

CHALLENGER OF RECORD & DEFENDER

AMERICA'S CUP 36

Interpretation 033

of

AC75 Class Rule Version 1.7 issued 4th November 2019

Rules References:

- 19.10 No **control system** shall be attached to, or bear upon a **headsail** except:
- (a) sheets attached to a single piece of **sail hardware** within 400 mm of the **clew point**;
 - (b) a halyard attached near the **head point**;
 - (c) a cunningham system or tackline near the **tack point**;
 - (d) the forestay;
 - (e) **luff, leech, head** and **foot** lines no greater than 8 mm in diameter and their associated purchase systems; and
 - (f) a furling system for the **code zero** only.
- 19.11 Systems that guide the sheet between the port and starboard **headsail** sheeting positions during tacks and gybes are forbidden.
- 19.12 A **headsail** sheet shall not be guided between the port and starboard sheeting positions through a tack or gybe.
- 19.13 Except during (or immediately before or after) a change of the outermost set **headsail**, the outermost set **headsail** sheet may only be controlled by:
- (a) the rotary motion of a winch, controlling the length of the sheet, where:
 - (i) the winch may be self-tailing, but shall not be captive; and
 - (ii) the crew must unload a sheet from one winch and load the other sheet on to another winch to tack and gybe the **headsail**; and
 - (b) a deflector, being the first point of contact on the sheet after the clew of the **headsail**, where:
 - (i) the position of the deflector may be controlled, providing any such control is a different **control function** to the winch; and
 - (ii) the deflector must have no connection to the **hull** further forward than 10.150 m in front of **TRP**.
- 35.97 **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**.

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Background:

Figure I shows the **headsail** sheeting system for an **AC75 Class Yacht**.

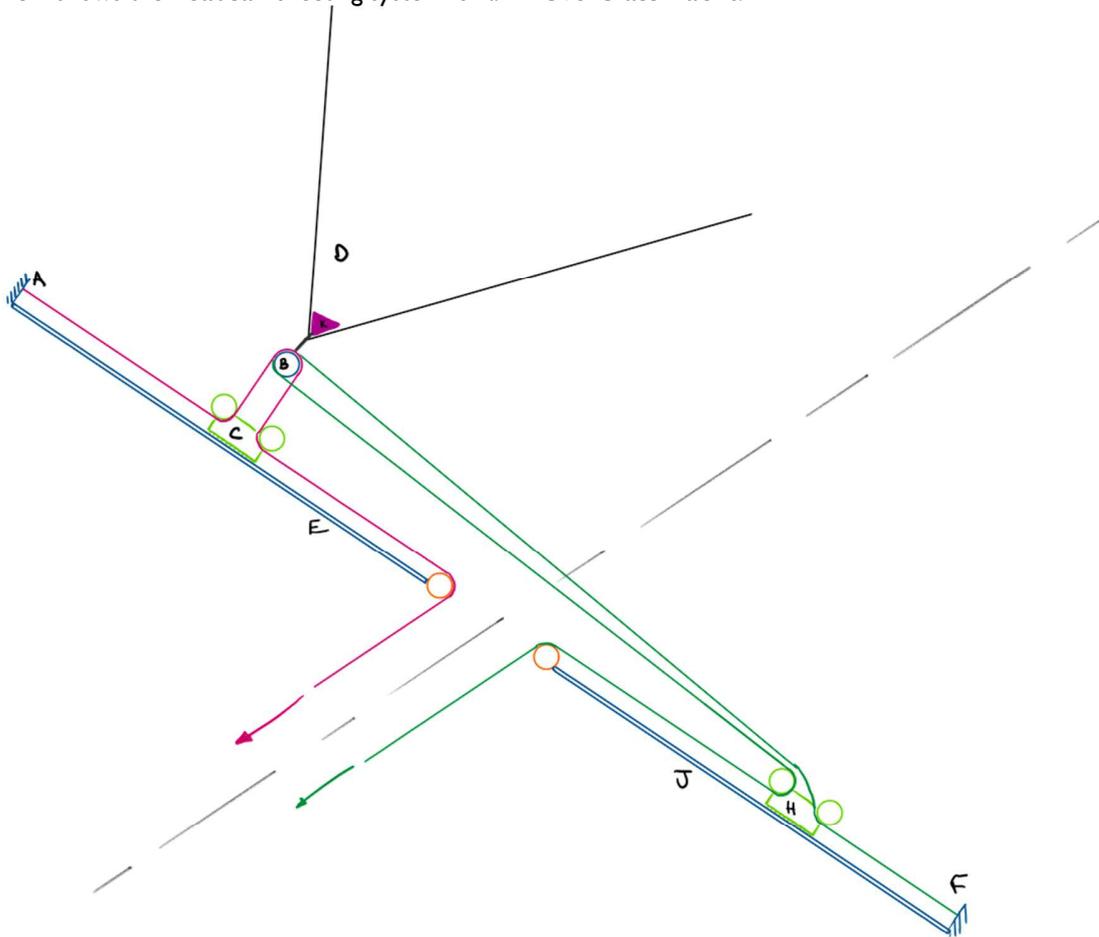


Figure I

The clew of the **headsail** (D) is controlled by sheets that run around a block (B). The port sheet (shown in pink) is dead-ended to the yacht at A and is adjusted via a winch (as per the arrow). A car (C) deflects the port sheet and runs on a track (E). The starboard sheet (shown in green) is dead-ended to the yacht at F and is adjusted via a different winch (as per the arrow). A car (H) deflects the starboard sheet and runs on a track (J).

