

Dagon

I started working on boats as a hobby at the age of 14. I built an 8' Glen L hydroplane, at 16. I progressed to a DN iceboat. I began my career in wooden boat repair and woodworking at 18 years old. I did all types of boat work, I could do good fits and clever repairs to remove rotted areas without having to charge too much. In St Clair Shores, Michigan in the early 70's, there were still plenty of wooden boats to work on. Being young and ambitious and less expensive than the marina repair shops, I found plenty of work. The jobs honed my skills estimating jobs, timely completion of jobs, and collecting payment while getting experience cutting out rotted areas of boats and making good fits. Without an enclosed shop to work on boats in the cold months, I had to find something else to do for the winter each year.

One year after working all summer on a 101' Trumpy named Lady Margaret, Rick crewed the boat down to Florida. In his third year of college at Wayne State University in Detroit, and with too many boat repair jobs to do he chose to quit college and go full-time into the boat repair business.

Within three weeks of quitting school all those jobs seem to evaporate. Without work and out of school Rick decided to get a job at Kean's Marina in Detroit, working for John Ams, an old carpenter that specialized in wooden boat carpentry. Rick worked there for 2 years, learning professional techniques from John while still freelancing part time. Rick left the marina in the spring of 1979 when he went to work full-time for Chet Bannister on the MV "Delta", a 62', 1928 Consolidated Commuter Yacht. The plan was to do upgrades on woodworking on the interior of the yacht then run the boat down to Florida.

The Discovery

While living on the 62' Consolidated, "Delta" at Broward Marine in Fort Lauderdale, Florida, I found Dagon stored in one of the sheds. The boat had been stored for nearly 10 years. She was a handsome boat, built in 1932 by CA Morse in Thomaston, ME. Rent for storage had not been paid for seven years and the boat was considered abandoned property. People in the yard would say as they walked by her, "She is such a pretty boat, it's too bad the bottom is so bad on her." The boat had been in salt water her entire life and being built with iron boat nails, her hull was rotten. The corroded fastener's in Dagon's bottom planking were the biggest issue. Many of the planks were loose on the frames. In addition, the Lathrup Gas engine had gotten salt water in it and the wiring, batteries, and all else was old and ruined. Everything above the waterline, the house, deck though was in pretty good condition. I asked Broward Marine to sell me the boat. To legally sell me the boat it had to be done in an open advertised auction. I went to the auction with determination expecting to pay perhaps a couple of hundred dollars. I got bid up, prevailed and won the boat for \$700.

The yard informed me that I would have to take the boat elsewhere as it was not a do it yourself yard. I was 26 years old at this time, highly motivated and hard-working, a young man with a vision to own a beautiful old motor yacht rebuilt to high standards and in excellent condition. At that time I was doing woodwork on boats in Ft. Lauderdale and was subletting a small shop space from a trucking company a little over a mile away.

Get Ready

I had to move the boat. The trucking companies driver I sublet from liked me and offered to move Dagon for \$50. Using a train Jack I elevated the boat about 5 feet off the ground, high enough for a flatbed low boy to back under Dagon and move her to my shop. No permits or police, no escort vehicles with flashing yellow lights. I rode on the boat watching and ready to deal with any hanging obstructions we encountered driving the city roadways to get to my shop. Being 35' long and 10 ½' wide and about 15 feet off the ground, it was about the maximum size that could be moved on the road. The driver had to drive through the middle of intersections to avoid the stoplights with me on the top watching out for obstacles. People thought we were crazy. We arrived safely. Dagon was precariously jacked off the trailer onto secure shoring and covered up with canvas to protect her from the sun and rain of South Florida. Dagon sat for about a year while Rick worked and accumulated materials to rebuild the boat and enough cash to take a year off work!

A unit of 5/4 genuine mahogany was purchased. Unseasoned 8/4 White Oak for steam bent frames and 5/4 #2 kiln dried White Oak for the new laminated keel was purchased from Coweke Lumber, a sawmill in Alabama.

I found an old wooden case filled with over 3000 # 20 x 1-½" flat head Everdur silicon bronze wood screws at a garage sale in Ft Lauderdale.

The screws were said to have been left over from building wooden minesweepers at Broward Marine in the 1940's.

