

## Suggested changes to the FD Rules for 2004:

### Version 1.10, 6 August 2003

Wording which has been eliminated is ~~crossed-out~~, while **added wording** is in red. See draft 2004 FD Rules for diagrams. Comments and rationale are in blue.

Change the FD rules to use ISAF ERS definitions and sail measurement procedures. This will allow measurers from other classes to measure without retraining into the FD definitions and methods. It will also mean that Juries will be familiar with the terminology and not confused, in case of measurement protests. Furthermore the FD rules will not have to define most terms. In line with ERS terms in **bold** are used in their defined meaning (not all are bold in this version, but see 2004 rules draft Some headings are also in Bold.). The FD rules will however have to have a statement to the effect that ERS definitions and measurement methods are being used and these are included in a preamble, see below.

The preamble also includes a section of the Flying Dutchman foundation rules in order that it is clear that invoking the **class rules** in the NoR and/or the SIs also invokes this foundation rule.

Define **Hull Datum Point**. This is normally at the intersection of the plane of the transom with the keel line, which is in the centre plane of the hull. Unfortunately this is 11 mm above the DWL so is not at the origin of the co-ordinate frame. Furthermore many measurements are made from the centre of the top of the transom, along the deckline, which is not parallel to the DWL

### Proposed Rule Changes

Note: Only those rules, which have been changes from the March 2003 FD rules, are included. A separate document contains the proposed March 2004 FD class rules including updated versions of the layout and diagrams. The previous diagrams were not in electronic form and so are not reproduced here.

#### 0.1 ISAF Equipment Rules of Sailing

These Flying Dutchman **class rules** shall be read in conjunction with the ISAF Equipment Rules of Sailing (ERS) and measurements shall be taken in accordance with the ERS and ISAF Sail Measurement Rules, unless specified. Where a term is used in its defined sense, it is printed in "**bold**" type if defined in the ERS and in "**bold italic**" type if defined in the RRS. Diagrams, measurement instructions and the raison d'être for a rule are given on facing pages in "italic" type. In the event of conflict the written rules take precedence.

#### 0.2 Certification Authority

Contrary to ERS C.5.1 the certification authority is the ISAF and the IFDCO.

#### 0.3 World and Continental Championships

The IFDCO Foundation Rules, Appendix I Championship Rules, 9.4.1 states: The measurement committee will be appointed by the Organizing authority from names to be submitted to the IFDCO Championship Organizing Committee for approval. The IFDCO chief measurer shall be President of the measurement committee (**Principal Event measurer**).

#### 0.4 Interpretation of the Class Rules

Interpretations of the **class rules** at an event shall be carried out in accordance with the RRS and ERS, by the IFDCO chief measurer, who shall, as soon as practical after the event, inform the ISAF of any new ruling.

#### 0.5 Axes of Measurement (ERS section H.2)

The Flying Dutchman lines are specified by offsets in vertical and waterline planes, which are perpendicular to the DWL and parallel to the centre plane of the hull. The DWL intersects the keel line at stations 0 and 10, thus the **Hull Datum Point**, which is at the intersection of the plane of the transom and the keel line. is 11 mm above the DWL. The planes of the measurement templates, which are determined by points measured along the keel line and **sheerlines**, are therefore only ideally at the station planes.

Rule 7 Change “International class fee sticker” to “ISAF plaque”. Remove amount, currency and ISAF bank account so the class does not have to update when ISAF changes. Change rule to:

**7. International Class Fee** (Royalty, Building Fee) Payable by Licensed Builders.

**7.1.** The International Class Fee will be fixed by **the ISAF in conjunction with** IFDCO. Payment has to be directed to **the ISAF Ltd**. As receipt for the International Class Fee payment, a numbered **ISAF Plaque International Class Fee Sticker** will be sent by the ISAF and shall be glued to the boat before **Fundamental measurement:**

- a. to the starboard aft side of the aft bulkhead of **a half** the double bottom, or if this is not possible:
- b. to the starboard side of the hog (vertical inner keel) about 300mm from the transom, or if this is not possible:
- c. to the starboard forward bulkhead (just forward of the mast), or if this is not possible:
- d. to the aft bulkhead of the cockpit.

**~~Instruction: The International Class Fee of Pound Sterling 100 has to be paid to the ISAF Ltd, Ariadne House, Town Quay, Southampton, SO14 2AQ, England. Only by EUROCHEQUE, bank draft or remittance to Account Number 7124 3461 with Natwest Bank, Isle of man, Sort Code 60 06 03.~~**

**Rule 8**, in order to keep a central database of all FDs issuing of certificates has to be centralised.

## 8 Certificate and Measurement Form

**Measurement certificates** are issued by the IFDCO after measurement by an official **IFDCO** measurer, and receipt of the completed measurement forms. ~~The issuing of certificates can be delegated by IFDCO to National Yachting Authorities or National FD Class Associations.~~

**Measurement Forms:** A certificate will be issued only upon the receipt of **2** original measurement forms, signed by the builder and an official **IFDCO** measurer, which show **that** the boat **fully complies** fully with all the rules. When the boat is measured outside the country of origin, it is desirable to have the signature of the builder, but not obligatory. When the boat proves to be within the rules, the **2** forms are to be signed by the **IFDCO** issuing authority. One form is to be kept by the IFDCO Registration; one will go to the National Yachting Authority; **or** ~~and one~~ to the National FD Class Association. **The third copy may be kept by the measurer.** A certified photocopy of the measurement form will be part of the certificate. The certificate **together** with the certified photocopy of the measurement form is to be produced upon demand at official FD regattas.

