

# PHRF OF EASTERN CONNECTICUT

## Performance Handicap Racing Fleet of the Eastern Connecticut Sailing Association

### 2019 ECSA PHRF REGULATIONS

#### I. GENERAL REGULATIONS

ECSA Handicap ratings are determined for each boat as the sum of its base boat rating and any adjustments applied that address modifications to the standard boat, its sail plan, spars, propulsion, etc. as outlined in this document. Base boat ratings are established based on performance potential and observation in accordance with the design of a standard boat, equipped as intended by the original manufacturer with US Coast Guard required safety equipment, maintained in top racing condition and sailed by competent crew. It is the aim of these regulations to equitably assign handicaps, as Time Correction Factors, for conditions likely to be found in and about Eastern Long Island Sound. Time correction factors are determined by the following formula:

$$\text{TIME CORRECTION FACTOR (TCF) = } 650 / (\text{PHRF} + 550)$$

- **A Standard Boat** is one that is equipped to the degree intended by the manufacturer, including those appointments and equipment supplied or intended by the manufacturer, such as joiner work, galley equipment, standing rigging, etc. Class rules notwithstanding.
- **A One-Design Boat (ODR)** must be equipped as specified in its class rules.
- **A Custom or One-Off Boat** is reviewed, by Council, as initially presented on a case-by-case basis, and normally handicapped "as Sailed". "As-sailed" ratings are established based on observed performance, documented to include configuration, equipment, appointments, and sails that are onboard during the period of observation. Subsequent changes may be treated as a Modified Boat per below.
- **A Modified Boat** is any boat that has been changed in some way that might affect its performance from the original design.

#### MODIFICATIONS

Older boats often require substantial restoration to be maintained in a safe and competitive condition. These repairs and improvements have the potential to affect boat speed when compared to the base

boat upon which the rating is established. It is the same for newer boats that are modified. For this reason, modifications and significant repairs made to any boat need to be documented and evaluated, and rating adjustments considered on a case-by-case basis to maintain fair racing for all. All restorations, repairs and modifications described below and listed in **Section XI** of these Regulations, whether performed by you, others or previous owners, must be reported and noted on your PHRF application whether or not they replicate the original design.

Modifications of interest typically include changes to the hull shape or structure, appendages, spars or sail plan, boat weight or propulsion. While some modifications may be allowable under One-Design class rules where all boats are the same, they may require a rating adjustment for racing under PHRF. The Handicapping Council assumes the role of assessing repairs or modifications to determine whether there is a significant effect on performance requiring adjustment of a boat's handicap. Though only some modifications may require that a rating adjustment be considered, it is not the owner's responsibility to assess the speed significance of a change or to decide which modifications qualify. For this reason, we offer the general guidelines below, on what to report (and what not to report) on your rating application.

#### **Modifications, Repairs and Upgrades Which Must Be Reported:**

- 1. Hull and Appendages:** Changes that alter either the weight of the boat or the flow of water over wetted surfaces such as size, shape, contour, length, materials, weight, location, center of gravity, etc.
- 2. Structure:** All structural work including changes, repairs, additions, or replacement to the original manufactured design and construction of the hull, keel sump, rigging, weight, or weight distribution. This includes (but is not limited to) interior bulkheads, longitudinal stringers, keel sump bracing, tie rods, and compression struts.
- 3. Spars:** Changes to weight, length, cross section, design, materials (Carbon Fiber, etc.), external support structure, standing rigging design or materials etc. The modification or addition of a sprit.
- 4. Sail Plan:** Guidelines are provided in this ECSA PHRF Regulations, Definitions and Adjustment

document for all applicable **Rated Sails** and the addition or removal of headsail roller furling devices. **Rated Sails** include your largest Symmetrical, Asymmetrical, and Code Zero Spinnakers, Mainsail and Headsails. Measurement certificates must be provided for each rated sail before they can be used in ECSA events. Any changes or replacements of Rated Sails, not previously reported MUST have documented sail measurement certificates. Other innovative changes to the sail plan, including Roller Furling gear must be reported.

