

General exemption from battery power for 40A, 40C, 40D and 40E

Last updated: January 2021

This document is uncontrolled if printed. Please refer to the Maritime New Zealand website for the latest version.

The Maritime Rules require all radiocommunication equipment on ships to be fitted with a rechargeable battery that is available at all times and is of sufficient capacity to supply current continuously for a period of at least six hours. The rules also require the battery to have enough capacity to power other appliances on the ship.

Concerns have been raised that this requirement is excessive for smaller ships that operate in enclosed, inshore or coastal operating limits. Maritime NZ has considered these concerns and prepared general exemptions to address this issue. This applies to four separate maritime rules – 40A, 40C, 40D and 40E.

What ships does the general exemption apply to?

The general exemption applies to ships that are less than 12 metres in length which are assigned inshore, enclosed or coastal operating limits and that are subject to Maritime Rules Part 40A, Part 40C, Part 40D or Part 40E.

What does the rule require?

Under each of the rules (40A, 40C, 40D and 40E) the source of electrical energy is set out in the appendix for radiocommunication equipment. Although each rule may have slightly different wording, generally speaking, the appendix requires the following.

For ships operating *within* the VHF coverage area the ship must have a rechargeable battery capable of operating the VHF radio installation. The battery must have enough capacity to supply **all** of the following:

- the current consumption of the VHF radio receiver, and
- one third of the current that may be required to operate the VHF radio transmitter, and
- emergency electrical light if applicable, and
- one third of the current that may be required to operate each additional load capable of operation from this battery.

For ships operating *beyond* the VHF coverage area the ship must have a reserve source of electrical power (this may be rechargeable batteries) capable of operating the VHF radio receiver. The reserve source of electrical power must have enough capacity to supply **all** of the following:

- the current consumption of the VHF radio receiver, and

- one half of the current required to operate the VHF radio transmitter, and
- the current required to operate the MF/HF radio receiver, and
- one half of the current required to operate the MF/HF transmitter, and
- the emergency light, and
- one third of the current that may be required to operate each additional load capable of operation from this battery.

The specific rule references are included in the general exemptions.

What does it mean for ships <12 metres?

There are two key changes as a result of the general exemptions:

1. Ships less than 12 metres operating in enclosed, inshore or coastal operating limits will only require enough battery power to supply current to operate radiocommunications equipment.
2. These ships will no longer need to have the capacity to power additional non-essential appliances.

How do I meet the requirements of the general exemption?

The general exemption applies provided that:

1. the requirements for a source of power to operate radio equipment are met, and
2. that other requirements relating to batteries or alternative sources of power are met, and
3. there is a practicable means to immediately isolate any non-essential electrical load from the power supply.

Refer to the general exemptions for the detail. A summary is provided below.

Electrical energy requirements

Under the general exemption a rechargeable battery continues to be required to provide a source of power for the ship's radio communications equipment. However, the battery duration has been changed depending on the operating limits.

Assigned operating limit	Battery duration
Enclosed limits	2 hours
Inshore limits	3 hours
Coastal limits	6 hours

Ships operating within a VHF coverage area

The battery must continue to be of sufficient power to operate the VHF radio receiver and one third of the current required to operate the VHF radio transmitter and radio emergency light. Under the general exemption the requirement to operate one third of the additional non-essential loads has been removed.

Ships operating beyond a VHF coverage area

The ship must continue to have a source of electrical power to operate the radio installations of the ship.

This must include enough reserve capacity to power the VHF and MF/HF radio receivers, the radio emergency light and one half of the current required to operate the radio transmitters. Under the general exemption the requirement to operate one third of the additional non-essential loads has been removed.

Other requirements

Other requirements relating to batteries may include ship design, overcurrent protection, capacity, re-charging plus battery installation and venting. Alternative sources of power may be required by the applicable maritime rule for other systems such as navigation lights or bilge pumps.

Note: If dual-battery systems are installed, standards cited by the rules will require that:

- one battery or battery group must be reserved for engine starting, and the other reserved for supplying the radio(s) and essential equipment, and
- in an emergency it must be possible to temporarily connect the engine(s) to an alternative battery to assist engine starting. If the alternative starting source is the battery supplying the radio(s), it must have sufficient additional discharge and cranking amp capacity to meet this need.

Isolate the battery for the radiocommunications equipment from the rest of the ship

It is recommended that electrical switches on control panels are clearly identified (by colour-coded labels for example) as controlling essential or non-essential items. For example, essential items would include the radio and transmitter operations, navigation lights, emergency lighting and bilge pump operation. Non-essential items would be things like winch operation, entertainment equipment or galley appliances.

Consider grouping related switches together. For example, all switches for lighting, or all switches relating to pumps.

Also consider grouping all switches or circuit breakers controlling essential equipment separately to switches or circuit breakers for non-essential equipment. For example, a single, clearly labelled switch or circuit breaker could be arranged to switch off all non-essential circuits.

Include an instruction to turn off all non-essential items as part of relevant emergency procedures.

For some ships it may be necessary to reconfigure switches so that essential and non-essential items can be controlled separately.

How do I apply for the general exemption?

As this is a general exemption, the operator does not need to apply. However, operators should check with their surveyor if they think their ship meets the requirements and is therefore exempt.

Any major alteration to the electrical system on a boat must be authorised by a surveyor recognised by the Director to approve electrical systems designs. Changing the battery arrangements on a boat is considered a major alteration because batteries play a central role in essential safety items.

Contact us

If you have any questions please email exemptions.officer@maritimenz.govt.nz.