## 9. Owner's Responsibility

No boat shall take part in Class Races unless it has:

- a. a valid certificate and measurement form with Sail **number, and** ISAF plaque, ~~and~~ Yard number shown;
- b. registration in the owner's name;
- c. a numbered ISAF plaque glued to the boat at the required place;
- d. the helmsman/**crew** have IFDCO **membership and associate membership cards**, with valid year stickers;
- e. a **numbered** sail button on each sail;
- ~~f. the entrants for any **FD** class race shall be members of IFDCO (Foundation Rule 4.3.1) and shall have paid the International Class Fee and the annual subscription for the respective year. The helmsmen shall be members of IFDCO as well, but need not necessarily sail their own boats.~~

**9.3.** The certificate of a second-hand boat is invalid until it has been put in the name of the new owner and countersigned by the **IFDCO registration which will issue a new sail number in the event of a country change** issuing Authority.

**11.4.** Boats shall be complete in every respect with all required gear when presented for measurement, except that sails and masts may be measured separately. The numbered international class fee sticker **ISAF plaque** (see rule 7) shall be glued to the boat at the required place before measurement takes place.

**11.8.** The **Equipment Rules of sailing, ERS**, measurement instructions, within these rules, and the measurement plan, form part of these rules. The object of the **ERS and** instructions is to make sure that the boats are measured the same way in all parts of the world.

**11.9.** Upon completion of the measurement, **2** of the **3** original measurement forms (white, green and pink) are to be sent to IFDCO Registration for the issuing of a certificate and sail number. The blue copy may be kept by the measurer.

I do not recall any extra stamp, beside the ISAF plaque, on any FDs. Hull numbers are moulded in to fibreglass hulls. The ISAF plaque identifies the hull and a valid measurement form for this ISAF # is the proof of measurement, thus an extra stamp on the hull is not required.

### **12.3 Stamps**

~~When the measurement is completed to the satisfaction of the National Authority, a special stamp, issued by the National Authority or National FD organisation, shall be put (pressed, cut, burned or on a plaque embedded) at a position next to the **ISAF plaque** and also to the piece of correcting ballast, centreboard, and stamped on all sails (as Rule 86). If sails are presented at a later date, they also shall be stamped by a measurer after measurement. No sails shall be used without a stamp."~~

12.5 then renumbered as 12.3

Rule 22 Change to Hull Length to conform to ERS definition.

**22.** Overall **hull length**, excluding fittings, stem- and transom-rubbing strakes, is to be 6057mm measured along the deck line.

**27.** The transom shall be placed at the extreme end of the boat and shall be vertical to the waterline. **This shall be controlled by the spacing between the transom template lug and the baseline, which shall be between 5 and 15 mm.** ~~with a tolerance of plus/minus 5 mm at the bottom.~~

**29. Keel measurements** The shape of the **keel line** shall be checked by measuring the **minimum** distance to the baseline, which is the line drawn from a point 100 mm under the keel at the transom to a point 120 mm under the keel at station 9. These **minimum** distances, H measurements, will be taken **at each station**:

<u>Station</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
"H"	72	56	45	49	40	46	59	80

Tolerance: The absolute value of the algebraic difference of the greatest positive and greatest negative deviations shall not exceed 12.5 mm.

### 30. Keelbands

Keelbands of metal, hardwood, plastic or glass reinforced plastic shall be fitted and shall measure between 3 and 10 mm in thickness and between 6 and 15 mm in width. The keelband shall run the full length of the boat along the keel including the stem. ~~The keelband shall protrude not less than 3 mm.~~ If the keelband is faired into the hull so that its width and thickness cannot be determined, the junction between the hull and the keelband shall be assumed to be where the hull is 6 mm wide. In the way of centreboard slot, the keelband shall be duplicated and shall overlap the centre keelband by not more than 50 mm at each end. Keelband joining fishplates are permitted.

### 33. Deck

The deck at the mast partners shall not be higher than the deck line. The deck line is the imaginary line between the top of the transom at the centreline and the highest point of the stem (excluding stem fittings).

