

Rudder Pintals

Submitted by Robert Haines Jan 14th 2006

TOMAHAWK 25

Many Moons sailed to The Channel Islands, Biscay and Gibraltar before resting up in Mediterranean Spain for a Christmas breather. Before departing the Solent in June 2005, I treated her to a major refit to ensure our safety. She had a ten week "makeover" in the Universal Boat Yard, Hamble. The job at the top of my list was: The Rudder. During the four years I had owned the boat the play in her lower bearing had deteriorated. This in itself didn't appear to be a safety issue, but the knocking whilst at a mooring or anchorage disturbed the peace - and my sleep. Replacing the bearing meant removing the rudder, so this was obviously the right time to inspect and beef up the tangs.

Small weeping Hole

The letters on the TOA web-site show that Tomahawk rudders seem to be a major concern. Apparently mild steel tangs are welded to the stainless steel stock, a weakness that causes concern when one considers the age of the boats. In my case I was worried about an old repair made to the rudder before I bought Many Moons; a small weeping hole left by that repair did not escape the surveyor's report. I could only guess at the extent of water ingress. The danger of rusty, weakened tangs could not be ignored, so I decided to have the rudder split open and re-welded with stainless steel tangs.

After a worthy recommendation I commissioned John Haskins, of Haskins Marine, to undertake the bulk of the refit. I helped Mike Hassel, part of John's team, remove the rudder, referring to information I had gleaned from the TOA web-site. This information proved an invaluable guide.

The rudder on Many Moons is attached to the hull in one place only, where the lower bearing plate is encapsulated within the skeg. The other place it is secured is at the top of the stock, which can be accessed after removing the tiller. Following directions we chipped and gouged away at the underside of the skeg until we found a bolt head, aft near the rudder, and a screw head on the forward curve. We removed these and found that the long bolt passed right through the bearing whereas the other screwed directly into the skeg. After prising off the base of the skeg we discovered a second bolt securing the forward part of the bearing plate; once this was unscrewed the rudder was free. Of course, to release it completely the tiller had to be removed, along with

the top bearing and cap (an allan screw). Thanks to our guide the process was quite straightforward. The fun part of cutting away one panel from the rudder was done out of doors, with an electric saw. In an hour the task was completed, the two tangs exposed, and the surplus mess cleaned away.

Surprise at how small the tangs were.

On inspection these tangs and welds seemed to be in reasonable condition, but I was surprised at how small the tangs were. After a short conference we decided that the new tangs should be larger, with the lower one having an angled extension towards the bottom of the rudder. I suggested that perhaps a third tang should be added between them, but decided to leave the final decision to the experts. We commissioned a professional workshop for the welding and rebuilding of the rudder, along with the manufacture of the new bearing. This was during the Spring, when boat yards are busiest, so I wasn't really surprised when seven weeks had elapsed before the rudder was completed and returned. However, the end result was worth it! The welder had complied with our directions for an angled lower tang and had also applied the design to the top one, which he made L-shaped. Once encapsulated in the GRP this made the rudder very strong. I drew extra comfort from the quality of the exterior finish, which impressed me and showed pride in the workmanship.

Everyone involved knew I was setting sail for Biscay and were keen to PDF Create! 3 Trial www.scansoft.com ensure I ended up with a rudder I could bet my life on. And I did! I was especially impressed with the new bearing, which appeared to be manufactured from white nylon but, apparently, is made from a composite material. Good craftsmanship and a nice, snug fit.

Before attaching the rudder, I painted on two coats of Primocon undercoat, followed by a generous layer of hard antifouling (XM4000) to the forward edge. I did the same to the mating groove of the skeg. This would give a good layer of protection to an inaccessible place. Next the rudder was lifted back into place and the bearing plate sandwiched in filler, the forward bolt being screwed home first before securely attaching the skeg base with the long aft bolt and forward screw. More filler was used to repair the damage to the base of the skeg and cover the bolt heads. This was left for 24 hours before sanding and shaping. The rudder then received the same treatment I gave to the rest of the hull, which (after two coats of Primocon) was two coats of the hard XM black antifouling followed by two coats of blue Shogun 33. I reasoned that when the black started appearing it was

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time to add more antifouling! I had used this same cost-effective formula the previous year, and was extremely impressed with the results. I must say she looked beautiful when all was finished.

Hairy winds and Atlantic swells

We departed the Solent on 16 June, survived Biscay and the turbulent waters around the capes, weathered hairy winds and the Atlantic swell, and after 2000 miles ploughed like a freight train through the Straits, from Gibraltar to Morocco, in a F7. And through it all that rudder gave me new-found confidence! Once again Many Moons has shown her worth and now gives me complete confidence in her ability to look after me. And oh what bliss to sway peacefully on an anchorage without that damned knocking sound! A rough estimate for my rudder repair would be around £650. Hard to be precise as a number of other welding jobs I had commissioned were absorbed into one bill. However, I now have a strong "new" rudder that gives me security and peace of mind, so I consider the cost minimal.

An excellent job

John Haskins (Haskins Marine, Hampshire 07786-078118) and his associate Mike Hassel did an excellent job. I wouldn't have made it without them! (This is an edited section from an article I have written which includes photographs. I will try to get the complete article onto our TOA web-site.)
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