

SCHEDULE 14

SPECIFICATIONS OF EQUIPMENT FOR LIFEBOATS, BOATS AND LIFERAFTS Rule 90(1)(j)

PART I

COMPASSES FOR LIFEBOATS

1. Every compass shall be of the liquid type. The liquid used shall be a mixture of industrial methylated spirit and water, specific gravity 0.93 at 15°C. It shall be clear and free from sediment, cloudiness, and dirt defects. The compass shall function efficiently over a temperature range of 50°C to minus 20°C.

2. The magnet shall have ample directive force. In the United Kingdom a period of 18 to 22 seconds after a deflection of 40 degrees at a temperature of about 15°C shall be deemed to comply with this requirement. For the purposes of this paragraph a “period” is the time taken by a complete oscillation of the card after a deflection of 40 degrees, a swing past the position of rest, and back again to the completion of its swing on the side to which it was originally deflected.

3. Over a range of 50°C to minus 20°C, the card system when immersed in the compass liquid shall rest on the pivot with a weight between 4 and 10 grammes.

4. The card shall be not less than 100 millimetres in diameter and shall have a clearance from the bowl of at least 6 millimetres. It shall be marked to half points, the eight principal points being distinctively marked. The card shall be luminised or fitted with a suitable means of illumination.

5. The centre of the card shall be of sapphire or equally hard jewel and shall be removable from the float.

6. The pivot of the card shall be of iridium or equally suitable hard material.

7. The arrangements made to allow for the expansion and contraction of the liquid shall enable the compass to withstand a temperature range of 50°C to minus 20°C without leakage, formation of bubbles or other defects.

8. The bowl shall be adequately weighted and properly poised in the gimbals which shall give a fore and aft and thwartship action. The gimbaling shall be in the same horizontal plane as the point of suspension of the card and the outer gimbal pins shall be placed fore and aft. The bowl shall be placed in a binnacle or box of non-magnetic material and the lubber line or point shall be luminised or fitted with suitable means of illumination. The card system shall remain free when the bowl is tilted by 10 degrees.

9. The direction of the lubber line or point from the centre of the card shall lie in the same vertical plane as the outer gimbal axis or other fore and aft datum line. The cumulative effect of card, pivot, directional and other similar errors, and of inaccurate positioning of the lubber's point shall be such that in the undisturbed earth's field the direction as read on the card against the lubber's point shall not differ by more than 3 degrees from the magnetic direction of the outer gimbal axis or other fore and aft datum line for any direction of the latter.

10. The minimum thickness of the metal used in the construction of the compass shall be as follows:—

Compass bowl	4.0 millimetres
Binnacle	3.85 millimetres

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Lamp

3.85 millimetres

The compass bowl shall be efficiently stiffened to take gimbal pins. The binnacle shell shall be swaged or spun into the base ring and soldered all round.

The gimbal ring shall be of naval brass or other rigid non-magnetic metal 15 millimetres by 3 millimetres. Gimbal pins shall be of naval brass or other hard non-magnetic material of 6 millimetres diameter: both they and the bearings in which they engage shall be perfectly smooth.

11. The paint inside the bowl shall show no sign of blistering.

12. The materials and workmanship shall be good throughout and the compass shall be such as will remain efficient under sea-going conditions.

13. The bowl of the compass shall be engraved or stamped with the maker's name or other identification mark.

Rule 90(1)(k)

PART II

SEA ANCHORS FOR LIFEBOATS AND BOATS OTHER THAN CLASS BOATS

1. Every sea anchor shall comply with the following requirements:—

- (a) it shall be constructed of No. 1 best flax canvas, or other suitable material;
- (b) the canvas part shall be strongly sewn together and be roped at the seams with 45 millimetres in circumference bolt rope; the ropes then being formed into a bridle with a thimble seized in the connecting end, and the ropes extended and seized into a parcelled loop to form the attachment for the tripping line;
- (c) a hawser shall be attached to the sea anchor by means of a shackle of suitable size to take the thimble;
- (d) the length of the hawser shall be three times the length of the lifeboat or boat;
- (e) a tripping line 3.5 metres longer than the hawser shall be provided.