**5. Interior Amenities:** Changes that affect weight of the boat including removal or addition of hatch tops, doors, tables, head, battery, tanks, other furniture or components of the basic boat. Replacement of any of these made with lightweight materials. Cushions are specifically exempt from this requirement.

**6. Mechanical Propulsion:** Changes from the original production installation that affect location, weight and/or underwater drag.

#### **Modifications Which Need Not Be Reported:**

- 1. Fairing and Smoothing** of the hull, rudder, keel or centerboard that conforms to the original design except as limited by One-Design class rules.
- 2. Additional Sails** that are no larger than the **Rated Sails**.
- 3. Sail Material** such as Mylar, Kevlar, Carbon, Dacron, Nylon, etc.
- 4. Changes** to Running Rigging or additions of sail handling gear such as head foil systems, winches, blocks, sail track, sheeting arrangement, removal or addition of chokers, outhauls, and Cunningham, mast or boom hardware.
- 5. Cosmetic Changes** to the hull, interior, or rigging of the boat not affecting the structure, weight, trim, or speed of the boat.

#### **OWNERS RESPONSIBILITY**

**It is the sole responsibility of each boat owner** to advise the ECSA PHRF Handicapping Council of any improvements, modifications or repairs to his/her boat. The fairness of ECSA TCF handicaps and of the racing that relies on them is entirely dependent on accurate information being provided to the Handicapping Council, and on a boat being maintained to continue her compliance with that rating. ECSA's handicapping council takes that

accuracy and compliance very seriously. Certification by the owner on the handicap application is a requirement.

**Failure to report modifications** accurately on PHRF rating applications (or failure to have a boat's rating reconsidered after any modifications are made that might affect that rating prior to the next race) is a clear breach of **RRS Rule 78.1** and may also violate **RRS Rule 2** (Fair Sailing). Competitors and Race Committees are encouraged to protest (and Protest Committees to penalize) boats that fail in this regard, and Race and Protest Committees are requested to report any such penalties to ECSA for possible further action, including considering possible disqualification from competition for season trophies. If ECSA finds such violations to be intentional and/or part of a pattern of non-compliance, it may well also consider that behavior or any attempt to cover it up as gross misconduct and call a hearing to take further action under RRS Rule 69 (Gross Misconduct) as prescribed in that rule.

#### **QUALIFICATIONS**

**To qualify for a handicap**, a boat must be single-hulled and self-righting and meet the requirements of **RRS Rule 51 (Movable Ballast)**. The use of movable ballast, a trapeze, hiking straps, hiking boards, or any other hiking aid is not permitted. A boat shall not have more than one current Eastern Connecticut PHRF handicap at any time. Rating changes based on a change in headsail size or a new **Rated Sail** will be limited to one per season. Rating adjustments for all hull and rig modifications not covered by the regulations that follow will be handled on a case basis. A base boat handicap may not be reviewed within 3 years of its last review date. [Note: All dimensions shall be given in decimal feet to two places. Please use: 1 Meter = 3.280833 Feet]

**Boats with a One Design PHRF rating (ODR)** must conform to the hull, appendage, rig, and sail configuration specified by its Class Rules. Additional class requirements such as limitations on crew weight, hiking, sail materials, number of on-board sails, new sail purchases, etc., will not apply. Practices permitted by the class, but otherwise prohibited by these Regulations (such as equipment or furniture removals), or the Racing Rules of Sailing, such as the use of trapezes or movable ballast, shall not be allowed.

