

TECHNICAL PUBLICATION

On board maintenance and drills agenda

January 2022

REVISION HISTORY

3	January 2022	Revised to include new requirements of MSC.1/Circ.1318/Rev.1
2	January 2020	Multiple insertions have occurred. Editorial changes have been carried out.
1	September 2018	The document has been revised as a whole.
Initial	June 2016	Initial issue

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INTRODUCTION

DromonClass is releasing the updated technical publication concerning the requirements for maintenance and inspection of firefighting, lifesaving and radio equipment as well as drills as per statutory instruments.

The publication includes requirements for:

- On-board Maintenance & Inspection of Fire Protection Systems and Life-Saving Appliances
- Servicing, Inspection & Testing of Accommodation Ladders, gangways, davits and winches
- Servicing, Inspection & Testing of Launching Appliances (davit and winch)
- Servicing, Inspection & Testing of Lifeboat on-load release gear
- Servicing, Inspection & Testing of Davit-launched liferaft automatic release hooks
- Servicing, Inspection & Testing of Radio and Navigation Equipment
- On-board Training and Drills

Manufacturer

Service Supplier

The information should be used for the ship's on board maintenance plan as required by SOLAS regulation II-2/14.

In accordance with ISM Code Section 10.1 the safety management system of the company must provide a maintenance plan which ensures maintenance and inspection of the ship and equipment according to the relevant rules and regulations, codes, guidelines and standards.

The ship ISM Managers should ensure that the existing maintenance programme on board ships follows the revised guidelines and necessary amendments or revisions should be carried out.

For the use of this publication the below abbreviations have been used:

Crew members and/or senior ship's officers qualified and competent in accordance with relevant circulars.

DBS In presence of or by DBS Surveyor.

Manufacturer of the equipment or Service Supplier approved by the manufacturer

Service Supplier for the type of equipment/service. The firms are subject to approval and verification by Dromon where Dromon is so authorized by the relevant flag Administration. For such services Dromon may also accept approvals done by:

- the flag Administration itself;
- duly authorized organizations acting on behalf of the flag Administration (such as IACS Classification Members); or
- other organizations those are acceptable to the flag Administration (e.g. other governments, etc.).



Part A – On board Maintenance

REQUIREMENTS FOR ALL SHIPS

	Ву	Yes	No	N/A
WEEKLY				
Life saving appliances				
Emergency escape breathing devices (EEBDs) Examine cylinder gauges to confirm they are in the correct pressure range [MSC.1/Circ.1432]				
Falls used in launching appliances¹ Maintenance [SOLAS III/20.4; MSC.1/Circ.1206/Rev.1]				
Lifeboats (except free-fall lifeboats) Moving from stowed position [SOLAS III/20.6.3]				
Lifeboat and rescue boat engines Maintenance [SOLAS III/20.6.2; MSC.1/Circ1206/Rev.1]				
Testing of public address systems and general alarm systems [SOLAS III/20.6.4; MSC.1/Circ.1432]				
Visual inspection of survival craft, rescue boats and launching appliances Maintenance [SOLAS III/20.6.1]				
Fire protection and fire fighting equipment				
Self-contained breathing apparatuses (SCBAs) Examine cylinder gauges to confirm they are in the correct pressure range [MSC.1/Circ1432]				
Fixed fire-detection and alarm systems Verify that all fire detection and fire alarm control panel indicators are functional by operating the lamp/indicator test switch [MSC.1/Circ1432]				
Fire Doors Verify that all fire door control panel indicators, if provided are functional by operating the lamp/indicator switch [MSC.1/Circ1432]				
Fixed firefighting systems				
 Equivalent gas fire-extinguishing systems (e.g. FM 200, NOVEC 1230 or Halon) Verify that all fixed fire-extinguishing system control panel indicators are functional by operating the lamp/indicator test switch [MSC.1/Circ.1432] 				
Verify that all control/section valves are in the correct position [MSC.1/Circ.1432]				
Water mist, water spray and sprinkler systems Verify that all control panel indicators and alarms are functional [MSC.1/Circ.1432]				
 Visually inspect pump unit and its fittings [MSC.1/Circ.1432] 				
• Check the pump unit's valve positions if valves are not locked, as applicable [MSC.1/Circ.1432]				
MONTHLY				
Life saving appliances				
Means of embarkation on and disembarkation from ships (gangways, accommodation la for pilot transfer) ²	dders, incl. winch and f	ittings as we	ell as u	se
 Maintenance and inspection [SOLAS II-1/3-9.3; SOLAS III/20.4; SOLAS III/20.7.2; MSC.1/Circ.1331] 				
Falls used in launching appliances ³ Maintenance [SOLAS III/20.4; MSC.1/Circ.1206/Rev.1]				

³ Inspections according to maker's maintenance guidelines. Special concern for hidden areas and areas of end terminations Responsibility applies to:

