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1 Introduction

- 1.1 This document, the **AC Technical Regulations**, defines rules that govern **yachts** sailed by **Competitors** in the 37th America's Cup. It also includes rules relating to shrouding, **Competitors'** chase boats, weather collection and reconnaissance.
- 1.2 The **AC Technical Regulations** shall be read and interpreted in conjunction with the **AC75 Class Rule** and **AC40 Class Rule**.
- 1.3 Rules that classify or provide interpretation within the **AC Technical Regulations**, for instance the "Language", "Reference frames and units" and "Definitions" sections, apply to all documents that comprise the **Class Rules**.
- 1.4 The **AC75 Class Rule**, the **AC40 Class Rule** and the **AC Technical Regulations** shall be in force from their first publication in non-draft form (without the word 'Draft' on the cover), and **Competitors** shall comply with them until the completion of the final race of the 37th America's Cup.
- 1.5 The **AC75 Class Rule**, the **AC40 Class Rule** and the **AC Technical Regulations** include:
 - (a) rules that govern an **AC75 Class Yacht** and an **AC40 Class Yacht**, including how they are constructed and how they are raced, which shall apply during measurement and when racing, unless stated otherwise; and
 - (b) rules that govern:
 - (i) procedures of measurement, declaration, interpretation, amendment;
 - (ii) limits on quantities, manufacture, modification and testing of components;
 - (iii) weather collection, shrouding, reconnaissance; and
 - (iv) other matters that are not separately addressed in the **Protocol**;
 which shall apply at all times unless stated otherwise.

The applicable time-period over which a Rule is in force shall be indicated by the context, but if there is any doubt, shall apply at all times.

2 *Language*

- 2.1 The official language of the **Class Rules** is English.
- 2.2 Within the **Class Rules**, the word “Rule” is a reference to a rule of the **Class Rules**, and unless specified otherwise is a reference to a rule within the same document.
- 2.3 Where words or phrases are printed in bold type their meaning is defined in Rule 11 of the **AC Technical Regulations**. Bold terms may be used in modified grammatical forms, in which case any modification to the term relates to a corresponding modification to the definition.
- 2.4 In some document viewers, the definition of terms in bold may be seen as a tooltip. Although these tooltips are intended to provide the correct and full definitions, they should not be relied upon; the text printed in Rule 11 of the **AC Technical Regulations** is the only authoritative source.
- 2.5 Where words or phrases are printed in italic type their meaning has a local definition that only applies within that section of the **Class Rules**.
- 2.6 The interpretation of words not defined in bold shall be made with reference to The Oxford English Dictionary, as it exists online at www.oed.com (or such later official website of the Oxford English Dictionary). In interpretation, the **Rules Committee** shall determine the most appropriate definition of a word within the Oxford English Dictionary, or if no appropriate definition is found, from another authoritative source.
- 2.7 The words “can” and “may” are permissive, but the permission is restricted when followed by the words “not”, “only” or similar. The words “will”, “must”, and “shall” are mandatory.
- 2.8 The word “or” is used as an “inclusive or”, meaning the same as “and/or”, except where it is clearly an “exclusive or” from the grammar or context, such as when:
- (a) it is preceded by the word “either”; or
 - (b) the options separated by the “or” are logically exclusive.
- 2.9 Where the word “significant” is used, it means “non-negligible”, or “sufficiently great or important to be consequential or influential”. As an exception, the phrase “significant figure” has its usual mathematical meaning.
- 2.10 The phrase “for the avoidance of doubt” indicates that the subject that follows is already controlled by a more general Rule, but the specific Rule is included to remove any potential uncertainty in interpretation.

3 *Reference frames and units*

- 3.1 The Measurement Waterline Plane, **MWP**, is defined as the horizontal reference plane of the **yacht**.
- 3.2 The Longitudinal Centre Plane, **LCP**, is defined as a vertical reference plane, orthogonal to **MWP**.
- 3.3 The Transom Reference Plane, **TRP**, is defined as the vertical reference plane orthogonal to **MWP** and **LCP**.
- 3.4 The reference planes **MWP**, **LCP** and **TRP** are fixed to the **yacht**, translating and rotating as the **yacht** moves in space.
- 3.5 Except where otherwise specified, terms such as “above”, “below”, “up”, “down”, “forward” and “aft” refer to directions or relative positions aligned to the xyz-axes in the **yacht**-fixed reference frame, where:
- (a) the origin is at the intersection of **TRP**, **LCP** and **MWP**;
 - (b) *x* is the **longitudinal** axis, positive forward;
 - (c) *y* is the **transverse** axis, positive to port;
 - (d) *z* is the vertical axis, positive up.
- 3.6 The **mast** and **mainsail** shall be measured in a **mast**-fixed reference frame, where:
- (a) the origin is at **MRP**;
 - (b) *u* is an axis perpendicular to the shear web of the **mast tube**, positive towards the front of the **yacht**;
 - (c) *v* is an axis perpendicular to *u* and *w*, positive towards port; and
 - (d) *w* is an axis parallel to the intersection of the shear web of the **mast tube** with the **mast centre plane**, positive up.
- 3.7 The following tolerances shall be applied to all dimensions specified in the **Class Rules**:
- (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 4.95 m 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”, “no less than”, “no greater than”, “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.
- 3.8 Pressures in the **Class Rules** refer to gauge pressures unless otherwise specified.

4 Component limits and modifications

4.1 Key components of **AC75 Class Yachts** and **LEQ12 yachts** are restricted in quantity and degree of modification. Any listed component that serves or partly serves the purpose of a listed component shall be counted, where:

- (a) a component **launched** on an **AC75 Class Yacht** or a **surrogate yacht** shall be treated as an **AC75 Class Yacht** component; and
- (b) a component **launched** on an **LEQ12 yacht** shall be treated as an **LEQ12 yacht** component.

4.2 As an exception to Rule 4.1, **in class AC40 Class Yacht** supplied components are not counted in the quantity limits imposed by these Rules if they are installed on an **in class AC40 Class Yacht hull**. However, if:

- (a) an **AC40 Class Yacht** supplied component is modified such that it is no longer **in class**; or
- (b) installed on any **yacht** except an **in class AC40 Class Yacht hull**;

and **launched**, it is then treated as a new **LEQ12 yacht** component.

4.3 For an **AC75 Class Yacht**, the components in the table below are restricted in quantity and degree of modification.

Component	Legacy quantity	Legacy immutable portion	New quantity	New immutable portion	Total quantity
Hull surfaces	1	87.5% area*	1	87.5% area	2
Foil arm stocks	4	See Rule 4.12	4	100% mass	4
Foil wings	2	100% mass	3†	80% mass	5
Foil flaps	2	100% mass	5‡	80% mass	7
Rudders	2	80% mass	2	80% mass	4
Mast tubes	1	See Rule 4.13	2	80% mass	3
Mainsail skins	8	85% area	12	85% area	20
Jib skins	10	85% area	15	85% area	25

*See Rule 4.9. †See Rule 4.10. ‡See Rule 4.11.

4.4 For an **LEQ12 yacht**, all components **launched** after 17th March 2021 shall be counted in the applicable limits. The components in the table below are restricted in quantity and degree of modification.

Component	New quantity	New immutable portion
Hull surfaces	1	87.5% area
Foil arm stocks	2	80% mass
Foil wings	4	80% mass
Foil flaps	4	80% mass
Rudders	1	80% mass
Mast tubes	1	80% mass
Mainsail skins	10	85% area
Jib skins	13	85% area

- 4.5 The values in the column “Legacy quantity” of Rule 4.3 are the maximum number of legacy components that a **Competitor** may **launch**. A legacy component:
- (a) is a component that was declared by a Competitor of **AC36**, which need not be the same **Competitor** that is using it as a legacy component in **AC37**;
 - (b) in the case of a **foil flap**, is a pair of **AC36** foil flaps, since they were defined as separate items for each side of a **foil wing** in **AC36**;
 - (c) must have a *Version A* for **AC37** that exactly matches a configuration in which that component was declared to the **Measurement Committee** during **AC36**, where:
 - (i) such configuration need not be the configuration in which that component was first **launched** during **AC36**, nor the final configuration of that component in **AC36**;
 - (ii) such configuration need not have been **launched** during **AC36** providing it was declared to the **Measurement Committee** according to the component declaration procedures of **AC36**; and
 - (iii) the **Competitor launching** a legacy component in **AC37** must provide a declaration to the **Measurement Committee** that the declared configuration matches a declared **AC36** configuration. That declaration must include the date that the specific configuration was declared during **AC36**, and the relevant documentation such as IGES files or drawings supplied to the **AC36** Measurement Committee at that time. If the component has transferred ownership, this declaration must be supported by the **AC36** Competitor that originally declared the component; and
 - (d) once declared in **AC37** in accordance with Rule 4.23, is treated in the same way as a new **AC37** component in terms of change and repair allowances described in this Rule subject to the “Legacy immutable portions” tabulated in Rule 4.3.
- 4.6 The values in the column “New quantity” of Rules 4.3 and 4.4 are the maximum number of new components that a **Competitor** may **launch**. A new component need not be newly built; it could be a modified or unmodified component that was previously declared in **AC36** or **AC37** if that component cannot be declared as a legacy component, or if a **Competitor** chooses not to declare it as a legacy component.
- 4.7 The values in the column “Total quantity” of Rule 4.3 are the maximum number of components, whether new or legacy, that a **Competitor** may **launch**.
- 4.8 The quantities tabulated in Rules 4.3 and 4.4 are limits applying per **Competitor**, not per **yacht**.
- 4.9 The **hull lower surface** of a legacy **hull** cannot be modified; changes to the **hull surface** of a legacy **hull** shall be confined to the **deck**.
- 4.10 The second and third new **AC75 Class Yacht foil wings** declared by a **Competitor** must have an identical *Version A* design to their first declared new **AC75 Class Yacht foil wing**. Those second and third new **foil wings** must also retain the same immutable portion as the first declared new **foil wing** throughout **AC37**.
- 4.11 The five new **AC75 Class Yacht foil flaps** shall have between them a maximum of two distinct *Version A* designs, and the new **foil flaps** corresponding each of those two *Version A* designs shall retain the same immutable portions as the first declared of each design throughout **AC37**.
- 4.12 The **AC37 Version A** of a legacy **foil arm stock** shall match the **AC36 foil arm stock** specification. The only modifications that may be made to a legacy **foil arm stock** are to:
- (a) update it to match the **AC37 foil arm stock** specification detailed in the “Foil arms” section of the **AC75 Class Rule**; or
 - (b) to return it to match the **AC36 foil arm stock** specification.

4.13 Legacy **mast tubes** shall only be modified from their **AC37 Version A** of the component within:

- (a) the **mast lower zone**; and
- (b) additional regions that may be defined in the **mast** specification.

Legacy **mast tubes** that have been modified and have a *Version A* that conforms to the legacy **mast** modification drawing of the **mast** specification can be declared as new components. Modification and repair allowances will thereafter be subject to the “New immutable portion” rather than the “Legacy immutable portion” tabulated in Rule 4.3. For the avoidance of doubt, *Version A* of a legacy mast tube can be a hypothetical configuration as allowed by Rule 4.21.

4.14 **New Competitors** may substitute up to 4 legacy **mainsail skins** and 5 legacy **jib skins** for equivalent replicas of legacy **sail skins**, provided that:

- (a) the **New Competitor** owns a legacy **hull** with **AC36** sail number 1, 2, 3 or 4 (the *paired hull*);
- (b) each new replica **sail skin** has an identical blank design to a version of a **sail skin** that was:
 - (i) **launched** by a **Competitor** of **AC36**; and
 - (ii) first hoisted on a **mast** stepped on the *paired hull*;
- (c) each replica **skin** is only ever hoisted on a **mast** stepped on the *paired hull*.

