



2018/19

Refit of 14 Meter sailing yacht

1969 round bilge steel ketch. Built in La Spezia Italy.

We purchased her in Elba on the 19th of October 2017.

We chose the yacht because of her classic lines and steel hull. She was at a very much reduced price and from the information we had managed to put together. She had been 100% restored in 2011/12 and the previous owner had spared no expense. He had dropped the price by 50% and was keen to sell her before the winter season.

I was looking for a boat to restore and for a cruising boat for the Mediterranean summer seasons.

We travelled to Elba for initial inspection and decided to buy her. She had a full set of photographs from the refit and the hull and decks were completely renewed. She had a new set of sails, stainless steel water tanks and a reconditioned Volvo Penta Diesel engine.



We departed Elba on the 2nd November for a shakedown sail. The passage to Viareggio was exciting to say the least. We departed with a 10 to 15 knot Easterly wind forecast. We sailed through the night and sustained 30 knots wind off Livorno in the middle of the night. We had a few issues. The engine stopped, the Genoa sail tore along the luff due to there not being a UV cover on the roller furler. Also there was a substantial leak through the main mast gasket.



The sails were immediately sent to the same sailmaker who fabricated them. The spray dodger was also sent off for a new one to be made.



The mast was leaking due to the teak ring around the mast being cracked and rotten. The plan is to remove the masts and revise the rigging and varnish, so a new teak seal will be installed when re-stepping the mast.

Bilges



The forepeak had a toilet and a bed in it. Which I have removed as it was not really a possibility that anyone could sleep down here? I intend to transform this large area into a workshop and tool storage.



I used the time before the drydock was ready to start on the bilge treatment. We are treating bilges at work on Rahil and I have the luxury of a supply of the best available paint on the market. Corroless. The pink or brown EPF anti corrosive primer was developed for the offshore North Sea oilfields. It sets like ceramic coat and is really a one time only application

The Bilges are really surprisingly good . After 8 years since the refit, there is no ongoing corrosion. The pitting from the sandblasting is apparent but there is no ongoing active rust.



The bilges were sanded and ground where necessary and the 2 coats of the Corroless EPF primer and 2 coats of Corroless white. Bilge paint is my priority. Once boat out of the water the rest of the bilges and tanks will be also completed. So we are starting on a good footing.



The steering equipment is hydraulic. It is very high quality and I was very impressed. It is a little difficult to access from the lazarette. But doable. I will eventually get in here and repaint this area but the bilge paint is good and the steering gear very substantial. It will need to be greased and cleaned but it is great to know.



Taking advantage of the sunny days to get some interior panels and pieces a coat of varnish.





Hauled out eventually on Monday 10th December.

I started to look at the electrics.



The hot water boiler was not working. So I extracted it and overhauled it. The body was stainless steel and in good condition. I replaced element, Thermostat and electric microswitch. De calcified it and polished it up.



I had to search for the inverter. I knew there was one. Because there are 220V sockets onboard and they work. Eventually found it behind the refrigerator. It was new. Battery charger also new. The switchboard was apparently done in Viareggio so I tried to track down the manufacturer to get some assistance.



I bought a big supply of electrical connectors and started to work on junction boxes. Re terminating connections with waterproof type. Changing relays.



Most things work onboard but I think I did replace a lot of breakers and cabling. Switches and relays etc.



When I got the boiler out I decided that the 3 stainless steel tanks would need to come out also.

The bilge underneath was in good condition. The bilge paint still mostly in tact. But I wanted to see underneath the tanks. The 3 tanks are in stainless steel and suspended on the bilge floors. For me it was now or never for getting underneath here so I decided that they had to come out.

In this picture you can see the 3 tanks. Closest (full beam is the water tank.)

In the middle is the black water tank and the far one is the grey water tank.



Tanks. I got them out. But it was a big job. I was determined to get them out before going to bed one night and it was midnight before they were off the boat.



The next morning I cleaned them up and had a good look at them. I filled them with water and found one of them had a leak.



I realized that the fresh water tank and the Black water tank were leaking and I sent them off to be welded up. But they were too bad so I ordered new ones to be made. . The grey tank had been beaten up badly. Was probably not replaced at refit. Lots of dents in it and there was a small leak. So I decided to replace them for new ones

It is obvious the boat was hardly used from 2012 because the grey water tank had no soap build-up. The black water tank also had no solid waste build-up.



