CARIBBEAN SAILING ASSOCIATION

Rating Rule January 2008 v 1.1

A.1 GENERAL

This Rule has been developed to meet the particular requirements of yachts racing in the Caribbean. Principal considerations are as follows:

A.1.1 The rule must endeavour to precisely estimate the speed potential of the yachts racing under its auspices.

A.1.2 Ratings should reflect realistically the speed potential of the wide variety of yachts racing in the region so that winning, on a well-prepared yacht, becomes principally a matter of skill on the part of the skipper and crew.

A.1.3 In order to meet the challenge of the wide range of yachts and yachtsmen racing in the region the rule has to be able to use different processes to arrive at a rating for a yacht. Thus, for example, the method of computing a rating for one yacht may not be the same as the method used for another. Special considerations may be made for yachts wishing to race as a class.

A.1.4 The rule has evolved from being completely based on measurement to one in which there is a combination of measurement and assessment of the yacht's speed potential.

A.1.5 The rule must be streamlined in application in order to handle the many visiting yachts , wanting to race but often arrive only shortly before race day.

A.1.6 The rule must recognize the different levels of competitiveness of the yachtsmen racing in the region. These range from the very keen yachtsmen who aim for excellence and who are willing to commit substantial resources to be competitive, to the visiting cruising yachtsman who participates in races simply for the fun of meeting people and enjoying their company.

A.1.7 The rule should encourage participation in regattas and camaraderie between yachtsmen.

A.1.8 This rule A.1 is not subject to protest.

A.2 Administration

A.2.1 Overall

The rating rule shall be administrated by the CSA. This body shall appoint a Chief Measurer who shall be responsible for appointing official Senior Measurers and official Measurers. The Chief Measurer shall control the number of active measurers. Measurers are required to register annually with the CSA who shall maintain a master list of active measurers. This list will be available to organizations and Regatta organizers, which are members of the CSA.

A.2.2 Measurer's Duties and Responsibilities.

Measurers shall pay an annual registration fee to the CSA as decided on from time to time.

Measurers shall be entitled to charge reasonable fees for their services. The measuring of yachts shall be carried out by the Measurers, and the preparation of rating certificates shall be carried out by the Measurers or the CSA administration.

A.2.2.1 Measurers should adhere to the following guidelines:

1) A measurer shall promote the principle of the fairest possible "level playing field" to the sailing public in respect of handicap systems.

2) A Measurer shall not be an advocate for the improvement of the rating of a boat on which he or she is sailing or has close business ties to.

3) A measurer shall not measure the boat that he or she is sailing on unless it is determined, in consulting with the chief measurer, that it is impractical for any other measurer to measure the vessel.

4) A measurer shall not act as a paid professional consultant to owners entering yachts in CSA measured events in respect of handicapping affairs.

A.2.2.2 A measurer can be struck off the list of official measurers by the Chief Measurer if

1) He has not paid his annual registration fee within 3 months of this becoming due or

2) If in the opinion of the Chief Measurer, that measurer is not carrying out his duties with the appropriate accuracy and care.

3) Other factors which can be brought into consideration by the Chief Measurer are:

3.1 Issuing intentionally incorrect certificates

3.2 Bringing disrepute on the CSA

3.3 Failing to comply with reasonable requirements laid down by the Chief Measurer.

A.2.2.3 The Chief Measurer may, at his discretion, appoint new or trainee measurers or limit the activities of measurers.

A.2.3 Official Regatta Measurers

A.2.3.1 Any regatta using the CSA rule shall appoint a CSA measurer as Regatta Measurer. This measurer shall be available to assist with the following duties:

1) Placing yachts in different classes.

2) Reviewing all certificates submitted and bringing errors or omissions to the attention of the skipper and to the Race Organizers and Officials.

3) Making corrections or arrange re-measurement if errors are found on certificates during the course of the regatta.

4) Ensuring that competitors comply with the requirements of the CSA rating rules and advising the race committee of any breaches observed and following their recommendations with respect to the submission of a protest.

5) Advising the race committee and protest committee on measurement matters.

6) Preparing a report for the Chief Measurer incorporating a commentary on the racing, the results and any comments as to the technical aspects of the rule as are appropriate for the continued monitoring and refinement of the rule.

A.2.3.2 Correcting certificates during regatta

When the official measurer of the regatta is satisfied that there is a technical error (such as typographical, calculation or measuring) in a boat's rating certificate at any time during the regatta, he shall notify the jury. If the jury is satisfied that the rating certificate is in error, the measurer shall re-issue the certificate and the scoring shall be adjusted for all the races in the regatta.

A.2.4 Authoritative body for determining rating protests.

If a regatta organizer wishes to have the facility for immediate decisions with respect to rating protests which, under RRS rule 64.3, have to be referred to an "authority responsible", they should advise the CSA Chief Measurer of this requirement and seek to set up a mechanism for having the Chief Measurer present or represented at the regatta.

It is intended that any costs associated with this requirement be borne by the Regatta Organizers.

A.2.5 Rating Protest

A.2.5.1 When a rating protest is submitted to the protest committee the protesting party and the yacht protested shall be required to deposit measurement fees as described under CSA Rule A.2.12.

A.2.5.2 If as the result of a protest on rating or as required by a Race Committee a yacht is re-measured to confirm her rating/handicap, the following tolerances for changing the certificate shall apply:
1) If the protest is in relation to the use of larger than rated sails only the sails shall be measured. If as a result of this measurement the rating of the yacht changes by more than +/- .001 this shall result in the alteration of the Yacht's Certificate and the protest shall be upheld.
2) If the protest is of a more general nature and the entire yacht is re-measured, the protest shall be upheld and a new certificate issued if the rating resulting from that measurement is different from that shown on the Rating Certificate by more than +/- .003

The RRS rule 64.3(d) shall be used to determine which party shall pay the measurement fees.

