
**Small craft — Permanently installed
fuel systems**

Petits navires — Systèmes à carburant installés à demeure

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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

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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).

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 fifth edition cancels and replaces the fourth edition (ISO 10088:2013), which has been technically revised.

The main changes are as follows:

- pressure testing requirement updated in [Annex A](#);
- permeation test limits and test procedures added as a new informative [Annex B](#) to serve as a reference for evaporative emissions.

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 deals with the installed fuel system as a whole. Fire resistant hoses, non-fire resistant hoses and permanently installed petrol and diesel fuel tanks are dealt with by ISO 7840:2021, ISO 8469:2021 and ISO 21487:2022, respectively. These standards are applicable to these products supplied as components.

Some countries have environmental controls for evaporative emissions from petrol fuel systems, and this document includes an informative [Annex B](#) describing limits and test procedures for the control of evaporative emissions from permanently installed petrol fuel systems. The details in [Annex B](#) 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 B](#) will have increased global acceptance.

Small craft — Permanently installed fuel systems

1 Scope

This document specifies the requirements for the design, materials, construction, installation and testing of permanently installed fuel systems as installed for internal combustion engines.

It applies to all parts of permanently installed diesel and petrol fuel systems as installed, from the fuel fill opening to the point of connection with the propulsion or auxiliary engine(s) on inboard- and outboard-powered small craft.

Requirements for the design and testing of petrol and diesel fuel tanks for internal combustion engines that are intended to be permanently installed in small craft are given in ISO 21487:2022.

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 1817:2022, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

ISO 7840:2021, *Small craft — Fire-resistant fuel hoses*

ISO 8469:2021, *Small craft — Non-fire-resistant fuel hoses*

ISO 8846:1990, *Small craft — Electrical devices — Protection against ignition of surrounding flammable gases*

ISO 11105:2020, *Small craft — Ventilation of petrol engine and/or petrol tank compartments*

ISO 11192:2005, *Small craft — Graphical symbols*

ISO 13297:2020, *Small craft — Electrical systems — Alternating and direct current installations*

ISO 13297:2020/Amd 1:2022, *Small craft — Electrical systems — Alternating and direct current installations — Amendment 1*

ISO 21487:2022, *Small craft — Permanently installed petrol and diesel fuel tanks*

IEC 60068-2-52:2017, *Environmental testing — Part 2-52: Tests — Test Kb: Salt, cyclic (sodium chloride solution)*

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/>