INTERNATIONAL STANDARD

ISO 21487

Third edition
2022-11

Small craft — Permanently installed petrol and diesel fuel tanks

Petits navires — Réservoirs à carburant essence et diesel installés à demeure

Reference number
ISO 21487:2022(E)

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

Published in Switzerland

Contents

Page

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).

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).

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.

This document was prepared by Technical Committee ISO/TC 188, *Small craft*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 464, *Small craft*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 21487:2012), which has been technically revised. It also incorporates the Amendments ISO 21487:2012/Amd 1:2014 and ISO 21487:2012/Amd 2:2015.

The main changes are as follows:

— an Introduction has been added to explain the addition of Annex A;

— the Scope has been amended to include installation of fuel tanks;

— some definitions have been updated;

— Clause 4 has been updated, in particular 4.2, 4.3.9 and 4.4.1;

— sublause 5.2 has been updated and Table 2 has been introduced for tests;

— subclause 6.2 has been redrafted;

— Clause 7 has been revised;

— Annex A has been added, which provides a permeation test to determine the evaporative emissions from non-metallic tanks.

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.

Introduction

This document provides requirements for the design, installation and testing of permanently installed fuel tanks for small craft.

Some countries have environmental controls for evaporative emissions from petrol fuel systems. Annex A describes the limits and test procedures for the control of evaporative emissions from permanently installed petrol fuel tanks. The details in Annex A allow for future standardization and application of evaporative emissions on small craft.

As the international community further restricts fuel system emissions, it is anticipated that Annex A will have increased global acceptance.

Small craft — Permanently installed petrol and diesel fuel tanks

1 Scope

This document specifies requirements for the design, installation and testing of petrol and diesel fuel tanks for internal combustion engines, that are intended to be permanently installed in small craft.

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 10088:2022, *Small craft — Permanently installed fuel systems*

ISO 12215-5:2019, *Small craft — Hull construction and scantlings — Part 5: Design pressures for monohulls, design stresses, scantlings determination*

ISO 12215-6:2008, *Small craft — Hull construction and scantlings — Part 6: Structural arrangements and details*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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
petrol
hydrocarbon fuel, or blend of hydrocarbon fuel and denatured ethanol, that is liquid at atmospheric pressure and is used in *spark ignition engines* (3.3)

3.2
diesel
hydrocarbon fuel, biofuel, or blend of these, that is liquid at atmospheric pressure and is used in *compression ignition engines* (3.4)

3.3
spark ignition engine
engine in which an electrical spark is produced to ignite the fuel/air mixture

3.4
compression ignition engine
engine in which ignition is obtained by means of compressing the fuel/air mixture

3.5
permanently installed
securely fastened by bolts, brackets, screws, paint, adhesive, welding or other means, so that it cannot be unattached without the use of tools or chemicals