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BOAT DECK FAILURES

MORE AND MORE DECKS ON SPORT FISHING BOATS ARE FAILING…WHY?

There are sometimes many reasons, but what is most prevalent in this investigator's eyes is the over stressing. The decks of newer sport fishing boats have fiberglass stringers (the ribs of a boat) or wooden stringers encapsulated in a fiberglass covering attached to the bottom of the deck. This gives the deck the structural integrity necessary to sustain the design loads induced from wind, water and certain accessories. The deck is then attached to the hull by screws 6" on center and a polyurethane or equivalent sealant is applied to add additional strength to keep the water out.

What most sport fishing boats have is either a factory or dealer installed T-top that attaches directly to the deck by bolts. What the T-top does to the deck is to create an additional force downward and upward depending on the wind, speed and size of the waves. A horizontal sail, the T-top collects wind like a sail either pushing down or pulling up directly on the T-top support arms. The degree of stress generated is directly proportional to the speed of the boat, direction and speed of the wind and the size of the waves when the boat impacts the water. Imagine holding your hand outside an automobile window with the palm facing the wind at 30 or 40 miles per hour and feeling the effects and required strength. A typical hand is about 5 inches by 7 inches in diameter. Now consider the push and pull force that is generated by a T-top that is maybe 5 feet by 7 feet in diameter, or larger. The deck is subjected to the push and pull that is transferred to the attached stringers and where the hull is attached, much like an accordion effect. There will also be evidence of spider cracking on the fiberglass deck at the flex areas. In those areas, the stringers are most likely damaged or broken.

Usually the first indication there is a failure is a deck/hull separation. Screws will be present outside the hull and a scraping of the screw threads will be visible against the fiberglass. The deck/hull joint will

be open and out of place. This can be a serious situation for the boater depending on where the boat is and the weather conditions. What the boater has is two halves of a boat that has lost a substantial amount of structural strength with the potential to take on water. The deck is essentially flapping up and down on the hull.

The good news is, when this investigator has shown to the boat manufacturers what caused the failures, they have stepped up and taken care of the repairs. Even when the boat has been out of warrantee. Far too often the insurance company will pay for the repair, which can be several thousand dollars without even considering that this is not an impact created failure, and if the boat was properly designed and built, it should not fail.

by Thomas Bailey

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