HalSail FAQ

How does HalSail implement the PHRF handicap scheme?

PHRF (Performance Handicap Racing Fleet) is a scheme of handicapping used mainly in North America. It has both time-on-distance and time-on-time versions, with time-on-distance being the most common.

PHRF_ToD time-on-distance

Handicaps are expressed in terms of a number of seconds per mile. The corrected time of each boat is calculated as its elapsed time, minus its handicap multiplied by the course length. The race officer enters the length of the course in nautical miles.

PHRF_ToT time-on-time

The time-on-time version of PHRF boils down to a time correction coefficient (TCF). Corrected times are worked out by multiplying the elapsed time by the TCF.

In many schemes, such as IRC, the handicap is expressed directly as a TCF (eg IRC handicap of 0.981 means a TCF of 0.981). But in some schemes, such as the RYA's Portsmouth Yardstick scheme, the TCF is produced from a formula. In the case of PHRF_ToT the formula is:

TCF = A / (B + PHRF_ToT)

In the HalSail implementation the constant A is 650 and B is 550.

- So a PHRF_ToT of 90 gives a TCF of 1.016, meaning that the corrected time is longer than the elapsed time.
- A PHRF_ToT of 100 gives a TCF of 1.000, meaning that the corrected time is the same as the elapsed time.
- A PHRF_ToT of 110 gives a TCF of 0.985, meaning that the corrected time is shorter than the elapsed time.

In summary, the smaller the PHRF_ToT the faster the boat.

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