**Instruction:** *Erect a taught line 150 mm above both the stem and the top of the transom, i.e. parallel to the deckline. ~~Put the stem template in its required place with "topstem" mark at the top of the stem. Put the transom height-angle template in position with its maximum height mark at deck level. Use the triangular shaped holes 150 mm above deck-level in both templates to draw a line tight between the two templates. The mast partners shall be at least 150 mm below this line.~~*

34. Depth of section 9 shall be 609 mm plus/minus 6 mm.

**Instruction:** *This is checked by applying the station 9 template and measuring the distance between **the bottom of the tie bar** and the line used for checking the height of deck (to be between 90 and 102 mm). (See the diagram on the Measurement Plan.)*

Combine rules 37-38 and 88-89 regarding the Genoa size, as they are identical. Put in both places and call 37-38. Rule 37 Genoa fairlead black band is not required so is eliminated. In principle the transom can be skewed so parallel to the transom is not technically correct, see new diagram. The rule should also specify that the measurement is parallel to the deck, not the DWL. The words "clew cringle" are added because, when using an upper cringle, that part of the genoa below the cringle (although not useful sail area) extends beyond the bearing point."

**37. The bearing point of the jib sheet** on its fairlead must be forward of a **line perpendicular to the deckline and 2000 mm along the deckline from the transom** and parallel to the transom. It shall be impossible to fix the bearing point of the jib sheet on its lead further aft, nor shall it be possible to extend the ~~jib or genoa~~

**operational clew cringle of the jib** beyond this point. ~~The aft side of a black band approximately 50 mm long and minimum 10 mm wide, shall be at least 2000 mm from the aft side of the transom.~~ The bearing point of the jib sheet on its fairlead shall be less than 60 mm from the upper side of the deck. The bearing point of the jib sheet is the aftermost point of the bottom of the groove of a sheave or the forward side of the opening of a fairlead for the jib sheet. **(For diagram see appendix)**”

Rule 38 Normally measure to the center of the jib furler on deck, but the luff of the sail is forward of this by a few mm. The 5 mm tolerance can be extended all the way down to take care of this. Include an instruction or on the diagram? Eliminate “at the halyard sheave”. Include rule 89a in this rule for clarity.

**38.** The size of the jib is optional but, when the boat is fully rigged with sails hoisted in racing trim and sheeted for windward sailing, no part of the jib shall project forward of or above an imaginary line, drawn from a point on the deckline 5450 mm from the aft side of the transom to a point on the mast below band number 4, with a tolerance forward of 5 mm ~~at the halyard sheave.~~ **Multiple clew cringles are allowed in the genoa. (For diagram see appendix)**

**Rule 39** all measurements to be given to the precision of measurement, i.e. 130 means  $\pm 0.5$  while 130.0 means  $\pm 0.05$ , Okay for cockpit area in rule 35 but hull weights should be more precise.

**43. The corrector weights** may be adjusted to comply with the minimum stripped **hull weight**, rule 39, only at a measurement by an official **IFDCO** measurer, ~~when~~ **at which time** the amount removed shall be marked on the measurement form **and certified by the measurer.**

**Rule 44** clarify: The boat **shall float** its own weight when all buoyancy tanks or bags have been removed or filled with water. Boats built of non-**buoyant** material shall have rigid buoyancy made of **closed cell** foam plastic, or similar buoyant material, **which is** permanently attached to the hull. Buoyancy tanks or bags shall provide a minimum of 220 kg of positive **buoyancy. At least two completely independent buoyancy tanks or bags, of at least 50 kg buoyancy each, are required.** ~~One single bag or tank shall have at least 50 kg positive buoyancy. Only one single tank or one single bag is not allowed.~~

Rule 48 Include wires or lines, as part of the trapeze is line for adjustment and modern rigs have trapeze lines not wires. Also change “fastened to” by “attached to” see rule 49. Fastened implies permanent. Change bodybelt to trapeze harness Change to :

**48. Trapeze** The use of any apparatus or contrivance outboard or extending outboard and attached to the hull, spars, rigging or crew outboard is prohibited with the exception of the **flying** trapeze. This contrivance consists of 2 wires **or lines** attached directly or indirectly to the mast, one on each side, which can be

fastened to a ~~body~~ **trapeze harness belt** to enable the crew to stand outside the gunwhale. The trapeze shall not be used to support more than one person at a time. The weight of the trapeze hooks, handles, rings, and gear to adjust the length between the trapeze wire **or line** and the ~~body~~ **trapeze harness belt** shall not exceed 1.0 kg. “

Rule 49 Eliminate hook as modern systems use a ball and keyhole. change to modern terminology:

**49. The trapeze harness** ~~The bodybelt~~ may be attached directly or indirectly to a trapeze wire **or line** but only by means of **a single** 4 quick release **system hook** (2 seconds). The **trapeze harness** ~~bodybelt~~ shall weigh not more than 4.0 kg and shall float **after complete immersion** ~~when immersed~~.