2. A circular sea anchor shall be fitted at the mouth with a galvanised iron hoop. Any other type of sea anchor shall be fitted with galvanised iron spreaders across the mouth and with an ash spreader at the upper edge.

3. The size of sea anchors shall be as follows:—

- (a) for lifeboats over 9 metres in length—

Non-circular folding sea anchors—Mouth	760 millimetres upper edge
	685 millimetres lower edge
	685 millimetres each side
Area of mouth	4968 square centimetres

Length of canvas bag—1.35 metres.

Hawser—75 millimetres in circumference.

Tripping line—50 millimetres in circumference.

- (b) for lifeboats over 6 metres in length but not over 9 metres in length—

Circular sea anchors—Mouth 685 millimetres diameter.

Non-circular folding sea anchors—Mouth 610 millimetres each side.

Length of canvas bag—1·25 metres.

Hawser—75 millimetres in circumference.

Tripping line—50 millimetres in circumference.

(c) for lifeboats not over 6 metres in length and other boats (other than Class C boats)—

Circular sea anchors—Mouth 610 millimetres diameter.

Non-Circular folding sea anchors—Mouth 545 millimetres each side.

Length of canvas bag—1·10 metres.

Hawser—65 millimetres in circumference.

Tripping line—35 millimetres in circumference.

Rules 90(1)(n) 94(m)

PART III

PARACHUTE DISTRESS ROCKET SIGNALS FOR LIFEBOATS AND LIFERAFTS

1. Every parachute distress rocket signal shall consist of a single bright red star which is projected to the required height by means of a rocket and which burns while falling, its rate of fall being controlled by means of a small parachute to an average rate of 4·5 metres per second. It shall be fitted with a self-contained means of ignition, so designed as to operate from the hand-held position without external aid, and as to enable the rocket to be discharged from a lifeboat, boat or liferaft without harm to the occupants.

2. When the rocket is fired approximately vertically the star and parachute shall be ejected at or before the top of the trajectory at a minimum height of 180 metres. The rocket shall also be capable of functioning when fired at an angle of 45 degrees to the horizontal.

3. The star shall burn with a minimum luminosity of 15,000 candelas for not less than 30 seconds. It shall burn out at a height of not less than 45 metres from the sea level.

4. The parachute shall be of such a size as to provide the required control of the rate of fall of the burning star. It shall be attached to the star by means of a flexible fireproof harness.

5. The rocket shall be waterproofed and capable of satisfactory functioning after immersion in water for one minute.

6. All components, compositions and ingredients shall be of such a character and of such a quality as to enable the rocket to maintain its serviceability under good average storage conditions for a period of at least three years.

7. The rocket shall be packed in a container which shall be effectively sealed. If made of metal, the container shall be well tinned and lacquered or otherwise adequately protected against corrosion.

8. The date on which the rocket is filled shall be stamped indelibly on the rocket and on the container.

9. Clear and concise directions for use in the English language shall be printed indelibly on the rocket.

Rules 90(1)(n) 94(n)

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PART IV

HAND-HELD DISTRESS FLARE SIGNALS FOR LIFEBOATS AND LIFERAFTS

1. Every hand-held distress flare signal shall be fitted with a self-contained means of ignition so designed as to operate from a hand-held position without external aid and as to enable the flare to be displayed from a lifeboat, boat or liferaft without harm to the occupants.
 2. Where the flare is carried in a liferaft it shall be so constructed that, when the flare is fired, no burning composition will fall from the flare which might cause damage to the liferaft.
 3. The flare shall be capable of emitting a red light of a minimum luminosity of 15,000 candelas for not less than 55 seconds.
 4. The flare shall be waterproofed and capable of satisfactory functioning after immersion in water for one minute.
 5. All components, composition and ingredients shall be of such a character and of such a quality as to burn evenly and as to enable the flare to maintain its service-ability under good average storage conditions for a period of at least three years.
 6. The flare shall be stamped indelibly with the date on which it is filled.
 7. Clear and concise directions for use in the English language shall be printed indelibly on the flare.
- Rule 90(1)(o)