Block B is attached to a piece of **sail hardware** (K).

Questions:

In the case that Block B is measured with the sail as **sail hardware**:

1. Are the sheets attached to a single piece of **sail hardware**?
2. Is the car (C) the first point of contact on the port sheet after the clew of the **headsail**?
3. Does this system conform to the **AC Class Rule**? If not, please specify the rules that are infringed.

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In the case that Block B is measured with the boat and considered part of the sheet

4. Are the sheets attached to a single piece of **sail hardware**?
5. Is the car (C) the first point of contact on the port sheet after the clew of the **headsail**?
6. Does this system conform to the **AC Class Rule**? If not, please specify the rules that are infringed.

Consider now that the two sheets run around separate blocks (B and B'), both of which are lashed to a piece of sail hardware (K).

In the case that blocks B and B' are measured with the sail as **sail hardware**:

7. Are the sheets attached to a single piece of **sail hardware**?
8. Is the car (C) the first point of contact on the port sheet after the clew of the **headsail**?
9. Does this system conform to the **AC Class Rule**? If not, please specify the rules that are infringed.

In the case that blocks B and B' are measured with the boat and considered part of the sheet

10. Are the sheets attached to a single piece of **sail hardware**?
11. Is the car (C) the first point of contact on the port sheet after the clew of the **headsail**?
12. Does this system conform to the **AC Class Rule**? If not, please specify the rules that are infringed.
13. Rules 19.11 and 19.12 restrict how a sheet may be moved between port and starboard **headsail** sheeting positions.
 - a. What is the definition of a **headsail** sheeting position?
 - b. If the port and starboard **headsail** sheeting positions are defined by blocks that are lashed to the deck of the yacht, and the sheets are otherwise used in accordance with the **AC75 Class Rule**, will the port sheet be considered to be being "guided" from the port to the starboard **headsail** sheeting position if its path is defined solely by the tension in the headsail and the action of the starboard **headsail** sheet?
 - c. Can the **headsail** sheeting position be adjusted during racing?
 - d. Do the requirements of 19.11 and 19.12 place any limits on the distance of the deflector track from the centreline of the boat?

Interpretation:

- A. The Oxford English Dictionary defines a "sheet" as:

1. a. A rope (or chain) attached to either of the lower corners of a square sail (or the after lower corner of a fore-and-aft sail), and used to extend the sail or to alter its direction.

Thus, the word "sheet" refers only to the rope. A sheet made up of a "chain" also does not include other elements like a deflection block, as it is seen to fulfil the same function as a rope (chains are often seen on classical tallships), even though it actually consists of multiple links.

- B. Rule 35.97 uses the term "rigidly connected". The Oxford English Dictionary provides an appropriate definition of "rigidly":

2. In a stiff or inflexible manner; so as to be fixed, firm, or unmoving.

"Rigidly connected" does not apply to the connected objects themselves but to their connection.

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- C. The term "clew" is not defined by the **AC75 Class Rule**.
The Oxford English Dictionary defines a clew of a sail as:
a. Nautical. A lower corner of a square sail, or the aft most corner of a fore-and-aft sail, to which are made fast the tacks and sheets by which it is extended and held to the lower yard
- D. Block B and B` constitute a single piece of sail hardware as per rule 35.97, if both blocks are rigidly connected.
Further in rule 19.10 (a), this sheet attachment must remain inside a 400mm perimeter of the **clew point**. Rule 19.4 must be respected, asking for the largest dimension of **sail hardware** not to exceed 250mm.
- E. For the purpose of rule 19.13 (b), Block B, the lashing and K are a combination of **sail hardware** of the clew D of a **headsail**.

Answers:

1. Yes. Block B.
2. Yes.
3. Yes.

Questions 4, 5 and 6 are answered with reference to rule 19.10 (a) and clause A. of the Interpretation:

4. Not applicable.
5. Not applicable.
6. Not applicable.

Questions 7, 8 and 9 are answered under the assumption that blocks B and B` fulfill the obligations of **sail hardware**, following clause D. of the above interpretation.

7. Yes.
8. Yes.
9. Yes.

Questions 10, 11 and 12 are answered with-reference to rule 19.10 (a) and clause A of the Interpretation:

10. Not applicable.
11. Not applicable.
12. Not applicable.

13.

- a. The first point of contact of the sheet with the platform assembly after its last contact with the headsail.
- b. No.
- c. Yes. Adjustment of the **headsail** sheeting position may be a **control function** provided that the restrictions of rules 35.15 and 19.13 (b) are complied with.
- d. No, the **AC75 Class Rules** do not define a relevant measure for the distance of the track, but rules 19.11 and 19.12 have to be respected.

END.