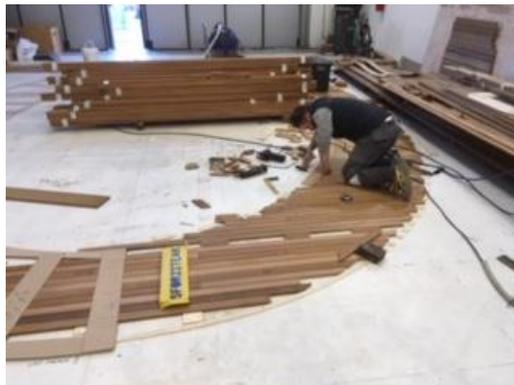
New Black water and grey water tanks after fabrication.

Teak excursion.

The boat I work on is having completely new teak decks laid. The supplier took me to his 2 huge workshops to show me his facilities. Unbelievable. He has offered me all the support I need. I will do all of the works myself where I can but if necessary he will help. He made all of his facilities available and also his TOOLS! Which will make the deck re-caulking so much easier. Also faster.



Teak in plenty.



Rahil. Deck being laid. Deck for bridge forward



This is Mahogany. He was throwing away? Above?



Main bilges. Once the water tanks were out, we could see the situation with the bilges.



The bilges were not bad at all. In these pictures you can see where I sanded off the dirt and oil with a sander and the paint is mostly intact. There is a bit of corrosion on the steel brackets that were holding the stainless-steel tanks but I will change these frames for Stainless steel ones.

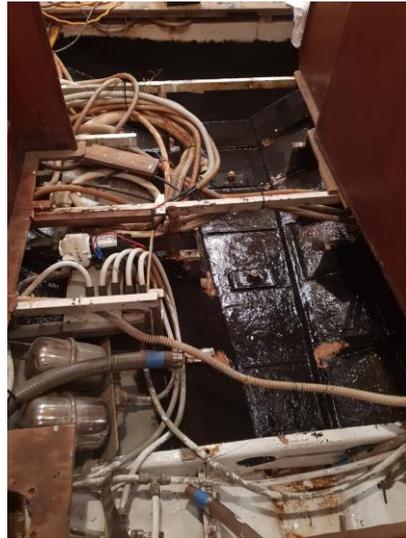
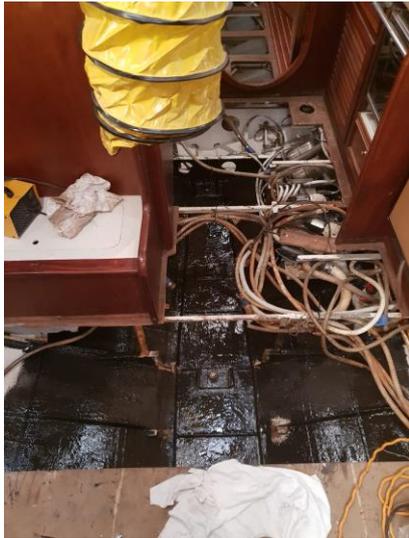


In the right of this picture you can see a black blotch. This was the only piece of rust in the actual keel and I attacked it with the grinder and rattle gun and it was not deep. The corroless paint system will be used in the bilges to stabilize them for the future.



This picture is of the main bilge bulkhead joining the fuel tank. It was my greatest concern and the principle reason why I wanted to address these bilges. Because I could see some rust blisters against the wall of the tank. If there were to be a hole rust through it will be the worst scenario. With fuel in the bilge.

Anyway, the rust was there but it is not deep. It is superficial.



Bilges coated in Black EPF corroless primer. The second coat was pink in colour which is good to make sure that you are covering 100%

Engine.



10th December I went to look at a refurbished engine. Same as the existing one.

It was supposedly refurbished but I could not really verify what work was done. The price they asked was high and I would be better off rebuilding the old one. At least I would know it was 100% new.

I looked for quotes for New Volvo Penta D2-75 (75HP) and Yanmar 4Jh80 (80HP)

I prefer Yanmar engines. Having a lot of experience with Volvo. I have had so much trouble with the newer Volvo Penta engines in yacht tenders over the years.



