



Hard Body

We install a cool-looking hardtop on our new Pursuit 2460 Denali project boat

Story and Photos by Jim Hendricks

Among the most basic human needs is shelter. On a boat, there are two basic ways of fulfilling this need — hard shelters such as cabins, and soft shelters such as Bimini tops with canvas and isinglass enclosures.

You can also combine hard and soft elements, and that's what we decided to do on our new project boat — a 2002 Pursuit 2460 Denali. Our first addition to this boat was a hardtop from Atlantic Towers in Barnegat, New Jersey (800/361-8200; atlantictowers.com).

The 2460 has a nice cuddy cabin, but we wanted some weather protection for the helm, and a hardtop offers a number of advantages over a canvas enclosure. For one, a hardtop is sturdier than a Bimini. What's more, its husky metal supports and fiberglass top offer places to mount accessories such as spreader lights, speakers, antennas and electronics. It also gives you a place to hang a canvas-and-isinglass enclosure — a project we are planning for early next year.

One of the downsides of a hardtop is that it is heavier than a Bimini, and that's why some boaters go with half-towers that feature hardtop-like frames, but with lightweight canvas tops.



■ **STEP 1:** Editor Jim Hendricks and Atlantic Towers' Steve Tull unbolt and unpack the hardtop from its shipping frame. Tops are delivered via common carrier, and you may need a neighbor or two to help you move it around — shipping weight is 300 pounds.

This minimizes mass, but also negates many hardtop advantages.

Atlantic Towers has resolved the weight issue by creating lightweight fiberglass canopies for its Special Hardtops line.

President Steve Tull claims that this saves 33 to 50 percent in weight over fully molded fiberglass hardtops. To create the look of a molded top, the upper aluminum structure is powder coated to match the boat's ivory gelcoat, while the uprights are brightly anodized.

Atlantic is one of the few companies that specialize in shipping ready-to-install hardtops, T-tops, radar arches, half-towers and wakeboard towers to do-it-yourselfers. So we asked them to send us a hardtop, then show us how to install it. The company supplies full instructions with each structure, but here's our 22-step version...

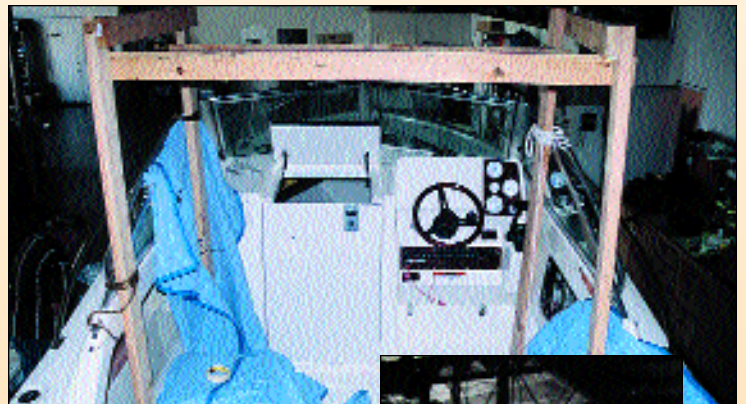


■ **STEP 2:** After lifting the top from its shipping frame (a two-man job), we carefully cut away the protective shrink-wrap. We saved the shipping blankets. These came in handy later.



■ **STEP 3:** Universal mounts (lower right foreground) are included with the hardtop — but not mounting bolts, nuts and washers. We also ordered some accessories, such as rod holders and spreader lights.

■ **STEP 4:** To gain access for through-bolting the hardtop mounts, we removed the side panels of the 2460 Denali. To prevent accidentally tearing the seats, we also removed most of the upholstery, then put down the shipping blankets to protect the rest of the interior.



■ **STEP 5:** Using 2x4-inch pine studs, we built a frame to support the hardtop so that the lowest aluminum crossmember was 75 inches above the deck to accommodate our tallest staff member. We used dock lines to lash the frame securely to the boat.



