



Upwind troubleshooting guide

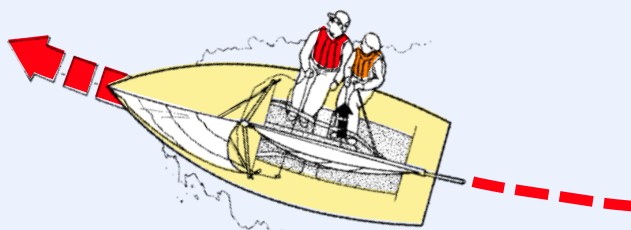
When you are racing to windward, do you have trouble pointing as high as other boats? Or is your main problem that you can't go as fast as your competitors? Perhaps it is a bit of both!

When it comes to evaluating upwind performance,

there are two very important measures – your forward speed and your height, or pointing. If you commonly find yourself falling behind the rest of your fleet, figure out which problem you have. Then look in the charts on these two pages to find some possible remedies.

POINTING

The Problem: You're not able to point as high as the other boats around you (or, if you do aim your boat as high as the others you can't sail as fast as they do).



Possible reasons

Explanation

Things you could try

1) Your boatspeed is too slow.

Before you can point high, you must be going fast to get the water flowing over your foils. Go fast first!

- See page 7 for lots of ideas on how to improve your boatspeed.

2) Your headsail is too full.

If your jib or genoa is full relative to the main, it will tend to pull the bow away from the wind and make pointing difficult.

- Reduce headstay sag by pulling on the backstay or mainsheet.
- Increase jib luff tension.

3) The entry of your headsail is too round.

If there is too much shape in the front of your jib, the sail will start to luff there before you can point very high.

- Reduce jib luff tension.
- Reduce headstay sag by pulling on the backstay or mainsheet.

4) Your headsail is trimmed too tightly.

Sometimes the jib trimmer thinks overtrimming the jib will help pointing. But this pulls the bow down and may have the opposite effect.

- Try different trim settings for your headsail (a good time is when you are two-boat testing). Make sure you try easing the sheet farther than you think is right.

5) Your mainsail is too flat, too twisted and/or undertrimmed.

The aft part of the mainsail makes the boat turn toward the wind; for good pointing you need a relatively full main and a firm leech.

- Pull harder on your mainsheet.
- Move the traveler car to windward.
- Ease the outhaul.
- Ease the backstay to make the main fuller and tighten its leech.

6) You don't have enough windward helm.

You need a certain amount of helm (4° to 6° if possible) so the boat constantly wants to head up closer toward the wind.

- Sheet the main harder (see above).
- Heel a little more to leeward.
- Move crew weight forward.
- Add rake; move centerboard forward; power up mainsail.

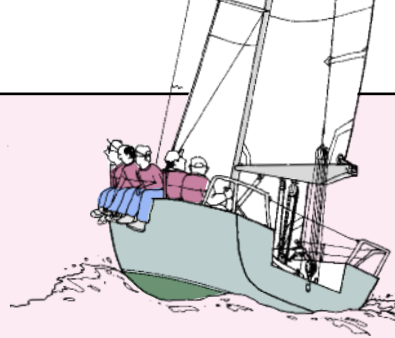
7) Your equipment is not good enough.

Even if you sail and set up the boat perfectly, certain limitations in your gear may keep you from pointing as high as other boats.

- Get new sails.
- Work on the shape of your foils.
- Any other factors that slow you down will also hurt pointing.

BOATSPEED

The Problem: You're not going as fast through the water upwind as the boats around you (or, you can go as fast as they do but only if you foot off pretty far).



Possible reasons	Explanation	Things you could try
1) Your steering is not especially good.	<i>You will be slow if the boat is not "in the groove" and sailing at its target speed and angle for most of the windward leg.</i>	<ul style="list-style-type: none"> • Make "groove" wider by easing sheets and giving jib fuller entry. • Give the skipper more practice. • Bear off to trade some of your pointing for more speed.
2) Sails are overtrimmed.	<i>Trimming sails too tightly is one of the most common causes of boatspeed blues, especially in light air and/or choppy seas.</i>	<ul style="list-style-type: none"> • Ease mainsheet and jib sheet until your boat starts to accelerate. • Let the vang off completely.
3) Failure to change gears.	<i>The wind and wave conditions change constantly as you sail upwind, so you must continually adjust the trim of boat and sails.</i>	<ul style="list-style-type: none"> • Don't cleat the mainsheet (unless you're on a big boat or it's windy). • Have a spotter who calls the puffs, lulls and waves that are coming. • Improve onboard communication.
4) Your rig is not tuned as well as it could be.	<i>Having a mast tuned correctly is a basic building block for getting your boat up to speed – without it, everything else will be off.</i>	<ul style="list-style-type: none"> • Set up your rig according to your sailmaker's tuning sheet. • Bring a 'tuning expert' on board to provide advice on tuning. • Set aside specific time for tuning.
5) Too much windward helm.	<i>If you have much more than about 6° of weather helm, you will be slow because of too much rudder angle and drag.</i>	<ul style="list-style-type: none"> • Make sails flatter & more twisted. • Sail the boat flatter! • Move crew weight aft. • Remove some rake. • Move centerboard aft.
6) You need better boat preparation.	<i>Every aspect of your hull, rig and sails should be tweaked as much as possible to achieve maximum speed.</i>	<ul style="list-style-type: none"> • Work on your bottom and foils. • Reduce windage and weight aloft. • Remove all unnecessary weight from your boat.
7) Your equipment is not good enough.	<i>Even if you do everything possible, with the gear you have, sometimes you need an upgrade to make your boat competitive.</i>	<ul style="list-style-type: none"> • Get new sails, new boat (!) . . . • Try a crew weight that is heavier or lighter.

On choosing your closehauled course: Higher and slower, or lower and faster?

■ "Picking the best angle to sail upwind depends a lot on your sailing style and experience. The higher you try to sail, the harder it is to maintain your speed. So if you are unsure about what angle to pick, a high angle is more dangerous because it's more critical and less forgiving. It's usually better to pick a slightly lower course where you will be assured of better speed all the time.

Remember that when you want to point better, the first thing you need is speed. So make sure your boat is going fast first. Once you have good speed, then you

can start playing a balancing game between speed and height and see how you go relative to other boats.

This is difficult in heavier boats (like an Etchells) because they decelerate at such a slow rate. By the time you realize you're going slow, it will take you 30 or 40 seconds to get back up to speed because they accelerate slowly as well. It's easy to be lulled into a false sense of security because you can point high and look good for a little while!"

– Dave Curtis, Sailmaker and one-design champion