The price of the Yanmar is 10% higher but the engine is quite narrow. Making it easier to install. It also has common rail fuel system which is much better. The HP is 80 HP but the engine block is the same as for the 110HP version. So it is underpowered for the block and will be very strong.

I took the engine out with the crew one day. I did not plan to do it myself but one day I started to remove parts and then got carried away. It took us 2 hours and the engine was on the ground with the assistance of the shipyard forklift.



Once it was on the ground, I was extremely happy that we had made a good decision to take it out.. It was in bad shape.

I did a lot of research on engines. New ones, reconditioned ones and eventually we decided that the best thing to do was to rebuild the old engine. Because there was nothing modern between the 80HP range and 150HP

My Engineer's father is a diesel mechanic. He said that he could rebuild the engine in Lithuania and he would love to completely restore the engine. In Lithuania the complete restoration would be much cheaper than the new engine. Plus, I would not need to modify engine base for a new engine. Or go through the process of matriculation with Coastguard.

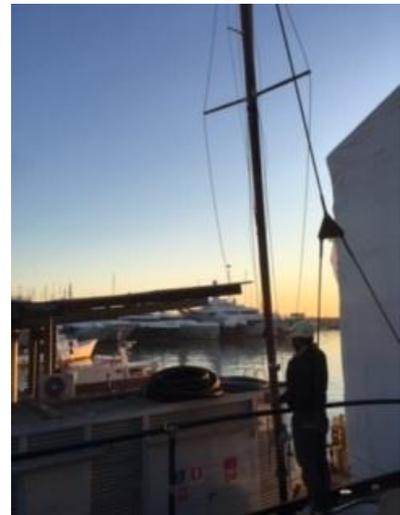


Once I cleaned out 10 CM of mud and oil from the engineroom bilges. I discovered the bilge paint to be almost perfect. Protected by the oil and sludge, there was no corrosion at all.

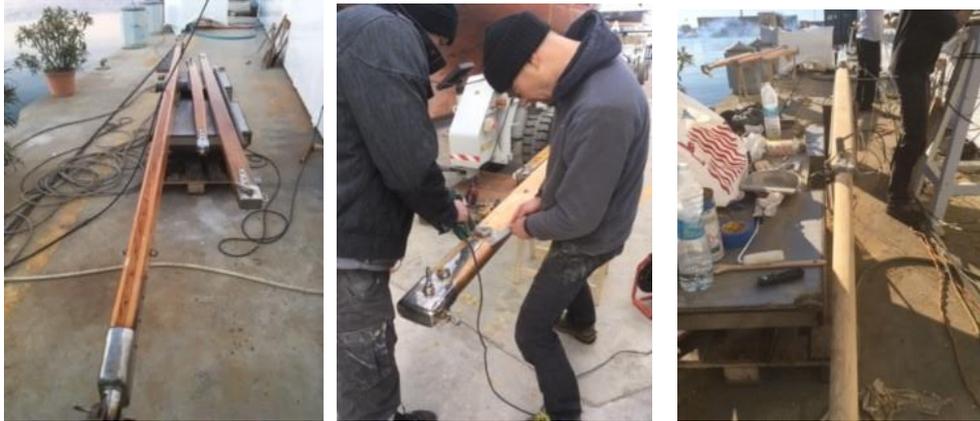


But I got in there and treated any corrosion with Corroless EPF and 2 coats of Corroless white bilge paint anyway. Including the fuel tank tops. There were a couple of rust spots on the tank top. Nothing serious but the tank tops are properly treated and painted now.

On 7th January the masts came out.