PART V

BUOYANT SMOKE SIGNALS FOR LIFEBOATS

1. Every buoyant smoke signal shall be fitted with a self-contained means of ignition.
 2. The signals shall be capable, while floating on the water, of emitting a dense volume of orange-coloured smoke for a period of not less than two minutes and not more than four minutes.
 3. The signal shall be waterproofed and capable of satisfactory functioning after immersion in water for one minute.
 4. All components, composition and ingredients shall be of such a character and of such a quality as to burn evenly and as to enable the signal to maintain its service-ability under good average storage conditions for a period of at least three years.
 5. The signal shall be stamped indelibly with the date on which it is filled.
 6. Clear and concise directions for use in the English language shall be printed indelibly on the signal.
- Rule 90(1)(p)

PART VI

FIRST AID OUTFITS FOR LIFEBOATS AND LIFERAFTS

The first aid outfit provided in every lifeboat or liferaft carried by the vessel shall comply with the following requirements:—

1. It shall be packed in a durable, damp-proof and effectively sealed container, which shall bear on its outside an itemised list of its contents.

2. It shall include the following items, each of which shall comply with any standards or requirements specified in relation to it in the current issue of the British Pharmacopoeia, the British Pharmaceutical Index or the National Formulary:—

<i>ARTICLE</i>	<i>QUANTITY</i>
(a) Standard Dressing No. 14, Medium BPC (15cm × 10cm)	4
(b) Standard Dressing No. 15, Large BPC (15cm × 20cm)	4
(c) Bandages, Triangular, not less than 90cm sides, 130cm base	6
(d) Open Wove Bandage, BPC 75cm × 3·5 metres	10
(e) Self Adhesive Waterproof Wound Dressings, assorted sizes	1 packet
(f) Paraffin Gauze Dressing for Burns, individual (10cm × 10cm approx) 10 dressings per carton	1 carton
(g) Antiseptic Burn or Wound Cream, Cetrimide BP 0·5% w/w 50 gm tube	2
(h) Analgesic Tablets, in containers clearly labelled with the name of the analgesic, e.g. Aspirin Compound tablets, Paracetamol tablets, and directions for use	50
(i) Scissors 10cm, 1 sharp, 1 blunt point, of rustless and stainless steel	1
(j) Six Morphine Ampoule Syringes containing a solution of either morphine salt equivalent to Anhydrous Morphine 15 mg in 1 cc or Papaveretum BPC (30 mg in 1 cc) in screw capped metal drum with directions for use	1 drum
(k) Safety pins	4
(l) First Aid instructions in the English language printed on linen or waterproof paper.	

Rule 90(1)(u)

PART VII

MANUAL PUMPS FOR LIFEBOATS

Every lifeboat manual pump shall comply with the following requirements:—

1. The capacity when operated at not more than 60 double strokes per minute at 1·25 metres suction head, shall be not less than:

- (a) 30 litres per minute in lifeboats of 7 metres in length or over; or
- (b) 20 litres per minute in lifeboats of less than 7 metres length.

2. In its normal dry state (excluding internal grease or other assistance) the pump shall be readily self-priming when operated at a suction head of not less than 1·25 metres.

3. All parts of the pump shall be of material unaffected by the corrosive effects of sea water.

4. The interior of the pump, including valves, shall be readily accessible for emergency cleaning, and the cover for access shall be capable of being easily removed without the use of a spanner or other special tool.

5. The pump branches shall be suitable for use with rubber hose connections of at least 30 millimetres bore. The metal part of the operating handle shall be suitably sheathed by material other

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than wood to ensure that the hands of the operator are protected when the pump is used in extreme cold. The spindle gland shall be of the spring loaded seal ring type.