The Plan

When most of the materials were secured and I had saved enough money so that I could stop doing paying jobs, I started work on the boat. I expected it to take a year or less to replace Dagon's bottom. I didn't want this to be a project uncompleted. I knew that most old boat rebuild projects of this magnitude were started, but too often, not completed ending in the boat being scrapped and sent to the dump. I decided that would be embarrassing! Therefore, the rebuild had to be worked on continuously until the woodwork was complete and the boat was all back together.

The stem, stern timbers, and every single floor timber would all be replaced with new. EVERY frame to be cut above the waterline and sistered with a new steam bent frame from the keel to about 3 feet past the cut frame, with three 1/4 inch bronze rods threaded on both ends to bolt the frames together. EVERY plank from the keel up to 8" above the waterline amidships was replaced with mahogany milled to 1-⅛" inch thick.

Shoring the boat

With the whole bottom of the boat to be replaced, I needed to support it somehow and not on her keel. I decided to put 4 inch diameter wood poles horizontally through the portholes. Some of them had to be egg shaped to fit, especially towards the bow of the boat. Then, vertical 4 x 4 wood columns were set under the horizontal poles. I nailed metal hurricane straps to secure the vertical to the horizontal. Then Diagonal shoring was fitted to prevent movement fore and aft.

In the stern and amidships there were no portholes, so 4 x 4's were fitted under the boat's structural sheer clamp, and with vertical and diagonal supports to the ground. Holes were sawn through the planks to accommodate vertical supports without having to take the plank off.

Rebuild

Once the boat was suspended I started work on the large structural parts. One at a time, the keel, stem, and horn timbers were removed for duplication. Remove the piece, duplicate it, reinstall it. I removed as little of the old parts of the boat as possible using the original shape as a guide.

To make the new keel, a series of plywood forms were cut with a V notch and glued with epoxy to the concrete floor. The keel would be tapered from 4 inches at the bottom to about 8 inches at the top and be 12 inches high. It required 12 laminations of net 1 inch thick #2 white oak lumber ripped with two beveled edges to fit in the form starting on the bottom with the 4 inch widths. The 12 lams were roughed up with a belt sander and glued with West Epoxy, one lam at a time. The forms made the job easy and accurate with little shaping required after glue up. I bought a nice set of heavy Wetzler clamps for this job. On the keel glue up, I used one clamp every 12 inches and tightened only moderately so as not to squeeze out all of the glue. The work went fast and well with one 31' lam applied per day. When completed the KEEL was 31 feet long, very stiff, solid and HEAVY.

To get the keel from my shop to the boat I used 3 Detroit Diesel, 71 series cylinder sleeves to roll the keel to the boat. Next the stem was laid out. Originally the stem was made in two pieces with a scarf joint and stop water and in a solid red oak lumber. The new stem would be KD white oak, 3 lams thick with West epoxy. The finished size of the completed stem was 10' long. Being laminated and one piece instead of two, the new stem was very strong and solid. The rebate was laid out and hand chiseled shallow, pending checking the fit to the upper planks not being replaced. Since the stem is almost straight, the rebate for the planks was also straight and not too difficult. However the piece probably weighed 200 to 300 pounds necessitating an A-frame to be rigged with block and tackle with jamb cleat. The block was then hooked to a barclamp at the top of the stem whereby I would hoist and lower it easily to chisel a little and then check the fit. Finally all the planks fit nicely into the rabbit with a taper to allow for cotton caulking to be driven later.

With the stem in place, the keel was moved into position and a laminated wood knee fitted to attach the stem to the keel with six lengths of half inch bronze rod threaded on both ends to accept a washer and nut. After the keel was removed I setup to install new 2 x 2 steam bent ribs. I built a plywood steambox 8' feet long with hinged doors on both ends. Steam was supplied from a homemade device suggested to me by an irritated plumbing supply store owner, using a 4500 W household water heating element in a piece of 2 1/2 in galvanized water pipe, reduced at the bottom for the element. A "T" with a half inch water valve allowed water to be adjusted so as to let in just enough water to make steam. Too little water would burn out the element. Too much would just make hot water. After burning out a few elements, I learned to throttle in just enough water to make plenty of nice wet steam. I connected the steamer to the box near a source of 220 V electric. Not as close to the boat as I would have liked, but close enough. I removed every other plank from the hull so I could clamp the hot and supple new oak frame and bend it to the shape of the bottom. This way I could slide in the new frame that would

allow me to clamp the hot new frame and Garboard next to the old frame and keep the shape of the hull.

