



Office of
Deputy Commissioner
of Maritime Affairs

THE REPUBLIC OF LIBERIA
LIBERIA MARITIME AUTHORITY

Marine Notice

SAF-005
Rev. 07/20

TO: ALL SHIPOWNERS, OPERATORS, MASTERS AND OFFICERS OF MERCHANT SHIPS, AGENTS AND RECOGNIZED ORGANIZATIONS

SUBJECT: Survival Craft, Rescue Boat and Launching Appliances - Testing, Servicing and Maintenance

Reference: (a) **Maritime Regulation 2.35**
(b) **Maritime Regulation 10.296 (5)**
(c) **SOLAS 1974, Chapter III**
(d) **International Life-Saving Appliances (LSA Code), as amended**
(e) **Resolution MSC.402(96)**
(f) **Resolution MSC.404(96)**

Supersedes: Marine Notice SAF-005, dated 06/12

The following changes have been included:

- a. **Amends the SUBJECT to include rescue boats and launching appliances;**
- b. **Revises BACKGROUND and section 4.0 on the requirements for conducting inspection and servicing of lifeboats, launching appliances and release mechanisms.**

PURPOSE:

This Notice provides guidance on inspection, servicing and maintenance of survival craft, rescue boat and launching appliances aboard Liberian flagged vessels.

BACKGROUND:

Following several accident, injuries and deaths involving lifeboats and lifesaving appliances, the International Maritime Organization identified the following as causes for these accidents, identifying areas where special attention must be paid:

- Failure of release mechanism;
- Inadvertent operation of release mechanism;
- Inadequate maintenance of lifeboats, survival craft, launching appliances and release gear;
- Communication failure;
- Lack of familiarity with the lifeboats, launching appliances, equipment and associated controls;
- Unsafe practices during lifeboat drills and inspections; and
- Design faults other than release mechanism.

Several accidents have been related to defective lifeboat on load release hooks. As a result, IMO's Maritime Safety Committee adopted **IMO Resolution MSC.317 (89)**, which added paragraph 5 to SOLAS III/1 requiring that lifeboat release mechanisms not complying with the new LSA requirements found in reference (d) shall be replaced by the first scheduled dry docking after 1 July 2014, but no later than 1 July 2019. The Maritime Safety Committee adopted amendments to the LSA Code; amending paragraph 4.4.7.6 related to the requirements for releasing mechanisms of lifeboats launched by a fall or falls to require new subparagraphs .2 to .6 representing important safety improvements of the release mechanism.

In the interim, to help protect the seafarer from injury due to defective on load release hooks, IMO developed **MSC.1/Circ. 1327**, recommending the use of Fall Preventer Devices (FPD) when needed. See paragraph 4.4 of this Marine Notice for additional guidance.

IMO **Resolution MSC.404(96)** adopted amendments to regulations SOLAS Chapters III/3 and III/20, concerning maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear. Upon entry into force of the amendments on 1 January 2020, 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") in **Resolution MSC.402(96)**.

APPLICABILITY:

This Notice applies to Owners, Masters, Ships Officers, Nautical Inspectors, Service Providers and authorized Recognized Organization (RO) (the vessel's Classification Society which has been recognized and authorized to act on behalf of the Liberian Administration), when performing maintenance, surveys and conducting drills on board Liberian flagged vessels.

REQUIREMENTS:

1.0 Certification

- 1.1 All Survival Craft are to be reviewed for compliance with the appropriate SOLAS regulations and acceptability by the Recognized Organization of the vessel at the time of installation and their condition verified at all subsequent safety equipment surveys. Any substandard or unapproved appliance or equipment is to be replaced. All survival craft are to be equipped as prescribed in SOLAS 74, as amended and complying with the requirements of the LSA Code, as amended.
- 1.2 Survival craft approved by a major maritime authority, such as the USCG, UKMCA, and the Ministries of Transport or Maritime Directorates of Japan, France, Italy, Germany, Norway, Korea, China, Russian Federation, Canada, Australia, Brazil or by an IACS member, recognized by Liberia, on behalf of a national maritime authority are acceptable for vessels registered with the Republic of Liberia. The Administration will also accept equipment that has been certified under the EU Marine Equipment Directive by an IACS Member.
- 1.3 Manufacturers of lifesaving appliances are responsible for ensuring that the standards of life saving appliances and arrangements are in accordance with the requirements of the LSA Code, as amended and for providing documentation that these standards are met.
- 1.4 Lifesaving appliances installed before 01 July 1999, which were manufactured and tested in

accordance with previous SOLAS Convention requirements and recommendations on testing of life-saving appliances may continue to be used as long as it remains in serviceable condition.

