



Chesapeake Tartan 30 Association

REPLACING T-30 THRU-HULLS & SEACOCKS

Brad Armendt, T-30 #282, *Emprise*, February 2000

It's well known that Tartan Marine Co. sometimes used pieces of threaded bronze pipe epoxied into the hull of Tartan 30s instead of conventional flanged bronze thru-hulls. Also, on early production T30s they sometimes used brass gate valves (!) instead of seacocks. By now, I hope all those who had gate valves have replaced them. Later T30s (including mine) were equipped with bronze Apollo ball valves instead of seacocks, but I was never certain whether or not such ball valves were suitable for use as seacocks (some aren't).

Previously on this list Joe Palmer advised that the epoxied-bronze-pipe thru-hulls should be replaced by proper flanged bronze thru-hulls. My boat is a 1975 standard-rig, aft-galley, diesel-powered T30, hull #282. I bought her new, so she had no previous owner who might have changed something. Having seen my boat out of the water about once a year for 24 years, I was pretty sure I had the epoxied-bronze-pipes, but I had never replaced them. Last October I had the boat in the yard for hauling, bottom-painting, a new prop, etc., and I resolved to take care of the thru-hull & seacock problem.

After hauling, examination of the thru-hulls showed that I had the following:

- Head seawater intake 1/2" bronze flush-head, flanged thru-hull
- Engine seawater intake 1/2" bronze flush-head, flanged thru-hull, covered by a bronze scoop strainer
- Head discharge 1 1/4" bronze flush-head, flanged thru-hull
- Galley sink & icebox drain 1/2" threaded bronze pipe epoxied into hull

AHA! There's one! But it's a mystery why Tartan installed *one* of the epoxied-bronze-pipes in the same hull with *three* proper flanged bronze thru-hulls. In the examination it became clear why I had thought all four thru-hulls were the epoxied-bronze-pipes. The three flush, flanged thru-hulls had their flanges sunken into the hull perhaps 1/8", and covered by a fairing compound, so from outside the hull they looked like the epoxied-bronze-pipes until the fairing compound was chipped away.

The original Apollo ball valve on the head discharge became hard to operate, and was replaced several years ago with a bronze ball valve of a different type that was suitable for use in seawater.

I had all of the other three original thru-hulls and ball valves replaced, and it was lucky I did. The yard worker had barely taken hold of the hose on top of the galley drain ball valve (the one with the epoxied-bronze-pipe), when the pipe *broke off* just inside the hull! Holy smoke! My wife could easily have banged one of her pans (kept under the galley) against that valve and we would have been sinking. Now *where* did I stow those emergency tapered wooden plugs??

Examination of the broken bronze pipe showed no evidence of electrolysis damage (nor did any other underwater metal). But it is clear that there just is not much metal thickness between the bottoms of the threads on the outside of the bronze pipe and the smooth inside of the pipe. More metal is present there on the conventional flanged bronze thru-hulls. But more important, a real flanged bronze seacock, properly installed, doesn't depend on the metal thickness of the thru-hull screwed into it to hold out the ocean. The relatively thick body of the seacock does that.

So now I have the following on each of the three small thru-hull openings:

- 3/4" Conbraco Apollo Full Flow Flanged Bronze Seacock, #78-115-01F, bolted through the hull (I used the 3/4" size because I couldn't find 1/2" seacocks)
 - 3/4" Flush-head Flanged Bronze Thru-hull, Groco #FTH-750W, screwed into seacock
- In addition, over the engine seawater intake, there is a Groco Cast Bronze Scoop Strainer, #GRC SC1000.

By the way, neither of the hoses originally installed by Tartan from the galley sink drain and from the icebox (it's an aft galley model, remember) were suitable for underwater use. But when the seacock is open, both hoses extend down below the waterline, so they were holding out the ocean. How this detail went unnoticed by me for all those years I don't know. But now I have good Shieldflex Series 250 wire-reinforced marine hose there.