4.15 The following new **AC75 Class Yacht** components may not be installed on a legacy **AC75 Class Yacht hull**:

- (a) **foil wings**;
- (b) **foil flaps**;
- (c) **rudders**;
- (d) **mainsail skins**; and
- (e) **jib skins**.

4.16 A component shall be counted in the applicable limits regardless of whether that component satisfies the specific Rules controlling its parameters in the **Class Rules**. In the event that a test component cannot readily be identified as a specific component type, a classification of type and quantity shall be determined by the **Rules Committee** by following the interpretation process detailed in Rule 7.5, where:

- (a) components shall be classified according to resemblance in form or function to **AC75 Class Yacht** components, whatever their scale;
- (b) test components shall be counted even if they only resemble one aspect of an **AC75 Class Yacht** component, without matching the overall functionality; and
- (c) in an extreme case, a single test component may be ruled as comprising multiple declared components if it is effectively serving the purpose of multiple components, depending on its method of installation in a **yacht**. For example, a double-ended **rudder** that could be installed either way up, with only one half of the component tested at a time, could be ruled as two declared **rudders**. However, a conventional **rudder** that could be installed at different extensions, or an asymmetric **foil wing** with different design concepts on either side of its connection to a **foil arm** shall be treated as a single component.

- 4.17 **Competitors** must track listed components and versions of those components in a spreadsheet with the following columns:
- (a) ID: a number indicating the identity of a physical component;
 - (b) Version: a letter (or letters) indicating the version letter the component;
 - (c) SHA: the **SHA** of the component's **blueprint**;
 - (d) Mass: the mass of the component, for components whose change percentage is controlled by mass;
 - (e) Area: the controlled surface area of the component, for components whose change percentage is controlled by area;
 - (f) Comment: text briefly describing the component or type of modification.
- Each row shall represent a version of a specific component. The rows shall be grouped by the component ID, where the first row for each component must be the declared *Version A* of that component.
- 4.18 The ID for a new **AC75 Class Yacht** component shall be distinct from any ID of the same **AC75 Class Yacht** component type **launched** by the same **Competitor** in **AC36**, such that any component from either **AC36** or **AC37** can be uniquely identified by the combination of the **Competitor** that launched it and the component's ID.
- 4.19 A new **AC75 Class Yacht hull's** ID or *hull number* shall be allocated by the **Measurement Committee** when it is **launched**. **Competitors** shall inform the **Measurement Committee** when this occurs, and *hull numbers* will be allocated sequentially, starting with 9, except that culturally objectionable numbers may be skipped at the discretion of the **Measurement Committee**.
- 4.20 *Hull numbers* for **AC40 Class Yachts** shall be allocated sequentially by the manufacturer, starting at 1.
- 4.21 *Version A* of a component is the version from which changes to that component are compared and measured. It may be the configuration in which the component was **launched**, or some other hypothetical configuration.
- 4.22 *Version A* of new **AC75 Class Yacht** components must comply with the relevant rules for that component type.
- 4.23 Except when restoring a component to a previously declared version, a new version of a component must be declared:
- (a) for components whose change percentage is controlled by mass, whenever any change is made to that component, even if there are no changes to its **blueprint**; and
 - (b) for components whose change percentage is controlled by area, whenever that component changes with respect to its **blueprint**.
- 4.24 **Competitors** may declare components and component versions by emailing an updated copy of the Rule 4.17 spreadsheet to the **Measurement Committee**. If a component or version of a component has not previously been declared, it must be declared within 48 hours of the component being **launched**.
- 4.25 For components whose change percentage is controlled by mass, the mass for the first **launched** version of a component must be determined by weighing that component. For other versions, a calculated mass can be declared based on the changes made to a **launched** component, or on a hypothetical configuration, but the **Measurement Committee** may require a component to be weighed at any time.

- 4.26 The material substance of the portion of the component indicated in Rule 4.3 must remain immutable through the life of the component, whereby:
- (a) at least the indicated percentage of the mass or surface area of every version of the component must remain unmodified from *version A* of the component;
 - (b) a common portion of at least the indicated percentage of the mass or surface area of *version A* of the component must remain unmodified and must match all declared versions of the component; and
 - (c) if *Version A* does not represent a physical version of a component, the immutable portion of the component must be referenced to material that would be present if the component was modified to *Version A*.

4.27 For **hulls, foil wings, foil flaps, rudders** and **mast tubes**:

- (a) the immutable portion of the component may comprise several disjoint regions divided by modified material, but those separate regions must remain in an identical position and orientation with respect to each other through the life of the component;
- (b) the **blueprint** of all versions of the component except *Version A* must include a surface entity or entities that enclose (for mass) or overlay (for surface area) regions that satisfy Rules 4.26 (a) and 4.26 (b); and
- (c) all **blueprints** for a component must be aligned with respect to these surface entities such that they overlay exactly across all versions.

4.28 For **sail skins**:

- (a) the immutable portion of the component may comprise several disjoint regions divided by modified material, and these regions are not required to be in the same position or orientation with respect to each other through the life of the component;
- (b) addition or removal of branding or stickers shall not count as replaced area provided the structure of the **sail skin** is not significantly altered;
- (c) addition of material for repairs or local reinforcement shall not count as replaced area provided the original **sail skin** remains; and
- (d) replacement of sail skin components such as edge tapes, chafe patches, batten pockets, batten end patches, webbings and associated block patching for maintenance will not be counted as replaced sail skin area.

Changes permitted in 4.28 (c) and 4.28 (d) must be no larger than required to address the area that requires repair, reinforcement or maintenance and shall not modify the global behaviour of the sail.

4.29 As an exception to Rule 4.26, material within a component that has been:

- (a) replaced with identical or equivalent material as part of a repair permitted by Rule 4.30;
- (b) temporarily repaired according to Rule 4.31; or
- (c) modified locally in way of a fitting, or to open, close or change penetrations permitted by the "Hull geometry" section of the **AC75 Class Rule**;

qualifies as an unmodified region.

- 4.30 It is permitted to repair or replace a new or legacy **hull surface, foil arm stock, foil wing, foil flap, rudder** or **mast tube** to restore it to an **AC37** declared configuration, where:
- (a) the material substance need not be the same material as in the declared component, providing that except where modification is permitted, surface geometry is identical and the material specification is equivalent to the satisfaction of the **Measurement Committee**; for example:
 - (i) dry fibre may be substituted for an equivalent pre-preg fibre;
 - (ii) two plies of 150 g/m² may be substituted for one ply of 300 g/m²; or
 - (iii) fibre may be substituted for fibre of a different modulus, provided that there is no significant change in the component's stiffness or behaviour under load;
 - (b) any construction forming part of the repair or replacement is built or prepared only once that component has been taken out of service, and that component is not installed with the **yacht** afloat again until that repair is complete;
 - (c) the restriction in Rule 4.30 (b) does not apply to the construction of:
 - (i) flat monolithic plate which has a uniform construction across the plate;
 - (ii) flat sandwich panel which has a uniform construction across the panel; or
 - (iii) round tubes of uniform construction and cross-sectional shape;
 but does apply to any incorporation of those components within a repair;
 - (d) in the case of a repair requiring replacement of more than 1 kg of material, a **Competitor** must inform the **Measurement Committee** when commencing the repair or replacement, and must provide the **Measurement Committee** with documentation they require; and
 - (e) a **Competitor** alone shall decide whether to repair or replace a component, and no evidence of damage is required.
- 4.31 If a **hull, foil arm stock, foil wing, foil flap, rudder** or **mast tube** is unintentionally damaged and a repair or replacement in accordance with Rule 4.30 cannot be completed in time for the **Competitor's** next race, the **Measurement Committee** may permit a temporary repair using alternative materials and construction methods, providing that:
- (a) the repair is no larger than required;
 - (b) the repaired component is no lighter than prior to the damage;
 - (c) the repaired component provides no performance advantage over a repair satisfying Rule 4.30;
 - (d) the outside shape of the repaired component is as close as possible to its shape prior to the damage;
 - (e) after the repair, the **yacht** still satisfies the **Class Rules**; and
 - (f) the temporary repair is replaced by a repair in accordance with Rule 4.30 as soon as possible.

5 *Measurement*

- 5.1 The **Measurement Committee** may place measurement marks or seals on **yacht** components during construction or upon their completion. These marks or seals may include, but are not limited to, reference screws, punch marks, measurers' signatures, cable ties and stickers, on components or component tooling. **Competitors** shall permit inspections, allow such marks to be placed, and shall not move, remove or alter any such marks or seals without the express consent of the **Measurement Committee**.
- 5.2 **Competitors** shall permit the **Measurement Committee** to:
- (a) interview team members; and
 - (b) require team members to complete affidavits,
- relating to questions from the **Measurement Committee** on design, construction or use of components on the **yacht**.
- 5.3 Except where specified, it is not the responsibility of a **Competitor** to provide categorical proof of compliance with the **Class Rules**. Where proof by inspection or measurement is impractical, the **Measurement Committee** shall rely on interviews, affidavits and reference documentation. However, it always remains the responsibility of a **Competitor** to ensure that their **yacht** complies with the **Class Rules**, including in areas that cannot be easily measured.
- 5.4 Leading up to **events**, the **Measurement Committee** will publish dates of measurement periods, during which **Competitors** may present their **yachts** for measurement. The **Measurement Committee** will inspect the **yachts** for compliance with the **Class Rules**, and **Competitors** shall provide whatever assistance is reasonably requested by the **Measurement Committee** to facilitate this process.
- 5.5 The **Measurement Committee** shall use its own equipment for measuring a **Competitor's yacht**, except that a **Competitor's** equipment may be used at the discretion of the **Measurement Committee** if it is calibrated against the **Measurement Committee's** equipment and sealed to their satisfaction.
- 5.6 When weighing components of a **yacht**, **Competitors** shall be permitted to dry any water on the surface of those components and replace wet rigging with equivalent dry rigging. The **Measurement Committee** shall make reasonable allowances for wet sail weights.
- 5.7 Where specific tolerances for component measurement are not given in the **Class Rules**, the **Measurement Committee** may make an allowance for unintended distortion of a component during manufacture when checking the shape of such a component against its **blueprint**.
- 5.8 The **Measurement Committee** shall, at times they choose during **AC37**, make spot checks of compliance with component declarations by requiring a **Competitor** to declare to them what component versions they sailed with on their last sailing day. The **Measurement Committee** may also request, and **Competitors** shall supply, **blueprints** corresponding to those component versions and declared **SHAs**.
- 5.9 Except as otherwise specified, **Competitors** are not required to routinely supply construction drawings of declared components. However, if the **Measurement Committee** have any doubt as to the compliance of a component they may request such drawings, which shall then be supplied by the **Competitor**.
- 5.10 **Competitors** shall inform the **Measurement Committee** immediately if they make any changes or repairs to the **yacht** that could affect her measurement certificate or her compliance with the **Class Rules**.
- 5.11 The **Measurement Committee** reserve the right to re-measure or inspect any aspect of a **yacht** at any time, before or after sailing, and may publish procedures for regular measurement inspections.

5.12 When a measurement period is open:

- (a) if the **Measurement Committee** believes there is ambiguity as to whether an element of a **Competitor's yacht** satisfies the **Class Rules**, they shall seek the advice of the **Rules Committee**. If the ambiguity remains, the **Rules Committee** shall rule confidentially on the compliance or otherwise of the **yacht**, based on the information presented to them by the **Measurement Committee**, after which a measurement certificate may be issued or withheld;
- (b) if the **Rules Committee** becomes aware of an element of a **Competitor's yacht** that may not satisfy the **Class Rules**, they shall ask the **Measurement Committee** to inspect the element and report to them. The **Rules Committee** shall then rule confidentially on the compliance or otherwise of the **yacht**, after which a measurement certificate may be withdrawn or withheld;
- (c) decisions on the compliance of a **yacht** made by the **Measurement Committee** and/or the **Rules Committee** may subsequently be changed by the **Measurement Committee** or the **Rules Committee** if new information comes to light, or if they believe the original decision was made in error. Only an interpretation or an amendment to the Rule providing clarification shall provide a **Competitor** with a guarantee of continuing compliance of an ambiguous design element; and
- (d) if a measurement certificate is withheld from a **Competitor**, the **Measurement Committee** shall explain in full the reasons why the **yacht** does not comply with the **Class Rules**, including the detail of decisions made or advice given by the **Rules Committee**.

