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**BS ISO 12619-3:2014+A1:2016**



**BSI Standards Publication**

# **Road vehicles — Compressed gaseous hydrogen (CGH<sub>2</sub>) and hydrogen/natural gas blend fuel system components**

Part 3: Pressure regulator

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The UK participation in its preparation was entrusted to Technical Committee GSE/40, Gas supply equipment for natural gas vehicles.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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# Road vehicles — Compressed gaseous hydrogen (CGH<sub>2</sub>) and hydrogen/natural gas blend fuel system components —

## Part 3: Pressure regulator

*Véhicules routiers — Composants des circuits d'alimentation pour hydrogène gazeux comprimé (CGH<sub>2</sub>) et mélanges de gaz naturel et hydrogène —*

*Partie 3: Régulateur de pression*



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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](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 22, *Road vehicles*, Subcommittee SC 25, *Vehicles using gaseous fuels*.

ISO 12619 consists of the following parts, under the general title *Road vehicles — Compressed gaseous hydrogen (CGH<sub>2</sub>) and hydrogen/natural gas blends fuel system components*:

- *Part 1: General requirements and definitions*
- *Part 2: Performance and general test methods*
- *Part 3: Pressure regulator*

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# Road vehicles — Compressed gaseous hydrogen (CGH<sub>2</sub>) and hydrogen/natural gas blend fuel system components —

## Part 3: Pressure regulator

### 1 Scope

This part of ISO 12619 specifies tests and requirements for the pressure regulator, a compressed gaseous hydrogen (CGH<sub>2</sub>) and hydrogen/natural gas blends fuel system component intended for use on the types of motor vehicles defined in ISO 3833.

This part of ISO 12619 is applicable to vehicles using CGH<sub>2</sub> in accordance with ISO 14687-1 or ISO 14687-2 and hydrogen/natural gas blends using natural gas in accordance with ISO 15403-1 and ISO/TR 15403-2. It is not applicable to the following:

- liquefied hydrogen (LH<sub>2</sub>) fuel system components;
- fuel containers;
- stationary gas engines;
- container mounting hardware;
- electronic fuel management;
- refuelling receptacles.

NOTE 1 It is recognized that miscellaneous components not specifically covered herein can be examined to meet the criteria of this part of ISO 12619 and tested according to the appropriate functional tests.

NOTE 2 All references to pressure in this part of ISO 12619 are to be considered gauge pressures unless otherwise specified.

NOTE 3 This part of ISO 12619 may not apply to fuel cell vehicles in compliance with international regulations.

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 11114-2, *Gas cylinders — Compatibility of cylinder and valve materials with gas contents — Part 2: Non-metallic materials*

ISO 12619-1, *Road vehicles — Compressed gaseous hydrogen (CGH<sub>2</sub>) and hydrogen/natural gas blend fuel system components — Part 1: General requirements and definitions*

ISO 12619-2, *Road vehicles — Compressed gaseous hydrogen (CGH<sub>2</sub>) and hydrogen/natural gas blend fuel system components — Part 2: Performance and general test methods*

ISO 14687-1, *Hydrogen fuel — Product specification — Part 1: All applications except proton exchange membrane (PEM) fuel cell for road vehicles*