Crew DBS Manufacturer Service Supplier

				Ву	Yes	No	N/A
Immersion suits and anti-expo		2. 40471					
Inspection [SOLAS III/20.7.2; SOI	LAS III/36.1; MISC/C	LITC.1047]					
Launching appliancesMaintained in accordance with i [SOLAS III/20.11.5]	instructions for on-	board maintenance					
Lifeboat and rescue boat relea	se gear						
Maintained in accordance with i [SOLAS III/20.11.5]	nstructions for on-	board maintenance					
Davit-launched liferaft automa	atic release hook	s					
 Maintained in accordance with i [SOLAS III/20.11.2] 	nstructions for on-	board maintenance					
Lifeboats and rescue boats, inc	•						
Maintained in accordance with i [SOLAS III/0.11.5]	nstructions for on-	board maintenance					
Fire protection and fire figh	ting equipmen	t					
Fixed fire-detection and alarm							
 Test a sample of detectors and r years [MSC.1/Circ1432] 	nanual call points s	so that all devices have	e been tested within five				
Wheeled (mobile) fire extingui							
 Verify that all are in place, proper 	erly arranged, and	are in proper condition	n [MSC.1/Circ.1432]				
Firefighter's outfits Verify that lockers providing stomate that equipment is in serviceable	_		heir full inventory and				
Fire mains, fire pumps, hydran	ts, hoses and no	zzles					
 Verify that all fire hydrants, hose serviceable condition [MSC.1/Ci 	es and nozzles are		nged, and are in				
Operate all fire pumps to confire [MSC.1/Circ.1432]	m that they continu	ue to supply adequate	pressure				
 Verify that emergency fire pump condition, if applicable [MSC.1/0] 		quate and heating sys	tem is in satisfactory				
Portable foam applicator units							
 Verify that all portable foam ap condition [MSC.1/Circ.1432] 	plicators are in pla	ce, properly arranged,	and are in proper				
Fixed firefighting systems							
Aerosol fire-extinguishing systom Verify that all electrical connection are in proper condition [MSC.1/4]	ions and/or manua	l operating stations ar	e properly arranged and				
 Verify that the actuation system [MSC.1/Circ.1432] 		uits are within manufa	cturer's specifications				
Equivalent gas fire-extinguishin Verify that containers/ cylinder	s fitted with pressu	are gauges are in the p					
installation is free from leakage	e [MSC.1/Circ.1432]					
CO2 fire-extinguishing systems General visual inspection of the [MSC.1/Circ.1318]		dition for obvious sigr	s of damage				
 Verify that all stop valves are in 	the closed position	[MSC.1/Circ.1318]					
 Verify that all releasing controls [MSC.1/Circ.1318] 			cessible for immediate use				
 Verify that all discharge piping a [MSC.1/Circ.1318] 	nd pneumatic tubi	ng is intact and has no	t been damaged				
Responsibility applies to:							
Crew	DBS	Manufacturer	Service Supplier				

	Ву		Yes	No	N/A
 Verify that all high pressure cylinders are in place and properly secured [MSC.1/Circ.1318] 					
CO2 fire-extinguishing systems ⁴					
• Verify that the alarm devices are in place and do not appear damaged [MSC.1/Circ.1318]					
• Verify that the pressure gauge is reading in the normal range [MSC.1/Circ.1318]					
• Verify that the liquid level indicator is reading at the proper level [MSC.1/Circ.1318]					
 Verify that the manually operated storage tank main service valve is secured in the open position [MSC.1/Circ.1318] 					
• Verify that the vapour supply line valve is secured in the open position [MSC.1/Circ.1318]					
 Dry chemical powder systems Verify that all control and section valves are in the proper open or closed position, and that all pressure gauges are in the proper range [MSC.1/Circ.1432] 					
Foam fire-extinguishing systems • Verify that all control and section valves are in the proper open or closed position, and that all pressure gauges are in the proper range [MSC.1/Circ.1432]					
Water mist, water spray and sprinkler systems					
 Verify that all control, pump unit and section valves are in the proper open or closed position [MSC.1/Circ.1432] 					
• Verify that sprinkler pressure tanks or other means have correct levels of water [MSC.1/Circ.1432]					
■ Test automatic starting arrangements on all system pumps so designed [MSC.1/Circ.1432]					
 Verify that all standby pressure and air/gas pressure gauges are within the proper pressure ranges [MSC.1/Circ.1432] 					
 Test a selected sample of system section valves for flow and proper initiation of alarms.⁵ [MSC.1/Circ.1432] 					
ANNUALLY					
Life saving appliances					
Means of embarkation on and disembarkation from ships (gangways, accommodation lad for pilot transfer) Thorough examination (within survey window) [SOLAS II-1/3-9.3; MSC.1/Circ.1331]	ders, incl. winc	h and fitti	ngs as w	ell as u	ise
Emergency escape breathing devices (EEBDs)					
■ Check according to maker's instructions [MSC.1/Circ.1432]					
Falls used in launching appliances ⁶ Maintenance [SOLAS III/20.4; MSC.1/Circ1206/Rev1]	or				
Hydrostatic release units (non-disposable) ⁷ • Maintenance [SOLAS III/20.9.1]					
Maintenance of inflatable liferafts, lifejackets ⁸ SOLAS III/20.8.1.1; Res. A.761(18); (inflatable liferafts)					
Launching appliances Launching appliance annual thorough examination (within survey window) [SOLAS III/20.11.1.2; MSC.1/Circ.1206/Rev.1]	or				
Dynamic test of the winch brake (within survey window) [SOLAS III/20.11.1.3; MSC.1/Circ.1206/Rev.1]	or				
⁴ For low pressure systems only. ⁵ The valves selected for testing shall be chosen to ensure that all valves are tested within a one-year period. ⁶ Inspections according to maker's maintenance guidelines. Special concern for hidden areas and areas of end terminate.	tions.				

Crew DBS Manufacturer Service Supplier

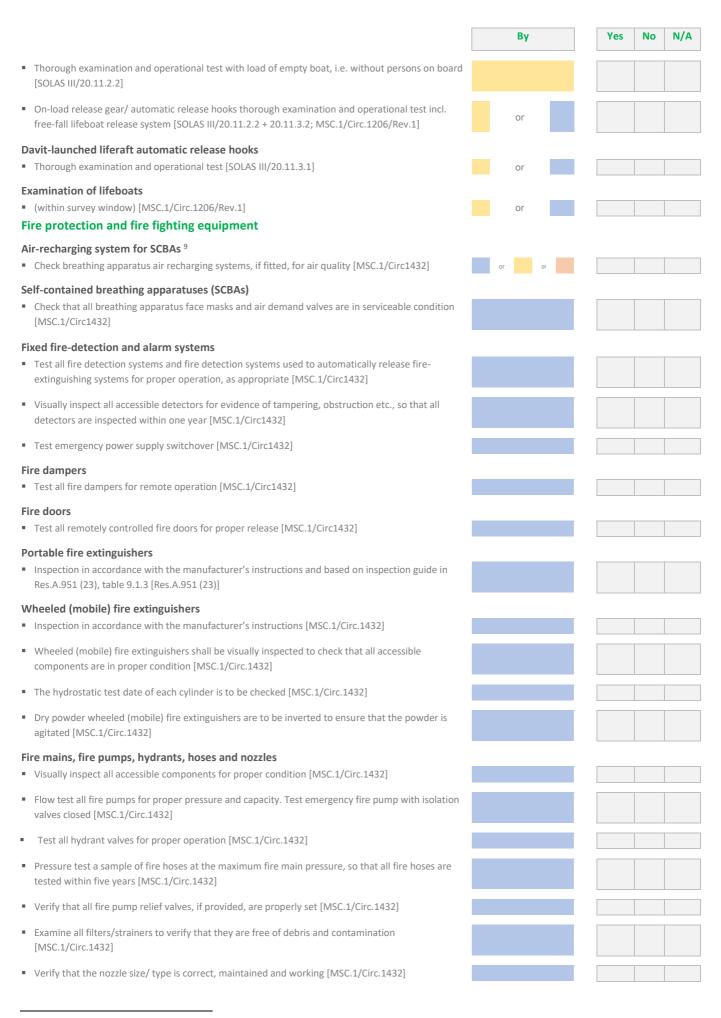
Inspections according to maker's maintenance guidelines. Special concern for hidden areas and areas of end terminations.