- 1.5 Testing of life saving appliances installed on or after 1 July 1999 are required to meet the requirements in **IMO Resolution MSC.81 (70)**, as amended.
- 1.6 Testing of life saving appliances installed after 1 July 2010 are required to meet the requirements in reference (c) above.

2.0 Servicing of inflatable survival craft, marine evacuation systems and repair of inflated rescue boats

- 2.1 Inflatable life rafts, marine evacuation systems are to be serviced at approved servicing stations meeting the requirements in **Resolution A.761(18) as amended**. Such servicing facilities that are approved by a State which is Party to reference (c), and acceptable to the vessel Recognized Organization or servicing facilities that have been approved by a Liberian Recognized Organization on behalf of a Party to the reference (c) are acceptable to the Administration, provided, the approvals are in compliance with reference (c). Vessel Owners and Agents should consult closely with their Recognized Organization when selecting a service station to ensure that it meets the requirements of the applicable rules.
- 2.2 Inflatable life rafts, and marine evacuation systems: As Liberia has implemented Harmonized System of Survey and Certification (HSSC) for ships registered under the Liberian flag and in pursuance of the HSSC's objectives to "simplify survey requirements, thereby reducing the burden on Administrations, operators of ships and the crews of ships" as outlined in **MSC/Circ.955** the servicing intervals of inflatable life rafts and marine evacuation systems for ships may be in concert with the terms of the HSSC annual, periodical and renewal survey stipulated in the 1988 SOLAS Protocol notwithstanding regulation III/20.8 of the 1974 SOLAS Convention, as amended, which requires inflatable liferafts and marine evacuation systems to be serviced at intervals not exceeding 12 months.

Therefore, the annual servicing interval may be carried out up to ± 3 months of the due date for a ship implementing the HSSC and extended to 17 months for a ship not implementing the HSSC, where it is impracticable to carry out the service.

In all cases a dispensation is required from the Administration when servicing of inflatable life rafts and/or marine evacuation systems will exceed the 12-month period.

- 2.3 Inflatable rescue boats: All repairs and maintenance of inflated rescue boats shall be carried out in accordance with the manufacturer's instructions. Emergency repairs may be carried out on board the ship; however, permanent repairs shall be effected at an approved servicing station.
- 2.4 Hydrostatic release units: Hydrostatic release units other than disposable units shall be serviced annually at a servicing station that is competent to service them. Notwithstanding regulation III/20.9 of the 1974 SOLAS Convention, the annual servicing interval may be carried out up to ± 3 months of the due date for a cargo ship. Disposable units shall be replaced when required.

2.5 Inflatable life rafts on Passenger Vessels: The Office of the Deputy Commissioner recognizes that annual servicing of the large numbers of life rafts required for passenger ships may impose unnecessary difficulties due to their unique voyage conditions. The Office of the Deputy Commissioner therefore approves the servicing of liferafts in smaller manageable groups throughout the certification year. However, each liferaft, must be serviced by its servicing date so that no unit will be beyond the 12 month servicing interval at the time of renewal of the Passenger Ship Safety Certificate.

3.0 Liferafts

3.1 Capacity:

- .1 Where the ship is provided with totally enclosed lifeboats on each side, then the life rafts required under regulation III/31.1.1.2 of reference (c), accommodating the total number of persons on board and are each of a mass less than 185 kg, may be stowed at a position providing for easy side-to-side transfer on a single open deck level. Where appropriate, portable guard rails or bulwarks should be provided to facilitate launching.
- .2 Where the ship is fitted with a single free-fall lifeboat launched from the stern, then the life rafts required under SOLAS III/31.1.2.2 capable of accommodating the total number of persons on board shall be carried on each side of the ship. The life rafts on at least one side of the ship shall be served by launching appliances.

3.2 Embarkation:

- .3 The acceptable means of embarkation for remotely located liferafts shall meet the requirements for an embarkation ladder found in 6.1.6 of reference (d). Particular care should be given to their accessibility when deck cargoes are carried. The Administration may accept a similar system on a case by case basis if it provides similar safety features as an embarkation ladder. If necessary, the Administration will grant dispensations to existing vessels to give additional time to comply with this requirement.
- .4 A knotted rope is not accepted as a means of enabling descent to the water in a controlled manner for embarkation of remotely located survival craft. This is applicable to both new ships and to existing ships.

