

CHAPTER 3

Emergency and safety

The sea is a dangerous place to work. If things go wrong, it can take time for search and rescue or emergency services to respond — crew must have a very broad knowledge of several skills in order to control the emergency situation.

It is the master's responsibility to ensure that crew members are trained in all aspects of emergency procedures onboard the vessel. The master cannot save the ship without the support of a strong and professional team. For this reason the crew should know where the emergency equipment is located and how to use it before beginning a journey to sea and must participate in any emergency drills that are conducted while onboard so that they are prepared for any emergency that may arise.

Safety induction

Before heading out to sea for the first time as a crew member on a vessel, a safety induction must be carried out. This involves a tour of the ship to learn the location of all the emergency equipment onboard. Crew members must familiarise themselves with the emergency station list, which outlines what their duties are in the event of a variety of emergencies. Once this is done, an entry will be made in the ship's safety management system and initialled by the crew member and the master. This is a legal declaration stating that the induction has taken place.



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Duties in an emergency

The crew of a commercial vessel should be a well-oiled machine and nowhere should this be more evident than in the event of an emergency. The skipper will provide training in the use of all emergency and safety equipment onboard, but crew members should also never be afraid to ask questions or research information themselves.

The emergency station list

Also known as a muster list, these provide information about the responsibilities of each crew member in an emergency. The emergency station list must be displayed in conspicuous locations throughout the vessel including the wheelhouse and crew accommodation areas, if at least one of the following applies:

- a vessel with four or more crew
- there is at least one berthed passenger
- there are more than 36 unberthed passengers
- the voyage is longer than 12 hours.

The emergency station list also outlines the general emergency signal and abandon ship signal. On passenger ships, lists are provided in each cabin and assign a muster station for each occupant as well as instructions for putting on life jackets.

Some of the duties, based on a crew of five, in the event of an engine room fire may include:

- Master — bridge, in command.
- Engineer — ascertain fire state/shutdown main engines; close engine room ventilation flaps and fuel supply and report to the master; activate fixed fire-fighting system if required.
- First mate — liaise between master and crew; communications; sounding of emergency station alarm; assist master.
- Deckhand — prepare emergency equipment including liferafts, EPIRB and so on.
- Steward — head count at muster station; distribute PFDs; passenger control; report to first mate.

Drills

Along with knowing the required duties in the event of an emergency, crew members must participate in drills to ensure familiarity with assigned duties. It is up to the ship's owner to determine



the frequency of drills so that crew members are confidently able to make rapid and effective responses to emergency situations.

Safety equipment on commercial vessels

National Standard for Commercial Vessels (NSCV) part C, subsection 7A — Safety equipment standard

All Australian maritime authorities require vessels to carry a certain amount of safety equipment. This is determined by vessel type, purpose, area of operation, length and the number of people onboard. Further information on safety equipment standards for various classes and lengths of vessels and area of operation can be found by reviewing the NSCV or through factsheets available on the Maritime Safety Queensland website.

All owners and masters of commercial vessels should be familiar with the sections of the NSCV that concerns the registration class of their vessel.

Examples from National Standard for Commercial Vessels (NSCV) C7A — Safety equipment standard	
Class 2C Non-passenger vessels — between 15 metres and less than 25 metres in length	
Seagoing non-passenger vessel, from 15 metres and less than 25 metres in length, for use in all operational areas up to and including restricted offshore operations. (Restricted offshore operations: operations within a limit of 50 nautical miles seaward from designated smooth or partially smooth waters, designated restricted offshore waters or a safe haven.)	
Liferafts and rescue boats	Inflatable coastal liferaft(s) for 100% of allowable crew and any other persons onboard
Lifebuoys	2 x lifebuoys: 1 with a light; 1 with a buoyant line
Lifejackets	Coastal life jacket with light for 100% of allowable crew and any other persons onboard
Distress signals	1 x 406MHz emergency position indicating radio beacon (EPIRB) 3 x parachute distress rockets 2 x red hand-held flares 1 x orange hand-held smoke flare
Onboard communications and alarm systems	General emergency alarm system
Emergency lighting (hand held)	1 x battery operated torch for each crew member
Medical supplies	Annex H: Scale F of Table H.3 — the quantity of medical supplies identified in Annex H is based on incidents involving 1 or 2 persons only Medical supplies will need to be expanded in accordance with the particular risks inherent to the voyage and the number of persons onboard

