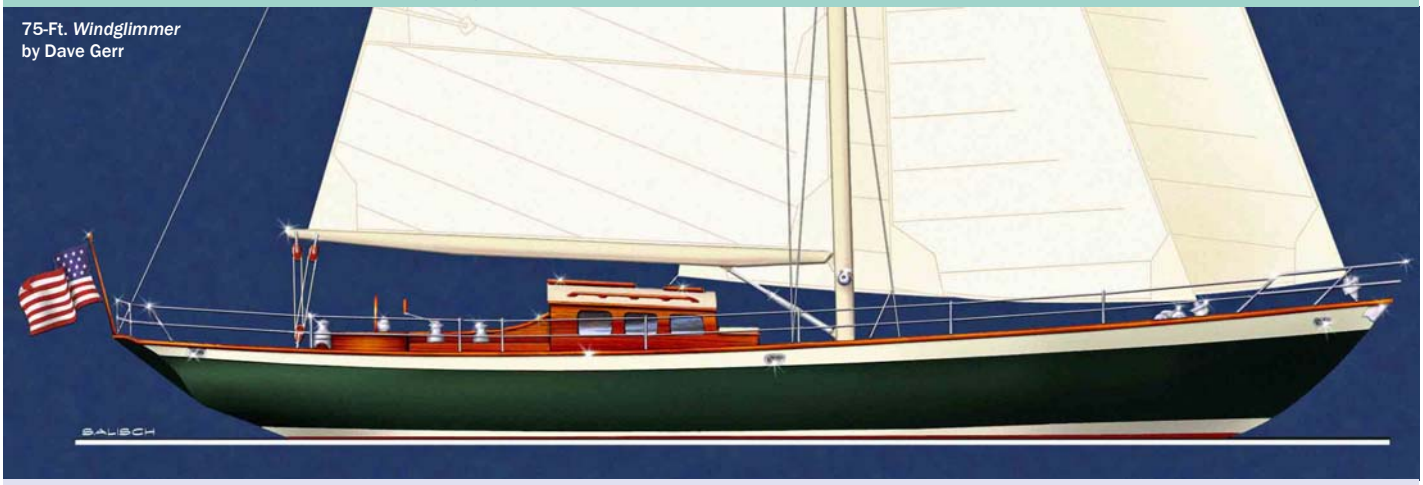
The Proper Bootstripe

By Dave Gerr, © Dave Gerr, 2011



75-Ft. *Windglimmer* by Dave Gerr

One of the most common errors I encounter is in laying out and painting bootstripes (also called boottops)—the paint line separating the topsides from the anti-fouling bottom paint. I've even read through quite a few articles that carefully explained how do it—all wrong! The thing to keep in mind, before painting a bootstripe, is that your *Grackle Crackle*—along with every other boat in harbor—never floats at the same line or at the same level two days in a row.

If she's a typical 30 to 45 footer, the additional load of passengers, fuel, water, gear, food and stores could easily come to a ton or two, for a long cruise. This would sink *Grackle Crackle* a good 2 inches, or so, in the water. Naturally, at the end of the cruise *Grackle* will be floating 2 inches higher again, and in between, well, she'll be in between. Even more important is that all this stuff isn't exactly going to be scientifically distributed. (I've always had special difficulty keeping my crew scientifically distributed, but—as skipper—I have to take full responsibility, of course.) The result is that *Grackle* will seldom float level. Sometimes she'll be down by the bow, sometimes by the stern. This is all normal, and unavoidable. (The nice waterline drawn on the architect's plans is really just a reference line. In fact, that's why it's usually labeled the "DWL," which stands for datum waterline or design waterline.)

The trick to painting a good bootstripe is not to make it straight as a rule and parallel to the imaginary waterline—as some articles indicate—but to make it curve up at each end, just as the sheer curves up on most boats, as in the drawing above. Like the sheer, it should be higher at the bow than at the stern. Not only does this compensate for *Crackle*'s inconsiderate tendency to float at different attitudes, but it will improve her looks as well. In fact, a boat with a straight bootstripe has a dull lifeless appearance, whereas her exact twin with a sheered bootstripe will have flair.

I usually take the profile drawing of my designs, draw on the full loaded displacement waterline and sketch in the desired curve and thickness by eye. On a 30 to 40 footer, I allow about 3 to 4 inches from the bottom of the bootstripe to the loaded waterline—a bit more doesn't hurt—and have the lowest point of the curve about 70 percent of the waterline length aft of the bow at the waterline. Doing this by eye takes some practice and a bit of trial and error. A reliable rule of thumb for defining the bootstripe exactly is as follows:

Take a profile drawing of your *Crackle Grackle* and draw three vertical lines up from her design waterline. The first vertical should be right at the intersection of the waterline with the bow (called, "station 0"), and the aftermost vertical should be right at the intersection of the of the waterline

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with the stern (station 10). The third or middle vertical should be at 70 percent of the length of the waterline aft of the bow. (This location is known to designers as "station 7.") Station 7 is the lowest point of the bootstripe curve, and the narrowest point of the bootstripe itself.

The heights of the bottom of the bootstripe above the DWL at each of these three locations are found by dividing the waterline length, in inches, by the following numbers:

HEIGHT OF BOTTOM OF BOOTSTRIPE ABOVE DWL		
Stern	Station 7	Bow
120.0	141.4	92.3

This gives you the height above the waterline at each location in inches. If *Crackle Grackle* were a 35-foot waterline boat then, the bottom of her bootstripe would be 3.5 inches above the waterline at station 10; 2.97 inches above at station 7; and 4.55 inches up at station 0. To paint this line you mark these points on her hull and connect them in a smooth fair even curve. Of course, since *Crackle*'s hull continues on forward of station 0 and aft of station 10, you have to continue your bootstripe beyond as well, in a nice fair sweep.

A really refined bootstripe is even more sophisticated than this. Its width (thickness) is not constant from bow to stern but varies as well. Using the same three reference stations, the thickness of the bootstripe—its width or height from top to bottom—can be found, just as before, by dividing the waterline length, in inches, by factors from the following table:

THICKNESS OR WIDTH OF BOOTSTRIPE		
Stern	Station 7	Bow
120.0	133.4	82.8

For our 35-foot waterline *Crackle Grackle,* the bootstripe thickness at the stern would be 3.5 inches; 3.15 inches at station 7; and 5.07 inches at station 0. Now, we've defined a handsome bootstripe line, one that will have enough arc or curve to it to keep the topsides paint out of the water even when heavily loaded and out of trim, and one that will add a bit of *panache* to *Grackle*'s appearance. In fact, although having over 3 inches of bottom paint showing amidships and a bootstripe over 5 inches wide at the bow sounds a bit much, I've actually found that somewhat more curve and a slightly thicker bootstripe usually looks more handsome still. Here, naturally, is where it helps to have a good eye. Too much sheer in the bootstripe will look plain foolish. The above rule of thumb will give good conservative results all around. It also pays to remember that we took all our measurements were from the design waterline. If you knew that *Crackle Grackle* floated, say, an inch lower than this—even when empty—then you should raise the height of the bottom of her bootstripe by a corresponding 1 inch all along.

Westbourne 44 express cruiser, designed by Dave Gerr