

# CHECKS ON BOARD

## Preventive measures to reduce deficiencies

Rev. 01/2024

1/2

## LSA

### Life-Saving Appliances GMDSS / Abandoning Ship

#### Assigned to:

Master  C/O  \_\_NWO  other: \_\_\_\_\_  
 C/E  \_\_TWO \_\_\_\_\_

#### Remarks / Findings:

Date: \_\_\_\_\_ Initial: \_\_\_\_\_ Signature: \_\_\_\_\_


It is normal for some technical systems to fail from time to time. Failures are therefore part of managing the bridge. In such a case:

Use the available **ISM tools** of the company!

**Be aware:** an inspection pursues two main objectives:

- 1) The ship was safely navigated into the port(s).
- 2) The ship can be safely navigated to the next port(s).

The inspection thus aims at both: the past & future.

 Further details: see enclosed information sheet.

#### 01. Lifejackets & Immersion Suits

Available, operational and of appropriate different sizes, in accordance with CSSEC (cert. safety equipment/total No.), placed according to F&S plan.

#### 02. Lifejacket – Oversize & Infant

Extensions for oversized persons & LSA for infants available.

#### 03. Personal LSA – Condition

Regularly inspected, tested and complete with no damage. Lights are not expired & functional. Whistles, belts & donning instructions available, immersion suits inspected, serviced and pressure tested as required.

#### 04. Lifebuoys

Good condition, appropriately marked with name/port of registry. Body, reflective tape & grabline intact. Self-igniting lights are operational and batteries not expired (service time <12M). Lifelines: intact and safe, not affected by UV radiation/salt. Lifebuoys and lines are in place, ready for use and not secured in a way that could delay readiness/throwing.

#### 05. MoB / PoB Buoys (bridge wings)

They are of an adequate weight (LSA Code, at least 4kg). Body, reflective tape and grabline are intact. Appropriately marked with name/port of registry. Attached light and smoke signals are in good condition, functional and not expired, lashings and storage conditions allow immediate release.

#### 06. Pyrotechnics Navigation Bridge

Parachuting rockets complete, not expired and safely stored (protected against mechanical impact, location labelled).

#### 07. Line-throwing Devices

Complete, not expired, of good condition and safely stored (protected against mechanical impact). Spare lines & rockets available. Ready for immediate use.

#### 08. GMDSS EPIRB

Good condition, regularly inspected & serviced (shore base certificate available), locations labelled accordingly (IMO symbol). Crew familiar.

#### 09. GMDSS SART

Both devices are in good condition, have not expired and are inspected regularly. Self-test functional, crew is familiar with interpretation of radar signal/ frequency (e.g. 9 GHz x-Band).

#### 10. GMDSS Portable VHF

Operational, ready to use. Emergency batteries are sealed & not expired or charged as per maker's instruction or SMS.

#### 11. Table of Life-Saving Signals

Available and posted on the bridge. Bridge Team familiar.

#### 12. Muster List

Updated with the current crew. Substitutes for key persons & responsibilities for maintenance of FFE & LSA are identified.

**13. Muster Station**   

Identified, appropriately labelled and noted in the *Muster List*. Well illuminated & protected by a non-slip surface. Means of communication to the bridge available & functional.

**14. Embarkation Stations**   

Identified, appropriately labelled and noted in the *Muster List*. Well illuminated & protected by a non-slip surface.

**15. Embarkation Ladder**   

Available according to F&S Plan. Shackles, eyes, ropes, wooden steps and foundations: good condition without damages. Covers: no hidden corrosion under the tarpaulin.

**16. Launching Instructions**   

Appropriate operating instructions correspond to the LSA on site for launching of liferaft, lifeboat & rescue boat. Those posted in the vicinity of the equipment/station are of good condition and visible under all/emergency lighting condition.

**17. Launching Devices – Crew**   

Crew is trained & familiar with launching procedures for liferaft, lifeboat and rescue boat and able to operate devices.

**18. Launching Devices – Maintenance**   

All devices in good order, regularly moved & tested (LB except freefall: turned out from stowed position), sheaves & wires not worn, limit switches & manual hoisting operational, remote controlled release systems operational & safe.

**19. Launching Devices – Wires & Falls**   

Wires, falls & lashings in good condition without damages, exchanged and serviced as required. Records available.

**20. Launching Dev. – On-Load Release**   

System complete as designed and in good order with clear instructions posted. Crew familiar.

**21. Launching Device – Free-fall lifeboat**   

Launching device & lashings are operational and in good order without damage. Means for simulated launching are of an approved type and corresponding to training manuals.

**22. Visual Inspections**   

Weekly & monthly inspections of lifeboat, rescue boat and launching devices are carried out and records are available.

