The Bahamas Maritime Authority

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Lifeboat Safety

Notice to ship owners, managers, Masters, Approved Nautical Inspectors, Recognised Organisations and surveyors

This Notice supersedes BMA Information Bulletin Nos.72, 100 & 117

1. Purpose

1.1. This Notice consolidates Bahamas Maritime Authority (BMA) Information Bulletin Nos. 72 (Lifeboat Safety), 100 (Fall Wires) and 117 (Fall Preventer Devices).

1.2. This Notice provides the BMA's position on the safety of lifeboats required under Chapter III of the International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS Chapter III).

2. Application

2.1. This Notice applies to:

i. All ships fitted with survival craft launching appliances as referred to in Regulation 20.11.1 of SOLAS Chapter III.

ii. All ships' lifeboats and rescue boats fitted with on-load release gear as referred to in Regulation 20.11.2 of SOLAS Chapter III;

iii. All ships' davit launched liferaft automatic release hooks as referred to in Regulation 20.11.3 of SOLAS Chapter III.

3. General

3.1. The issue of lifeboat safety has been the focus of considerable efforts over several years at the International Maritime Organization (IMO). A large amount of information has been issued to assist Companies[1] in enhancing safety when conducting abandon ship drills with lifeboats.

[1] The "Company" is the entity responsible for the management of the ship in accordance with the ISM Code. For ships to which the ISM Code is not applicable, the Company is the "Managing Owner" in accordance with Section 52 of the Merchant Shipping Act

3.2. In addition, amendments have been made to SOLAS Chapter III to improve lifeboat safety (e.g. new Regulation 1.5 of SOLAS Chapter III, which entered into force on 01 January 2013 and amendments to Regulation 20 of SOLAS Chapter III, which entered into force on 01 January 2020).

4. Important factors for lifeboat safety

4.1. Important factors to enhance the safety of lifeboats and release hooks include:

i. maintenance and inspections must be carried out by a competent person to procedures that reflect the manufacturers' instructions;
ii. maintenance and inspections must be recorded to provide objective evidence that these have been carried out according to manufacturer's instructions;
iii. the quality of crew training and familiarisation are directly affected by the frequency and quality of the drills carried out;
iv. planning is essential to ensure drills are performed safely;
v. drills should be realistic but must not be hurried when familiarisation or other training is taking place;
vi. a crew debrief after each drill is essential to emphasise lessons learned or to give additional training where necessary.

4.2. In view of the need to safely verify satisfactory operation of lifeboat launching equipment that is not in frequent use, it is recommended that, where possible, lifeboats are initially lowered and recovered without any crew on board during drills.

4.3. The guidelines for simulated launching of free fall lifeboats contained in the appendix to IMO Circular MSC.1/Circ.1578 should be brought to the attention of ship's crew, where applicable, to ensure crew familiarisation with limited risk. However, manufacturer's instructions take precedence over the generic procedure contained in that circular.

4.4. Careful observation of the lifeboat during every recovery operation should be made, in particular when near the davit heads as the boat may swing on a short pendulum during the later stages of recovery. This may happen when the speed of the winch is slowed or the boat is run out in order to ensure proper return to the davits or run out to the embarkation position after an empty deployment, such as referred to in paragraph 4.2 above.

5. Maintenance

5.1. Weekly and monthly inspections are normally conducted by a competent person[2], in accordance with the maintenance manual(s), and such activities do not require BMA authorisation.

5.2. Service providers intending to conduct repairs, overhauls, annual and 5-yearly thorough examination, service and testing of the following equipment fitted on board Bahamian flagged ships:

i. Lifeboats (including free-fall lifeboats), rescue boats and fast rescue boats; and
ii. Launching appliances (including primary and secondary means of launching appliance for freefall lifeboats), and release gear for all lifeboats type, rescue boats, fast rescue boats and davit launched liferafts.

should be in possession of a Bahamas Approved Service Provider (BASP) Certificate of Authorisation, issued by the BMA. Please refer to Marine Notice 83.

5.3. It is the responsibility of the Company to ensure that servicing, testing and repairs of such equipment is carried out only by BASPs holding a valid Certificate of Authorisation issued by the BMA.

5.4. The Company may perform the annual thorough examinations and operational tests outlined in Regulation 20 of SOLAS Chapter III, provided they are authorised by the BMA as a BASP for makes and types of equipment to be serviced.

5.5. There are no provisions in SOLAS Chapter III to postpone the 5 yearly service and load test. The Company shall make arrangements for the 5-yearly service to be carried out, including the dynamic load test, prior to the expiry of the 5-year term.

