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**Ships and marine technology —  
Servicing of inflatable life-saving  
appliances —**

**Part 5:  
Inflated rescue boats**

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*Navires et technologie maritime — Entretien des dispositifs  
de sauvetage gonflables —  
Partie 5: Bateaux de sauvetage gonflables*

ISO 18079-5:2018

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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](http://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](http://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 on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html). (standards.iteh.ai)

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A list of all parts in the ISO 18079 series can be found on the ISO website.

## Introduction

The IMO International Convention on the Safety of Life at Sea of 1974 (SOLAS 74) Chapter III Regulation 20.8 sets requirements for the annual servicing and inspection of inflatable life rafts, inflatable lifejackets, marine evacuation systems, and maintenance and repair of inflated rescue boats on ships. This regulation refers to the IMO Recommendation on the conditions for the approval of servicing stations for inflatable life rafts Assembly resolution A.761(18).

However, this resolution only provides specific standards for the servicing, maintenance and repair of inflatable life rafts and remains silent for other types of inflatable or inflated life-saving appliances mentioned by SOLAS Chapter III Regulation 20.8 and consequently, the application of this statutory requirement could vary widely in practice.

The ISO 18079 series addresses those areas in which the IMO recommendation is silent, in order to facilitate consistent implementation by maritime Administrations. It is intended for use as a companion to the IMO recommendation and also to encompass all other relevant life-saving appliances covered by the ISO 18079 series and not necessarily regulated by IMO instruments.

The IMO Recommendation on the conditions for the approval of servicing stations for inflatable life rafts Assembly resolution A.761(18) specifies obligations and responsibilities for Administrations, manufacturers and ship owners. While the ISO 18079 series covers the requirements of this resolution, it has been rearranged and reformulated in order to enable a single entity, i.e. a servicing station, to attain certification in accordance with the ISO 18079 series. This does not mean that the specified obligations and responsibilities are lifted, delegated or otherwise transferred by authority from those parties to the single entity being certified.

This document addresses the maintenance and repair of inflated rescue boats and it is intended for use as a companion to the IMO resolution.

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# Ships and marine technology — Servicing of inflatable life-saving appliances —

## Part 5: Inflated rescue boats

### 1 Scope

This document, in conjunction with ISO 18079-1, provides provisions for servicing stations servicing inflated rescue boats referred to in SOLAS III/20.8. This document is applicable to non-SOLAS inflated rescue boats, as appropriate.

### 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 18079-1, *Ships and marine technology — Part 1: Servicing of inflatable life-saving appliances*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 18079-1 apply.

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

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

### 4 Inspection

#### 4.1 General

Inspection and servicing of inflated rescue boats shall be carried out in accordance with the requirements of ISO 18079-1 and the appropriate manufacturer's servicing manual. The tests and procedures shall include, but not be limited to, the following.

#### 4.2 Visual inspection

##### 4.2.1 General

At first, the following items shall be checked visually under the inflated condition with appropriate internal pressure of the air chambers.

##### 4.2.2 Air chamber and cordage

There shall be no signs of damage to air chambers such as deterioration, splitting, cutting, peeling, or rubbing of rubber coated fabric air chambers. There shall be no signs of damage to cordage, such as deterioration, cutting, or rubbing of a lifeline, a tow line and a painter.

#### 4.2.3 Valves, valve mounting and cordage mountings

There shall be no abnormality in valves, valve mountings and cordage mountings, no peeling of mountings on air chambers and no cutting of mountings.

#### 4.2.4 Bonded parts

There shall be no signs of deterioration such as wrinkles, slippage and peeling on any bonded parts on air chambers.

#### 4.2.5 Inflation valves and pressure relief valves

There shall be no signs of damage such as deterioration or corrosion of inflation valves and pressure relief valves on air chambers.

#### 4.2.6 Retro-reflective materials

There shall be no signs of peeling and deterioration of retro-reflective materials.

#### 4.2.7 Rigid floor

There shall be no damages on the rigid floor such as cracking, wear and deformation.

#### 4.2.8 Self-righting device

There shall be no damages on self-righting devices. There shall be no water inside of rigid type of self-righting devices.

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#### 4.2.9 Marking

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#### 4.2.10 Fender/skate arrangements

There shall be no damages on fender/skate arrangements such as cracking, wear or deformation.

#### 4.2.11 External boundaries of void spaces

Void spaces shall be subjected to visual inspection as far as practicable and there shall be no damages on external boundaries of the void spaces such as cracking, wear or deformation.

### 4.3 Air chamber

#### 4.3.1 Working pressure (WP) test

A working pressure (WP) test shall be carried out by inflation of air chambers with dry air compressed to at least the working pressure or the pressure required by the manufacturers' servicing manual, if higher. The air chambers shall be subjected to a pressure holding test over a period of not less than one hour during which the pressure drop will not exceed 5 % of the working pressure after correction based on temperature during the test.

To inspect the leakage of partitions inside the air chamber, respective compartments of the air chambers shall be alternately inflated and tested.



#### 4.3.2 Necessary additional pressure (NAP) test

Each air chamber shall be subjected to the necessary additional pressure (NAP) test annually, after the tenth year after manufacture of the inflated rescue boat life in accordance with the following procedure.

- a) Inflate all air chambers using dry compressed air at least equal to working pressure or to the pressure required by the manufacturer's servicing manual, if higher.
- b) Plug the pressure relief valves.
- c) Gradually raise the pressure to the lesser of 2,0 times the working pressure or that sufficient to impose a tensile load on the air chamber fabric of at least 20 % of the minimum required tensile strength, i.e. NAP test pressure.

Inflated rescue boat manufacturers shall include tables in their servicing manuals of exact NAP test pressures corresponding to their particular inflated rescue boat types and/or air chamber sizes and fabric tensile strength requirements, calculated according to [Formula \(1\)](#):

$$p(\text{N/m}^2) = \frac{\text{tensile strength}(\text{N/m})}{5 \cdot \text{radius}(\text{m})} \quad (1)$$

- d) After 5 min, check that there is no seam slippage, cracking, other defects, or significant pressure drop. If a cracking sound is heard from the air chamber, the inflated rescue boat shall be condemned; if no cracking sound is heard, the pressure in all air chambers shall be reduced simultaneously by removing the plugs from the pressure relief valves.

- e) The service provider shall record the accurate test pressures.

#### 4.3.3 Overload suspension test for main air chambers

The overload suspension test shall be carried out at 5 years and 10 years after date of manufacture and thereafter annually, in accordance with the following procedure.

- a) Inflate all air chambers other than the automatically inflatable chambers for self-righting device to working pressure.
- b) Load the inflated rescue boat with 1,1 times the mass of the full component of persons and equipment for which it is to be approved.
- c) Suspend the inflated rescue boat for 5 min with all pressure relief valves operative.
- d) Check that there are no abnormalities, such as slippage and peeling.
- e) Check that there are no abnormalities, such as slippage and peeling, after being placed on the floor and removing the load.

#### 4.4 Pressure relief valve

The activation and closing pressure of each pressure relief valve shall be measured. The measured pressure shall be within the specified pressure ranges. Leakage of air after closing of each pressure relief valve shall be checked. Any leakage is unacceptable.

#### 4.5 Equipment

All items of equipment shall be checked to ensure that they are in good condition and that dated items are replaced at the time of servicing in cases where the expiry date falls before the next service date of the inflated rescue boat.