The tolerance on the aft, bottom and corners of the centerboard are changed so that all are now  $\pm 6$  mm as the transition to 12 mm tolerance was ambiguous,

**50.1** The shape of the underhull part of the centreboard, in its lowest position, shall conform to the equivalent part of the full size Mylar plan. With the leading edge fully up against the line of the Mylar plan, ~~with~~ in a tolerance of **maximum 3 mm for** local gaps, the tolerance is plus or minus 6 mm on the bottom and trailing edges (~~excluding keelbands~~) and ~~plus or minus 12 mm~~ on the curves at the bottom of the centreboard. A stop shall be fitted on the centreboard to prevent it from being lowered farther than 1060 mm under the hull. ~~The measurement mark of Rule 12.3 shall be directly next to it.~~ The use and position of a centreboard bolt, notch or holes are optional.”

One cannot have a keel band on a centerboard!! However, I do not know an alternative term. Why was it excluded in the first place? Have changed the curve tolerance to 6 mm for consistency.

**51.1** The shape of the part of the rudder blade, when in its lowest position, which is situated under the ~~lengthened~~ **extended keel line** ~~keel line~~ aft, shall conform to the equivalent part of the full size Mylar plan. With the leading edge fully up against the line of the Mylar plan, ~~with~~ in a tolerance of **maximum 3 mm for** local gaps ~~or maximum 3 mm, with a~~ **the tolerance is** plus or minus 6 mm on the bottom and trailing edges, and ~~plus or minus 12 mm~~ on the curves at the bottom of the rudder.

Rule 51.3 There is no under hull part of the rudder! Also change “during the race” which implies it has to be done in the middle of the race to “when racing” This allows lifting the rudder blade while sailing to and from the race. Also use **extended** not “lengthened” as the latter implies physically changing the boat.

**51.3.** The ~~under hull~~ part of the rudder ~~is the part~~ projecting under the extended line of the keel, ~~and it~~ shall not project under this line more than 810 mm. The leading edge of **this** ~~the under hull~~ part of the rudder shall make an angle of not more than 105 degrees with the keel line. Boats with lifting rudder blades shall fix the position of the leading edge as above **when racing** ~~during the race~~ by means

of a pin, unless a special exception is made in the sailing instructions. The distance from the leading edge of the rudder at the **point of intersection with the extended** the lengthened keel line shall be not more than 60 mm from the transom. The total weight of the complete rudder including fittings, tiller and tiller extension shall not be less than 4.00 kg

Rule 51.5 remove "The tiller may extend aft of the transom maximum 1000 mm." No one does this any more.

**51.5 Tiller** Construction and design of the tiller are optional. ~~The tiller may extend aft of the transom maximum 1000 mm.~~

Rule 51.6 add "lifting foils," The international 14s now have lifting foils on their rudders and we do not want them.

**51.6 Trimtabs, lifting foils** or similar contrivances, **attached to the** rudder and/ or transom are not permitted

Rule 59 The halyard exit sheave openings usually provide enough opening and some masts are open tubes so do not need extra holes. The rule should specify the area of the openings rather than force them to be circular as is implied by "diameter".

**59. Holes** ~~shall be made in~~ The mast shall have openings near the head **top** and the foot **heel** to allow the mast to drain. The sum of the areas of the openings ~~diameters of the holes at the head top and at the foot heel~~ shall not be less than 150 mm<sup>2</sup>. ~~10 mm. (So total 20 mm minimum).~~

With the modern raked mast positions, the angle of the mast with the deck line can be substantial and cannot be determined during measurement. It is better to specify the measurement relative to the mast itself.

**60.** The distance from the **fore side to the aft side** of the mast, measured ~~parallel to the deck line~~ shall not be more than **maximum** 100 mm.

Rule 61 "the mast" is ambiguous. Does it mean the aft end of the heel plug, where the stop will be, or the intersection of the extension of the aft edge of the sailtrack and the line at right angles to this extension through the lowest point on the mast heel? The diagram on page 20 clarifies this but it should also be clear in writing. The latter is what I presume to be the definition of **the heel point** in the ERS. Note you have to measure the distance from the stop to the transom, then the distance from the aft of the mast to the point on the heel which rests on the stop and subtract!

**61. Mast Position:** ~~Perpendicular down from the deck line at 3600 mm from the transom, a stop shall be fitted at the mast step to prevent the mast from being moved aft of this point. The mast foot shall be on the centreline. Only a plain mast track, i.e., without slide or carriage, is allowed~~

**61. Mast Position:** A stop shall be fitted at the mast step to prevent the mast **heel point** from being moved aft of a point perpendicularly down from the deck line and 3600 mm from the transom, as measured along the deck line. The mast heel shall be on the centreline. Only a plain mast heel track, i.e., without a slide or carriage, is allowed. . **(For diagram see appendix)**

Rule 62 Change to allow aramid forestay, as most boats have part of the forestay this way now: The forestay can then be completely or partly aramid line. Rule 63 ensures it is strong enough. The current wording could be interpreted to mean that only rigid runners and running backstays are prohibited, so change word order. In principle the current rule does not allow one to rake the mast while racing as this moves the shrouds fore and aft, it is intended that only the lower ends have to remain fixed. Essentially all bands #2 are 800 mm above band #1, It is easier to check the babystay position in the boat referenced to Band #2.

