

Submission: **SR09-14**

Offshore Special Regulation – Stability Monohulls 3.04.4

A submission from the Sail Canada

Purpose or Objective

Addition of missing ISO 12217-2 requirements to the stability regulations.
Modify the stability requirements for greater consistency between ISO, ORC and SSS.

Proposal

- 3.04.3 Yachts shall demonstrate compliance with ISO 12217-2*, either by EC Recreational Craft Directive certification (having obtained the CE mark) or the designer's declaration, for the race categories as follows:
TABLE 3

ISO Category	A	B
OSR Category	1-2	3

* The latest effective version of ISO 12217-2 should be used unless the yacht was already designed to a previous version

- 3.04.4 For yachts which cannot demonstrate compliance in accordance with 3.04.3, ~~a yacht shall provide, as specified by the race organiser, either shall meet a minimum sailing weight (m) and stability values as below and shall provide:~~
- a) STIX and AVS values as below; or failing that
 - ab) the stability index/AVS in ORC Rating System; or failing that
 - bc) IRC SSS Base value ~~or~~
 - e) ~~STIX and AVS values as below~~

TABLE 4

OSR Category	0	1	2	3
STIX min	32			23
AVS min	130-0.002*m but always ≥100°			130-0.005*m but always ≥95°
m min	3,000 kg			1,500 kg
ORC Stability Index min	120	115	110	103
IRC SSS Base Value min	35		28	15
OSR Category	0	1	2	3
ORC Stability Index min	120	115	110	103
SSS Base Value min	35	35	28	15
STIX min	32	32	32	23
AVS min	130- 0.002*m	130- 0.002*m	130- 0.002*m	130- 0.005*m

Where "m" is the mass of the boat in the minimum operating condition as defined by ISO 12217-2

Mo0,1,2,3

Mo0,1,2,3

Current Position

As above.in black (3.04.3 in blue is for reference), additions in green, deletions in ~~red-strike-through~~.

Reason for re-ordering

- The wording in regulations 3.04.3 and 3.04.4 indicate that ISO 12217-2 is the preferred system for stability screening.
- Meeting ISO 12217-2 STIX and AVS more closely matches ISO 12217-2 than meeting the ORC Stability Index or the IRC SSS Base Value so those regulations have been moved to a higher precedence
- Because it includes an inclination test, ORC remains ahead of SSS

Reason for additions

- In ISO 12217-2 section 6.3.1 Table 4, minimum values for m and for AVS are specified but were omitted in the 2012 OSR.
- A boat failing to the minimum m for a category could not achieve that ISO category under OSR 3.04.3, but could do so under ORC or SSS in 3.04.4
- A (heavier) boat failing to the minimum AVS for a category could not achieve that ISO category under OSR 3.04.3, but could do so under the minimum AVS stated OSR 3.04.3
- ISO 12217-2 is only obligatory in the European Common Union. Outside of the ECU there is no obligation for designers or builders to meet this standard. Race organizers can rely on OSR 3.04.3 for some boats and have to rely on OSR 3.04.4 for the rest. The failure to apply the minimum m and AVS can result in inconsistencies in the boats permitted to race. For example a design in North America could qualify for Category 2 but would meet category 3 in Europe.
- As an example of inconsistency consider the Farr 30 OD (formerly Mumm 30):
 - From her ORC International certificate:
 - Displacement 2,490 kg
 - LPS 122.6
 - ORC Stability Index 116.7 (category 1)
 - From the IRC list of STIX and AVS
 - IRC STIX 27
 - IRC AVS 132
 - IRC Category B (OSR category 3)
 - By applying the minimum m , this design would meet category 3.