■ **STEP 6:** Using a pipe cutter, we removed 4 to 6 inches of excess length (used to bolt the top to the shipping frame) from each of the four legs. ►



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■ **STEP 7:** We lifted the top onto the wood frame to make the final measurements. Hoisting up the hardtop can be done with two people, but four makes it easier. Note that we wrapped the ends of the legs with shrink-wrap to prevent scratching the gelcoat.



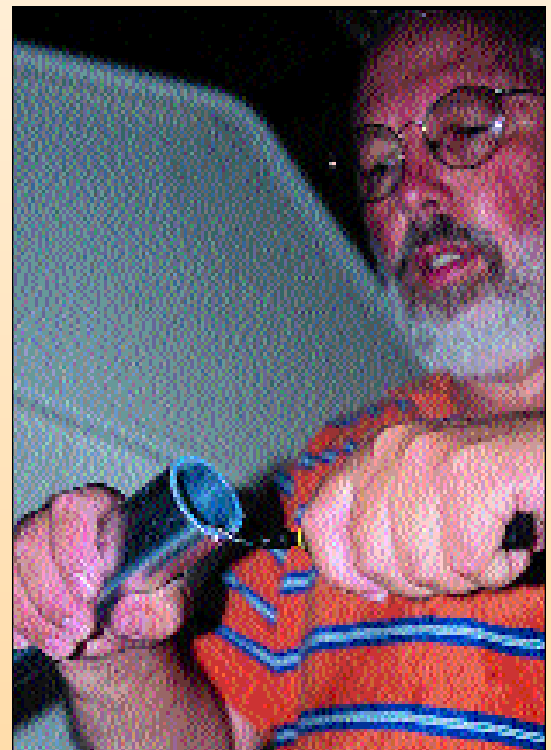
■ **STEP 8:** To make fine adjustments to the height of the hardtop, we cut wedges from scrap wood and gently tapped them into place to square everything up.



■ **STEP 9:** Once we were happy with the position, we held up the universal mounts to determine where to make the final cuts in the legs.



■ **STEP 10:** To trim the legs, we tilted the hardtop back, scored each with the pipe cutter (protecting the upper section with masking tape), then cut straight through with a sharp hacksaw.



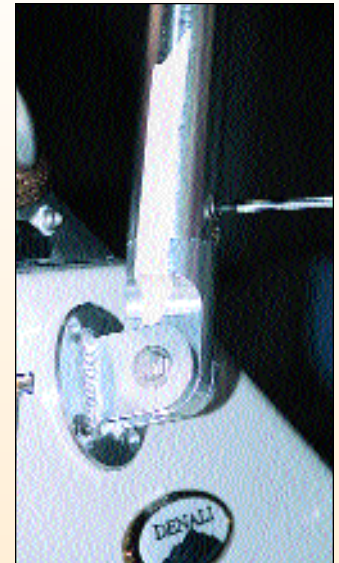
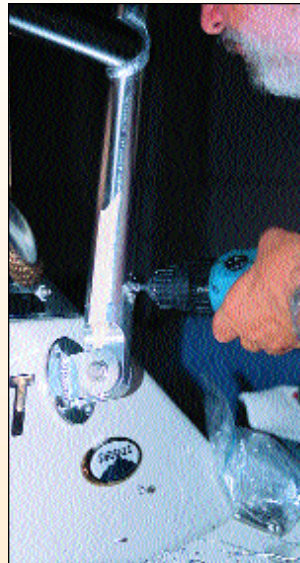
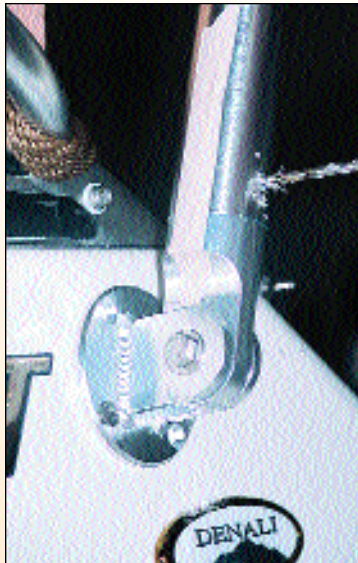
■ **STEP 11:** We used a de-burring tool to clean up the final cuts.