5.13 During training or racing, **Competitors** shall permit the **Measurement Committee** to install small video cameras onboard their **yachts** to assist the **Measurement Committee** in determining compliance, where:

- (a) the mass of these cameras shall not be included in the measurement mass of the **yacht**;
- (b) the **Measurement Committee** shall where possible locate the cameras in locations that minimise any increase in aerodynamic drag, providing they are still able to capture the details required; and
- (c) **Competitors** shall not adjust nor deliberately obstruct the view from these cameras.

6 *Non-compliance with the Class Rules*

6.1 After a measurement certificate has been issued for an **event** or **AC75 event stage**, if the **Measurement Committee**:

- (a) determines that it has issued a measurement certificate in error, and that a **yacht** is non-compliant with the **Class Rules**;
- (b) determines that a new interpretation issued by the **Rules Committee** renders a **yacht** non-compliant with the **Class Rules**;
- (c) determines that a **yacht** is non-compliant with the **Class Rules** as a result of a query of compliance by a **Competitor** detailed by Rule 6.7; or
- (d) is informed by the **Rules Committee** that a **yacht** is non-compliant with the **Class Rules** following the process described by Rule 5.12 (b);

they shall notify the **Regatta Director**, notify all **Competitors** and follow the process detailed in Rule 6.2. No penalty shall be applied relating to races sailed when non-compliant unless a condition within Rule 6.3 is also found to apply.

6.2 If a **Competitor's yacht** is found to be non-compliant with the **Class Rules** according to Rule 6.1, a determination of the **Competitor's** ability to rectify the non-compliance in time for the next race shall be made by the **Regatta Director** in consultation with the **Measurement Committee**, and:

- (a) if they find that the **Competitor** is able to rectify the non-compliance, and the **yacht** can be re-inspected before the next race, the **Measurement Committee** shall withdraw the **yacht's** measurement certificate immediately;
- (b) otherwise, the **Regatta Director** may grant a grace period which shall end no later than:
 - (i) the end of the following day, if the **yacht** has a race on the following day that is scheduled to start within 24 hours of the current time; otherwise
 - (ii) the end of the current day;

the current time being the time at which the **Measurement Committee** notifies the **Regatta Director** and all **Competitors** of the non-compliance. The **Measurement Committee** shall withdraw the **yacht's** measurement certificate at the expiry of any grace period.

6.3 After a measurement certificate has been issued for an **event** or **AC75 event stage**, if the **Measurement Committee** determines that:

- (a) a **yacht** has been modified without the approval of the **Measurement Committee** and:
 - (i) may no longer be compliant with the **Class Rules**; or
 - (ii) no longer matches the configuration specified in her measurement certificate; or
- (b) a **Competitor** has made a false declaration;

they shall withdraw the **yacht's** measurement certificate and follow the process detailed in Rule 6.4.

6.4 If a **yacht's** measurement certificate has been withdrawn according to Rule 6.3, and the **yacht** has raced in a non-compliant configuration, the **Measurement Committee** shall notify the **Jury**, the **Regatta Director** and all **Competitors** with details of:

- (a) the non-compliance;
- (b) any races the **yacht** may have raced in whilst non-compliant; and
- (c) the **Measurement Committee's** assessment of any potential performance implications of the non-compliance.

- 6.5 On receiving notification from the **Measurement Committee** according to Rule 6.4, the **Regatta Director** shall review the non-compliance, requesting further investigation if necessary. As a result, if the **Regatta Director** determines that the non-compliance is:
- (a) unintentional, and unlikely to have impacted the outcome of a race, the **Jury**, in consultation with the **Regatta Director** may impose a fine on the **Competitor**;
 - (b) intentional, or could have impacted the outcome of a race, the **Jury**, in consultation with the **Regatta Director** may disqualify the **yacht** from:
 - (i) the last race in which the **yacht** competed if the **yacht** competed in only one race while non-compliant; or
 - (ii) the last two races in which the **yacht** competed whilst non-compliant.
- 6.6 A **Competitor** whose measurement certificate has been withdrawn must rectify the non-compliance, present their **yacht** for re-measurement and receive a new measurement certificate prior to being eligible for any further racing in the current **event** or **AC75 event stage**.
- 6.7 During an **event**, a **Competitor** may query the compliance of another **Competitor's yacht** by sending an email to the **Measurement Committee** that details the potential areas of non-compliance. The **Measurement Committee** shall investigate and:
- (a) if the **Measurement Committee** finds that the **yacht** complies with the **Class Rules**, they shall notify the **Regatta Director** and all **Competitors** with details of the investigation and an explanation as to why they are satisfied that the **yacht** continues to comply; or
 - (b) if the **Measurement Committee** finds that the **yacht** does not comply with the **Class Rules**, they shall proceed according to Rule 6.1.
- 6.8 The total number of measurement compliance queries that may be made by each **Competitor** shall be limited as follows:
- (a) two queries in each Preliminary Regatta;
 - (b) three queries in the America's Cup Challenger Selection Series; and
 - (c) two queries in the America's Cup Match.
- Any measurement compliance queries that result in the **Measurement Committee** determining that the **yacht** in question is non-compliant with the **Class Rules** shall be excluded from these limits.
- 6.9 If a **yacht** is unintentionally damaged whilst racing to the extent that she is no longer compliant with the **Class Rules**, or no longer matches the configuration specified in her measurement certificate, the **Measurement Committee** shall notify the **Regatta Director** with details of:
- (a) the non-compliance;
 - (b) any races the **yacht** may have raced in whilst non-compliant; and
 - (c) the potential performance implications of the non-compliance.
- If the **Regatta Director** in consultation with the **Measurement Committee** determine that the non-compliance is unlikely to have increased the performance of the **yacht**, no penalty shall be applied relating to races already sailed; otherwise, the **Regatta Director** shall inform the **Jury** who in consultation with the **Regatta Director** may impose a penalty at their discretion.

6.10 After a **yacht** has been damaged as described by Rule 6.9, if:

- (a) it is not possible for repairs to be made to restore the **yacht** to a compliant condition in time for her next race (after accounting for any changes permitted by a substitution schedule); and
- (b) the **Measurement Committee** determines that any damage or subsequent temporary repair could not positively impact the performance of the **yacht**;

the **yacht** may be granted an exemption to the specific **Class Rules** or parts of her measurement certificate that she cannot comply with, and permitted to race.

6.11 The decision to grant an exemption described in Rule 6.10 shall be made by:

- (a) the **Regatta Director** in consultation with the **Measurement Committee**, for any races that are scheduled on the same sailing day in which the damage occurred; and
- (b) the **Jury**, in consultation with the **Regatta Director** and the **Measurement Committee**, for any races on subsequent sailing days. In this case, prior to making their decision, the **Jury**:
 - (i) may decide to provide details of the damage, repair and substitution options to other **Competitors** affected by their decision so that those **Competitors** have an opportunity to provide relevant technical feedback; and
 - (ii) must be entirely satisfied that Rules 6.10 (a) and 6.10 (b) apply;

prior to granting such an exemption.

In any case in which an exemption is granted, the **yacht** shall be restored to a compliant condition as soon as possible.

7 Interpretation and amendment

7.1 The **AC75 Class Rule** may be amended:

- (a) at any time by unanimous consent of **Competitors**, either:
 - (i) via the mechanism described in Rules 7.5; or
 - (ii) by another process;
- (b) at any time by the **Rules Committee**, with the agreement of **COR/D** and the **Regatta Director** (if they have been appointed), for changes relating to:
 - (i) supplied or specified components;
 - (ii) the supplied ultrasonic transmitter specified in the “Foil Wings” section of the **AC75 Class Rule**;
 - (iii) standard pressure relief valves and the supplied high-pressure **hydraulic accumulator** specified in the “Hydraulics” section of the **AC75 Class Rule**;
 - (iv) the use of Samsung Knox management software specified in the “Crew information system” section of the **AC75 Class Rule**;
 - (v) the permission or requirement for additional **hull** penetrations, ducts, fans, radiators or other components for cooling the internal **hull** volume and enclosed systems;
 - (vi) safety;
 - (vii) **media equipment** specifications; or
 - (viii) **event** branding,

including their impact on masses and centres of mass controlled by **AC75 Class Rule**. In making any such amendments, the **Rules Committee** shall consider the impact of their proposed changes on all **Competitors**, taking account of the state of their design and construction programmes, so that any burden imposed is commensurate with the need for amendment.

- (c) by **COR/D** alone for the items listed in Rule 7.1 (b) if the **Rules Committee** has not yet been appointed.

7.2 The **AC40 Class Rule** may be amended at any time by the **Defender**.

7.3 The **AC Technical Regulations** may be amended:

- (a) according to the same conditions that apply to the **AC75 Class Rule** in Rule 7.1;
- (b) for Rule 4, “Component limits and modifications”, by **COR/D** at any time; and
- (c) for Rule 10, “Reconnaissance”, by **COR/D** at any time.

7.4 If the date for the first race of the 37th America’s Cup Match is announced to be at any time before 1st January 2024 or after 1st September 2024, any dates within the **AC75 Class Rule** and **AC Technical Regulations** may be amended by **COR/D** during the 10 **working days** following such an announcement. This Rule applies to both an original announcement of the date, and to any subsequent announcement of a change in date.

7.5 A **Competitor** may submit a Rule Enquiry regarding the **AC75 Class Rule** or **AC Technical Regulations** to the **Rules Committee** in the form of:

- (a) an interpretation request;
- (b) an amendment proposal, with or without additional commentary;
- (c) two or more alternative proposals for an amendment; or
- (d) a combination of the above.

7.6 Requests submitted according to Rule 7.5:

- (a) shall be a Microsoft Word document or compatible format, so that it can be edited easily;
- (b) may include references to relevant paragraph numbers within the **Class Rules**, indicated as “75-X.X”, “40-X.X” or “TR-X.X”, but should not include formal excerpts of those Rules except where used directly in the context of the question;
- (c) shall be in a form that can be directly and immediately forwarded to all **Competitors** without the need for further editing; and
- (d) shall be submitted by email to the **Rules Committee** or if advised, to a specific Rule Enquiry email address.

A mechanism may be implemented whereby these requests are forwarded automatically to **Competitors** as soon as they are received; otherwise, the **Rules Committee** shall forward them as soon as possible. In either case, the email subject line of the forwarded request shall include a sequential Rule Enquiry number.

7.7 The **Rules Committee** can also initiate a Rule Enquiry, providing that it does not reveal a design characteristic that might not have been considered by all **Competitors**.

