Over 45 Years in Business
"Ask Dr Gel"
15 Years in
*Boating on the Hudson*

# Ask Dr. Gel

## by Dave Weakley

**Dave Weakley is the owner of American Boat Restoration and has been keeping boaters afloat in fine trim and good repair for over 45 years.**

"Email me or call me with your questions! I'll be happy to help you out"
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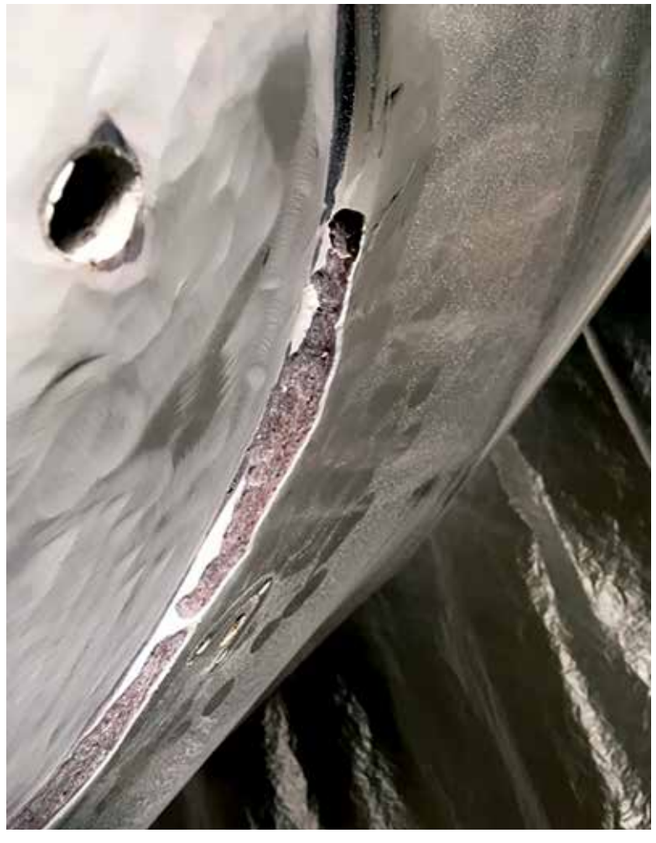
# Air Voids Must Be Filled

