# Handicap Drift over a Season

## Background.

Because handicapping of boats is purely relative (within the group) drift is not really an issue. In saying that, it becomes an issue when (for example) a boat misses a block of races mid-season. A boat that does not receive a time stamp for 'this' race has its Allocated Handicap for 'this' race rolled forward to the 'next' race. It the remaining fleet's handicap is drifting down, and the non-starter re-joins the competition that re-joining boat will have a handicap advantage, and (depending on the drift speed and the number of missed races) could quite possibly win on corrected time: an outcome that would be considered by the other competitors as unfair.

Additionally, he is likely to continue winning until the auto-adjusting handicap system 'catches up'.

## Prerequisites.

A TopYacht Keel Boat Handicap License Extension

## Detecting Drift.

**Option 1: Fleet.**

1. Go to last race in a Series
2. Follow sequence *Admin | View | Handicap Data | Summary Data*
3. Click on the column heading 'Class'
4. Press **Crtl X:** this will then show the Initial Handicap, the first race number and the Next race HC for each competitor.
5. Press **Ctrl A**: this will give you the Fleet Average Handicap for each race.

   See Appendix 1

**Option 2: Class.**

1. Go to last race in a Series
2. Follow sequence *Admin | View | Handicap Data | Summary Data*
3. Click on the column heading Class
4. Put the cursor on the class name for any boat.
5. Press **Crtl X**: this will then show the Initial Handicap, the first race number and the Next Race Handicap for each competitor.
6. Press **Ctrl A**: this will give you the Average Handicap for each class for each race.

   See Appendix 2.

   It is shown at the bottom of each set of boats for a class. This clearly demonstrates any HC drift over time.

You can then eyeball the average data. A drift would be obvious.

## Quantifying Drift.

If you have doubts, you can dump the data into a **.csv** file, and then load it into a Spreadsheet.

⇨ See: TopYacht HELP | Viewing and Publishing Results | Export results in Different File Formats | Create TXT and CSV Files

By using a "Least Squares Linear Regression" tool, the gradient of the drift will be calculated.

The output will be in the form y = a*x + b, where 'a' is the gradient.

⇨ A positive number means the handicaps are increasing through time
⇨ A negative number means the handicaps are decreasing through time

Click here for a regression tutorial (only if you *want* to know).

As mentioned earlier, the mark boat is pivotal in the calculation of the next-race handicaps.

The mark boat is set in the handicapping recipe: ***Admin | Maintain | For Master List | Define / Edit Handicaps***

⇨ See Screen Snapshot below
⇨ Select the Handicap Name (recipe) that is in use (there are several recipes!!)
⇨ Change the values in Parameter 1 (Back Calculated handicap Reference Time is…)

Increasing this pair of numbers will select a mark boat further down the list, and will slow a downward drift (or reverse it). Be aware that the numbers nominated are rounded to a specific boat count within the list, and changing the number from 45% to (say) 46%, will **not** be enough of a change to force the selection of the next boat. The size of this change needed to change the mark boat becomes larger as the fleet size gets smaller
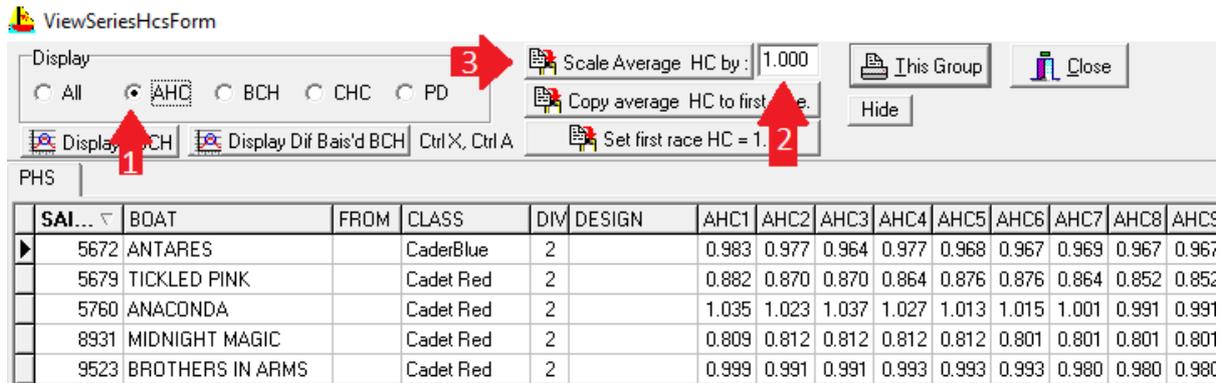


TopYacht Handicap Recipe Screen.

# Correcting Drift.

TopYacht provides some tools for factoring up the fleet's handicaps.