The work to replace and install the frames was brutal. It was summer in South Florida. The temperature and humidity are in the 90's. No shade except under the boat and in my shop. I would steam the 1-3/4" x 2" white oak frames for about two hours, then I would pull a steaming frame out of the box, run to the boat to get it in while still hot and slide it up as far as I could. Then, grab the sledgehammer and beat the hell out of the end of the frame until it slid up between the ceiling planking and hull planking. I would drive it a few feet past where I would cut the old frame. The job was arduous and hot from the combination of the 90° summer temperatures and heat from the steamed frame. On the difficult S shaped frames towards the stern I would have a helper. One of us would hold the end of the frame to keep it from bouncing around while the other guy beat on it with the sledge. Using a block and tackle, we would bend the bottom of the "s" and clamp it to the garboard. It took a month to complete and was probably the most difficult and miserable job of the whole rebuild.

The Keel

Once all the frames were installed and with the keel under the boat I jacked it up under the frame ends. From there, I began to lay out the floor timbers and band saw them from wide 8/4 KD white oak planks. When the floors were cut out and beveled, I would bolt them to the frames using 1/4" bronze rod threaded on both ends. Alignment and fairing of all the components to each other was critical. When the floors were all installed, the keel was elevated into position and clamped to some of the floors along its 31' length. Using at least 3 lengths of 1/2" drills, I would bore through the floor timber 12 to 24 inches deep and through the 12 inch thick keel.

Floor Timbers

Attachment of the keel to the floor timbers was done using 1/2 " bronze rod. To counterbore the floor timber and keel I used an old fashioned brace and bit. For the bit to stay centered with the bolt hole, I attached a short piece of the bronze rod with a hole drilled through the center into which the threaded tip of the bore was driven into. I developed an affection for that hand powered boring tool since it effectively bored the holes without nearly breaking any of my bones like a powerful electric hand drill had almost done many times before on this job. Afterwards, I fabricated and installed the vertical stern post and radius lower frame at the transom.

Hull Planking

Planking was started with the garboard. I had bought a unit of 5/4 x 16' genuine mahogany that I planed as needed. The bed of the very old 18" Crescent planer was dished out from years of use yet worked very well on the mahogany. I notched the keel the whole length using a wood mallet & chisel. My fore finger knuckle holding the chisel took too many accidental whacks from that task. It becomes inflamed and sore after awhile and hurts twice as bad when you whack it. I used the old planks as patterns to make the new ones. Once I'd roughed out the new plank, I

would clamp it into position making notes on the board where it needed trimming. Typically, each plank was test fitted a dozen times before I was happy with the fit. Using a right angle iron plane with a beveled oak shim, I would apply the caulk seam. It was a celebration to do this as the shaping and fitting were all done and the plank was about to be fastened in. Using cut off's from the 2x2 frames, I would clamp them to a frame, then drive a wedge in so as to press the new plank to the next one for a tight fitted seam. The plank would be drilled and countersunk with two screws per frame. I used the brace with a slotted bit to drive the screws home just right. I used Dolfinite bedding compound on the screw which provided lube and corrosion resistance. The #20 screws were very large diameter screws. I could never have afforded them if I were to have purchased them new. They were a pleasure to work with and never did they break. By consulting mine sweeper building manuals from the 1950's, I learned to use to differentiate the sapwood from the heartwood of the white oak. I secured that orangey chemical and applied it to all the white oak used in the rebuild to insure that I used only ALL- Heart White oak.

At this point, the reconstruction of Dagon's bottom was all done. After nine months of working 7 days a week, 10 hour days continuously with few days off, she was all buttoned up and I was broke.

During that reconstruction time there was a man who would walk by regularly and would say to me, "You're never gonna' finish this." I didn't need the negative re-enforcement and I did not care for him. Everytime he said it, I was more determined than ever, I will say he got me through the challenging days. By the end of the job, we had become friends and I know he admired my perseverance.

At this point, I had to return to working. I'd been offered a job doing woodwork in California on a yacht and after about a year working on the yacht, I returned to Florida and had made enough money to purchase a warehouse property for Dagon and the lumber and woodworking business I wanted to start. I had no interest of working off the docks anymore. I moved Dagon to the warehouse yard space soon after buying it. The property was comprised of four sections of building. I took one of them to start General Hardwoods and Millwork, Inc, and rented out the other three sections. The three tenants paid the mortgage payment on the building. This gave me plenty of time to work on Dagon.

