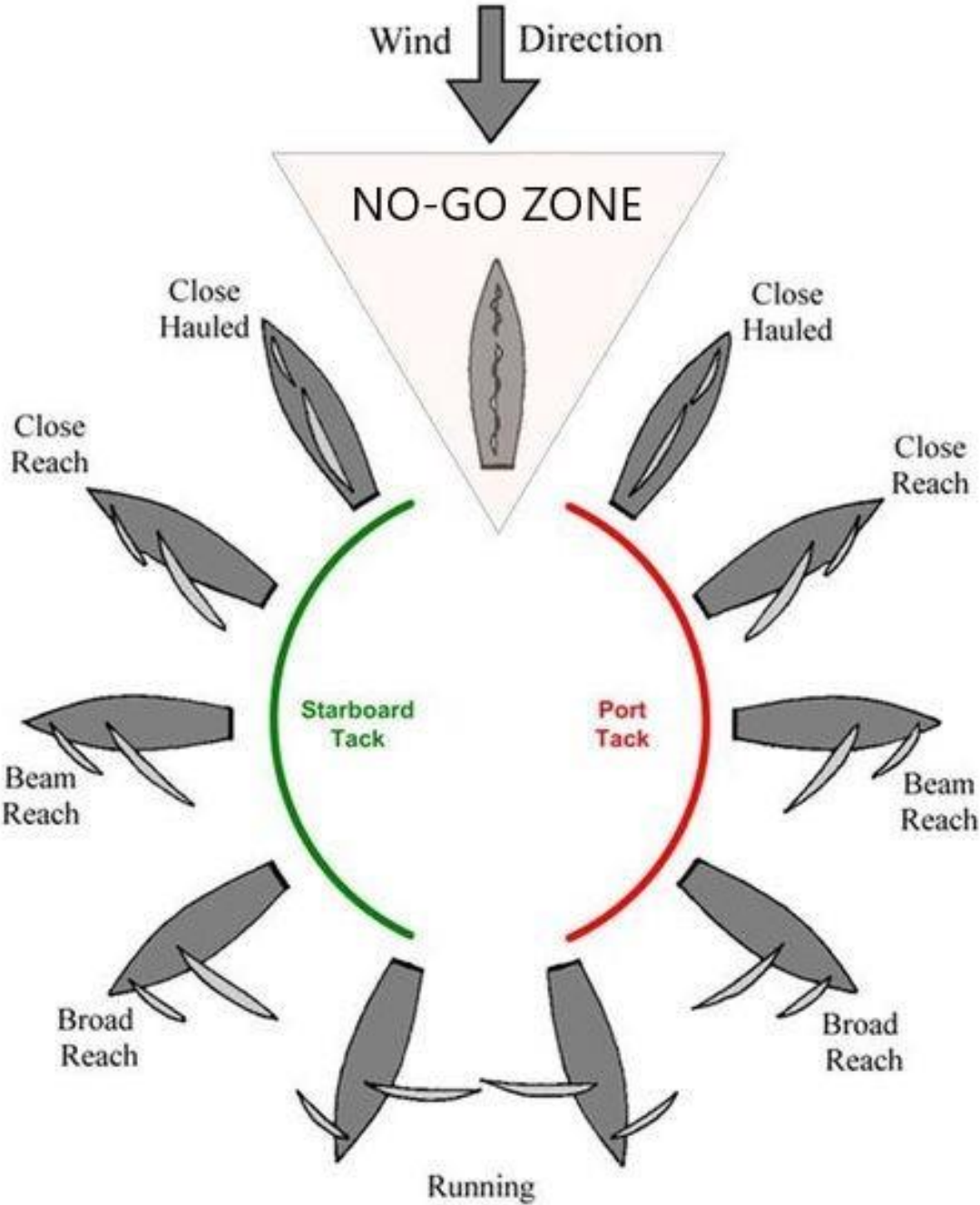


POINTS OF SAIL DIAGRAM

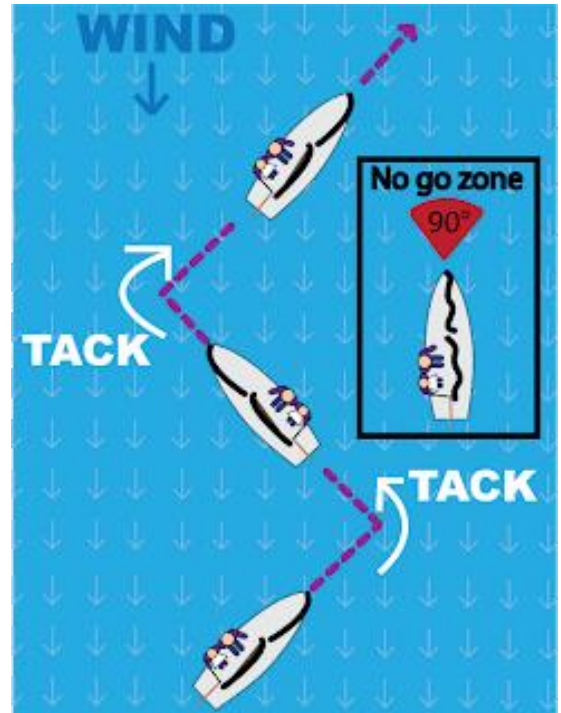


Sailing Upwind

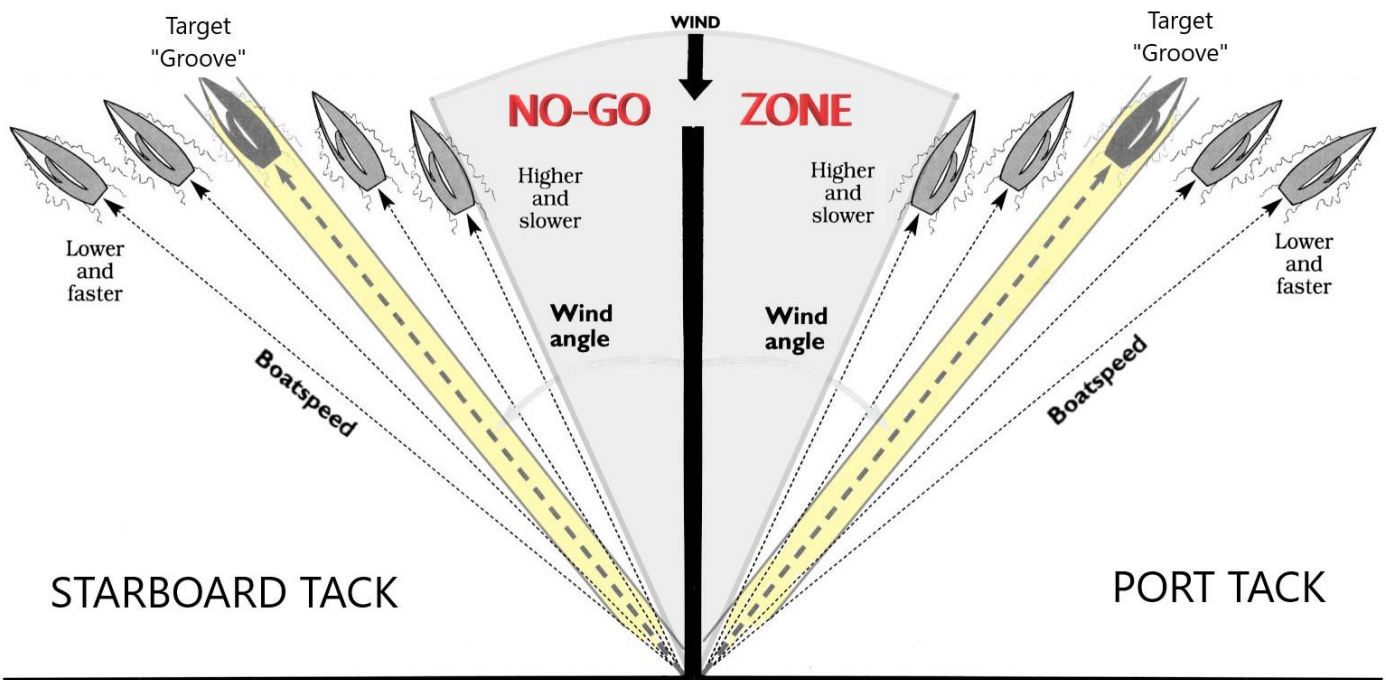
Sailboats can sail upwind, but they cannot sail directly into the wind. If you want to sail to a point directly upwind from you (perhaps a dock or a mark), you must sail a 'zig-zag' course to get there. This Point of Sail is known as "close-hauled."

