

Fireball Facts - Maintenance. Sheet 3.

Maintenance and Repairs for FRP Boats

- by Richard Wagstaff of Winder Boats.

All FRP boats require little maintenance but they do have to be treated with a certain amount of care. A wipe down with a clean cloth and keeping the cover clean is a good start.

Epoxy resin, with its toughness and bond strength, is unquestionably the most suitable resin for molding lightweight, highly stressed boats such as the Fireball, and brilliant polyester gelcoat is still the best available. These two materials are available in numerous forms, modified to improve their performance and compatibility, and we work with S.P. Systems Ltd. to obtain the best epoxy resin/polyester gelcoat combination. We have been using basically the same resin/polyester gelcoat combination for over 6 years, during which we have come across occasional problems with the micro blistering of the gelcoat under certain conditions of temperature and humidity. The condition is barely visible under daylight and disappears once the gelcoat is allowed to thoroughly dry, so may be aggravated by the use of a non-breathable cover. As with most builders of plastic boats, we recommend the use of a polycotton cover as an alternative to a PVC cover. Having had a boat with each for a year the difference is immeasurable. A PVC cover can cause the boat to "sweat" all the time, and it can never really dry. It is also preferable to leave all other covers and sails on the floor of the boat and not on the decking or thwarts.

Another occasional problem is failure of the bond between the gelcoat and the laminate. This occurs when the joint line between gelcoat and laminate is left exposed to water, usually after damage. The problem is aggravated by stressing of the gelcoat joint line, as with say a fitting pulling its screws and allowing water to enter the gelcoat bond which fails. The solution is to not delay repairs and to use the correct fittings, correctly fastened, and sealed with silicone sealant.

Damage to the moldings should be dried and fully repaired within two weeks, or if that is not practical, then the area should be washed with fresh water and dried fully and sealed temporarily with epoxy until a full repair is possible. I cannot stress strongly enough that simply sticking tape over damage is fatal. The application of 'gaffer tape' is only going to hold moisture under it and cause an even bigger and more difficult repair.

Invisible repairs to gelcoat requires some expertise, but we can supply you with a gelcoat repair kit if you wish to do your own repairs.

Small chips and dings are quite a common form of damage, especially on edges and corners. These are the easiest repairs to do, but if they are not done fast they can spread.

All that is needed on a chip is to file or grind out the damage keeping all the gelcoat edges totally clean at all times. Never wipe over the grinding with dirty fingers. You can simply put gelcoat in a small repair. If the gelcoat is on a vertical surface it can be held in place with some paper tape until it has gelled. Using sellotape or any other plastic tape is not advisable as the gelcoat reacts with the tape and melts it away. Once the gelcoat has gelled (the green stage) it is easy to shape with a sharp chisel or spoke shave and this will give you a good start to the finishing without touching the original gelcoat around the repair.

It is important not to touch the existing gelcoat until you are finishing. The reason for this is the gelcoat layer is very thin and can be sanded through very easily. If you have shaped the green gel next let it cure fully and then you can sand it down with a 400grit wet and reduce the risk of going through. It is also safer to use a small piece of paper on a long wood block, this allows the block to follow the contours of the boat and the paper will only sand down the repair.

Once the sanding with 400grit is complete and the gel is the correct shape, a quick sand with 1200grit over the 400 scratches is all that is needed. You should use clean water for each grade of paper to reduce the possibility of scratching when using the fine paper. Now you are ready to polish the repair. Using a car paint abrasive polish such as 'T-Cut' is fine, and you should apply this to the manufacturers recommendation. If the repair was on an edge such as the case top or thwart, it is best to then coat the underneath with epoxy to fully seal down the edge again.

Foam sandwich panels can be easily dented if subjected to high local pressure. If this occurs but with little or no damage to the glass laminate it can be repaired fairly easily but requires a slightly different approach to a chip. The gelcoat has to be ground away without damaging the glass laminate. There are two reasons for this :

- 1) The bond between the gel and the epoxy can be damaged when dented, so to remove it is the most guaranteed way to repair it.
- 2) A deep repair will normally be hard to make disappear completely because the thick layer of gel will shrink and show up again after some time in the heat of the sun.

Once the gelcoat is ground away you can fill this with a car body filler (such as P38) and then let that set. Sand the filler down to the original shape of the boat with 150grit (approx.). Now sand down an area around the filler about 50mm and check the filler is definitely not high of the surrounding surface of the boat. You can now mix your gelcoat, brush one coat only over the filler and keep the edges as smooth as possible. Let this first coat cure to the green stage. When this has happened brush a second coat to the edge of the sanding, again make sure that you keep it all as smooth as possible so that a minimum of sanding is required. You are now ready to finish your repair as before with a long hard block and a piece of 400grit paper no bigger than your area of new gelcoat.

If you have temporarily sealed a repair with epoxy and it has not fully cured then it is essential to remove all the epoxy as this will inhibit the cure of the gelcoat. The mixing of the epoxy has to be 100% accurate to not affect a polyester resin.

If the glass laminate or foam core has been significantly damaged then I would advise you to take the boat to a professional builder as these type of repairs need a high level of skill. Remember you can always contact us at Winder Boats for more detailed advice regarding the repair of your glass Fireball.

I hope you find this helpful to your winter maintenance routine and wish you all the best in your new profession.

I look forward to seeing you all next year.

Richard Wagstaff

ADVANCE NOTICE SAILBOAT 99

Next year Sailboat 99 will take place on the weekend of 6th and 7th March at Alexandra Palace. As anyone who has been will know this is a "must do" event for all dinghy sailors so put the dates down now in your next years diary - not got one - then ask Santa to bring you one! As always help over the weekend will be gratefully appreciated so please contact Rachel or Jackie if you can give a hand.

SPECIAL NOTICE TO ALL FLEET CAPTAINS

The UKFA Committee would like to invite all Fleet Captains to an important meeting at Sailboat 99. Please make every effort to attend and if you cannot please ask someone who is going to the show to represent you.

We would also like to invite clubs which do not have a recognised fleet captain to send someone who is a member of the Association to act as their representative. This is the ideal opportunity for you to tell us what you want and for us to let you know what we are doing.