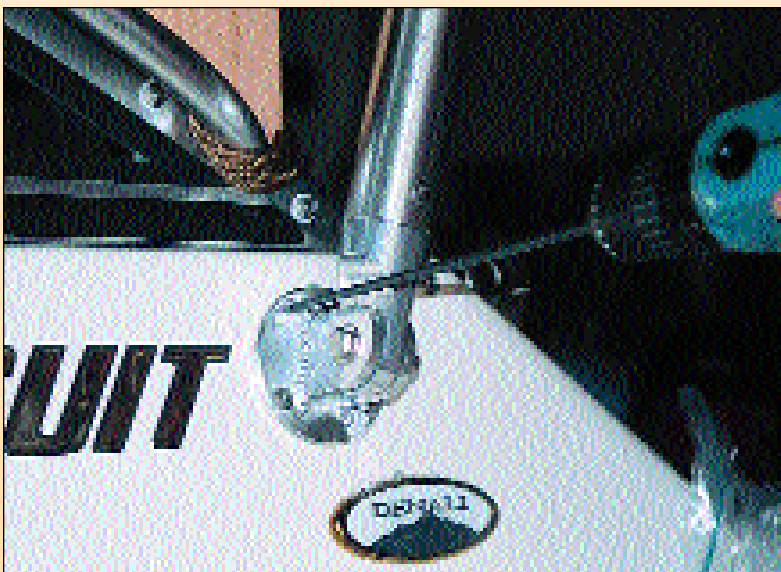
■ **STEP 12:** We assembled all of the universal mounts, using the supplied nylon washers to keep the pin and pads from galling.



■ **STEP 13:** With the hardtop repositioned on the wood frame, we dry-fitted the port-aft leg (the first one we installed) with a universal mount. Then we drilled two of the four mounting holes for 1/4-inch-diameter mounting bolts. We used a 12-inch-long drill bit to prevent the chuck from marring the mount assembly.



■ **STEP 14:** With two mounting bolts in place, we drilled, then countersunk and tapped two 1/4-20 holes (90 degrees from each other) through the leg and into the pin of the universal mount.



■ **STEP 15:** We drove in the two set screws to attach the leg to the pin, then drilled holes for the other two mounting bolts. We dry fitted everything in preparation for the final installation.



■ **STEP 16:** We disassembled everything, vacuumed up the aluminum and fiberglass shavings, and cleaned all surfaces with denatured alcohol. ▶

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■ **STEP 17:** To permanently attach the mounting pins to each leg, we mixed up a batch of Marine-Tex Rapid Set epoxy. We also used Loctite to help secure the set screws.



■ **STEP 18:** To create a watertight seal for each mounting pad, we applied BoatLife clear silicone sealant.



■ **STEP 19:** We fitted the pins to each leg and reinstalled the set screws. Note the excess epoxy, which we cleaned up before it set.



■ **STEP 20:** Using the supplied backing plates (seen here from inside the hull), we installed the oval-head 1/2-20x3-inch mounting bolts, washers and locknuts. This is a two-man job.



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■ **STEP 21:** *Once the port-aft leg was secure, we moved progressively to the starboard-aft, port-forward and starboard-forward legs, rechecking measurements before each installation.*



TIME AND MONEY

So, what did it cost and how long did take to install our hardtop? Here's a cost breakdown:

Atlantic Towers Special Hardtop	\$2380
Radar Antenna Mounting Plate	\$75
Powder-coated Top Frame	\$150
Shipping (New Jersey to California)	\$816
Stainless Mounting Bolts, Washers and Locknuts	\$12
Marine-Tex Rapid Set Epoxy	\$10
Loc-Tite Blue Thread-Locking Compound	\$5
BoatLife Silicone Sealant	\$10
Ten 8-foot 2x4-inch Studs	\$25
Drywall Screws for Assembling Studs	\$3
TOTAL	\$3486

To install the hardtop using standard tools took two men 12 hours, which included stopping to shoot photos and take notes. If you are contemplating this do-it-yourself project, count on devoting a full weekend.

■ **STEP 22:** *With all of the legs secure, we carefully dismantled and removed the wood frame. Now we're ready to get a canvas-and-isinglass enclosure.* 🛠️

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