5.6. In exceptional cases where it is not possible to conduct the 5-yearly service within the required period, the BMA may consider short postponements of up to 3 months to allow the service to be completed. In such cases, the Company shall apply for postponement via the Recognised Organisation, with full supporting information.

5.7. The application should include:

i. the reasons why the service cannot be completed;
ii. a statement from the Master that the equipment remains in satisfactory condition;

[2] Please refer to BMA Marine Notice 89

iii. manufacturer recommendations on conditions for the requested postponement, as appropriate;

iv. Recognised Organisation recommendations and conditions.

6. Abandon ship drills and launching requirements

6.1. Abandon ship drills, launching and manoeuvring of lifeboats, including rescue boat and free fall lifeboats, shall be carried out in accordance with Regulation 19.3.4 of Chapter III of SOLAS.

6.2. Noting the value of drills for crew familiarisation and training, exemptions from this requirement will not normally be granted.

6.3. Drills must be carefully planned to take into account the voyage requirements, loading and unloading operations, weather conditions, crew fatigue, etc. in order to identify the most suitable opportunity for an alert crew to carry out the drill.

6.4. Notwithstanding paragraph 5.2, in noting the potential hazards associated with conducting drills in unsuitable conditions the BMA accepts that the Master may use his or her professional judgement to either:

i. modify the drill to suit the circumstances of weather, location and vessel operational requirements; or

ii. postpone the drill until the earliest opportunity when circumstances are suitable for the drill to be carried out.

6.5. Full details of planned drills, whether carried out or not, must be entered into the Official Log Book, with reasons for the modification or postponement (as applicable). Such written evidence is accepted by the BMA as valid reason for not carrying out abandon ship drills at the required intervals.

6.6. Every effort should be made to carry out the required drills at the earliest reasonable opportunity, although the BMA recognises that the ship should not be unduly delayed or deviate from its intended voyage in order to do so.

7. Record Keeping

7.1. Instructions, maintenance and record keeping shall be implemented through the ship's instructions for on-board maintenance of life saving appliances or a planned maintenance system which meets the requirements of SOLAS Chapter III.

7.2. Records must clearly state that the annual periodical inspection has been carried out and the results of the examination. If end-for-end turning of wires has been carried out this should also be recorded. The renewal of falls at the required intervals (according to the maintenance procedure adopted) must be included. These records must be verified by the surveyor attending for the Safety Equipment Survey.

7.3. At ISM audits Bahamas Recognised Organisations are required to verify that the following are available on board:

i. manufacturer's instructions and recommendations;
ii. the Company's procedures for maintenance and inspection;
iii. records of lifeboat drills; and
iv. records of inspection and maintenance of equipment, including details of the competent persons undertaking the activity .

7.4. Failure to maintain these documents are considered an ISM non-conformity and must be specially reported to the BMA by the Recognised Organisation carrying out the ISM audit.

8. Causes of accidents

8.1. While the number of accidents remains small in comparison with the number of Bahamian ships, the consequences of accidents can be unacceptably high. With this in mind, the BMA requires full details of any accident in order to identify and recommend improvements to equipment, onboard management or industry practices.

8.2. Companies are required to report all accidents and near misses, whether resulting in personal injury or not, so that valid information can be gathered to identify new or ongoing problems with survival craft and their launching appliances.

8.3. Lifeboat accidents have been attributed to multiple categories of failure, including:

i. failure of on-load release gear (OLR);
ii. inadvertent operation of OLR mechanism;
iii. inadequate maintenance of lifeboats, davits and launching equipment;
iv. incorrect supply and fitting of equipment, not in accordance with manufacturer requirements;
v. inadequate inspections including failure to identify defective equipment;
vi. communication failure;
vii. lack of familiarity with lifeboats, davits, equipment and associated controls;
viii. inadequate training impacting safe operation of equipment;

ix. unsafe practices during lifeboat drills and inspections;
x. design faults other than OLR.

8.4. Inadvertent operation, or incomplete engagement of the locking mechanism prior to hoisting, is of particular concern as a clear result of the dangers of crew unfamiliarity with OLR. Consequently, it is recommended that, where possible, a working model of the OLR is carried on board for training purposes. In one case where a working model was unavailable a generic training video was supplied which also covered the specific equipment on board that ship.

9. Davit winch brake remote release gear – equivalent arrangement

9.1. A number of accidents have involved difficulties with lifeboat davit brake remote release arrangements, e.g. snagging of wires resulting in non-operation.

