



ROUGH READY

Paul Glatzel provides his take on all things 'rough' and how to be 'ready' from the southern based professional's point of view.

Part of the joy of owning a RIB is knowing that if the rough stuff turns up then you are well placed to be able to deal with it. The boat though is only part of the equation and the helm and the crew play a fundamental part in making your journey safe and fun.

Before we look at how to handle your RIB in rough water let's look at a few related areas.

Is your boat capable of dealing with the conditions you are taking it into? Whilst the fundamental design of a RIB means it is well placed to deal with rough water, not all RIBs are equal - the example of a Land Rover Defender vs a Vauxhall Frontera off-road being a useful parallel! Is the boat well prepared? Is your kit on board properly secured, is the anchor secure (the shock loading an anchor places on its locker may lead to it breaking

through the hull if not secured), have you got all of the relevant safety kit on board?

You may think you are the best helm since Steve Curtis, but are you and your crew up to it? Do you understand how to drive in the conditions that are out there, can you predict where the rougher water will be, have you assessed the weather to see what its going to do over the next few hours? Are your crew fit? Minor back or joint issues can become a real problem after even a short pounding, and can they handle the boat if you are incapacitated?

It is definitely great fun to play in the rough stuff but are you being irresponsible? Being faced with a situation where you need assistance is one thing if it is unavoidable; however placing those that may have to rescue you in danger because you just wanted some extreme fun is not really fair.

SO WHY DO RIBS HANDLE ROUGH WATER SO WELL?

The commonly held view is that RIBs evolved from the simple soft bottomed inflatable as a means to reduce hull wear when dragged across a beach. The hard flat bottom evolved into the deep-vee to improve performance and the RIB as we know it was born. The combination of this deep-vee hull and the tubes (sponsons) give a RIB its outstanding sea-keeping qualities. The tubes act as shock absorbers taking a high percentage of the impact on the boat thus reducing the stress on the crew, whilst the lateral movement is also reduced significantly giving a far more stable ride than other types of boat. A RIB can handle seas way beyond what other types of boat of its length could handle, its ability to not take on much water but at the same time to be able to get rid of it quickly if necessary - via a low transom and 'elephant trunks' - really do denote a very special type of boat.



ROUGH WATER HANDLING

So if you are faced with rough water how do you deal with it?

When helming any type of vessel, the key is to try to match your speed and direction - through careful control of the throttle and steering - to the conditions. Jumping from wave to wave, or ploughing through waves can be great fun but you, your crew, and the boat will find it very wearing very quickly. Equally, if the prop is constantly leaving and re-entering the water then this is not typically the most efficient way for the RIB to make rapid and safe progress.

There are a variety of sea conditions that you will need to master. If you are driving upwind (a 'head sea') first set the trim to in/down, this helps keep the nose down whilst also allowing the 'V' to cut through the waves. Drive up the face of the wave, easing off at the top to ensure you don't take off, then drive down the wave speeding up to raise the bow as the next crest approaches. The ride becomes smooth and quite fast. Reasonable progression here is about throttling 'on' and 'off' as you move through the waves. Whether this proves to be a comfortable ride is largely dependant on the 'wavelength' (the distance between the wave crests) as shorter wavelengths can make it very difficult as there is little time between wave crests for the



helmsman to adjust the throttle. In this case you might find it easier to 'tack' upwind by driving at 30° - 45° to the waves. This increases the 'apparent wavelength' and can therefore allow you to increase your speed and smooth your journey, you will be 'zig-zag'-ing towards your destination but whilst a longer distance it will be less stressful and may be quicker.

If you proceed at an angle to the wavefront or totally perpendicular (a 'beam sea') to it, you must remain very aware of breaking waves. Breaking waves are especially dangerous as they can easily lead to a capsize. In 'beam seas' you can attain a fair speed as you drive, constantly watching for breaking waves either speeding up and steering to pass ahead or slowing and perhaps turning to pass through the clearer water behind the breaking wave. If you are faced with a breaking wave and cannot avoid it then you have two choices - turn into it and ride it as described above or turn away and run ahead of it. As we will look at later, whilst running ahead of the wave may seem sensible it could be the more dangerous of the two options unless you can be sure you can out run/power the considerable speed that these waves can achieve.

A 'following sea' (the RIB is running in the direction of the wind) can be extremely

dangerous despite the fact that because wind and waves are running in the same direction as you, it may appear quite serene. If a breaking wave catches the RIB from behind then it will turn it side on to the waves making a capsize almost inevitable by the next wave. If you've helmed a craft in a following sea then you will have noticed how the craft is susceptible to 'wallowing'. This occurs because the waves can move very fast (up to 23 - 27 knots) meaning that your speed through the water could be quite low (if you are doing 15 knots over ground and the waves are moving at 14 knots your speed through the water is only 1 knot), couple this lack of speed to the confused water that occurs around a breaking wave and in rough water and you can see that the prop will struggle to bite and that steering is affected.