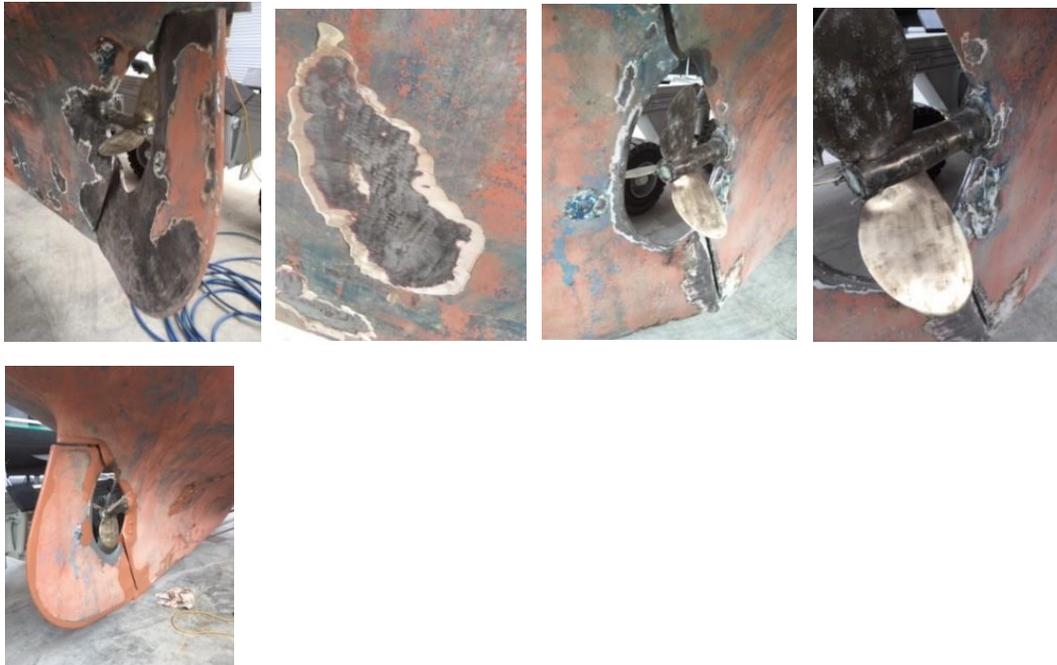


Mizzen took a long time to remove. The timber had swollen and it took a lot of manipulation to remove it.



My guys start removing hardware and stripping varnish after work. All the spars stripped to bare and 20 coats of Epiphanes PP applied followed by 3 Coats of Epiphanes natural varnish for UV protection.

Hull treatment.



I started works on the steel hull. There was not a lot of corrosion on the outside. There was quit a lot of flaking paint around the rudders which I feathered out. We are using the Corroless primer as metal primer on all areas.



She was moved close to Rahil and covered with a tent for the teak works to start and painting.

January 17th

My brother in Law Marcello came up for weekend.

To do some varnishing and works.



Beautiful bare Oregon pine spars. This was fun. The 500 Lira coin under the mast was checked on the internet. For a day we thought that it was a rare 1957 commemorative coin worth from 30 to 60 000 Euros. Turns out not to be the case so the coin will be returned for good luck.

Interior varnish works.



Making use or the nice weather. I employed a young kid for a few months to get a lot of this small pieces varnished.



We are getting other interior works done. The crew cabin forward I am turning into a kind of workshop. There was a small bed up here and a toilet?? Which was really never going to be used so I have a plan to make a really good workshop down here. We have done the bilges and repainted everything ready to put floor back in and the stairs etc.

27th January

The engine arrived in Lithuania at Algis' dad. He wasted no time in stripping it down so we could evaluate and order spare parts.



The news on the engine was good. The crank and big end bearings were sent to check and the tolerances are perfect. As specified in the manual. So the expensive parts are good.

The bad news was that 2 of 4-cylinder liners were in need of replacement. He measured them for roundness and 2 liners were over the tolerance for roundness. The liners can only be ordered as a set including piston and conrod. So we will reorder 4 complete sets. That means we will have some spare pistons and conrods once the engine is rebuilt. Algis's father will make a full rebuild report on the refurbishment in any case. But there is nothing major wrong with the engine. All parts will be replaced. The rocker arm and overhead assembly all OK. Fuel pump OK water pumps OK. We will replace 2 valves. The engine will be sandblasted, and powder coated.

I decided to remove the old bilge frames and replace with stainless steel while I had the tanks out. I don't want to worry about it again. The corrolless paint is good but invariably corrosion returns. So we replaced 5 bilge floors for stainless steel.



These bilges are 100% sorted now. With the stainless steel floors welded in and the bilges were completely treated with rattlegun, sandblasted and 3 coats of Corroless primer and 3 coats of Corroless bilge paint applied. Also, The aft end of the bilge adjoins the fuel tank, so this partition was treated with Belzone. (Plastic metal). To prevent any risk of corrosion on the fuel tank partition.

Then the new water tanks and also a new hot water heater were installed. All of the sensors and pumps were replaced for grey, Black and freshwater tanks. My Engineer and I replaced all of the wiring for the tanks and pumps. The pump relay box was moved out of the bilge and up to a more reasonable place on a wall behind the fridge.