A.2.6 Changing the Rule

The CSA may modify the rule at any time. A recommendation for a rule change may originate at an official CSA meeting, a Measurers meeting, from a CSA member, or from an interested party. These recommendations should be sent to the Chief Measurer.

A.2.7 Interpreting the Rule

The CSA Chief Measurer is the final authority for interpretation of this rule. It must be understood that any written document can be interpreted in many different ways and that there has to be a means of resolving disputes. In resolving disputes the Chief Measurer will be guided by the intention of the rule rather than the strict interpretation of the wording of a particular statement.

A.2.8 Un-measurable yachts

If a Yacht, arriving at a regatta to race, cannot be given a measurement rating because of some abnormality in its dimensions which results in the calculated rating being inapplicable or which has equipment which is not allowed under the rule; the matter shall be referred to the Regatta Measurer. In this case the Regatta Measurer shall use his best efforts to arrive at a fair rating for the yacht and may suggest to the regatta organizers that this yacht be given a provisional rating to allow it to race in the regatta. The Regatta Measurer shall have the authority to alter this provisional rating during the regatta if, in his opinion, it does not truly represent the speed potential of the yacht.

A.2.9 Standard Hull Dimensions

Some one-design classes like J27, J29, and Melges 24 may have standardized hull and rig dimensions. The mean hull and rig dimensions are recorded in the database. The hull, rig and sails of the yacht are measured and the rating computed using a standard set of sail dimensions. If the rating so obtained is within a fixed number of points of the standard rating, the yacht can be given the standardized hull and rig dimensions.
All certificates with standard hull and rig dimensions must be sent to the Chief Measurer for approval before they are issued.

A.2.10 One design Class Rating

One-design classes can be given a fixed Class Rating. This rating will be given to every boat of this one design class that is determined to be 'Class Legal' by an official class measurer. The boat does not have to be measured for CSA. The Chief Measurer will determine the 'Class Rating'. Every 'Class Legal' boat needs a valid CSA certificate. The certificate will indicate that it is a Class rating. The measurements stated on the certificate may be different from the actual measurements.

A.2.11 Minimum dimensions

For all racing conducted under this Rule, Race Committees may stipulate minimum sizes of yachts that will be accepted for each class.
Establishment and control of these minimums is outside the scope of this Rule.

A.2.12 Fees

A.2.12.1 The CSA shall levy fees for the services it provides in order to offset the costs of providing these services. Measurers shall charge the boat owner a fee for measuring the yacht and producing a certificate.

The recommended standard measurement fee is as follows:
For a complete measurement for a yacht the fee is US $ 4.00 per ft of LOA Plus cost of CSA on-line certificate validation (currently US $1.00/ft of LOA), with a minimum fee of US$100.00 plus the cost CSA on-line certificate validation.

For example, a 30ft yacht will be charged as follows $4.00 per ft LOA ($4.00 x 30ft = $120.00) Measurement fee plus $1.00 per ft LOA ($1.00 x 30ft = $30.00) Certificate Validation Fee. Total for complete measurement - $150.00.

A.2.12.2 Updating $25.00 plus $1.00/ft for the on-line certificate validation. For example a 30ft yacht which requires a re-validated certificate will be charged as follows $25.00 update fee for the measurer and $30.00 certificate revalidation fee for CSA ($1.00 x 30ft = $30.00). Total for certificate update - $55.00.

A.2.12.3 Testing $40.00

A.3 RATING CERTIFICATES

The measurements taken off the yacht shall be entered in the CSA Rating Program. The certificate printed by this software is the only certificate that can be issued. All authorized certificates are store in a central on-line database in digital format and are readily accessible to

measurers and authorized third parties through using an access protocol.

A.3.1 Authorizing A Certificate

Every certificate shall be checked by a Senior Measurer or the Chief Measurer. All certificates shall carry a unique authentication number and the name of the Measurer who measured the boat and/or authorized the certificate.

A.3.2 Distribution of Certificates

Copies of Certificates shall be distributed as follows:
The official digital certificate is automatically logged in the centralised database. This shall become the official Certificate of the yacht and shall be accessible to the Regatta Organizers for registration purposes. It shall also be available to Race Officials during all competitions using this rule.
A copy of this digital certificate may be given to the owner at his request.
The Measurer, or the Chief Measurer may supply a copy of any certificate (that is available) to any person on request, subject to a discretionary charge.

A.3.3 Certificate Validation

The rating certificate issued to a yacht shall be valid for one calendar year. Rating certificates are validated by measurers using the on-line rating program. Each valid certificate has a digitally generated unique authorization number. Only such digitally authorized certificates are considered valid. A yacht may only be issued with three certificates per calendar year.

A yacht's certificates become invalid when:

1) The period of validity expires or the Rating Rule is changed.
2) The ownership of the yacht is changed.
3) The Authoritative Body so decides. (Rule 2.4).
4) A modification to a yacht's hull or rig affecting her parameters is made.
5) New sail(s) are delivered to the yacht.
6) Repairs are made to the yacht's structure, rig, accommodation or equipment arrangements such as to affect measurably the yacht's parameters.
7) The owner or his representative can't present a signed owners declaration with the certificate.

When a yacht's certificate become invalidated as above, a Measurer shall carry out such re-measurement as is necessary and issue a new certificate after retrieving and cancelling the invalid certificate. A yacht may carry only one valid Certificate at any time.