7.8 When the **Rules Committee** receives a Rule Enquiry:

- (a) The **Rules Committee** shall immediately publish the Enquiry, if not automatically distributed.
- (b) By 8pm of the 4th **working day**, considering the day that the Rule Enquiry is published as the first **working day**, **Competitors** may reply to the **Rules Committee** to:
 - (i) consent to a draft amendment;
 - (ii) supply comments on the interpretation and/or amendment proposal; or
 - (iii) propose an alternative amendment wording.
- (c) Within 4 **working days** of the feedback from **Competitors** being due:
 - (i) *If there is sufficient consent to implement a proposed amendment according to the conditions of Rules 7.1, 7.2 and 7.3, then the **Rules Committee** shall amend the relevant documents of the **Class Rules**, publish the new version, and mark the Rule Enquiry as closed.*
 - (ii) *Else if the **Rules Committee** consider that there is the possibility that the issue can be resolved by an amendment, then they shall propose or revise a draft amendment, this option being preferred to an interpretation.*
 - (iii) *Else if there was no interpretation question as part of Rule Enquiry, the **Rules Committee** shall mark the Rule Enquiry as closed, there being no agreement on a proposed amendment.*
 - (iv) *Else if at least one interpretation draft has previously been circulated and the **Rules Committee**, having reviewed all feedback, is satisfied that the interpretation cannot be improved then they shall publish the previously circulated interpretation draft as a final interpretation and mark the Rule Enquiry as closed.*
 - (v) *Else the **Rules Committee** shall propose or revise a draft interpretation response, subject to Rule 7.9.*
- (d) If not closed, the process shall then return to step 7.8 (b).

7.9 At the step described by Rule 7.8 (c) (v), if the **Rules Committee**, after considering the feedback from **Competitors**, determine an interpretation request included in the Rule Enquiry to be unreasonably long, or to cover an unreasonably large number or matrix of possible scenarios, they may withdraw the request and request the original **Competitor** to re-submit the Rule Enquiry with an interpretation request that limits the scope of the question to those elements which better clarify ambiguity in the **Class Rules**.

- 7.10 The Rule Enquiry, all **Competitor** responses, and all draft and final responses by the **Rules Committee** shall be published by the **Rules Committee** to the Official Noticeboard (as defined in the **protocol**). **Competitor** responses will not be published until either all responses have been received or the deadline detailed by Rule 7.8 (b) has passed, whichever is earlier. The Rule Enquiry and responses from the **Rules Committee** shall be published as soon as they are issued.
- 7.11 Rule Enquiries and response documents from **Competitors** shall be published in the form in which they are received without any additional information indicating who they are from. **Competitors** may anonymise their submission.
- 7.12 The **Rules Committee** may, at their discretion, shorten any of the times allowed in Rule 7.8, particularly leading up to **events**.
- 7.13 With the agreement of the **Competitor** seeking the amendment or interpretation, the **Rules Committee** may lengthen any of the times allowed in Rule 7.8.
- 7.14 Interpretations shall be based on the following principles:
- (a) interpretations shall consider only the words in the **Class Rules**, not their possible intent;
 - (b) where wording is ambiguous, the most reasonable and natural interpretation of the written words within the context of any other relevant **Class Rules** shall be taken;
 - (c) if a part of the **Class Rules**, or the understanding of it created by the application of clause 7.14 (b), is found to directly contradict another part, a part that refers to more detail shall take precedence over a part that is more general; and
 - (d) finally, if there remains ambiguity or contradiction as to whether a particular feature is permitted, and that ambiguity or contradiction cannot be resolved by application of the above clauses, an interpretation shall be permissive.
- 7.15 Draft responses from the **Rules Committee** shall not constitute a ruling of any form. Whilst **Competitors** may comment on these drafts, they are inadmissible as evidence of any interpretation of the **Class Rules** unless published as final.
- 7.16 The **Rules Committee** may seek the advice of independent experts, including members of the **Measurement Committee**, when considering an interpretation.
- 7.17 **Competitors** shall not conduct any private correspondence with the **Rules Committee** regarding any Rule, interpretation or amendment. Correspondence shall only be in the form described by Rule 7.5, or within a group forum which all **Competitors** are invited to attend.
- 7.18 Advice or opinions on the meaning of a Rule, from a member of the **Measurement Committee** or **Rules Committee**, are not binding except through an interpretation.
- 7.19 Once an interpretation has been issued as final, it cannot be modified without the explicit agreement of all **Competitors**.
- 7.20 Interpretations that relate specifically to wording within the **Class Rules** that has since been amended no longer apply.
- 7.21 Separately to the interpretation and amendment process described in the above rules, **Competitors** may request clarification of the construction or operational requirements of specified or supplied components including **foil arm stocks**, **mast tube** specifications, **supplied rigging** and the **FCS**. Requests for clarification should be made to the **Rules Committee** who, after consultation with the designers of those parts, will issue a clarification notice to all **Competitors**.

8 *Meteorological and oceanographic data*

- 8.1 After the announcement of the **Match venue**, **Competitors** shall only collect weather, wind, sea state or sea current instrument data relevant to the **Match venue**:
- (a) from devices that measure weather, wind, sea state or sea current within 100 mm of a sensor mounted on any of a **Competitor's eligible yachts**;
 - (b) from a chase boat that is *supporting* one of that **Competitor's eligible yachts**, limited to two chase boats per **yacht**, which must be the primary chase boats for that **yacht**; and
 - (c) as permitted by the **Protocol**.
- 8.2 With reference to Rule 8.1, **Competitor's yachts** are *eligible* provided that:
- (a) **Competitors** shall be limited to a maximum of two *eligible yachts* per day; and
 - (b) during an **event**, whenever any of a **Competitor's yachts** are within their *racing period*, the only *eligible yachts* for that **Competitor** shall be those **yachts** that are currently within their *racing period*, where a *racing period* for a **yacht** is the period that:
 - (i) begins 45 minutes before the warning signal of that **yacht's** race; and
 - (ii) ends at the completion of that race.
- 8.3 A *supporting* chase boat is defined as follows:
- (a) On any sailing day, during the time that a **Competitor's yacht** is away from the dock, a *supporting* chase boat must spend at least 80% of that time:
 - (i) following, towing or alongside their **yacht**;
 - (ii) setting marks for their **yacht**;
 - (iii) waiting or manoeuvring on a course on which their **yacht** is sailing;
 - (iv) travelling directly between the **Competitor's** shore base and their **yacht**; or
 - (v) at a **Competitor's** shore base.
 - (b) When a **Competitor's yacht** is not sailing, a *supporting* chase boat shall only:
 - (i) travel directly to and from the **Competitor's** shore base for the purpose of refuelling or maintenance; or
 - (ii) remain at a **Competitor's** shore base.
- 8.4 When at the **Match venue**, after it has been announced, wind measuring devices shall only be installed on **Competitors'** chase boats if:
- (a) they are *supporting* their **yacht**;
 - (b) the wind measuring devices are covered rendering them inoperable; or
 - (c) the **Regatta Director** has given permission for their use.

9 *Shrouding*

- 9.1 No component or part of the **yacht** shall be covered for the purpose of hiding it from reconnaissance once it has been **launched**, or when it is about to be **launched** (i.e. prepared for being lifted into the water), unless:
- (a) it is not being used for sailing operations on that day; or
 - (b) the item providing cover (the 'cover') is a part of the **yacht** that satisfies the **AC75 Class Rules**, and remains in the same position whilst sailing.
- 9.2 Any temporary cover used for physical or sun protection during sailing operations shall be immediately removed at the request of reconnaissance teams. The **Measurement Committee** may remove the right of a **Competitor** to use any such covers if they believe the covers are being used to hinder the role of reconnaissance units.

10 Reconnaissance

10.1 Applicability

- (a) This section sets out the regulations governing a Joint **Competitor** Reconnaissance Programme.
- (b) The Joint Reconnaissance Programme shall be in place from the first official publication of these **AC Technical Regulations** until two months before the first race of the *Final Preliminary Regatta*.
- (c) At an *Initial Preliminary Regatta*, during the time period starting at 08:00 seven days before the programmed start of the first race and ending at 23:59 on the day of the final race (in the local time zone of the regatta), any sailing by a **Competitor** in an **in class AC40 Class Yacht** is not required to be notified, observed or declared as a **Sailing Session**.
- (d) An **in class AC40 Class Yacht** is one whose components restricted by Rule 4.4 are all **in class**.
- (e) The italicised terms within Rule 10.1 are defined by the **Protocol**.

10.2 RMP

- (a) Within two weeks of their entry into the 37th America's Cup being accepted, or within one week of the first official publication of these **AC Technical Regulations**, whichever is later, each **Competitor** shall appoint a team member as their recon representative and notify the **Recon Administrator** of this person. This person shall be a member of all **RMPs** that the **Competitor** is a part of.
- (b) Any change in a **Competitor's RMP** representative shall be notified to the **Recon Administrator**.
- (c) The **Recon Administrator** may convene and manage meetings of **RMPs**, but shall not be entitled to vote.
- (d) Decisions within **RMPs** shall be made by a majority vote. In the event of a tie, a casting vote shall be given to:
 - (i) the **Defender**, for the **RMP** that follows the **Challenger of Record**; and
 - (ii) the **Challenger of Record**, for all other **RMPs**.
- (e) Any **Competitor** currently in default of its obligation under Article 20 of the Protocol shall be ineligible to participate in an **RMP**.

10.3 **Recon Unit** appointment

- (a) One **Recon Unit** shall be appointed to follow each **Competitor**, that appointment to occur during the two months before a **Competitor's** first **Sailing Session** (see Rule 10.6).
- (b) Each **Recon Unit** will comprise two people, of which at least one shall hold any licence required to operate the recon vessel in the operating country.
- (c) It is envisaged that **Recon Unit** personnel shall have expertise in sailing and the America's Cup environment, and that at least one member of the team shall have experience in media content generation. However, the decision on personnel will be solely the responsibility of the relevant **RMP**.
- (d) An **RMP** may ask an **Observed Competitor** for a recommendation of suitable local personnel but shall not be obliged to follow that recommendation.
- (e) Compensation for each **Recon Unit** will be the same for all contracted **Recon Units**, as outlined in Part 12 of these Conditions; other contractual terms will also be identical except as otherwise required by applicable laws. Initial discussions with prospective **Recon Unit** personnel shall be between those prospective personnel and the respective **RMP**. When an agreement is reached, the **RMP** shall inform the **Recon Administrator** of their chosen personnel, who will then confirm the appointment with the recon personnel and make arrangements for payment of their compensation. The **Recon Administrator** shall not refuse any appointment unless a person is not legally permitted to work in the given role, or is determined by the Arbitration Panel to be unsuitable for the role following an application by the **Observed Competitor** or the **Recon Administrator**.
- (f) A **Recon Unit** shall be engaged from one week before the first **Sailing Session** until the termination of the joint reconnaissance programme.
- (g) A **Recon Unit** shall travel with their **Observed Competitor** to any location where they are sailing, including the **Match venue**, except that they shall only travel to the venue of an *Initial Preliminary Regatta* if the **Observed Competitor** is sailing at that venue:
 - (i) outside of the period during which sailing in an **in class AC40 Class Yacht** is not required to be notified, observed or declared as a **Sailing Session** by Rule 10.1 (c); or
 - (ii) any **yacht** other than an **in class AC40 Class Yacht**,
 where the italicised terms are defined by the **Protocol**. Travel and accommodation costs for each **Recon Unit** shall be dealt with in accordance with Part 12 of these Conditions.
- (h) Alternatively, an **RMP** may elect to switch their **Recon Unit** personnel to local personnel at each venue at which their **Observed Competitor** is sailing.

10.4 **Recon Unit** replacement

- (a) An **RMP** may elect to replace a **Recon Unit** at any time, subject to any notice period or other restriction contained in their contract or applicable law. Such notice period is anticipated to be one month but may vary according to applicable law.
- (b) In the event that a **Recon Unit** is to be replaced, the **RMP** shall inform the **Recon Administrator**, who shall make the necessary contractual arrangements.
- (c) An **RMP** shall be required to replace a **Recon Unit** if that **Recon Unit** is no longer able to work in the country that their **Observed Competitor** is sailing.

