Chapter Seven

2018 SUMMER CRUISE OF AVANTI

The 28th Voyage Dunedin to Nelson

Bill and Margaret McIndoe

Successful Repairs

Strange Noises

When cruising in a yacht a sailor has good days and not so good days. This last two weeks have been not so good. Let me go back a little. When Avanti was 40nm off shore, east of Timaru, on the way north we had the leaking rudder post gland. We got that under control.

There was no wind between Dunedin and Tory Channel and it was necessary to motor almost the complete 370nm (625km) to Picton. Since leaving Taiaroa Heads I had been hearing a noise in the stern of the yacht that seemed associated with the propellor shaft. As we got further from home the noise from the propellor shaft stern bearing seemed to get louder to my ear. When off Kaikoura I was convinced the noise was malevolent. I didn't tell Margaret or Gae because I wasn't sure myself what it was.

What was wrong?

The propellor is mounted on the propellor shaft. There is then a short 25mm section before the propellor shaft enters the 125mm long stern bearing inside the boat which takes the weight and holds it steady as it turns. It is made of fore and aft strips of cutless rubber mounted in a tube and is salt water lubricated. The shaft rotates inside the shaft tube, and at the forward end of which is the mechanical water seal which keeps the water out of the boat. After so many million revolutions, probably about 12 years worth, the cutless rubber shaft bearing becomes worn. As it turned it was no longer holding the shaft firmly horizontally and vertically and it started to wobble. The wobbling of the shaft was creating a vibration which I could feel and hear in the cockpit and found very disturbing. It was quite a while before I faced up to the situation and the danger it could create.

Warning from the Past

I clearly remembered an incident from my childhood which was a warning not to take the propellor shaft vibration lightly. In 1932, at the the age of four years, I contracted rheumatic fever. Dr Clerk Hannan told my parents that the only way to save the child was a warmer climate. My father packed up the family of three boys and mother and sent them off to Tahiti, to a small cottage beside the beach, where we lived for a year. We travelled from Auckland on the SS Tahiti, passenger ship on the Pacific circuit, without incident. However on the next voyage the SS Tahiti's propellor shaft broke, the propellor and half the shaft dropped out and went to the bottom of the Pacific Ocean leaving a

400mm diameter hole in the ship. The water rushed in and the ship sank in calm seas. All the passengers and crew got safely into the lifeboats and all were picked up by rescue vessels.
I have never forgotten the close call we had 85 years ago.

Professional Help

When the reason for the vibration became clear in my mind I knew that I had to nurse Avanti all the way to Nelson to have her hoisted out and get the stern bearing professionally repaired before the propellor shaft broke or the stern of the boat was damaged, with all the unthinkable consequences.

What happens Next?

Because we will be lifted out this afternoon I have been watching how yachts have approached the lifting dock and what happens when they are hoisted out and placed on the hard, propped up by four screw supports on either side. Then the engineer from Marine and General Engineers will come down to start the repair on the worn propellor shaft stern bearing.
As far as I can ascertain the procedure is as follows:

1) Undo the propellor nut.
2) Remove the propellor from the propellor shaft.
3) Remove the two coach bolts from the stern bearing housing.
4) Unscrew the stern bearing housing and withdraw it from the shaft.
5) Remove the old warn cutless rubber bearing, which is in the stern bearing housing.
6) Insert new cutless rubber bearing into bearing housing.
7) Replace and antifoul.
8) Is the job then done - I wonder, but we shall see.

Walk in the Yard

"Oyster 2" a stunning 17m American yacht was lifted out of the water by the travel lift. She needed to by waterblasted to clean off the weed growing on the hull, sanded down and then antifouled. All that was standard yearly procedure. Standing watching I could hear much banging from inside the boat. When the American owner appeared he explained that last year he had his boat up on the slip and was working on some job down below. He stood on a bronze through-hull valve and it broke off leaving a 32mm hole through the hull with daylight coming through and a fine view of the ground below. He did comment that it was a good thing that the boat was up on the slip and not in the water otherwise if he wasn't quick with finding and selecting the right sized soft wooden bung and hammering it into the hole, inspite of the water hosing through, it was likely she would have sunk. The poor quality bronze valve had been dezincified and disastrously weakened by electrolyses. It is possible to detect dezincification by scratching the surface with a knife point

or filing. The metal then shows pink because of the absence of zinc and the copper only showing.

