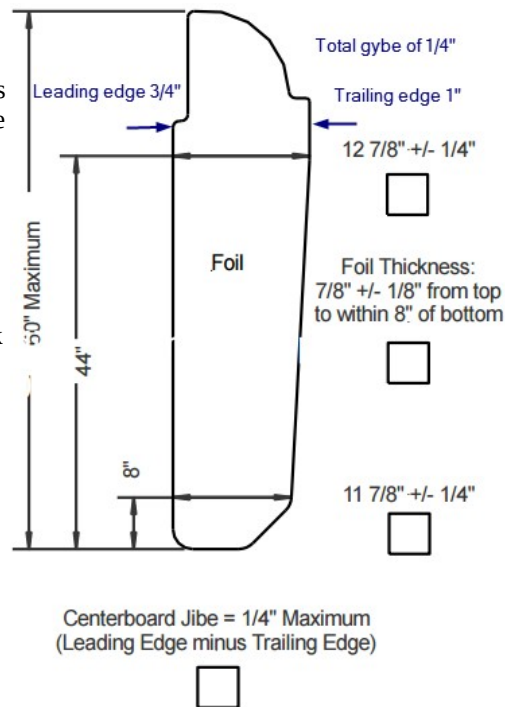


## Centerboard Gybe

by Kerry Poe

The Lido class rules allow up to a 1/4" of gybe in the centerboard. What does that mean? Basically that the leading edge moves 1/4" from side to side more than the trailing edge of the board. You could reverse it so the trailing edge moves 1/4" more than the leading edge and that would also be a gybing board, but I would only recommend that for somebody you want to slow down like a Bruce Gollison. If you measure your board at the leading edge where it rest against the bottom of the hull, it should be 1/4" thinner than the trailing edge that rests against the bottom of the hull. The class measures the gybe while the board is in the boat which also accounts for centerboard trunk shape. Check out the following video for measurement procedure: <https://www.youtube.com/watch?v=vjnI0uY94wM>



Centerboard in trunk with no gybe.



Centerboard gybed sailing on starboard

Top of leading edge of board 3/4" thick.



Top of trailing edge of board 1" thick.

Top of centerboard gybed on starboard in the trunk.

In the following picture the red line represents the heading of the boat and also the centerline. The yellow line is the direction the boat is actually traveling. When going upwind sailboats slip sideways a little bit, this is called leeway. I am not sure what it is on a Lido but I am guessing about 5 degrees in lighter air and 4 degrees in heavier air, which is the actual direction the boat is sailing through the water.

The gybing centerboard has two advantages. The first is it allows the bow to pivot to leeward about .57 degrees which aligns the boat more in the direction that it is actually going through the water. The second advantage is when the bow pivots to leeward, the entry angle of the jib relative to the apparent wind widens allowing you to steer .57 degrees higher without luffing your tell tales. A half a degree of extra point does not sound like much, but when we would do about anything to gain a tenth of a knot in boat speed, then maybe it is a big deal.

Also note that the rudder angle is about 4 degrees which is a good goal for the driver to achieve. If the boat is heeled too much you will end up sailing with more rudder angle (drag), which is slow and causes even more leeway. Sail the boat flat!



The Lido has a very wide jib sheeting angle, as illustrated by this picture. To help with point sail the boat flat and make your board gybe.

