Maritime New Zealand Guidelines

SAFETY BULLETIN ISSUE 16 2008 (Supersedes Issue 10)

June 2008

LIFERAFTS AND THEIR RELEASE MECHANISMS

This safety bulletin is for:

- owners and operators
- skippers and crew
- ship surveyors
- safe ship management companies
- Maritime Safety Inspectors
- liferaft servicing stations.

Will your liferaft save your life?

It is blowing 40 knots, raining, night-time; your vessel is sinking and you have to abandon ship. Your best chance of survival in the freezing sea is a liferaft.
If your vessel capsizes, can the liferaft be released? Make sure the:

- hydrostatic release unit (HRU) is connected correctly
- liferaft is not prevented from release by extra lashings or rigging on the vessel, or by a cover on the liferaft

Example of a correctly installed HRU

Unlike this liferaft, make sure it can escape from the rigging on the vessel

Common problems with liferafts

Make sure the following happens on your vessel:

- the liferaft is NOT stowed in an area where rigging will prevent the liferaft being able to leave the vessel
- the liferaft is NOT stowed in a cradle that is too tight to release the liferaft in an emergency
- there is NO cover over the liferaft that may stop it from inflating
- gear is NOT stowed around the liferaft, making manual operation difficult and reducing the liferafts ability to deploy
- easy access IS provided to the liferaft when it is stored in a difficult location, e.g. the wheelhouse roof.

Manual release liferafts

The manual release on a liferaft is more likely to be used in an emergency than waiting for the hydrostatic release unit to deploy.

Common problems

- Manual release is difficult to operate due to lack of maintenance or seized parts.
- The liferaft is difficult to get over the side of the vessel as it is obstructed by guardrails or rigging.

Float-free liferafts and the hydrostatic release unit (HRU)

Float-free launching is the method of launching a liferaft whereby it is automatically released from a sinking ship and is ready for use. Float-free arrangements may either be an HRU or some other means. Whatever type it is, if your vessel capsizes too quickly for you to release the liferaft manually the float-free arrangement may be your only chance of survival.

Please see the diagrams at the end of the safety bulletin on the correct installation of an HRU.

Common problems

- The painter is connected to the ship and not the weak link, so the liferaft inflates but goes down with the ship.
- The disposable HRU is out-of-date and will not work.
- The serviceable HRU has not been serviced and will not work.
- The expiry date is not marked on the HRU when it is replaced so there is no record of when to replace it.

Liferaft cradles

A liferaft cradle is used to store your liferaft on the deck. Whether the liferaft cradle is “off-the-shelf” or homemade, it is vital for you and the safety of your crew, as well as being a legal requirement in Maritime Rules 40A, 40C and 40D, that the liferaft can float free in the event of the ship sinking.

Cradles made by manufacturers are specifically designed to fit a particular size of liferaft.

Common problems

- Squeezing a large liferaft into a small cradle.
- Fitting a small liferaft into a large cradle and filling it with padding to stop the liferaft falling out.
- Using cradles that have high sides.

Any of these problems may prevent the liferaft from deploying in an emergency.

Suitable cradles

The most suitable cradle is the one supplied by the manufacturer of the liferaft because both the cradle and the raft have been designed to work together as a storage and release system.

However, if a home-made liferaft cradle is to be used make sure that:

- the liferaft correctly fits into the cradle
- the cradle has a strong point to which the HRU is attached and that the tie-down strap from the HRU is also attached to a strong point on the other side of the cradle
- the cradle has low sides so the liferaft can escape, no matter the angle of the capsizing vessel.

Conclusion

In the event of capsizing and/or sinking the liferaft is your best chance of survival.

It is important that:

- every crewmember is trained in how to stow and deploy the liferaft
- the liferaft is easy to get to for manual release
- the liferaft is stowed in an area clear of rigging and in a cradle that will allow the liferaft to release
- on float-free liferafts the HRU is up-to-date regarding service and expiry dates.

Recommendations/actions

- During maintenance checks make sure your liferaft and its connections comply with the advice in this safety bulletin.
- The procedure for connecting each of your liferafts and how to care for them should be in your SSM safety management plan (ie manual).
- Use an “off-the-shelf” liferaft cradle that suits your type and size of liferaft whenever possible.