Open the Handicapping Menu screen. *Admin | View | Handicap Data | Summary Data*



1. Choose the AHC button
2. Determine the scale factor
3. Press the ![Scale Average HC by :] box.
4. **Tell the troops that you have scaled up the fleet's handicaps and why.**
5. You may wish to adjust the AHC for the boat that missed the block of races accordingly.

# Further Reading.

How the Next Handicap is Calculated

.

## Appendix 1

Typical Fleet Data Dump

PHS

| SAIL NO | BOAT | FROM | CLASS | DIV | DESIGN | BCH1 | BCH2 | BCH3 | BCH4 | BCH5 | BCH6 | BCH7 | BCH8 | BCH9 | BCH10 | BCH11 | BCH12 | BCH13 | BCH14 | BCH15 | BCH16 | BCH17 | BCH18 | BCH19 | BCH20 | BCH21 | AvBCH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5760 | ANACONDA | | Cadet Red | 2 | | 1.000 | 1.087 | 1.007 | 0.948 | 1.019 | 0.968 | 0.971 | 1.005 | 1.011 | 0.996 | 0.997 | 0.986 | | 0.993 | | | | 0.959 | | 1.007 | 0.884 | 0.990 |
| 5672 | ANTARES | | CaderBlue | 2 | | 0.966 | 0.937 | 1.002 | 0.939 | 0.964 | 0.974 | 0.962 | 0.989 | 0.964 | 1.000 | | | 0.983 | 1.067 | 0.958 | 1.023 | 0.999 | | 0.964 | 0.951 | 1.026 | 0.981 |
| 9930 | AQUILO | | CaderBlue | 2 | | 0.984 | 0.768 | 0.994 | 0.979 | 0.983 | 1.031 | 1.009 | 0.968 | 1.011 | 0.982 | 0.999 | 0.998 | 0.982 | 0.993 | 0.954 | 0.907 | 0.972 | 1.000 | 0.962 | 0.926 | 0.881 | 0.966 |
| 9560 | ASSASSIN | | Cadet Red | 2 | | 0.981 | 0.898 | 0.925 | 0.936 | 0.977 | 0.940 | 0.967 | 0.963 | 0.957 | 0.951 | 0.938 | 0.979 | 0.941 | 0.958 | 0.930 | 0.971 | 0.956 | 1.001 | 0.937 | 1.004 | 0.886 | 0.952 |
| 9523 | BROTHERS IN ARMS | | Cadet Red | 2 | | 0.976 | 0.991 | 0.998 | | | 0.931 | 0.899 | 0.954 | 0.922 | | 0.975 | 0.940 | | | 0.967 | 0.930 | 0.923 | | 0.942 | | 0.844 | 0.942 |
| 9616 | IMP | | Cadet Red | 2 | | 0.963 | 1.014 | 0.962 | | | 0.971 | 0.922 | 0.958 | 0.929 | | 0.929 | 0.862 | 0.916 | 0.928 | 0.931 | 0.931 | | 0.919 | 0.920 | 0.845 | | 0.931 |
| 8931 | MIDNIGHT MAGIC | | Cadet Red | 2 | | 0.818 | | | 0.705 | 0.766 | | | | | | 0.819 | 0.690 | 0.763 | 0.801 | 0.809 | 0.700 | | 0.597 | 0.743 | | 0.820 | 0.753 |
| 9527 | MUSTANG SALLY | | Cadet Red | 2 | | 1.031 | 1.045 | 0.971 | 0.974 | 0.972 | 0.899 | 0.912 | | | | 0.922 | 0.850 | 0.924 | 0.938 | | 0.909 | | 0.837 | 0.987 | 0.976 | 0.945 | 0.943 |
| 9624 | NEED FOR SPEED | RGYC | Cadet Red | 2 | | | | 0.787 | 0.838 | 0.858 | 0.889 | 0.903 | | | | 0.925 | 0.880 | | | | | | | | 0.844 | | 0.866 |
| 9913 | OCEAN WARRIOR | | CaderBlue | 2 | | 0.976 | 0.765 | 0.979 | 0.975 | 0.996 | 1.004 | 0.955 | 0.953 | 0.957 | 0.909 | 0.957 | 1.014 | 0.991 | 0.940 | 0.949 | 0.987 | 0.939 | 0.977 | 1.015 | 0.928 | 0.840 | 0.953 |
| 4677X | RESISTANCE | | CaderBlue | 2 | | 1.005 | 1.001 | 1.018 | 0.949 | 0.957 | 0.963 | 0.994 | 0.987 | 0.981 | | | | | | | | | | | | | 0.984 |
| 9559 | RESISTANCE | | Cadet Red | 2 | | | | 0.977 | 0.923 | 0.944 | 0.783 | 0.957 | 0.899 | | | | | | 0.981 | 0.933 | 0.933 | 0.825 | 0.932 | 0.945 | 0.949 | | 0.922 |
| 9545 | SMOOTH CRIMINAL | | CaderBlue | 2 | | 1.000 | 1.025 | 1.010 | | 0.975 | 1.019 | 1.017 | 0.987 | 1.012 | 1.011 | | | 1.052 | 1.014 | 1.001 | 0.988 | 0.977 | 1.030 | 1.008 | 1.000 | 1.009 | 1.007 |
| 9919 | SPARKLE | | CaderBlue | 2 | | 1.023 | | 1.002 | 1.052 | 1.011 | 0.961 | 0.988 | 0.993 | 1.007 | 1.024 | 0.977 | 1.036 | 1.031 | 0.896 | 1.100 | | 1.022 | 0.961 | 1.002 | 1.018 | 1.001 | 1.006 |
| 9822 | SPITFIRE | RYCV | CaderBlue | 2 | | | | | | | | | | | | | | 1.000 | 1.036 | 0.749 | 1.062 | 1.025 | 1.025 | 1.064 | | | 0.994 |
| 5679 | TICKLED PINK | | Cadet Red | 2 | | 0.819 | | 0.853 | 0.903 | | 0.837 | 0.823 | | | | 0.828 | 0.743 | 0.778 | 0.825 | 0.861 | 0.766 | 0.913 | 0.739 | 0.735 | 0.752 | 0.837 | 0.813 |
| 9698 | WILDCARD | | Cadet Red | 2 | | | | | | | | | 0.971 | 0.839 | | | | | | 0.924 | | | 0.954 | 0.926 | 0.922 | 0.983 | 0.931 |
| | AVERAGE VALUE | | | | | 0.965 | 0.953 | 0.963 | 0.927 | 0.952 | 0.941 | 0.949 | 0.969 | 0.963 | 0.982 | 0.933 | 0.907 | 0.942 | 0.949 | 0.932 | 0.926 | 0.966 | 0.909 | 0.938 | 0.938 | 0.911 | 0.937 |

