

MY LOVE AFFAIR WITH THE GRADUATE

My love of "all things Graduate" started I guess nearly 40 years ago when first started sailing at the age of 15. My first sailing experience was in an elderly GP14 and then a succession of Enterprises all owned and maintained by my school in North Wales. Very soon I decided I wanted my own boat but I wanted something just a bit different. Looking through the shelves of the school library I found a sailing book which contained pictures of an early "Dandy Grad" sailing on the river Trent ... the self same picture as used by the Class Association when detailing the various design options. This boat looked modern, racy and just a bit different.

I then had to set about persuading my father to make the "investment" in a boat. I wrote off to Mike Noakes for details and prices etc and he had to endure countless questions from this "school boy" up in North Wales. Eventually my father ... rather than saying yes ... gave some sort of innuendo suggesting that were I to do well in my "O" levels he would consider such a purchase. After all boats were expensive and a new Grad in those days cost all of £185; by the time you had added a trailer and various other "bits" the price rose to nearer £350 ... WOW!

So it was that after achieving my grades in 1967 that I persuaded my father to act on his innuendo. I recall that he and I drove from Stafford (where I lived in those days) to Nottingham to visit the yard of Mike Noakes and Wyche and Coppock Ltd. A rambling old mill known as Radford Mill in Norton Street greeted us. I remember walking up an ancient outside staircase to the show room on one of the mills upper floors. Upon entering I was greeted by the splendid sight of a brand new Merlin, National 12 and an OK but no Graduates. Naturally I was a little disappointed until Mike said that he had a shed full downstairs. My father and I went downstairs to what I recall as some sort of out house which was "full of new Graduates" all beautifully varnished. I guess there were six or seven boats there and I was told to take my pick. Back in those heady days Wyche and Coppock produced I believe about 2 boats a week ... they were almost a "stock" item! How times have changed.

I picked a boat although I have to accept they were all identical but recall the expression of horror on Mike's face when I said I wanted it painted black. That he was not having so the boat remained varnished ... a very wise decision!

Clearly the boat had to fitted out and so it was that on Thursday before Easter in 1968 Dad and I drove again to pick up my new boat. Even now I can feel the excitement "... What are you going to call her?" said Dad. Why "Innuendo" of course ... so it was that Graduate sail number 2024 was born!

I always was a bit of a "rebel" and so I had a spinnaker fitted to the boat which I have to say worked very well. I also chose to have Enterprise blue sails ... the boat looked an absolute dream!



Her "maiden voyage" was on Easter Saturday 1968 when I sailed her from Mudeford to Christchurch and back. Innuendo and I spent some four years together and I have many happy memories of racing and sailing the boat out of Tenby Sailing Club every summer. I have one particular vivid memory of sailing at the Nationals in

Saundersfoot when between races in particularly squally conditions we tried out the spinnaker and planed past the then National Champion ... Peter Conway ... with some ease! Do spinnakers work on the Grad ... they most certainly do!

I kept Innuendo for about 4 years before selling her to be replaced by a Fireball. The boat was sold to Robin Elt in Worcester and from then on I lost track of her ... oh how I missed Innuendo!

A chance browsing on EBay found my looking at my old boat on the Auction Site ... I had to have her back! The next time I saw my old boat was in May 2005 and what a sad sight she made ... since leaving my care she had clearly led a very very hard life. Virtually every piece of timber in her hull was absolutely saturated and I guess she was well over 15kgs overweight. The decking had been replaced but not sealed underneath and so this had completely perished. The floor was heavily blackened and elements of the hull "butchered" in a vain attempt to save weight.



If only Innuendo had been stripped down earlier in her life and allowed to thoroughly dry out then perhaps some of the real damage could have been avoided

Restoration

After the removal of all her fittings "Innuendo" was painstakingly stripped right back to the bare wood using a combination of Nitromors, Burning and sanding. The most delicate and tricky job was removing the "West Resin" which had been smeared around the boat in an attempt to seal leaks. Having removed all the years of paint and varnish I wrapped and sealed the boat in a plastic bag (actually 2 King Size Mattress bags) having placed a de-humidifier inside first. The amount of water which came out was truly stunning and it took a full week before no more could be withdrawn. Having done this the true extent of the damage became self evident. Years of water ingress had simply washed away the original glues with joints which had simply sprung open. All the joints were subsequently inspected and re-fixed where necessary. Worst of all was an area so rotten near the transom it simply fell apart in my hands!