A.3.4 Updating Certificates

The owner has to mention all changes made to a yacht's hull or rig affecting her parameters and changes in sails since the last time a certificate was issued. If the original certificate is not available or the owner cannot assure the measurer that no changes were made the yacht should be completely re-measured.
The measurer may charge a reasonable fee (A.2.12) for validating certificates in addition to the charge for the CSA certificate validation fee.

A.3.5 Certificate Changes Prior to an Event

In order to discourage the practice of changing sail inventory to suit individual event conditions there is a deadline for the change of sail inventory prior to any Regatta. This deadline is five (5) days prior to the start of the event. Any request that is lodged with a certified CSA Measurer

prior to the deadline will be considered valid as long as this does not result in the number of certificates issued for the yacht exceeding the allowed limit (see A.3.3 above). Replacement of sails that have been damaged, destroyed or lost between Regattas shall be excluded from the above deadline.

A.3.6 Re-measurement

If the last complete re-measurement is over 5 years old or if the measurer thinks that the measurements are no longer accurate, the measurer can insist on complete re-measurement. The date of re-measurement is to be recorded in the database.
If a boat owner requests a re-measurement from another measurer, there has to be a good reason for re-measurement. The measurer must first check with the Chief Measurer, or confer with the measurer who did the first measurement to ensure that there is a good reason for re-measuring the yacht.

A.3.7 Changes to valid certificates and changes to Hull, Keel, Rudder and Rig Factors

A measurer shall review any request for changes to certificates carefully. If the request has merit the details must be forwarded to the Chief Measurer.
A valid certificate shall not be changed without first notifying the Chief Measurer and giving a written description of the proposed changes. The information passed to the Chief Measurer should include the following:

a) Race results for races completed with the current valid certificate.
b) The reasons for the proposed changes.

Where the request is to change the designated Hull, Keel or Rudder factor or Rig factor, the reasons for requesting the change should be submitted in writing.
Upon receipt of the request for change, the Chief Measurer shall set up a review committee comprising (wherever possible) the measurer who issued the original certificate, the measurer requesting the change and any other person he wishes to include.
After coming to a decision, the Chief Measurer must notify the original measurer as well as the measurer requesting the change. Copies of this correspondence should also be given to the Regatta Official measurer at the next Regatta to be sailed by the yacht.
As this is likely to be a lengthy process, yachtsmen are advised to make their requests for changes at the earliest possible opportunity.

A.3.8 Temporary Certificates

Temporary certificates may be issued for a single regatta if the measurer is confident that the certificate so issued will stand up to the rigors of a measurement protest. The certificate should be clearly identified as temporary and comments should include the circumstances of its issue. Temporary certificates are only valid for a single regatta and must not be updated without a full measurement.

A.4 Computations

The Rating Rule Software will do all computations. Measurer's should take care to verify that the data is entered correctly and that the rating obtained is reasonable for the yacht. The database of yachts, which is available with the rating rule, should be used where possible to ensure that the measurements for similar yachts are accurate.

A.5 Handicaps

A.5.1 TCF

The yacht's corrected time is obtained by multiplying its elapsed time for the race by the TCF

stated on the certificate. The yacht with the lowest corrected time wins the race. The CSA recommends that in calculating corrected times the minimum time increment should reflect that which is reasonably achieved by the timing devices that are used to record competitor's elapsed times.

A.5.2 With Spinnaker / Non Spinnaker Ratings for yachts

Yachts will normally have a "with Spinnaker" and a "Non spinnaker" rating indicated on their certificate. If the yacht is racing in a non-spinnaker class, the "non spinnaker" TCF is used to handicap the yacht. There are several non-spinnaker TCF's displayed on the certificate. These are used depending on the yacht's downwind sail configuration and are as follows; TCF_jib which applies to a Mainsail and Jib only sail configuration, TCF_pol which applies to a Mainsail, single Jib and spinnaker pole and finally TCF_sec which refers to Mainsail, twin headsails and a spinnaker pole.

A.6 Power Assisted Operations

Yachts may use power-assisted winches and may have power assistance for the canting of ballast.

A.7 Crew Weights

The maximum weight of the crew is limited to that shown on the rating certificate. If this crew weight is exceeded the rating certificate is not valid. The regatta organizers may waive this requirement for specific classes if they so wish.
It is recommended that the skippers be required to submit a list of crew along with their weights and that any changes be subject to the approval of the regatta race officer or equivalent.

A.8 Water Ballast

Yachts designed to use water ballast will be allowed to race.
The quantity of the water ballast in litres equivalent to the maximum water ballast that the yacht intends to carry at any one time is then stated on the certificate. Suitable means of ensuring that more water ballast is not carried has to be agreed with the measurer and stated on the certificate. If the total weight of crew plus the weight of the water ballast exceeds the maximum allowed crew weight the yacht can still be given a TCF using rule A.2.8. Un-measurable yachts.

A.9 Preparation of the Yacht for Measurement

When a request for measurement is received the Measurer should issue the document "Preparation of a Yacht for Measurement " from the appendix.

A.9.1 "Measured Light" (ML) and "Measured with gear" (MWG)

Normally yachts with a light interior will be measured light and yachts with a medium or heavy IAF will be "measured with gear". Alternatively, an owner may opt to have his yacht "Measured Light".