In light of the dangers of a following sea, the RIB must have the power needed to be able to outrun the waves - and have a good chunk in reserve. The way to make progress in these conditions is to ride the wave staying behind the back of the crest and as it breaks, power through to sit on the back of the next wave - a good lookout must be kept behind at all times to avoid the chasing waves catching. Because it can feel that you are not actually going very fast, care is needed here to not power through the breaking wave too early (or just drive too fast for the conditions) as it is easy to power off the crest of the wave into the abyss of the 'hole' the other side and dive into the back of the next wave - 'stuffing it'! Whether you stuff the wave ahead or simply crash into the 'hole'

"Breaking waves are especially dangerous as they can easily lead to a capsize"



ahead - the result is always a dramatic loss of speed which then leaves the boat exposed to the waves from behind again. Also, if you stuffed it, then there's a good chance you and your crew will have slammed forward and been met by a wall of water and the console - it is very easy to be seriously injured. If you do fill the RIB with water, then let's hope you've got the ability to clear the water and that the engine has kept running. If you can drive forward then the elephant trunks can do their job (some RIBs are fitted with frighteningly small diameter trunks - at a time like this you'll wish they were bigger!) else it will be down to bilge pumps and buckets - unless you're lucky enough to have an open transom.

The conditions you experience can be magnified or reduced by the combination of wind, tide and the local environment. Wind in the opposite direction to the tide ('wind against tide') can create short sharp and unpleasant seas if driving upwind yet markedly different conditions downwind. Short sharp seas can be very difficult to deal with as the helmsman has little time between dealing with each wave to recover and 'plan' how to deal with the next one.

A local condition that can be a real challenge - and be very dangerous too - is if a following sea is found at the entrance to a harbour. As you move towards land then the depth of water usually reduces, forcing the bottom of the wave to slow as it drags along the bottom. The wind pushes the wave forcing it to grow in height and potentially break. If

this occurs where there is a sudden reduction in depth - at the entrance to a harbour for example - then the change in conditions will be dramatic.

Generally speaking you should avoid crossing a harbour bar even if you do have a very capable crew and craft and should consider finding an alternative port of refuge until conditions ease. If you do have to enter, then hope that it's not on an ebb tide as this will exacerbate the conditions. Before making your move over the bar, stop and assess the conditions. Where are the waves breaking? Do some areas look easier than others? In practice you are dealing with a following sea and the same rules apply, however you are likely to face a small number of waves of considerable intensity with a short wavelength. Furthermore, it is likely that the waves increase in height as you go through as the depth continues to reduce. Once committed then firm and positive action is critical, you can't stop and go back at this stage, so keep moving and it should be all over quite quickly - one way or another!

Speed and power are essential elements in the safe passage of a RIB, being able to power away from and through trouble is key.

The need to cross a bar is clearly a local factor and it makes sense to study local charts to predict where such situations may arise. It's certainly worth getting to understand how the conditions vary under different tide and wind conditions, so that when you experience them you will be better placed to handle them.

Each boat will handle differently though and it is essential that you take the fundamental principles addressed in this article and apply them to the vessel that you are using. For example a large diesel RIB has the advantage that it is long - so that it straddles wave crests avoiding the troughs when the wavelength is short - and heavy - so that its mass can power it through many of the waves. Conversely some diesel RIBs suffer from turbo lag so are not as immediately responsive as a outboard powered example, and so need to be driven in a slightly different way. In short, know and understand your boat, its capabilities and its limitations.

In this article we have looked at some fairly typical conditions. Whether ploughing into a head sea or running at an angle to the wave front the key is vigilance and making sure that you actually 'drive' the boat - rather than 'point and shoot'. Driving is not 'power-on and head in that direction' it is about adjusting your speed and direction according to the conditions, perhaps using less power to attain a greater speed, it is about 'reading' the waves and steering accordingly. A final thought, don't forget that you are holding onto the steering wheel and the throttle and you know what you are about to do. Think of your passengers and remember they may not be enjoying it quite as much as you are!

Paul Glatzel

RYA POWERBOAT HANDBOOK

The RYA Advanced Powerboat Course looks at rough water handling and serious RIBsters should consider this course.

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FURTHER READING:

If you are keen to develop more advanced handling skills in rough conditions then *Fast Boats & Rough Seas* by Dag Pike is well worth getting hold of. (The book is out of print so is best sourced through a library, Pub: Adlard Coles, ISBN: 0-229-11842-9)

The RYA Powerboat Handbook (ref G13) written by Paul also addresses the subject of rough water handling in words and pictures. Available via the RYA website www.rya.org.uk or Amazon.