

# Zephyr Class Rule Interpretations

Updated 29 November 2021

## Zephyr Class Rule #

### 1.1

The Zephyr is a One Design Class. For hull shells, sails and spars, Closed Class rules apply and for these items, anything not specifically permitted by the class rules is prohibited.

Source: - Graeme Robinson ZOA Exec meeting October 2018 – quoted from World Sailing Measurers Manual.

### Hulls

#### 2.1.1

*No alteration to the hull as supplied shall be permitted except as provided for herein.*

For the **Mackay Boats GRP** hulls the following initial purchase options are available: -

A choice of mainsheet traveller, rope bridle or hoop assembly.

Two stern scuppers may be installed during the build by Mackay Boats. Scuppers are not to be retro fitted by owners.

Rudder gudgeon fittings are optional, provided attachment is via bolt fastenings through the internal plywood re-enforcing. Gudgeons glued and moulded to the hull are not permitted.

Deck cleat brands are optional.

The stay attachment fittings, the mast collar fitting and venturis must remain as supplied.

Source: - ZOA Committee under Zephyr Class Rules - clause 4.3.4.

#### 2.1.2

*Minimum weight of the completed hull, including the following fittings, shall be 58kgs. Included fittings are: - chain plates, fixed rudder fittings, cleats, hiking straps, buoyancy bags, blocks, mainsheet take off system, control lines including vang, cunningham, traveller and forestay control lines, compass, drink bottle holder. Excluded are: - mainsheet, centreboard, rudder and all items that rotate with the rudder, gear bags, loose bailers, sponges, drink bottles.*

For the purposes of this rule 'fittings' includes the items that are specifically listed, even those not 'fixed'. Rudder fittings fastened to the hull (fixed with bolts, screws or rivets) or bonded to the hull (fixed with glues, resins etc.) are part of the hull when it is weighed. A pintle permanently fixed to its associated transom-mounted bracket is deemed to be a part of the hull for weighing purposes. A pintle that is not fixed to the associated bracket is not permitted to be included in the hull weight.

Source: - ZOA Exec Ruling 23 Aug 2021.

### Side tank/Hull joint:

#### 2.1.4

E-glass taping of the side-tank to hull with up to 220 gm cloth laid over a coving is permitted either side of the side tank plywood.

Rule: - 2.1.4

### Decorative carbon fibre and fittings made from carbon fibre

#### 2.1.5

Clear-coated carbon cloth added for aesthetic enhancement is permitted. Examples: -

Deck rub pads, chain plate surrounds, centre thwart wrapping, gunwale wrapping, coaming sheathing, centre case capping and mast-hole trim-wraps.

Any carbon fitting, either fastened to or moulded into hulls is permitted. Examples: -

Rudder stocks, tillers, tiller extensions, fixed rudder fittings, transom venturi flaps, transom handles, chain plates, mounting brackets, mainsheet take off systems, block mountings, hiking strap fixtures, control line tubing and commercially available fittings with carbon content.

Rule ballot 2019

### **Other carbon usage**

Existing carbon fitted to hulls not otherwise prescribed within the rules but deemed by the Chief Measurer and Exec to be non-performance enhancing may be eligible for dispensation.

Rule 1.10.14 provides a boat-by-boat assessment process.

Some existing examples - but not limited to: -

Patch repairs, side tank to hull joint taping, bulkhead to hull joint taping, mast step web taping and any carbon application similar to the decorative carbon as described above but painted.

Application for dispensation shall be submitted to the ZOA Secretary along with a description of the carbon usage.

Applications will be referred to the Chief Measurer who will assess each boat on its individual merits.

### **Deck**

#### **2.2**

An additional panel of plywood reinforcing or the addition of athwartship deck beams are permitted under the side decks.

Source: - Common practice, ZOA Handbook recommendation 2009, Rule: - Part D (4) October 1990 rules

E-glass up to 220 gm attached with resin on both sides of the plywood side decks is permitted.

Rule: - 2.1.4

### **Side-stay chainplates**

#### **2.7**

The 2371 mm measurement from the aft face of the transom must be measured parallel to the waterline. For measuring purposes, the bow is approximately 140mm above the transom's deck centreline and this line is approximately parallel to the waterline.

Source: - 1956 Townson lines drawing.

Side-stay chainplates may extend beyond the hull outer skin but must not extend beyond the deck beading.

Source: - Graeme Robinson November 2020

### **Masts**

#### **3.1.3**

*Aluminium masts shall be supplied by a manufacturer to a specification approved by the ZOA Committee.*

The masthead sheave box is welded to the top end of a tapered aluminium tube and therefore is part of the mast supplied under Class Rule 3.1.3.

The mast sheave box cannot be modified from that supplied by a manufacturer, other than to remove any surplus aluminium above the extrusion sail track that would otherwise prevent the sail from being fully raised to the underside of the halyard sheave.

Cutting the supplied mast to length off the bottom is permitted to ensure that the overall length complies with Class Rule 3.1.1.