A.9.1.1 When a yacht is to be "Measured Light" it shall be prepared as follows:

- **a**) Floorboards shall be kept down; bulkheads and doors left standing; ladders, stairways and water tanks left in place; all cabin, galley and forecastle fixtures and fittings kept on board; all movable ballast shall be properly stowed under the floorboards or in lockers and no dead weight shall be shifted.
- **b**) All loose and portable items and stores shall be removed. Anchors and their ropes shall be removed. All internal ballast and all items of the yacht's necessary equipment, rig,

machinery, galley, cabin, etc. that are normally fixed in position shall be in their normal positions. Internal ballast is allowed only if it is fixed in position. Lifting appendages shall be fully lowered.

c) Notes on "Portable" and "Fixed" items:-

i) Sails in bags or loose shall be removed from the yacht but sails furled normally on their booms shall remain in place.

ii) All halyards and main, mizzen, foresail and boomed staysail sheets and reefing lines shall remain reefed. All other sheets and lines to be removed. Parts of a fixed item shall also be considered as fixed even if not captive or fastened, i.e. drawers of a built-in chest of drawers, hatch covers for all hatches and access holes, removable sections of floorboards or bunks, removable doors and slides and similar. These items shall remain on board during measurement if the yacht races with them on board.

iii) Fitted carpets shall be considered as fixed if the yacht races with them. Cockpit cushions shall be removed. Bunk cushions shall be in place if the yacht races with them.

iv) Loose stores to be removed, including all misc. items of equipment, life jackets, sails in bags, anchors, chains, rode, mooring lines, cutlery, loose galley equipment etc.

v) Fixed items can remain if the yacht races with them, including loose sections that form part of fixed items, locker doors, drawers, hatch covers etc. All lockers and shelves must be empty. This item will be inspected.

d) All water holding tanks shall be empty. Some fuel is allowed so long as the fuel tank is not more than one-third full. Bilges shall be dry.

e) On yachts 26 ft (7.9m) L.O.A. or over an outboard used as the yacht's auxiliary may be on board during measurement stowed on the cabin sole on the yacht's centreline, aft of the mast with the powerhead at the mast heel position.

f) The horsepower of the engine shall be noted on the Measurement Certificate. In all other cases, outboard engines shall be removed from the yacht for measurement.

g) All items on board during measurement shall be on board while racing.

The Measurer shall check that the yacht is in proper condition for measurement as specified in the foregoing. Shortcomings shall be brought to the attention of the owner who shall comply with the requirements of the measurer in order to have the yacht measured.

A.9.1.2 If a yacht is to be "measured with gear" it may be measured in whatever reasonable racing trim the owners present it.
All items on board during measurement shall be on board while racing. This is the owner's responsibility. If the yacht is in faster trim while racing than when measured, the owner and captain are in breach of the rating rules and, if this is established, the Race Committee or the Protest Committee may take punitive action against the yacht in accordance with the Racing Rules. In addition, a competitor may protest the yacht and this may result in disqualification or some other penalty. All gear aboard shall be in its normal racing position. Except that sail bags and ropes to be stacked amidships during measurement.

A.9.2 Owner – Measurer Responsibilities

A.9.2.1 The Owner shall be responsible for presenting his yacht in proper condition and in water sufficiently calm for measurement. The owner (or his agent) shall be present during measurement and assist, if required by the Measurer, in the measurement of the yacht.
The owner shall ensure that the yacht, its sails and its equipment meet at the requirements of the Rule.

A.9.2.2 The Measurer shall check that the yacht is in proper condition for measurement as specified

under MEASUREMENTS-GENERAL in the foregoing. If the yacht is being "measured light", the Measurer shall personally check the yacht from stem to stern and sound bilges and tanks to ensure that the conditions specified in the foregoing relating to "light" conditions for measurement are obtained. Shortcomings shall be brought to the notice of the owner who shall remove, relocate and fix all items as required by the Measurer in accordance with the Rule.

B. MEASUREMENTS

B.1 GENERAL

B.1.1 Measurements from the Hull

Measurements shall be taken directly from the yacht except where otherwise particularly specified. No projections such as rubbing strakes, chocks, boomkins or other protuberances shall be included in the measurements.

B.1.2 Hollows and Projections

Where hollows or projections or other deviations from the fair surface of the hull or its appendages occur in the way of a point of measurement, the Measurer shall adjust the measurement by relating it to the fair surface of the hull or appendage. If, in the measurer's opinion, the fair surface of the hull has been intentionally altered in order to obtain a more favourable measurement under the Rule, the Measurer shall indicate this on the rating certificate and make an arbitrary adjustment in the particular measurement(s).
Bumps: There have been attempts by the owners to obtain a higher "d" measurement by fairing bumps into the hull of the yacht at the quarter beam measurement position. If the yacht you are measuring is known to be bumped, you should normally assess the hull factor one or more higher than would otherwise be assessed. Of course your good judgement -as always -must be applied. The intention here is to ensure that the yacht does not gain an advantage by bumping. If the bumps are severe, you should assess the difference in the quarter beam measurement that the bump produces and subtract it from the quarter beam measurement.

B.1.3 Units of measure

Dimensions must be taken in metres. Hull dimensions shall be taken to the nearest millimetre. Sail and rig dimensions shall be taken to the nearest centimetre.

B.1.4 Measurement Conditions

Measurement shall only be taken in wind and water conditions sufficiently calm to permit the accuracy specified in B.1.3 above.

B.1.5 Measuring bendy rigs

The Measurer shall measure the rig with the mast as near as is practical to the straight configuration. Backstay tension shall be adjusted by the Measurer to hold the rig firm for measurement of length of headstay.

B.1.6 Adjustable Masts

Where a mast is readily movable at the deck, measurements shall be taken with the mast in its furthest aft position.
For masts that have hydraulic or other devices for tensioning the rig, the mast should be positioned in such a way that all the standing rigging is taut and not slack.

B.1.7 For overhangs and freeboard measurements there shall be no person aboard the yacht.

B.1.8 Mooring or docking lines shall be slack during measurement.

