International Melges 24 Class Association

ANNUAL GENERAL MEETING 2019
Saturday, 09 November 2019

According to the IM24CA Constitution, motions, amendments and nominations for the AGM shall be proposed only by the Executive Committee, NCA's, the Technical Committee and ISAF and must reach the International Secretary not less than eight (8) weeks before the officially announced date of the meeting. Only the motions, amendments and nominations on the Agenda and its attachment/s shall be voted upon. The Chairman may, in exceptional circumstances, accept amendments from the floor of the AGM when, in his opinion, this will assist the resolution of issues on which the World Council have had an opportunity to express their views.
Deadline for the submissions for the 2019 AGM is ***September 13th, 2019***. To allow this process to function smoothly, the each Submission should adhere to the following guidelines:

- The Submission shall clearly state the current position along with the proposal for a change (clearly stating the rule) and the rationale behind this change.
- The Submission should be written to relate to any IM24CA documents or topics as listed below.
- Wherever possible, each submission should contain wording for the proposed new rules.
- Reason for the motion
- Technical items the tech staff can work on during the year should not be sent as an Submission

Nominating Body *Exec Comm, NCA, Tech Comm*	Canadian Melges 24 Class Association

Melges 24 Class Rule Change Proposal

Name and Surname	Mike Gozzard
Position in Nominating Body	Canadian M24 Class – Technical Officer
Email	mike@gozzard.com
Title of the motion, amendment, nomination	Change the keel position definition

Topics concerned

	Constitution		Events
X	Class Rules	X	Technical Issues
	Regatta Regulations		General Policies
	Nomination		

Current Rule:

This change affects 3 areas of the current Class Rules

C.8.2 KEEL

(a) DIMENSIONS with keel fully lowered:

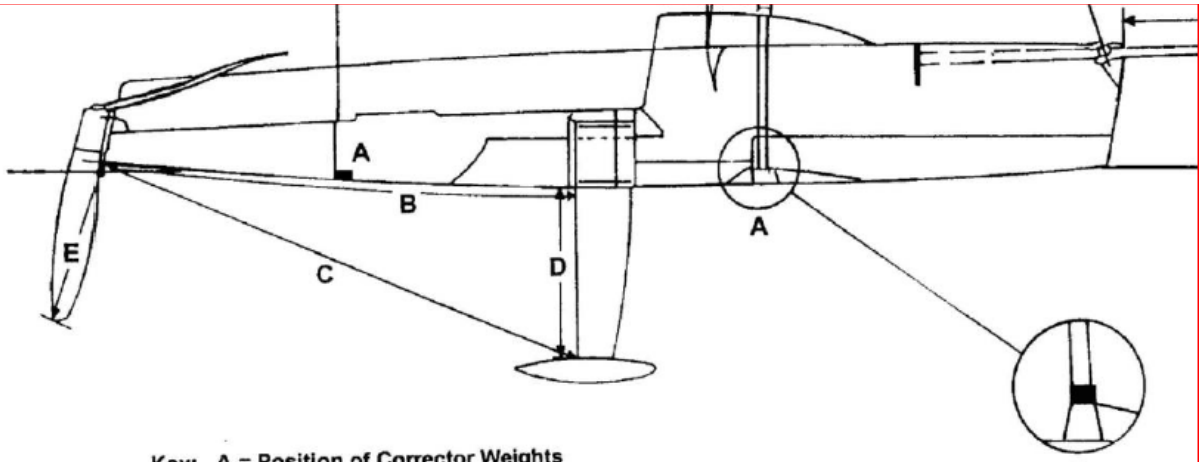
	minimum	maximum
Hull datum point to intersection of hull and fin trailing edge, around hull on centreline	3482 mm	3494 mm
Hull datum point to intersection of fin trailing edge and top of keel bulb, straight line	3784 mm	3823 mm
Underside of hull in a straight line to top of keel bulb at the trailing edge of the keel	1195 mm	1215 mm

And

E.3.5 DIMENSIONS

The keel fin and keel bulb shall conform to official templates.

And



Key: A = Position of Corrector Weights
B = 3482 ÷3494mm (Class Rule E 3.3.1)
C = 3784 ÷3823mm (Class Rule E 3.3.2)
D = 1195 ÷1215mm (Class Rule E 3.3.3)
E = 1220mm max. (Class Rule E 4.3.2)
F = 1400mm max. (Class Rule C 6.3.2)

Equal weights secured
side of mast compress

Illustration regarding dimension C correcte

Proposed New Rule:

The proposal is to change the measurement point of the keel fin to the leading edge

C.8.2 KEEL

(a) DIMENSIONS with keel fully lowered:

