

## With and without spinnaker.

When trying to arrive at a recommended PYN for the Comet Trio when it is being sailed without spinnaker, it would be very easy to rely on the suggestion made in the original builder's literature of +20 points, or to follow the RYA suggested figure for dinghies of + 20 points, especially as they coincide so neatly. Except that the builder's figure is almost certainly based on the RYA recommendation, and the RYA recommendation is without doubt a starting point not a fixed and final figure. The following is an abstract from the RYA publication called YR2: (I have omitted the bits about keels and propellers.). It deals with the kind of adjustments to make to the PYN of boats being sailed with non standard rigs.

### “VARIATIONS FROM *BASE RIG*, LISTED CONFIGURATIONS AND ALLOWANCES

Where a cruiser does not conform to *Base Rig* for its class or type, allowances up to the following **maxima** may be applied on a trial basis:

Boat with all headsails smaller than *Base Rig* (+40)

Boat with no spinnaker (+40)

Boat with mainsail other than Bermudan (+20)

Boat with cruising chute and no spinnaker (+20)

Boat with all spinnakers smaller than *Base Rig* (+20)

Any variation from *Base Rig* not covered by the above list, such as hightech sailcloth, may justify an allowance (excluding *Crew Skill Factor*). If it is considered that the above allowances should be different, clubs should decide on a suitable number and, if of general application, inform the RYA.

For boats other than cruisers, the above allowances may not be applicable or suitable. For a dinghy without a spinnaker, for example, an allowance of +20 may be suitable.

Should an Owner decide to race his boat to anything other than *Base Rig*, he should declare the difference to the club and the club should allocate a *Trial Number* for the boat. In such cases the boat shall not change from its declared state during a series of races. If no difference is declared the club should apply the lowest Number applicable for the class during a series of races.

So it looks as if the RYA have produced a rather vague starting point along the lines of “We think it should be +40, but you ought to start at +20 and see how that works.” And that seems to be as far as it has gone. A good number of sailing clubs will give a spinnaker allowance of +20 points, and a search of the websites of clubs will give a good number of examples of this practise. There is almost total lack of clubs who report different yardsticks for boats with different configurations, despite it being built into sailwave and the current system for uploading race results to the RYA.

We might however be able to get a more useful figure by examining current practise from the dinghy sailing community, and I have searched diligently for some useful data: Sadly there is very little of this. I have so far found only four examples of published results for boats with and without asymmetric spinnaker. These include the RYA figures for the international canoe, The RS 200 owners association, Chew Valley Lake sailing club's measured performance of the RS Vision, and the Topper Topaz data from the manufacturer's website.

## **Analysis of available data for boats sailed with and without spinnaker.**

### **International canoe**

With Asymmetric Spinnaker 870

Without Spinnaker 893

Handicap increase +23 points, (+2.64%)

Source 2015 Portsmouth Yardstick tables

### **RS 200**

With Asymmetric Spinnaker 1057

Without Asymmetric Spinnaker 1090

Handicap increase +33 points (+3.12%)

Source RS 200 sailing class organisation

### **RS Vision**

With Asymmetric Spinnaker (RS Vision XL) 1114

Without Asymmetric Spinnaker (RS Vision S) 1144

Handicap increase +30 points (+2.69%)

Source Chew Valley Lake SC 2015 yardsticks

### **Topper Topaz UNO Race ( Sail Area 8.68 sq M Asymmetric spinnaker 8.00 sq M)**

With Asymmetric Spinnaker (Uno Race X) PY=1200

Without Asymmetric Spinnaker (Uno Race) PY=1240

Handicap increase +40 points, (3.33%)

Source manufacturer's website.

## **Discussion**

Interestingly the data set includes figures from the RYA, figures from a class association, figures from a sailing club which has been calculating its own yardsticks for many years, and figures from a manufacturer.

The average of these 4 sets of data is an increase in a boat's Portsmouth Yardstick of +2.95% (i.e.: slower) when the boat is used without spinnaker. The range of the data is from +2.64% to +3.33%. And what is most surprising about this data is the astonishingly small effect of a spinnaker, and the close agreement of the figures despite radical differences between boats, and the differences between sources of data.

It would seem logical therefore to look at a starting point of +2.95% for the Comet Trio. As the class yardstick published by the RYA is currently 1085 the calculation is:

1085 plus 2.95% which gives a figure of 1117. An increase of 32 yardstick points.

**This is the figure that should be recommended for adoption by the class association as it is a figure based on the most comprehensive data currently available, and falls within the range of values proposed by the RYA.**

## Proposal for Rule Changes

Regrettably the most recent copy I have of the class rules is from 2009

### 17 ASYMMETRIC SPINNAKER

- a. The Comet Trio may be raced as a two sail dinghy without spinnaker or as a three sail dinghy with spinnaker, depending on individual events and race instructions.
- b. The Comet Trio will race on handicap with two different Portsmouth yardstick ratings reflecting performance as a two sail dinghy or three sail with spinnaker.

I propose the addition of paragraph C as follows:

- c. The Yardstick for the Comet Trio when sailed without spinnaker shall be 2.95% higher than the yardstick for the Comet Trio as a three sail boat with spinnaker. Such that if the Portsmouth Yardstick is 1085. The yardstick without spinnaker becomes 1117.

And the addition of Para D as follows

- d. The factor by which the yardstick is increased to reflect it's performance as a two sail dinghy may be varied from time to time by the class association, but only in response to numerical evidence of the boat's performance in the two configurations.

Paragraph C is worded to allow changes to be automatically made to the 'without spinnaker' handicap in response to changes that might be made to the Trio handicap.

Paragraph D is worded to allow the class association freedom to change the factor of +2.95% in response to evidence being produced (for example by a test series of races). It also acts as a marker to sailing clubs to stop them from making arbitrary changes without the facts to prove it. If you omit this paragraph some sailing committee run by laser sailors will take a dislike to it and change the factor to Zero. This is in effect what happened at Swarkestone some years ago and got me started on the road to a redress hearing.

And finally for sailing clubs using SAILWAVE, could we agree standardised descriptions for with and without spinnaker such as:

Comet Trio (|2|S|A|||)

Comet Trio No Spinnaker (|2|S|O|||)

And then ask members to make sure that clubs use the common descriptions.

And Finally #2

For the avoidance of doubt, do we need to specify that this is for yardstick racing only? Or does it need to apply to class racing as well?

Phil Davies. 11<sup>th</sup> December 2015