**“62. Mast Rigging:** The standing rigging is optional, but a ~~wire~~ **seaman-like** forestay of minimum diameter 2 mm, shall be rigged. ~~A rigid forestay,~~ Runners, ~~and~~ running backstays **and rigid forestays** are prohibited, but a single centreline adjustable backstay is allowed. The shrouds shall be installed such that movement fore and aft, **of their lower ends, when racing** ~~during the race will~~ **shall** be impossible. A flexible or solid babystay is allowed, but shall be attached not higher than ~~800 mm above~~ the upper edge of band number **2** (see Rule 68).”

Rule 63. ISAF RR 54 requires forestays to be approximately on the centerline. The present wording could be misconstrued to mean that this is optional.  
Change to

**63. The position of the forestay** ~~on the centreline is optional~~ but shall be forward of the luff of the jib **and approximately on the centerline, see ISAF RR 54.** The forestay shall be independent of the jib, **and** shall support the mast when the jib is lowered, or the jib halyard or tack is broken in a strong wind. The measurer must be convinced of a seaman-like job, also under the foredeck.

Rule 64. There is a famous case of a competitor, in another class, loosing an Olympic berth because the halyard broke and the sail was tied up and could not then be lowered as in rule 64. We do not want this situation in these days of more than one race a day? Change to “it must normally be possible...”

**64. Type and material** of all running rigging is optional, but it must **normally** be possible to lower the main and the jib from the cockpit while the mast is standing in its normal sailing position.

Rule 67 call it a spinnaker pole in conformity with ERS.

**67. Spinnaker Pole Boom.** Maximum length including fittings: 2500 mm. Diameter and construction optional. **Spinnaker pole boom fittings** on the **mast** shall not protrude more than 50 mm from the outside of the **mast**.

Add permanently to rule 68 to eliminate tapes, see also rule 71.

**68. Bands.** Bands of minimum width 10mm, shall be **permanently** put on the mast, in contrasting colour to the mast, as follows:

- No 1: ~~Whose~~ **The** upper edge **of which shall be** ~~is~~ under the deck level **at the mast.**
- No 2: ~~Whose~~ **The** upper edge **of which** shall be **a** maximum **of** 800 mm above the upper edge of **band** No 1.
- No 3: ~~Whose~~ **The** lower edge **of which shall be** ~~is~~ **a** maximum **of** 6400 mm above the upper edge of **band** No 2.
- No 4: ~~Whose~~ **The** lower edge **of which shall be** ~~is~~ **a** maximum **of** 5250 mm above the upper edge of **band** No 1.

Rule 70 should be specific, the stop does not have to be at the band, it has to stop the clew point of the sail from being beyond the band, so change to:

**70.** A band in contrasting colour shall be put on the boom with its foremost edge **a** maximum **of** 2840 mm from the aft side of the mast. A stop on the boom shall prevent **the clew point of the mainsail** from extending beyond **the foremost edge of the band** ~~this point.~~ **(For diagram see appendix)**

Rule 71. Do not want a centre punch marks on carbon spars so allow a scribed line.

**71.** Bands may be painted or taped but the relevant edge shall be marked with a **scribed line or** centre punch mark.

Rule 76. Electronic compasses, such as the “Tacktick” are now used in many dinghy classes and are allowed in the FD. Sunnto now make a “watch which includes a GPS, which we want to prohibit so change word “watch”. “no data correlation” implies no GPS so GPSs are not specifically mentioned. Change rule to :

**76.** The type and material of all fittings is optional except that hydraulic, pneumatic and electrical devices (including instruments) are prohibited. But electronic ~~watches~~ **timing devices** and magnetic and electronic compasses are permitted, provided they have no data correlation capabilities.

**78.** The following shall always be carried on board:

- 2 efficient paddles, minimum length 1000 mm; each of minimum weight 0.25 kg.
- 2 adequate **personal** buoyancy aids each of which shall support at least 5.0 kg of lead **when immersed** in water.

- 1 towing line, synthetic material, minimum diameter 8.0 mm, minimum length 15.0 m and dry weight not less than 0.50 kg.

An anchor plus line are required only when and as specified in the Notice of Race and/or in the Sailing Instructions.

Rule 79 eliminate, No one uses six bailers in self draining FDs or modifies them to avoid sharp corners.

~~79. Maximum 6 bailers are allowed, total width of which shall not exceed 200mm. No bailer to be longer than 110mm. The self bailers should have no sharp corners.~~

Rule 81 If folding flat is defined by the 8 mm OD, then this rule can be simplified, and includes the batten pockets. change to:

**81.** All sails shall be flexible, soft and capable of being easily stowed. The body of the mainsail and the genoa shall each be of a single colour except for windows, and markings in accordance with **ISAF RR 77 and Appendix G**. ~~The body of the sail, other than the windows, as defined under Rule 83, shall be so constructed that it can be folded flat in any direction other than in the way of the corner stiffening as defined below.~~ **Sail reinforcement** having the effect of stiffening the sail shall be permitted without limitation in size. ~~but~~ It shall be possible to fold **the sail, including the reinforcement**, ~~it~~ by hand in any direction within an outside diameter of 8 mm. ~~For batten pocket stiffening, see Rule 100."~~

Rule 82 Change wording to conform to ERS

**82. Sails** passing round the forestay or **mast** and attaching back onto themselves are considered to be **double luffed sails** and are not permitted.