B.2 INDIVIDUAL HULL MEASUREMENTS

B.2.1 Length "LOA"

The length overall "LOA" shall be measured on the centre-line of the yacht and shall be the horizontal distance in the profile between the forward and after terminations of the hull proper. Measurements shall be taken to include the rail (bulwark or toe-rail) only where this forms a continuation of the external surfaces of the topsides of the hull.
Any projection of the skin of the hull shall be included in length measurements if in the opinion of the Measurer such projection extends the sailing lines of the hull.
Rudders shall not be included in length measurements. The term "rudder" shall be taken to include any parts attached to the rudder proper and rotating with it.
Any part of a fixed fairing piece between the top of the rudder proper and the hull proper and located aft of the rudder post shall be considered as part of the rudder and thus not included in length measurements provided that such fairing piece does not exceed in thickness the maximum thickness of the rudder.

B.2.2 Midsection

M1 shall be the vertical cross-section of the yacht which occurs at a distance 0.55 x LWL aft of the forward termination of the waterline.

B.2.3 Beam B

B.2.3.1 B55

The maximum width of the hull proper at the 55% LWL midsection M1 at whatever level it occurs.

B.2.3.2 Maximum Beam - BMax

Where extensions to the deck or hull, such as wings, seats, outriggers, etc., are fitted to allow crew to be carried beyond the normal hull, the maximum beam over these extensions wherever it occurs shall be measured and recorded as BMax.

B 2.3.3 Waterline beam - Bwl

Bwl is the width of the hull at waterline level, measured at the 55% LWL, M1 midsection

B.2.3.4 Quarter Beam Depth - D55

This is measured at the 55% LWL M1 midsection location “d” is the vertical distance from the level of the point on the hull where the transverse salient line of the top of the deck, produced as necessary and ignoring any discontinuities at the deck/hull junction, intersects the outside surface of the hull, to a point on the outside surface of the bottom of the hull one-quarter of B55 out from the hull centerline.
This dimension is measured port and starboard.

B.2.5 FREEBOARDS

B.2.5.1 Ff, Freeboard Forward

This is the vertical distance from the forward termination of LOA to the water plane.

B.2.5.2 F55 Freeboard Midships

This is the vertical distance from the level of the upper point of the d measurements (see B.2.3.4), to the water plane. F55 is measured at the 55% LWL midsection location.
This dimension shall be measured port and starboard.

B.2.6 DRAFT

B.2.6.1 Vm

Vm or fixed draft, is the draft to the lowest point of the fixed keel or rudder or the bottom of a movable ballasted keel in its raised position, whichever is the greater.

B.2.6.2 Vcbl

Vcbl, Draft with Centerboard Lowered, is the draft with any movable appendage fully lowered. Lifting keels or Centerboards are considered to be less effective than a fixed keel because of their shape, however some modern lifting keel boats don't have this disadvantage as their lifting keels are well shaped (Melges24, Carrera 290). These keels are considered to be fixed.

B.2.6.3 Vm and Vcbl taken from Yacht's plans

These dimensions may be taken from the plans of the yacht, or other reliable descriptive literature, which must be made available to the Measurer. However from time to time the measurer may have to measure this dimension.

B.2.7 Engine Distance ED

The Engine Distance ED shall be the horizontal distance from the plane of the midsection M1 to a vertical transverse plane through a point midway between the furthest forward engine mount(s) and the furthest aft engine mount(s). (Gearboxes are taken as part of the engine proper if directly coupled to it).

B.2.8 Canting Ballast

Boats with canting Ballast shall be assessed appropriate Keel and Rudder Factors by the Chief Measurer. The presence of these movable appendages shall be indicated on the certificate and in the case of canting ballast the amount of displacement from the centreline in degrees shall be recorded.

B.3. SAILS GENERAL

B.3.1 Definition of Head, Tack & Clew

The term "Head", "Tack" and "Clew" shall be defined as, at the relative apex of the sail, the intersection point of the salient lines of the adjacent edges of the sail, produced as necessary.

B.3.2 Measuring the Sails

Where dimensions are to be measured off sails themselves, the sail shall be laid flat on a plane surface and stretched tight by hand to remove wrinkles across the line of measurement so as to include the full fabric length between measurement points.
The foot dimensions of any sail shall be the straight-line distance from tack to clew.

B.3.3 Sail Materials Classification

When entering data in the Rating Calculation program, these classifications must be used.

1) Any Dacron/Nylon Sail with Parallel Seams ie. Cross Cut, Mitre Cut or Vertical Cut (Excluding tape drives).
2) Any sail material/construction other than that described above.

There is no credit allowed for crosscut Dacron sails in the Spinnaker rating.

B.3.4 Headboards & Clewboards

For headsails, headboards are not permitted. For all sails, clewboards are not permitted, except on self-tacking jibs.

B.3.5 Head Sails

Headsails shall be either "Jibs" or "Spinnakers". These sails shall meet the following dimensional criteria:

B.3.5.1 Jibs

B.3.5.1.1 The length of the luff shall not exceed Hj

B.3.5.1.2 The mid-girth, measured between midpoints of luff and leech, shall not exceed 50 percent of the foot length nor shall the length of any intermediate girth exceed a value similarly proportionate to its distance from the head of the sail.

B.3.5.1.2.1 For boats that have only non-overlapping headsails, LP of 110%, in their inventory; the mid girth, measured between midpoints of luff and leech, shall not exceed 55 percent of the foot length nor shall the length of any intermediate girth exceed a value similarly proportionate to its distance from the head of the sail.

B.3.5.1.3 The fabric length of the sail between the midpoint of the foot and the mid-point of the luff shall not exceed 0.55 of the length of the leech. (Straight line distance between head and clew).

B.3.5.2 Second Headsails

B.3.5.2.1 This sail, which is carried down wind in addition to the normal headsail, must fall within the definition of a jib.

