

Neil Pryde Terminology

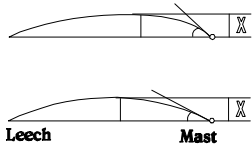
In this discussion we use many technical terms with very specific meanings, While most are standard terms, other sailmakers sometime use alternative terms.

Glossary of Terms

Halyards and cunninghams

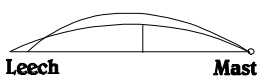
Halyards are lines used to pull the sails up and to adjust the position of the draft (sail camber, curvature or “fullness”) fore or aft in the sail. They don’t significantly alter whether the sail is more full or less full. More tension on the halyards brings the draft of the sail forward; less tension drops it back. (figure 1) Cunninghams are down haul lines for fine tuning luff tension after the halyard is tightened and cleated off. It has the same effect on the draft as the halyard.

Figure 1



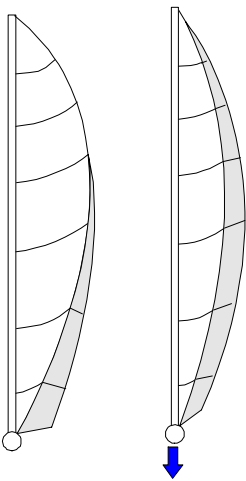
Halyard tension moves draft forward and aft, with little effect on how full the sail is.

Figure 2



Outhaul tension effects how full the draft is, with little effect on it's position forward or aft.

Figure 3



As the mainsheet is tightened, the boom is lowered, and the the twist is pulled out.

Mainsail outhaul

Line used to flatten or make fuller the bottom third of the sail. Tightening the outhaul flattens this part of the sail and makes the aft section (exit or leech) straighter. Loosening the outhaul makes the sail fuller in the bottom so the leech becomes a rounder, fuller exit, providing more power. (figure 2)

Main sheet

Line giving control over the movement of the boom. Upwind, it is used to control sail twist (tighter mainsheet reduces twist, looser mainsheet increases it). Downwind it is used to control the lateral position of the boom in and out. (figure 3)

Boom vang

A line at 45 degrees from bottom of mast to underside of boom. This adjustment is predominantly used when sailing off the wind to control sail twist. Tightening boom vang reduces twist, loosening increases twist.

Genoa fairlead

Block through which genoa sheet passes. This has two functions which are interactive: moving the fairlead aft will tend to increase twist and, at the same time, flatten the bottom third of the sail. Moving the fairlead forward reduces twist and makes the bottom of the sail fuller. (figure 4)

Genoa sheet

Increase sheet tension always reduces twist, but—and this depends on the position of the fairlead — genoa sheet tension also has an effect on the fullness of the sail. If the fairlead is a long way forward the sail will tend to get fuller as the sheet is tightened. If the fairlead is a long way back, the sail will get flatter, especially in the bottom third.

Backstay

The backstay is the single most effective adjustment on any boat (except those with extremely stiff masts). Increasingly backstay tension flattens both the mainsail and jib simultaneously, as follows: It pulls the mast top backward, which flexes the middle of the mast forward, thus flattening the mainsail. This also makes the forestay tighter, which pulls the jib body forward, flattening it as well, especially in the entry. (figure 5a and 5b)

Woven materials

Any material that is made up of individual yarns woven together to form a fabric. It can be finished to different levels of stiffness through the addition of a coating of hardener. (Tetoron, Dacron, polyester, Nylon, and other company trade names)

Kevlar™

Describes a fabric which has Kevlar yarns for extra strength in critical directions. Kevlar is a man-made fiber of incredible strength and lightness. This material is made only in laminated form, which means the Kevlar yarn is glued to a film of plastic-like material.

(Kevlar/mylar, Technora™)

Spectra™

Describes a fabric which has Spectra yarns for extra strength in critical directions. Spectra is a man-made fiber with the highest modulus of any of the fibers mentioned. Spectra has incredible tear strength and very good U.V. resistance. The material is generally found in laminated products.

Mylar / Polyester Film

Any fabric which gets its strength from a backing of plastic film. This material can be either single sided (film on one side only), or can be a “scrim” style material (plastic film on both sides with a strength-giving weave of threads sandwiched in between).

(Laminate)

Parrel beads

A wire strop covered in plastic balls used to attach free flying sails to the forestay over a roller-furled sail. (Figure 6)

Oz(USA)

At Neil Pryde we use the industry’s standard measurement of weight, the American sailmakers’ yard (36” x 28”). Some sail lofts use English ounces per square yard although this is becoming increasingly uncommon. Standard European units are grams per square meter.

Multi Track Foam Luff

Neil Pryde’s innovative foam luff tape system that promotes shape flattening of headsails when using roller furling gear, yet does not permanently distort with time as do solid foam luff systems.

Broad-seaming

Rounding the edges of sail panels to create 3-Dimensional shape.

(Takeups, shape) (Figure 7)

CDT

“Continuous Development Technique” is the name of the Neil Pryde computer design system that creates a sail shape defined in numerical format. (“mould, “tin plate”)

Warp-oriented

A fabric that has its strongest threads—and therefore its greatest strength—running along the length of the cloth. Used in the production of radial sails.

Fill-oriented

A fabric that has its strongest threads—and therefore its greatest strength—running along the width of the cloth. Used in the production of cross-cut sails.

Overlap—(L.P.) Luff perpendicular

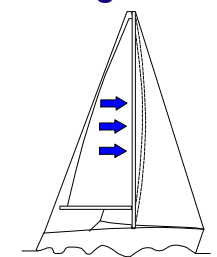
Expressed as a percentage of “J” (the distance from the bow to the mast) this figure indicates the size of a specific genoa. Standard sizes are: #1 - 150% #2 - 135% #3 - 105% #4 - 80%

Figure 4



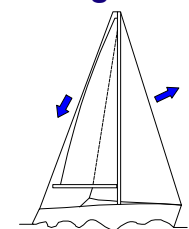
Fairlead back tightens the foot, flattening the bottom third of the sail, and letting the leech raise up (more twist). Fairlead forward creates a fuller sail, but pulls the leech down, reducing twist.

Figure 5a



Tightening the backstay pulls the top of the mast backward, and bends it forward in the middle. This flattens the mainsail in the middle.

Figure 5b



Also as the backstay is tightened, the forestay pulls up and forward on the jib, flattening it as well.