3.3 Life rafts for Ro/Ro Passenger vessels: Effective 1 January 2010, the existing paragraph 2.5 of regulation III/26 of reference (c) is replaced by the following: "Life rafts carried on Ro-Ro passenger ships shall be fitted with a search and rescue locating device in the ratio of one search and rescue locating device for every four life rafts. The search and rescue locating device shall be mounted inside the life raft so its antenna is more than one meter above the sea level when the life raft is deployed, except that for canopied reversible life rafts the search and rescue locating device shall be so arranged as to be readily accessed and erected by survivors. Each search and rescue locating device shall be arranged to be manually erected when the life raft is deployed. Containers of life rafts fitted with search and rescue locating devices shall be clearly marked."

4.0 Maintenance of Lifeboats, rescue boats, launching appliances and release mechanisms

4.1 The maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release mechanisms shall be conducted in accordance

with the requirements in **Resolution MSC.402(96)** and the instructions for onboard maintenance as required by regulation 36 of reference (c).

- .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 manufacturer's maintenance manual(s).
 - .2 As of 01 January 2020 the annual servicing and five yearly thorough examination of lifeboats, rescue boats, and the associated launching appliances including the releasing mechanisms shall be carried out by service providers that have been authorized by the Administration for each make and model in accordance with Res. **MSC 402(96)**. Authorizations previously provided to third party lifeboat service providers under Annex I of **MSC.1 Circ. 1206/Rev.1** is no longer permitted.
 - .3 Annual thorough examination and operational testing shall be carried out by certified personnel employed by the manufacturer, or service providers authorized by the Administration in accordance with **Resolution MSC 402(96)**.
 - .4 Five-year thorough examination, any overhaul, overload operational tests, as described in section 6.3, of **Resolution MSC.402(96)**, and repair shall be conducted by certified personnel of either the manufacturer or a service provider authorized by the Administration. The five year thorough examination, any overhaul, overload operational tests test must always be conducted in the presence of a class surveyor no matter who conducts it.
- 4.2 In order to receive authorization from the Administration the lifeboat service providers must obtain an Authorization Document from the Administration. Lifeboat service providers desiring to be authorized should submit to the Administration the documents required under **Marine Operations Note 3-2019** for review and issuance of an Authorization Document.
- 4.3 In cases where a ship is in a port where there is no lifeboat service provider that holds authorization from the manufacturer(s) of the lifeboat equipment for that make and model on the vessel the Administration will, on a case by case basis, authorize a third party service provider if:
- .1 Evidence is provided that no manufacturer authorized service provider is available (i.e. statement /correspondence from the manufacturer or the ship's classification society).
 - .2 The nominated third party facility has been issued an Authorization Document by Liberia.
 - .3 The nominated third party service provider provides evidence of previous servicing of the manufacturer's equipment, such as copies of previous reports of servicing the equipment on any vessel, copies of previous acceptance messages/letters from Liberia authorizing servicing of the manufacturer's equipment prior to 01 January 2020, copies of service engineers training certificates indicating that the service engineer has been or was previously trained on the servicing of the equipment.
- 4.4 When any lifeboat is damaged and declared unseaworthy or is found in need of repair and no replacement boat is readily available, life raft(s) with aggregate capacity at least equal to that of the lifeboat may be substituted, as a temporary measure, but only with specific

approval of the Office of the Deputy Commissioner, provided the minimum survival craft capacity prescribed by reference (c) is maintained. These temporary measures will be limited to the minimum period of time required for replacement and, in general, will not exceed three (3) months.

- 4.5 FPD's can be used to minimize the risk of injury or death by providing a secondary alternate load path in the event of failure of the release mechanism or its accidental release. However, FPDs should not be regarded as a substitute for a safe release mechanism. In the interest of safety to vessel crews, the Liberian Administration requires the use of FPDs on vessels fitted with non-compliant lifeboat release mechanisms in accordance with **MSC.1/Circ. 1327**, until such time as the release mechanism has either been found to be in compliance with the requirements of paragraph 4.4.7.6 of reference (d), or has been replaced with a compliant system.
- 4.6 Launching appliances shall be:
 - .1 subject to a thorough examinations at the annual surveys required by regulations 1/7 and 1/8 of reference (c), as applicable, and
 - .2 upon completion of the examination referred to above, subjected to a dynamic test of the winch brake at maximum lowering speed. The load to be applied shall be:
 - .1 the mass of the survival craft or rescue boat without persons on board,
 - .2 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.
- 4.7 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 1/7 and 1/8 of reference (c);
 - .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 4.7.2 above, 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 the requirements in **Resolution MSC. 402(96)**.
- 4.8 Davit-launched liferaft automatic release hooks shall be:
 - .1 subject to a thorough examination and operational test during the annual surveys required by regulations 1/7 and 1/8 of reference (c); 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.
- 4.9 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 1/7 and 1/8 of reference (c).