B.3.5.2.2 The luff length cannot exceed Hj and the Lp of this sail cannot be greater than that of the headsail the yacht is rated with. If the LP of the second headsail is bigger than the LP of the one normally used up wind this larger LP must be measured and inserted in the measurement form.

B.3.5.3 Spinnakers

B.3.5.3.1 Symmetrical Spinnakers

These are spinnakers where the difference between the luff and the leach is less than 2 % of the shorter measurement.

B.3.5.3.2 Asymmetrical Spinnakers

Asymmetrical spinnakers are spinnakers, which have luff/leech dimensions, which do not comply with the requirements, for a symmetrical spinnaker outlined above. The mid girth must be greater than 75% of the foot length.
If the mid girth is less than 75% of the foot the sail is illegal and cannot be used unless it qualifies as a jib.

B.3.5.3.3 Unusual Down-Wind Sails

Down-Wind sails that do not fit the above definition of Spinnakers, are deemed illegal and are not allowed. These include but are not limited to Kite Sails, Parasails and Spinnakers with modified elements of kites and/or parasails.

B.3.5.4 Spinnaker and bow poles

B.3.5.4.1 Yachts must choose either

a) Symmetrical spinnaker
b) Asymmetrical spinnaker

B.3.5.4.2 Yachts which choose an asymmetrical spinnaker must choose either:

a. Tack the end to a standard spinnaker pole
b. Use a bow pole or fixed tack position on deck
c. Which choice is made should be made clear to the measurer and is clearly stated on the certificate. If a yacht uses a bow pole or fixed tack position on deck, it is not allowed to race with a standard Spinnaker pole as well.

B.3.5 Poles for Non Spinnaker classes

Poles may be used to boom out the second headsail, but this must be indicated on the certificate and will result in a higher non-spinnaker TCF. The pole length must then be measured and entered on the certificate.

B.3.6 Mainsails, mizzens, triangular foresails:

For area computation these sails shall be considered triangular:

B.3.6.1 Headboard width (measured at right angles to the luff, sail and headboard inclusive) shall not exceed 0.045E. Headboards beyond this maximum can be assessed by applying to the Chief Measurer on an individual basis.

B.3.6.2 Mid Girth, Upper Mid Girth and Top Mid Girth only have to be measured and put in program if they exceed the following:

Mid Girth: The maximum of:
65 % of E OR 0.5*E + 0.022*P + .366 m (1.20 ft)

Upper Mid Girth: The maximum of:
38 % of E OR 0.28*E + 0.016*P + 0.259 m (0.85 ft)

Top Mid Girth: The maximum of:
22% of E OR 0.13*E + 0.01*P + 0.150 m (0.49 ft)

B.3.6.3 Any girth dimension (at any height on the sail) that exceeds the measured foot dimension of the sail shall be taken as the foot dimension (E).

B.3.7 Battens may be of any length and number.

B.3.8 Mizzen Staysails, Gollywobblers etc.

Mizzen staysails should be declared on the certificate.

B.3.9 Setting and sheeting of sails:-

B.3.9.1 A headsail shall be sheeted from one point on the sail only. No jib may be set, whether hanked to a stay or set flying, the luff of which cannot be fully stretched when hoisted on the highest jib halyard and tacked to the forward measurement point of J.

B.3.9.2 No tack pennant greater than 2.5 feet may be used on a jib when set flying.
A fitting may be placed towards the outer end of a boom for a sheet lead for sheeting a loose footed sail set forward of the boomed sail. This fitting may not be more than 0.5 feet aft of the black band for the clew of the boomed sail.

B.3.10 Black Bands

Black bands as required by the Rule may be painted or of tape and shall be at least 3/4" wide. Black bands shall go completely around spars. The term "black band" shall be taken to mean bands of contrasting colour to the surface to which they are attached but black wherever possible.

B.3.11 Yawls and Ketches

For the purpose of this Rule no differentiation is made between these rigs. The term "ketch" shall be taken to include yawls.

B.3.12 Inner Staysails

For rigs using multiple jibs, no inner staysail shall be set in such a manner that when fully sheeted aft, its clew may pass in profile an imaginary line drawn parallel to the headstay and at a distance equal to LP from it.

B.3.13 Accepting measurements

Sail dimensions placed on sails by reputable sail makers or measurers of other recognised rating bodies or shown on Certificates from such bodies will be accepted by the CSA.

B.3.14 Maximum Sail Hoist

The upper limit of hoist of any sail shall be taken as the shackle pin of the particular halyard with the halyard fully hoisted. . Halyard stops are not allowed. If these are present the measurer shall access the amount to be added to the measured halyard length to establish the maximum halyard length.

B.4 INDIVIDUAL SAIL AND RIG MEASUREMENTS

B.4.1 Hh Spinnaker halyard hoist

Distance maximum hoist of highest spinnaker halyard to the intersection of the line of the forestay with deck level.

B.4.2 Hj Jib halyard hoist

Without roller furling: Distance maximum jib halyard hoist to lowest tack position of headsail.
With roller furling: Distance maximum hoist of top swivel shackle pin to the normal tack position of the roller furling sail above the furling drum.

B.4.3 Dh Drum Height

Distance from the tack point on the top of the rollerfurling drum to the point at the base of the forestay where the headstay would be tacked should the drum be removed.

B.4.4 Hs Length of luff of symmetrical spinnaker.

Measured along the edge of the fabric from head to clew and taken from whichever spinnaker on board provides the maximum value of this dimension.

B.4.5 J

Horizontal distance from the fore side of the mast to the intersection of the line of the headstay with the salient line, in profile, of the top of the rail. (Toe rail or bulwark.) Where a bowsprit is fitted, measurement shall be to the intersection of the line of the headstay with the top of the bowsprit.

