

Tech Tips #18, Give Me a Little Leeway

By Bill Whitney

As Friendship Sloop sailors we all have experienced leeway at one time or another. All vessels are subject to it, except with the wind dead ahead or astern. Sailing vessels make lots of leeway when hard on the wind and less leeway when well off the wind. Light airs and heavy winds have more impact than moderate breezes. When you are trying to get from point A to point B, leeway is one of the elements that you have to consider along with currents, tides and wind direction. Admittedly, current and wind direction usually have more of an effect on a vessel, but if you are on a long leg, vessel leeway can really add up.

There are several ways to estimate your boat's leeway; the most effective ways deal with looking astern and watching where you have been. Choose either of these methods to make a rough estimate of your boat's leeway angle:

The first method is to simply watch your wake as you steer a straight course. Take a bearing on your wake trail using your primary compass (if it's binnacle mounted and high enough) or a handbearing compass to estimate leeway angle. Using either compass, take a bearing dead astern. Wait several minutes, then sight along the wake line to windward. The difference in the two angles gives you your leeway angle.

The second method is to use a bearing to an object astern. First find a landmark, light structure, or buoy dead astern. Take a bearing with your compass. Hold a steady course for several minutes, and then take a second bearing. The difference in bearings is your leeway angle.

Now that you know how much the boat is slipping sideways you can correct for it by adding or subtracting your observed leeway angle from the compass course you are steering. Be sure to apply correction to your steering course in the proper direction. You want to steer the boat closer to the wind to counteract the effect of leeway. If the wind blows from the port side, subtract the angle from your course. If the wind blows from the starboard side, add the leeway angle to your course.

For example, you are close-reaching on the starboard tack, steering a course of 300 degrees magnetic. You sight astern with the handbearing compass for a reading of 120 degrees magnetic. Five minutes later, you sight down the wake line, and the bearing is 114 degrees magnetic. The difference gives you a leeway angle of 6 degrees. You'll need to point 6 degrees higher, so add the angle to your 300 degree course and steer a new course of 306 degrees magnetic.

Note that this correction may also include a component of current correction because you could easily be in an area where the current is pushing the boat sideways. Normally the current has an equal effect on both the boat and the wake it leaves but in some areas the currents can be quite tricky, flowing faster in one part of a bay than in another. After you have estimated your boat's leeway in different wind velocities and at different wind angles a few times you get a good feel for the corrections that you need to make and can make them on a "seat of the pants" basis.

See you on the water!