



TANGGAPAN NG KOMANDANTE
(OFFICE OF THE COMMANDANT)
PUNONGHIMPILAN TANOD BAYBAYIN NG PILIPINAS
(HEADQUARTERS PHILIPPINE COAST GUARD)
139 25th Street, Port Area
1018 Manila

HPCG/VSD

MEMORANDUM CIRCULAR)
)
NUMBER..... 01 - 02)

05 AUG 2002

**GUIDELINES FOR SERVICING OF
INFLATABLE LIFERAFTS**

A. PURPOSE:

The purpose of this Memo Circular is to provide a policy in the implementation of HPCG Memo Circular 05-94 in consonance with IMO Resolution A.761(18) and HPCG Memo Circular 01-98.

B. SCOPE:

This Memo Circular is applicable to inflatable liferafts for use in international and Coastwise voyages and requirements in the proper conduct of its servicing by PCG accredited liferaft service stations.

C. CONCEPT/POLICIES:

A. General:

1. Regulations III/19.8.1 of the International Convention for the Safety of Life at Sea, 1974 as amended, require that every inflatable liferaft shall be serviced at intervals not exceeding 12 months but that, where it appears proper and reasonable, the PCG may extend this period to 17 months and that inflatable liferafts shall be serviced at an approved servicing station which is competent to service them, maintains proper servicing facilities and uses only properly trained personnel.
2. The PCG shall ensure that the periodic survey of inflatable liferafts is performed at servicing stations that have demonstrated competence to service and repack rafts, maintain adequate facility and use only properly trained personnel. In order to be approved, servicing stations should have

demonstrated this capability for inflatable liferafts of each manufacturer whose liferafts they are competent to service.

B. Specific Guidelines:

1. The following tests and procedures should be carried out, except where noted otherwise, at every servicing of an inflatable liferaft fitted as life-saving equipment.
2. Inflatable liferaft servicing should be carried out in accordance with the appropriate manufacturer's servicing manual. Necessary procedures should include, but not be limited to, the following:
 - 2.1 Inspection of the container, for damage;
 - 2.2 Inspection of the folded liferaft and the interior of the container for signs of dampness;
 - 2.3 A gas inflation (GI) test should be carried out at 5-year intervals, and when undertaking a gas inflation test, special attention should be paid to the effectiveness of the relief valves. The folded liferaft should be removed from its container before activating the fitted gas inflation system. After gas inflation has been initiated, sufficient time shall be allowed to enable the pressure in the buoyancy tubes to become stabilized and the solid particles of CO₂ to evaporate. After this period the buoyancy tubes should, if necessary, be topped up with air, and the liferaft subjected to a pressure holding test over a period of not less than one hour during which the pressure drop will not exceed 5 % of the working pressure;
 - 2.4 Each liferaft should be subjected to the necessary additional pressure (NAP) test as described appendix 1, or any other similar test recommended by the manufacturer at yearly intervals after the tenth year of the liferaft's life unless earlier servicing is deemed necessary as a result of visual inspection. After allowing sufficient time for the liferaft to regain fabric tension at working pressure, the liferaft should be subjected to a pressure holding test of not less than one hour during which the pressure drop will not exceed 5% of the working pressure;
 - 2.5 When a NAP or GI test is not required, a working pressure (WP) test should be carried out (see appendix 2), by the inflation of the liferaft with dry compressed air, after removing it from the container shell or valise and from its retaining straps is fitted, to at least the working pressure, or to the pressure required by the manufacturer servicing manual if higher. The liferaft should be subjected to a pressure

holding test over a period of not less than one hour during which the pressure drop will not exceed 5% of the working pressure;

