

The Wolfson Stability Method

Frequently Asked Questions & Examples

1 How can I produce a Stability Notice for my own vessel?

Visit our Stability and Loading Guidance web page at <https://www.wolfsonunit.com/service/vessel-safety>, download our free Stability Notice and Freeboard Calculator, type your vessel's overall length and beam, and print your Notice.

2 Which loading condition should be assessed against the Wolfson Method?

The vessel's worst foreseeable operating condition, for example the most onerous lift over the side your boat can perform (heaviest load & furthest reach & highest lifting point).

Multipurpose vessel: worst foreseeable condition over the range of fishing methods undertaken.

When assessing the heaviest lift, be mindful of the load rating of your lifting equipment (your winch may be powerful enough to capsize the boat).

3 Should I put the mark to port or starboard?

The mark should be placed on both sides of the vessel.

4 Should I put the Mark forward/aft/amidships?

Load the vessel to the worst foreseeable operating condition (FAQ 2), pick the location where the deck is closest to the water and put the Mark there. A consistently useful position is 25% length overall (forward of the aft end i.e. 75% abaft the fore end).

5 How far down the topsides should I put the Mark?

This distance is shown in the 'Freeboard Guidance Mark' diagram, either as a distance from the deck edge (for decked vessels) or as a distance from the top of the gunwale (for open boats). The Stability Notice and Freeboard Calculator (FAQ 1) will produce the appropriate diagram for you.

6 Is the Wolfson Mark a load line?

No, because it assesses upright AND heeled freeboard, whereas a load line assesses upright freeboard only. Many vessels operate with upright freeboards in the amber zone, and some in the red zone. This may be acceptable if they operate within the seastate recommended in their Stability Notices.

7 The Maximum Recommended Seastate looks small, my boat can take far worse!

The Stability Notice presents seastates in terms of their Significant Wave Height (Hs) in metres. Hs is the average of the 1/3 highest waves and is a standard way to describe real seastates. In practice, waves of twice the significant height can be expected once every 2000 encounters.

The wave height (trough to crest distance) as estimated by an observer corresponds closely to the Significant Wave Height. This correlation is maintained for all seastates.

8 Decked vessels have a green zone, open boats don't. Why?

However large their freeboard, open boats are vulnerable to swamping and their range of positive stability is limited by gunwale immersion.

9 I can't see the Mark when I'm at sea, am I supposed to lean over the side?

In a word, no. It is not expected that fishermen will attempt to view the Mark when at sea, but that they will become familiar with its location to increase their awareness of how the heeled freeboard affects their level of safety.

Correlation between Sea State and Significant Wave Height (source: Met Éireann)

Sea State (Descriptive)	Significant Wave Height (in metres)
1 - Calm	0 - 0.1
2 - Smooth	0.1 - 0.5
3 - Slight	0.5 - 1.25
4 - Moderate	1.25 - 2.5
5 - Rough	2.5 - 4.0
6 - Very Rough	4.0 - 6.0
7 - High	6.0 - 9.0
8 - Very High	9.0 - 14.0
9 - Phenomenal	Over 14.0

Example Stability Notice: Decked Vessel

Decked vessel: 3 safety zones

Does the vessel heel significantly when operating its gear?

→ **No – check loading, use port or stbd Mark**

Wolfson Mark dry > **Green**
 Waterline through Wolfson Mark > **Amber**
 Wolfson Mark underwater > **Red**

→ **Yes – check heeling, use Mark on low side**

Wolfson Mark dry > **Green**
 Waterline through Wolfson Mark > **Amber**
 Wolfson Mark underwater > **Red**

Wolfson Stability Notice					
Name:	JMT	Loading & Lifting Guidance	Safety Zone	Minimum Freeboard	Maximum Recommended Seastate
No.:	-				
Owner:	-				
Length:	11.42m				
Beam:	4.38m				
	Good margin of residual freeboard	Good margin of safety	At least 52cm		
	Loading or lifting reduces minimum freeboard to less than 52cm	Low margin of safety	26 to 52cm	1.4 metres	
	Excessive loading or lifting reduces minimum freeboard to less than 26cm	Danger of capsize	Less than 26cm	0.7 metres	