## II. DEFINITIONS

- AMG** Asymmetric spinnaker mid-girth, measured from the midpoint of the luff to the midpoint of the leech.
- ASF** Asymmetric spinnaker foot length, measured in a straight line from tack to clew.
- ASLIM** Equal to:  $1.15\sqrt{(ISP^2 + TPS^2)}$ .
- BAL** Ballast of vessel in pounds.
- BEAM:** Maximum width of the vessel.
- DECK HEIGHT** The height of the sheer line abreast of the mast.
- DISP** Displacement of vessel in pounds, without any water, fuel, etc.
- DRAFT** Distance from bottom of keel to LWL. Also include draft with board down if a centerboard vessel.
- E** Distance from the after face of the mast along the boom to the center of the outhaul sheave or band whichever is less.
- EC** Calculated value of an E dimension such that max girths become allowable under Section V of these Regulations.
- EY** The mizzen correspondent of "E".
- I** The distance above sheer line to the point of intersection of the head stay and the mast.
- ISP** The distance above sheer line to the highest headsail halyard.
- J** Horizontal base of fore triangle measured from head stay intersection at deck edge to front of mast.
- JGM** The length measured between the mid points of the luff and leech of a jib.
- LLY** Luff length of the largest mizzen staysail (mule, etc.).
- LOA** Length overall of hull.
- LP** Distance perpendicular from the luff to the clew of the jib. [Also referred to as **LPG**.]
- LPY** Distance perpendicular from the luff to the clew of the largest mizzen staysail.
- LWL** Load waterline length.
- MAT** Construction material of the keel or mast, e.g., lead, iron, carbon, aluminum.
- MGL** Mainsail girth measurement from a point along the leech, one-quarter (1/4) of the distance from the clew to the head, to the nearest point of the luff.
- MGM** Mainsail girth measurement from a point along the leech, halfway between the clew and the head, to the nearest point of the luff.
- MGT** Mainsail girth measurement from a point along the leech, seven-eighths (7/8) of the distance from the clew to the head, to the nearest point of the luff.
- MGU** Mainsail girth measurement from a point along the leech, three-quarters (3/4) of the distance from the clew to the head, to the nearest point of the luff.
- P** Height of main luff between black bands or from bottom of upper band to bottom of fixed boom track. ( Use top of halyard sheave if no upper band).
- PY** The mizzen correspondent of "P".
- RFR** Roller Furling Restrained, see Section IV of these regulations for description, application and limits.
- SFL** The length of the foot of a symmetric spinnaker, measured between the clews.
- SL** Length of symmetric spinnaker measured along either luff from head to tack, with only enough tension to remove wrinkles. Sail to be stretched flat while measuring.
- SLE** Asymmetric spinnaker leech, measured from head to clew, with only enough tension to remove wrinkles. Sail to be stretched flat while measuring.
- SLIM** Equal to:  $0.95\sqrt{(I^2 + J^2)}$ , [ or  $0.95\sqrt{(ISP^2 + TPS^2)}$ , if **ISP** is greater than **I** or **TPS** is greater than **J** or both].
- SLU** Asymmetric spinnaker luff, measured from head to tack, with only enough tension to remove wrinkles. Sail to be stretched flat while measuring.
- SPL** Spinnaker pole length measured from centerline of mast to outboard end of pole when set in a horizontal position, athwart ship.
- SMW** Maximum symmetric spinnaker girth measured luff to leech (Previously was "**G**").
- TPS** Tack Point Spinnaker; the horizontal distance from the front of the mast at its lowest point above the deck to the point of attachment, at deck level, of the foremost tacking point of an asymmetric or symmetric spinnaker or to the extreme forward end of any bowsprit in its maximum extended position. If a symmetric or an asymmetric spinnaker is flown from a pole, **TPS** is equal to **SPL**. **TPS** replaces former terminology referring to **JSP**.
- WPL** Whisker pole length. Measured similarly to **SPL**.



## ADDITIONAL NOTES

**Measurements** All measurements shall be in decimal feet to two decimal places [Note: 1 Meter = 3.280833 Feet]

**Modification** Any restoration, repair or change made to a base boat since manufacture as detailed in **Sections I and XI** of these regulations.

**Rated Sail** Those sails upon which the handicap is based; specifically, the largest Jib/Genoa, Mainsail, and largest Spinnaker.