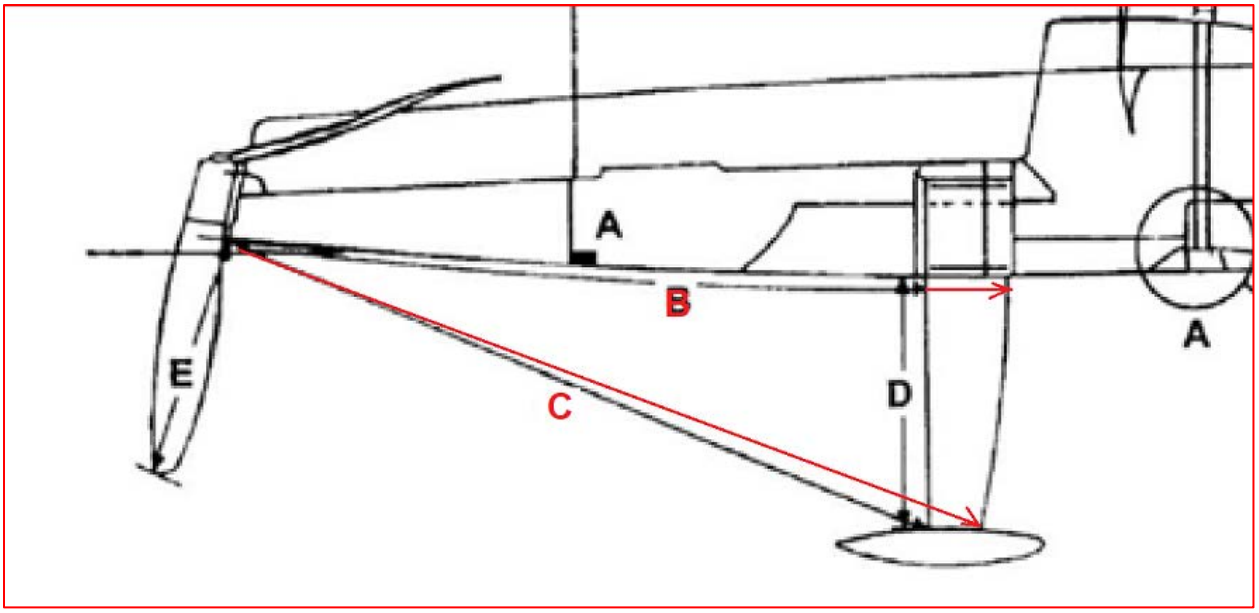
	minimum	maximum
Hull datum point to intersection of hull and fin leading edge, around hull on centreline	3892 mm	3904 mm
Hull datum point to intersection of fin leading edge and top of keel bulb, straight line	4039 mm	4078 mm
Underside of hull in a straight line to top of keel bulb at the trailing edge of the keel	1195 mm	1215 mm

And

E.3.5 DIMENSIONS

The keel fin and keel bulb shall conform to official templates.

And



Proposed change to the Key on the Diagram:

Key	A = Position of Corrector Weights
	B = 3892 - 3904mm (Class Rule E 3.3.1)
	C = 4039 - 4078mm (Class Rule E 3.3.2)
	D = 1195 - 1215mm (Class Rule E 3.3.3)
	E = 1220mm max. (Class Rule E 4.3.2)
	F = 1400mm max. (Class Rule C 6.3.2)

Reason:

It is widely accepted that to optimize performance of the foil, the keel is best located close to the forward limits as set by the class rules. Some boats are sacrificing maximum depth (maximum righting moment of the bulb) in favor of reducing the rake of the foil relative to the hull. This suggests there is an advantage to having the bottom of the foil as far forward as possible. The reasons for this vary in opinion but that aside, it is clear that boats are optimizing the foil placement forward up against at least one of the keel placement limits as set by the class rules.

Since Rule C.8.2(a) dictates the measurements for the keel limits shall be taken from the back of the foil, it is clear that the position of the leading edge of the keel is not being controlled, if the chord length is not being controlled as well. Although Rule E.3.5. refers to foil shape being controlled by templates, these are not readily available. Thus, there is currently no class controls available to control the shape and chord length of the foil after its manufacture.

Random sampling of various boats in the US and Canadian Mid West fleets, has revealed that the chord length of the foil can vary as much as 10mm. This difference is likely more to do with adjustment or repairs having been made to the easily damaged trailing edge rather than actual manufacturing controls. However, it does suggest that a boat with a shorter foil chord length is at a disadvantage against one with a longer one, if indeed the class is trying to control how far forward a foil can be placed.

