

5. Why, When, and How to Reef

April 18, 2016 *Marc Hughston*



OCC's Catalina 42 Betty, with the first reef tucked in, in the windy lane off Santa Cruz Island during one of the Northern Channel Islands trips

Why to Reef

When the boat is heeling over with a rail in the water and you are fighting the helm to steer a straight line, it's tempting to believe that something good is happening. This is actually what it feels like to be overpowered, and this is an inefficient and less safe way to sail.

Here is what is really happening: as the boat heels over, the keel inclines at such an angle that it no longer effectively prevents leeway, and the boat slips sideways – that's inefficient. The overpowered sail plan and angle of heel cause the boat to continually want to round up in to the wind (excessive weatherhelm), and that forces you to turn the rudder and drag it sideways in an effort to keep the boat straight – that's inefficient.

Why reef? Control, safety, and speed - you'll be a lot faster and safer when the boat is more upright with a balanced helm.

When to Reef

When the wind picks up to around 12-14 knots *true* with whitecaps all around and you are sailing upwind, for most boats, it's time to reef. Some boats are more "tender" and may need to reefed earlier, while others are more "stiff" and reefing might be delayed. The two main indicators are 1) excessive weatherhelm, and 2) excessive heeling.

The basic rule of thumb is that if you are wondering if you should reef, you probably should. Increasing weather helm and heeling over 15 degrees are the early indicators, and if you are fighting the helm and the leeward rail is buried, you have waited too long. If the weather forecast and your observations tell you conditions are sure to build, reef early before it gets rough.

Downwind, it's a little more deceptive. Helm control is the key indicator here – if you are having trouble keeping the boat on course because of weather helm, reef the main.

How to Reef the Main

The 4 primary steps to reefing the main are below. While each boat will differ in the way it is rigged and while you will have to ease the main sheet and vang to accomplish steps 3 and 4, these primary steps are transferable to any modern sloop rigged cruiser/racer.

1. Lower the halyard
2. Secure the tack
3. Tension the luff
4. Secure the clew

With practice, you will be able to reef in less than 60 seconds, and that's important because then you will never hesitate to reef when you need to.