- 2.6 While inflated, the liferaft should be subjected to a through inspection inside and out in accordance with the manufacturer's instructions;
 - 2.7 The floor should be inflated, checked for broken reeds and tested in accordance with the manufacturer's instructions;
 - 2.8 The seams between floor and buoyancy tube should be checked for slippage or edge lifting;
 - 2.9 With the buoyancy tube supported at a suitable height above the service floor a person weighing not less than 75 kg should walk/crawl around the perimeter of the floor for the entire circumference and the floor seams should be checked again. Manufacturers may substitute any other seam test which will determine the integrity of the floor seam until the next inspection is due. This test should be carried out at yearly intervals after the tenth year of the liferaft's life;
 - 2.10 After deflation, arch roots should be checked in accordance with the manufacturer's instructions;
 - 2.11 All items of equipment should be checked to ensure that they are in good condition and that dated items are replaced at the time of servicing if there is less than 6 months remaining before the expiry date approved by the administration;
 - 2.12 Davit-launched liferafts should be subjected to a 10% overload suspension test at every second servicing;
 - 2.13 A check should be made to ensure that the liferaft and the atmosphere are dry when the liferaft is being repacked;
 - 2.14 The required markings should be updated and checked;
 - 2.15 A record of servicing should be maintained for at least 5 years after the date of service;
 - 2.16 Statistical records should be prepared on all liferafts serviced, indicating, in particular, defects found, repairs carried out and units condemned and withdrawn from service. Such statistics should be available to the Administration.
3. Inflatable liferafts failing below the standards set forth in the above tests shall be declared unserviceable and a report shall be submitted to the

Commandant, Philippine Coast Guard (Attn: Vessel Safety Division) by the Servicing Station.

C. RESPONSIBILITIES:

In order to ensure that the servicing of inflatable liferafts is effectively conducted to provide reliable survival craft in an emergency, manufacturer's and shipowners have parallel and overlapping responsibilities, these include, but are not limited to the following:

A. Philippine Coast Guard:

The PCG shall be responsible for conducting periodic checks of servicing stations to determine compliance with this resolution and for checking quality assurance by spot checks or inspections that are deemed to be adequate to achieve compliance;

B. Manufacturers and Servicing Stations:

1. ensure that the liferafts can be adequately serviced in accordance with this Memo Circular or with any additional requirement necessary for that particular product and design;
2. ensure that each servicing station accredited by the manufacturer and the PCG for servicing and repair of the liferafts has qualified persons whom the manufacturer adequately trained and certificated to perform such work and who are aware of any changes or new techniques;
3. keep the PCG fully informed as to the list of servicing stations accredited by the manufacturer and any changes thereto;
4. service stations should have the following from the manufacturer:
 - changes to servicing manuals, servicing bulletins and instructions;
 - proper materials and replacement parts;
 - bulletins and other instructions.
5. keep the PCG fully informed of any shipping casualties known to them and involving their liferafts; and also of any failures of liferafts other than failures during inspections which are known to them; and

6. informing shipowners whenever possible of any deficiency or any danger known to them and related to the use of their liferafts and taking whatever remedial measures they deem necessary;

C. Shipowners:

Shipowners are responsible for ensuring, as a minimum requirement, that all liferafts fitted as life-saving equipment are type-approved by the PCG and are serviced at the appropriate intervals at an approved servicing station. Whenever practicable, a representative of the shipowner should be in attendance during service.

D. PENALTY CLAUSE:

A. Service Station/Manufacturer

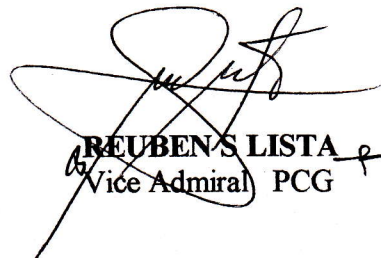
Service stations or manufacturers who do not comply to these guidelines of servicing inflatable liferafts or fails to report to the PCG unserviceable liferafts shall be punished by revocation/non-renewal of certificate/license as service station/manufacturer.

B. Shipowner

Shipowners who fail to comply with the required servicing of liferafts shall be punished by the withdrawal of Certificate of Inspection (CI) of the vessel with the deficient liferaft/s until such time that the vessel shall have complied with these Circular.

D. EFFECTIVITY:

This Memorandum Circular shall take effect one month after its publication in a newspaper of general circulation or fifteen (15) days after the submission to the University of the Philippines Law Center.