**23. Liferafts**   

In good condition, no overdue shore service with valid certificates. Appropriately stored & secured as designed. ID cards (e.g. pipe) are complete & updated with correct figures.

**24. Liferafts Remotely Located (>100m)**   

Easy to move/throw overboard, not obscured, lashing fast and easy to remove (e.g. pelican hook).

**25. Liferafts – HRU Hydrostatic Release**   

In good order, free of paint, not expired, connected to the painter & foundation as designed (maker's instruction).

**26. Liferaft – Davit Launched**   

Davit, hook, winch and both means for swinging out (main and 2<sup>nd</sup> means, e.g. hydro / turning gear) are operational

**27. Lifeboat**   

Appropriate condition without damage. Intact hull, readable ID markings. Painter connected as designed. Appropriately lashed and secured. Ready for use. No hygiene deficiencies.

**28. Lifeboat – Fall Preventer (FPD)**   

If required: lifeboat fall preventer available as designed.

**29. Lifeboat – Seating Position Benches**   

Seating position marked. Belts: contrasting colour.

**30. Lifeboat – Engine**   

Easy to start from any power source (battery), operational under all environmental conditions (<2min/-15°C) with gear engaged ahead/astern and turning propeller. Filters regularly cleaned/exchanged. Antifreeze available as necessary.

**31. Lifeboat – Engine & Crew**   

All Officers/assigned crew: able to start the engine.

**32. Lifeboat – Equipment**   

Complete and in good condition. Food ratio, drinking water, first aid equipment & pyro techniques are not expired. Rain dripping system / catcher is clean and operational, crew is familiar. Inspection records available.

**33. Lifeboat – Power Management**   

In order. All lights (position, search, ceiling) are operational. Both batteries and charger functional with no limitations.

**34. Lifeboat – Bilge**   

Clean & dry. Bilge pump operational.

**35. Lifeboat – Window, Doors, Hatches**   

Appropriate condition without damage. Windows provide safe visibility (no residues, paint, scratches), wiper operational. Door/hatches are safe & weathertight with suitable seal and locking system.

**36. Lifeboat – Tanker**   

Sprinkler system ready to use and in good condition. Air bottle connected, full and in good condition.

**37. Launched and Manoeuvred**   

Lifeboat and rescue boat: water borne every 3-months (RB monthly as possible, at least 3M), suitable records available. Records/times of drill: vessel at port, on anchorage, drifting?

**38. Lifeboat & Rescue Boat Engine/Fuel**   

Sufficient gasoline, engine consumables & spares available.

**39. Rescue Boat**   

Ready for immediate use with engine & assigned crew.

**40. Rescue Boat – Equipment**   

Regular inspections of completeness, condition and function carried out. Records available. Equipment not expired.

**41. Recovery of Persons**   

Recovery equipment readily available and of a type corresponding to the ship specific recovery & ISM emergency plan.

**Information to prepare for inspections****LSA****Life-Saving Appliances  
GMDSS / Abandoning Ship****Objectives**

Generally, the inspection pursues two main objectives:

- 1) The ship was safely navigated into the port(s).
- 2) The ship can be safely navigated to the next port(s).

**The inspection thus aims at both  
the past and the future.**

Therefore, inspectors examine existing records such as logbooks, checklists and maintenance records as well as operating and maintenance instructions. Together with the general impression and results of direct interviews, which also give an indication of the familiarization and understanding of the company procedures of the crew members, a picture emerges.

Beside this, all LSA/life-saving appliances, whether required or not, must be in a good and operational condition. Since LSA can be one of the most important requirements for survival at sea, inspectors can also focus on operational readiness of the equipment and crew readiness, i.e. on the ability to handle this equipment / LSA under emergency conditions in emotionally challenging situations.

Unsuccessful drills and inspections in ports could be an indicator to inspectors that the crew might not be able to manage and use LSA and take all the necessary measures for survival in emergencies.

**Technical failure and reporting**

It is normal for technical systems to fail from time to time. For these cases, the reporting and documentation as per SOLAS and company's ISM/SMS system is a routine and essential standard. The crew should not try to hide or disregard a deficiency – instead the team should discuss deficiencies/deviations and use the available ISM tools of the company.