Further Information

For further information, please contact:
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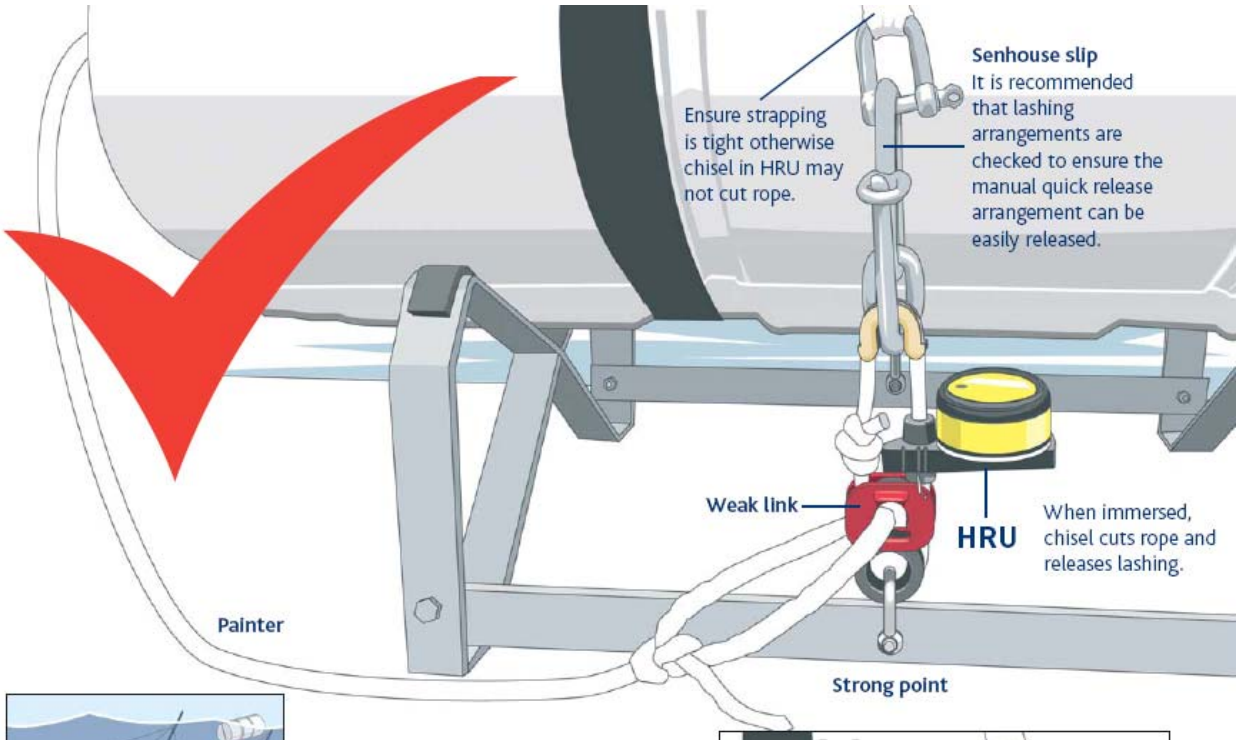
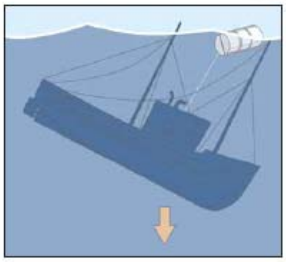
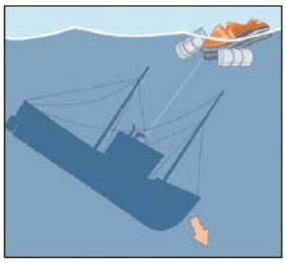
CORRECT INSTALLATION OF HYDROSTATIC RELEASE UNIT (HRU)

