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NVIC 03-19  
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NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 03-19

Subj: MAINTENANCE, THOROUGH EXAMINATION, OPERATIONAL TESTING, OVERHAUL AND REPAIR OF LIFEBOATS AND RESCUE BOATS, LAUNCHING APPLIANCES AND RELEASE GEAR

Ref: (a) Servicing and Maintenance of Lifeboats, Launching Appliances and On-load Release Gear, NVIC 04-07, COMDTPUB P16700.4  
(b) Title 46 Code of Federal Regulations (CFR) Part 199

1. PURPOSE. This Navigation and Vessel Inspection Circular (NVIC) provides guidance to assist owners and operators of vessels that are subject to the requirements in the International Convention for the Safety of Life at Sea (SOLAS) on complying with the amendments to SOLAS Chapter III Regulations 3 and 20, through the International Maritime Organization (IMO) Maritime Safety Committee (MSC) Resolution MSC.404(96). These amendments will enter into force on January 1, 2020. Additionally, this NVIC provides guidance with respect to IMO Resolution MSC.402(96) *Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear.*
2. ACTION.
  - a. The Coast Guard will use this guidance to provide information on how vessel owners and operators may comply with the amendments to SOLAS Chapter III Regulation 3 and 20 and the IMO Resolution MSC.402(96).
  - b. Vessel owners and operators, lifesaving equipment manufacturers, servicing and repair facilities and personnel may use this guidance to ensure that the servicing and maintenance of lifeboats, rescue boats, release gear, and launching systems for their vessels are carried out in accordance with SOLAS Chapter III Regulations 3 and 20, and the IMO Resolution MSC.402(96).

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## NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 03-19

c. Internet release is authorized.

3. DIRECTIVES AFFECTED. Reference (a) is cancelled.

4. BACKGROUND.

a. Over the years, life-saving appliances have become more sophisticated, providing increased capabilities better able to deal with different possible types of shipboard casualties. This is readily apparent in such equipment as modern totally enclosed tanker lifeboats, fast rescue boats, and on-load/offload release mechanisms. While this equipment provides greater functionality, they also come with greater complexity, and consequently are more difficult and critical to maintain properly. Ship operators now rely more heavily on specially trained personnel, outside of the ship's crew, to maintain their life-saving appliances. Unfortunately, accidents involving life-saving appliances, some resulting in fatalities, have been reported worldwide, often due to operator error or improper maintenance.

b. In 2006, the IMO developed guidelines for periodic servicing and maintenance of lifeboats, launching appliances and on-load release gear (MSC.1/Circ.1206) to address accidents with life-saving equipment. In 2007, the Coast Guard promulgated NVIC 04-07 as guidance on how to apply the non-mandatory provisions of MSC.1/Circ.1206. In 2008, the IMO also developed guidelines with interim recommendations on conditions for authorization of service providers (MSC.1/Circ.1277) to be used in conjunction with MSC.1/Circ.1206. In 2009, MSC.1/Circ.1206 was revised to consolidate the circulars on preventing accidents with lifeboats and included amendments to the guidelines for periodic servicing and maintenance of lifeboats, launching appliances and release gears (MSC.1/Circ.1206/Rev.1).

c. In 2016, the IMO Maritime Safety Committee (MSC) incorporated MSC.1/Circ.1206/Rev.1 and MSC.1/Circ.1277 into IMO Resolution MSC.402(96) *Requirements For Maintenance, Thorough Examination, Operational Testing, Overhaul And Repair Of Lifeboats And Rescue Boats, Launching Appliances And Release Gear*. The MSC implemented those requirements through amendments to SOLAS Chapter III by IMO Resolution MSC.404(96). IMO Resolutions MSC.402(96) and MSC.404(96) will enter into force on January 1, 2020.

5. DISCUSSION.

a. In accordance with 46 CFR § 2.01-25, the Officer in Charge, Marine Inspection (OCMI), or an Authorized Classification Society, will issue a SOLAS Cargo Ship Safety Certificate or Passenger Ship Safety Certificate, following verification that the vessel complies with the relevant requirements of the International Convention for the Safety of Life at Sea (SOLAS).

b. The amendments to SOLAS Regulations III/20 and III/3 are given in IMO Resolution MSC.404(96), Enclosure (1). SOLAS Regulation III/20 adds specific examinations and

tests required for each type of equipment. SOLAS Regulation III/3 adds the definition for *requirements for maintenance, thorough examination, operational testing, overhaul, and repair* as meeting the requirements in IMO Resolution MSC.402(96). IMO Resolution MSC.402(96), provided in Enclosure (2), outlines the requirements for maintenance, through examination, operation testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear.

- c. These SOLAS requirements apply to the servicing of lifeboats, rescue boats, launching appliances and release mechanisms on vessels that are subject to the requirements in SOLAS. This includes those vessels enrolled in the Alternate Compliance Program or the Maritime Security Program.
- d. For those vessels that are not subject to the requirements of SOLAS, the Coast Guard recommends they also follow the guidance in this NVIC when servicing their lifesaving equipment.
- e. The U.S. requirements for maintenance and inspection of lifesaving equipment on board inspected U.S. vessels can be found in Reference (b). This policy does not supersede the requirements found in Reference (b).

6. IMPLEMENTATION.

a. Coast Guard Headquarters.