I was anxious to retain as much of the original "Innuendo" as I could in the reconstruction but try as I may the rear bulkhead and its supporting structure was beyond it and badly perished.



As far as possible I did not want to mask problems with paint and so I attempted to restore the interior ply colour and remove the staining. This I did with a fantastic "timber bleach" called Net-Trol. The evidence of this can be seen from the following two pictures.



Was someone spying on the Restoration!!!!!!!

Having basically stripped the boat back to the bare bones and beyond I was surprised to find how many of the screws used in her construction were made from simple steel or galvanised steel. The resultant corrosion made them extremely difficult to remove. Also surprising was what I felt the unnecessary use of heavy timber sections

(eg. Around the transom area) and totally the reverse under the mast step. This latter area was beefed up considerably as illustrated to take account of the increased stresses and loading from a new metal mast.



Earlier attempts at re-decking "Innuendo" had resulted in the smooth curve of the foredeck being compromised somewhat. To restore the original shape I glued thin strips of mahogany to the cross beams and carefully shaped this back to the original contour.

I decided to incorporate within the re-build a more modern and up to date decking arrangement with angled side decks and built in buoyancy. By doing this I was also able to remedy the unsightly "butchering" of the transom and dispense with the transom horse arrangement.



Prior to fixing the new deck panels the whole boat was cleaned inside and treated with Epiglass. The original joint between the hull and the front bulkhead had already been found to be suspect as had the scarf joint beneath it. Liberal coating of Epiglass inside the tanks sealed this completely. This was tested by filling the front tank with water and leaving it for two days. Nothing dripped out from underneath and nothing seeped into the cockpit. The inside of all the tanks was then coated with International Danbolin bilge paint. All the joints between the cockpit floor and the tank sides treated with an epoxy fillet for added strength.

Judging by the amount of epoxy daubed around the plate case I felt it was fair to assume that the boat had leaked around the joint. Upon turning the boat over and removing the keel (it virtually fell off due to the original adhesive having "washed out" I was amazed to find that the plate case was fixed with plain steel screws. These had corroded so badly removal was impossible. After discussion with a local boat builder who looked at the problem it was felt that the joint between the hull and the plate case was, in the main, good. Rather than remove the case the area inside the case was cleaned, sanded, and a groove chiselled out to be filled with resin. Twelve large stainless steel screws were then screwed (6 either side) through the keel and into the case having moments earlier trowelled lashings of resin into the joint. At this point I had to take care to remove surplus resin otherwise the centreboard would have fouled. On the inside, in the cockpit, I similarly cut out a small groove around the joint prior to treating the whole area with a thin coat of Epiglass. Having earlier purchased two lengths of mahogany quadrant moulding I planed off the back to leave a flat and then carefully cut this to size. Since I knew this would

have to be pinned in place I drilled pilot holes at 3" intervals to take brass panel pins. Having mixed up a really thick resin and glue mix this was applied liberally in the joint between the plate case and the hull. I then immediately offered up the quadrant moulding, pushed it firmly against the front bulkhead and quickly knocked the pins in place. The resin mix oozed out but I feel confident enough remains behind and within the joint to provide total integrity. The surplus resin was then quickly wiped off with solvent so as to leave the joint you see below.



Having carefully coated all surfaces with Epiglass I discovered a small area of "soft" ply just aft of the rear bulkhead. This did not extend through to the outer skin so the top layers of ply were carefully "peeled" back and a new section of ply bonded in pace with resin (see picture above).

I am NOT a boat builder and whilst the above was well within my scope I would not attempt to re-deck the boat ... this work I entrusted to a professional! I thought long and hard about whether or not I wanted Sapelle decking or standard "Rose" cut veneers. Dave Butler's words about a boat looking like an internal door constantly echoed in my head but the Sapelle won in the end! Sapelle with Maple inlays ... sounds good to me!



Starboard Tank side in place.

Original thwart re-laminated with Maple



Strengthening Web Support under thwart

Floor cleaned back to original



Hull completed ready for decking

Fore deck fitted with inlays



Compare with above photo to show stain on transom removed

Re-decked and ready for finishing

During this process ... which proved particularly tricky ... I wanted the decks to be secured WITHOUT using any pins try and hide all the "end grain" ply. Eventually this was achieved but not without rigging up all sorts of complicated "wedges" and "supports"!