**Use the available ISM tools of the company.**

**Need advice?****BG Verkehr - Ship Safety Division**

- Nautical Dep.   ✉ [nautik@bg-verkehr.de](mailto:nautik@bg-verkehr.de)  
Machine Dep.   ✉ [maschine@bg-verkehr.de](mailto:maschine@bg-verkehr.de)  
ISM/ILO       ✉ [ism-mlc@bg-verkehr.de](mailto:ism-mlc@bg-verkehr.de)

**Checklist: Notes on selected references**

01.	CSSEC, F&S Pl.	SOLAS III/7, III/32.3, LSA 2.2, 2.3
02.	Oversize, Infant	SOLAS III/7, III/32.3, LSA 2.2,2.3
03.	Condition	SOLAS III/7, III/20, III/32.3, III/36, MSC/Circ.1047
04.	Lifebuoys	SOLAS III/7, III/32, V/23, LSA 1.2, 2.1
05.	MoB / PoB	SOLAS III/7, LSA 2.1
06.	Pyrotechnics	SOLAS III/6.3, LSA 1.2, 3
07.	Line-throwing	SOLAS III/18, LSA 1.2, 7.1
08.	EPIRB, SART	SOLAS III/6.2, IV/7.1, IV/15, V/19.2
09.	EPIRB, SART	SOLAS III/6.2, IV/7.1, V/19.2
10.	Portable VHF	SOLAS III/6.2
11.	Signals Table	SOLAS V/29
12.	Muster List	SOLAS III/8, 37
13.	Muster Station	SOLAS III/11,
14.	Embark. Station	SOLAS II-1/43, III/6.4, III/11, III/19
15.	Embark. Ladder	SOLAS III/11, III/16, III/31
16.	Launch. Instruct.	SOLAS III/9
17.	Launch.& Crew	ISM
18.	Launch. Mainten.	SOLAS III/20, MSC.1/Circ.1206 Rev.1
19.	Launch. Wires	SOLAS III/16, III/20
20.	On-Load Rel.	LSA 4.4, MSC/Circ.1206 Rev 1
21.	Free-fall LB	SOLAS III/20, III/31, LSA 4.7
22.	Visual Inspect.	SOLAS III/20
23.	Liferafts (LR)	SOLAS III/13, III/20, III/31, LSA 4.2, 4.3
24.	Liferaft Remote	SOLAS III/31
25.	LR HRU	SOLAS III/20
26.	LR Davit Launch.	SOLAS III/13
27.	Lifeboat (LB)	SOLAS III/11, III/23
28.	LB Fall Preventer	MSC.1/Circ.1327 MSC.1/Circ.1392
29.	LB Seats	LSA 4.6
30.	LB Engine	SOLAS III/20, LSA 4.4
31.	LB Engine Crew	SOLAS III/19
32.	LB Equipment	SOLAS III/20, LSA 4.4, LSA 1.2
33.	LB Power	SOLAS III/20, LSA 4.4
34.	LB Bilge	SOLAS III/20, LSA 4.4
35.	LB Window	SOLAS III/20, LSA 4.6
36.	LB Tanker	SOLAS III/20, LSA 4.8, 4.9
37.	LB/RB Launched	SOLAS III/19
38.	RB/RB Fuel	SOLAS III/20, LSA 4.4
39.	Rescue boat	SOLAS III/14, III/17, III/21,23, III/31 LSA 5
40.	RB Equipment	SOLAS III/20, LSA 5.1
41.	Recovery	SOLAS III/17-1

### Common deficiencies noted

#### Lifeboat

- Structural defect
- Drain plug failed (missing, not functional)
- Windows worn out (limited visibility, paint residues)
- Equipment incomplete / expired / not secured, especially food, water, pyrotechnics, first aid and seasickness medicine expired
- Power management / battery failure
- Inner and outer lights not working
- Defect of compass
- Wear & tear on hooks and attachment
- Engine inoperative / crew unable to start engine
- Engine mountings corroded
- Insufficient amount of fuel
- Bilge contaminated
- Rain catcher (drain) not operational
- Launching appliances inoperable, obstructed, poor condition, broken or worn remote release wires

#### Personal LSA

- Lifebuoy lights missing, inoperative, batteries' best before date expired
- Lifebuoys line not fitted or worn out
- Lifebuoy at access areas not available with lights
- Lifebuoys not in place or obstructed
- Lifejacket and immersion suits: total no. not same as on certificates, lights not available or expired
- Retro-reflective tape missing from equipment

#### Liferaft

- Float-free arrangements on liferafts not satisfactory
- HRU / Painter incorrectly connected to weak link
- HRU expired
- (Annual) service overdue

#### Embarkation & instructions

- Embarkation ladder worn out or unsafe
- Embarkation lights insufficient, instruction posters not readable

#### Drills

- Not conducted / inadequate records / acc. to record lifeboat launched whilst vessel was making headway at inadequate speed (e.g. of 20 kn).