# Appendix 2

Typical Class Data Dump

PHS

| SAIL NO | BOAT | FROM | CLASS | DIV | DESIGN | AHC1 | AHC2 | AHC3 | AHC4 | AHC5 | AHC6 | AHC7 | AHC8 | AHC9 | AHC10 | AHC11 | AHC12 | AHC13 | AHC14 | AHC15 | AHC16 | AHC17 | AHC18 | AHC19 | AHC20 | AHC21 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5672 | ANTARES | | CaderBlue | 2 | | 0.983 | 0.977 | 0.964 | 0.977 | 0.968 | 0.967 | 0.969 | 0.967 | 0.967 | 0.966 | 0.977 | 0.977 | 0.977 | 0.979 | 0.992 | 0.981 | 0.994 | 0.996 | 0.996 | 0.985 | 0.974 |
| 9930 | AQUILO | | CaderBlue | 2 | | 0.964 | 0.971 | 0.971 | 0.979 | 0.983 | 0.983 | 0.996 | 1.000 | 1.000 | 1.004 | 0.997 | 0.998 | 0.998 | 0.993 | 0.993 | 0.980 | 0.967 | 0.969 | 0.979 | 0.973 | 0.960 |
| 9913 | OCEAN WARRIOR | | CaderBlue | 2 | | 0.960 | 0.965 | 0.965 | 0.970 | 0.975 | 0.982 | 0.989 | 0.978 | 0.978 | 0.971 | 0.958 | 0.958 | 0.971 | 0.978 | 0.965 | 0.960 | 0.969 | 0.959 | 0.985 | 0.995 | 0.982 |
| 4677X | RESISTANCE | | CaderBlue | 2 | | 1.008 | 1.007 | 1.005 | 1.009 | 0.996 | 0.983 | 0.976 | 0.982 | 0.982 | 0.982 | 0.982 | 0.982 | 0.982 | 0.982 | 0.982 | 0.982 | 0.982 | 0.982 | 0.982 | 0.982 | 0.982 |
| 9545 | SMOOTH CRIMINAL | | CaderBlue | 2 | | 1.017 | 1.011 | 1.016 | 1.014 | 1.014 | 1.001 | 1.007 | 1.010 | 1.010 | 1.011 | 1.011 | 1.011 | 1.011 | 1.024 | 1.021 | 1.014 | 1.005 | 0.996 | 0.996 | 1.000 | 1.000 |
| 9919 | SPARKLE | | CaderBlue | 2 | | 1.050 | 1.041 | 1.041 | 1.028 | 1.040 | 1.030 | 1.016 | 1.007 | 1.007 | 1.007 | 1.013 | 1.001 | 1.013 | 1.019 | 1.019 | 1.033 | 1.033 | 1.029 | 0.988 | 0.993 | 1.001 |
| 9822 | SPITFIRE | RYCV | CaderBlue | 2 | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.012 | 1.012 | 1.025 | 1.025 | 1.025 | 1.038 | 1.038 |
| | AVERAGE VALUE | | | | | 0.997 | 0.996 | 0.995 | 0.997 | 0.997 | 0.992 | 0.993 | 0.992 | 0.992 | 0.992 | 0.991 | 0.990 | 0.993 | 0.996 | 0.998 | 0.995 | 0.996 | 0.994 | 0.993 | 0.995 | 0.991 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5760 | ANACONDA | | Cadet Red | 2 | | 1.035 | 1.023 | 1.037 | 1.027 | 1.013 | 1.015 | 1.001 | 0.991 | 0.991 | 0.998 | 0.997 | 0.997 | 0.993 | 0.993 | 0.993 | 0.993 | 0.993 | 0.993 | 0.982 | 0.982 | 0.990 |
