (pneumatic sequential tests)</p> <p>Section 5.1.4 Verification test for service terminating system performance in Fire</p> <p>Section 5.1.5 Verification test for performance durability of primary closures</p> <p>Section 6.2 Test procedures for the compressed hydrogen storage system</p>

### TL-782

**UNDERWRITERS LABORATORIES OF CANADA INC.**

Effective Date January 25, 2026

Page 2 of 8

IAS/TL/100-1



# SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

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<p>Addendum 133 Regulation No 134 of the Economic commission for Europe of the United Nations (UN/ECE)</p>	<p>Uniform provisions concerning the approval of motor vehicles and their components with regard to the safety-related performance of hydrogen fueled vehicles (HFCV) [2019/795]</p> <p>Section 5 Part I – Specifications of the compressed hydrogen storage system</p> <p>Section 5.1 Verification tests for baseline metrics</p> <p>Section 5.2 Verification test for performance durability (hydraulic sequential tests)</p> <p>Section 5.3 Verification test for expected on-road system performance (pneumatic sequential tests)</p> <p>Section 5.4 Verification test for service terminating system performance in Fire</p> <p>Section 5.5 Verification test for performance durability of primary closures</p> <p>Section 6 Part II – specifications of specific components for the compressed hydrogen storage system</p> <p>Section 6.1 TPRD requirements</p> <p>Section 6.2 Check valve and automatic shut-off valve requirements</p> <p>ANNEX 3 Test procedures for the compressed hydrogen storage system</p> <p>ANNEX 4 Test procedures for specific components for the compressed hydrogen storage system</p>
<p>Addendum 133 Regulation No 134 of the Economic commission for Europe of the United Nations (UN/ECE), amendment 2 of 2024-06-15</p>	<p>Uniform provisions concerning the approval of motor vehicles and their components with regard to the safety-related performance of hydrogen fueled vehicles (HFCV) [2019/795]</p> <p>Section 5 Part I – Specifications of the compressed hydrogen storage system</p> <p>Section 5.1 Verification tests for baseline metrics</p> <p>Section 5.2 Verification test for performance durability (hydraulic sequential tests)</p> <p>Section 5.3 Verification test for expected on-road system performance (pneumatic sequential tests)</p> <p>Section 5.4 Verification test for service terminating system performance in Fire</p> <p>Section 5.5 Verification test for performance durability of primary closures</p> <p>Section 6 Part II – specifications of specific components for the compressed hydrogen storage system</p> <p>Section 6.1 TPRD requirements</p> <p>Section 6.2 Check valve and automatic shut-off valve requirements</p> <p>ANNEX 3 Test procedures for the compressed hydrogen storage system</p> <p>ANNEX 4 Test procedures for specific components for the compressed hydrogen storage system</p>
<p>CSA/ANSI HGV2:23</p>	<p>Compressed hydrogen gas vehicle fuel containers (18.3.2 to 18.3.14, 18.5.2 to 18.5.8)</p>