B.4.6 Lp

Distance from clew of a jib to its luff measured per perpendicular to the luff, taken from whichever jib on board provides the maximum value of this dimension.

B.4.7 Spl Spinnaker Pole Length

Length overall of spinnaker pole, measured from the fore side of mast proper (i.e.. not to the track) at the point of attachment of pole to extreme outboard end of pole.

B.4.8 Td Tack distance

Maximum horizontal distance from the front of the mast to the point where the tack of the spinnaker can be attached.

B.4.9 Pm

Distance from highest hoist main halyard to top of black band (at boom) for limiting position of tack. (Bermudan mains, mizzens, and foresails) or;
Distance from highest hoist halyard of mainsail or main tri-sail, to level of lowest tack (black band on mainmast) of any sail carried between masts (Staysail Ketches)

B.4.10 Smw

Maximum width of symmetrical spinnaker.
Taken from whichever spinnaker on board provides the maximum value of this dimension.

B.4.11 Em

Distance from face of track on mast to black band on boom for limiting position of clew. Note that when there is a stand-off at the tack for roller reefing, E shall not be measured from this stand-off but from the salient straight line of the track extended downwards. (Boomed mainsails, mizzens and foresails) or;
Distance between masts at lowest tack level. (Staysail schooners, foresail schooners with loose footed foresails, staysail ketches)
Dimension E shall include the maximum fore and aft dimension of the mast for rotating masts or double luffed sails.

B.4.11.1 Em50 Mid Girth

The position to measure MID GIRTH is established by folding (on leach) the Head of the sail to the Clew and marking the mid position on the Leech of the sail. The Mid Girth is then the minimum distance from the position marked on the leech to the luff of the sail.

B.4.11.2 Em75 Upper Mid Girth

The UPPER MID GIRTH position is then established by folding the sail again with the head now back at the Mid Girth position on the Leech of the sail. The mid point so established on the Leech is the Upper Mid Girth measurement position. The minimum distance between the Leech of the sail to the Luff of the sail is the Upper Mid Girth measurement.

B.4.11.3 Em87 Top Mid Girth

In order to assess the sail area contribution of ‘square top’ or ‘fat head’ Mainsails, we have introduced the Top Mid Girth Measurement. The position of this measurement is established by folding the head of the sail yet again to the Upper Mid Girth position on the leech of the sail, the mid point so established is the Top Mid Girth position and the minimum distance from this point to the luff of the sail is the Top Mid Girth measurement.

Where it is extremely difficult to measure mid girths on large yachts, it is permissible to estimate this measurement from the sail plan for the yacht. If this is done it must be noted on the certificate.

B.4.12 Asymmetric spinnaker

To measure the dimensions of the asymmetrical spinnaker the cloth has to be stretched tight and measured to the extremity of the cloth as you would measure any other sail.

B.4.12.1 Slu

Luff length of asymmetrical spinnaker

B.4.12.2 Sle

Leech length of asymmetrical spinnaker

B.4.12.3 Sf

Length of foot of asymmetrical spinnaker

B.4.12.4 Smg

Mid Girth of asymmetrical spinnaker

The Mid Girth is obtained by folding the luff (Head to Tack) and marking the mid position. This procedure is repeated with the leech (Head to Clew) and mark the mid position. The SMG is taken as the distance between these two mid positions with the cloth stretched tight.

B.4.13 Mcirc

Mast circumference measured at boom height, not including any tracks or other extensions.

B.5 Other Program Entries

B.5.1 Internal Accommodation Factor

The yacht's interior will be classified as Ultralight, Light, Medium, or Heavy by the measurer.

1) An ***Ultralight*** interior is one with minimal or no regard for crew accommodation or onboard living. As can be expected with a yacht that is solely designed for racing.
2) A ***Light*** interior is intended to include yachts, which will give the impression that they are intended for racing. Weight is kept out of the ends; living facilities are utilitarian or Spartan for the size yacht.
3) A ***Medium*** interior will include production boats (standard cruising boats, most charter fleets) with all the equipment necessary for living aboard. Reasonable water storage is provided and there are adequate lockers for storage of gear and food.
4) A ***Heavy*** interior will normally include yachts which are fully fitted out with live aboard gear and little consideration given to the weight of the internal fittings are considered to have heavy interiors. These yachts would generally have wood panelling, large water and fuel storage, full accommodation, full galley etc.

B.5.2 Exotic Materials

Yachts with substantial quantities of Carbon fibre or Titanium or similar high tech materials used in the construction of the hull/deck and/or keel and rudder are considered to be constructed of exotic materials.

There are separate penalties for exotic materials in

1) hull and or deck
2) keel

3) rudder

B.5.3 Propeller

A yacht shall not be entitled to either the Propeller Factor or Engine Factor unless it may be demonstrated that the yacht can attain a speed (under power in calm conditions) of 1.2 times the square root of LWL (feet) in knots.
If the engine cannot work, no prop allowance will be given. If the owner or his representative claims that the engine is only temporary out of order, this should be noted on the certificate with a date stating when the engine will be working again.

B.5.4 Hull Date

Year of completion of construction of the yacht. This may be adjusted for Class Legal Boats so that they may level rate regardless of hull age.

B.5.5 Keel material

Lead, Iron, Uranium, etc.

B.5.6. Number of chines

These chines are the type that runs the full length of the hull. Hulls, which have chines only at the aft end, do not qualify for this allowance.

B.5.7 Headstay

There is a choice of Hanks, Grooved luff tape and Roller furling. Boats with roller furling as on the Melges 24, where there are no tubes, but only a rolling wire will be considered to have grooved luff tape.