10.5 Recon vessels

- (a) During any **Sailing Session**, an **Observed Competitor** must make a recon vessel available to their **Recon Unit**, which shall:
 - (i) be at least 9 m long, of a form equivalent to a Protector rib;
 - (ii) have a top speed in flat water of at least 45kts;
 - (iii) provide a windscreen and covered area for at least two people;
 - (iv) be in good working order;
 - (v) be otherwise suitable as a working recon vessel;
 - (vi) be moored at or within five minutes' walk of that **Observed Competitor's** base, and accessible to the **Recon Unit**;
 - (vii) be available for use by the **Recon Unit** at least one day before any **Sailing Session**, and always remain available for that **Sailing Session**.
- (b) In the event that there is a disagreement between the **Observed Competitor** and the **Recon Administrator** as to the validity of the licence held by the **Recon Unit** driver, or the legality or capability of the **Recon Unit** driver to operate the recon vessel, the **Observed Competitor** shall provide a suitably qualified driver to drive the recon vessel, who shall operate under the direct instruction of the appointed **Recon Unit**.
- (c) With the agreement of the **Recon Administrator** in consultation with the respective **Recon Unit**, an **Observed Competitor** may provide a recon vessel whose specifications fall slightly below those required by Rule 10.5 (a). However, if this recon vessel proves unfit for purpose as determined by the **Recon Administrator** and the **Recon Unit**, the **Observed Competitor** shall be required to replace the recon vessel with a vessel that meets the requirements of Rule 10.5 (a) within a time frame determined by the **Recon Administrator**.
- (d) An **Observed Competitor** shall make best endeavours to ensure the provided recon vessel is always in service. If the provided vessel is at any time inoperable or out of service, and a suitable replacement boat is not available, the **Recon Unit** shall be entitled to observe from the **Observed Competitor's** primary chase boat.
- (e) An **Observed Competitor** shall either ensure the recon vessel boat is fuelled for a day, or provide the **Recon Unit** with a fuel card or other payment method for purchasing fuel.
- (f) Subject to the relevant **Recon Unit's** operational requirements, an **Observed Competitor** may on occasion place team members, VIPs or media on the provided recon vessel, to accompany the **Recon Unit**, but the boat shall be skippered by the **Recon Unit** who shall make all decisions about the boat's location and schedule. If additional personnel on recon vessels are found to hinder the operational duties of the **Recon Units**, the combination of all **RMPs** can elect to suspend this right.
- (g) Unless agreed otherwise between the **Recon Unit** and the **Observed Competitor**, a **Recon Unit** shall only use the recon vessel for reconnaissance of an **Observed Competitor** whilst sailing, before sailing, or after sailing, or to re-fuel the vessel, etc.

10.6 Notification

- (a) An **Observed Competitor** shall notify their **RMP** and the **Recon Administrator** a minimum of two months prior to their first roll out of a new **yacht** into *public view* at any *sailing venue*, in preparation for their first **Sailing Session**, where:
 - (i) *public view* means a location from where there is a line of sight to any part of the **yacht** from a viewing point that is readily and easily accessible to the general public, accessible by foot or by boat (using a sightline 2 m above mean sea level for any boat), and within 200 m of the location of the mast base of the **yacht**; and
 - (ii) a *sailing venue* is a location where a **Competitor** will launch a **yacht** and the zone within a radius of 10 km around that location.
- (b) An **Observed Competitor** shall notify their **RMP** and the **Recon Administrator** a minimum of two months before sailing at a new location (i.e. from a different base).
- (c) It is strictly prohibited for a **Competitor** to sail or tow a **yacht** at any location without having notified their **RMP** and the **Recon Administrator** as required above.
- (d) Once a **Recon Unit** is appointed, the **Recon Administrator** shall put them in contact with their **Observed Competitor**, who shall arrange access and notification.
- (e) An **Observed Competitor** must provide 24 hours notice to their **Recon Unit** of their intent to *operate* on a **yacht** or any of its *components* in *public view* at a *sailing venue* for any reason, where:
 - (i) *operate* within Rule 10.6 means to launch, sail, tow, move, test, measure, assemble, modify, disassemble or similar; and
 - (ii) *component* within Rule 10.6 means a **hull, foil arm stock, foil wing, foil flap, rudder, mast tube, mainsail skin, jib skin** or significant part thereof.
- (f) The **Competitor** should notify the **Recon Unit** again, as soon as possible, if that **yacht** or *component's operation* notified according to Rule 10.6 (e) is cancelled. They shall keep the **Recon Unit** informed of planned *operation* times.
- (g) If the **Competitor** intends to leave a **yacht** or a **yacht** component listed in Rule 10.6 (e) (ii) in *public view* for an extended period without conducting an *operation*, they must notify their **Recon Unit** and the **Recon Administrator**. The **Recon Administrator** will determine which days are appropriate for the **Recon Unit** to be deployed.
- (h) A **Competitor** must notify a **Recon Unit** of planned **Sailing Sessions**, days off and extended non-sailing periods as soon as they are known and notify them again as soon as possible if those plans change. The notice period for any such notification of a **Sailing Session** shall not be less than the gap between consecutive **Sailing Sessions**.
- (i) Each time a **Competitor** sends an updated component schedule to the **Measurement Committee**, a copy shall also be sent to their **RMP**, **Recon Unit** and **AC Media**. This component shall indicate component IDs and versions but need not include any descriptions.
- (j) Notification shall be by text or email.

10.7 Access

- (a) On any day which shall be notified according to Rule 10.6 (e), if an **Observed Competitor** intends to launch, sail or tow any of their **yachts**, they shall provide their **Recon Unit** access to the forecourt on which they roll-out, or from which they launch their **yachts** in a location that provides an unobstructed view of the **yacht** (except where obstructed by the **yacht's** cradle, etc). Such location shall be no more than 25m from the location of the mast base of the **yacht** when preparing to launch, or when in *public view* for any reason if not preparing to launch.
- (b) A **Competitor** shall provide access to the edge of a wharf overlooking the **yacht** when at the dock, or to the dock itself, at a location that provides an unobstructed view of the **yacht** and is no further than 25m from the mast base of the **yacht**.
- (c) **Recon Units** must abide by the health and safety regulations of the **Observed Competitor**, and may be required to move from the nominated locations during crane operations, etc. However, the **Observed Competitor** shall not impose health and safety regulations on their **Recon Unit** that are above and beyond those of the **Observed Competitor's** own team members, and shall provide the **Recon Unit** with the appropriate health and safety training if necessary for them to observe a **yacht** launch.
- (d) Following a sailing day, a **Competitor** shall provide access to one sailor who sailed on the **yacht** that day, or a designer who was on the water, for an interview lasting no more than 3 minutes, within 15 minutes of docking. This interview shall be with a:
 - (i) helmsperson at least 25% of the occasions;
 - (ii) foil or aero trimmer, or grinder, on at least 25% of the occasions;
 - (iii) a designer on at least 25% of the occasions.
- (e) On request, a **Competitor** shall provide access to a suitable member of their technical team to provide commentary or explanation on an aspect of another **Competitor's yacht**, a recent interpretation draft, **Class Rules** amendment, or similar.
- (f) **Competitors** shall not be obstructive in answering interview questions, and whilst they are permitted to withhold confidential information, shall provide an informative report on the sailing day.

10.8 Recon equipment

- (a) **AC Media**, in conjunction with the **Recon Administrator**, shall provide to each **Recon Unit** a standard set of recon equipment including cameras, video cameras, gimbals, a hand-held anemometer, laptops and software.
- (b) **Recon Units** shall not use any photo or video equipment for recon except that standard equipment provided, and/or their own personal mobile phones.

10.9 **Recon Unit** duties

Prior to and during any **Sailing Session** at a *sailing venue*, a **Recon Unit** shall:

- (a) Take photos and video of a **Competitor's yacht** on each
 - (i) roll-out into *public view*, whether launching or not;
 - (ii) launch and lift-out, whether sailing or not;
 - (iii) sailing session.
- (b) Follow a sailing day on the water, record the amount of sailing time vs. stoppage and towing time, sails used, approximate wind speeds and sea-state, approximate boat speeds and sailing angles, significant events, crew changes, etc.
- (c) Interview a team member following a day's sailing, asking about what was learnt, how the day went, and for feedback on any new components or events observed whilst sailing.
- (d) Within six hours of the end of a sailing day, upload all photos and videos recorded to the **Recon File Store**. In exceptional circumstances, a **Competitor** may request to the **Regatta Director** that the publication of footage to the **Recon File Store** is delayed. Such a request shall only be granted by the **Regatta Director** if:
 - (i) a **Competitor's yacht** reveals new branding that is commercially sensitive, in which case the footage shall be made available in the usual time-frame to **Competitors** only, but its wider publication shall be delayed. Such an embargo shall be granted to each **Competitor** no more than twice during any rolling twelve month period; or
 - (ii) one of more of a **Competitor's** crew members have been seriously injured.

The length of any publication delay granted to a **Competitor** shall be decided by the **Regatta Director**, who shall balance the **Competitor's** request with the requirements of **AC Media**.

- (e) As soon as possible, compile and collate images, videos and daily summaries for distribution to **Competitors** and **AC Media**. These summaries shall include observations and comments on photos and videos, in addition to some statistics, and shall be uploaded to the **Recon File Store**. The format of the reports may be specified by **AC Media**.
- (f) A **Competitor** from a **Recon Unit's RMP** may propose specific areas of interest to focus on, but any information captured by the **Recon Unit** shall be shared equally with all **Competitors** via the **Recon File Store**. A **Recon Unit** shall not provide any photos, video or other data to any **Competitor** except via the **Recon File Store**, but this does not prohibit verbal discussions between a **Competitor** and a **Recon Unit**.
- (g) On request from **AC Media**, a **Recon Unit** shall interview a member of their **Observed Competitor's** technical team on specific technical questions, and upload that interview to the **Recon File Store**.
- (h) Take photos and video of a **Competitor's yacht** when in *public view* or when it is not in an enclosed structure, such as during roll-out, lifting or afloat, whether or not it is a sailing day.

10.10 On-water management

- (a) When following a **Competitor**, a **Recon Unit** in the recon vessel shall not obstruct sailing, and shall always remain at least 50 m from the **yacht** they are observing.

10.11 **AC Media**

- (a) **AC Media** shall employ a dedicated technical writer with sailing and America's Cup expertise to edit and supplement recon data with technical commentary sourced from:
 - (i) Analysis of information provided by **Recon Units**
 - (ii) New components declarations; and
 - (iii) Interpretation and amendment analysis.
- (b) **AC Media** shall publish edited information supplied by **Recon Units** on a technical area of the Official America's Cup Website and the Official America's Cup Social Media Channels. This will include feature stories, interviews, photos, videos and sailing statistics.
- (c) Stories and interviews provided by **Recon Units** shall be credited on the website with the names of the **Recon Unit** personnel, which is intended to encourage good quality commentary and content from those teams.

10.12 **Costs**

- (a) The compensation for each member of a **Recon Unit** shall be a:
 - (i) monthly retainer to be agreed by **COR/D**;
 - (ii) an additional contracted rate to be agreed by **COR/D** for any day that falls within a **Sailing Session**.

These costs shall be borne by the **Observed Competitor**. The **Recon Administrator** will calculate and invoice each **Observed Competitor** for the relevant **Recon Unit** costs on a monthly basis.

- (b) It is expected that **Recon Unit** members will, in general, already be based in the location where the **Observed Competitor** will be sailing. As such, when operating at the home base of the **Observed Competitor**, no additional expenses shall be payable to a **Recon Unit**. However, an **RMP** may choose to make their own arrangements to provide accommodation and travel expenses for their chosen **Recon Unit** if necessary, those costs to be shared equally between the **Competitors** of that **RMP**.
- (c) An **Observed Competitor** shall be responsible for providing travel and accommodation for their **Recon Unit**, for any venue at which they sail away from their home base except the **Match venue**. Such travel and accommodation shall be of a standard equivalent to that provided to that **Competitor's** own team members.
- (d) The **Recon Administrator** shall arrange travel and accommodation for **Recon Units** at the **Match venue**, these costs to be shared by all **Competitors**.