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ANSI HGV 3.1 (2022)	Fuel system components for compressed hydrogen gas-powered vehicles excluding Sections 5.9 and 5.11
ANSI HPRD 1 (2021)	Thermally activated pressure relief devices for compressed hydrogen vehicle fuel containers
CSA/ANSI NGV2:23	Compressed natural gas vehicle fuel containers (19.3 to 19.13)
CSA/ANSI NGV3.1:2020	R2022 Fuel system components for compressed natural gas powered vehicles (5.2-5.7, 5.9, 5.13, 5.15)
ANSI NGV 3.1 (2020)	Fuel system components for compressed natural gas-powered vehicles
ANSI PRD 1 (2020)	Pressure relief devices for natural gas vehicle (NGV) fuel containers (excluding Section 7.7)
Commission Regulation (EU) No 406/2010 of 26 April 2010 implementing Regulation (EC) No 79/2009 of the European Parliament and of the Council on type-approval of hydrogen-powered motor vehicles	<p>ANNEX IV Requirements for hydrogen components and systems designed to use compressed (gaseous) hydrogen and their installation on hydrogen powered vehicles</p> <p>Part 2 Requirements for hydrogen containers designed to use compressed (gaseous) hydrogen (excluding clause 4.1)</p> <p>Part 3 Requirements for hydrogen components other than containers designed to use compressed (gaseous) hydrogen (excluding clause 4.1)</p>
CSA/ANSI NGV 2 (2019)	Compressed Natural Gas Vehicle Fuel Containers
EN 12245:2009+A1:2011	Transportable gas cylinders - Fully wrapped composite cylinders excluding Sections 5.2.1, 5.2.2, 5.2.3 and 5.2.15
EN 12245:2022	Transportable gas cylinders - Fully wrapped composite cylinders excluding Sections 5.2.1, 5.2.2, and 5.2.15
EN 14427:2022	LPG equipment and accessories - Transportable refillable composite cylinders for LPG - Design and construction (5.2.3 to 5.2.6, 5.2.8 to 5.2.16)
EN 17339:2020	Transportable gas cylinders- Fully wrapped carbon composite cylinders and tubes for hydrogen (6.2.3 to 6.2.13, 6.2.15)
ISO 11119-2:2012+A1:2014	Gas cylinders — Design, construction and testing of refillable composite gas cylinders and tubes — Part 2: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with load-sharing metal liners (8.5.1 to 8.5.13)
ISO 11119-2:2020	Gas cylinders — Design, construction and testing of refillable composite gas cylinders and tubes — Part 2: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with load-sharing metal liners (8.5.1 to 8.5.13)
ISO 11119-3:2013	Gas cylinders — Design, construction and testing of refillable composite gas cylinders and tubes — Part 3: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with non-load-sharing metallic or non-metallic liners or without liners (8.5.1 to 8.5.16, 8.5.18)

TL-782

**UNDERWRITERS LABORATORIES OF CANADA INC.**

Effective Date January 25, 2026

Page 4 of 8

IAS/TL/100-1



INTERNATIONAL  
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# SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

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ISO 11119-3 (2020)	Gas cylinders - Refillable composite gas cylinders and tubes Part 3: Fully Wrapped fibre reinforced composite gas cylinders and tubes up to 450L with non-load-sharing metallic or non-metallic liners
ISO 11439 (2021)	Gas cylinders - High pressure cylinders for the on-board storage of natural gas as a fuel for automotive vehicles
ISO 11515:2022	Gas cylinders – Refillable composite reinforced tubes of water capacity between 450 l and 3000 l – Design, construction and testing (8.5.2-8.5.15, 8.5.19, 8.5.20)
ISO 17268 (2012), ed. 2	Gaseous hydrogen land vehicle refueling connection devices (excluding clauses 5.4, 5.10, 5.11, 5.12, and 5.20)
ISO 19881:2025	Gaseous hydrogen — Land vehicle fuel containers (17.3.2 to 17.3.14, 17.5.2 to 17.5.5)
ISO 19882:2018	Gaseous hydrogen — Thermally activated pressure relief devices for compressed hydrogen vehicle fuel containers (7.2-7.6, 7.9.1, 7.10-7.13)
ISO 19887-1:2024	Gaseous Hydrogen — Fuel system components for hydrogen-fuelled vehicles Part 1: Land vehicles (5.2-5.7, 5.9, 5.11, 5.15, 5.16; 8.3., 9.3 - 15.3; 16, 17.3, 18.3 - 24.3)
UN R110, amendment 6 of 2023-09-24	, Uniform provisions concerning the approval of: I. Specific components of motor vehicles using compressed natural gas (CNG) and/or liquefied natural gas (LNG) in their propulsion system II. Vehicles with regard to the installation of specific components of an approved type for the use of compressed natural gas (CNG) and/or liquefied natural gas (LNG) in their propulsion system (8.2.1, Annex 3A: A.6, A.7, A.10-A.21, A.25, A.27)
SAE J2600 (2015)	Compressed Hydrogen Surface Vehicle Fueling Connection Devices (excluding clauses 5.4, 5.10, 5.11, 5.12 and 5.20)
SAE J2579_2018-06	Standard for Fuel Systems in Fuel Cell and Other Hydrogen Vehicles (5.2.2.1 to 5.2.2.4)

