



Chesapeake Tartan 30 Association

MAINTAINING HULL & DECK SHAPE

Juan Perez, T-30 #292, *Celeste*, January 1980*

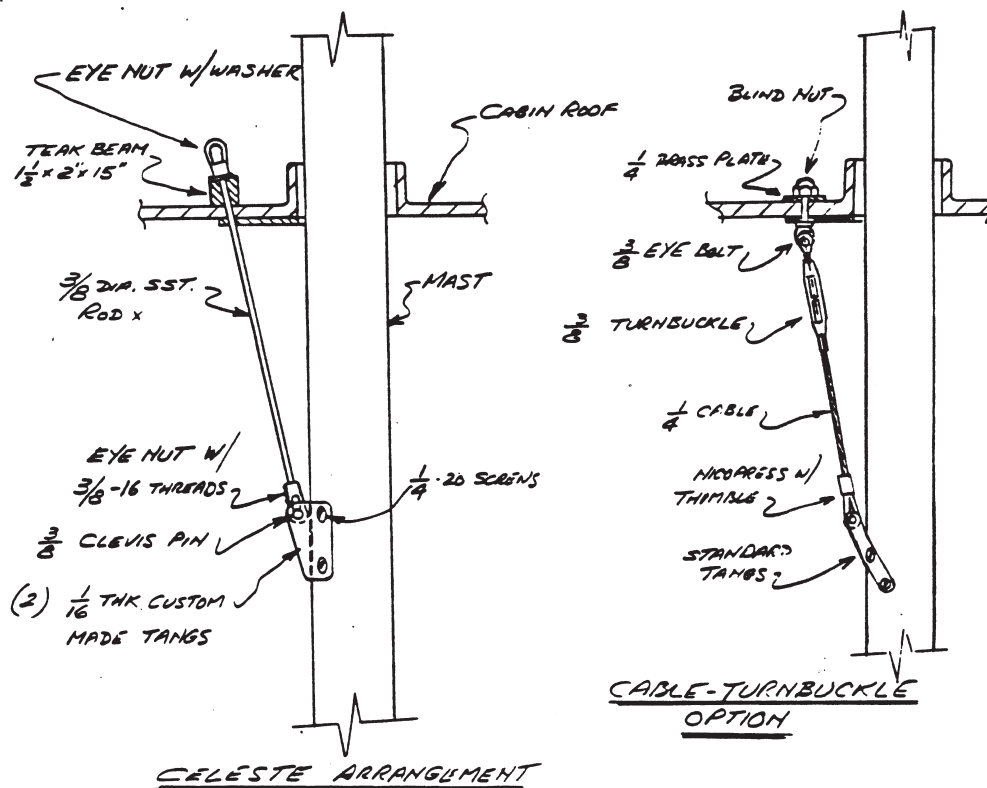
Prior to my second trip to Bermuda**, the rigging on *Celeste* was completely inspected and in some areas improved. One of the improvements which could be beneficial to every Tartan 30 skipper is a simple device used on old wooden boats as well as adequately designed fiberglass boats today. The device is a rod or cable connecting the top of the cabin to the mast. It helps to minimize the deflections of the hull and deck caused by rigging tensions (turnbuckles and wind loads). When the rigging gets taut the hull wants to become narrower, the bow and stern tend to elevate — and so does the cabin top, especially at the mast area. This is where all of the forces are concentrated. To counter this I used, in *Celeste*, a $\frac{3}{8}$ " diameter rod of stainless steel, approximately three feet long. The rod goes through the cabin roof behind the mast and is secured to a teak cross member on top of the cabin to distribute the load (see *Celeste* Arrangement, on figure below).

Inside, the other end of the rod has an eye nut and is rigidly attached to the mast by four screws. I installed it with the rigging completely loose and the rod had a slight tension. As I tensioned the rigging I could "play the violin" with the rod as the shroud tension was increased. This meant that the coach top was trying to flex upwards. Another way to do it with the same results, for example, is to use a steel cable with swaged fittings and a turnbuckle to adjust tension.

Note from Lee Greenbaum, T-30 #90, *Cloudsong*: I basically copied Juan's concept, with one exception. I used a $\frac{1}{4}$ " brass plate, approximately 12" x 12", with a cutout for the aft portion of the mast partners (see Cable-Turnbuckle Option, on figure below). This was through-bolted with four bolts. The plate also serves as a base for two blocks to lead lines aft.

* Originally published in *The Hook* (newsletter), and later in the *Tartan 30 Manual*, both published by the Chesapeake Tartan 30 Association

** Juan participated in the Single-Handed Race To Bermuda (starting from Newport, RI) several times, and did quite well in these races.



JUAN PEREZ

November 2000 note from Brad Armendt, T-30 #282, *Empire*: All of the above was published in 1980, before we had the capability of publishing color photos, so drawings were used for illustration. A bit later in 1980 we also installed a cabin roof tie-down similar to that done by Lee Greenbaum. This was halfway through a ten-year period when we raced the boat fairly often. We tried to keep our rig in tune, using forestay/backstay tension of about 1200 lbs. and shroud tensions of only 200-400 lbs., as recommended by Tartan Marine Co. These were tensions measured (in the slip, after final shroud adjustment under sail) using a Loos Rig Tension Gauge, so the values must be regarded as only approximate, but the tensions also "felt" right, and certainly did not seem excessive. Nevertheless, at this time I had begun to notice the head door sticking and refusing to close forward, and the head bulkheads a bit displaced. In addition, a hairline crack developed in the gel coat at the upper corners (abreast of the mast) where the cabin roof joined the cabin sides. I attributed all these changes to the extra stresses imposed on the boat by the racing.