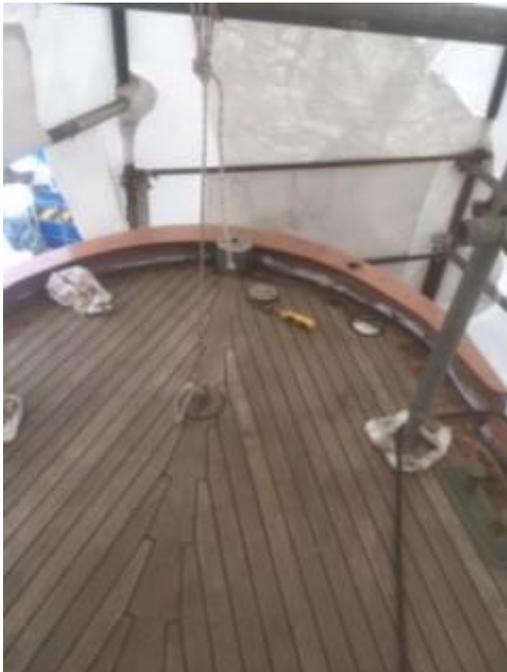
Bilges and tanks done. I started to demolish the old cracked mahogany Margine planks and capping rails. The work was not done well at the last refit. The steel toe rails were rusting because they were sadwiched between wooden laminates on each side so it just encouraged rust. The varnished mahogany margine planks were cracked and looked terrible. So I decided to remove it all including the capping rail and replace with new teak. A varnished capping rail and outboard trim. Interior scuppers would be Awlgrip painted. The margine planks would be bare teak to match the deck. The deck and the plywood underneath were in prefect condition.



I just smashed it. With a chisel and hammer, I removed the margine plank and left plywood underneath as it was in perfect condition.



The teak on the inner and outer side of the capping rail came off and the corrosion was treated properly with sandblasting and corroleless paint.



Old hahogany margine plank chizelled out to conserve the plywood underneath.





The Mizzen mast had an area of dry rot in it so I had a specialist remove it and scarf in a new section. Both masts were given a teak shoe to prevent moisture rising from underneath.





The masts were stripped bare and sanded clean. They were coated with 3 coats of Epifanes PP diluted 50% for first absorption. A total of 20 Coats of PP was applied including the initial 3 coats. The masts were turned over after every 6 coats and sanded flat to enable grain filling. Finally they were coated with 3 coats of Epifanes natural varnish.

The mast gear was all serviced including pulleys and fittings. The stainless steel fittings were polished. The electric wiring was checked and a new aluminium powder coated junction box was installed to replace the existing electric tape connections. All lights were checked with a 12 Volt battery. Also a new TV antenna installed. VHF radio cable was tested and new connectors installed.

Forepeak cabin.



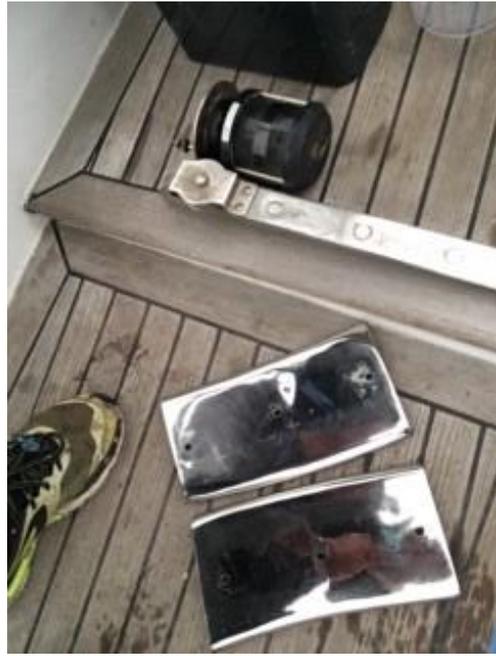
I decided that the forepeak should have some shelving. It was a crew cabin with a toilet and bed. I have made it into a kind of workshop with some box shelving.



The bowsprit was rotten. It was hollow and full of water through a large split. I decided to make a new one. It took me a week to remove the old one. It was swollen inside the tube and impossible to extract it. The pine wood inside was wet and smelly. Anyway the new bowsprit will be installed correctly. Varnished properly.