- (1) IMO Resolution MSC.402(96) Section 3, Authorization, in Enclosure (2), states that the Administration shall ensure that the examination, operational testing, repair and overhaul of equipment is carried out by service providers authorized by the Administration.
- (2) The Coast Guard considers a service provider to be authorized by the Administration if a classification society that is an Authorized Classification Society (ACS) under 46 CFR § 8.420 has verified the service provider is capable of servicing life-saving equipment in accordance with Reference (b) and Enclosure (2). The procedures for verifying a service provider's capability should include the International Association of Classification Societies Unified Requirement Z17 Procedural Requirements for Service Suppliers.
- (3) The Coast Guard may conduct oversight on the ACS to verify the ACS is complying with U.S. and IMO requirements. The Coast Guard may review records pertaining to the authorization of service providers when an issue is discovered with a service provider authorized by the ACS.
- (4) The Coast Guard maintains a list of ACSs on the Flag State Control Division website at <https://www.dco.uscg.mil/Our-Organization/Assistant-Commandant-for-Prevention-Policy-CG-5P/Inspections-Compliance-CG-5PC-/Commercial-Vessel-Compliance/Flag-State-Control-Division/AltComp/>.

b. Coast Guard Officer in Charge, Marine Inspection.

- (1) In accordance with 33 CFR § 1.01-20 and 46 CFR § 199.45, the local Coast Guard Officer In-charge, Marine Inspection (OCMI) is responsible for conducting tests and inspections to verify the proper condition and operation of lifesaving equipment onboard U.S. vessels.
  - (a) The OCMI may inspect the lifesaving equipment and review the servicing records during annual vessel inspections.
  - (b) The OCMI may witness the annual and 5-year testing of lifesaving equipment, and the testing for repairs, as appropriate.
  - (c) If the OCMI is the issuing authority for the SOLAS Safety Certificates required in SOLAS Regulation I/12, the OCMI should be present to witness important maintenance and repairs of the lifesaving equipment.
- (2) In accordance with 46 CFR § 199.190(a) and SOLAS Regulation III/20, all life-saving appliances must be in working order and ready for immediate use. If the lifesaving equipment is not being maintained, inspected or tested as required, the OCMI may withhold or withdraw the COI. The OCMI should work with the vessel owner and operator, and the service provider to correct any issues with lifesaving equipment. The OCMI should contact the ACS and Coast Guard Headquarters if the issue involves an authorized service provider.

c. Authorized Classification Society.

- (1) An Authorized Classification Society (ACS) under 46 CFR § 8.420, may authorize service providers to conduct the maintenance, servicing, inspection and testing of lifesaving equipment required in Enclosure (2). The Coast Guard considers those services providers to be authorized by the Administration.
- (2) The ACS should issue authorization documentation after verifying that the service provider is capable of servicing the equipment in accordance with Reference (b) and Enclosure (2). Once the authorization documentation is issued, the service provider may be considered an Authorized Service Provider (ASP).
  - (a) The ACS should use the procedures in the International Association of Classification Societies Unified Requirement Z17 Procedural Requirements for Service Suppliers to verify the service provider's capability of servicing life-saving equipment in accordance with Reference (b) and Enclosure (2).
  - (b) The ACS should conduct an initial audit of the service provider during their review.

- (3) The ACS should periodically verify that the ASP is continuing to carry out the requirements in Enclosure (2), including conducting periodic audits of the ASP. Any significant non-conformity may result in an ACS surveyor attending a servicing by an ASP and the ACS notifying the Coast Guard.
  - (a) The ACS audits should occur at least every 5 years or during the ASP reauthorization. Audits may occur more frequently as determined by the ACS.
  - (b) The ACS audits should also occur whenever an issue with an ASP is identified. These audits may be conducted in conjunction with the Coast Guard.
- (4) The ACSs should maintain a record of the ASP authorization documentation and verification results for the time that the ASP is authorized to be a service provider. These records should be made available to the Coast Guard, as requested.
- (5) The ACS should maintain a list of authorized service providers that is available to vessel owners and operators. The ACS should provide the location of that list to the Coast Guard.
- (6) If the ACS is the issuing authority for the SOLAS Safety Certificates, required in SOLAS Regulation I/12, the ACS should be present to witness important testing, maintenance and repairs of the lifesaving equipment.

d. Authorized Service Providers.

- (1) A service provider may be either an original equipment manufacturer or a third party service provider. Some components of lifeboat and launching systems are generally of common and conventional designs for which service and repair do not necessarily require manufacturer-specific expertise.
- (2) A service provider should apply to be an authorized service provider through an ACS. The service provider should provide evidence they are capable of meeting the requirements in Section 7 in Enclosure (2). Upon a successful initial audit of the service provider, the ACS should issue authorization documentation outlining the scope of services provided by the service provider. Once the authorization documentation is issued, the service provider may be considered an Authorized Service Provider (ASP). The ASP should maintain their authorization documentation for the period of validity.
- (3) Paragraph 7.1.1 of Enclosure (2) requires the ASP employ personnel certified to conduct inspection, maintenance, servicing and testing for each make and type of equipment for which the ASP provides service. The Coast Guard's definitions for make and type are provided in Enclosure (3).
- (4) Where a lifesaving appliance manufacturer believes that a particular model requires certified servicing personnel to have additional competencies, those competencies

should be identified during the equipment approval process and will be listed on the USCG Certificate of Approval for that model.

- (5) The ASP and each certified technician should maintain a record of the scope of their certifications and training as required.
- (6) The ASP should maintain their servicing program records for the duration of the time they are authorized as an ASP. These records should be made available to the Coast Guard or ACS during an audit, as requested.

e. Vessel Owners and Operators.