A boat sailing upwind must change direction by performing a tack, which is a maneuver where the bow of the boat rotates through the No-Go Zone. During this turn, the sails and the sailor must switch sides because after the tack the wind will be on the opposite side of the boat.

When sailing close-hauled, the goal is to keep the boat in the "groove" right along the edge of the No-Go Zone by heading up as much as possible without luffing. This takes focus and small adjustments in steering to keep the boat in the groove.



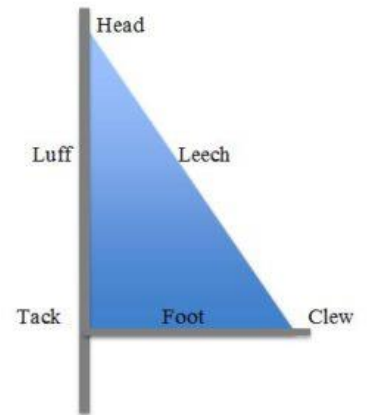
CLOSE-HAULED SAILING



Sailing in the "groove" is the perfect balance between upwind progress and boatspeed. Sailing above the groove increases upwind progress but decreases boatspeed (higher and slower). Sailing below the groove decreases upwind progress but increases boatspeed (lower and faster).

How to Use Your Telltales

Telltales are a very useful tool to help with sail trim and steering upwind. There are two types of telltales, luff and leech telltales. The luff telltales are attached on both sides near the forward edge, or luff, of the sail. Leech telltales stream off the back edge, or leech, of the sail. The most common are luff telltales.



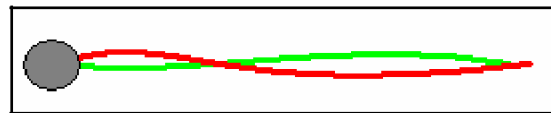
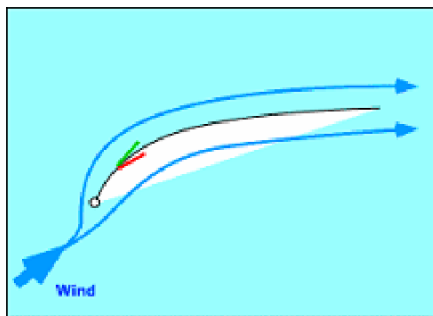
Luff telltales show what is happening with the wind as it flows over the luff of the sail. Instead of waiting for the sail to luff (bubble or flap) and slow you down, using the telltales allows you to correct the sail trim before the sail luffs. They also indicate when your sail is not working as efficiently as it could be.