When completed using contrasting strips of Maple and Mahogany the result certainly looked pleasing. The gunwales were laminated from four alternating strips of Mahogany and Maple. These are 40mm wide at the maximum tapering away at either end of the boat to virtually nothing.

Modifications to the bow

After stripping the fittings from the hull I noted that the two sheets of ply which formed the side panels were simply "but jointed" together at the bow. As with the rest of the boat, neglect over the years, had resulted in this "joint" separating. I gave some thought as to how to best resolve this situation before hitting upon the idea of creating an "Alpha style" profile. I simply sliced off some two inches of bow section and grafted on a solid mahogany stem which was fixed using both Epoxy resin and screws.





This did involve a degree of filling so as to ensure the correct profile was achieved.

Epoxy Coating, Painting and Varnishing

Much has been written over the years by those far more knowledgeable than myself. In common with all such advice I agree that good preparation is the key. You MUST ensure a flat, smooth and fair surface otherwise the rest is a waste of time.

Before applying colour coats to the hull I felt that I should seal and finish the decks and interior first since removing paint from new wood can be a nightmare. Therefore after the re-decking process had taken place and before the boat was turned over to carry out repairs to the hull the decks were treated with two coats of Epiglass ... the cockpit area was not treated at this stage since there were still alterations and repairs to carry out.





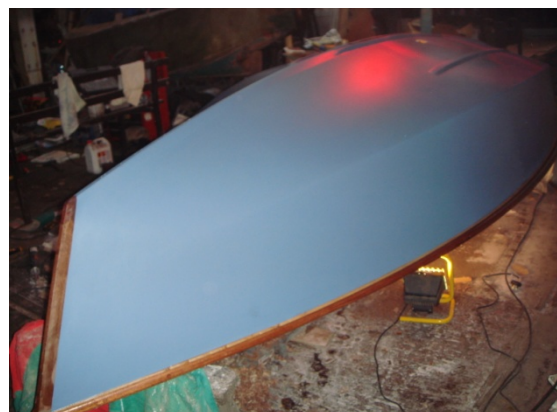
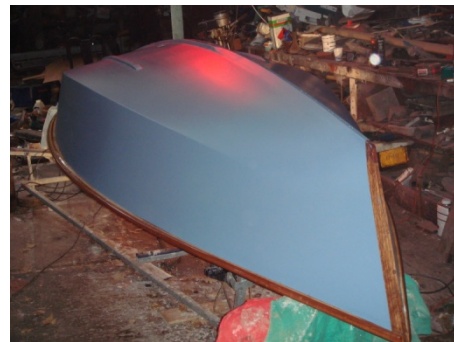
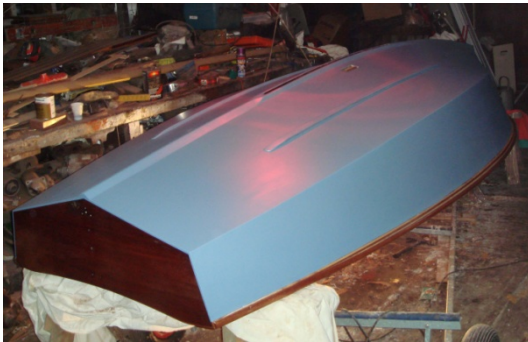
Stripping the hull back to bare wood took some time but I can thoroughly recommend the new “breed” or random orbital sanders. Some 40 years of sailing had taken its toll on the hull and so it took a great deal of effort to get back to a smooth fair surface. Once this was done the whole of the hull was flatted back by hand and the area wiped clean. A thinned solution of Epiglass was then mixed with glue powder mixed with 50% thinners which I painted on all the joints on the hull. The bone dry timbers soaked this up like a sponge and so for good measure (in reality I had mixed up too much solution!) I went back again over all the joints. This I allowed to dry for a few hours before coating the hull with a 20% thinned coat off Epiglass with no additives. This was allowed to dry for 24 hours before the process was repeated with two un-diluted coats of resin which were allowed to cure for several days.



