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Entwurf**Straßenfahrzeuge –
Nachfüllschnittstelle für Einspritzwasser;
Text Englisch**

Road vehicles –
Refilling interface for injection water;
Text in English

Voiture routière –
Interface de remplissage pour injection d'eau;
Texte en anglais

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Gesamtumfang 14 Seiten

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Foreword

This document has been prepared by Working Group NA 052-00-34-52 AK “Water injection” of the DIN-Normenausschuss Automobiltechnik (NAAutomobil, DIN Standards Committee Automotive Engineering).

For current information on this standard, please go to DIN’s website (www.din.de) and search for the document number in question.

Introduction

Injection water can improve the combustion engine efficiency. The fluid is injected into the engine instead of enrichment of fuels at higher loads and revolutions to reduce CO₂ emissions of gasoline engines.

ISO 22241 was used for orientation to define the refilling interface for the customer.

The refilling system specified in this document has been developed by several industry stakeholders, including passenger vehicle manufacturers. The functional requirements describe a filling system that has minimal spill risk, limits pressure build-up and includes mismatch prevention.

1 Scope

This document applies to road vehicles using injection water according to ISO 31120-1.

It specifies the essential functional and geometric requirements of the on-board refilling interface for injection water according to ISO 31120-1 in order to ensure compatibility between the on-board refilling system and the off-board refilling system. This includes requirements and recommendations for the design of the off-board refilling system and other on-board refilling interfaces (e.g. for gasoline).

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 2575, *Road vehicles – Symbols for controls, indicators and tell-tales*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

DIN and DKE maintain terminological databases for use in standardization at the following addresses:

- DIN-TERMinologieportal: available at <https://www.din.de/go/din-term>
- DKE-IEV: available at <http://www.dke.de/DKE-IEV>

3.1

buttress thread

thread with an asymmetrical ridge that has one straight and one angled flank

3.2

canister

bottle, container, plastic bags with cardboard box, etc., used to refill the on-board tank of the vehicle

3.3

filler cap

part which is fitted to the *filler neck* (3.3) to prevent spillage as well as to minimize contamination of injection water and which is temporarily removed for refilling

3.4

filler neck

interfacing part of the *on-board refilling system* (3.7), synonym filler head

3.5

filler nozzle

interfacing part of an *off-board refilling system* (3.6) which allows the operator to control the flow of *injection water* (3.5) during the filling, consisting of a nozzle spout with a defined interface geometry and an automatic shut-off system