### III HANDICAP ADJUSTMENTS: Non-Spinnaker Handicap

Non-Spinnaker handicaps are based on the ratio of mainsail size (including mizzen sails, if applicable), to fore triangle size as follows: Ratio =  $(P \times E + [PY \times EY] + [0.6 \times LLY \times LPY]) / (ISP \times TPS)$ .

| Ratio                 | Rating Adj. |
|-----------------------|-------------|
| .3 but less than .4   | +26         |
| .4 but less than .5   | +25         |
| .5 but less than .6   | +24         |
| .6 but less than .7   | +23         |
| .7 but less than .8   | +22         |
| .8 but less than .9   | +21         |
| .9 but less than 1.0  | +20         |
| 1.0 but less than 1.1 | +19         |
| 1.1 but less than 1.2 | +18         |
| 1.2 but less than 1.3 | +17         |
| 1.3 but less than 1.4 | +16         |
| 1.4 but less than 1.5 | +15         |
| 1.5 but less than 1.6 | +14         |
| 1.6 but less than 1.7 | +13         |
| 1.7 but less than 1.8 | +12         |
| 1.8 but less than 1.9 | +11         |
| 1.9 but less than 2.0 | +10         |
| 2.0 but less than 2.2 | + 9         |
| 2.2 but less than 2.4 | +8          |
| 2.4 but less than 2.6 | +7          |
| 2.6 but less than 3.0 | +6          |
| 3.0 but less than 3.4 | +5          |
| 3.4 but less than 4.0 | +4          |
| 4.0 but less than 4.0 | +3          |
| 5.0 but less than 6.0 | +2          |
| 6.0 but less than 7.0 | +1          |
| 7.0 + greater         | 0           |

Non-Spinnaker handicaps for **cat-rigged** vessels shall be equal to their Spinnaker handicap **minus** 6 seconds per mile.

## IV. HEADSAILS

**A Jib** shall have a mid-girth, (**JGM**) which is not more than 50% of its foot length. The length of any intermediate girth shall not exceed a value proportionate to its distance from the head of the sail. Bloopers and spinnaker staysails are classed as headsails.

**Limitations on Jibs** These limitations do not apply to bloopers and staysails except their size may not exceed other **Rated Sails**.

- A. Jibs must be sheeted from only one point on the sail except while in the process of reefing.
- B. Jibs must be tacked on centerline.
- C. No headboards shall be used.
- D. Battens may be used only if the LP is 117% or smaller. The number of battens is limited to four, which must be arranged with approximately equal spacing between the head and clew. There is no limit on batten length.
- E. Only one headsail shall be flown at any one time from the head stay (except during a sail change).
- F. No headsails may be set to extend aft of the LP line used to establish the handicap.
- G. No headsail (including stay sails) may be flown that has an LP greater than the rated LP.

**Roller Furler Restrained (RFR)** A boat, not subject to One Design or Class rules, which sails with ALL head stay jibs that are tacked to the top of an above deck mounted functional roller furler, and are raised within a head foil (excluding inner stays or free flying staysails), and using a head stay swivel such that the sails can be furled, shall be considered "Roller Furler Restrained" (**RFR**).

Boats that are sold by the original manufacturer in the RFR configuration or a custom boat in the RFR configuration, upon which the base boat handicap is established, is referred to as an RFR Base Boat. All other boats, whether equipped with a roller furler or not, are referred to as a Non-RFR Base Boat. In all cases, owners **MUST SPECIFICALLY** indicate their configuration in the application process.

An RFR Base Boat sailed in a non-RFR configuration will receive a (-3) rating adjustment. A Non-RFR Base Boat sailed in an RFR configuration will receive a (+3) rating adjustment.