Max. recommended Amber seastate:

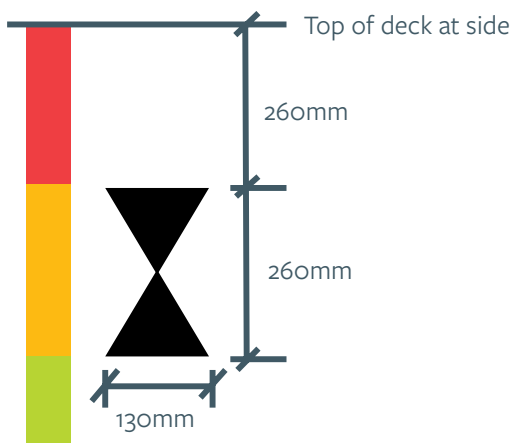
- Sig. wave height limit 1.4m (low end sea state 4)
- Highest wave of all 2.8m (approximately 1 in 2000)

Max. recommended Red seastate:

- Sig. wave height limit 0.7m (low end sea state 3)
- Highest wave of all 1.4m (approximately 1 in 2000)

Example Freeboard Guidance Mark: Decked Vessel

Freeboard Guidance Mark (or 'Wolfson Mark')



Mark up/down location:

top of mark 260mm below top of deck at side.

Mark fore/aft location:

25% overall length forward of transom.



Example Stability Notice: Open Vessel

Open vessel: 2 safety zones only.

Does vessel heel when operating its gear?


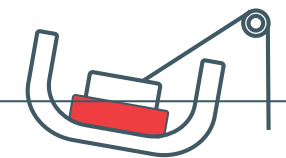
→ No – check loading, use port or stbd Mark

Wolfson Mark dry → Amber
 Waterline through Wolfson Mark → Amber
 Wolfson Mark fully underwater → Red

→ Yes – check heeling, use Mark on low side

Wolfson Mark dry → Amber
 Waterline through Wolfson Mark → Amber
 Wolfson Mark fully underwater → Red

Wolfson Stability Notice

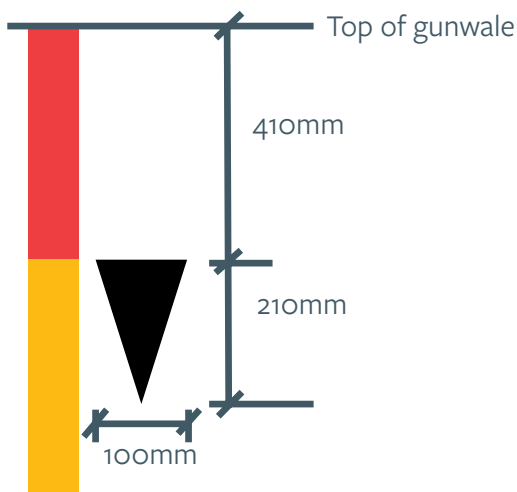
Name:	Laura Jane	Loading & Lifting Guidance	Safety Zone	Minimum Freeboard	Maximum Recommended Seastate
No.	SE80				
Owner	-				
Length:	6.1 metres				
Beam:	2.26 metres				
	Even with a freeboard of at least 41cm, swamping may be a hazard		Low level of safety	At least 41cm	
	Excessive loading or lifting reduces minimum freeboard to less than 41cm		Danger of capsize	Less than 41cm	0.4 metres

Max. recommended Red sea state:

- Sig. wave height limit 0.4m (top end of sea state 2)
- Highest wave of all 0.8 m (approximately 1 in 2000)

Example Freeboard Guidance Mark: Open Vessel

Freeboard Guidance Mark (or 'Wolfson Mark')



Mark up/down location:

top of mark 410mm below top of gunwale

Mark fore/aft location:

minimum freeboard in worst foreseeable operating condition.

Mark visible = amber zone.

