



## **Ashlee Barrell – Apprentice Marine Engineer**

### **Cox's Boatyard, Norfolk**

### **Final progress report, August 2022**

**<https://coxsboatyard.co.uk/>**

Over the past few months, I've been working on many tasks. The tasks that I have completed have taught me some new skills but have also introduced new knowledge on subjects I have already been learning about, such as diagnosing issues on the craft.



The pictures above are of a fully wooden craft with a BMC engine I had to service. During my time servicing, I was alerted to some electrical issues. Whilst testing the electrics I found the engine would start with the isolator switch turned off which is a great safety issue. I further went on to find the alternator was not charging both battery banks when the engine was running. After informing Damon (my mentor/manager), we mapped a plan of what I needed to do and come back with the results. After carrying out continuity tests, voltage tests and battery tests, we had decided to rewire part of the engines wiring and install two new isolators which would control the engine and domestic electric systems separately. As well as this a new Cyrix was installed to allow the domestic battery bank to be charged. Once all the wiring was carried out, we tested the system and it worked correctly. In the beginning, I found problem solving to be one of the hardest topics, with so many variables that needed to be understood, but the experience I have gained has allowed me to problem solve easier and understand how certain applications work. Due to this being a challenging subject, I can strongly say it makes it that much more interesting to learn about and keeps me engaged.

I have particularly enjoyed wiring new systems onto the crafts such as battery chargers, winches and even some engine wiring. I feel I have improved a lot quicker in this area whilst also showing off my keen eye for perfection and neatness.



I've also learnt a lot about engines recently and have been able to spot issues which I wouldn't have been able to a year ago. When servicing this newer Nanni engine, I checked over the fan belt and felt quite a lot of wear which was unusual for such a new engine. After closer inspection, it was clear that the belt between the pulleys was not running parallel. Using a straight edge and a rule, I carried the parallel line from the front of the alternator pulley to the front of the idler pulley and measured the gap between the straight edge and the idler pulley. The measurement of 7mm is what I had to remove from the alternator bracket in order for the belt to run parallel. After this was removed and a spacer was inserted, I tested the engine, and the belt ran perfectly inline.

Unfortunately, I haven't been to college in nearly 6 months due to implications with my teacher leaving but, the work I have been carrying out online has allowed me to reflect on tasks carried out a while ago, allowing me to revisit some of the skills/knowledge I may have forgotten.

I feel like my steep incline in learning and taking on jobs which I couldn't 6 months ago has helped improved my productivity and ability within the company allowing the company to provide more technically demanding jobs as I progress. However, it hasn't been easy although I am keen to learn whatever the company throws at me, such as the National Marine apprentice of the year award which I gratefully won in July. I had to show a 3minute video of my progress over the past year and some of the jobs I have complete with information covering what I had done.



Overall, I hope to push to better myself from where I am now and take on as much information as I can and move towards completing jobs independently which I cannot at the moment.