## Headsail Adjustments

**NOTE** Headsail handicap adjustments shall not apply to boats with One-Design Ratings. For unmodified series production boats use the design "J" dimension when determining the adjustment:

| Spinnaker Class           |                             |
|---------------------------|-----------------------------|
| <u>LP/J Size Range</u>    | <u>Rating Adjustment</u>    |
| Up to 1.10                | +7                          |
| Greater than 1.10 to 1.20 | +6                          |
| Greater than 1.20 to 1.30 | +5                          |
| Greater than 1.30 to 1.35 | +4                          |
| Greater than 1.35 to 1.40 | +3                          |
| Greater than 1.40 to 1.45 | +2                          |
| Greater than 1.45 to 1.51 | +1                          |
| Greater than 1.51 to 1.55 | 0                           |
| Greater than 1.55 to 1.60 | -1                          |
| Greater than 1.60 to 1.65 | -2                          |
| Greater than 1.65 to 1.70 | -3                          |
| Greater than 1.70         | is adjusted proportionally. |

| Non-Spinnaker Class       |                             |
|---------------------------|-----------------------------|
| <u>LP/J Size Range</u>    | <u>Rating Adjustment</u>    |
| Up to 1.10                | +16                         |
| Greater than 1.10 to 1.20 | +13                         |
| Greater than 1.20 to 1.30 | +10                         |
| Greater than 1.30 to 1.40 | +7                          |
| Greater than 1.40 to 1.48 | +4                          |
| Greater than 1.48 to 1.51 | +1                          |
| Greater than 1.51 to 1.55 | 0                           |
| Greater than 1.55 to 1.60 | -1                          |
| Greater than 1.60 to 1.65 | -2                          |
| Greater than 1.65 to 1.70 | -3                          |
| Greater than 1.70         | is adjusted proportionally. |

## V. MAINSAILS

Unless standard for a class, unpenalized mainsail girth shall be limited as follows: Headboard shall not exceed the greater of 0.04 E or 0.5 feet.

|   |        |
|---|--------|
| <b>MGT</b> (7/8 leech) shall not exceed | 0.22 E |
| <b>MGU</b> (3/4 leech) shall not exceed | 0.38 E |
| <b>MGM</b> (1/2 leech) shall not exceed | 0.65 E |
| <b>MGL</b> (1/4 leech) shall not exceed | 0.90 E |

Individual girth or headboard dimensions that exceed the standard fraction of actual E, MUST be declared and will be addressed on a case-by-case basis. IMS Rule 826 will be used for guidance. If actual E or EC is greater than standard E, a penalty of up to 2 seconds/mile may be assessed for each 5% or fraction thereof in excess.

## VI. ASYMMETRIC SPINNAKERS

An **Asymmetric Spinnaker** is defined as having unequal leech (**SLE**) and luff (**SLU**) lengths that differ by more than 5%, and a midgirth (**AMG**) of not less than 75% of its foot length (**ASF**). Asymmetric spinnakers shall have a free flying luff. Asymmetric spinnakers may be flown from a pole, the deck (or an extension thereof) with a pennant not exceeding 2 feet in length, or from a **non-articulating sprit**.

**Pole-Flown or Deck-Tacked** An **AMG** of up to 180% x **J** and an average of the leech and luff lengths ( $((\text{SLE}+\text{SLU})/2)$ ) not exceeding **ASLIM**, shall be permitted without penalty; provided that **TPS (SPL)** is equal to **J**. Oversized sails and poles will be penalized using a similar methodology as for symmetric spinnakers, see **Section VII** below, except that **AMG** shall be substituted for **SMW**, and the average of the leech and luff lengths will be substituted for **SL**. **Both Symmetric and Asymmetric Spinnakers MAY be flown from the pole on a boat without a sprit.**

**Sprit-Flown** If a boat model comes standard from the manufacturer with a sprit, the "base boat" handicap is based on the largest standard (**ODR**) asymmetric spinnaker, as specified by the boat manufacturer, provided that the boat is sailing in one design (**ODR**) configuration. All boats choosing to sail outside their **ODR** configuration (i.e. with PHRF sails) are subject to the "Asymmetric Girth Adjustments as listed below". **Symmetric Spinnakers MAY NOT be flown from a pole on a boat with a sprit.**

### Adjustments for Alternative AGM/TPS values

**ODR** Boats and others sailing in PHRF configuration with a sprit flown asymmetric spinnaker shall be allowed an **AMG** of up to 165% x **TPS**, and an average of the leech and luff lengths ( $((\text{SLE}+\text{SLU})/2)$ ) not exceeding **ASLIM**, without penalty. Oversized sails will be subject to the adjustments shown below.