At this point I tried to be a “bit clever” and introduce some “discreet panel curvature” into the hull by mixing Epiglass with filler ... what a disaster ... the resultant “mess” ended up like treacle toffee and never fully cured. A lengthy chat with Adrian Baker offered advice which meant stripping off the glutinous mess and starting again! In essence, I guess, I should have taken more care about the critical measurements involved with the mix and THOROUGHLY READ THE INSTRUCTIONS! The boat was heated from above and below (see the “red” glow on the pictures below) and the surface heated with a hot air gun. This proved critical to achieving the correct result which after a further two coats of epoxy and the surface dents and “dings” filled with International “Watertite Epoxy Filler” the boat looked like this:-



The boat then received two coats of international primer and at last "Innuendo" was starting to look very good indeed ... her re-profiled keel and varnished stem and transom really did look rather smart.



I was advised by international that Epiglass cures slightly differently to conventional varnish and should be left for a few days to harden. However since it provides no UV protection it must not be left in sunlight. I debated long and hard about the use of "two pack poly" and ultimately elected to use International Goldspar one pack. To get a really good finish with two pack can be a bit tricky, very wasteful, and the resultant finish prone to cracking.

I did follow the instructions and apply one thinned coat although I could not really see why since the whole surface was already sealed with resin. I then applied a further 3 coats relatively quick succession with minimal rubbing down between coats. My OWN experience ... which does not come from a text book ... tells me that providing the previous coat has not been allowed to dry for more than a day or so the mechanical bond between coats is fine. Lots of sanding is required if (a) you have loads of brush marks or (b) there are other imperfections in the surface to be coated. All sanding then does is remove the "body" you are trying to build up.



To get a really deep shine there is no substitute for the number of coats ... 5 – 7 to get a really deep shine. However unlike the first three coats the last three are rubbed down really well using something like 1000 grade wet and dry. You MUST ensure that the whole area is absolutely flat and mat ... no gloss ANYWHERE! In that way you know the whole area is covered. OK, you could use coarser wet and dry but that is simply removing the body you are trying to build up SO DON'T.

Secrets of a good finish

DON'T use a new brush, DON'T overload the brush, work on a small defined area at a time and remember to keep one "wet" edge and NOT several. When applying by brush quickly apply the varnish with the grain and once applied go across the same area at 90 degrees (across the grain) before laying off from right to left (for right handed individuals), with the grain again, and with the brush angled at about 45 degrees using just the tip and VERY light pressure.

Alternative 1 ... and please don't be alarmed ... purchase a cheap foam roller and plastic paint tray. Detail in all the edges with a brush and simply fill in using the foam roller (**DOES NOT** work for two pack poly). Simple roll it on taking care not to apply too thickly and **WALK AWAY**. Why do I say "walk away" ... well ... immediately you apply the varnish (or paint) you end up with a surface that looks bubbly and cratered and you will want to go over it and over it ... DON'T! Walk away and watch the TV and return a few hours later. Providing the ambient temperature is correct you will find that all those surface blemishes have simply pulled out and you are left with a perfectly flat and smooth finish with absolutely no brush marks! Many many years ago I remember doing an Osprey for the Boat Show in London and being asked how I obtained the finish ... nobody believed me when I told them!

Alternative 2 ... try a simple paint pad; Ronseal I believe produce a new product which I guess may well be ideal. Paint pads are certainly good for those awkward places behind and underneath other components.

For me I use a combination of all three ... brush, roller and pad. Once the whole area covered is perfectly dry ... 7 – 10 days ... take a sheet of brown wrapping paper and some paraffin and rub over the whole area **WITH THE GRAIN**. You will think you are getting nowhere but these are all tips given to me by the guy from International Paints who HAND painted Onassis' yacht! Believe it or not but paraffin and brown paper are two extremely fine abrasives which when used together burnish out small blemishes and dust. Once finished polish the whole area with a good quality car wax!

The hull is treated in much the same way as the decks 5 - 7 coats of high quality Yacht paint ... **NOT B&Q's finest!**

I am by no means an expert but the above works for me and when I did sail competitively my boats were always known for looking like a grand piano!

Once I was satisfied with the paint finish I then set about putting the boat back together and then replacing the "Innuendo name logo", keel band and slot gasket.



Picture showing extension for jib track.



The fittings and new bailers were then installed and I felt it was time to see if the "old lady" still floated ... she did!!!!