Rule 84. Some modern retraction systems for spinnakers use two cringles in the sail so this rule should be changed to

**84.** No intentional openings in the **sail openings** are allowed apart from the cringles and reefing eyelets. **Eyelets and reinforcements on the centre line of the spinnaker are permitted."**

Rule 85 Include last sentence, **Contrary to ISAF RR Appendix G1.3(e) national letters and sail numbers are not required on genoas.** which is a temporary rule in 2003.

### **85. Emblems - Sail Letters – Numbers**

The class emblem shall be the letters **FD**. The sail number, letters and class emblem shall be placed as laid down in the ISAF RR Appendix G. In addition to ISAF Appendix G1.1 (b) mainsails and spinnakers shall carry national letters in home waters. **Contrary to ISAF RR Appendix G1.3(e) national letters and sail numbers are not required on genoas.**

Rule 86 . In order to make a consistent leech length measurement the mainsail sometimes has to be flaked, so include this. The floor may not be flat and we do not want to measure on their knees.

**86.** All sails shall be measured in a completely dry state, and laid on a flat surface the floor with tension adequate to remove all wrinkles and flaked adjacent to the measurement being taken. After it has passed measurement the measurer shall stamp and sign the sail. each sail shall be stamped with the special measurers stamp (Rule 12), and dated and signed by the measurer.

Rules 87, 88 and 89 have been eliminated as they are covered by rule 37, which will be printed in two places for clarity.

~~**87.** The size of the jib is optional but, when the boat is fully rigged with sails hoisted in racing trim and sheeted for windward sailing, no part of the jib shall project forward of or above an imaginary line drawn from a point on the deckline 5450 mm from the aft side of the transom, to a point on the mast below band number 4, with a tolerance of 5 mm at the halyard sheave (Rule 38). (For diagram see appendix)~~

~~**88.** The bearing point of the jib sheet on its fairlead must be forward of a line 2000 mm from and parallel to the transom. It shall be impossible to fix the bearing point of the jibsheet on its lead further aft, nor shall it be possible to extend the jib or genoa beyond this point (Rule 37). (For diagram see appendix)~~

~~**89.** The bearing point of the jib sheet on its fairlead shall be less than 60mm from the upper side of the deck.~~

~~**89a.** Multiple clew eyes are allowed in the genoa.~~

Rule 90 can be eliminated as it is covered by ISAF RR 54,

~~**90.** No jib may be set unless tacked down on the centreline of the boat.~~

Rule 90a is no longer required so eliminate it.

~~**90a.** A blooper or big boy type jib is prohibited. The sheet of the spinnaker shall not pass to windward of any other jib.~~

Rule 91. Does this mean Neither elastic strips or strips of different material to that of the sail...? Surely the sail would not be of "elastic material". Although of course all materials are to some extent elastic!

~~**91.** Neither elastic strips of different material to that of the sail, nor regulating cords are permitted in or attached to the foot of the jib or genoa.~~

Rule 92 was omitted from the March 2000 FD rules due to an oversight. We wish to keep this rule.

**92.** No headboard, battens or foot club are allowed in the jib.

Rule 95. The FD class is adopting the ERS, so the latter half of this rule becomes redundant. There is no clear ERS definition of “the top of the luff”. It is surely not the end of the bolt rope, which can be well below the headboard. The head point can be on an extension of the luff, see ERS diagrams. In order to make the life of the sail makers easier I suggest we increase the headboard dimension from 120 to 150 mm. Change to:

**95.** The headboard of the mainsail shall not exceed ~~120~~ **150** mm in any direction, ~~and no part shall extend higher than the top of the luff.”~~

Rule 96. As above the ends of the luff are not defined, so just say mainsail. The FD rules no longer have three sets of mast bands so remove the plural. See ERS for the top of the boom, including the sail groove. The ERS definition of the **sail** requires the **head point** to be below the band 3. Change to:

**96.** The ~~luff of the~~ **mainsail** when set shall lie between bands number 2 and number 3. The extension of the ~~foot rope groove~~ in top of the **boom**, ~~when perpendicular to the mast~~, shall not cross the **mast** at a **point** lower ~~point~~ than the upper edge of the ~~respective~~ bands number 2. The **mainsail** shall not extend beyond the forward edge of the band on the boom.