Changing Valves

Continuing maintenance procedure would be to progressively replace skin fitting (through hull) valves i.e. one every two years as I have done. If replaced progressively it would be easy to loose track of which valve and when they had been renewed. Because sometimes all the valves would be the same age as the boat, his idea to replace all of them at the same time was even better. He also considered that modern plastic valves with their strength and resistance to corrosion were better than bronze. I asked his opinion of stainless steel valves. His answer was "maybe" if made of the right sort of stainless and if it had been proven over a period. That was a worthwhile conversation. I just asked questions, listened, remembered his comments then came home and wrote them down.

Fewer Boats About

We have both commented on how quiet is the boating scene on the east coast of the South Island, in the Marlborough sounds, Tasman Bay and in the marinas. There are 600 yachts and launches here and we would observe only about 6 movements a day. February is the height of the New Zealand cruising season and in the past we remember more boats on the club moorings and at sea. We would often raft up with two or three boats at a club mooring and enjoy social occasions with their crews. There has never been another boat on a mooring that we occupied and therefore we have never rafted up with any other yachts on this trip. However we have also noted in the marinas more visiting overseas yachts from UK, Australia, USA, Germany and Switzerland.

Our Turn to be Moved

In the morning I singled up our lines, coiled and stowed them away. Our turn came at 14:30. Pete-the-boat-hoist-driver lolliped down the pontoon undoing our moorings as he leapt aboard. Under power I moved the boat to the special pontoon set aside for boats waiting to be hoisted. He then disappeared and soon came back with his huge machine. The hoisting straps were lowered into the water and Avanti was pulled by hand into position over them. With a roar of the hoist engine the boat was lifted out of the water and the driven back over the apron to be hosed down.

And into the Yard

The hoist, with Avanti in the slings was then driven a hundred meters into the boat yard, gently lowered onto blocks and propped up with eight screw jacks so the hoist straps could be lowered and the hoist depart.

Two skilled tradesmen from Marine and General Engineers Ltd arrived and immediately started working on the job. They removed the propellor, dismantled the stern bearing casting and with much thought and discussion as to how it could be done extracted the old worn cutless rubber bearing. Much to our delight a new bearing had been sourced, was fitted and the parts reassembled with suitable 3M sealant to make all joints waterproof. After the propellor had been cleaned and balanced it was replaced. How fine it looked, once more bolted on the shaft, shining in the Nelson sunlight, The job was finished Friday after only two days of intense and difficult work by our engineers. Margaret and I were beside ourselves with delight at the outstanding result.

The Apprentices Turn

At the end of the day the apprentice immediately started work on dismantling the rudder post waterproof packing gland which he intended completing on Monday. This gland was leaking on the way north and had also caused me concern.

New Anodes

I then sourced two new anodes which, with Ashley's help, we drilled to fit and bolted back, one on the rudder and one on the hull, to prevent corrosion of bronze valves on the bottom of the hull and the rudder parts.

Patching Antifouling

There are a few small patches of antifouling that have lifted. Although it is raining today, tomorrow's plan when the weather will be better, is to scrape off any loose areas, smooth out with sandpaper and a lick of antifouling to ensure there is no weed growth on those bare patches until the next haul out in November 2018. Ashley has kindly offered some antifouling from his paint locker. It is bright blue but when Avanti is in the water nobody would be able to see the change of colour. But as Margaret said "but *we* would know" and feel ever so guilty. I am planning for relaunch on Wednesday 14 February 2018.

Splendid People One and All

Well dear friends that is the story to date. When the engineers and I were talking about the degree of difficulty of the job, the mysteries within the shaft and information that it would take three weeks to obtain the correct size cutless rubber bearing from USA, I began to wonder if we would ever get Avanti back to Careys Bay, let alone be in Picton on 27/2/18 to pick up Craig on 28/2/18 for the voyage home.

But the bearing was all done in two days and probably the rudder post will be finished on Monday. We feel free as a bird and will be plonked back in the water on Tuesday and ready for sea on Wednesday 14 February.

I cannot speak too highly of the skill, perseverance and good humour of the engineers from Marine and General Engineers Ltd. Ian, Glen and Seff the Apprentice were all wonderful. The General Manager John Rowling and Factory Manager Ian Beaty were understanding and cooperative during this busy time of the year.

Maureen and Ashley have been wonderfully hospitable. Not only taking us into their home like orphans in the storm for a seven days, but also helping with repair arrangements and lending us Maureen's car for two weeks. They have been trusted friends for many years.

We are both well but looking forward to getting Avanti in the water and shifting back aboard.
Our cruising plans from 14/2/18 will evolve and I will keep you up to date.

Very best regards from us both,

Bill and Margaret
at the Wagg's,
Nelson