Margine-planks removed. Rusting toerails and scuppers treated with Corroless paint and inside with Awlgrip off white.



Teak supplier came and started making templates for the new teak margin planks. We started cleaning up all deck fittings.

With the sandblasting and 3 coats of corroless primer and 2 coats of Awlgrip 545 primer. These toe rails will hopefully never rust again.



All the bronze portholes were removed for resealing because they were leaking. A couple of the bronze rings were cracked and so were re braised and all polished.



Pictures coming back from mechanic. Engineblock completely refurbished. Sandblasted and powdercoated.

Before picture was pretty scary looking.

All spare parts arrived from Volvo. The turbocharger was sent away for complete overhaul.

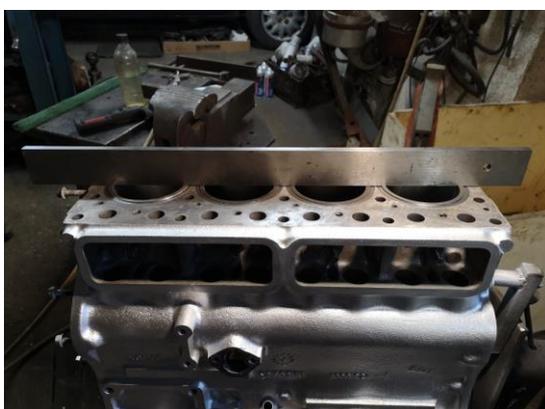


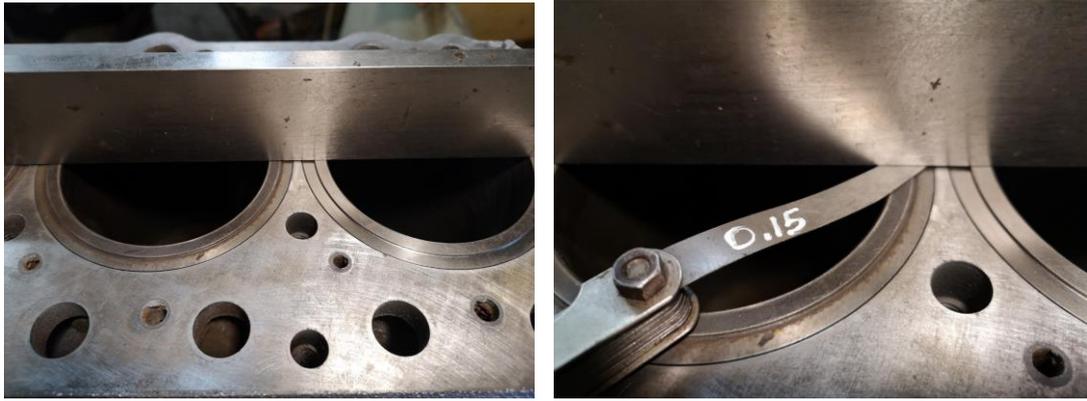


We managed to find all the spare parts we needed eventually. The last spares to be found were the conrod shell bearings which were found in Russia.

The engine will be completely new. The only parts we did not need to either change or refurbish were 2 x Cylinder liners and also the crank. The crank was 100% perfect according to the tolerances in the manual.

The cylinder head was sent for refurbishment. The valve guides all changed, valves. Injector sleeves. Rocker arm. Everything changed. The alternator and starter motor were sent for refurbishment. New engine mounts. The engine will be basically as new.





The 2 saved liners were re scoured and all 4 reinstalled in the block with new O rings. Ready for the head to be re-installed.

The fuel pump was sent for testing and calibration. The injectors were fitted with new tips. Only one injector needed changing completely as it was completely unserviceable. The new injectors were quite expensive so this was good news to me.



The carpentry contractor started working on the cabin bulkhead and cockpit lining. For some reason the shipyard used regular plywood in these areas and wood rot had converted the panels to a king of soft cake. So we replaced them with marine plywood and primed them properly with 545 primer 3 coats and then awl-grip off white.



The underwater area was completed. There were areas of rust blisters. Not large ones but small coin size ones. They were treated with rattlegun and grinder. 2 coats of Corroless anti rust primer applied followed by international epoxy filler. The whole hull was sanded and re-faired with this filler. Then the whole boat was primed with an international bridging primer coat 2 coats. 3 coats of Hempel black antifoul applied and then new anodes.



