INTERNATIONAL TORNADO CLASS ASSOCIATION

The following amendments to the Class Rules have been approved to be effective 1st December 2004.

Rule 1(a) (New Rule)
Amendment: Add rule to read as follows: "This is a one-design class. The intention of these rules is to ensure that the boats are as alike as possible in all respects affecting performance. Everything that is not actually stated as permitted or optional shall be prohibited."
Re-number rest of current rule.

Rule 3(a)
Amendment: Change to read as follows: "Professional builder of Tornado boats, hull kits, or masts shall be only those recognized and registered by the ISAF; and boats, hull kits, or masts shall only be built for sale by these builders."

Rule 9(e)
Amendment: Add to end of current rule: "or more than 2.35 mm. an aluminium bulkhead casting is permitted inside the beams at the position of each of the inner beam bolts. An aluminium or epoxy composite bulkhead casting is permitted inside the main beam at the position of the mast step."

Rule 17 (b)
Amendment: Change current rule to 17(b)(i) In current rule delete "or a combination of both" and replace with "listed on "Schedule A – Approved Sailcloth". Delete "The spinnaker shall be made of nylon and/or polyester fabrics only".
Add Section (ii) to read as follows: The spinnaker will be made of woven single ply nylon or polyester materials listed on "Schedule A – Approved Sailcloth".
Add Section (iii) to read as follows: The ITA will accept proposals for new sailcloth materials to be added to "Schedule A – Approved Sailcloth" once each year.

Rule 18
Amendment: Change rule name to "Running Rigging & Travellers".
Change current rule to 18(b) and add "The mainsheet traveller track shall be made of aluminium only."
Add Section (a) to read as follows: "All running rigging is optional."
Add Section (c) to read as follows: "A jib sheet traveller system is permitted to be attached to the main beam. The jib traveller system is free of material restrictions."

Rule 19
Amendment: Add to Section (c) "The bowsprit is free of material restrictions."

Add Section (e) to read as follows: “A gennaker retrieving system may be attached to the bowsprit or be integral to the construction of the bowsprit. It shall be suitable solely for the purpose containing the gennaker and shall not violate class rule 10(b). The gennaker retrieving system is free of material restrictions.”

Rule 14

Amendment: To replace current rule with the following:

(a) “The Tornado mast is a one-design mast. No alteration whatsoever of a certified mast is allowed.”

(b) “Masts built after 1 December 2004 shall be made of commercial grade HT T600 or T700 carbon fibres only. Masts built before 1 December 2004 shall remain legal for use subject to compliance with Appendix 1 – Aluminium Masts.”

(c) “The length of the cross section shall be 135 +- 0.7mm and the width shall be 73 +- 0.7mm.”

(d) “There shall be one web. The distance from the front edge to the out side of the web shall be minimum 117 and maximum 118.5mm.”

(e) “The mast shall be tapered along the leading edge between a point 2064 mm under the lower edge of the top measurement band and the top of the mast. The length of the cross section at the lower edge of the top measurement band shall be 98.5 + 0.5mm, and the width of the cross section shall be 56.5 + 0.5mm. The taper shall be constant from beginning to end and shall not have bigger divergence from the string line than +-0.5mm from the lower edge of the upper measurement band to a point 7230mm above the lower end of the mast section.”

(f) “Forestay, shrouds, and trapeze shall be attached to the mast to one point only at the leading edge of the mast. The attachment point shall be not more than 7230 mm above the low end of the mast section. The bearing surface of the Gennaker halyard lead shall be:

  (i) no higher than 950mm above the bearing point of the forestay and shroud attachment point

  (ii) no more than 100mm from the mast, when measured with the halyard extended at 90 degrees to the mast”

(g) “There shall be one pair of diamonds stays only.

  (i) The diamond stay shall be fitted to the mast with one single bolt (M6) on each side of the mast that is tapped into a stainless through bar that is tapped into the mast section.

  (ii) The lower ends of the diamonds shall be connected to the mast with a M10 centre bolt. Turning the centre bolt is the only way allowed for to adjust the tension of the diamonds”

  (iii) The diamond stay shall not be adjusted while racing.

(h) “The spreaders for the diamonds shall be adjustable and located 3400mm above the lower end of the mast section”

(i) "The mast shall be stepped at the centre line of the boat and its vertical centre line shall intersect the main beam in any position to which the mast may be rotated."
(j) "There shall be a measurement band with low edge of the band not more than 9294mm above the low end of the mast section. There shall be a second band with the upper edge not more than 8915mm below the low edge of the upper measurement band."
(k) "The sail entry shall be located with the low edge 760 +- 2mm above the low edge of the mast section. The top edge shall be 80 +- 2mm above the low edge."
(l) "The gooseneck shall be fastened to the mast with the upper part of the gooseneck at the top edge of the lower measurement band so the gooseneck prevents the sail to come below the top edge of the lower measurement band."
(m) "There shall be one spanner fitted to the mast 390 +- 2mm from the lower end of the mast or below a point 25 +- 2mm from lower of the mast."
(n) "With the mast supported on the top edge of the lower measurement band the tip weight measured at the lower edge of the top measurement band not be less than (*Final production weight being determined*)"
(o) "The total weight of the mast including main and gennaker halyards, diamonds, and main down haul shall be not less than (*Final production weight being determined*)"
(p) "Stiffness control tests shall be met fore and aft and laterally."
(q) "All tests shall be performed without diamond tension."
(r) "With the mast supported at the top edge of the lower band and the lower edge of the top band and with 25kg at the upper diamond connection shall the bending curve not deviate more than 2mm from the ideal curve in the rule book measured at the position if the Spreaders, Hounds and the connection point for the gennaker halyard."

Rule 2
Amendment: Add to the end of section (a) "The International Class Fee shall be 3% of the builder's selling price for a standard Tornado without sails."
In Section (b) delete "c/o Justus Wolf, Ballindamm 35, D20095 Hamburg, Germany,"

Rule 4
Amendment: In section (c) of current rule change "name" to "number". Delete Section (h).

Rule 5
Amendment: In Section (a) after "This is a one-design class" add
(i) "Interpretations of these rules shall be made by the ISAF, which shall consult the ITA.

(ii) If a measurer considers that a boat, or any equipment listed on the Measurement Form, departs from the intended one design nature of the declaration in Rule 1(a)"

Delete "Interpretations of these rules shall be made by the ISAF, which shall consult the ITA". Delete "anything, which he considers, departs from the intended nature of the design of the boat", replace this with "all such items", at the end of section (a) delete "for a ruling in writing" and replace with "for forwarding to the ISAF for an interpretation of the rules as they apply to the items in question."

Add to the beginning of the current section (d) "Except as permitted by ISAF in-house certification,"

Add to the beginning of current section (g) "Except in the cast of the replacement of a certified component"

Rule 20(b)

Amendment: Delete rule.

Rule 21

Amendment: Delete current rule and replace with "Each crewmember shall wear at all times when racing, a personal buoyancy device capable of supporting the competitor's full weight including personal equipment."