## TL-1389

Pressure Vessels/Cylinders/Containers	
CSA PRD1:2020	Pressure relief devices for natural gas vehicle (NGV) fuel containers (7.2-7.4, 7.6, 7.10.1, 7.11-7.13, 7.15-7.22)
CSA/ANSI CHMC 2:19(R2024)	Test methods for evaluating material compatibility in compressed hydrogen applications — Polymers
CSA/ANSI HGV 3.1:2022	Fuel system components for compressed hydrogen gas powered vehicles (5.3-5.7, 5.15, 5.16, 8.3-15.3, 17.3-22.3, w/o 20.3.7 & 20.3.12, 23.4,24.3)
CSA/ANSI HGV2:23	Compressed hydrogen gas vehicle fuel containers (18.3.11-18.3.13, 18.5.6, 18.5.7)

## TL-782

**UNDERWRITERS LABORATORIES OF CANADA INC.**

Effective Date January 25, 2026

Page 5 of 8

IAS/TL/100-1



# SCOPE OF ACCREDITATION

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CSA/ANSI HPRD1:2021	Thermally activated pressure relief devices for compressed hydrogen vehicle (HGV) fuel containers (7.2-7.4, 7.6, 7.10.1, 7.11-7.14)
CSA/ANSI NGV2:23	Compressed natural gas vehicle fuel containers (19.12, 19,13)
CSA/ANSI NGV3.1:2020 R2022	Fuel system components for compressed natural gas powered vehicles (5.2-5.6, 5.9, 5.13, 5.15, 8.4-10.4, 11.5, 12.4-17.4,19.4-24.4, w/o 22.4.6.3, 25, 26.4)
EN 12245:2009+A1:2011	Transportable gas cylinders- Fully wrapped composite cylinders (5.2.14, 5.2.16-5.2.19)
EN 12245:2022	Transportable gas cylinders- Fully wrapped composite cylinders (5.2.13, 5.2.14, 5.2.16-5.2.19)
EN 14427:2022	LPG equipment and accessories - Transportable refillable composite cylinders for LPG - Design and construction (5.2.15, 5.2.16-5.2.18)
EN 17339:2020	Transportable gas cylinders- Fully wrapped carbon composite cylinders and tubes for hydrogen (6.2.12, 6.2.13, 6.2.15, 6.2.16)
EN 17533:2025	Gaseous hydrogen - Cylinders and tubes for stationary storage (Annex C: C.1.3.11, C.1.3.12, C.1.3.13)
EN ISO 10297:2017+ Amd.1:2017 / ISO 10297:2017+ Amd.1:2017	Gas cylinders- Cylinder valves- Specification and type testing (5.5-5.8, 6.9-6.14)
EN ISO 10297:2024 / ISO 10297:2024	Gas cylinders- Cylinder valves- Specification and type testing (5.4 - 5.7, 5.9, 6.9-6.16)
EN ISO 23826:2021	Gas cylinders - Ball valves - Specification and testing (5.3-5.8, 6.)
EN ISO 4126-1:2013 + A1:2016 / ISO 4126-1:2013 + A1:2016	Safety devices for protection against excessive pressure - Part 1: Safety valves (7.2, 7.3, 7. 4, 7.5)
ISO 11114-4:2017	Transportable gas cylinders — Compatibility of cylinder and valve materials with gas contents Part 4: Test methods for selecting steels resistant to hydrogen embrittlement (5.1)
ISO 11119-2:2012+A1:2014	Gas cylinders — Design, construction and testing of refillable composite gas cylinders and tubes — Part 2: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with load-sharing metal liners (8.5.12)
ISO 11119-2:2020	Gas cylinders — Design, construction and testing of refillable composite gas cylinders and tubes — Part 2: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with load-sharing metal liners (8.5.12)
ISO 11119-3:2013	Gas cylinders — Design, construction and testing of refillable composite gas cylinders and tubes — Part 3: Fully wrapped fibre reinforced composite gas