- (1) The SOLAS amendments in Enclosures (1) and (2) enter into force on January 1, 2020. The requirements in those amendments will be applicable to vessels that are subject to the requirements in SOLAS.
- (2) Enclosures (1) and (2) require the owners and operators of vessels subject to the requirements in SOLAS to use certified personnel of an equipment manufacturer or ASP to carry out the annual thorough examination and operational tests, and the five-year thorough examination, overhaul, and overload operational tests. Shipboard personnel or certified personnel of an ASP may conduct the weekly and monthly inspections, and routine maintenance.
- (3) Vessel owners and operators may use an ASP authorized by an ACS, as described in the sections above.
  - (a) The Coast Guard maintains a list of ACSs on the Flag State Control Division website at <https://www.dco.uscg.mil/Our-Organization/Assistant-Commandant-for-Prevention-Policy-CG-5P/Inspections-Compliance-CG-5PC-/Commercial-Vessel-Compliance/Flag-State-Control-Division/AltComp/>.
  - (b) ACSs should maintain a list of service providers they authorize.
  - (c) Issues involving the unavailability of an equipment manufacturer or ASP will be handled on a case-by-case basis. If the original equipment manufacturer is unavailable and there is no ASP available to conduct the required servicing or testing, the vessel owner or operator should contact Commandant (CG-ENG-4), Lifesaving and Fire Safety Division at [TypeApproval@uscg.mil](mailto:TypeApproval@uscg.mil).
- (4) Vessel owners and operators should maintain the maintenance manuals and technical documentation for all lifesaving equipment onboard the vessel subject to the requirements in IMO Resolution MSC.402(96).
- (5) Vessel owners and operators should maintain a record of the lifesaving equipment servicing on board the vessel for the service life of the equipment. These records

should be made available to Coast Guard inspectors during annual inspections, as requested.

- f. Feedback. In order to provide supporting documentation for future discussions at IMO concerning the application of IMO Resolution MSC.402(96), vessel owners and operators, lifesaving equipment manufacturers, service providers and personnel, and OCMI's are encouraged to inform the Commandant (CG-ENG-4) of any practical problems encountered in the implementation of its provisions, particularly with regard to availability of Authorized Service Providers.
7. DISCLAIMER. This guidance is not a substitute for applicable legal requirements, nor is it itself a regulation. It is not intended to, nor does it impose legally-binding requirements on any party. It represents the Coast Guard's current thinking on this topic and is issued for guidance purposes to outline methods of best practice for compliance with the applicable law. You can use an alternative approach if the approach satisfies the requirements of the applicable statutes and regulations.
8. ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATIONS.
  - a. The development of this publication and the general policies contained within it have been thoroughly reviewed by the originating office in conjunction with the Office of Environmental Management, Commandant (CG-47). This publication is categorically excluded under current Department of Homeland Security (DHS) categorical exclusion DHS (CATEX) A3 from further environmental analysis in accordance with the U.S. Coast Guard Environmental Planning Policy, COMDTINST 5090.1 and the Environmental Planning (EP) Implementing Procedures (IP).
  - b. This publication will not have any of the following: significant cumulative impacts on the human environment; substantial controversy or substantial change to existing environmental conditions; or inconsistencies with any Federal, State, or local laws or administrative determinations relating to the environment. All future specific actions resulting from the general policy in this publication must be individually evaluated for compliance with the National Environmental Policy Act (NEPA) and Environmental Effects Abroad of Major Federal Actions, Executive Order 12114, Department of Homeland Security (DHS) NEPA policy, Coast Guard Environmental Planning policy, and compliance with all other applicable environmental mandates.
9. DISTRIBUTION. No paper distribution will be made of this NVIC. An electronic version will be located at <https://www.dco.uscg.mil/Our-Organization/NVIC/>.
10. RECORDS MANAGEMENT CONSIDERATIONS. This NVIC has been thoroughly reviewed during the directives clearance process, and it has been determined there are no further records scheduling requirements, in accordance with the Federal Records Act (44 U.S.C. 3101 et seq.), NARA requirements, and the Information and Life Cycle Management Manual, COMDTINST M5212.12 (series). This policy does not create significant or substantial change to existing records management requirements.

11. FORMS/REPORTS. None.

12. REQUEST FOR CHANGES. All requests for changes and regarding implementation of this NVIC should be directed to Commandant (CG-ENG-4), Lifesaving and Fire Safety Division at [TypeApproval@uscg.mil](mailto:TypeApproval@uscg.mil).

R. V. TIMME  
Rear Admiral, U.S. Coast Guard  
Assistant Commandant for Prevention Policy

Encl: (1) IMO Resolution MSC.404(96) - Amendments to the International Convention for the Safety of Life at Sea, as amended  
(2) IMO Resolution MSC.402(96) - Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear  
(3) Coast Guard Definitions for Make and Type



**ANNEX 3**

**RESOLUTION MSC.404(96)  
(adopted on 19 May 2016)**

**AMENDMENTS TO THE INTERNATIONAL CONVENTION  
FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO article VIII(b) of the International Convention for the Safety of Life at Sea, 1974 ("the Convention"), concerning the amendment procedure applicable to the annex to the Convention, other than to the provisions of chapter I,

HAVING CONSIDERED, at its ninety-sixth session, amendments to the Convention proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1 ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 July 2019, unless, prior to that date, more than one third of the Contracting Governments to the Convention, or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have notified the Secretary-General of their objections to the amendments;

3 INVITES Contracting Governments to the Convention to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2020 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;

5 REQUESTS ALSO the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization, which are not Contracting Governments to the Convention.

