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Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/ natural gas blends fuel system components —

Part 4: Check valve

Véhicules routiers — Composants des circuits d'alimentation pour hydrogène gazeux comprimé (CGH2) et mélanges de gaz naturel et hydrogène —

Partie 4: Clapet de nonretour

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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 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 41, *Specific aspects for gaseous fuels*.

ISO 12619 consists of the following parts, under the general title *Road vehicles — Compressed gaseous hydrogen (CGH2) 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*

— *Part 4: Check valve*

— *Part 5: Manual cylinder valve*

— *Part 6: Automatic valve*

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Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components —

Part 4: Check valve

1 Scope

This part of ISO 12619 specifies general requirements and definitions of compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components, intended for use on the types of motor vehicles defined in ISO 3833. It also provides general design principles and specifies requirements for instructions and markings.

It is applicable to vehicles using compressed gaseous hydrogen (CGH2) 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:

a) liquefied hydrogen (LH2) fuel system components located upstream of, and including, the vaporizer;

b) fuel containers;

c) stationary gas engines;

d) container mounting hardware;

e) electronic fuel management;

f) 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 12619-1, *Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blend fuel system components — Part 1: General requirements and definitions*

ISO 12619-2, *Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blend fuel system components — Part 2: Performance and general test methods*

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12619-1 apply.

4 Markings

Marking of the component shall provide sufficient information to allow the following details to be traced:

— manufacturer's or agent's name, trademark or symbol;

— model designation (part number);

— working pressure or pressure and temperature range.

The following additional markings are recommended:

— direction of flow (when necessary for correct installation);

— type of fuel;

— electrical ratings (if applicable);

— symbol of the certification agency (if applicable);

— type approval number;

— serial number or date code;

— reference to this International Standard (i.e. ISO 12619).

Marking shall remain legible for the life of the component and shall not be removed without destroying or defacing the marking. Permanent adhesive labels are permissible, or markings may be etched, stamped, or moulded into the component.

NOTE 1 Specific information required for each component can be found in this part of ISO 12619 and subsequent parts of ISO 12619.

NOTE 2 This information can be provided by a suitable identification code on at least one part of the component when it consists of more than one part.

5 Construction and assembly

The check valve shall comply with the applicable provisions of ISO 12619-1 and ISO 12619-2, and with the tests specified in Clause 6.

6 Tests

6.1 Applicability

The tests required to be carried out are indicated in Table 1.

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