May be extended to 17 months. Some flag administrations require that they be consulted for acceptance

May be extended to 17 months. Some flag administrations require to be consulted for acceptance

Inflatable liferafts: Administration can accept specific liferafts for extended service intervals acc. to SOLAS III/20.8.3 and MSC.1/Circ.1328

Responsibility applies to:



⁹ By crew provided a suitable measurement device is available on board. The test device is to be agreed with the maker of the air recharging system. Responsibility applies to:



	Ву	Yes	No	N/A
Galley exhaust ducts		<u>-</u>		
 Verify that galley exhaust ducts and filters are free of grease build-up [MSC.1/Circ.1432] 				
Portable foam applicator units				
 Verify that all portable foam applicators are set to the correct proportioning ratio for the foam concentrate supplied and that the equipment is in proper order [MSC.1/Circ.1432] 				
 Verify that all portable containers or portable tanks containing foam concentrate remain factory sealed, and that the manufacturer's recommended service life interval has not been exceeded [MSC.1/Circ.1432] 				
Portable foam applicator units¹0 ■ Portable containers or portable tanks containing foam concentrate, excluding proteinbased concentrates, less than 10 years old, that remain factory sealed can normally be accepted without the periodical foam control tests required in MSC.1/Circ.1312 being carried out [MSC.1/Circ.1432]				
■ Protein-based foam concentrate portable containers and portable tanks shall be thoroughly checked and, if more than five years old, the foam concentrate shall be subjected to the periodical foam control tests required in MSC.1/Circ.1312, or renewed [MSC.1/Circ.1432]				
■ The foam concentrates of any non-sealed portable containers and portable tanks, and portable containers and portable tanks for which production data is not documented, shall be subjected to the periodical foam control tests required in MSC.1/Circ.1312 [MSC.1/Circ.1432]				
Ventilation systems				
 Test all ventilation controls interconnected with fire protection systems for proper operation [MSC.1/Circ.1432] 				
Fixed firefighting systems				
 Verify that condensed or dispersed aerosol generators have not exceeded their mandatory replacement date. Pneumatic or electric actuators shall be demonstrated working, as far as practicable [MSC.1/Circ.1432] 				
Equivalent gas fire-extinguishing systems (e.g. FM 200, NOVEC 1230 or Halon) [MSC.1/Circ	:.1432]			
 Externally examine all high pressure cylinders for evidence of damage or corrosion. 				
Check the hydrostatic test date of all storage containers.				
Functionally test all fixed system audible and visual alarms.				
 Verify that all control/section valves are in the correct position. 				
 Check the connections of all pilot release piping and tubing for tightness. 				
Examine all flexible hoses in accordance with manufacturer's recommendations.				
■ Test all fuel shut-off controls connected to fire-protection systems for proper operation.				
■ The boundaries of the protected space shall be visually inspected to confirm that no modifications have been made to the enclosures that have created uncloseable openings that would render the system ineffective.				
If cylinders are installed inside the protected space, verify the integrity of the double release lines inside the protected space, and check low pressure or circuit integrity monitors on release cabinet, as applicable.				
CO2 fire-extinguishing systems The boundaries of the protected space shall be visually inspected to confirm that no modifications have been made to the enclosures that have created uncloseable openings that would render the system ineffective [MSC.1/Circ.1318]				
 All storage containers shall be visually inspected for any signs of damage, rust or loose mounting hardware. Cylinders that are leaking, corroded, dented or bulging shall be hydrostatically retested or replaced [MSC.1/Circ.1318] 				

 $^{^{\}rm 10}$ The foam control tests are to be conducted by SER or maker. Responsibility applies to:

Crew DBS Manufacturer Service Supplier

	Ву	Yes	No	N/A
 System piping shall be visually inspected to check for damage, loose supports and corrosion. Nozzles shall be inspected to ensure they have not been obstructed by the storage of spare parts or a new installation of structures or machinery [MSC.1/Circ.1318] 				
■ The manifold shall be inspected to verify that all flexible discharge hoses and fittings are properly tightened [MSC.1/Circ.1318]				
• All entrance doors to the protected space shall close properly and shall have warning signs, which indicate that the space is protected by a fixed carbon dioxide system and that personnel shall evacuate immediately if the alarms sound. All remote releasing controls shall be checked for clear operating instructions and indication as to the space served [MSC.1/Circ.1318]				
The hydrostatic test date of all storage containers shall be checked. High-pressure cylinders should be subjected to periodical tests at intervals not exceeding 10 years. At the 10-year inspection, at least 10% of the total number provided should be subjected to an internal inspection and hydrostatic test. If one or more cylinders fail, a total of 50% of the onboard cylinders should be tested. If further cylinders fail, all cylinders should be tested. Before the 20-year anniversary and every 10-year anniversary thereafter, all cylinders should be subjected to a hydrostatic test. Flexible hoses should be replaced at the intervals recommended by the manufacturer and not exceeding every 10 years. When cylinders are removed for testing, the cylinders should be replaced such that the quantity of fire-extinguishing medium continues to satisfy the requirements of 2.2.1 of chapter 5 of the FSS Code, subject to SOLAS regulation II-2/14.2; and [MSC.1/Circ.1318]				
Deep fat cooking fire-extinguishing systems In accordance with the manufacturer's instructions [MSC.1/Circ.1432]				
Dry chemical powder systems				
Visually inspect all accessible components for proper condition [MSC.1/Circ.1432]				
• Verify that the pressure regulators are in proper order and within calibration [MSC.1/Circ.1432]				
 Agitate the dry chemical powder charge with nitrogen in accordance with system manufacturer's instructions.11 [MSC.1/Circ.1432] 				
Foam fire-extinguishing systems				
 Visually inspect all accessible components for proper condition [MSC.1/Circ.1432] 				
Functionally test all fixed system audible alarms [MSC.1/Circ.1432]				
 Flow test all water supply and foam pumps for proper pressure and capacity, and confirm flow at the required pressure in each section (ensure all piping is thoroughly flushed with fresh water after service) [MSC.1/Circ.1432] 				
■ Test all system cross connections to other sources of water supply for proper operation [MSC.1/Circ.1432]				
 Verify that all pump relief valves, if provided, are properly set [MSC.1/Circ.1432] 				
 Examine all filters/strainers to verify that they are free of debris and contamination [MSC.1/Circ.1432] 				
 Verify that all control/section valves are in the correct position [MSC.1/Circ.1432] 				
 Blow dry compressed air or nitrogen through the discharge piping or otherwise confirm that the pipework and nozzles of high expansion foam systems are clear of any obstructions, debris and contamination.12 [MSC.1/Circ.1432] 				
■ Take samples from all foam concentrates carried on board (including the foam in sealed transport containers more than 10 years old) and subject them to the periodical control tests in MSC.1/Circ.1312, for low expansion foam, or MSC/Circ.670 for high expansion foam.13 [MSC.1/Circ.1432, MSC.1/Circ.1312]	&			
 Test all fuel shut-off controls connected to fire-protection systems for proper operation [MSC.1/Circ.1432] 				
Water mist, water spray and sprinkler systems				