ANNEX

**AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR  
THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED**

**CHAPTER II-2  
CONSTRUCTION – FIRE PROTECTION, FIRE DETECTION  
AND FIRE EXTINCTION**

**PART A  
GENERAL**

**Regulation 3 – Definitions**

1 The following new paragraphs are added after the existing paragraph 56:

"57 *Helicopter landing area* is an area on a ship designated for occasional or emergency landing of helicopters but not designed for routine helicopter operations.

58 *Winching area* is a pick-up area provided for the transfer by helicopter of personnel or stores to or from the ship, while the helicopter hovers above the deck.

**PART D  
ESCAPE**

**Regulation 13 – Means of escape**

1 The footnote to the title of paragraph 3.2 is deleted.

2 The following new paragraphs are added after the existing paragraph 3.2.6.2:

"3.2.7 *Evacuation analysis for passenger ships\**

3.2.7.1 Escape routes shall be evaluated by an evacuation analysis early in the design process. This analysis shall apply to:

- .1 ro-ro passenger ships constructed on or after 1 July 1999; and
- .2 other passenger ships constructed on or after 1 January 2020 carrying more than 36 passengers.

3.2.7.2 The analysis shall be used to identify and eliminate, as far as practicable, congestion which may develop during an abandonment, due to normal movement of passengers and crew along escape routes, including the possibility that crew may need to move along these routes in a direction opposite to the movement of passengers. In addition, the analysis shall be used to demonstrate that escape arrangements are sufficiently flexible to provide for the possibility that certain escape routes, assembly stations, embarkation stations or survival craft may not be available as a result of a casualty.

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\* Refer to the *Revised Guidelines on evacuation analyses for new and existing passenger ships* (MSC.1/Circ.1533), as may be amended."

3 Paragraph 7.4 is deleted.

**PART G  
SPECIAL REQUIREMENTS**

**Regulation 18 – Helicopter facilities**

4 A new paragraph 2.3 is added after the existing paragraph 2.2, as follows:

"2.3 Notwithstanding the requirements of paragraph 2.2 above, ships constructed on or after 1 January 2020, having a helicopter landing area, shall be provided with foam firefighting appliances which comply with the relevant provisions of chapter 17 of the Fire Safety Systems Code."

and the subsequent paragraphs are renumbered accordingly.

5 The renumbered paragraph 2.4 is replaced with the following text:

"2.4 Notwithstanding the requirements of paragraph 2.2 or 2.3 above, ro-ro passenger ships without helidecks shall comply with regulation III/28."

6 A new paragraph 5.1.6 is added after the existing paragraph 5.1.5 as follows:

".6 in lieu of the requirements of paragraphs 5.1.3 through 5.1.5, on ships constructed on or after 1 January 2020 having a helideck, foam firefighting appliances which comply with the provisions of the Fire Safety Systems Code."

and the remaining paragraphs are renumbered accordingly.

**CHAPTER III  
LIFE-SAVING APPLIANCES AND ARRANGEMENTS**

**PART A  
GENERAL**

**Regulation 3 – Definitions**

7 The following new paragraph 25 is added after the existing paragraph 24:

"25 *Requirements for maintenance, thorough examination, operational testing, overhaul and repair* means the Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear, adopted by the Maritime Safety Committee of the Organization by resolution MSC.402(96), as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the annex other than chapter I."

**PART B**  
**REQUIREMENTS FOR SHIPS AND LIFE-SAVING APPLIANCES**

**Regulation 20 – Operational readiness, maintenance and inspections**

- 8 The existing paragraph 3.1 is replaced with the following text:
- "3.1 Maintenance, testing and inspections of life-saving appliances shall be carried out in a manner having due regard to ensuring reliability of such appliances."
- 9 The existing paragraph 11 is replaced with the following text:
- "11 Maintenance, thorough examination, operational testing, overhaul and repair of lifeboats, rescue boats and fast rescue boats, launching appliances and release gear**
- 11.1 Launching appliances shall be:
- .1 subject to a thorough examination at the annual surveys required by regulations I/7 or I/8, as applicable; and
  - .2 upon completion of the examination referred to in paragraph 11.1.1, subjected to a dynamic test of the winch brake at maximum lowering speed. The load to be applied shall be the mass of the survival craft or rescue boat without persons on board, except that, at intervals of at least once every five years, the test shall be carried out with a proof load equal to 1.1 times the weight of the survival craft or rescue boat and its full complement of persons and equipment.
- 11.2 Lifeboat and rescue boat release gear, including fast rescue boat release gear and free-fall lifeboat release systems, shall be:
- .1 subject to a thorough examination and operational test during the annual surveys required by regulations I/7 and I/8;
  - .2 in case of on-load release gear, operationally tested under a load of 1.1 times the total mass of the boat when loaded with its full complement of persons and equipment whenever the release gear is overhauled. Such overhauling and operational test shall be carried out at least once every five years;\* and
  - .3 notwithstanding paragraph 11.2.2, the operational testing of free-fall lifeboat release systems shall be performed either by free fall launch with only the operating crew on board or by a test without launching the lifeboat carried out based on Requirements for maintenance, thorough examination, operational testing, overhaul and repair.