I loved having a nice woodshop, I was tired of working out of my van and this place became my world. I slept aboard Dagon by night and worked on the boat and did a few jobs for customers by day. At first I had plenty of time to work on Dagon as the U.S. was in a recession and my business was new. During this time, I stripped the old turquoise + cream paint off the house of the boat and varnished it. I replaced the partly rotten Mahogany side decks and toe rails with teak. The old canvas was stripped from the fore and wheel house decks and replaced with new canvas applied the old fashioned way. I'd bought a new 100 HP, John Deere Diesel main engine and a 7.5 KW Yanmar Generator.

Installing the John Deere main

I made a model of the engine in plywood showing the shaft angle and support location and heights. I'd never done this before and it was painstakingly slow figuring it out. There was no room for error. I had stainless steel engine beds fabricated. The fabrication company told me when I picked them up, "never again". Finally, after sitting on the shop floor for several years, I

lifted the engine up with a forklift and set it in the cockpit onto a 8/4 x 12" wide milled white oak plank 16' long running into the wheelhouse through the back door from the cockpit. The engine was bolted to wood skids. Next, I put short lengths of 1/2" water pipe between the engine skids and the oak plank and very carefully rolled the 800 lb engine into the wheelhouse. Since the engine was an in line six cylinder ,it just barely fit through the ??24inch wide doorway. I had to remove the alternator. We lifted it using an A frame and a very compact chainfall borrowed from a marine engine mechanic. Fortunately, after extensive planning and measuring, the engine lined up perfectly with the propeller shaft hole I bored through the stern timber. What a relief that everything fit. I celebrated that night out with dinner and a few too many drinks. Walking into the wheelhouse that night with the lights off and the hatch doors open (that I'd forgotten to close), I fell face down into the engine compartment. I was 32 years old by this time and I laid there for a few minutes thinking that I needed to change my life. I was extremely lucky that I didn't hurt myself badly.

The business grows

Around this time Sheila came into my life. She was lost, looking for another woodworker that was on the same street and needed directions. Of course I told her I was busy, couldn't talk to her and charged her a quarter to use my phone. At that time,General Hardwoods had been open for about 4 years and I was working more on the business and little on Dagon. I had taken over the space next door that I'd been renting out and had about six employees. The boat had become a novelty among my customers asking "if I ever planned to finish it". The business was overwhelming me and I was always there. I made time for a date with Sheila...sail on my Soling sailboat at night, with a full moon. After a year I asked her to quit her job and join in with me at General Hardwoods. She took a big risk with me. The business continued to grow and prosper. We both worked long hours. My customer's upgraded the comments from "when are you...", to "you are never going to finish the boat not with a girl and a business".

After a few more years Sheila and I were married and nine years still with the boat at my shop, Sheila told me that we were going to have a baby. Every man that came into the shop mourned with me that I would never ever finish the boat. I became discouraged. I didn't think I would ever complete Dagon. Up to this time, I did most of the work on the boat myself. Sheila advised me to get some help to finish it. Plumbing the engines for water and fuel, and electrical wiring would best be done by experienced professionals. In Ft Lauderdale, there were plenty of qualified people doing boat work. It was good advice. The work was done quickly and correctly. With the burgeoning business and a developing family, my baby "Dagon" was getting close to completion, the other baby, our son Ricky, was getting close his due date.

The launch

During the last months of the pregnancy, Sheila challenged me to get my baby in the water before our baby would come out of the water. So we shook hands, made a \$50 bet and the race was ON! I do not like to lose money. When Sheila was 3 weeks overdue, the doctor called me and yelled PUT THE BOAT IN THE WATER!!

I arranged for a crane to lift the boat and later in the day, we got Dagon to Broward Marine via lowboy truck. It was lifted off the trailer and set down on blocks to be put in the water the next day. She looked so beautiful with the new wood bottom, fresh paint and varnish, etc. Some of

the marina crew remembered her from ten years ago and could not believe how good she looked. The next day, the yard travel lift set Dagon into the New River. There were no leaks or problems. I started the engine for the first time, warmed her up and backed her out into the river and ran her about a mile to our home on a canal. It was a most wonderful feeling. The boat's gentle sway afloat after 10 years sitting solid on land felt good. Dagon looked beautiful, the engine and other equipment worked well. She was all done.

I was 39 years old when Dagon splashed, a dream come true, a lot of hard work and a new baby boy, our son who weighed 13 lbs and 4 oz.

It was a good day.