10.13 Restrictions

- (a) **Competitors** are prohibited from carrying out their own reconnaissance on other **Competitors**.
- (b) When on the water, **Competitors** should at all times make all reasonable attempts to avoid being close to any other **Competitor's yacht**.
- (c) When two or more **Competitors** are sailing at the same location they may find themselves in the same stretch of water from time to time. In these situations, **Competitors' yachts** or other boats shall not make any attempt to follow or approach each other's **yachts** unless requested to provide assistance by the other **Competitor**.
- (d) Taking photos or videos of another **Competitors's yacht** is prohibited, except:
 - (i) another **Competitors's yacht** is permitted to appear occasionally in the background of videos taken from onboard a **Competitors's yacht**; and
 - (ii) casual photos taken on a mobile phone from shore are permitted.
- (e) It is prohibited to make any estimations, or electronic position, speed or course measurements of the performance of another **Competitors's yacht**.
- (f) **Competitors** shall not obstruct **Recon Units** from performing their roles efficiently, and shall be always courteous and considerate to their assigned **Recon Unit**.
- (g) As exceptions to the Rules in Section 10.13:
 - (i) If **Competitors** accidentally find themselves close to another **Competitor's yacht**, they are permitted to observe that **yacht** from their own **yacht**, or from an accompanying team boat (for example a *supporting* chase boat as defined by Rule 8.3, or a VIP boat) subject to Rules 10.13 (b), 10.13 (c), 10.13 (d) and 10.13 (e).
 - (ii) At an *Initial Preliminary Regatta*, during the period when sailing an **in class AC40 Class Yacht** is not required to be notified, observed or declared as a **Sailing Session** by Rule 10.1 (c), Rules 10.13 (b) and 10.13 (c) do not apply for *Official Practice*, *Official Training* or racing providing that **Competitors** are sailing only **in class AC40 Class Yachts**, where the italicised terms are defined by the **Protocol**.
 - (iii) Following the launch of the **Defender's** first **AC40 Class Yacht**, if invited to do so by the **Defender**, **Competitors** may observe the sailing of that **yacht** from land or from a chase boat for the period extended by the invitation only.

10.14 Remedies

(a) A **Competitor** that fails to:

- (i) notify a **Recon Unit** of an intended outing;
- (ii) provide a suitable recon vessel or access to their primary chase boat;
- (iii) provide a driver that operates according to Rule 10.5 (b); or
- (iv) provide other access as required herein;

shall be referred to the **Regatta Director** and is subject to a fine of NZ\$10,000 for the first offence, NZ\$20,000 for the second offence, and so on for each subsequent offence.

- (b) If the breach in Rule 10.14 (a) is considered to be deliberate by the relevant **RMP**, in consultation with their **Recon Unit**, the matter shall be referred initially to **Regatta Director** and ultimately to the Arbitration Panel who shall determine additional remedies (including points penalties).
- (c) If a **Competitor** fails to give the required notification for a **Recon Unit** to witness the launch of a new component or component version, as declared to the **Measurement Committee**, in addition to the fine listed above, that **Competitor** shall be obliged to immediately make that component available for viewing to the **Recon Unit**, whether on the **yacht** or otherwise.
- (d) Any other breach of these conditions shall also be referred to the **Regatta Director** in the first instance, and ultimately to the Arbitration Panel for remedy.

11 Definitions

11.1 AC Media

As defined in the **Protocol**.

11.2 AC Technical Regulations

The technical regulations governing the yachts, including **AC75 Class Yachts** and **LEQ12 yachts**, used by any **Competitor** in addition to any rules specific to the class of yacht. This included all amendments to, interpretations of and rulings regarding such technical regulations.

11.3 AC36

The 36th America's Cup, and the time period spanning from the completion of the final race of the 35th America's Cup to the completion of the final race of the 36th America's Cup.

11.4 AC37

The 37th America's Cup, and the time period spanning from the completion of the final race of the 36th America's Cup to the completion of the final race of the 37th America's Cup.

11.5 AC40 Class Rule

The rule governing the yachts to be used in the first and second America's Cup Preliminary Regattas, the Youth America's Cup and the Women's America's Cup and/or in any other regattas sailed in AC40 Yachts (if any), including all amendments to, interpretations of and rulings regarding such class rule.

11.6 AC40 Class Rules

The combination of the **AC40 Class Rule** and the **AC Technical Regulations**.

11.7 AC40 Class Yacht

A yacht that complies with or could comply with the **AC40 Class Rule**.

11.8 AC75 Class Rule

The rule which, together with the **AC Technical Regulations** governs the yachts to be used in the Final Preliminary Regatta, America's Cup Challenger Selection Series and the Match, including all amendments to, interpretations of and rulings regarding such class rule.

11.9 AC75 Class Rules

The combination of the **AC75 Class Rule** and the **AC Technical Regulations**.

11.10 AC75 Class Yacht

A yacht that complies with or could comply with the **AC75 Class Rules**.

11.11 **AC75 event stage**

One of:

- (a) an entire Preliminary Regatta, if raced in **AC75 Class Yachts**;
- (b) a Round Robin stage of the Challenger Selection Series;
- (c) the Semi-Finals stage of the Challenger Selection Series;
- (d) the Finals stage of the Challenger Selection Series; or
- (e) the entire Match,

where those regattas or parts of regattas listed above are detailed in the **Protocol**.

11.12 **Aft Media Post**

A post attached near the transom of the **hull** which forms part of the **media equipment**.

11.13 **Appendage**

A **foil** or a **rudder**.

11.14 **Batten**

A beam used to locally stiffen a sail.

11.15 **Bearing centre**

The centre of rotation of a bearing.

11.16 **Blueprint**

An IGES file, drawing or other document or collection thereof that provides information about the design and/or construction of a version of a component. Specific requirements for **blueprints** for each component type are provided in the relevant sections of the **AC75 Class Rule**, these specific requirements taking precedence over this general definition.

11.17 **Cant**

Rotation of a **foil** about the **foil arm** rotation axis.

11.18 **Carried equipment**

Clothing, safety equipment, other equipment, food and drink carried aboard by the crew, excluding **crew supplied media equipment**.

11.19 **CCTV system**

Closed-circuit television system: a **hardwired** camera and display system.

11.20 **Challenger of Record**

As defined in the **Protocol**.

11.21 **CIS**

Crew information system: an electronic system connected to the **Media System** to display the raw or processed **Competitor** data output from the **Media System** to the crew, and to provide voice communication between the crew.

11.22 Class Rules

The combination of:

- (a) the **AC Technical Regulations**;
- (b) the **AC75 Class Rule**; and
- (c) the **AC40 Class Rule**.

Where the term is used in relation to an **AC75 Class Yacht** or an **AC40 Class Yacht**, it refers to the **AC Technical Regulations** in combination with either the **AC75 Class Rule** or the **AC40 Class Rule** respectively.

11.23 Clew point

The intersection or projected intersection of the **leech** and **foot** of a **sail skin**. The **leech** or **foot** will be projected tangentially from the point where the **leech** or **foot** curvature reduces below a radius of 1.0 m when approaching the intersection.

11.24 Clutch or shifter

A **transmission actuator** that adjusts the transmission of mechanical power to or within a **control system**.

11.25 Cockpit aperture

A closed line bounding the upper extent of a cockpit.

11.26 Commercial core

The **core** category of a **commercial product**.

11.27 Commercial hardware

The hardware category of a **commercial product**.

11.28 Commercial paint

The paint category of a **commercial product**.

11.29 Commercial pre-consolidated FRP

The pre-consolidated **FRP** category of a **commercial product**.

11.30 Commercial product

A classification of products controlled by the “Commercial products” section of the **AC75 Class Rule**.

11.31 Competitor

As defined in the **Protocol**. Where the term **Competitor** is used in the context of interpretations or amendments, it refers only to those **Competitors** that are still competing and who are not in default of their payment obligations required by the **Protocol** and **Class Rules**.

11.32 **Control surface**

One of the following:

- (a) a **foil flap**;
- (b) a **rudder**; or
- (c) a **rig**.

Where position, orientation, movement or control of a **control surface** is mentioned herein, that position, orientation, movement or control is implied to be relative to the **yacht**, except that for a **foil flap**, it is relative to the **foil wing** to which it is attached.

11.33 **Control surface actuator**

A single **hydraulic actuator** together with any rods, struts, cables, sheets, turning blocks etc. used to connect it **mechanically** to a single **control surface**, in combination with zero or more **transmission actuators** used to adjust that **control surface**.

11.34 **Control system**

A system used for the adjustment of **control surfaces**, including all mechanical, hydraulic and electrical components involved in supplying or transmitting power or information used for such adjustment.

11.35 **COR/D**

The **Challenger of Record** and the **Defender** jointly.

11.36 **Core**

Material that is bonded between two structural **FRP** skins in a sandwich construction, primarily to transfer shear. **Core** includes any material that is bonded to both skins, such as a corrugated laminate between two skins, but excludes:

- (a) solid laminate or metal used within edge, taper or local reinforcement details; and
- (b) adhesives and resins used to bond skins and core, or to fill honeycomb cells.

11.37 **Crew indication device**

Any device that:

- (a) contains an electronic system, or is connected directly or indirectly to an electronic system;
- (b) displays or plays audibly information that it has received or generated internally;
- (c) is worn or installed on the **yacht**;
- (d) can be seen or heard by the crew, directly or indirectly; and
- (e) may process data internally,

such as a display, LED or speaker.

11.38 **Crew supplied media equipment**

Equipment supplied by **AC Media**, the **Regatta Director** or any other organising authority to be worn or carried by the crew.

11.39 **Crew zone**

A volume designed for a crew member to operate within.

11.40 **Deck**

That part of the **hull surface** that is not the **hull lower surface**.

11.41 **Defender**

As defined in the **Protocol**.

11.42 **Dock tune**

The state of the rig as it is positioned on the **hull** before and after sailing with no sails hoisted.

11.43 **ECC**

Electrical control circuit: an electrical and/or electronic circuit within a **control system** and/or for sending commands to an **FCS**.

11.44 **Electric actuator**

An electric linear or rotary motor, or functionally equivalent device, that converts electric power into force and translation, and/or torque and rotation.

11.45 **Event**

Any regatta that forms part of the 37th America's Cup.

11.46 **External forces**

Forces applied from outside the **yacht** to the **yacht**, such as fluid pressure, fluid dynamic friction and gravity.

11.47 **FCS**

Foil cant system: a supplied system for controlling the rotation of the **foils** about the **foil arm cant** axes.

11.48 **Flight control**

A degree-of-freedom of motion, or deformation, being:

- (a) the rotation or twist of a cross-section parallel to **WSP** of a **foil flap** about a hinge axis; or
- (b) the rotation of the **rudder** about its rake axis,

where each **flight control** shall relate to a single **control surface actuator**.

11.49 **Flight control system**

The **control system** used to control all **flight controls**.

11.50 **Flight HCC**

The **HCC** that forms part of the **flight control system**.

11.51 **Flight power pack**

A combination of one or more electric motors driving one or more hydraulic pumps, used to power the **flight HCC**. Low-pressure reservoirs, **hydraulic accumulators**, **transmission actuators**, filters, radiators, lines and connectors may also be included in the **flight power pack**.

11.52 **Foil**

An appendage that can provide hydrodynamic side force and vertical lift.

11.53 **Foil arm**

A component of a **foil** that connects the **FCS** to the **foil wing**.

11.54 **Foil arm drum**

A fairing to close a penetration in the **hull** that allows **cant** rotation of a **foil arm**.

11.55 **Foil arm fairing**

Those parts of a **foil arm** that are not part of the **foil arm stock**. Although a **foil arm fairing** may be referred to in the singular, it can comprise several unconnected parts, each attached to a different region of the **foil arm**.