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\* Refer to *Recommendation on testing of life-saving appliances* (resolution A.689(17)), as amended. For life-saving appliances installed on board on or after 1 July 1999, refer to *Revised Recommendations on testing of life-saving appliances* (resolution MSC.81(70)), as amended.

- 11.3 Davit-launched liferaft automatic release hooks shall be:
- .1 subject to a thorough examination and operational test during the annual surveys required by regulations I/7 and I/8; and
  - .2 operationally tested under a load of 1.1 times the total mass of the liferaft when loaded with its full complement of persons and equipment whenever the automatic release hook is overhauled. Such overhauling and operational test shall be carried out at least once every five years.\*
- 11.4 Lifeboats and rescue boats, including fast rescue boats, shall be subject to a thorough examination and operational test during the annual surveys required by regulations I/7 and I/8.
- 11.5 The thorough examination, operational testing and overhaul required by paragraphs 11.1 to 11.4 and the maintenance and repair of equipment specified in paragraphs 11.1 to 11.4 shall be carried out in accordance with the Requirements for maintenance, thorough examination, operational testing, overhaul and repair, and the instructions for onboard maintenance as required by regulation 36.

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\* Refer to *Recommendation on testing of life-saving appliances* (resolution A.689(17)), as amended. For life-saving appliances installed on board on or after 1 July 1999, refer to *Revised Recommendations on testing of life-saving appliances* (resolution MSC.81(70)), as amended."

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**ANNEX 1**

**RESOLUTION MSC.402(96)  
(adopted on 19 May 2016)**

**REQUIREMENTS FOR MAINTENANCE, THOROUGH EXAMINATION, OPERATIONAL TESTING, OVERHAUL AND REPAIR OF LIFEBOATS AND RESCUE BOATS, LAUNCHING APPLIANCES AND RELEASE GEAR**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO the *Measures to prevent accidents with lifeboats* (MSC.1/Circ.1206/Rev.1) and the *Interim recommendation on conditions for authorization of service providers for lifeboats, launching appliances and on-load release gear* (MSC.1/Circ.1277) approved by it,

RECOGNIZING the need to establish a uniform, safe and documented standard for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats (including free-fall lifeboats) and rescue boats (including fast rescue boats), launching appliances and release gear,

NOTING that, by resolution MSC.404(96), it adopted amendments to regulations III/3 and III/20 of the International Convention for the Safety of Life at Sea, 1974 ("the Convention"), concerning maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear,

NOTING ALSO that the aforementioned regulation III/20 of the Convention provides that the maintenance, thorough examination, operational testing, overhaul and repair shall be carried out in accordance with the Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear ("the Requirements"),

HAVING CONSIDERED, at its ninety-sixth session, the recommendation made by the Sub-Committee on Ship Systems and Equipment, at its third session,

1 ADOPTS the Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear, the text of which is set out in the annex to the present resolution;

2 INVITES Contracting Governments to the Convention to note that the Requirements will take effect on 1 January 2020 upon entry into force of the associated amendments to regulations III/3 and III/20 of the Convention;

3 ALSO INVITES Contracting Governments to the Convention to take measures they consider appropriate to ensure that national manufacturers of equipment certified under chapter III of the Convention for installation and use on board ships undertake to ensure that equipment, instructions, specialized tools, spare parts, training and accessories, as required, are available to independent service providers in a timely and cost-effective manner;

4        REQUESTS the Secretary-General to transmit certified copies of this resolution and the text of the Requirements contained in the annex to all Contracting Governments to the Convention;

5        REQUESTS ALSO the Secretary-General to transmit copies of this resolution and the annex to all Members of the Organization which are not Contracting Governments to the Convention.

## ANNEX

**REQUIREMENTS FOR MAINTENANCE, THOROUGH EXAMINATION, OPERATIONAL TESTING, OVERHAUL AND REPAIR OF LIFEBOATS AND RESCUE BOATS, LAUNCHING APPLIANCES AND RELEASE GEAR****1 GENERAL**

1.1 The objective of these Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear (the Requirements) is to establish a uniform, safe and documented standard for maintenance, thorough examination, operational testing, overhaul and repair of the equipment specified in paragraph 2.1.

1.2 The detailed procedures covered by these Requirements are provided in section 6.

1.3 These Requirements relate to the following regulations:

- .1 SOLAS regulation III/20 – Operational readiness, maintenance and inspections; and
- .2 SOLAS regulation III/36 – Instructions for onboard maintenance.

1.4 The Company<sup>1</sup> shall ensure that maintenance, thorough examination, operational testing, overhaul and repair on board its ships is conducted in accordance with these Requirements and SOLAS regulation III/20. The Company shall establish and implement health, safety and environment (HSE) procedures covering all activities set out in these Requirements.

1.5 The personnel carrying out maintenance, thorough examination, operational testing overhaul and repair as described in paragraphs 4.2 and 4.3 shall be certified by an authorized service provider in accordance with the requirements specified in section 8. When performing such activities on board ships they shall comply with health, safety and environment (HSE) instructions and procedures established by the Company.

**2 APPLICATION**

2.1 These Requirements shall apply to the maintenance, thorough examination, operational testing, overhaul and repair of:

- .1 lifeboats (including free-fall lifeboats), rescue boats and fast rescue boats; and
- .2 launching appliances and on-load and off-load release gear for lifeboats (including primary and secondary means of launching appliances for free-fall lifeboats), rescue boats, fast rescue boats and davit-launched liferafts.