5.0 Lifeboat Air Support Systems

- 5.1 In accordance with the manufacturer's instructions and guidelines, the air support system shall be subject to periodic inspection carried out by the vessel's crew on a monthly basis as required by Regulation 20.7 of reference (c).
- 5.2 All lifeboat air support systems and bottles shall be examined at least annually by the attending class society surveyor as part of the annual statutory survey for the Safety Equipment Certificate (SEC) or MODU Code certificate.
- 5.3 If the air pressure in the bottles should fall below ten percent (10%) of the normal full level air pressure, then the air bottles should be recharged in accordance with the manufacturer's instructions and guidelines. The air bottle can only be recharged on board from an air compressor that has been certified for providing air that is fit for human consumption. When applicable, the on board air supply air recharging systems should be checked for air quality as part of the annual statutory survey for the SEC or MODU Code certificate. If the ship is not equipped with such an air compressor then the bottle must be sent ashore to an authorized service facility for recharging or exchange.
- 5.4 Hydrostatic testing of lifeboat air support bottles shall be carried out once every five years or in accordance with the recommendations of the bottle manufacturer whichever is due the earliest. The air support bottles shall also be hydrostatically tested prior to refilling a bottle that has been discharged. The hydrostatic test date must be permanently marked on the bottles or, if the bottles are made of a material that cannot be stamped with the date, a tag indicating the hydrostatic test date should be securely attached to the bottles. Intervals for hydrostatically testing cylinders of the ultra-lightweight type may vary and will depend upon the requirements of the cylinder manufacturer and the vessel's Recognized Organization. Servicing of the cylinders must be performed to the satisfaction of the Recognized Organization surveyor.
- 5.5 The accuracy of the primary pressure gauge and secondary air pressure gauge shall be verified at least once every five years or in accordance with the recommendations of the bottle manufacturers whichever comes first. Verification of the gauges shall be performed to the satisfaction of the Recognized Organization surveyor.

6.0 Manuals

- 6.1 The Administration encourages owners/managers to develop user-friendly manuals for operation and maintenance of lifeboat systems including launching appliances. These manuals should be easy to understand and reflect the equipment used on board the ship. The use of video materials in conjunction with printed manuals can be an effective tool.

- 6.2 The manual for a lifeboat system including launching appliance should be developed with the collaboration of manufacturers of the lifeboat and the launching appliance and preferably be a single document.
- .1 The operation and maintenance manual for a lifeboat system may contain the following information:
 - a. General
 - b. Method of checking proper closure of release hooks
 - c. Launching operation
 - Preparation before launching
 - Setting painter
 - Release of safety pin for winch hand brake lever
 - Release of davit arm stop
 - Boarding the lifeboat
 - Launching procedure
 - Release gear operation
 - Painter release and lifeboat operation
 - d. Recovery operation
 - Resetting procedure of release hook
 - Recovery procedure
 - Stowage procedure
 - e. On-load/off-load release gear system
 - General
 - Fore and aft hook units
 - Release handle unit
 - Hydrostatic interlock unit
 - f. Inspection and maintenance
 - General precautions
 - Inspection and maintenance of lifeboat and release gear system
 - Inspection and maintenance of launching appliances (davits and winches).

7.0 General Safety Precautions Concerning Lifeboats

- 7.1 It is of the utmost importance that the officers and crewmembers are familiar with and confident that they will be able to safely use the lifesaving apparatus.
- 7.2 When servicing davits in the stowed position, the Harbor Safety Pins or other similar Safety devices shall be in place to ensure the davits cannot be accidentally moved.
- 7.3 When personnel are in the stowed lifeboats, the hanging-off pendants should be used to prevent the boat from being accidentally released and dropped from the releasing gear.
- 7.4 All launching apparatus should receive regular maintenance by persons who are familiar with and able to follow the manufacturer's instructions.
- 7.5 Checklists should be developed and used to ensure that all safety precautions are in place before personnel perform maintenance or inspections.

- 7.6 Checklists should be developed and used to ensure that standard safety precautions and operating procedures are followed including proper stowing/securing after use.
- 7.7 No additional securing arrangements should be used which are not included in the lowering/free-fall instructions except for additional securing devices during extreme heavy weather, which must be removed as soon as the weather moderates.

These standard procedures should be included in each vessel's safety management system as applicable.

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