B.5.8 Mast Material

Wood, Heavy Steel or Aluminum or Carbon

B.5.9 Rig Fraction

Mast head, 7/8 or 3/4

B.5.10 Rig Factors

-	R_spreader (Rsp)	Number of spreader pairs Diamond spreaders are counted as spreader pair	
-	R_standing rigging (Rst)	Die-Form/Wire	- 2
		Rod	- 3
		Aramid/Non Metal-Hi tech	- 5
-	R_adjustcontrols (Rac)	Very difficult	- 1
		Easy	- 5
-	R_mainadjust (Rma)	Difficult to Adjust	- 1
		Easy	- 3
-	R_mastbend (Rmb)	No bend	- 1
		Effective Bend Available	- 5
-	R_vang (Rva)	None/difficult	- 1
		Powerful/easy to adjust	- 3
-	R_maintrim (Rmt)	None, slow, difficult	- 1
		Powerful/easy	- 3
-	R_spreaderbase (Rba)	Wide base, sheeted on rail	- 1
		Inboard, close wind	- 5

The intention here is to identify those yachts which have made little effort to improve the windward performance of the yacht by bringing the main shrouds in from the rails to allow a close sheeting angle for the headsail. Include No. 3 Blade headsail track in this assessment. As a rough rule of thumb (which is not intended to overrule one's common sense) assume that the sidedeck equals approx. B/4. Thus for each B/16' that you move your tracks inboard from the rail amidships the points tally increases by one. For example. if the sheeting point is on the rail, (1), if it is B/4 inboard (5) in B/16 increments. However some "Cruisy" yachts may have genoa tracks in odd places, even on the coach roof, which are obviously NOT close winded yachts.

-	R_exoticmaterial (Rex)	Carbon Fibre Spin Pole	- 1
		Non Wire/Non Rod Backstay	- 1
		Non Wire /Non Rod Runners	- 2
		Carbon Fibre Main Boom	- 2

These different items are cumulative. You should add all the different items together and put the total as the points score for this item.
For the rig factors in-between values are possible as long as these are whole numbers.

B.5.11 Hull, Keel, Rudder Factors

Those are assessed factors. The intention here is to rank the hull keel and rudders in terms of their speed potential. There are both quantitative and qualitative aspects of this ranking. The following is a description of the quantitative factors. The qualitative factors are simply the measurer's informed impression of the speed performance of the hull, keel and rudder. It may be that a hull should be fast, but simply is not. In this case the measurer shall assess a hull factor to represent the hulls speed potential. Before doing he must check with the Chief Measurer and review all available material on the subject.

B.5.12 Outside Stanchions, Stan_out

There will be a penalty for yachts where the lower lifeline at any stanchion at hiking position is outside the salient hull line as established by dropping a plumb bob from the lower lifeline.

B.5.13 Other Program Entries

There may be other program entries that appear in the program or on the issued certificate which are not listed here for reasons of brevity, redundancy, obsolescence etc. Explanations for these may be obtained from any current CSA measurer.

C. PREPARATION OF A YACHT FOR MEASUREMENT

1. The following information should be readily available for the measurer:
   - Owner's Name & Address
   - Owner's email address
   - Sail Numbers
   - Design class or type
   - Date of completion of the yacht
   - Maximum Draft (from drawing or manufacture's data sheet)
   - If yacht has a centreboard
   - Drawing showing underwater profile of yacht
   - Propeller type, number of blades, in or out of aperture, with or without strut
   - Materials used in construction of the yacht
   - Materials used in the sails.

2. Copies of existing rating certificates, either CSA or any other rating system. (Note existing ratings in comments)

3. To ensure accuracy of measurement, yachts are to move into such sheltered position as shall be designated by the measurer with minimum wind and water disturbance and at least 6 ft clear space obtaining all round.

4. The owner, captain or their representative to attend and give assistance.

5. A tender or dinghy must be provided for the measurer to take the Freeboard and Overhang Measurements

6. Headsail: Decide on the largest headsail you intend to use racing (a blooper is a headsail); This sail must be available for measurement, or where dimensions are marked and signed by a reputable sail maker, these marks must be available for scrutiny.

7. Spinnakers and MPSs, Jenikers, Asymmetrical Spinnakers etc. must be available for inspection and measurement if it is intended to use these for racing. Asymmetrical spinnakers must have a mid girth measurement which is greater than 75% of the foot measurement.

   a) If the yacht chooses to fly a spinnaker and the yacht is fitted with a bow pole, it can only fly asymmetrical spinnakers.
   b) If the yacht is not fitted with a bow pole, it has to choose if it will fly an Asymmetrical or a Symmetrical spinnaker when the certificate is issued. Only one choice is allowed on the certificate.

8. Yachts are to be presented for measurement in the weight condition as specified below:

Yachts measured with gear (Mwg)

Yacht must be presented for measurement in the same condition in which it will be raced. Sailbags and ropes to be stacked amidships before measuring. Skipper to list items of significant weight (that may be movable) and their approximate locations and report these on the owner's declaration enclosed. The measurer will inspect the yacht and if he is not satisfied with the owner's declaration he may insist that it be properly filled out before he completes the measurement or issues the certificate.

Measured Light (Ml)

Yachts are to be presented in light condition, bilges dry, water and holding tanks empty, fuel not to exceed 1/3 of tank capacity, loose stores to be removed, including all misc. items of equipment, life jackets, sails in bags, anchors, chains, rode, mooring lines, bunk/cockpit cushions, cutlery, loose galley equipment etc.

Fixed items can remain if the yacht races with them, including loose sections that form part of fixed items, locker doors, drawers, hatch covers etc. Fitted carpets can remain if the yacht races with them.

All lockers and shelves must be empty. This item will be inspected.