2.2 For the purpose of these Requirements:

- .1 *Authorized service provider* means an entity authorized by the Administration in accordance with section 3 and section 7.

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<sup>1</sup> For the purpose of these Requirements, Company is as defined in SOLAS regulation IX/1.2.



- .2 *Equipment* means the aforementioned equipment to which the Requirements apply.
- .3 *Manufacturer* means the original equipment manufacturer or any entity which has taken legal and legitimate responsibilities for equipment when the original equipment manufacturer no longer exists or supports the equipment.
- .4 *Off-load release mechanism* means a release mechanism which releases the survival craft/rescue boat/fast rescue boat when it is waterborne or when there is no load on the hooks.
- .5 *On-load release mechanism* means a release mechanism which releases the survival craft/rescue boat/fast rescue boat with load on the hooks.
- .6 *Repair* means any activities requiring disassembly of equipment, or any other activities outside the scope of the instructions for on-board maintenance and for emergency repair of life-saving appliances prepared in accordance with SOLAS regulations III/36.2 and III/35.3.18, respectively.
- .7 *Overhaul* means a periodical activity defined by the manufacturer that proves continued fitness for purpose for a defined period subject to correct maintenance.

### **3 AUTHORIZATION**

3.1 Administrations shall ensure that the thorough examination, operational testing, repair and overhaul of equipment (see paragraphs 4.2 and 4.3) shall be carried out in accordance with SOLAS regulation III/20 by service providers authorized in accordance with section 7.

3.2 The requirements in section 7 shall equally apply to manufacturers when they are acting as authorized service providers.

### **4 QUALIFICATION LEVELS AND CERTIFICATION**

4.1 Weekly and monthly inspections and routine maintenance as specified in the equipment maintenance manual(s), shall be conducted by authorized service providers, or by shipboard personnel under the direction of a senior ship's officer in accordance with the maintenance manual(s).

4.2 Annual thorough examinations and operational tests, as described in section 6.2, shall be conducted by certified personnel of either the manufacturer or an authorized service provider in accordance with section 7 and section 8. The service provider may be the ship operator provided that it is authorized in accordance with section 3 and section 7.

4.3 Five-year thorough examination, any overhaul, overload operational tests<sup>2</sup>, as described in section 6.3, and repair shall be conducted by certified personnel of either the manufacturer or an authorized service provider in accordance with section 7 and section 8.

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<sup>2</sup> See SOLAS regulations III/20.11.1.2, III/20.11.2.2 and III/20.11.3.2.

## **5 REPORTS AND RECORDS**

5.1 All reports and checklists shall be completed and signed by the person who carries out the inspection and maintenance work and countersigned by the Company's representative or the ship's master.

5.2 Records of maintenance, thorough examination, operational testing, overhaul and repair shall be updated and filed on board the ship for the service life of the equipment.

5.3 When thorough examination, operational testing, overhaul and repair are completed, a statement confirming that the lifeboat arrangements remain fit for purpose shall be promptly issued by the manufacturer or authorized service provider that conducted the work. A copy of valid documents of certification and authorization as appropriate shall be included with the statement.

## **6 SPECIFIC PROCEDURES FOR INSPECTION, MAINTENANCE, THOROUGH EXAMINATION, OPERATIONAL TESTING, OVERHAUL AND REPAIR**

### **6.1 General/Maintenance**

6.1.1 Any inspection, maintenance, thorough examination, operational testing, overhaul and repair shall be carried out according to the maintenance manuals and associated technical documentation developed by the manufacturer.

6.1.2 A full set of maintenance manuals and associated technical documentation as specified in paragraph 6.1.1 shall be available on board.

6.1.3 The maintenance manuals and associated technical documentation as specified in paragraph 6.1.1 shall include the items listed in sections 6.2 and 6.3 as a minimum and shall be kept up to date by the Company taking into account relevant information provided by the manufacturer.

### **6.2 Annual thorough examination and operational test**

6.2.1 All items listed in checklists for the weekly/monthly inspections required by SOLAS regulations III/20.6 and III/20.7 also form the first part of the annual thorough examination.

6.2.2 Records of inspections and routine on-board maintenance carried out by the ship's crew and the applicable certificates for the equipment shall be reviewed.

6.2.3 For lifeboats (including free-fall lifeboats), rescue boats and fast rescue boats, the following items shall be thoroughly examined and checked for satisfactory condition and operation:

- .1 condition of the boat structure including fixed and loose equipment (including a visual examination of the external boundaries of the void spaces, as far as practicable);
- .2 engine and propulsion system;
- .3 sprinkler system, where fitted;
- .4 air supply system, where fitted;

- .5 manoeuvring system;
- .6 power supply system;
- .7 bailing system;
- .8 fender/skate arrangements; and
- .9 rescue boat righting system, where fitted.

6.2.4 For release gear of lifeboats (including free-fall lifeboats), rescue boats, fast rescue boats and liferafts, the following shall be thoroughly examined for satisfactory condition<sup>3</sup> and operation after the annual operational test of the winch brake with the empty boat or equivalent load, as required by paragraph 6.2.10:

- .1 operation of devices for activation of release gear;
- .2 excessive free play (tolerances);
- .3 hydrostatic interlock system, where fitted;
- .4 cables for control and release; and
- .5 hook fastening.