¹¹ Due to the powder's affinity for moisture, any nitrogen gas introduced for agitation must be moisture-free.
12 This may require the removal of nozzles, if applicable.
13 Except for protein-based alcohol-resistant foam concentrates, the first test should be performed not more than 3 years after being supplied to the ship. Responsibility applies to:

		Ву	Yes	No	N/A
	Water mist, water spray and sprinkler systems [MSC.1/Circ.1432]				
	Visually inspect all accessible components for proper condition [MSC.1/Circ.1432]				
•	Externally examine all high pressure cylinders for evidence of damage or corrosion [MSC.1/Circ.1432]				
	Check the hydrostatic test date of all high pressure cylinders [MSC.1/Circ.1432]				
	Functionally test all fixed system audible and visual alarms [MSC.1/Circ.1432]				
•	Flow test all pumps for proper pressure and capacity [MSC.1/Circ.1432]				
•	Test all antifreeze systems for adequate freeze protection [MSC.1/Circ.1432]				
•	Test all system cross connections to other sources of water supply for proper operation [MSC.1/Circ.1432]				
•	Verify that all pump relief valves, if provided, are properly set [MSC.1/Circ.1432]				
•	Examine all filters/strainers to verify that they are free of debris and contamination [MSC.1/Circ.1432]				
•	Verify that all control/section valves are in the correct position [MSC.1/Circ.1432]				
•	Blow dry compressed air or nitrogen through the discharge piping of dry pipe systems, or otherwise confirm that the pipework and nozzles are clear of any obstructions.14 [MSC.1/Circ.1432]				
•	Test emergency power supply switchover, where applicable [MSC.1/Circ.1432]				
•	Water mist, water spray and sprinkler systems MSC.1/Circ.1432, par. 7.5.14 (as amended by MSC.1/Circ.1516)				
•	Check for any changes that may affect the system, such as obstructions by ventilation ducts, pipes, etc [MSC.1/Circ.1432]				
•	Test a minimum of one section in each open head water mist system by flowing water through the nozzles.15 [MSC.1/Circ.1432, par. $7.5.16$ SI II-2/14.2.2]				
•	For automatic sprinkler systems of less than 5 years, test a minimum of two randomly selected sprinkler heads/nozzles of each type. If five years or more, test a minimum of 20 heads/nozzles (2 \times 10 sections) for each type.16 [MSC.1/ Circ.1432 (as amended by MSC.1/ Circ.1516)]				
•	During basic testing, and extended testing when applicable, of automatic sprinkler heads/nozzles as outlined in subparagraph .17, water quality testing should be conducted in each corresponding piping section.17 [MSC.1/Circ.1432 (as amended by MSC.1/ Circ.1516)]				
•	Test additives in water mist system water sample ¹⁸				
R	adio and navigational equipment				
	esting of the automatic identification system (AIS) ¹⁹				
	[SOLAS V/18.9] hecking of radio battery ²⁰				
	[SOLAS IV/13.6.2]				
	Testing according to MSC.1/ Circ.1040/Rev.1 (within survey window) [SOLAS IV/15.9.1]				
	oyage data recorder (VDR) ²¹ [SOLAS V/18.8]				
14	This may require the removal of nozzles if annicable				

Responsibility applies to:

¹⁵ The sections tested shall be chosen so that all sections are tested within a five-year period. Other test and inspections as per maker's recommendations and type approval 15 The sections tested shall be chosen so that all sections are tested within a five-year period. Other test and inspections as per maker's certificate. Test or record of the test shall be presented to the attending surveyor
 16 Test in accordance with the basic and extended testing (when applicable) in MSC.1/Circ.1516.
 17 Should a tested sprinkler fail, assessing the corresponding water quality at that time would assist in determining the cause of failure
 18 After 3 years and then annually
 19 Test report shall be retained on board the ship.
 20 Not by radio surveyor.
 21 Certificate of compliance and maintenance report shall be retained on board the ship.