9.2. The BMA may consider applications for exemptions from the remote release gear requirement, provided that an officer responsible for overseeing the lowering of a lifeboat is in:

i. constant two-way UHF radio communication with the responsible person in the lifeboat;
ii. direct line of sight of the lifeboat;
iii. direct contact with the person operating the local davit winch brake release, if applicable.

9.3. All applications for exemption shall be submitted via the Recognised Organisation that classes the ship, as outlined in BMA Information Bulletin No.8.

10. Fall Wires

10.1. General

10.1.1. As per Regulation 20.4 of SOLAS Chapter III, falls used in launching shall be inspected periodically, with special regard for areas passing through sheaves, and renewed when necessary due to deterioration or after not more than 5 years, whichever is earlier.

10.1.2. The previous requirement for wires to be turned end-for-end at intervals of not more than 30 months and renewed after no more than 5 years is no longer applicable, however Regulation 20.4 does not prohibit turning of wires end-for-end.

10.1.3. If the Company chooses to end-for-end fall wires, special attention must be paid to the method of joining and terminating wires. The BMA recognises that there are a number

of alternative methods that can be used to form these terminations and that the suitability of each type of connection for the intended service is varied. The Company shall ensure the correct method of joining and terminating the wires, taking into consideration any design or manufacturers' requirements.

10.1.4. The periodic inspection shall be carried out by competent persons within the window before, or at the time of, the Safety Equipment survey.

10.1.5. The periodic inspection of every wire shall at least comply with the following specification:

i. The survival craft must be lowered to the water, or the wire otherwise paid out, such that the wire bears no weight and there is no more than one layer left on the drum. The wire shall then be cleaned to facilitate a general inspection of its condition.
ii. The stationary parts of the wire, i.e. parts resting on or within sheaves and locking devices, must be given particularly close attention during that inspection.
iii. Once the wire is clean it must be verified as free from corrosion and that grease had penetrated the whole wire. In the case of anti-rotational wires or wires with sheathed cores, the inspection, maintenance and effectiveness of greasing is to be determined in accordance with manufacturer's instructions.
iv. After satisfactory inspection an approved type of grease shall be re-applied in accordance with manufacturer's instructions and the wire re-wound on the drum as recommended by the manufacturer.
v. Wires found with corrosion or deterioration to the extent that their strength is compromised must be replaced.

10.2. Stainless Steel Falls

10.2.1. Where no service life for marine use is specified by the manufacturer, stainless steel falls are subject to the same requirements as galvanised steel falls.

10.2.2. Where the manufacturer's stated service life for marine use exceeds five years the wire may be retained in use for the stated period subject to being turned end-for-end as specified by the manufacturers and to periodic inspections as set out in paragraph 5 above.

11. Fall Preventer Devices (FPDs)

11.1. The BMA notes that the use of fall preventer devices (FPDs) has been implemented on many ships. The use of FPDs allows lowering and recovery of the boat with personnel inside, with enhanced safety and familiarisation benefits.

11.2. FPDs are intended to protect against the consequences of an unintended release of the hook(s). The safety pin type consists of a steel pin which passes through the cheek plates of the release gear to physically prevent the hook from releasing by locking it in the engaged position and many modern designs now feature such safety pins.

11.3. An alternative method used for older designs which do not feature safety pins is to fit resilient strops or continuous slings across the on-load release between a fixed strong point on the lifeboat and the falls block ring or shackle. The resilient FPD will not prevent the on-load release gear from releasing but will prevent hazardous consequences.

11.4. The BMA recognises the overriding authority and the responsibility of the Master to make decisions with respect to safety, as set out in Paragraph 5.2 of the ISM Code and consequently accepts the use of FPDs when advocated by the Company .

11.5. Where FPDs are used, procedures for their use, inspection and maintenance shall be made available to ship's crew and documented in the ship's Safety Management System. The professional judgement of the Master is necessary in deciding the occasions and circumstances when FPDs are installed and used, such as when the suspension hooks of the craft cannot be secured in a fail-safe condition (i.e. "closed") when at any significant height above the water.

11.6. The BMA has no objection to the use of FPDs on Bahamian ships in association with any safety drill or exercise.

11.7. Any FPD installed shall be fit for purpose. The proposal to use such a device shall be subject to an engineering analysis to ensure that the device and existing lifeboat structure and arrangements are capable of withstanding any loadings which would result from the failure of the on-load release gear with the boat in the fully-loaded condition and suspended from the davits. A factor of safety of six (6) should be the minimum used in such an analysis. All materials used shall be suitable for use in the marine environment.