Above the waterline we completely sanded with 220 grit sandpaper. Then we applied grey 545 to all of the fairing repairs and to the outer toe rail. The whole boat was then re-sanded with 320 grit sandpaper to make ready for topcoat.





The colour is Ariston Blue. It is the colour of the classic sailboat Alajandra which I always liked. I plan to change the waterline colour to off white as well as the pin stripe.

The following week I did repaint the pinstripe.



Cabin Sides and Carpentry



There was some wood rot in the cabin sides along the deck. It was due to a mahogany fillet rail which was installed and it kept water and caused the mahogany cabin sides to swell. We removed the bottom 5 inches and replaced with a 5 inch strip.



The companionway woodwork was renewed. The mahogany on the cabin stripped of varnished, re glued and revarnished.



The cockpit and the cabin sides were repainted. Applied 3 coats of US paints 545 primer to bridge and then 2 coats of Awl Grip Off white polyurethane topcoat.



Replaced the old split mahogany margin planks with new teak ones.



The newly painted awl grip cabin sides before portholes were reinstalled.

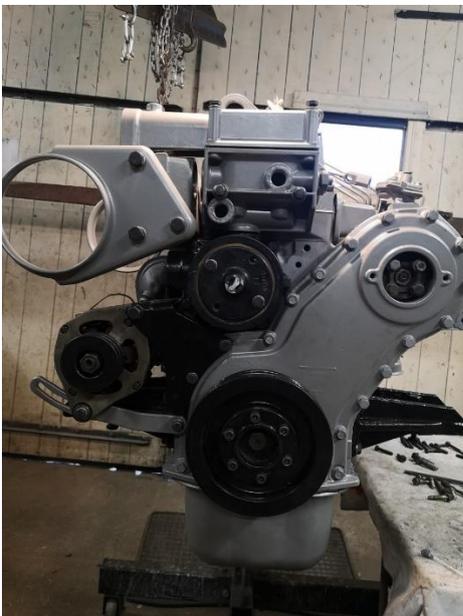


New seams cut with this ingenious tool.

Seriously makes teak re caulking easy.



Inside cabin was also refaired and painted with 545 and Awl Grip. I started to re-varnish the interior varnish section by section with epifanes natural varnish.





Pictures of the almost complete engine were exciting. I went to see the local Volvo dealer and organised for him to come down and look at the logistics of reinstalling the engine. I have ordered new Morse cables as well as a new gear shift lever.



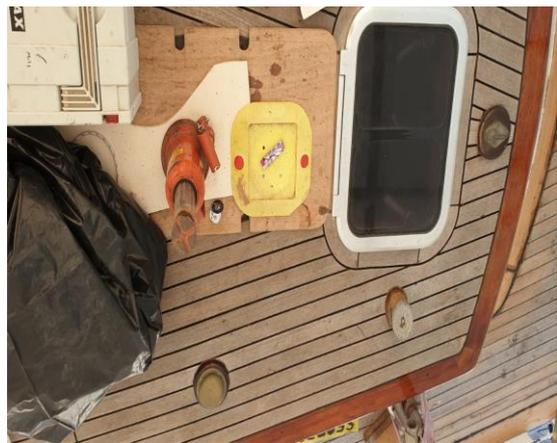
I reinstated the portholes and there is no possibility now of any water leaks. On this yacht. The cabin top will be completely re-caulked 100%



I removed this hand bilge pump in the cockpit and ordered a rebuild kit. This will be something Rina will want to see working. The rubber membrane was completely gone.



New bowsprit arrived. I decided to ask to make a new one. The old one was cracked and had water inside for who knows how long? The new one is a work of art. We immediately coated with 6 coats of Epifanes PP and sealed it.



We cut out the cabin top caulking because the old rubber was brittle and the cabin top had some leaks. The deck is in good order because it was covered with an epoxy membrane before laying the teak. So We just re caulked.





Rather than the mahogany steel sandwich that was on the toe rail before. I have decided to go for teak toe rail with a nice size capping rail. The inside scuppers will remain awlgrip paint which will be easy to keep clean. This day was the first piece on the exterior of the hull. Diego plans to epoxy glue a nothe piece on the inside above the steel. Then capping rails on the top.