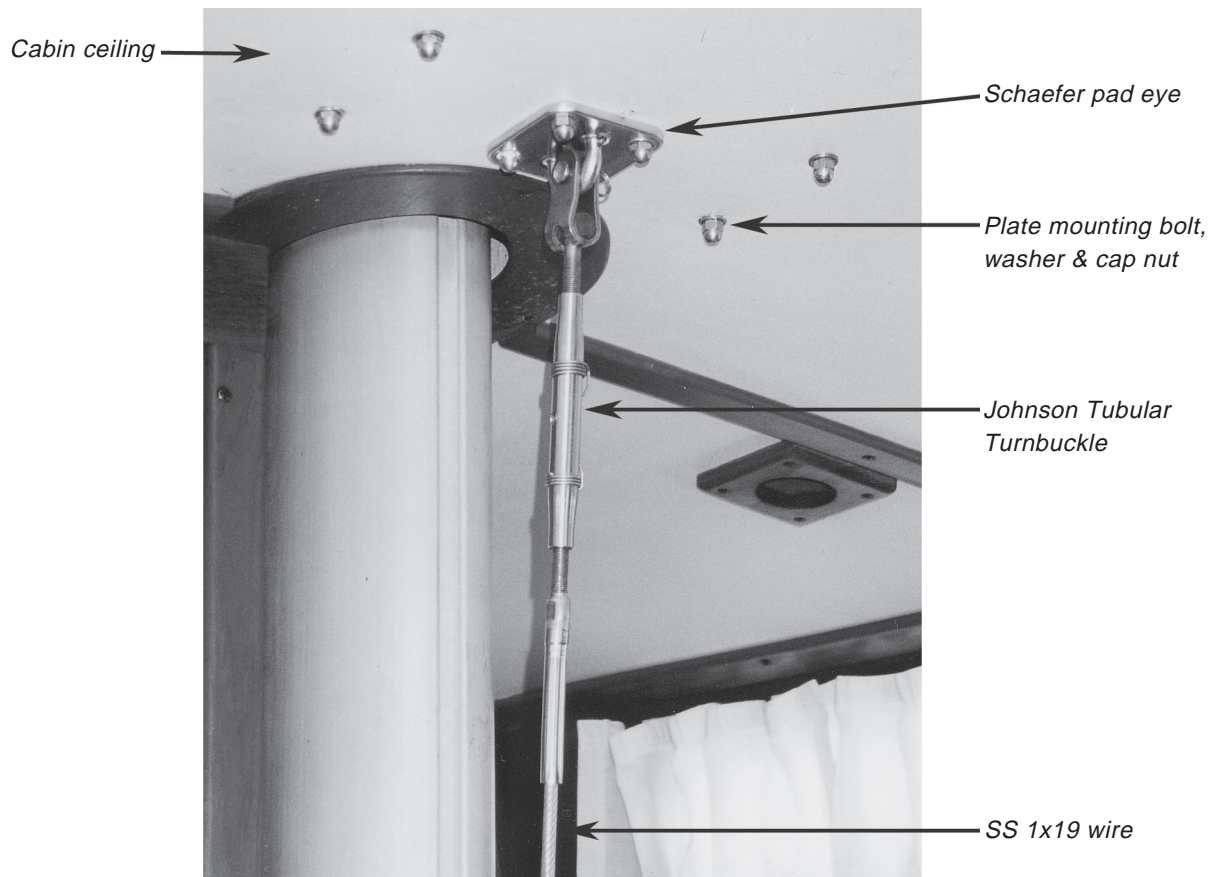
There are many ways to install a cabin roof tie-down. Ours is similar to Lee Greenbaum's (shown at right on Juan Perez's drawing), but it uses some different components. Like Lee, we used a metal plate on the cabin top, but ours is a 1/4" x 6" x 12" aluminum plate, hard-coat black anodized, located immediately aft of the mast partners. A 1/4" flat head stainless steel machine screw near each corner attaches the plate to the cabin roof. In the center of the plate is a Schaefer 97-42 Square Pad Eye, attached with four more 1/4" FHSSMS; on the bottom of the cabin roof, an identical pad eye provides for attachment of a C. Sherman Johnson 08-108 Jaw/Swage Stainless Steel Tubular Turnbuckle. The turnbuckle is swaged to a length of 1/4" stainless steel 1x19 wire. At the bottom, a fork swaged to the wire is attached to a mast hound just above the engine box. The attached photos show details.

After installation of this tie-down, during twenty more seasons of sailing (five years of racing & cruising, plus 15 more years of cruising only) the structure of the boat has been quite stable, and distortions of the sort observed earlier have not been evident.



The 1/4" aluminum plate is installed just aft of the mast partners. The padeye on top of the plate anchors turning blocks used for running various lines back to the cockpit. In this current "cruising" configuration these are a single-line 1st reef (to port) & the mainsail cunningham (to stbd) . Other lines running back to the cockpit are the main halyard (port) and the spinnaker pole topping lift (stbd); these lines go through turning blocks mounted on the mast, just above the partners.

INSIDE CABIN: Top of Cabin Roof Tie-Down



INSIDE CABIN: Bottom of Cabin Roof Tie-Down