	Ву	Yes	No	N/A
 Capsule float-free arrangements are satisfactory as originally accepted at commissioning and any battery, release mechanism or other datable items are within their expiry date. For float-free capsules approved in accordance with MSC.333(90), the examination should be carried out in accordance with MSC.1/Circ.1040/Rev.1 [MSC.1/Circ.1222/Rev.1] 				
2-YEARLY				
Fixed firefighting systems				
Equivalent gas fire-extinguishing systems (e.g. FM 200, NOVEC 1230 or Halon)				
All high pressure extinguishing agent cylinders and pilot cylinders shall be weighed or have their contents verified by other reliable means to confirm that the available charge in each is above 95% of the nominal charge. Cylinders containing less than 95% of the nominal charge shall be refilled [MSC.1/Circ.1432]	or			
Blow dry compressed air or nitrogen through the discharge piping or otherwise confirm that the pipework and nozzles are clear of any obstructions. This may require the removal of nozzles, if applicable [MSC.1/Circ.1432]	or			
Dry chemical powder systems ²²				
 Blow dry nitrogen through the discharge piping to confirm that the pipework and nozzles are clear of any obstructions [MSC.1/Circ.1432] 				
• Operationally test local and remote controls and section valves [MSC.1/Circ.1432]				
 Verify the contents of propellant gas cylinders (including remote operating stations) [MSC.1/Circ.1432] 				
Test a sample of dry chemical powder for moisture content [MSC.1/Circ.1432]				
Subject the powder containment vessel, safety valve and discharge hoses to a full working pressure test [MSC.1/Circ.1432]				
2,5-YEARS				
Accommodation ladders, gangways, davits and winches Servicing of liferafts (30 moths) [SOLAS III/20.8.3 & MSC/Circ.1328	or			
3-YEARLY				
Life saving appliances				
mmersion suits and anti-exposure suits ²³				
Air pressure test (seams and closures) [MSC/Circ.1114]	or			
4-YEARLY				
Fire protection and fire fighting equipment				
rire dampers				
Test all fire dampers for local operation [MSC.1/Circ1432]				
Fire mains, fire pumps, hydrants, hoses and nozzles Verify that international shore connection(s) is/are in serviceable condition [MSC.1/Circ.1432]				
Fixed firefighting systems				
Foam fire-extinguishing systems • Verify that the proper quantity of foam concentrate is provided in the foam system storage tank [MSC.1/Circ.1432]				
Water mist, water spray and sprinkler systems Assess system water quality in the header tank and pump unit against the manufacturer's water				
If permitted by the flag state administration, the interval can be extended to/harmonized with every intermediate/ p2/14.2.2 item 3.11.1.1 e4). By crew provided suitable equipment is available on board.	periodical and renewal survey	according to I	DBS SI II	-

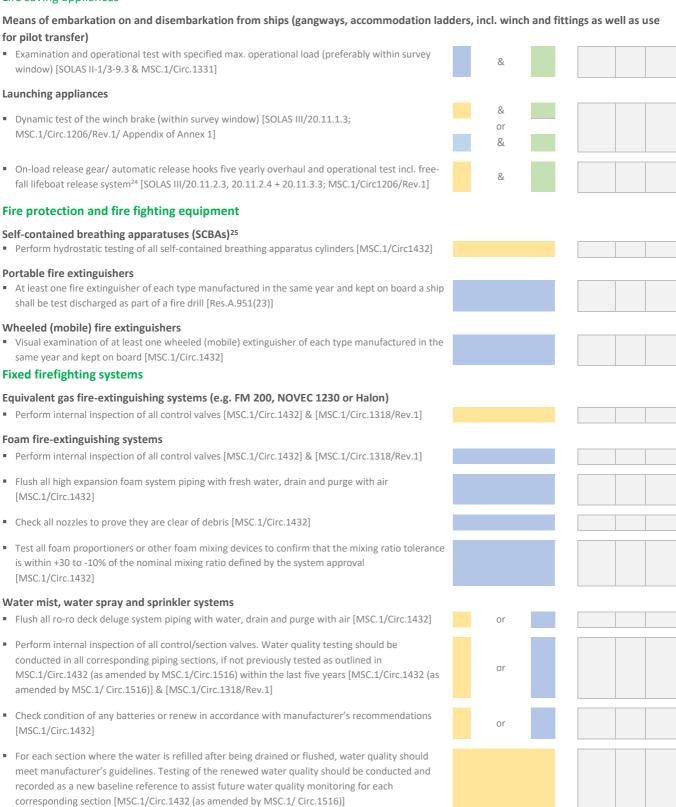
 ²³ By crew provided suitable equipment is available on board.
 Responsibility applies to:

Crew DBS Manufacturer Service Supplier quality guidelines [MSC.1/Circ.1432 (as amended by MSC.1/Circ.1516)]

Radio and navigational equipment

5-YEARLY

Life saving appliances



²⁴ 1.1 x load test no longer required for free-fall lifeboats (ref III/20.11.2.4); only operational test with operating crew or simulated launching required after overhaul ²⁵ Aluminium and composite cylinders shall be tested to the satisfaction of the Administration.

Responsibility applies to:



		Ву	Yes	No	N/A
 Perform internal examination of water pressure cylinders. 		&			
Radio and navigational equipment					
Satellite emergency position-indicating radio beacons (EPIRB	s) ²⁶ [SOLAS IV/15.9.2]				
(Shore-based maintenance)					
10-YEARLY					
Fire protection and fire fighting equipment					
Portable fire extinguishers					
 All fire extinguishers together with propellant cartridges shall be hy with the recognized standard or the manufacturer's instructions [R 					
Wheeled (mobile) fire extinguishers					
 All fire extinguishers together with propellant cartridges shall be hy with the recognized standard or the manufacturer's instructions [N 					
Fixed firefighting systems					
Aerosol fire-extinguishing systems					
 Condensed or dispersed aerosol generators are to be renewed in a recommendations [MSC.1/Circ.1432] 	ccordance with manufacturer's				
CO2 fire-extinguishing systems					
High pressure cylinders shall be subjected to periodical tests at inte					
the 10-year inspection, at least 10% of the total number provided s inspection and hydrostatic test. If one or more cylinders fail, a total					
cylinders shall be tested. If further cylinders fail, all cylinders shall be					
Dry chemical powder systems ²⁷					
 Subject all powder containment vessels to hydrostatic or non-destr 	ructive testing (NDT) carried out				
by an accredited service agent [MSC.1/Circ.1432]					
Water mist, water spray and sprinkler systems					
 Perform hydrostatic test and internal examination for gas and wate [MSC.1/Circ.1432] 	er pressure cylinders				
OTHER INTERVALS	Intervals				
Life saving appliances					
Emergency escape breathing devices (EEBDs) ²⁸					
 Hydrostatic test and internal inspection of cylinders [IACS Rec. No.88 SI II-2/14.2 item 3.11.1.1 g5)] 	As specified by the manufacturer (or every 5				
NU.00 31 II-2/ 14.2 (LEHI 3.11.1.1 g5)]	years if not specified)				
Falls used in launching appliances					
Renewal [SOLAS III/20.4]	After 5 years at the latest,				
	or earlier if necessary due	or			
	to deterioration				
Replacement of first-aid outfit and anti-seasickness medicine	e of lifeboat equipment				
■ LSA Code	Maker's expiry date				
Replacement of food rations of lifeboat equipment					
■ LSA Code	Maker's expiry date				
Rescue boat launching and manoeuvring in the water					
SOLAS III/19.3.3.6	3-monthly (as far as practical monthly)				
Battery replacement of lifebuoy lights ²⁹					
26 Certificate of compliance or test report shall be issued.					
17 In case of NDT, contact DBS prior to the testing. 18 Intervals specified in recognized international standards (e.g. ISO, EN) are to be an expensive in the property of the prope	e observed.				
Responsibility applies to:					