Rule 97. Change to ERS definitions of head point and clew point, we already use the head point in rule 99. The way the rule reads someone could put the headboard well below the stiffened head of the sail to gain leech length. Since the raked rig era, leech lengths have been well short of the maximum, so I believe this change in definition will have no practical consequences. Change rule to:

~~**97.** The length of the leech for the purpose of this measurement shall be the straight line distance between the lowest point of the sail, directly under the centre of the clew cringle, and the highest point of the headboard nearest the luff and shall not exceed 6800 mm.~~

**97.** The length of the leech is the straight line distance between the **Clew point** (ERS G1.4.1) and the **Head point** (ERS G1.4.2) and shall not exceed 6800 mm, when the sail is flaked on a flat surface with just sufficient tension to remove wrinkles.

Rule 98. This is where the ERS measurement is significantly different to the FD method. The ERS **G.7.5 Half Width** measurement is the shortest distance between the **half leech point** and the **luff**. The **half leech point** is that point on **the leech** which is equidistant from the **head point** and the **clew point**. However, it is much more efficient during regatta measurement, to measure down the leech 3200 mm while measuring the leech length, as opposed to folding the sail. Rule 98 will then be changed from:

~~98. The cross measurement, being the distance between the mid-point of the leech and the mid-point of the luff, shall be maximum 1900 mm, including the bolt rope, with the sail lying on the floor with just sufficient tension to remove wrinkles.~~

~~**Instruction:** The mid-point of the luff shall be determined by folding the sail upon itself, with the highest point of the headboard nearest the luff even with the lowest edge of the bolt rope nearest the tack. The mid-point of the leech shall be determined with highest point of headboard nearest the luff even with the lowest point of the sail directly under the centre of the clew cringle. Where the tack of the mainsail cannot be clearly defined, the mid-point of the luff shall be found by stretching the full length of the luff by hand sufficiently to remove the wrinkles in the cloth and measuring from the head along the luff a distance equal to half the measurement between the inner edges of the mast bands, (mostly 3200 mm).~~

To:

**98. The upper width** of the mainsail is the shortest distance from the **upper leech point**, which is 3400 mm the **head point**, to the **luff**, and shall be a maximum of 1900 mm, when the sail is lying on a flat surface with just sufficient tension to remove wrinkles.

Rule 100. It is not clear whether it is the inside or outside width of the batten pockets which should be less than 60 mm. The ERS definition is adopted. Sail stiffening is dealt with in rule 81 so is not needed here. Hence Rule 100 should be:

**100. Not more than A maximum of 4** sail battens are permitted in the mainsail. The batten pockets shall divide the leech into equal parts plus or minus 100 mm. **The batten pocket inside widths** shall not be more than be a maximum 60 mm wide. The maximum inside length of the **batten pocket inside widths**, measured from the aft edge of the sail, shall not exceed shall be maximum 1000 mm.

Sail stiffening adjoining the batten pockets is permitted but it shall be possible to fold the stiffening by hand in any direction within an outside diameter of 8 mm (Rule 81).

Rule 101. The ERS method of measurement is different to the FD method as described in the instruction for rule 101. The class has adopted the ERS measurement method and so a description of the measurement method is no longer required:

~~**101.** The spinnaker shall be measured folded along its centreline with the luffs together, lying flat on the floor with just sufficient tension to remove wrinkles. When sails are cut spherically and without a middle seam, the sail is laid down with a minimum of wrinkles or loose cloth.~~

~~**Instruction:** The spinnaker shall be measured folded in half. With the contour~~

~~(spherical) spinnaker, this is not very easy but it can be done when the clew and tack are laid on top of each other and the middle fold of the spinnaker found. It is not possible to lay the spinnaker entirely flat but that does not matter. The middle is measured by laying the tape along the middle fold. The leech and the luff lying on top of each other are measured in the same way. If the leech and luff are rounded, the tape is laid along the edge of the sail and not straight from top to clew and tack. With the sail in this position the top is brought onto the tack and clew so that the leech and luff are folded in half. Then the fold created by this is measured. In case of a contour spinnaker this fold is not straight but the measurement is taken from the luff/leech to the middle along the fold. Then the top is folded back again onto the fold just found which will give the top transverse measurement in the same way as the first measurement was found.~~

Rule 103. Change from:

~~103. The length of the luffs shall not exceed 5500 mm. They are measured along the edges of the sail from the highest point of the sail or the headboard to the lowest point of the sail directly below the centre of the tack or clew cringles.~~

To:

**103. The luff lengths**, as measured in a straight line from the **head point** to the **clew points** with the sail flaked on a flat surface shall be maximum 5500 mm.

Note this is not now along the edge of the sail so all present sails will be legal. This will be much easier to check at championships.

Rule 104 could be eliminated as no one has huge foot roach in modern spinnakers. Otherwise the ERS **foot median**, as measured according to the "ISAF guide to sail measurement 2001-2004" should give results similar to the present FD measurement. So change to:

~~104. The length of the centrefold shall be measured around the curved edge and shall not exceed 6600 mm.~~

**104. The length of the Foot median** as measured from the **Head point** to the **Mid Foot Point** shall be maximum 6600 mm.

