

2006 • Over a Decade with Dr. Gel • 2017



Ask  
Dr. Gel

by Dave Weakley



Dave Weakley is the owner of American Boat Restoration and has been helping Northeastern boaters keep their boats in fine trim and good repair for over 40 years.

"Email me or call me with your questions! I'll be happy to help you out"

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Gelcoat Cracks and Delaminating

***If you think gelcoat cracks and delaminating on a boat are no big deal here's something to consider: Water intrusion into the deck, hull or stringers is something that could cause many problems and be expensive to repair!***



Loose Gelcoat falling off hull  
Note excessive thick Gelcoat.

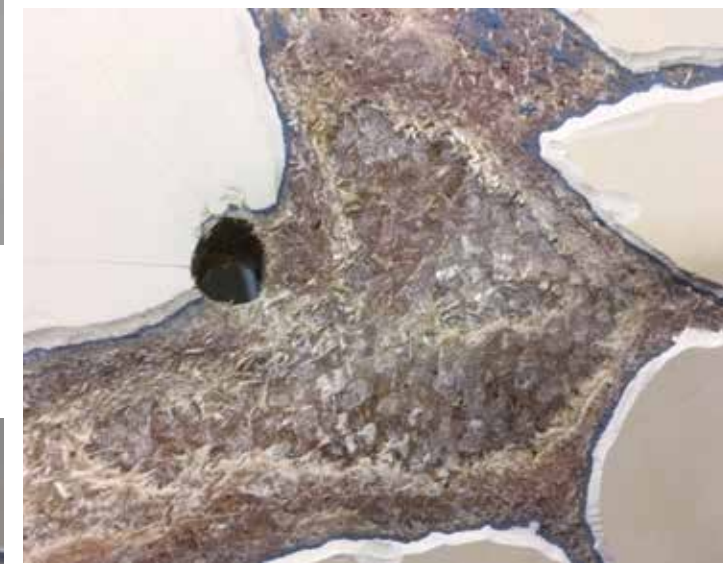


Area of rudder - loose Gelcoat ground off.



Strut area - loose Gelcoat ground off revealing soaked up laminate.

What could be the cause of this type of damage? It could be a sign of impact damage, damage not properly repaired in a timely fashion, excessive gelcoat thickness applied when the boat was built, flexing of the vessel, headers and other main structures detaching from hull allowing stress cracks followed by water intrusion, drilled holes not sealed, leaving the boat uncovered, water vapor seeping through the porosity in the gelcoat causing moisture to build up behind the gelcoat. Moisture problems is another cause in wood coring such as plywood, foam and balsa and can absorb and spread by wicking. The moisture can create rot, adding weight and compromise structure strength. Eventually it could weaken important hardware and fittings such as engine mounts and bolts, rail fasteners, cleats, hinges, etc.



Close up. Strut area. White areas indicate bad laminate.



Rudder and strut area repair complete.

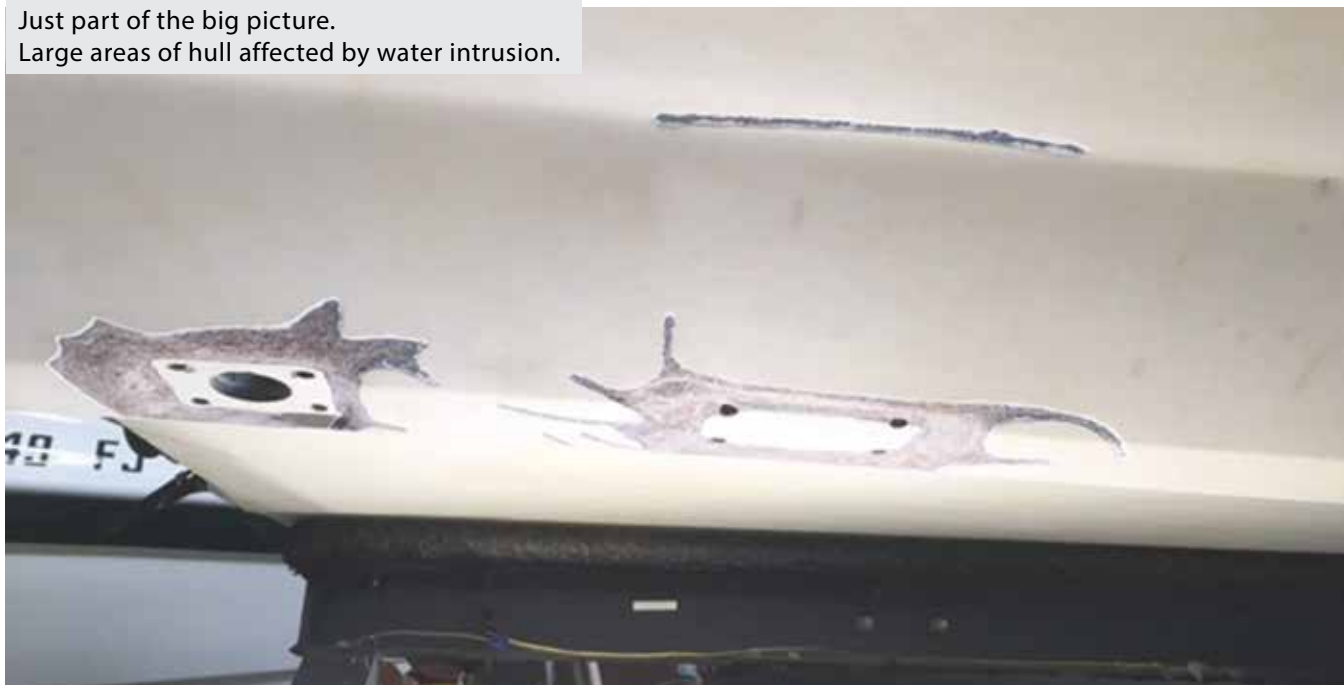


3' elongated delaminating Gelcoat where boat rested on bunk. This was hidden from view.

The problems shown in the photos of this boat are caused by excessive gelcoat. To my surprise the boat was built by a highly respectable and very experienced manufacturer. The gelcoat on the hull was actually falling off and the start of blisters were apparent. Normally blisters are evident first followed by cracks that connect the blisters. This allows water to go through the gelcoat speeding up water intrusion into the laminate.

The repair method in this situation required scraping off all the loose gelcoat first by hand. I used a putty knife with very little effort. I scraped until I found good adhesion. After the loose gelcoat was removed I examined the laminate. Good laminate has a deep purple color and shows healthy laminate. The areas that are white indicate bad laminate and I had to keep grinding until good is revealed. After the grinding was complete the area was layed up with epoxy resin and heavy biaxle fiberglass mat. It was then ground to shape and additional epoxy fiberglass fillers were applied. Next step was sanding and recreating original body lines. The areas were prepped for epoxy barrier, sanding with 80 grit and then the barrier was applied. Epoxy barrier was chosen to slow down any more potential water intrusion hoping to extend the life of the boat.

Just part of the big picture. Large areas of hull affected by water intrusion.



### Did you know?

The boot stripe placed along the water line on your boat is a nice attractive accent. It also will quickly bring to your attention that your boat is not floating evenly in the water greatly indicating the boat could be taking on water. If the boot stripe is uneven as it floats in the water immediately check your bilge, thru-hull fittings, check items stored and be sure to balance the weight of what's on board evenly. If you don't have a boot stripe look for a uneven scum line. It could possibly indicate there is a problem. Be sure to have an adequate running bilge pump and keep drain areas clear and free of debris!

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