Use your telltales to:

- Help trim the sail
- Help with steering upwind

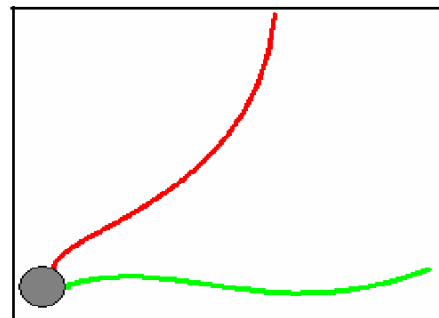
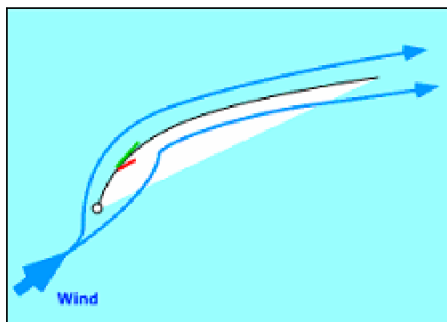
Sail trimmed correctly:

With the sail trimmed correctly, the wind is going over both sides of the sail and therefore both telltales are 'streaming' towards the back of the sail.



Sail too far out, or boat pointing too high:

The wind is now only going over the leeward side of the sail. The wind going over the windward side is not flowing properly, therefore the windward telltales will not stream.

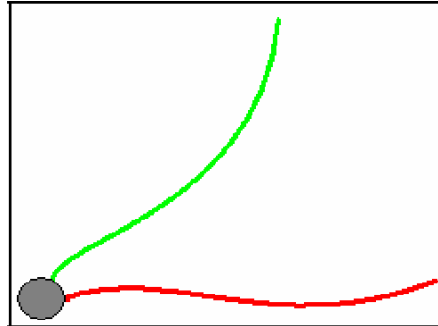
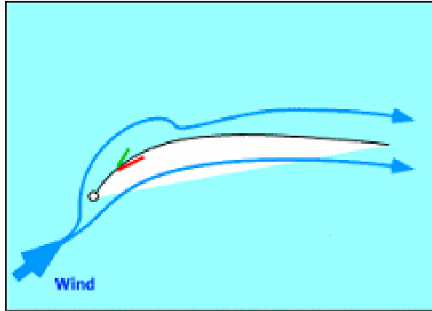


Solutions:

- Trim the sail in
- Bear away

Sail too far in, or boat pointing too low:

The wind on the leeward side is now stalled, therefore the leeward telltales will not stream. When reaching, the leeward telltale is a very useful way to trim the sail.



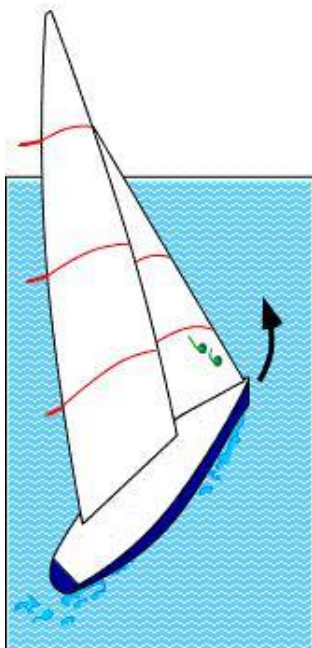
Solutions:

- Ease the sail out
- Head up

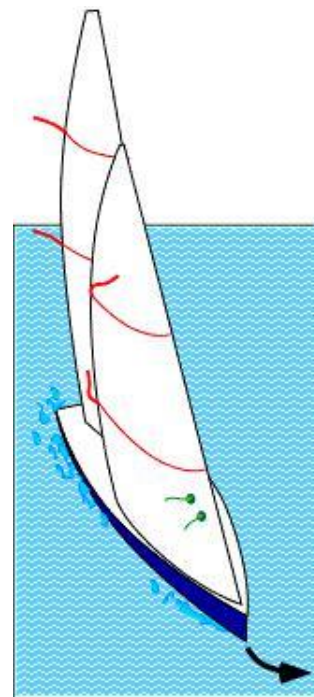
Steering Upwind with Telltales

When sailing upwind, first ensure your sail is trimmed to a close-hauled course. Pay attention to your windward and leeward luff telltales to make sure they are streaming.

- If your windward telltale is breaking, you are sailing too close to the wind and the sail is on the verge of luffing (Diagram A).
- If your leeward telltale is breaking, you are sailing too low and need to head up closer to the wind (Diagram B).



A



B