Crew DBS Manufacturer Service Supplier

		Ву	Yes	No	N/A
LSA Code	Maker's expiry date				
Replacement of rocket parachute flares and rocket line- throw	ving appliances				
LSA Code	Maker's expiry date				
Replacement of smoke signals					
LSA Code	Maker's expiry date				
Fixed firefighting systems					
Equivalent gas fire-extinguishing systems (e.g. FM 200, NOVEC	2 1230 or Halon)				
Flexible hoses (replacement) [MSC.1/Circ.1318]	To be replaced at the				
	intervals recommended by the manufacturer and not				
	exceeding every 10 years				
CO2 fire outinguishing systems	<i>5</i> , ,				
CO2 fire-extinguishing systems Maintenance by approved service supplier. [MSC.1/Circ.1318]	As per manufacturer's				
	instructions	or			
Flexible hoses shall be replaced at the intervals recommended by	At least 10-yearly				
the manufacturer and not exceeding every 10 years.31	, ,				
[MSC.1/Circ.1318]					
Low pressure CO2 bulk storage containers are subject to internal	If content has been				
survey if the content has been released and the container is more	released and is more than	&			
than 5 years old.	5 years old				
Deep fat cooking fire extinguishing systems					
Overhaul and hydrostatic testing [10-yearly (from date of	10-yearly (from date of				
manufacture of pressure vessels)]	manufacture of pressure vessels)	or			
	vessels)				
Dry chemical powder systems				I	
 Maintenance by approved service supplier.³² 	As per manufacturer's instructions	or			
Water mist, water spray and sprinkler systems					
Fixed local-application fire-extinguishing system for engine rooms	As per maker's instructions				
Tests and inspections as per maker's recommendation and the	and type approval				
Society's type ³³ approval certificate	certificate				
Radio and navigational equipment					
Standard magnetic compass					
 Determination of magnetic compass error [STCW Code/Sec. A-VIII/2.34.2] 	Once a watch				
 *Adjustment, incl. curve of residual deviation³⁴ [Flag state requirements] 	*Individual flag state requirements				
Other	•				
Other Medical oxygen					
Replacement of oxygen [National pharmaceutical regulations, if	According to national				
applicable]	pharmaceutical regulations				
	or maker's expiry date				
Hydrostatic test and internal inspection of cylinders [Flag state, if	As per maker's instructions				
applicable]	and/or international				
	standards (e.g. ISO, EN)				
	and/or flag's requirements				

Responsibility applies to:

DBS Manufacturer Crew Service Supplier

³⁰ Only if requirements from the manufacturer are available in addition to those in this table.

³¹ Hose assemblies are to be delivered on board with a Recognized Organization test certificate.

³² Only if requirements from the manufacturer are available in addition to those in this table.

³³ Competent crew member (with an advanced firefighting training course) or person trained in the maintenance of such system or as per maker's instructions and type approval certificate.

³⁴ Table or curve of residual deviation to be available at all times and compass deviation book to be properly maintained, will be checked annually during safety equipment surveys. Res.A.1104(29), item (EA) 1.2.1.27

Responsibility applies to:

No

ADDITIONAL REQUIREMENTS

OIL TANKERS

ANNUALLY

Life saving appliances

Examination of lifeboats with sprinkler system.

CHEMICAL AND GAS TANKERS

MONTHLY

Fire protection and fire fighting equipment

Air-recharging system for SCBAs

• The compressed-air equipment shall be inspected [BCH Code]

Self-contained breathing apparatuses (SCBAs)

• The breathing apparatus shall be inspected [BCH Code, IBC Code, IGC Code]



ANNUALLY

Life saving appliances

Lifeboats with self-contained air-support system³⁵

• Examination (incl. external inspection of air cylinders) [MSC.1/Circ.1206/Rev.1]



Self-contained breathing apparatuses (SCBAs).

• The breathing apparatus shall be inspected [BCH Code, IBC Code, IGC Code]

Fire protection and fire fighting equipment

Air-recharging system for SCBAs³⁶

• The equipment shall be inspected and tested [IGC Code]



Self-contained breathing apparatuses (SCBAs)

• The equipment shall be inspected and tested [BCH Code, IBC Code, IGC Code]



5-YEARLY

Life saving appliances

Lifeboats with self-contained air-support system

Hydrostatic test of air cylinders [IACS Rec. No. 88]



CHEMICAL TANKERS

ANNUALLY

Fixed firefighting systems

Foam fire-extinguishing systems

 Alcohol-resistant fluorineprotein-based foam concentrates are subjected to a chemical stability test with acetone before being poured into foam tank, and a new chemical stability test is performed after installation on board (not less than 14 days after installation on board) [MSC.1/Circ.1312]



DBS

Manufacturer



Service Supplier

³⁵ Incl. external inspection of air cylinders

³⁶ By crew provided a suitable measurement device is available on board. The test device is to be agreed with the maker of the air recharging system. Responsibility applies to:

No

PASSENGER SHIPS

WEEKLY

Other

Low-location lighting systems

 Verify that the low-location lighting systems are functional by switching off normal lighting in selected locations [MSC.1/Circ.1432]



ANNUALLY

Life saving appliances

Marine evacuation systems (MES)37

Service [SOLAS III/20.8.1]

Fixed firefighting systems

Water mist, water spray and sprinkler systems

• Fixed local-application fire-extinguishing system for engine rooms full flow test of minimum one section and spot check of fire detection/automatic release system shall be carried out.³⁸



2-YEARLY

Fixed firefighting systems

Equivalent gas fire-extinguishing systems (e.g. FM 200, NOVEC 1230 or Halon)

Maintenance by approved service supplier.