## Girth Adjustments for Asymmetric Spinnakers:

| AMG/TPS                   | Rating Adjustment |
|---------------------------|-------------------|
| Up to 1.65                | 0                 |
| Greater than 1.65 to 1.70 | -3                |
| Greater than 1.70 to 1.75 | -6                |
| Greater than 1.75 to 1.80 | -9                |

Greater than 1.80 will be adjusted proportionally

**Modified or Retrofit -- Sprit Flown** Boats with a modified or retrofit sprit are subject to the following limitations. A TPS equal to  $1.24 \times J$  shall be permitted without penalty or adjustment. Handicap adjustments for alternative TPS values will be made in accord with the table below. These adjustments do not apply to OEM sprits. Custom boats will be dealt with on a case-by-case basis. **NOTE: TPS/J and AGM/TPS adjustments are additive.**

| TPS / J %                  | Rating Adjustment |
|----------------------------|-------------------|
| Less than or equal to 100% | +9                |
| Greater than 100% to 108%  | +6                |
| Greater than 108% to 116%  | +3                |
| Greater than 116% to 124%  | 0                 |
| Greater than 124% to 132%  | -3                |
| Greater than 132% to 140%  | -6                |
| Greater than 140%          | -9                |

### Code Zero Spinnakers

Code 0/Close Reaching Spinnakers, are designed to fill a hollow in the polar diagram. They normally have an area of about 60% of a full sized asymmetric and are effective in 40 to 80 degrees apparent wind. These sails are characterized as being made of a laminate or aramid material and have a substantial luff rope for the large luff tensions that these sails require. For handicap purposes, Code 0 spinnakers shall be treated as an asymmetrical spinnaker with unequal leech (**SLE**) and luff (**SLU**) lengths that differ by more than 5%, and a midgirth (**AMG**) of not less than 75% of its foot length (**ASF**) with a free flying luff. Battens are not permitted, and they shall be sheeted from only one point. Currently no handicap adjustment is offered for a Code Zero Spinnaker. **Measurement certificates are required.**

## VII. SYMMETRIC SPINNAKERS

A Symmetric Spinnaker shall have a mid-girth (**SMW**) that is greater than 75% of its foot length (**SFL**) and be symmetrical about a line joining its head to the center of its foot. Note **SMW=SHW x 2.0**.

Spinnaker rating adjustment is based on the largest spinnaker measured by the **SMW/J** ratio and the **SL/SLIM** ratio. A luff length equal to SLIM is standard. The maximum girth (**SMW**) without penalty is equal to  $1.800 \times J$ . If spinnaker luff length is greater than standard, excess length is converted to excess girth. Convert the excess luff to excess girth using the following formula: **SMW/J** Rated = **(SMW/J Actual) x (SL/SLIM)**.

### Girth Adjustments for Symmetric Spinnakers

| SMW/J  | Rating Adjustment |
|--|-------------------|
| Up to 1.80   | 0                 |
| Greater than 1.80 to 1.85                          | -1                |
| Greater than 1.85 to 1.90                          | -2                |
| Greater than 1.90 to 1.95                          | -3                |
| Greater than 1.95 to 2.00                          | -4                |
| Greater than 2.00 to 2.05                          | -5                |
| Greater than 2.05 to 2.10                          | -6                |
| Greater than 2.10 will be adjusted proportionally. |                   |

### Maximum Spinnaker Pole Length (SPL) Without Penalty

For spinnakers where **SMW** is  $\leq 1.8 \times J$ , **TPS=J**.

For spinnakers where **SMW** is  $\geq 1.8 \times J$ , **TPS=SMW/1.80**.

If TPS exceeds both **J** and **SMW/1.8**, use the Girth Adjustment Tables (substituting  $1.8 \text{ TPS/J}$  for **SMW/J**) to determine pole penalty.

The spinnaker/pole penalty shall be the greater of either the girth penalty or the pole penalty, but not both.