| 9560 | ASSASSIN | | Cadet Red | 2 | | 0.965 | 0.970 | 0.957 | 0.946 | 0.946 | 0.956 | 0.951 | 0.956 | 0.956 | 0.956 | 0.954 | 0.949 | 0.959 | 0.953 | 0.955 | 0.947 | 0.955 | 0.955 | 0.968 | 0.958 | 0.971 |
| 9523 | BROTHERS IN ARMS | | Cadet Red | 2 | | 0.999 | 0.991 | 0.991 | 0.993 | 0.993 | 0.993 | 0.980 | 0.980 | 0.980 | 0.967 | 0.967 | 0.970 | 0.960 | 0.960 | 0.960 | 0.962 | 0.951 | 0.942 | 0.942 | 0.942 | 0.942 |
| 9616 | IMP | | Cadet Red | 2 | | 0.963 | 0.963 | 0.976 | 0.971 | 0.971 | 0.971 | 0.971 | 0.958 | 0.958 | 0.948 | 0.948 | 0.942 | 0.942 | 0.933 | 0.931 | 0.931 | 0.931 | 0.931 | 0.931 | 0.927 | 0.925 |
| 8931 | MIDNIGHT MAGIC | | Cadet Red | 2 | | 0.809 | 0.812 | 0.812 | 0.812 | 0.812 | 0.801 | 0.801 | 0.801 | 0.801 | 0.801 | 0.801 | 0.807 | 0.807 | 0.796 | 0.798 | 0.802 | 0.802 | 0.802 | 0.802 | 0.791 | 0.791 |
| 9527 | MUSTANG SALLY | | Cadet Red | 2 | | 1.021 | 1.024 | 1.031 | 1.017 | 1.006 | 0.995 | 0.995 | 0.995 | 0.995 | 0.995 | 0.995 | 0.982 | 0.982 | 0.969 | 0.959 | 0.959 | 0.946 | 0.946 | 0.946 | 0.959 | 0.965 |
| 9624 | NEED FOR SPEED | RGYC | Cadet Red | 2 | | 0.839 | 0.839 | 0.839 | 0.828 | 0.828 | 0.838 | 0.849 | 0.860 | 0.860 | 0.860 | 0.860 | 0.871 | 0.874 | 0.874 | 0.874 | 0.874 | 0.874 | 0.874 | 0.874 | 0.874 | 0.864 |
| 9559 | RESISTANCE | | Cadet Red | 2 | | 0.977 | 0.977 | 0.977 | 0.977 | 0.964 | 0.957 | 0.957 | 0.957 | 0.957 | 0.957 | 0.957 | 0.957 | 0.957 | 0.957 | 0.957 | 0.965 | 0.954 | 0.947 | 0.947 | 0.942 | 0.943 |
| 5679 | TICKLED PINK | | Cadet Red | 2 | | 0.882 | 0.870 | 0.870 | 0.864 | 0.876 | 0.876 | 0.864 | 0.852 | 0.852 | 0.852 | 0.852 | 0.844 | 0.844 | 0.833 | 0.830 | 0.840 | 0.840 | 0.851 | 0.851 | 0.851 | 0.851 |
| 9698 | WILDCARD | | Cadet Red | 2 | | | | | | | | | 1.000 | 0.990 | 0.990 | 0.990 | 0.990 | 0.990 | 0.990 | 0.990 | 0.990 | 0.977 | 0.977 | 0.977 | 0.964 | 0.951 |
| | AVERAGE VALUE | | | | | 0.943 | 0.941 | 0.943 | 0.937 | 0.934 | 0.934 | 0.930 | 0.935 | 0.934 | 0.932 | 0.932 | 0.931 | 0.931 | 0.926 | 0.925 | 0.925 | 0.922 | 0.922 | 0.921 | 0.918 | 0.918 |