TL-782

**UNDERWRITERS LABORATORIES OF CANADA INC.**

Effective Date January 25, 2026

Page 6 of 8

IAS/TL/100-1



# SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

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	cylinders and tubes up to 450 l with non-load-sharing metallic or non-metallic liners or without liners (8.5.12, 8.5.13, 8.5.15, 8.5.16)
ISO 11119-3:2020	Gas cylinders — Design, construction and testing of refillable composite gas cylinders and tubes — Part 3: Fully wrapped fibre reinforced composite gas cylinders and tubes up to 450 l with non-load-sharing metallic or non-metallic liners or without liners (8.5.12, 8.5.13, 8.5.15, 8.5.16)
ISO 11439:2013+Amd.1: 2021	Gas cylinders - High pressure cylinders for the on-board storage of natural gas as a fuel for automotive vehicles (A.21, A.27)
ISO 11515:2022	Gas cylinders – Refillable composite reinforced tubes of water capacity between 450 l and 3000 l – Design, construction and testing (8.5.11, 8.5.12, 8.5.14., 8.5.15, 8.5.19)
ISO 12619-10:2017	Road vehicles — Compressed gaseous hydrogen (CGH <sub>2</sub> ) and hydrogen/natural gas blends fuel system components — Part 10: Pressure relief device (PRD) (w/o 6.8, 6.11.2)
ISO 12619-11:2017	Road vehicles — Compressed gaseous hydrogen (CGH <sub>2</sub> ) and hydrogen/natural gas blends fuel system components — Part 11: Excess flow valve
ISO 12619-12:2017	Road vehicles — Compressed gaseous hydrogen (CGH <sub>2</sub> ) and hydrogen/natural gas blends fuel system components — Part 12: Gas-tight housing and ventilation hoses
ISO 12619-13:2017	Road vehicles — Compressed gaseous hydrogen (CGH <sub>2</sub> ) and hydrogen/natural gas blends fuel system components — Part 13: Rigid fuel line in stainless steel
ISO 12619-14:2017	Road vehicles — Compressed gaseous hydrogen (CGH <sub>2</sub> ) and hydrogen/natural gas blends fuel system components — Part 14: Flexible fuel line
ISO 12619-15:2017	Road vehicles — Compressed gaseous hydrogen (CGH <sub>2</sub> ) and hydrogen/natural gas blends fuel system components — Part 15: Filter
ISO 12619-16:2017	Road vehicles — Compressed gaseous hydrogen (CGH <sub>2</sub> ) and hydrogen/natural gas blends fuel system components — Part 16: Fittings
ISO 12619-2:2014+ Amd.1:2016	Road vehicles — Compressed gaseous hydrogen (CGH <sub>2</sub> ) and hydrogen/natural gas blends fuel system components — Part 2: Performance and general test methods (w/o 10.-12., 15, 16, 21)
ISO 12619-3:2014+ Amd.1:2016	Road vehicles — Compressed gaseous hydrogen (CGH <sub>2</sub> ) and hydrogen/natural gas blends fuel system components — Part 3: Pressure regulator
ISO 12619-4:2016	Road vehicles — Compressed gaseous hydrogen (CGH <sub>2</sub> ) and hydrogen/natural gas blends fuel system components — Part 4: Check valve
ISO 12619-5:2016	Road vehicles — Compressed gaseous hydrogen (CGH <sub>2</sub> ) and hydrogen/natural gas blends fuel system components — Part 5: Manual cylinder valve