And not a drop of water leaked in:-



The next stage was for me to replace all the fittings ... actually I retained the stem fitting and the mast step ... and essential set the boat up for "single handed" sailing which was the main reason for both the main and jib sheeting arrangements shown above. This photograph also shows the re-profiling carried out to the plate case top and the way in which the colour has been restored back to normal on the floor.

With the boat yard in Chester where I was carrying out these repairs having been sold I was forced to move Innuendo back to a temporary home having rented out my main residence in the UK so temporarily she would have to live outside.



However a brand new cover has ensured she kept safe and dry!

With it now being nearly seven years since this whole process and having been given a gentle "nudge" by Stewart Eaton about it being the "60th Anniversary" of the Class this should be the only incentive I need to complete the task and get the "Oldest, Newest wooden Graduate" back on the water!

Ancillary Items

The mast and sails were essentially shot (although for "old times sake I retained the original Light Blue Windward Set) and so were sold and replaced with a new Needlespar Mast and suit of Edge sails and then subsequently with the new "Rooster" large mainsail. The boom, as can be seen from the picture below, was the wooden original and had been tied down so hard in the boat it had adopted a permanent bend ... great for spilling wind on a starboard tack!!!!

The trailer was stripped down and sandblasted before being correctly primed with both galvanised paint AND red oxide and then painted with Blue Enamel. A new mast support was fitted together with new rollers to support the boat.

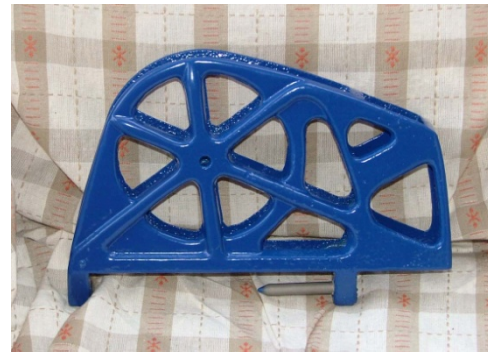


The trolley was virtually brand new and so needed no TLC.

Foils ... the centreboard was an original plywood affair and I suspect original. It was badly twisted and so replaced with a new laminated foil from Chippendale Boats on the South Coast. Beautifully constructed from laminations of Mahogany and ash with a tufnol replaceable tip and an epoxy resin bearing for the centreboard bolt. The rudder too was original and solid mahogany but had been coated in something very very tough. It took hours to strip but now, after eight coats of International one pack polyurethane looks like new.



The rudder stock too was showing its age and so this too has been restored.



The Nylon Coating on the Stock was badly damaged and so I took the entire component to a local "Metal Refinisher" who removed the old coating and shot blasted the unit which was then electro-statically powder coated as above.

Fitting out and re-rigging.

Whilst I would like to think the end result of all this will be a boat which looks well ... "pretty even" ... I would be surprised if it were ever going to be "Championship Winning Material"; whilst she is still clearly an original Wyche and Coppock "Dandy-Grad" she is of course very much 44 years old. I feel sure that in almost all respects she will be better and stiffer than she was when new having the beefed up "box structure" of two side tanks and with the whole boat having been treated with Epoxy resin I have few doubts about the structural integrity. However the design ethos of the Grad has moved on considerably through the Rebel to the Alpha and then on to the Sprinter and now the excellent product produced by Rooster and the Boatyard at Beer. Having said that ... in the RIGHT hands maybe she could perform quite well.

The ONLY fittings I have retained is the mast step and bow plate ... everything else will be / is new. However I have set the boat up very much with single handed sailing in mind as and when I get her to what I hope will be her new home in Spain. The Sheeting will be via transom to centre main as appears to be favoured in the class (I actually think I have forgotten how to sail with conventional transom sheeting) with a "jammer" ... if racing I guess you would remove the jammer. I have positioned the jib fairleads as far inboard as feasible by the addition of a "Mahogany fillet" added to the side tank. Whilst I appreciate that such a set-up may not be exactly 2012 "sailing technology" it is far simpler for use single handed.

All the main controls (Kicker, Outhall and Cunningham) will be led aft and cleated on the side decks with the whole boat finished with a brand new Mast, Boom and Sails ... the new large Rooster main.

Andrew Wilford February 2012