

---

---

**Diesel engines — NO<sub>x</sub> reduction agent  
AUS 32 —**

**Part 4:  
Refilling interface**

*Moteurs diesel — Agent AUS 32 de réduction des NO<sub>x</sub> —*

*Partie 4: Interface de remplissage*



This document is a preview generated by EUS



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2023

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

Contents		Page
Foreword.....		iv
1	Scope.....	1
2	Normative references.....	1
3	Terms and definitions.....	1
4	Requirements.....	3
4.1	Functional requirements.....	3
4.2	Filler neck.....	4
4.3	Inlet adapter.....	5
4.3.1	Inlet adapter with neodymium-iron-boron (NdFeB) magnet ring .....	6
4.3.2	Inlet adapter with alternative equivalent magnet field .....	6
4.4	Filler cap.....	11
4.5	Filler nozzle.....	11
4.6	Minimum free space for refilling.....	12
Annex A (normative) Compatibility conditions for sealed refilling systems.....		15
Bibliography.....		18

## 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 document 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)).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

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

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](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 34, *Propulsion, powertrain and powertrain fluids*.

This third edition of ISO 22241-4 cancels and replaces the second edition (ISO 22241-4:2019), which has been technically revised.

The main changes are as follows:

- an alternative magnetic function design has been added;
- [Table 1](#) has been editorially and technically revised.

A list of all parts in the ISO 22241 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](http://www.iso.org/members.html).

# Diesel engines — NOx reduction agent AUS 32 —

## Part 4: Refilling interface

### 1 Scope

This document specifies the refilling interface for the NOx reduction agent AUS 32 in conformance with ISO 22241-1, which is needed to operate converters with a selective catalytic reduction (SCR) exhaust treatment system.

This document specifies the minimum functional and geometric requirements of an open refilling system, in order to ensure compatibility between the on-board refilling system and the off-board refilling system. Compatibility conditions for a sealed refilling system are provided in [Annex A](#).

This document applies to commercial vehicles and buses as defined in ISO 3833 and having a gross vehicle mass of more than 3,5 t, designed to use stationary off-board refilling systems. This document also applies to the nozzle of stationary off-board refilling systems.

NOTE Throughout this document, the term “NOx reduction agent AUS 32” is abbreviated to “AUS 32”.

### 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*

ISO 22241-1, *Diesel engines — NOx reduction agent AUS 32 — Part 1: Quality requirements*

ISO 22241-3, *Diesel engines — NOx reduction agent AUS 32 — Part 3: Handling, transportation, and storage*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 22241-1 and the following apply.

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/>

#### 3.1

##### refilling system

off-board system and on-board system, including their refilling interface, for dispensing AUS 32 into the on-board tank of the *vehicle* ([3.12](#))

#### 3.2

##### off-board refilling system

stationary equipment for dispensing AUS 32 into the on-board tank of the *vehicle* ([3.12](#)), consisting typically of tank, pump, hose and *filler nozzle* ([3.3](#))