

All About Leech Lines

Special points of interest:

- Genoas and Mainsails will flutter at the leech in stronger wind.
- Leech lines can solve this problem without reducing sail area.
- Leech lines increase sail weight a bit thus decreasing effectiveness in light air.
- When used to aggressively, leech lines can cup the trailing edge of the sail increasing induced drag.
- Care should be exercised in selecting the right cleat.

What Leech Lines Are and How They Work

Genoas and mainsails often tend to flutter a bit along their trailing (leech) edge — especially in heavier air. The proper solution for this flaw is to cut a hollow into the leech from head to clew in the case of the genoa and from batten to batten in the case of the main. But that entails the reduction of sail area that can be of some benefit in lighter air and on reaches.

The “work around” for this dilemma is a leech line — a small line sewn into the hem at the leech. It is secured at the head but left loose in the hem all the way to the clew where it is fed through a cleat that secures it when it is tightened. Just a little tension on this line will usually eliminate the tendency for the sail to flutter in a breeze. Indeed, the presence of the line itself will stabilize the leech in wind well beyond what would have been the case without it.

When a leech line is employed the run between battens in a main can be straight or even a bit rounded and genoa leeches can be cut in a straight line from head to clew or nearly so. These edges will begin to flutter

as the wind increases, but that tendency can be reduced or controlled by simply tightening the leech line.

There is, as usual, a price to pay. First, the leech of the sail becomes heavier which can reduce its effectiveness in light air. Second, the use of the leech line introduces a cup along the trailing edge of the sail which can introduce vortices in air flow off the leech which will increase induced drag. With careful use, i.e., taking care not to over tighten the line, this latter problem can be

controlled.

Care must be exercised when installing a leech line in a main to be sure that the line is not trapped when batten pockets are sewn in place. It is necessary to “skip stitch” where the leech line crosses over the pockets. This does not endanger sail’s structural integrity.

Choice of leech line cleat is especially important in the case of genoas where the leech will be dragged over the rigging on every tack. We recommend the “closed” leech line cleats for this application.



The Small Closed Clamcleat #23203