**Sailing Under Control as the Wind Increases**

**John Jourdane**

**SHIFTING GEARS – keeping the boat under control by the adjusting or changing sails**

Monitor wind strength and sea state closely, and adjust sails according to changes in conditions as they occur. This keeps the boat sailing most efficiently, avoids heavy rolling, excess weather helm and heel and promotes crew confidence and comfort.

As the breeze freshens to the 11-to 16-knot range, you have various adjustments at hand to prevent overpowering before reefing or rolling in headsails:

1. Move the jib fairlead aft to open the upper leech and spill off wind.
2. Ease the jib sheet.
3. Move the mainsail traveler car down to leeward.
4. Ease the mainsheet, adding twist to the upper main and spilling excess wind.
5. Flatten the mainsail and jib with increased backstay tension, clew outhaul and vang.
6. Pull the mainsail draft forward with more halyard and/or cunningham tension.

**REDUCING SAIL AREA**

When winds strengthen to the point where trimming sails no longer de-powers the boat, it's time to bring in some sail.

**Upwind:** (This varies boat to boat, learn where you need to make the changes for your boat).

15 knots: flatten main, open top of sails, number 3 jib or furling jib 10 percent furled.

20 knots: first reef in main, number 4 jib or furling jib 20 percent furled.

30 knots: second reef in main or storm staysail or furling jib 40 percent furled or removed and stowed below, deploy storm jib or storm staysail.

35 knots: deep-reefed main down on traveler or dropped in favor of storm trysail, headsail furled or dropped, storm jib or storm staysail deployed.

40 to 50 knots: actively steer close hauled upwind (forereach), or heave-to.

50 knots and above: continue concentrated, active forereaching or heave-to, with sea anchor if necessary.

**Downwind:**

25 knots: first reef in main, maintain full genoa or spinnaker.

30 knots: second reef in main, furl genoa 15 to 20 percent, go to a smaller chute.

35 knots: third reef in main or storm trysail, furl genoa 30 to 40 percent or small jib.

38 knots: third reef in main or trysail, genoa furled or removed, storm jib or storm staysail deployed.

44 knots: storm trysail and storm jib or storm staysail. Deploy drogue if necessary.

50 knots and above: actively sail the waves downwind, deploy drogue to maintain safe speed. Alternatively, head upwind and sail a close reach (forereach) or heave-to. Never risk sailing too fast downwind under bare poles. The boat can easily broach and capsize in beam seas.

Reefing begins sooner upwind than downwind because the apparent wind is greater sailing a beat or close reach. Mainsail reefing and headsail reduction should be done sooner rather than later in either circumstance, however. The weather forecast determines sail deployment tactics. If heavy weather approaches, it can be wise to skip some intermediate steps in sail reduction.

When true winds approach 30 knots, the storm jib or staysail and the trysail should be readied for deployment; i.e. set up to be hoisted with their sheets on and run. Keep sheets permanently attached to the trysail and storm staysail.

When cruising, a drogue is often deployed to control downwind speed. This prevents the boat from accelerating down a wave and burying its bow into the next wave crest.

If you are racing with good helmsmen, put up the biggest sails you can handle, and go surfing. Sailing the waves very fast downwind requires helmsmen capable of concentrated efforts to drive the correct angles up waves and then bearing off appropriately down waves.

Do not be fooled by the diminished apparent wind speeds sailing down wind. If your boat is making 10 knots of boat speed, the apparent wind you feel will be 20 knots less than you'd feel upwind. Pay close attention to the true wind speeds, and become familiar with the Beaufort Scale of Winds and Seas, which will allow you to estimate wind speed based on the appearance of the sea.

**PRACTICE REEFING**

Putting in the first reef, proceeding to the second and then third, and shaking out the reefs, should be practiced by the whole crew over and over, so that the process becomes second nature.

Have protocols of shifting gears in mind to reduce hesitation when the time comes. Practice de-powering your sails. Know exactly how to reef the main and shake reefs out. Ensure that the headsails furl easily. Be intimately familiar with the tactics of forereaching and heaving-to, and you'll become a more capable, seamanlike sailor. Instead of fearing heavy weather, you'll be able to manage those situations with confidence, experience the water like you never dreamed possible, and know the immense satisfaction of weathering a gale at sea.