

CORE CHECK

A surveyor will sound a cored hull and deck with a phenolic hammer and use a moisture meter to check for bond-line failure and water intrusion in cored hulls, particularly around hardware fittings and areas of high loads. Inspecting the hull's dark recesses, or, in the case of a new boat, touring the factory, can reveal further clues to hull integrity. Unfortunately, interior liners often inhibit a thorough inspection.

1. Check hidden recesses where structural components and bulkheads bond to hull and deck. Are there signs of puddling, bubbles, dry laminate, tabbing flaws, or excess resin accumulation?
2. How are through-deck and hull penetrations handled? Low density foam or balsa should be removed and filled in with higher density material.
3. Check for voids and note the quality of glasswork where the core terminates (tapers into solid laminate skin) in the hull or deck.
4. Ask to see a laminate plan and core samples. Note where core has been removed and filled in at high-load areas such as the keel, rudder, windlass, sail tracks, windlass, etc..
5. Check skin thickness by inspecting the thickness of an inward turning hull flange (bow locker offers good access). Thin skins may show signs of being beefed up with more laminate to accept mechanical fasteners.



A Tartan hull takes shape at the factory in Fairport, Ohio. Epoxy-impregnated, unidirectional E-glass fabric followed by ATC Core Cell foam and additional laminates of E-glass are vacuum-bagged at 1 atmosphere. The hull is then cured in a temperature-controlled oven.



A laminator applies a layer of chopped strand mat to the underside of a cored cockpit well (inverted here). The core is bedded in a resin-rich mixture of chopped strand mat. Hand-lamination requires more resin to eliminate voids. Although reaching panel consistency is nearly impossible, careful application can result in a strong, durable hull.