

6. When In Doubt...Let It Out

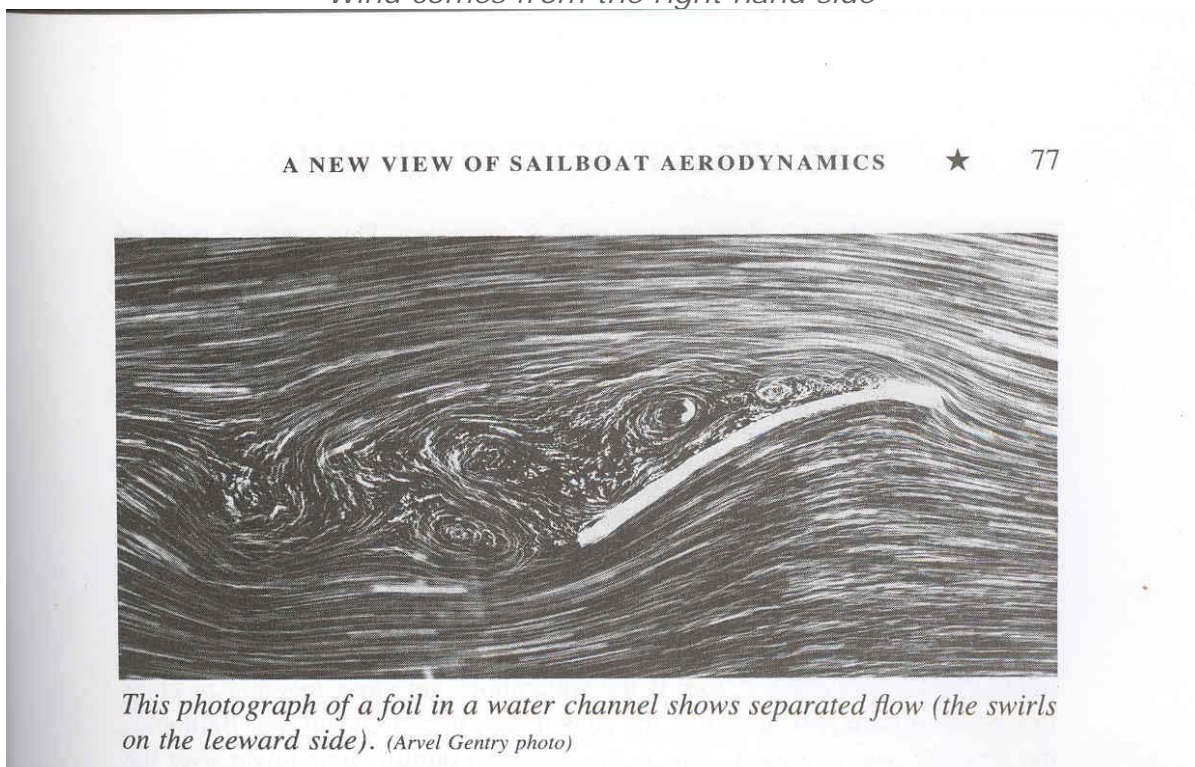
March 14, 2016 *Marc Hughston*

You've heard this before, right? "When in doubt, let it out." You've no doubt even said the same thing to your crew. But, have you wondered exactly why it's so important? The questions I get in my Basic Cruising classes remind me that knowing how and why things work is an important part of the foundation one needs.

So, why let the sail out until it luffs, and bring it back in until it stops luffing? Why ease the genoa sheet two inches so the leeward telltales lay back in line with the windward telltales? It's because that's where the power is. As the old saying goes, "Any time two sailboats are in sight of one another, it's a race." That may not be true for everyone, but it's fun to go fast! And, better sail trim might just make the difference in getting to Catalina before sundown. Take a look at the image below. This sail is over-trimmed, and needs to be eased out.

The Over-trimmed Sail

Wind comes from the right hand side



Source: "The Art and Science of Sails" by Tom Whidden

The sail trimmer's goal is attached, laminar airflow. The most common sail trim error made is to over-trim, meaning to have the sails in too tight. The photo above shows what airflow over the sail looks like when it is over-trimmed. Note the turbulence of the separated flow on the leeward side of the sail - lift is reduced, and drag is increased. That's slow! When you see your telltales lifting and fluttering, this is what's happening.

There is much more to race-winning sail trim than this, but use the following procedure to get your basic trim in the right ball park:

1. When in doubt, let it out.
2. Let it out until it luffs.
3. Bring it back in to where the luffing just stops.