REUBEN S. LISTA
Vice Admiral PCG

Enclosures:

1. Necessary Pressure (NAP) Test Procedure
2. Frequency of NAP Test

ENCLOSURE 1

NECESSARY PRESSURE (NAP) TEST

1. Plug the pressure release valves.
2. Gradually raise the pressure to the lesser of 2.0 times the working pressure or that sufficient to impose a tensile on the inflatable tube pressure fabric at least 20% of the minimum required tensile strength.
3. After 5 minutes, there should be no seam slippage, cracking, or other defects (resolution A.521 (13), part 1, paragraph 5.18.4.1), or significant pressure drop. If cracking, in the buoyancy tubes is audible, the liferaft should be condemned; if no cracking is heard, the pressure in all buoyancy chambers should be reduced simultaneously by removing the plugs from the pressure relief valves.
4. Liferafts manufactures should include tables in their servicing manuals of exact NAP test pressures corresponding to their particular tube sizes and fabric tensile strength requirement, calculated according to the equation:

$$p \text{ (kg/cm}^2\text{)} = \frac{2 \times \text{tensile strength (kg per 5 cm)}}{25 \times \text{diameter (cm)}}$$

ENCLOSURE 2

FREQUENCY OF NAP TEST: WORKING PRESSURE (WP), GAS INFLATION (GI) AND FLOOR SEAM STRENGTH (FS)

SERVICING INTERVALS (Reckoned from date of Manufacture)	Annual floor seam and pressure test methods
End of first year	WP test
End of second year	WP test
End of third year	WP test
End of fourth year	WP test
End of fifth year	GI test
End of sixth year	WP test
End of seventh year	WP test
End of eighth year	WP test
End of ninth year	WP test
End of tenth year	GI test + FS
Eleventh to fourteenth year	NAP test + FS
Fifteenth year	GI test + NAP + FS
Sixteenth to nineteenth year	NAP test + FS
Twentieth year	GI test + NAP + FS
Twenty-first to twenty-fourth year	NAP test + FS
twenty-fifth year	GI test + NAP + FS
etc.	

NAP – Necessary additional pressure test (appendix 1)
 WP - Working pressure (compressed air)
 GI - Gas inflation (fitted gas)
 FS - Floor seam



REPUBLIC OF THE PHILIPPINES
Department of Transportation and Communications
HEADQUARTERS PHILIPPINE COAST GUARD
VESSEL SAFETY DIVISION
139 25th Street, Port Area
Manila

23 July 2002

Memorandum for:

Commandant, Philippine Coast Guard

Via: CS, PCG
DCPCG

Subject: Memorandum Circular 01-02 on Guidelines for Servicing Of Inflatable Liferafts

1. Refs: a) HPCG Memo Circular 05-94 dated. *(encl 1)*
b) HPCG Memo Circular 01-98 dated. *(encl 2)*
c) IMO Resolution A.761(18). *(encl 3)*

2. In August 1971, HPCG Memo Circular 01-71 was passed which set the guidelines for the approval, servicing and equipage of inflatable liferaft in accordance with Regulation 15 and 17 part 3 of SOLAS 60. This Memo Circular was rescinded in 22 Feb 94 by HPCG Memo Circular 05-94 of the same title in accordance with the SOLAS amendments at that time.

3. HPCG MC 05-94 include provisions for the construction requirements of liferafts and provisions for accredited servicing stations. On the other hand, HPCG MC 01-98 provides for the accreditation of suppliers and manufacturers of all safety equipment with reference, among others, IMO Resolution A.761(18) adopted on 04 Nov 93.

4. Although the IMO Resolution is recommendatory in nature, it is implied that the PCG MC 01-98 is in accordance with the above IMO Resolution. As a result of this very vague relation between the reference IMO Resolution and the Memo Circular itself, some very enterprising shipowners were very clever enough to demand to servicing stations to forego some very important and basic tests to inflatable liferafts being serviced in order to lessen servicing cost since, as they put it, it is not specifically stated in the Memo Circular.

5. In this connection, HVSD has made consultations with some servicing stations and came up with a proposed Memo Circular which will complement MC 01-98 and MC 05-94. This proposed MC provides for the details of how to go about the servicing of an inflatable liferaft in accordance with the recommendations of the IMO Res A.761(18).

6. Request approval and signature on the attached Memo Circular.


LEOPOLDO LAROYA
LCDR PCG

<u>25 July 03</u> DATE
APPROVED / DISAPPROVED
 EPCG