SKIP NOVAK

IT'S TIME TO GET DOWN TO BASICS, SAYS SKIP. HOW MUCH DO YOU THINK ABOUT YOUR YACHT'S SKIN FITTINGS, AND HOW OFTEN?

Let's get down to some basics for a change. There is no better place to start than with plumbing – fundamental to keeping your boat afloat is the integrity of your through-hull fittings. Skin fittings, we call them.

This topic came to mind while reading yet another sad story of a yacht now sailing in Davy Jones's fleet after mysteriously and uncontrollably filling with seawater so quickly that the crew were overwhelmed. They never found the source.

By the time the floorboards were awash it was deemed too late and too difficult to investigate so there was nothing for it but to deploy the liferaft.

They had not hit anything. They suspected it could have been the bow thruster housing. It can only be assumed that something had given way below the waterline and the most likely culprits are skin fittings, if not the shaft log or the rudder bearing.

All of us who go to sea and have worked on boats have had the catalogue of frights with plumbing below the waterline: dangerous corrosion; frozen valves; hose clamps missing and soft hoses gone brittle with age – fittings that fall apart when looked at the wrong way.

'KNOW THE LOCATION OF EVERY SKIN FITTING'

Boats continually try to sink themselves given half a chance. It is our job as crew to be vigilant and prevent a potential disaster.

The mode of failure for skin fittings and valves can be incompatible materials. The classic is bronze fittings on an aluminium hull. Aluminium valves are hard to come by, so stainless steel is better, but there is also galvanic potential over time and the bigger the mass of the stainless fitting, the more vulnerable the alloy hull will be as its foundation.

Composite materials are available, but may not be coded for purpose, especially in the engine room where metal pipework and fittings are de rigueur.

Another issue is a lack of maintenance. Skin fittings need to be inspected and the valves attached to them exercised often. Hose clamps need to be replaced when any corrosion is present. Some are all stainless steel and last longer than the cheaper combination of steel and stainless steel. On the bigger sizes, we use double stainless steel exhaust hose clamps on anything bigger than one inch fittings. Vibration and improperly fixed hose runs can also cause chafe and splitting, especially at the nipple ends where a hard interface is created.

And all of this is compounded by accessibility issues. Every through-hull fitting and valve must be readily accessible, not buried under fixed floorboards where only a Houdini would be capable of seeing them let alone inspecting them. This goes back to the design phase for any yacht and should be prioritised. Alas, that is easier said than done.

Another good idea is to minimise the number of skin fittings by combining them into manifolds for various services. The fewer the fittings, the less risk. Every working crew member on board should know where every skin fitting is located, aided by an A4 laminated sheet kept to hand for reference.

In flooding scenarios when under way (flat water is the worst, as no sloshing will occur) and especially when motoring where noise levels mask the sound of rushing water, by the time the floorboards start floating it's very difficult to locate the source. And by the way, bilge alarms can fail and should never be trusted. Some skin fittings might be in deep bilges, buried under stowage. At this point the priorities are crew safety and getting liferafts deployed rather than last ditch efforts to find the problem.

This is more of an issue with yachts that have no watertight bulkheads – that is, the vast majority. Where do you start to look for the source of water ingress? With watertight bulkheads there is at least a chance of containment and the compromised compartment is more than obvious, but having said that show me a watertight bulkhead on a small yacht that is truly watertight and I will be impressed.

If you do manage to bung the hole or stop the flow by whatever means, then there is the issue of pumping it all out, or at least keeping pace with the rising tide. There is a lesson learned from the folks on the yacht described earlier. They quickly realised their variety of pumps could not keep pace. As a prophylactic measure, flood your bilges every so often and have a go, just to remind yourself what you might be up against. You will therefore go to sea better prepared. ■