Rule 105. Change from:

~~105. The half length of the foot shall be measured around the curved edge and shall not exceed 2050 mm. The foot shall have a substantially uniform curvature (i.e., it shall be part of a circle). It shall be possible to superimpose any two parts of the foot in such a way that they are within 20mm of each other when laid flat.~~

**105. The straight line distance from the Clew points to the Mid foot point** shall be maximum 2050 mm. The **Foot Irregularity** shall not exceed 20 mm.

This again is a straight line measurement so all present sails will remain legal and measurement is easier. Foot irregularity is now according to ERS.

Rule 106. I do not see a way of converting the present FD rule to be compatible with ERS, as the intersection point of the centrefold and the vertical half fold to which we measure is not defined (and would be difficult to define mathematically). So for compatibility with ERS the will change the measurement. To be compatible with ERS Change to:

~~106. The half height cross measurement shall not exceed 2080 mm and is measured along the edge of the fold found by putting the highest point of the sail or the headboard on top of the lowest point of the sail directly below the centre of the tack or clew cringles.~~

**106. The upper leech points on the two spinnaker luffs are 2750 mm from the head point. The spinnaker upper width, i.e. the straight line distance between the upper leech points shall not exceed 3900 mm when the sail is flaked on a flat surface with just sufficient tension to remove wrinkles.**

Five existing spinnakers from two sail makers were measured using the new rule and the maximum upper width was 3877 mm, thus the new rule **106** was rounded up and allows 23 mm extra, to ensure that all present sails are legal.

Rule 107. We never check this at regattas so eliminate this rule.

~~107. The three quarter height cross measurement shall not exceed 1750 mm and is measured along the edge of the fold found by moving the head back to the intersection of half height cross fold and the leach.~~

Rule 108 Not a necessary change, but keeps both spinnaker and mainsail headboards the same, and is better for the bigger spinnakers the FD now uses.

**108.** The spinnaker headboard shall not exceed **150** mm in width.

Rule 109. Essentially no one now carries two spinnakers. Let alone three spinnakers during racing and for championships where rule 113 is invoked only 1 spinnaker can be measured in, so this rule should be eliminated.

~~109. Not more than 2 spinnakers are allowed on board during a race.~~

Rule 110. This is already covered in rules 81 and 84 so eliminate this rule.

~~110. Reinforcement, as in Rule 81, is permitted somewhere in the middle of the spinnaker for holding the fitting for lowering the sail.~~

Rule 111. ISAF now have precise new classifications of amateur and professional sailors, so the class may want to look at this rule restricting competitors to being amateur only, i.e. **ISAF Group 1 classification**, see [www.sailing.org/classification/classificationcode.asp](http://www.sailing.org/classification/classificationcode.asp). Could change rule 111 to: "The crew consists of two persons, both **ISAF Group 1 classification**", however the class has opted to remove all restrictions:

**111. Crew**

The crew consists of two persons, ~~both amateurs as defined by the ISAF.~~

Rule 112. The words "reinforcing material" suggests that this would be significantly less than 100%, say 30%. This is not intended for booms or spinnaker poles, and how does one control this in other components? There is also carbon strand reinforced sail window material, we do not want to ban these windows in sails. Change rule 112 to:

**112. Expensive Materials** Unusually expensive materials or equipment shall be deemed to be contrary to the spirit of the class and may be prohibited. Before using such materials and/or equipment, permission shall be obtained from the General Committee IFDCO. Composite materials such as those incorporating boron and other materials of limited availability, are prohibited. However, carbon fibre (fibres of graphite) and/or aromatic polyamides (aramid) such as Kevlar (Dupont trade name), shall be permitted ~~as a reinforcing material~~ in hulls, rudders, ~~and~~ centreboards, booms and spinnaker poles, but not on Masts (including spreaders) and sails.

Rule 120. The FD Week no longer exists so can be eliminated from this rule. Change rule 120 to:

**120. Sailing Instructions** For World and European Championships ~~and the FD Week~~, only the latest version of the ISAF Standard Sailing Instructions, **ISAF RR Appendix K, as amended by the IFDCO and ISAF to be in compliance with the** FD Championship Rules, shall be used.

One flagrant abuse of the rules is the continuous sculling of the rudder on the starting line. The present rule does not prohibit this. This should be explicitly mentioned. Change rule to :

**121. Propulsion** All of ISAF RR 42 is altered **(as permitted by ISAF RR 86.1 (c))** to read as follows:

On a free leg of the course, the following actions are permitted for the sole purpose of accelerating a yacht down the face of a wave (surfing) or, when planing conditions exist, responding to an increase in the velocity of the wind: Not more than three rapidly-repeated trims and releases of any sail (pumping). There shall be no further pumping with respect to that wave or increase of wind. **There shall be no more than a maximum of three consecutive rapidly repeated alterations of the helm while racing.**

Please see 2004 version of the FD Class Rules for the appendix containing the diagrams.

P.F.Hinrichsen

FD Chief Measurer

27 August 2003