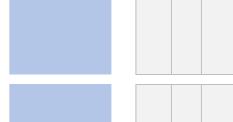
Aerosol fire-extinguishing systems

Maintenance by approved service supplier.

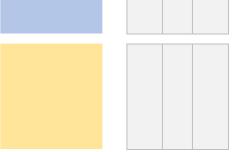
CO2 fire-extinguishing systems

- All high pressure cylinders and pilot cylinders shall be weighed or have their contents verified by other reliable means to confirm that the available charge in each is above 90% of the nominal charge. Cylinders containing less than 90% of the nominal charge shall be refilled. The liquid level of low pressure storage tanks shall be checked to verify that the required amount of carbon dioxide for protection against the largest hazard is available [MSC.1/Circ.1318]
- The hydrostatic test date of all storage containers shall be checked. High-pressure cylinders should be subjected to periodical tests at intervals not exceeding 10 years. At the 10-year inspection, at least 10% of the total number provided should be subjected to an internal inspection and hydrostatic test. If one or more cylinders fail, a total of 50% of the onboard cylinders should be tested. If further cylinders fail, all cylinders should be tested. Before the 20-year anniversary and every 10-year anniversary thereafter, all cylinders should be subjected to a hydrostatic test. Flexible hoses should be replaced at the intervals recommended by the manufacturer and not exceeding every 10 years. When cylinders are removed for testing, the cylinders should be replaced such that the quantity of fire-extinguishing medium continues to satisfy the requirements of 2.2.1 of chapter 5 of the FSS Code, subject to SOLAS regulation II-2/14.2; and [MSC.1/Circ.1318]
- The discharge piping and nozzles shall be tested to verify that they are not blocked. The test shall be performed by isolating the discharge piping from the system and blowing dry air or nitrogen from test cylinders or suitable means through the piping [MSC.1/Circ.1318]
- Where possible, all activating heads shall be removed from the cylinder valves and tested for correct functioning by applying full working pressure through the pilot lines. In cases where this is not possible, pilot lines shall be disconnected from the cylinder valves and blanked off or connected together and tested with full working pressure from the release station and checked for leakage. In both cases, this shall be carried out from one or more release stations when installed. If manual pull cables operate the remote release controls, they shall be checked to verify that the cables and corner pulleys are in good condition and freely move and do not require an excessive









Responsibility applies to:

³⁷ Administration may extend this period to 17 months

³⁸ Automatic release is not applicable for continuously manned engine rooms.

	Ву	Yes	No	N/A
amount of travel to activate the system [MSC.1/Circ.1318]				
 All cable components should be cleaned and adjusted as necessary, and the cable connectors shall be properly tightened. If the remote release controls are operated by pneumatic pressure, the tubing shall be checked for leakage, and the proper charge of the remote releasing station's pilot gas cylinders shall be verified. All controls and warning devices shall function normally, and the time delay, if fitted, shall prevent the discharge of gas for the required time period [MSC.1/Circ.1318] 				
• After completion of the work, the system shall be returned to service. All releasing controls shall be verified as being in the proper position and connected to the correct control valves. All pressure switch interlocks shall be reset and returned to service. All stop valves shall be in the closed position [MSC.1/Circ.1318]				
QUARTERLY				
Fire protection and fire fighting equipment				
Fire doors Test all fire doors located in main vertical zone bulkheads for local operation [MSC.1/Circ1432]				
5-YEARLY				
Other				
Lightweight survey				
SOLAS II-1/5.5 IS Code VIII/8.1.5	& or &			
Low-location lighting systems Test the luminance in accordance with the procedures in resolution A.752(18) [MSC.1/Circ.1432,				
Res.A.752(18)]				
6-YEARLY				
Life saving appliances				
Marine evacuation systems (MES)³9 ■ Test [SOLAS III/20.8.2]				
CARGO SHIPS				
2,5-YEARLY				
Fixed firefighting systems				
Aerosol fire-extinguishing systems ⁴⁰ Maintenance				
Equivalent gas fire-extinguishing systems (e.g. FM 200, NOVEC 1230 or Halon) ⁴¹ Maintenance				
CO2 fire-extinguishing systems ⁴²				
• All high pressure cylinders and pilot cylinders shall be weighed or have their contents verified by other reliable means to confirm that the available charge in each is above 90% of the nominal charge. Cylinders containing less than 90% of the nominal charge shall be refilled. The liquid level of low-pressure storage tanks shall be checked to verify that the required amount of carbon				
dioxide for protection against the largest hazard is available.				
³⁹ Deployment on rotational basis at intervals to be agreed by flag administration, however each system to be deploye ⁴⁰ On each intermediate/ periodical and renewal survey.	d at least once every six yea	irs.		

Responsibility applies to:

⁴⁰ On each intermediate/ periodical and renewal survey.
41 On each intermediate/ periodical and renewal survey.
42 On each intermediate/ periodical and renewal survey.
43 On each intermediate/ periodical and renewal survey.