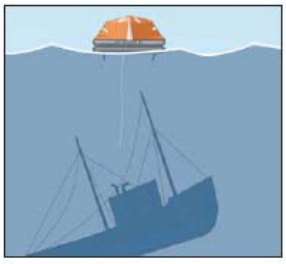




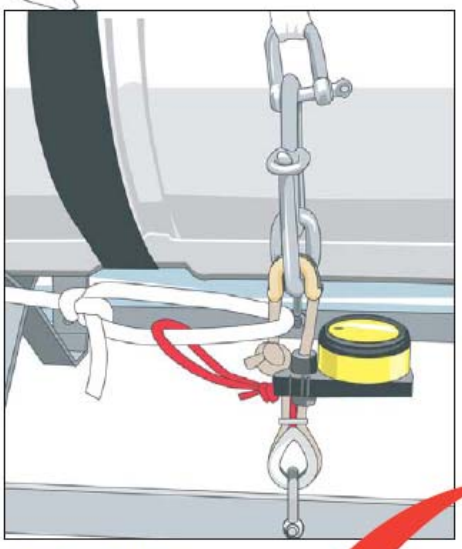
1. If vessel sinks, Hydrostatic Release Unit activates, and liferaft attempts to float to surface



2. Tension on painter will cause liferaft to inflate



3. Tension on weak link will cause it to break ensuring liferaft does not go down with the boat

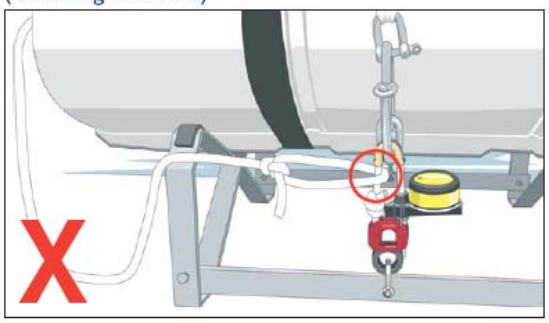


Correct installation of older version HRU

Diagram provided by the UK's Royal National Lifeboat Institution (RNLI)

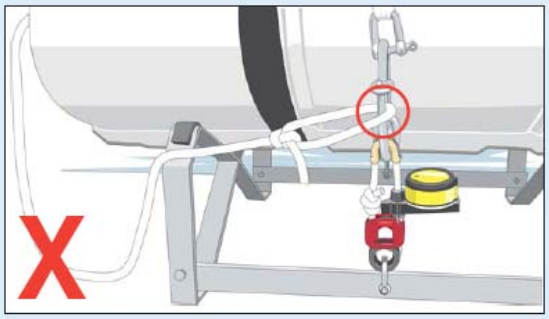
INCORRECT INSTALLATION OF HRU

Painter secured to HRU
(not through weak link)



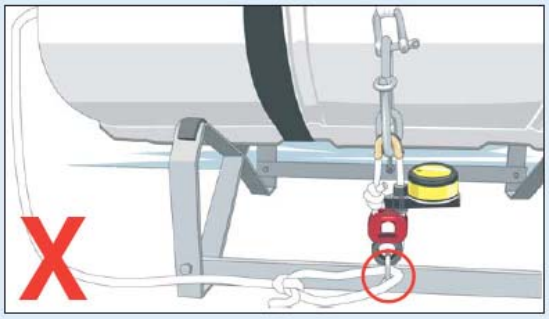
1. HRU will activate
2. Liferaft will be released but will not inflate and will sink

Painter secured to senhouse slip



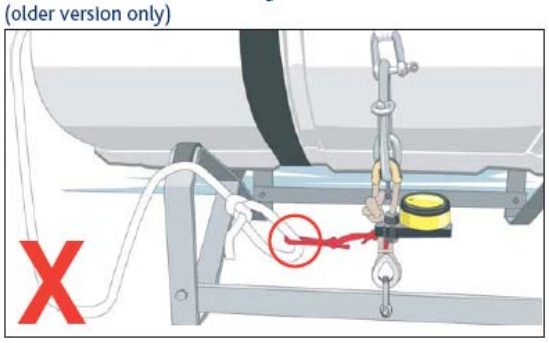
1. HRU will activate
2. Liferaft will float free and eventually inflate
3. Because the painter is secured to the slip, the liferaft will **NOT** be released to the surface

Painter secured directly to strong point



1. HRU will activate
2. Liferaft will float free and eventually inflate
3. Because the painter is secured directly to the strong point, the liferaft will **NOT** be released to the surface **EVEN IF** it is attached to the weak link as well

Painter secured only to weak link
(older version only)



1. Will work correctly for automatic release, but:
2. If liferaft is thrown overboard in an emergency (or comes adrift at sea) it may be lost

Diagram provided by the UK's Royal National Lifeboat Institution (RNLI)