**Whisker Poles** - Whisker Poles must be declared but there is no whisker pole length (**WPL**) limit.

## VIII. MAST

### Mast Height Adjustments

(Only applicable when "I" & "P" change equally.)

Standard Mast Height is "ISP"

Excess or deficient height is measured by mast ratio where Mast Ratio = Actual "ISP"/Std. "ISP"

| <u>Mast Ratio</u>                             | <u>Rating Adjustment</u> |
|---|--------------------------|
| Greater than 0.91 to 0.93                     | +12                      |
| Greater than 0.93 to 0.95                     | + 9                      |
| Greater than 0.95 to 0.97                     | + 6                      |
| Greater than 0.97 to 0.99                     | + 3                      |
| Greater than 0.99 to 1.00                     | 0                        |
| Greater than 1.00 to 1.03                     | - 3                      |
| Greater than 1.03 to 1.05                     | - 6                      |
| Greater than 1.05 to 1.07                     | - 9                      |
| Greater than 1.07 to 1.09                     | -12                      |
| Greater than 1.09 to 1.11                     | -15                      |
| Greater than 1.11 is adjusted proportionally. |                          |

## IX . PROPULSION

Engine or prop too small to drive vessel at  
 $KTS = 0.8 (1.3\sqrt{LWL})$  -6  
 (Not applicable if temporary engine outage.)

### Propeller Adjustments for Inboard Engine

|                                       |     |
|---------------------------------------|-----|
| 2, 3 or 4 blade folding or feathering | 0   |
| Solid 2 blade aperture                | 0   |
| Auto Prop                             | +3  |
| Solid 2 blade exposed to water        | +6  |
| Solid 3 blade in aperture             | +6  |
| Solid 3 blade exposed to water        | +12 |

### Outboard Engine Propellers

|  |     |
|--|-----|
| Std. retracted when racing                         | 0   |
| Engine not retracted, prop immersed on both tacks: |     |
| 2 blade  | +6  |
| 3 blade  | +12 |

## X. ADDITIONAL NON-SPINNAKER REGULATIONS

A. The intent of non-spinnaker racing is that boats sail off the wind with the same sails they use to sail on the wind. Therefore, ketches and yawls may not fly staysails off the wind unless such sails are used when sailing upwind.

- B. Except when changing headsails, participating yachts rated as sloops, may only fly one headsail at a time.
- C. A yacht permanently rigged as a Cutter may fly a staysail. The inner forestay shall be set up at all times.
- D. Any boat, not subject to One Design or Class rules when sailing in a non-spinnaker class, is eligible for a non-spinnaker handicap adjustment.
- E. All headsails must have the luff fully attached to the head stay.
- F. See the Roller Furler Restrained (RFR) adjustments in **Section IV** above.

## XI. BOAT MODIFICATIONS

### Proper Racing Trim:

Yachts shall race as rated with at least all the equipment and furnishings supplied as standard by the manufacturer. A yacht that has altered or has removed bulkheads, permanently attached furniture, or structural interior components shall be considered a custom or modified yacht. Drawers, headliners, cabinet and locker doors, steps, ladders, and engine enclosures shall remain in place as supplied as standard equipment. If they do not remain, then the yacht shall be considered a modified yacht and rated accordingly. Lifting keels (not designed to be adjusted while racing) must be fixed and locked in the lowered position while racing.

### Modified Structure:

All aftermarket structural work must be reported by the applicant and reviewed by the Council on a boat-by-boat basis. Refer to **Section I** above for guidance regarding what needs be reported. When possible, we recommend that plans be reviewed with your handicapper before work is started. Alternately, documentation of modifications previously completed by you or others, should include as built photographs and/or as-built drawings with notes on materials and dimensions. Any modifications in the bow area to add or modify a SPRIT must be reported, providing the TPS length.

Articulating sprits are not permitted.

Removal, or partial removal, of an OEM roller-furling device is considered a modification and must be reported. All modified boats will be reviewed and assessed on a case-by-case basis.