International Standard

ISO 19723-2

# Road vehicles — Liquefied natural gas (LNG) fuel systems —

## Part 2: Test methods

*Véhicules routiers — Systèmes à carburant gaz naturel liquéfié (GNL) —*

*Partie 2: Méthodes de test*

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# Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 41, *Specific aspects for gaseous fuels*.

This second edition cancels and replaces the first edition (ISO 19723-2:2018), which has been technically revised.

The main changes are as follows:

— generally updated wording and update of some requirements.

A list of all parts in the ISO 19723 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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# Introduction

All fuel system components in contact with liquid natural gas are suitable for natural gas as defined in the ISO 15403 series.

When applying this document, it is understood that a safety device to prevent overfilling the vehicle's fuel system is part of the refueling station. The pressure gauge has not been considered as a safety component.

When necessary, technical solutions regarding functional requirements are given in Annex A.

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# Road vehicles — Liquefied natural gas (LNG) fuel systems —

# Part 2:
# Test methods

## 1 Scope

This document specifies performance and general test methods for liquefied natural gas fuel system components intended for use on the types of motor vehicles defined in ISO 3833.

This document is applicable to vehicles (mono-fuel, bi-fuel or dual-fuel applications) using liquefied gas according to the ISO 15403 series. It is applicable to original-production and converted vehicles.

This document is only applicable on the components in the "liquefied natural gas (LNG) system" meaning an assembly of components (tanks, valves, flexible fuel lines, etc.) and connecting parts (fuel lines, fittings, etc.) fitted on motor vehicles using LNG in their propulsion system and related components up to and including the vaporizer. Other parts downstream from the vaporizer are considered as compressed natural gas (CNG) components covered by ISO 15501.

NOTE All references to pressures, given in megapascals and bar (1 bar = 0,1 MPa = $10^5$ Pa; 1 MPa = 1 N/mm$^2$) are considered gauge pressures, unless otherwise specified.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 898-1, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs with specified property classes — Coarse thread and fine pitch thread*

ISO 6487, *Road vehicles — Measurement techniques in impact tests — Instrumentation*

ISO 12617, *Road vehicles — Liquefied natural gas (LNG) refuelling connector — 3,1 MPa connector*

ISO 12991:2012, *Liquefied natural gas (LNG) — Tanks for on-board storage as a fuel for automotive vehicles*

ISO 19723-1:2025, *Road vehicles — Liquefied natural gas (LNG) fuel systems — Part 1: Safety requirements*

## 3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

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