		Ву	Yes	No	N/A
	The hydrostatic test date of all storage containers shall be checked [MSC.1/Circ.1318]				
•	The discharge piping and nozzles shall be tested to verify that they are not blocked. The test shall be performed by isolating the discharge piping from the system and blowing dry air or nitrogen from test cylinders or suitable means through the piping [MSC.1/Circ.1318]				

5-YEARLY

Fixed firefighting systems

CO2 fire-extinguishing systems

- Where possible, all activating heads shall be removed from the cylinder valves and tested for correct functioning by applying full working pressure through the pilot lines. In cases where this is not possible, pilot lines shall be disconnected from the cylinder valves and blanked off or connected together and tested with full working pressure from the release station and checked for leakage. In both cases, this shall be carried out from one or more release stations when installed. If manual pull cables operate the remote release controls, they shall be checked to verify that the cables and corner pulleys are in good condition and freely move and do not require an excessive amount of travel to activate the system [MSC.1/Circ.1318]
- All cable components should be cleaned and adjusted as necessary, and the cable connectors shall be properly tightened. If the remote release controls are operated by pneumatic pressure, the tubing shall be checked for leakage, and the proper charge of the remote releasing station's pilot gas cylinders shall be verified. All controls and warning devices shall function normally, and the time delay, if fitted, shall prevent the discharge of gas for the required time period [MSC.1/Circ.1318]
- After completion of the work, the system shall be returned to service. All releasing controls shall
 be verified as being in the proper position and connected to the correct control valves. All
 pressure switch interlocks shall be reset and returned to service. All stop valves shall be in the
 closed position [MSC.1/Circ.1318]

Water mist, water spray and sprinkler systems

 Fixed local-application fire-extinguishing system for engine rooms full flow test of minimum one section and spot check of fire detection/automatic release system shall be carried out.⁴³

or	&			

⁴³ Automatic release is not applicable for continuously manned engine rooms. Responsibility applies to:





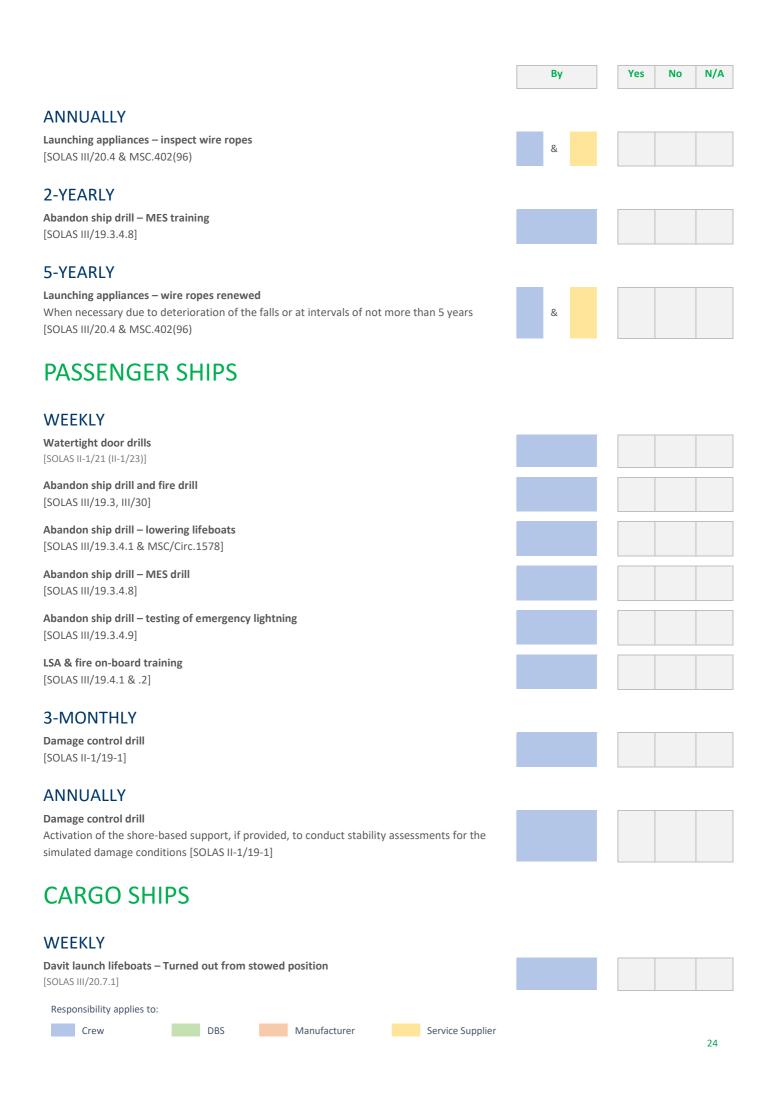
Part B – On board drills

ALL SHIPS

	Ву	Yes	No	N/A	
WEEKLY					
Survival craft, rescue boats and launching appliances (visual inspection) [SOLAS III/30.6.1 & MSC 402(96)					
Test run of lifeboat and rescue boat engines ⁴⁴ [SOLAS III/20.6.2 & MSC.402(96)					
Testing of public address and general alarm system [SOLAS III/20.6.4]					
Steering gear tests Within 12 hours before departure or weekly for ships which regularly engage on voyages of short duration [SOLAS V/26.1 $\&$.2]					
MONTHLY					
Abandon ship drill – launching lifeboats & rescue boats ⁴⁵ [SOLAS III/19.3.4.3 & 19.3.4.6, MSC.1/Circ.1578]					
Davit-launched lifeboats – turned out from stowed condition [SOLAS III/20.7.1]					
Inspection of LSA including lifeboat equipment [SOLAS III/20.7.2 & III/36.1]					
2-MONTHLY					
Enclosed space safe entry and rescue drills [SOLAS III/19.3.3 & 19.3.6]					
3-MONTHLY					
Abandon ship drill – launching lifeboats [SOLAS III/19.3.4.3 & 19.3.4.6 & MSC/Circ.1578]					
Abandon ship drill – free-fall lifeboat drill [SOLAS III/19.3.4.4 & MSC/Circ.1578]					
Emergency steering drill [SOLAS V/26.4]					
4-MONTHLY					
Davit launched liferaft training [SOLAS III/19.4.3]					
6-MONTHLY					
Abandon ship drill – launch (or stimulated launch) free-fall lifeboats [SOLAS III/19.3.4.4 & MSC/Circ.1578]					

⁴⁴ In special cases the Flag may waive this requirement for ships constructed before 1 July 1986. ⁴⁵ Dedicated rescue boats launched monthly, if possible. Responsibility applies to:

Crew DBS Manufacturer Service Supplier



	Ву	Yes	No	N/A
MONTHLY About days while dutill and fine dutill				
Abandon ship drill and fire drill [SOLAS III/19.3]				
Abandon ship drill – lowering lifeboats [SOLAS III/19.3.4.1, MSC/Circ.1578]				
Abandon ship drill – MES drill [SOLAS III/19.3.4.8]				
Abandon ship drill – Testing of emergency lighting [SOLAS III/19.3.4.9]				
LSA & fire on-board training [SOLAS III/19.4.1 & .2]				



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