11.56 **Foil arm stock**

A component forming the structural spar of a **foil arm** combined with a leading edge. For an **AC75 Class Yacht** and an **in class AC40 Class Yacht**, the **foil arm stock** shall be a supplied component with included items defined in the relevant **Foil arm stock** specifications.

11.57 **Foil cant reference point**

The point at the intersection of the **foil cant** axis and the **FCS transverse** reference plane, as defined in the one-design **FCS** specification.

11.58 **Foil flap**

A component of a **foil** that can be adjusted relative to a **foil wing** by a **foil** system.

11.59 **Foil flexure**

A region of a **foil wing** and/or **foil flap** that is declared by the **Competitor** as flexible.

11.60 **Foil wing**

A component of a **foil** that, together with a **foil flap**, typically generates most of the hydrodynamic vertical lift of the **foil**.

11.61 **Foil wing box**

A 2D region with extents defined in the “Foils” section of the **AC75 Class Rule**.

11.62 **Foot**

The bottom edge of a **sail skin**.

11.63 **Foot girth**

The distance from the **tack point** to the **clew point** for a **jib sail skin** or **tack point** to the **lower leech point** for a **mainsail sail skin**.

11.64 **Force input device**

A device that is moved by one or more crew members to provide control and/or power input, and whose movement, resistance to movement or response can, where expressly permitted within the **AC75 Class Rules**, be affected by certain parts of the **yacht state**. Examples are:

- (a) a sheet or winch connected to a sail;
- (b) a **steering wheel** connected through cables to a **rudder**.

11.65 **Force input device, primary**

A **force input device** that allows crew to provide power to mechanical drive trains and **HCCs**, comprising only that part of the system which is directly turned by the crew, excluding any gearing or ratio changes.

11.66 **FRP**

Fiber-reinforced polymer matrix composite.

11.67 **Hardwired**

Physically connected by electrical wires, including localised electromagnetic or optical coupling between system components (e.g. galvanic isolation of protocol bus, optical isolation of IO device) provided information exchange is confined to the wiring circuit.

11.68 **HCC**

Hydraulic control circuit.

11.69 **Head**

The top edge of a **sail skin**.

11.70 **Head girth**

The distance from the **head** point to the **peak point** of a **sail skin**.

11.71 **Head pennant**

A nominally round piece of rigging used as an extension of a halyard to accommodate a sail with reduced **luff** length.

11.72 **Head point**

The intersection or projected intersection of the **luff** and **head** of a **sail skin**. The **luff** or **head** will be projected tangentially from the point where the **luff** or **head** curvature reduces below a radius of 1.0 m when approaching the intersection.

11.73 **Hull**

The main body of the **yacht**, including the bottom, sides, transom, **deck**, cockpit and internal structure but not the **mast**, rigging, sails, **appendages** or fittings.

11.74 **Hull lower surface**

The lower part of a **hull surface** that is divided by the **perimeter line**, extending downwards from the **perimeter line**.

11.75 **Hull shell**

The monolithic or sandwich panel construction that forms the structure of the **hull surface**, excluding:

- (a) internal structure and local reinforcements such as bulkheads, ring frames, longitudinal beams, stringers and tapering details; and
- (b) surface finishes such as paint and vinyl.

11.76 **Hull surface**

The external surface of a **hull**, where:

- (a) fittings such as pedestals, helm wheels and deck gear shall be excluded; and
- (b) local details may be excluded, provided they have no significant aerodynamic, hydrodynamic or hydrostatic effect. Examples of such details that may be excluded are:
 - (i) local reinforcements for deck hardware;
 - (ii) recesses for winches; and
 - (iii) local foot rests.

The **hull surface** is divided into the **deck** and **hull lower surface** by the **perimeter line**.

11.77 **Hydraulic accumulator**

A pressure storage reservoir in which hydraulic oil can be held under pressure applied by a spring, a raised weight, the hydrostatic head of the fluid itself, or compressed gas. A **hydraulic accumulator** is not a **hydraulic actuator** providing it cannot do work, or have work done on it, via its **mechanical** connection to or contact with the **yacht**.

11.78 **Hydraulic actuator**

A hydraulic device such as a ram or motor that converts:

- (a) hydraulic pressure into force or torque, and flow into translation or rotation; or
- (b) force or torque into hydraulic pressure, and translation or rotation into flow.

11.79 **Hydraulic actuator node, also node**

A **hydraulic actuator** interface that may comprise distributed contacts or connections and forms part of the primary load path that transmits load to or from the **hydraulic actuator**.

11.80 **Hydraulic intensifier**

A pressure or flow intensifier, being a device whose sole function is to modify the pressure and flow rate within an **HCC** by converting:

- high flow and low pressure into lower flow and higher pressure; or
- low flow and high pressure into higher flow and lower pressure.

11.81 **Hydrodynamic surface**

The external surface of a **foil wing, foil flap, foil flap** segment or **rudder** as declared by a **Competitor**, where:

- (a) the surface shall form one or more closed volumes;
- (b) **foil** systems shall be excluded; and
- (c) local details and openings may be excluded, provided they have no significant aerodynamic or hydrodynamic effect.

11.82 **IG**

The intersection of the centre line of the forestay with the leading edge of the **mast**, as shown in the "Mast" section of the **AC75 Class Rule**.

11.83 **ILS**

Instrumentation and logging system: an electronic instrumentation circuit including devices such as sensors, processing units and logging systems.

11.84 **In class**

The status of a supplied component that has not been modified outside the scope of any modifications explicitly permitted by the **Class Rules**.

11.85 **Internal state**

The specific condition of a device, comprising:

- (a) for a **hydraulic actuator, hydraulic accumulator, hydraulic intensifier, control surface actuator, transmission actuator or flight power pack**:
 - (i) the extension, rotation, velocity or angular velocity of one part of the device with respect to another part of the device;
 - (ii) the hydraulic pressure within any part of the device, including the inlet and outlet;
 - (iii) the force or torque between two parts of the device that extend or rotate with respect to each other;
 - (iv) the temperature within any part of the device;
 - (v) the electrical voltage across or current through any part of the device; and
 - (vi) the above properties of any **transmission actuators** within the device;
- (b) for an **ECC, ILS or CIS**:
 - (i) the voltage, current or temperature within that system; and
 - (ii) the voltage, current, temperature, state-of-charge or similar information from electrical power supplies that power that system or electrical devices controlled by that system;

providing that if any **yacht state** information is present in any of the above data for an **ECC, ILS or CIS**, that data shall be excluded from the **internal state**.

11.86 **Isolated**

Electrically insulated so as to prevent the passage of electricity, and physically separated so that isolation is apparent by inspection. **Isolated** cabling may be bundled together, so long as individual cables within a bundle can be followed, but cables from two **isolated** systems must not share common connectors.

11.87 **JG**

The distance between **MRP** and the intersection of the centreline of the forestay and a plane 1.500 m above **MWP** with the rig at dock tune as shown in the “Mast” section of the **AC75 Class Rule**.

11.88 **Jib**

A sail set forward of the **mast** hoisted on the forestay.

11.89 **Jury**

As defined in the **Protocol**.

11.90 **Launched**

- (a) First installed on an **AC75 Class Yacht** with that yacht afloat where the term appears in relation to an **AC75 Class Yacht**.
- (b) First installed on an **AC40 Class Yacht** with that yacht afloat where the term appears in relation to an **AC40 Class Yacht**.
- (c) First installed after 1 March 2021 on a **LEQ12 yacht** with that yacht afloat where the term appears in relation to a **LEQ12 yacht**.

11.91 **LCP**

Longitudinal centre plane.

11.92 **LCS**

Liquid Cooling System is a hydraulic system with the sole purpose to cool components, systems or fluid within the **yacht** by the movement of a fluid, and has no effect on the **yacht state** other than that resulting from the transfer of heat, does not provide feedback to other systems on the yacht and can not do any work.

11.93 **Leech**

The aft edge of a **sail skin**.

11.94 **Leech points**

For any **sail skin** a **leech point** is the intersection of the **leech** and a line perpendicular to the line from the **lower leech point** to the **head point** taken at the corresponding percentage of **LL** from the **lower leech point**. **Leech points** are illustrated in the “Jib” and “Mainsail” sections of the **AC75 Class Rule**.

11.95 **LEQ12 yacht**

Any sailing yacht (or platform towed to simulate a sailing yacht) including an **AC40 Class Yacht**, that exceeds 6 m LOA, is less than or equal to 12 m LOA (including all fittings when sailing such as rudder struts and bowsprits, but excluding instrumentation and structure required only to support that instrumentation) and that is capable of producing meaningful design or performance information for use either directly or indirectly in the design, construction or sailing of an **AC75 Class Yacht**, excluding yachts of classes existing on 17th March 2021, providing they are used only with their standard equipment for participation in and preparation for their in-class racing.

11.96 **Linear component**

A component of the **yacht**:

- (a) that has no moving parts or mechanisms;
- (b) for which any two points on or within it must either always be in contact, or never be in contact;
- (c) whose overall deformation at any point, in response to normal sailing loads, is approximately linear; and
- (d) that always returns to the same state in the absence of applied load.

A **linear component** may be constructed from multiple parts and fastened together **mechanically** or with an interference fit, or contain voids in materials such as wood or foam which may open or close under normal sailing loads. Such connections and materials are exempt from Rule 11.96 (b) provided that the components, connections or materials are not engineered to provide deliberately non-linear characteristics through internal contact mechanisms.

11.97 **LL**

The distance from the **head point** to the **clew point** for a **jib sail skin** or the lower **leech point** for a **mainsail sail skin**.

11.98 **Longitudinal**

Orthogonal to **TRP**.

11.99 **Low-pressure circuit**

Hydraulic circuits within an **HCC** that:

- (a) supply oil from reservoirs and return oil to reservoirs;
- (b) operate at no more than 6 bar when the oil is in any static equilibrium condition; and
- (c) are incapable of delivering oil to a **hydraulic actuator**, **hydraulic accumulator** or **hydraulic intensifier** at more than 6 bar.

11.100 **Lower leech point**

For any **sail skin** of the **mainsail** the **lower leech point** is the intersection of a 26.750 m radius circle centred at the **head point** and the **leech** or the projection of the **leech**. For any **jib** the **lower leech point** is at the **clew point**.

11.101 **LP**

The distance, measured perpendicular to the **luff**, from the **luff** to the **clew point** of a **sail skin**.

11.102 **Luff**

The forward edge of a **sail skin**.

11.103 **Mainsail**

The combination of **sail skins** and associated components that are hoisted on the **mast**.

11.104 **Mast**

An assembly comprising the **mast tube** with any attached components and rigging that is not hoisted with the **mainsail** or **jib**. It includes **mainsail** support structures and **control systems** such as booms that are not part of the **mainsail** as well as the **supplied rigging**, rigging, halyards, spreaders, fittings, luff tracks, fairings, instrument displays, instrument sensors, cameras, cables, **media equipment**, flotation systems and hydraulic rams that remain as part of the rig whilst sailing. Sheets shall be considered as part of the **mast** if they cannot be easily disconnected from **mast** structures and **control systems**.

11.105 **Mast centre plane**

The plane perpendicular to the aft face of the **mast surface specification** and coincident to the lengthwise centre line of the aft face of the **mast surface specification**.

11.106 **Mast lower zone**

The lower **mast** zone as shown in the “Mast” section of the **AC75 Class Rule**.

11.107 **Mast surface specification**

The external surface of the **mast tube** as given in the **mast** specification.

11.108 **Mast tube**

The principal spar of the **yacht**. For the **AC75 Class Yacht** this includes the one design laminate provided in the **mast** specification as well as any team designed reinforcements permitted by the **AC75 Class Rules**. The **mast tube** excludes any attached components such as luff tracks, **mainsail** support structures and **control systems** as well as taping or local reinforcements for the connection of such components.