11.8. Wires or chains shall not be used as FPDs as they do not absorb shock loads.

11.9. Resilient FPDs shall be continuous slings or strops of a type which have permanent end loops and shall be of a suitable length to ensure minimal drop in the event of premature release of the hook arrangement. Strops shall be dedicated to lifeboat use and should be suitably identified to ensure that they are not used for any other purpose.

11.10. Continuous slings have an advantage over strops in that they possess fewer points of splicing (potential failure points) and can be arranged in shorter lengths. They can also be released in an emergency (when waterborne) by cutting a single member of the sling. All such FPDs should be protected by an outer cover that protects them from damage or degradation from chemical contamination or ultra-violet light. The outer covering should not be contributory to the overall tensile strength of the sling or strop.

11.11. In selecting FPDs, the Company shall ensure that a comprehensive risk assessment is carried out to ensure that nothing is done to compromise the effectiveness of the operation of the release gear. This is particularly important where the installation of a safety pin is considered. The Company shall not make any modification which adversely affects the strength and type approval of the hook and release gear arrangement.

11.12. Where FPDs fitted are synthetic strops or slings, a functional test should be carried out. The function test should demonstrate, to the satisfaction of the Recognised Organisation surveyor, that the equipment performs without interfering in the operation of the lifeboat or launching equipment. The function test is to be carried out at the 5 yearly load test and thorough examination as required by regulation 20.11 of SOLAS III.

11.13. Companies shall ensure that suitable procedures are implemented to ensure that individuals involved in the lifeboat launching are fully trained, familiar and competent in the maintenance, inspection, installation and removal of FPDs. All FPDs should be thoroughly examined prior to each use and replaced if any signs of damage or significant deterioration are found. The Company should also establish a schedule for overload testing and replacement.

11.14. Where FPDs are used, suitable clear and simple warning notices should be placed inside the lifeboat at the release gear access hatches at each end of the boat so as to ensure correct use of the devices.

11.15. Examples of FPD:

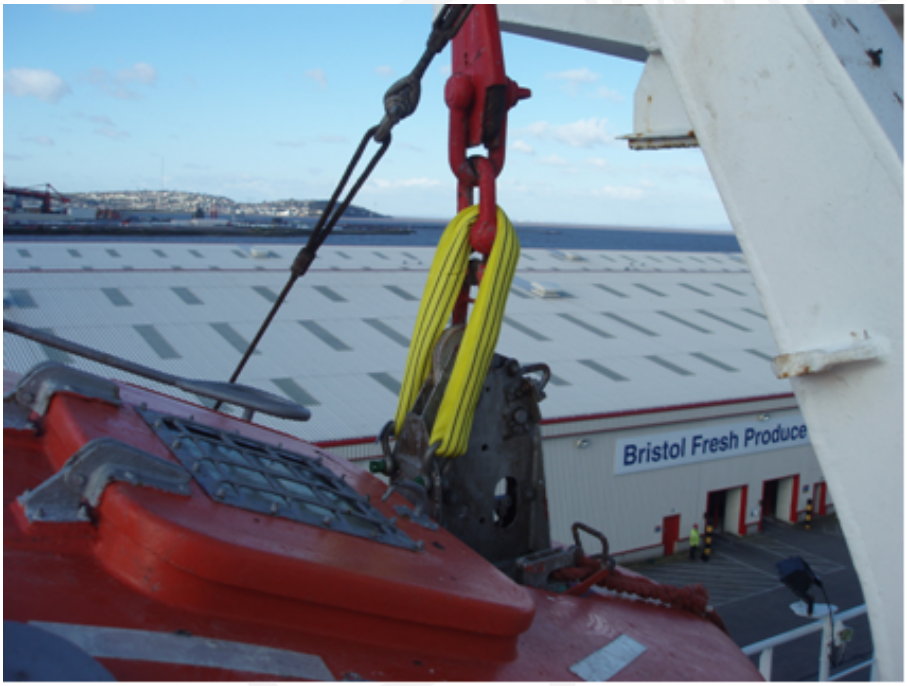

Figure 1 – Continuous sling in place over-riding on-load release

Figure 2 - FPD taking load during exercise, simulating premature release of on-load hook. Note that the boat is not waterborne but suspended just above the water – a safety precaution for avoiding injury to personnel or damage to structures during the exercise.

12. Queries

12.1. Any queries on this Notice may be addressed to tech@bahamasmaritime.com or any BMA office.

Revision History

Version	Description of Revision
1.0	First Issue