

# CHALLENGER OF RECORD & DEFENDER

## AMERICA'S CUP 36

### Interpretation 064

of

### AC75 Class Rule Version 1.16 issued 30<sup>th</sup> September 2020

#### Rule References:

3.11 The following tolerances shall be applied to all dimensions specified in this **AC75 Class Rule**:

- (a) where a measurement is required to be a specific value:
  - (i) where decimal places for a unit are given, the measurement shall be accurate to the least significant figure indicated. For example, if a Rule states that a length must be 5.0 m, that length must be at least 4.95m and less than 5.05 m;
  - (ii) where decimal places for a unit are not given, the measurement shall be accurate to within 1% of the figure indicated. For example, if a Rule states that a component must weigh 1000 kg, that component must weigh between 990 kg and 1010 kg inclusive; and
- (b) where a measurement is required to be "at least", "at most", "a minimum", "a maximum", "between", "within a range", or other similar wording, no tolerance beyond that limit or outside that range is permitted, but the permitted measurement is inclusive of the limit value. For example, if a Rule states that a length must be no more than 5 m, that length must be no more than 5.000000 m.

10.1 The mass of components and crew on an **AC75 Class Yacht** shall be:

Component	mass (kg)	x or u (m)	z or w (m)
<b>Yacht assembly: (x,y,z) frame</b>	<b>6520</b>	<b>8.85-9.38</b>	<b>&lt;0.62</b>

10.3 It is not permitted for any weighed component or assembly to have a greater mass than that given in Rule 10.1. Where a mass number is not indicated, there is no mass requirement for that specific assembly.

#### 35.108 **Yacht assembly**

The combination of the **platform assembly**, the **mast** and the **mainsail**.

#### Questions:

1. Rule 10.1 says: "The mass of components and crew on an **AC75 Class Yacht** shall be:", rule 10.2 references "...specified components and assemblies." and rule 10.3 references "...weighed components or assemblies..."
  - a) Is the **yacht assembly** a "component" for purposes of rule 10.1?
  - b) Is the **yacht assembly** a "component" for purposes of rule 10.2?
  - c) Is the **yacht assembly** a "component" for purposes of rule 10.3?
2. Is the mass of the **yacht assembly** required to be weighed by the Class Rule?
3. If the answer to 2 above is no, does the first sentence of rule 10.3 apply to the **yacht assembly**?

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4. Rule 10.1 specifies a **yacht assembly** mass of 6520 kg. Do the tolerances of Rule 3.11(a)(ii) apply to **yacht assembly** mass, such that a measured mass of 6520 +/- 65kg (1%) complies with the **yacht assembly** mass stated in Rule 10.1?
5. If the answer to question 4 is yes, is a calculated yacht assembly mass which falls within the tolerances of Rule 3.11(a)(ii), listed on the measurement certificate as 6520 kg, or some other value?
6. If the answer to question 4 is no, what tolerances apply to **yacht assembly** mass, and why?
7. What is the allowable weight range for a **foil**?
8. What is the allowable weight range for a **jib**?
9. What is the allowable weight range for a **code zero**?
10. Is the 'x' value (LCG) of the **FCS** required to be between 10.50 and 11.80?
11. To what does the bolded term **Total** refer and is the mass range indicated for **Total** a rule requirement?

### Interpretation:

- A. Rule 10.3 applies to “weighed components” and to (weighed or un-weighed) “assemblies”.

In English, an adjective may apply to one or both nouns separated by an “or”, depending on the context. As an example: “You can travel to the city via suspension bridge or tunnel.”

Thus, the context of Rule 10.3 indicates that it must be applied to all assemblies, because **platform assembly** and **mast** and **mainsail** assembly have no value associated in table 10.1. **Yacht assembly** is the only assembly with an assigned value. This is further reinforced by the 2<sup>nd</sup> sentence in Rule 10.3 where it says, “Where a mass number is not indicated, there is no mass requirement for that specific assembly”.

10.6 does not mention weighed or unweighed assemblies.

- B. The combination of Rules 10.1, 10.3, 10.6, apply directly. As a consequence, Rule 3.11 does not apply to the masses in 10.1 as further defined by 10.3 & 10.6.

Rule 10.1 details the components and assemblies' specific masses. Rule 10.3 details that the masses in 10.1 are maximums by stating: “It is not permitted for any weighed component or assembly to have a greater mass than that given in Rule 10.1.”. Rule 10.6 then mandates that ballast needs to be added if there is any shortfall from the specific masses in 10.1.

- C. The precision of the process used to determine the weight of the yacht assembly is defined by the **Measurement Committee** tools and procedure. This precision is consistent across the fleet. The values determined by the **Measurement Committee** shall be used to ballast to the detailed values in 10.1. without tolerance.

### Answers

1. The first column of the table in rule 10.1 is entitled “Component”. Therefore, all items listed in the first column of 10.1 are components for the purpose of Rule 10.1.
  - a. Yes.
    - b. No, it is an assembly.
    - c. No, it is an assembly.
  2. No.
  3. Yes. See interpretation section A.
  4. No. See interpretation section B & C.
  5. Not applicable.

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6. There is no tolerance applied to **yacht assembly**. See interpretation section B & C.
7. There is no tolerance applied to a **foil**. See interpretation section B & C.
8. The allowable mass for a **jib** is between 0 and 55 kg. There is no tolerance applied to a **jib** and its associated **deck** ballast in accordance with Rule 10.5. Rule 4.1 h) explicitly permits equivalent ballast.
9. The allowable mass for a **code zero** is between 0 and 90 kg. There is no tolerance applied to a **jib** and its associated **deck** ballast in accordance with Rule 10.5. Rule 4.1 i) explicitly permits equivalent ballast.
10. No. The **FCS** is a supplied component and these values are for information and reference only.
11. "**Total**" is written in bold, but it is not a defined term. It refers to the sum of all items listed in the first column of rule 10.1. The mass range indicated as "**Total**" is a redundant rule requirement by implication of the components and assemblies that it comprises which sum up to the given value.

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