11.109 Mast upper plane

The plane oriented at 95° to the aft face of the **mast surface specification** at w=26.5 m in **mast**-fixed reference frame, as shown in the “Mast” section of the **AC75 Class Rule**.

11.110 Master actuator

A **hydraulic actuator** whose sole function is to convert force or torque into hydraulic pressure, and translation or rotation into flow, that pressure and flow being delivered to a **control surface actuator**.

11.111 Match venue

As defined in the **Protocol**.

11.112 Measurement Committee

A committee responsible for ensuring a **yacht** satisfies the **Class Rules**.

11.113 Measurement Procedures

A document detailing the procedures for the measurement of a **yacht**, including measurement tolerances, written by the **Measurement Committee** and approved and published by the **Rules Committee**.

11.114 Mechanically

Only through contact of components, without the use of hydraulic, pneumatic, magnetic or electrical components.

11.115 Media Bowsprit

A bowsprit which forms part of the **media equipment**.

11.116 Media Equipment

The hardware supplied by **AC Media**, including the **Media System**.

11.117 Media System

A supplied system for managing the flow of data, audio and video around the **yacht** and off the **yacht** for broadcast.

11.118 MRP

Mast rotation point. The point about which the mast base rotates relative to the **hull**.

11.119 MWP

Measurement waterline plane.

11.120 New Competitor

As defined in the **Protocol**.

11.121 Normal sailing position

A declared position that indicates where a crew member normally operates.

11.122 Observed Competitor

The **Competitor** that a specific **Recon Unit** is engaged in providing reconnaissance on.

11.123 Official noticeboard

As defined in the **Protocol**.

11.124 Passive input device

A device that is moved by a crew member to produce an electrical control signal, such as a button, joystick, slider or touch screen.

11.125 Peak point

The intersection or projected intersection of the **leech** and **head** of a **sail skin**. The **leech** or **head** will be projected tangentially from the point where the **leech** or **head** curvature reduces below a radius of 1.0 m when approaching the intersection.

11.126 Perimeter line

The line on the **hull surface** that forms the perimeter of the **hull surface** when **projected** on to **MWP**. Where there are multiple coincident points on the perimeter of the **projected hull surface**, the **perimeter line** shall pass through the highest point of each set of coincident points.

11.127 Planform

A geometry when **projected** to **MWP**.

11.128 Platform

The **hull, foils, rudder** and other systems, hardware, fittings, rigging and supplied equipment that is weighed with those components.

11.129 Platform upper surface

The upper surface of the **platform**, being the surface of the **platform** that is visible when viewed from above and orthogonal to **MWP**.

11.130 Point of action

A point on the **yacht** or **control surface** to which a **control surface actuator** is **mechanically** connected or contacts which transmits the load to or from the **control surface actuator**.

11.131 Primary force input device

See **Force input device, primary**.

11.132 Projected

The **projected** shape of a part is the shape of a shadow cast by that part on the specified plane from a parallel light source acting normal to that plane.

11.133 Protocol

The Protocol governing the 37th America's Cup made between the Royal New Zealand Yacht Squadron and Royal Yacht Squadron Limited.

11.134 Quasi-isotropic FRP plate

Flat, monolithic, in-plane quasi-isotropic **FRP** plate of uniform thickness, that is of dimensions no larger than 600 mm x 1200 mm x 50 mm at the time compaction pressure greater than 1.1 bar is applied.

11.135 **Recon Administrator**

A Regatta Official such as the Regatta Director, their assistant, or other appointed person who manages contractual matters for the Joint Recon Programme. Until such time that the **Recon Administrator** is appointed, their role will be undertaken by a representative from **COR/D**.

11.136 **Recon file store**

An online file storage resource, with upload access to a specific folder provided to each **Recon Unit** and download access to all folders provided to all **Competitors**.

11.137 **Recon Unit**

A team of two people engaged to provide reconnaissance and media on a specific **Competitor**.

11.138 **Recover**

To drain oil from a **hydraulic actuator** chamber to:

- (a) another **hydraulic actuator** chamber (whether or not of the same **hydraulic actuator**); or
- (b) a high-pressure **hydraulic accumulator**;

without first passing to a **low-pressure circuit**.

11.139 **Regatta Director**

As defined in the **Protocol**.

11.140 **Rig**

The combination of the **mast**, **mainsail** and **jib**.

11.141 **Rig control**

A degree-of-freedom of motion, or deformation, of:

- (a) the **rig**; or
- (b) a device, such as a **jib** car, that is **mechanically** connected to the **rig**. In this case, the **mechanical** connection may at times be slack, such as when there is a slack sheet between a **jib** car and the **jib**.

11.142 **Rig control system**

A **control system** used to control a **rig control**.

11.143 **RMP, Recon Management Panel**

For a specific **Observed Competitor**, the **RMP** is a panel comprising one team member from each **Competitor** except the **Observed Competitor**, responsible for determining the personnel in a specific **Recon Unit**.

11.144 **Rudder**

An appendage positioned on the centreline of the **hull** which is rotated to affect yaw and trim.

11.145 **Rules Committee**

A committee responsible for administering **Class Rules** enquiries, ruling on interpretations of the **Class Rules**, publishing and amending official documents as specified in the **Class Rules** and other responsibilities as detailed in the **Class Rules**.

11.146 **Sail hardware**

Components of a sail for the purpose of attachment or applying pre-tension of sail controls and **battens**. If two or more components are rigidly connected together then they will be considered as a single piece of **sail hardware**.

11.147 **Sail skin**, also **skin**

A thin and predominantly flexible membrane of a **jib** or **mainsail**. **Sail skins** include stickers, branding, **batten** pockets, **luff** pockets, attachment devices such as bolt ropes and zips as well as any reinforcements such as edge tapes or corner patches.

11.148 **Sailing session**

For a specific **Observed Competitor**, a **sailing session** is any period during which the **Observed Competitor** will be sailing a **yacht** at any location. Any periods of less than 3 days between sailing days do not constitute a break in a **sailing session**. For example, if sailing on days 1-3, 6-10 and 12-13, but then not again until day 17, the **sailing session** begins on day 1 and ends on day 13.

11.149 **SHA**

An SHA-512 of a component's **blueprint**, generated according to the Secure Hash Standard (SHS) (FIPS PUB 180-4) issued by the National Institute of Standards and Technology. This shall be generated using a tool such as the Windows software "Hash Tool" by DigitalVolcano Software.

11.150 **Steering control**

A degree-of-freedom of motion, being the rotation of the **rudder** about its yaw axis, excluding any incidental yaw change resulting from **rudder** rake change;

11.151 **Steering control system**

The **control system** used to control the **steering control**.

11.152 **Steering wheel**

A wheel used by the crew to steer the **yacht**.

11.153 **Stop or lock**, also **stop and lock**

A **transmission actuator** that **mechanically** limits or locks the extension or orientation of:

- (a) a **hydraulic actuator**;
- (b) a **control surface**; or
- (c) part of a **control system**.

11.154 **Strop**

A length of rope with its two ends spliced together forming a continuous ring or band.

11.155 **Supplied rigging**

The supplied forestay, V1 cap shrouds and D1 lower shrouds.

11.156 **Surrogate yacht**

As defined in the **Protocol**.

11.157 Symmetric

A component that is required to be **symmetric** must be designed to be exactly symmetric, and the built shape must lie within the specified tolerance of the designed shape everywhere on its surface. Such a component must also be designed to be almost exactly symmetric in its structure, where any structural asymmetry can only result from details such as:

- (a) asymmetries at the individual ply level (e.g. lap joints or staggers), provided the overall laminate has symmetric structural behaviour;
- (b) fastenings across the symmetry plane; and
- (c) right-handed screw threads;

which are not designed to induce asymmetric structural behaviour.

11.158 Tack point

The intersection or projected intersection of the **luff** and **foot** of a **sail skin**. The **luff** or **foot** will be projected tangentially from the point where the **luff** or **foot** curvature reduces below a radius of 1.0 m when approaching the intersection.

11.159 Transmission actuator

A mechanical assembly including a part or parts that move, when electrically or hydraulically energised, or de-energised and possibly driven by a spring return, being a:

- (a) **valve**;
- (b) **stop or lock**; or
- (c) **clutch or shifter**.

Power supplied to a **transmission actuator** can do no work on a **control surface**, or on oil or gas within an **HCC**, except for incidental work such as the displacement of oil by the plunger in a **valve**, or a component of force applied by a chamfered lock pin that engages on a ram, providing such work is insignificant in the context of overall power supplied to a **control surface**.

11.160 Transverse

Orthogonal to **LCP**.

11.161 TRP

Transom reference plane.

11.162 Valve

A **transmission actuator** that controls the flow of oil within an **HCC**, such as a check valve, pressure relief valve, or electrically powered control valve.

11.163 Wet box

A volume within the **hull surface** that is separated from the remainder of the enclosed volume of the **hull** by a watertight boundary, and shares a penetration with the **hull surface**.

11.164 Wetted

The **wetted** part of a component is that part of a component that extends or can extend outside of the **hull surface** below the **perimeter line**.

11.165 Woolly

A piece of wool or light fabric used only for flow visualisation.

11.166 **Working day**

A period of 24 hours excluding:

- (a) Sundays;
- (b) Saturdays prior to 3 months before the first race of the America's Cup Match;
- (c) 15/4/2022 to 18/4/2022;
- (d) 25/12/2022 to 3/1/2023;
- (e) 7/4/2023 to 10/4/2023;
- (f) 25/12/2023 to 2/2/2024; and

where the above are defined using the current time zone in Spain, being either Central European Time (CET, UTC+1) or Central European Summer Time (CEST, UTC+2). For example a working day beginning on Friday 8th July 2022 at 09:00 CEST ends on Monday 11th July 2022 at 09:00 CEST.

11.167 **WSP**

Wing symmetry plane.

11.168 **Yacht**

- (a) An **AC75 Class Yacht** where the term appears in the **AC75 Class Rule**.
- (b) An **AC40 Class Yacht** where the term appears in the **AC40 Class Rule**.
- (c) An **AC75 Class Yacht** or a **LEQ12 yacht** where the term appears in the **AC Technical Regulations**.

11.169 **Yacht assembly**

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

11.170 **Yacht state**

The specific condition of the **yacht**, comprising any of the following:

- (a) the position and orientation of any part of the **yacht** with respect to an earth-fixed datum;
- (b) the position and orientation of any part of the **yacht** with respect to the body of water on which she is sailing;
- (c) the position and orientation of any **control surface** with respect to the **yacht**;
- (d) the position and orientation of a **foil** with respect to the **yacht**;
- (e) the shape of any **control surface** or **foil**;
- (f) the position and orientation of any **force input device** or part thereof, with respect to the **yacht**;
- (g) the stress, strain, tension and force in any part of the **yacht**, except in **passive input devices**;
- (h) other force-related quantities in any part of the **yacht**;
- (i) the volume, velocity, flow rate or pressure of fluid within, or acting on, any part of the **yacht**;
- (j) all absolute measures of the above and quantities measured relative to each other;
- (k) all time derivatives of the above;
- (l) all proxies of the above;
- (m) all quantities derived from any of the above; and
- (n) all quantities from which the above can be derived or approximated.

12 *Agreement*

- 12.1 **COR/D** agreed to the publication of version 1.0 of these **AC Technical Regulations** on the 17th day of March 2022.
- 12.2 This version of the **AC Technical Regulations** shall replace the previous version and be in force when stamped by the **Rules Committee**. The replacement of the previous version with this version is an amendment according to Rule TR-7.1 (a).

DocuSigned by:

A circular blue stamp with the text "AC37" in the center. The outer ring of the stamp contains the text "THE RULES COMMITTEE" at the top and "37TH AMERICAS CUP" at the bottom.

2/23/2023