



## ISO 15501-1

### Road vehicles — Compressed natural gas (CNG) fuel systems —

#### Part 1: Safety requirements

*Véhicules routiers — Systèmes d'alimentation en gaz naturel comprimé (GNC) —*

*Partie 1: Exigences de sécurité*

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

This fourth edition cancels and replaces the third edition (ISO 15501-1:2016), which has been technically revised. It also incorporates the Amendment ISO 15501-1:2016/Amd. 1:2021.

The main changes are as follows:

- normative references have been updated;
- terminological entries have been updated;
- the reference to the series PRD has been removed;
- an electronic control unit requirement has been added;
- an electrical connections requirement has been added;
- the minimum receptacle clearance has been updated;
- vent line closures requirements have been added;
- gas temperature sensor requirements have been added.

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For the purposes of this document, all fuel system components in contact with natural gas have been considered suitable for natural gas as defined in ISO 15403-1.

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

When necessary, technical solutions regarding functional requirements are given in [Annex A](#).

This document refers to a service pressure of 20 MPa (200 bar).

NOTE 1 1 bar = 0,1 MPa =  $10^5$  Pa. 1 MPa = 1 N/mm<sup>2</sup>.

NOTE 2 This document is based upon a service pressure for natural gas as fuel of 20 MPa (200 bar) settled at 15 °C. Other service pressures can be accommodated by adjusting the pressure by the appropriate factor (ratio). For example, a 25 MPa (250 bar) service pressure system will require pressures to be multiplied by 1,25.