- Notes:**
- 1 The setting and maintenance of release gear are critical operations with regard to maintaining the safe operation of lifeboats (including free-fall lifeboats), rescue boats, fast rescue boats and davit launched liferafts. Utmost care shall be taken when carrying out all inspection and maintenance operations on the equipment.
  - 2 No maintenance or adjustment of the release gear shall be undertaken while the hooks are under load.

6.2.5 The operational test of davit-launched lifeboats' and rescue boats' on-load release function shall be carried out as follows:

- .1 position the boat partially in the water such that the mass of the boat is substantially supported by the falls and the hydrostatic interlock system, where fitted, is not triggered;
- .2 operate the on-load release gear;
- .3 reset the on-load release gear; and
- .4 examine the release gear and hook fastening to ensure that the hook is completely reset and no damage has occurred.

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<sup>3</sup> Hanging-off pennants may be used for this purpose but should not remain connected at other times, such as when the lifeboat is normally stowed and during training exercises. The release gear is to be examined prior to its operational test. The release gear is to be re-examined after its operational test and the operational test of the winch brake. Special consideration shall be given to ensure that no damage has occurred during the winch brake test, especially to the hook fastening.

6.2.6 The operational test of davit-launched lifeboats' and rescue boats' off-load release function shall be carried out as follows:

- .1 position the boat so that it is fully waterborne;
- .2 operate the off-load release gear;
- .3 reset the off-load release gear; and
- .4 recover the boat to the stowed position and prepare for operational readiness.

During the test, prior to hoisting, it shall be checked that the release gear is completely and properly reset. The final turning-in of the boat shall be done without any persons on board.

6.2.7 The operational test of the free-fall lifeboat release function shall be carried out as follows:

- .1 engage the arrangements for the test without launching the lifeboat, required by paragraph 4.7.6.4 of the LSA Code, as specified in the manufacturer's operating instructions;
- .2 if required to be on board, ensure that the operator is properly seated and secured in the seat location from which the release mechanism is to be operated;
- .3 operate the release mechanism to release the lifeboat;
- .4 reset the lifeboat in the stowed configuration;
- .5 repeat the procedures referred to in .2 to .4 above, using the back-up release mechanism, if applicable;
- .6 remove the arrangements for the test without launching the lifeboat, required by paragraph 4.7.6.4 of the LSA Code; and
- .7 verify that the lifeboat is in the ready to launch stowed configuration.

6.2.8 The operational test of the davit-launched liferaft automatic release function shall be carried out as follows:

- .1 manually release the hook with a load of 150 kg on the hook;
- .2 automatically release the hook with a dummy weight of 200 kg on the hook when it is lowered to the ground; and
- .3 examine the release hook and hook fastening to ensure that the hook is completely reset and no damage has occurred.

If a raft is used for the test instead of a dummy weight, the automatic release function shall release the raft when waterborne.

6.2.9 For launching appliances for lifeboats (including free-fall lifeboats), rescue boats, fast rescue boats and liferafts, the following items shall be examined for satisfactory condition and operation:

- .1 davit or other launching structures, in particular with regard to corrosion, misalignments, deformation and excessive free play;
- .2 wires and sheaves, possible damage such as kinks and corrosion;
- .3 lubrication of wires, sheaves and moving parts; and
- .4 if applicable:
  - .1 functioning of limit switches;
  - .2 stored power systems;
  - .3 hydraulic systems; and
- .5 for winches:
  - .1 inspecting the braking system in accordance with winch manual;
  - .2 replacing brake pads, when necessary;
  - .3 winch foundation; and
  - .4 if applicable:
    - .1 remote control system; and
    - .2 power supply system.

6.2.10 For winches of the launching appliances for lifeboats (including free-fall lifeboats), rescue boats, fast rescue boats and liferafts, annual operational testing shall be done by lowering the empty craft or boat or equivalent load. When the craft has reached its maximum lowering speed and before the craft enters the water, the brake shall be abruptly applied. Following these tests, the stressed structural parts shall be reinspected<sup>4</sup> where the structure permits the reinspection.

### **6.3 Five-year thorough examination, overhaul and overload operational tests**

6.3.1 The five-year operational test of the winches of the launching appliances shall be carried out with a proof load equal to 1.1 times the weight of the survival craft or rescue boat and its full complement of persons and equipment. When the proof load has reached its maximum lowering speed, the brake shall be abruptly applied.

6.3.2 Following these tests, the stressed structural parts shall be reinspected<sup>4</sup> where the structure permits the reinspection.

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<sup>4</sup> In loading the craft or boat for this test, precautions should be taken to ensure that the stability of the craft or boat is not adversely affected by free surface effects or the raising of the centre of gravity.

6.3.3 The operational tests and overhaul at five-year intervals of release gear for lifeboats (including free-fall lifeboats), rescue boats, fast rescue boats and liferafts shall include:

- .1 dismantling of hook release units;
- .2 examinations with regard to tolerances and design requirements;
- .3 adjustment of release gear system after assembly;
- .4 operational tests as per paragraphs 6.2.5, 6.2.6, 6.2.7 or 6.2.8 above, as applicable, but with a load equal to 1.1 times the weight of the survival craft or rescue boat and its full complement of persons and equipment; and
- .5 examinations of vital parts with regard to defects and cracks<sup>5</sup>.