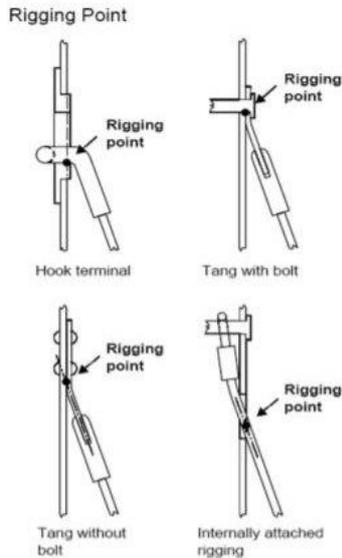
Source: - Graeme Robinson and ZOA Exec, August 2021.

### **Rigging**

#### **3.1.6**

*The halyard shall be wholly external to the mast.* An internal halyard is not permitted. External halyards enable masts to be built watertight to assist recovery after capsizing.

For the purposes of establishing a stay intersection with the mast, a 'Rigging Point' is defined as: -



### **Rigging Point**

For a hook terminal, the rigging point is the lower bearing surface where the hook rests on the mast cutout.

For a tang attached to the mast with a bolt, the rigging point is the lower face of the bolt.

For a tang without a bolt, the rigging point is the point where the stay extension intersects with the mast.

For internally attached stays, the rigging point is the location where the stay and the outside surface of the mast intersect.

**World Sailing Measurers Manual, Section J, para 7**

## **Booms**

### **3.2.2**

*The sail track may be cutaway not more than 200mm from the forward end of the boom.*

The forward end of the boom is the front face of the boom plug.

A sail that has been intentionally pulled from the remaining boom track violates class rules 1.1 and 3.2.2. The sail boltrope must remain within the adjacent sail track.

Source: - Graeme Robinson November 2020

## **Centrecase**

### **3.4**

Centre cases may have a fairing-flaps on the underside of the hull.

Ruling: - ZOA Executive, September 2009.

### **3.4.2.**

Centre cases may have shaping material to fit closely around the shape of the centreplate. If it is within the centrecase, then it can be considered a fairing flap and/or an internal wedge, both of which are permitted by this rule. The rule is silent on what material may be used, which can be an issue with one-design & closed class rules, but on the basis of materials currently being used under this rule, and the practical use of materials to make flaps, straps, and wedges, it is my opinion that there is no restriction on what materials might be used for these items, except that the use of carbon fibre is prohibited under Class Rule 3.8.2 and is not specifically permitted under Rule 3.4.2.

Source: - Graeme Robinson, November 2021

### **3.4.3**

A horizontal timber gusset may be glued either side of the centrecase adjoining the centre thwart. This must not extend more than 50mm forward of the thwart, 50mm outboard of the centrecase and not extend above or below the thwart.

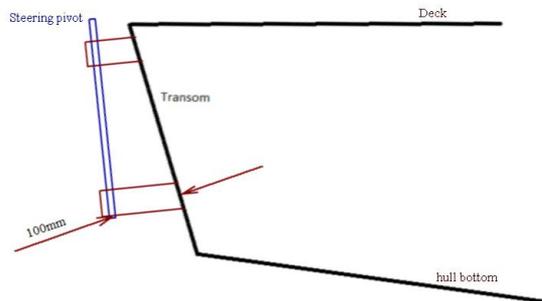
Rule ballot, October 2019

## Rudder Stock

### 3.5.3

*The steering pivot axis for the rudder and stocks shall not be more than 100mm aft of the transom.*  
For the purposes of class rule 3.5.3 the distance to the steering pivot centreline is to be measured adjacent to the gudgeons.

Source: - ZOA Exec Ruling August 2021



## Items Not Permitted

### 3.8

Carbon fibre sheathing of hulls is not permitted.

Ruling: - Prohibited by the ZOA Executive in June 2012 and reaffirmed at a ZOA Executive meeting in Oct 2018.

Incorporated in Class Rules, October 2019.

## Hull Shell

### 4.3

GRP hulls must have a not less than 9mm plywood transom doubler. Substitution with a composite doubler is not permitted. Glass fibre covering over wood or plywood is permitted.

Rule: 4.3.3 and 2.1.4

## Framing Timbers

### 4.4

The transom can either be made from 20 mm clear timber or 18 mm plywood. No composite panel material or combination of plywood and clear timber is permitted.

Source: - Graeme Robinson May 2019, confirmed ZOA Exec email vote 2019

#### 4.4.1

*These items shall be made in accordance with the plans and patterns supplied by the ZOA.*

Townson built hulls were built with 3/4inch (19 mm) scantling materials. To satisfy the requirements of rules 1.3.3 and 4.5.3, during any refurbishment work on Townson built hulls, owners must ensure replacement timbers are 19mm minimum thickness. This enables rebuilders to replace 'like-with-like' and avoid deviating from the norm.

Applicable rules 1.3.3 and 4.5.3. Source: - Graeme Robinson, July 2021

### 4.5

These items shall be made in accordance with the plans and patterns supplied by the ZOA but can be modified up to a 5 mm radius on the exposed edges.

Hole-saw lightening of deck beams, keelson or king planks is not permitted. These holes represent a modification to the 'as-supplied' status of a hull and contravene various clauses contained in class rules 4.4 and 4.5.

The non-compliant component can either be replaced or the holes filled with solid timber plugs.

Source: - Graeme Robinson Feb 2018 and July 2021.