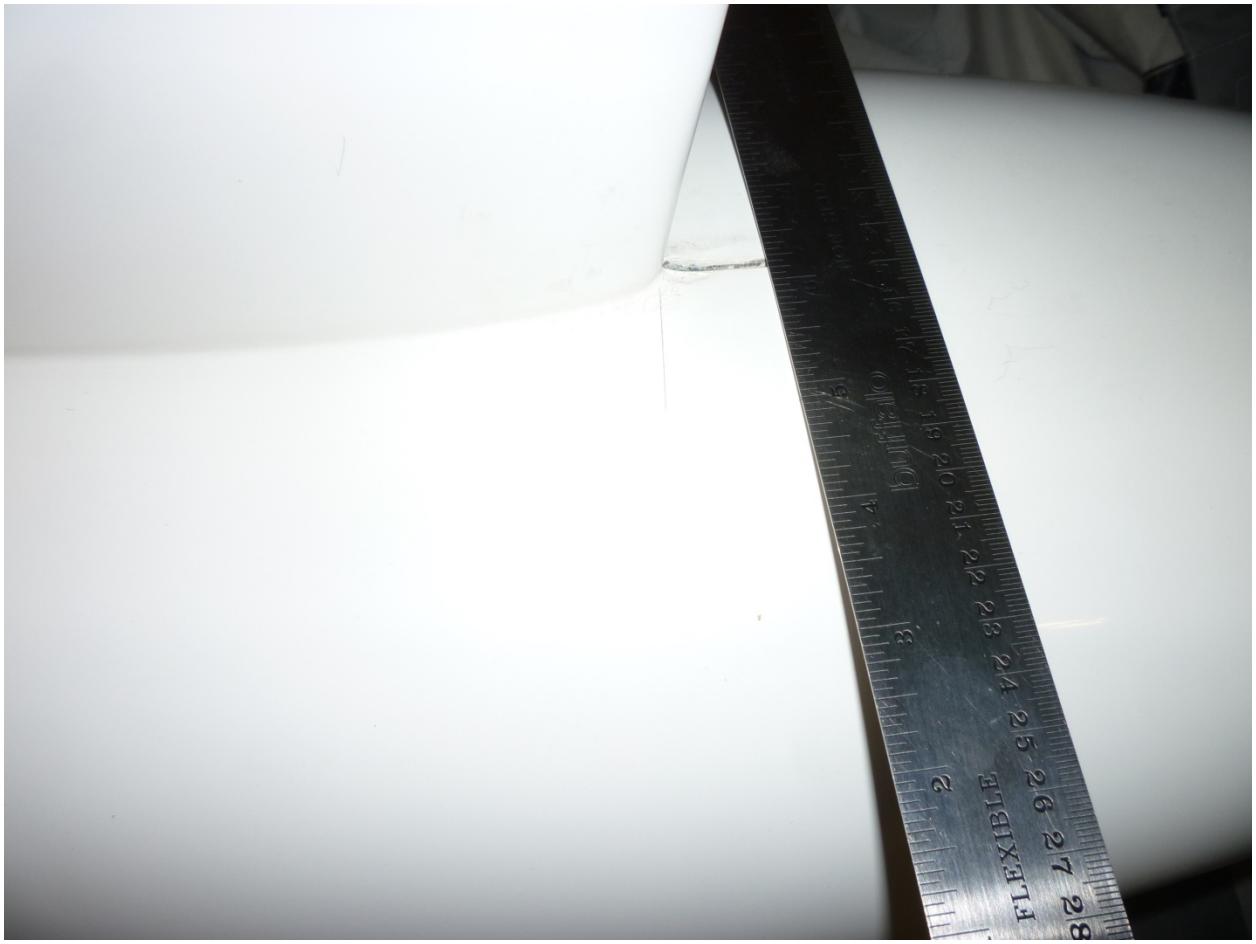
Similarly, the trailing edge thicknesses also vary from very sharp (1mm) to very fat (in excess of 3mm). For example imagine a foil with a 2mm wide trailing edge that is corrected to a more appropriate 1mm thickness. If it was simply extended and faired to a narrower edge, the cord length would increase by

approximately 4 or 5mm. When this foil is re-measured it could be placed with its leading edge 4 or 5mm further forward without being detectable.

The easy way to control this situation is simply to measure the foil at its leading edge instead of its trailing edge. The kelp cutter channel is far more difficult to modify and since the profile of the leading edge is so critical to the stalling characteristics of the foil, any modification in this area is more likely to lead to a performance disadvantage. All this suggests the leading edge is likely a more stable point to measure the keel's location.

Determination of new measurements:

The random sampling included 3 boats that were optimized professionally and at least two of these by the factory. They were hulls 629, 523 and 744. A female pattern was pulled from the foil of 629 (granted it is an unofficial pattern) and then compared to the others and found to be very close (within .5mm) and especially with respect to the chord length. Using this foil as the base line, it was positioned in boat at the maximum forward position allowed by the rule using the trailing edge. Measurements were then taken to the leading edge and recorded for this purpose. During this exercise various methods were used to measure the leading edge to determine the most accurate and repeatable method. The best way we found was to set a steel ruler against the leading edge and draw a line perpendicular to the center line. Measurements can be taken on both sides of the foil and averaged to determine the measurement easily and effectively.


FLEXIBLE

This method was found to repeatable by other none trained people with success.

Implementation if accepted:

Perhaps it would be best if we considered measuring both the new method and the old method for a full calendar year to determine if there are any issues with the new measurements or the method used. If for some reason we find boats outside these suggested limits then it is only further evidence that current controls are not working. A year's worth of measurements should tell us if the current crop of legal boats fall within these new parameters and if not adjust accordingly so all boat have the same opportunity on the race course. Full implementation of the rule change could then occur in 2021.

Thank you for your consideration.