

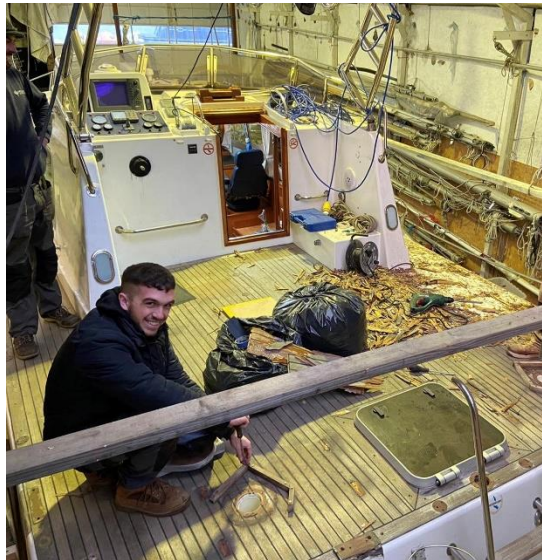


The Worshipful
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Case Study – Jacob Roach – Apprentice Boatbuilder (funded 2019-20)

Will Squibb Boats, Isle of Wight

<https://www.willsquibb.net/>



Jacob joined Will Squibb Boats after hearing of the apprenticeship whilst at Isle of Wight College. He was studying carpentry and joinery and had previously undertaken an electronics course. He always enjoyed practical hands-on work and was always very keen on a role within the marine industry after his Grandfather Lionel worked alongside Will Squibb as a fellow boatbuilder for many years. At the end of the first year we asked Will to summarise his development over the course of the year...

Skill and Knowledge

“Since starting my apprenticeship I have worked on a variety of different jobs including woodwork, marine engineering, rigging and general boat handling. I started my apprenticeship initially replacing the oil on the mast motor on an Oyster 46. This was also my first time working on any form of motor to do with the marine industry. Since then I have done over ten services and winterisations on both inboards and outboards of all different makes and both petrol and diesel fuel types. I have learned how to confidently carry out a

full service involving replacing all fuel/oil filters as well as impellas, gaskets and 'O' rings. I was also taught early on how to carry out the winterisation process on the engines involving both the manual procedure in which I cut the engine out using fogging oil as well as using software to automatically winterise Evinrude engines.



Probably one of my greatest achievements involving the engineering aspect of my apprenticeship so far has been the full engine removal from a speed boat named 'Calico Jack'. This job involved me having to remove my first inboard "leg" in order to free up the engine when we were ready to lift it. After removing the leg I unfastened anything attaching the engine to the boat, such as for example, engine mounts, riser tubes, jubilee clips and electricals. After everything was removed we then lifted the engine out using the correct strops and lifting equipment all rated to capably handle the weight of the engine. After the engine was brought into the workshop, I replaced the manifolds and risers as well as the gaskets and bungs. I also used a wire brush wheel attachment on a drill in

order to remove all rust on the flywheels and alternator and made sure the paint was stripped revealing the metal surface ready for priming and painting, which I also did. The last thing I did on the engine was finally replace the belt as the previous one was torn. Since carrying out this engine removal I also have a v6 that I removed and have a similar process to carry out in the summer.

I have also been involved in woodwork repairs and refurbishments with the most notable of my tasks involving a restoration of a wooden Redwing made from original timbers. I have been involved in removing the varnish from the inside as well as the outside of the boat ready for fresh varnish.

I also recently carried out my first repair on a Mermaid sailing boat. The boat's port side had been starting to bubble up underneath the paint and the salt water had become soaked into the timbers. I marked out a guideline surrounding the affected area and used veneers to create a surface to guide the router along over the top of my marked out lines. Once I had gone over the top of the lines I had marked out I removed the inside area with the router and then smoothed it over with a block plane. Next, I used acetone and a rag to clean up the surface before cutting veneers into the right shape to fit the hole. Every piece I used had to be shaped to fit, using a block plane. Once I was left with a tight fit, I removed the veneer and covered the back of the piece and the surface area with glue that I had already premixed. After that I placed down each piece of veneer one by one and stapled them to the boat in order to keep them in place whilst the glue hardened overnight.