Examples from National Standard for Commercial Vessels (NSCV) C7A – Safety equipment standard	
Class 1C Passenger vessels – between 10 metres and less than 25 metres in length	
Seagoing passenger vessel, from 10 metres and less than 25 metres in length, for use in all operational areas up to and including restricted offshore operations. (Restricted offshore operations: operations within a limit of 50 nautical miles seaward from designated smooth or partially smooth waters, designated restricted offshore waters or a safe haven.)	
Liferafts	Inflatable coastal liferaft(s) for 100% of allowable crew and any other persons onboard
Lifebuoys	2 x lifebuoys: 1 with a light; 1 with a buoyant line
Life jackets	Coastal life jacket with light for 100% of allowable crew and any other persons onboard
Distress signals	1 x 406MHz emergency position indicating radio beacon (EPIRB) 3 x parachute distress rockets 2 x red hand-held flares 1 x orange hand-held smoke flare
Onboard communications and alarm systems	Public address system (if no effective means of addressing passengers in time of emergency)
Emergency lighting (hand held)	1 x battery operated torch for each crew member
Medical supplies	Annex H: Berthed passengers Scale E of Tables H.4 and H.5 and Scale F of Table H.3 unberthed passengers Scale F of Table H.3 – The quantity of medical supplies identified in Annex H is based on incidents involving 1 or 2 persons only. – Medical supplies will need to be expanded in accordance with the particular risks inherent to the voyage and the number of persons onboard

Examples from National Standard for Commercial Vessels (NSCV) C7A – Safety equipment standard	
Class 3B fishing vessels – less than 15 metres in length	
Seagoing fishing vessel, less than 15 metres in length, for use in all operational areas up to and including offshore operations. (Offshore operations: operations within a limit of 200 nautical miles to seaward of the coast)	
Liferafts	Inflatable coastal liferaft(s) for 100% of allowable crew and any other persons onboard
Lifebuoys	1 x lifebuoy with a light
Life jackets	Adult SOLAS life jacket with light for 100% of allowable crew and any other persons onboard plus a child size SOLAS life jacket with light for each passenger less than 32kg
Distress signals	1 x 406MHz emergency position indicating radio beacon (EPIRB) 6 x parachute distress rockets 4 x red hand-held flares 2 x orange hand-held smoke flares
Onboard communications and alarm systems	Public address system (if no effective means of addressing passengers in time of emergency)
Emergency lighting (hand held)	2 x battery operated torches
Medical supplies	Annex H: Scale E of Tables H.4 and H.5 and Scale F of Table H.3 The quantity of medical supplies identified in Annex H is based on incidents involving 1 or 2 persons only. Medical supplies will need to be expanded in accordance with the particular risks inherent to the voyage and the number of persons onboard

Compliance in this area is very important and the onus is on masters and owners to ensure their ship is kept equipped and operated according to its class of registration. For example, if a fire onboard a passenger ship resulted in death or injury and it was found that the fire-fighting appliances onboard the vessel were not compliant with its class of registration, serious penalties would apply to both the owner and the master of that ship. If a ship was navigating outside of its area of operation this also would be a serious offence.

Inflatable liferaft

The inflatable liferaft is the most common survival craft carried by small commercial ships. It is stored on deck in a fibreglass container and secured to the vessel using a hydrostatic release mechanism. This mechanism cuts the securing lines at a depth of two or three metres and is activated by water pressure. This allows the liferaft to rise to the surface in the event of the ship sinking. Correct installation of this equipment is essential to ensure that in the event of a vessel capsize, the liferaft will be released hydrostatically. Inflatable liferafts vary greatly in size — typically carrying between four and 60 people. They are designed to endure exposure for 30 days at sea in all conditions and are stocked with equipment and rations such as an EPIRB, sponges, paddles, bailer, knife, electric torch, food, a first aid kit and fishing equipment.



A hydrostatic release.



Life rafts are complex pieces of equipment and must be inspected by an authorised servicing company every year.



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