TL-782

**UNDERWRITERS LABORATORIES OF CANADA INC.**

Effective Date January 25, 2026

Page 7 of 8

IAS/TL/100-1



# SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

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ISO 12619-6:2017	Road vehicles — Compressed gaseous hydrogen (CGH <sub>2</sub> ) and hydrogen/natural gas blends fuel system components — Part 6: Automatic valve
ISO 12619-7:2017	Road vehicles — Compressed gaseous hydrogen (CGH <sub>2</sub> ) and hydrogen/natural gas blends fuel system components — Part 7: Gas injector
ISO 12619-8:2017	Road vehicles — Compressed gaseous hydrogen (CGH <sub>2</sub> ) and hydrogen/natural gas blends fuel system components — Part 8: Pressure indicator
ISO 12619-9:2017	Road vehicles — Compressed gaseous hydrogen (CGH <sub>2</sub> ) and hydrogen/natural gas blends fuel system components — Part 9: Pressure relief valve (PRV)
ISO 17268:2020	Gaseous hydrogen land vehicle refuelling connection devices (7.5-7.8,7.10-7.12(w/o 7.12.4),7.15, 7.16)
ISO 19880-3:2018	Gaseous hydrogen — Fuelling stations — Part 3: Valves (5-7, 8.2, 9 (w/o 9.2.11), 10.2, 11, 12)
ISO 19880-5: 2019	Gaseous hydrogen — Fuelling stations — Part 5: Dispenser hoses and hose assemblies (7.2.3, 7.3-7.5, 7.8,7.9, 7.11, 7.12.3, 7.17)
ISO 19881:2025	Gaseous hydrogen — Land vehicle fuel containers (17.3.11-17.3.13)
ISO 19882:2018	Gaseous hydrogen — Thermally activated pressure relief devices for compressed hydrogen vehicle fuel containers (7.2-7.4, 7.6, 7.9.1, 7.10-7.13)
ISO 19887-1:2024	Gaseous Hydrogen — Fuel system components for hydrogen-fuelled vehicles Part 1: Land vehicles (5.2-5.6, 5.9, 5.11, 5.12, 5.15, 5.16; 8.3., 9.3 - 15.3; 16, 17.3, 18.3 - 24.3)
SAE J2579_2018-06	Standard for Fuel Systems in Fuel Cell and Other Hydrogen Vehicles (5.2.2.2)
SAE J2600:2015	Compressed Hydrogen Surface Vehicle Fueling Connection Devices (5.2, 5.3, 5.5-5.9, 5.11, 5.12 (w/o 5.12.1), 5.14-5.19)
UN GTR13 amendment 1:2023	Global technical regulation, hydrogen and fuel cell vehicles (5.1.3.2., 5.1.3.3., 5.1.5.1. a)-c), e)-j); 5.1.5.2. a)-c), e), g)-j))
UN GTR13 amendment 1:2023	Global technical regulation, hydrogen and fuel cell vehicles (5.1.3.2., 5.1.3.3., 5.1.5.1. a)-c), e)-j); 5.1.5.2. a)-c), e), g)-j))
UN GTR13:2013	Global technical regulation, hydrogen and fuel cell vehicles (5.1.3.2., 5.1.5.1. a)-c), e)-j); 5.1.5.2. a)-c), e), g)-j))
UN GTR13:2013	Global technical regulation on hydrogen and fuel cell vehicles (5.1.3.2., 5.1.3.3., 5.1.5.1. a)-c), e)-j); 5.1.5.2. a)-c), e), g)-j))

TL-782

**UNDERWRITERS LABORATORIES OF CANADA INC.**

Effective Date January 25, 2026

Page 8 of 8

IAS/TL/100-1