6.3.4 Any other overhaul if required shall be carried out in accordance with paragraph 6.3.3.

## **7 REQUIREMENTS FOR AUTHORIZATION OF SERVICE PROVIDERS**

7.1 Authorization as required by paragraph 3.1 shall include, as a minimum, demonstration of:

- .1 employment and documentation of personnel certified in accordance with a recognized national, international or industry standard as applicable, or a manufacturer's established certification programme. In either case, the certification programme shall comply with section 8 for each make and type of equipment for which service is to be provided;
- .2 availability of sufficient tools, and in particular any specialized tools specified in the manufacturer's instructions, including portable tools as needed for work to be carried out on board ship;
- .3 access to appropriate parts and accessories as specified for maintenance and repair;
- .4 availability of the manufacturer's instructions for repair work involving disassembly or adjustment of on-load release mechanisms and davit winches; and
- .5 a documented and certified quality system, which covers at least the following:
  - .1 code of conduct for personnel involved in the relevant activity;
  - .2 maintenance and calibration of measuring tools and gauges;
  - .3 training programmes for personnel;
  - .4 supervision and verification to ensure compliance with operational procedures;
  - .5 recording and reporting of information;

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<sup>5</sup> Non-destructive examination (NDE) techniques, such as dye penetrants (DPE), may be suitable.

- .6 quality management of subsidiaries and agents;
- .7 job preparation; and
- .8 periodic review of work process procedures, complaints, corrective actions and issuance, maintenance and control of documents.

**Note:** A documented quality system complying with the most current version of the ISO 9000 series and including the above items would be considered acceptable.

Enclosure (2) to NAVIGATION AND VESSEL INSPECTION CIRCULAR CCC

7.2 Administrations shall ensure that information regarding authorized service providers is made available.

7.3 In cases where a manufacturer is no longer in business or no longer provides technical support, Administrations may authorize service providers for the equipment on the basis of prior authorization for the equipment and/or long-term experience and demonstrated expertise as an authorized service provider.

7.4 Issuance and maintenance of authorization document:

- .1 upon successful initial audit of a service provider, an authorization document shall be issued by the Administration defining the scope of services provided (e.g. makes and types of equipment). The expiry date shall be clearly written on the document;
- .2 the Administration shall ensure that work continues, e.g. by periodic audit, to be carried out in accordance with these Requirements, and shall withdraw the authorization of service providers who are not in compliance; and
- .3 the Administration may accept or recognize service providers authorized by other Administrations or by their Recognized Organizations.

## **8 REQUIREMENTS FOR CERTIFICATION OF PERSONNEL**

8.1 Personnel for the work specified in paragraphs 4.2 and 4.3 shall be certified by the manufacturer or authorized service provider for each make and type of the equipment to be worked on in accordance with the provisions in this section.

### **8.2 Education and training**

8.2.1 Initial certification shall be issued only to personnel having completed education, training and competence assessment. Education shall address, as a minimum:

- .1 relevant rules and regulations, including international conventions;
- .2 design and construction of lifeboats (including free-fall lifeboats), rescue boats and fast rescue boats, including on-load release gear and launching appliances;
- .3 causes of lifeboat and rescue boat accidents;
- .4 education and practical training in the procedures specified in section 6 for which certification is sought;

- .5 detailed procedures for thorough examination, operational testing, repair and overhaul of lifeboat (including free-fall lifeboats), rescue boats and fast rescue boats, launching appliances and on-load release gear, as applicable;
- .6 procedures for issuing a report of service and statement of fitness for purpose based on paragraph 5.3; and
- .7 work, health and safety issues while conducting activities on board.

8.2.2 Training shall include practical technical training on thorough examination, operational testing, maintenance, repair and overhaul techniques using the equipment for which the personnel are to be certified. The technical training shall include disassembly, reassembly, correct operation and adjustment of the equipment. Classroom training shall be supplemented by field experience in the operations for which certification is sought, under the supervision of a certified person.

8.2.3 Prior to issuance of certification, a competency assessment shall be satisfactorily completed, using the equipment for which the personnel are to be certified.

### **8.3 Validity of certificates and renewal**

8.3.1 Upon completion of training and competency assessment, a certificate shall be issued defining the level of qualification and the scope of the certification (i.e. makes and types of equipment and specifically state which activities in paragraphs 4.2 and 4.3 are covered by the certification). The expiry date shall clearly be written on the certificate and shall be three years from the date of issue. The validity of any certificate shall be suspended in the event of any shortfall in performance and only revalidated after a further competency assessment.

8.3.2 A competency assessment shall be conducted to renew the certification. In cases where refresher training is found necessary a further assessment shall be carried out after completion.

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### Coast Guard Definitions for Make and Type

Make – The Coast Guard considers the “make” to refer to the equipment manufacturer.

Type – The Coast Guard considers the “type” to refer to the Coast Guard approval series for the equipment. The following table outlines the Coast Guard approval series name and number for each type of equipment required to be serviced in accordance with MSC.402(96), Enclosure (2).

<b>Coast Guard Approval Series Name</b>	<b>Coast Guard Approval Series Number</b>
Lifeboats	160.135
Boats and Fast Rescue Boats (SOLAS)	160.156
Launching Appliances - Winches	160.115
Launching Appliances - Davits	160.132
Release Mechanisms for Lifeboats and Rescue Boats	160.133
Davit-Launched Liferaft Automatic Release Hooks (SOLAS)	160.170

For example, Company A has a lifeboat Model X approved under Coast Guard approval number 160.135/XXX. The technician would be required to be certified to service equipment with make Company A and type Lifeboat – 160.135.