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Once the glue had hardened overnight, I began removing all the staples I had previously left in the veneers with a small flat bladed screwdriver and a pair of pliers. After I had finished removing all of the staples I carefully went over the repair with a block plane to remove any

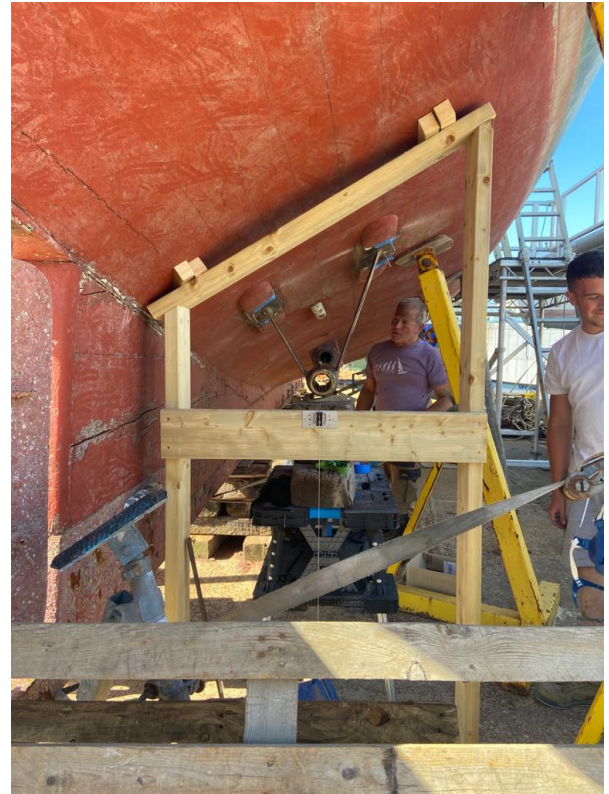


bits of hardened glue that had seeped through. I then got a handheld sander with some 300 grit paper and carefully went over the repair following the curved shape of the boat until I could run my hand along the boat and not feel any difference when crossing over the repair edges.

In the second half of the year I have worked on numerous tasks that have allowed me to totally learn new skills by undertaking and being taught how to carry out and complete jobs I had never done before.



Alongside new jobs I have been able to improve upon my understanding of jobs that I had recently been taught since starting my apprenticeship. One of the jobs that I enjoyed a lot and was able to gather new knowledge and understanding from involved a dual prop shaft removal, replacement and realignment process that we carried out on a 54-foot motor boat built in 1965 named 'Silver Sula' as shown below:



I really enjoyed this job because it was something completely new to me and involved a lot of carefully made adjustments in order to get the correct alignment in the new prop shafts and the 'A' brackets.

The job that I have spent probably the most amount of time on would be a wooden sailing boat called Zingana. This was a large job that involved multiple aspects of work, but the main job was involving the heavily rotted cabin roof that needed replacing as shown below:



I had never carried out a job like this before which made it very interesting for me as well as very useful in my general improvement of knowledge in wooden boatbuilding and maintenance, as it tied in perfectly with the similar wood working I was doing at college each Monday.

I found working with my colleague Simon very interesting and it has been a great benefit as I was able to learn loads of new information and follow his guide to carrying out certain tasks well. One of the tasks that I was less familiar with and slightly struggled with at the beginning of this job was the mixing up of glues as I would sometimes struggle to remember how much of a certain quantity I would need, however after being shown carefully and after carrying out multiple tasks that have needed different types of mixes of glue I have become a lot quicker at the process.



The recent work I have carried out has definitely benefited me a lot in teaching me that it's much more important to be patient and complete my tasks to the best of my ability than to rush a certain job to get it completed quicker.

*I believe I have shown this new understanding best on the newly made teak handrails I recently made as shown **to the left.***

In this process I had to take a lot of time and be very precise in my cutting and sanding to ensure that I didn't remove too much material but at the same time not to leave the handrails uneven or misshaped.

I have also continued to carry out services on outboards this year involving; gear oil changes, impellor changes, filter swaps, thermostat replacement and spark plug changes.

And tell us about the future...

I have enjoyed the wooden boat building side to my job a lot more than I thought I would have when initially making the switch from many engine jobs I had been doing beforehand. This has led me to slightly change how I view my future plans, as I hope to still gain a better understand for marine engineering, but I would also like to incorporate a lot more wooden boat building and maintenance jobs in my time learning as an apprentice as well.

I am really enjoying all aspects of my job at the moment especially the engineering and mechanical side of things. The off-site training at college has so far worked well alongside my job as it is only one day a week, so it doesn't interfere too much with my progress at work.

At the beginning of my job I found it difficult to remember all the steps involving a service, however I am now able to carry out services on both diesel and petrol engines confidently. Given that I have spent most of my time at work being involved with engines I would say I have gathered a good amount of knowledge on how to carry out basic services and repairs mechanically."