### Common grounds for PSC detention

- Absence, failure, insufficient capacity or serious deterioration of personal life-saving appliances.
- Absence, failure, insufficient capacity or serious deterioration of survival craft and launching and recovery arrangements
- Assigned crew not able to start lifeboat engine (either human element or technical cause)
- Abandon ship drill failed
- Inoperative GMDSS equipment

### Further information that may be of interest

#### **Procedures for Port State Control, 2021**

#### **Extracts of IMO Res. A. 1155(32)**

#### **Operation**

*The PSCO may verify if responsible persons are familiar with starting and maintenance of lifeboat or rescue boat.*

*The PSCO may determine whether the duties assigned to crew members manning the survival craft (lifeboats or liferafts) are in accordance with the regulations and verify that a deck officer or certificated person is placed in charge of each survival craft to be used.*

#### **Abandon ship drill**

*After consultation with the master, the PSCO may require an abandon ship drill for one or more survival craft. If possible, the rescue boat(s) should be included.*

*The abandon ship drill should include:*

*.1 summoning crew, and passengers where applicable, to the muster station(s) with the required alarm and ensuring that they are aware of the order to abandon ship as specified in the muster list;*

*.2 reporting to the stations and preparing for the duties described in the muster list;*

*.3 checking that crew, and passengers where applicable, are suitably dressed;*

*.4 checking that lifejackets are correctly donned;*

*.5 lowering at least one lifeboat after the necessary preparation for launching;*

*.6 starting and operating the lifeboat engine;*

*.7 operating the davits used for launching liferafts;*

*.8 conducting a mock search and rescue of passenger trapped in their staterooms (if applicable);*

*.9 giving instructions in the use of radio life-saving appliances;*

*.10 testing emergency lighting and low location lights if applicable for mustering and abandonment; and*

*.11 if the ship is fitted with marine evacuation systems, exercising the procedures required.*



### Functional requirements of SOLAS Chapter III

A preventive approach can be to promote the understanding of the functional requirements, which explain, in general terms, which function the system under consideration should provide to meet the safety objectives of SOLAS (MSC.1/Circ.1212/Rev.1):

Extracts only

#### Requirement No.1:

*All life-saving appliances (LSA) should be in a state of readiness for immediate use.*

- easily accessible (not obstructed, not locked)
- sheltered position, protected from fire and explosion
- maintainable to ensure reliability for the service
- instructions for operation & maintenance available
- crew members are assigned and trained

#### Requirement No.2:

*Training and drills should be sufficient to ensure that all crew and passengers are familiar with their responsibilities in an emergency.*

- routinely conducted to ensure competence with operations and assigned duties
- every crew member should participate in drills
- conducted, as far as practicable, as if there were an actual emergency
- planned and conducted in a safe manner
- regular practice of the various emergencies that may occur depending on the type of ship and cargo

#### Requirement No.3:

*Before proceeding to sea, all crew and passengers should be provided with information and instructions of the actions to be taken in an emergency.*

- easily understood
- distributed and displayed in appropriate places
- indicate stowage locations, directions to places, assignments & operating instructions
- LSA number / type marked at each stowage location

#### Requirement No.4:

*All ships should have an effective emergency management system readily available.*

- system clearly identifies roles & responsibilities
- muster stations and escape routes identified
- uniform structure, easy to use, provided on board

#### Requirement No.6:

*All ships should be able to internally communicate emergency messages and instructions to all crew and passengers.*

- alerts, messages, instructions can be received regardless of an individual's location on board
- appropriate languages understood
- two-way communication between emergency control stations, assembling and/or embarkation stations and strategic positions on board

#### Requirement No.7:

*All ships should provide means for a safe abandonment for all persons.*

- each davit-launched survival craft is capable of being launched from two positions by one crew member: from a position in the survival craft and from a position on deck
- provide for safe unobstructed launching of each survival craft
- abandonment of all persons on board takes no more than 30 minutes after mustering on passenger ships, and 10 minutes on cargo ships
- survival craft should be prepared for boarding and launching by no more than two crew members in less than 5 minutes

#### Requirement No.9:

*Each person should be provided with means to facilitate survival in the water until rescued into a survival craft or rescue unit.*

- ensure individual wearable buoyancy equipment are available for persons on watch and at remote locations on the ship so that they are readily accessible in an emergency
- each adult on board has a suitable personal LSA considering their weight and girth
- passengers on board: ensure that each infant and child on board has a suitable individual wearable buoyancy equipment, as appropriate, for the duration of the voyage and the type of service
- personal LSA should be provided with adequate spare capacity.

#### Requirement No.12:

*All ships should provide for the search, rescue and retrieval of persons in the water.*

- rescue craft: can be launched within 5 minutes
- safe launching from the ship in a seaway with the ship making way at speeds of up to 5 knots
- capable of maintaining a speed of at least 6 knots for at least 4 hours in a seaway
- capable of carrying at least five persons seated and at least one person lying down