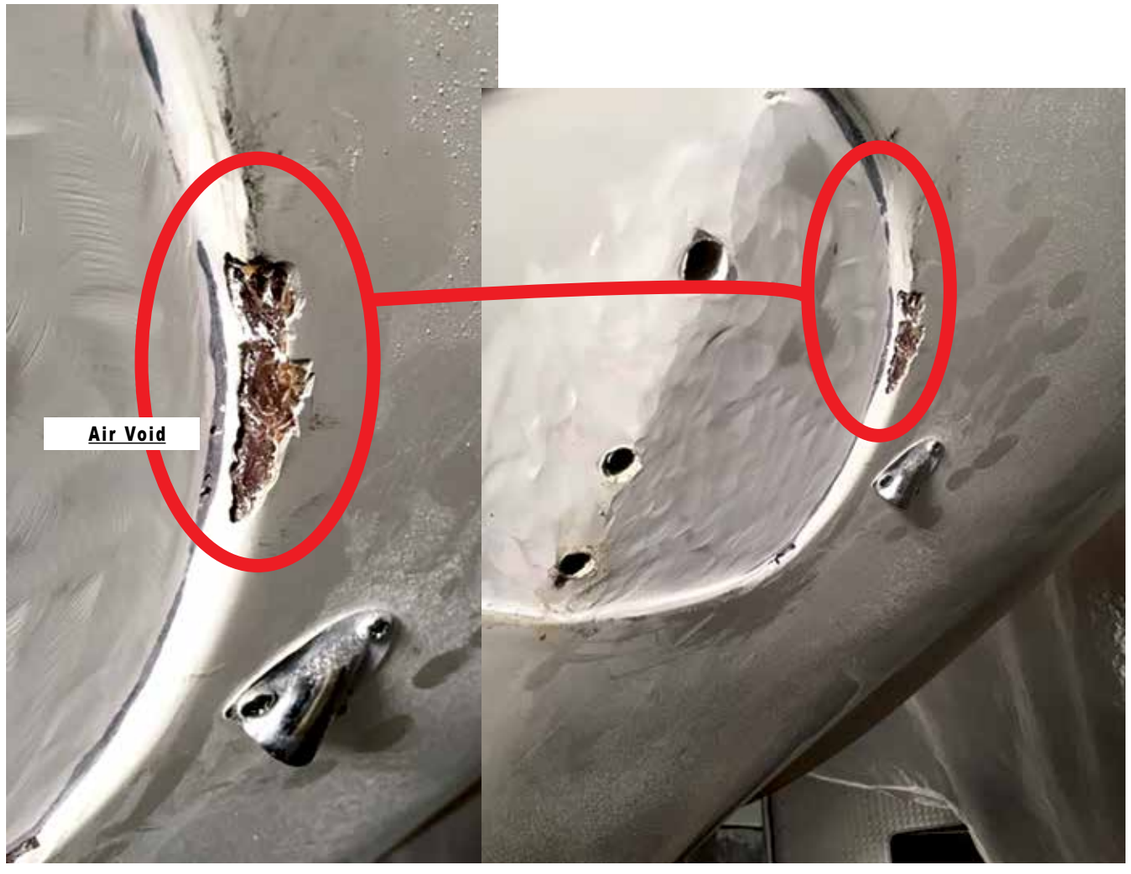


***"I was cleaning my boat and discovered a small hairline crack in the gelcoat in the corner of the cockpit. I pushed on it and the gelcoat broke through leaving a hollow spot and I can see fibers underneath. Can this be repaired? Tim O. from Hudson, NY***

What you have is called an AIRVOID and yes, it can be repaired. Airvoids develop during the boat building process.

Let's not mistake an airvoid for an osmotic blister. An airvoid remains flat just waiting for someone to stick their finger through it. Osmotic blisters appear as rounded and protruding bumps normally found below the water line. Sometimes they are called "boat pox".

A fiberglass boat is made of many layers of reinforcing fabrics and core materials typically bonded together with a polyester resin.

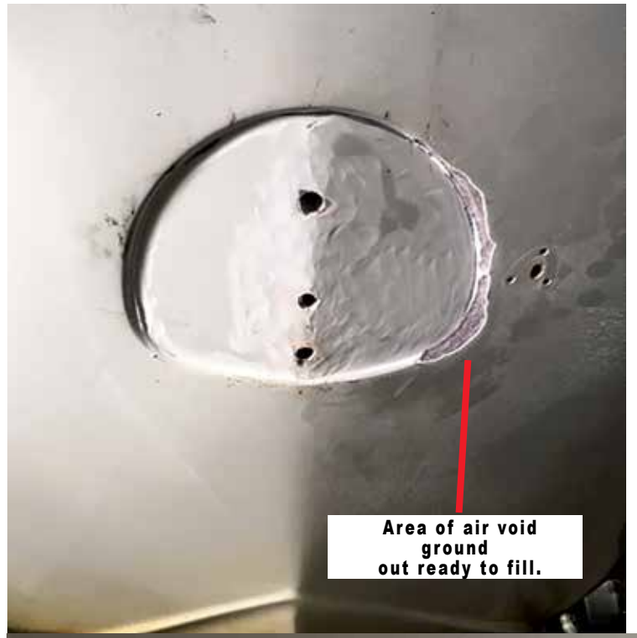



***The basic construction process…***

A mold release is sprayed onto the inside of the hull and deck molds. Next layers of gelcoat are sprayed on. Following the gelcoat, laminate layers of fiberglass mat, cloth & resin are applied. A fiberglass chop strand & resin mixture is also applied using a "spray chop gun". Core materials and final laminates finish the construction.

The birth of an airvoid begins when air gets trapped between the gelcoat and the fiberglass layers typically where there are 90 degree angles e.g.; cockpit corners, bottom edges of the hull, along the body lines of the hull called chine,strikes, transom corners, etc. During the "lay up" process the fiberglass needs to be pushed into these areas to eliminate air pockets. Some may call this important step caulking. If time is not taken to properly caulk, the result is an air void!

I hate to be the bearer of bad news, but often airvoids are bigger than they appear. During previous airvoid repairs, I have seen an airvoid begin as a tiny piece




of missing gelcoat run half way down the side of a hull. A nickel size airvoid can often become the size of an orange.
The repair method for airvoids is to grind out all the loose areas, fill with fiberfillers, sand and apply new gelcoat.
AIRVOIDS are not a structural problem but should be addressed especially if they are below the waterline. Why? Because gelcoat is the protective coating over your fiberglass and once the surface is broken it exposes the fiberglass to the elements and is susceptible to absorbing water.
When you are looking to buy a another boat here's a tip to help look for airvoids. Put on a thin cotton glove and run the tip of your finger along sharp angles, the chine, along where the rub rail is fastened to the boat, base of the seats, dash board, cockpit area, curves, corner of the stairs, corners in the ladder storage area, etc. Don't be afraid to put some pressure on it. If there is an airvoid, best to discover it sooner than later.