Miscellaneous Procedures and Reminders

HOW TO MEASURE RUDDERS

Rudder Template Measurement. Procedure written by the Class Chief Measurer and approved at the 2000 IGC Meeting, as reported in the October 2000 Newsletter.

Rule 3.5 RUDDER and SKEG

P*art #1* Applying the alloy rudder template

To find centerline of rudder stock:

Mark, on the hull, the aft side (in profile) of the stock at the top of the rudder.

Mark, on the hull, 14mm fwd of this mark, square to the stock.

Note: All rudder stocks are 28 mm diameter.

At rudder gudgeon. Ascertain the aft side of the bearing pin (in profile).

Mark, on the gudgeon, 6mm fwd of this mark, square to the stock.

Note: All bearing pins are 12mm in diameter

Set the rudder exactly fore and aft.

With a straight edge, mark on the rudder, the centreline of the rudder stock between top and bottom marks.

Present the alloy template to the rudder/skeg, setting the template centreline to the rudder stock centreline.

The template can be held in place with spring clamps.

Sight from opposite side, the profile of the rudder/skeg.

The outline of the rudder/skeg must lie within the profile of the template and the tolerance lines scribed on the template.

Tolerances are: 5mm along the top edge and 15mm on all other edges.

Part # 2 Rudder thickness

Mark, on the trailing edge two plane lines perpendicular to the trailing edge.

These plane lines are situated 100mm and 250mm above the straight-line intersection of the bottom of the rudder and the trailing edge.

With a set of outside calipers, measure the maximum thickness of the rudder and skeg.

Max: 38mm Min: 32mm

Then measure the thickness at both 100mm and 250mm planes.

100mm plane: Max 26mm

250mm plane: Max 33mm

With a straight edge applied to the face of the rudder and skeg, on both sides, there shall be no hollows, except in the areas immediately adjacent to the rudder stock.

Only minor local concavities shall be permitted in rudder and skeg.

Part #3 Rudder stock and position

The rudder stock shall be solid and between 28mm and 29mm in diameter.

With a tape measure, measure from point “C” to the aft side of the rudder stock at the hull and to the aft edge of the rudder stock at the bottom of the gudgeon.

Point “C” to aft edge of rudder stock at hull:

Min: 1890mm Max: 1900mm

Point “C” to aft edge of rudder stock at bottom of gudgeon:

Min: 2135mm Max: 2145mm

Point “C” is the straight-line intersection of the centre of the transom and the centreline of the hull.

Bottom of gudgeon point, is a straight line intersection of the aft edge of the rudder stock and the profile of the gudgeon along the leading edge of the skeg.

NOTE: Part #3 tolerances for boats built before March 1, 1995 are:
Point "C" to aft edge of rudder stock at hull:
Min: 1885mm Max: 1905mm
Point "C" to aft edge of rudder stock at bottom of gudgeon:
Min: 2130mm Max: 2150mm

RECONSTRUCTION AND REPAIRS

Owners will please take note of the following when undertaking reconstruction or repairs of damaged hulls:

1. Repairs must be effected in a manner that restores (matches) the original structure without strengthening or stiffening it. Materials and methods of fastening must conform at closely as possible to what was in the original structure. If major structural repairs are undertaken, an owner is obligated to have the boat inspected before and after by a measurer who shall take appropriate remeasurements or weighings. You are reminded of Rule 9, Owner's Responsibility: "The owner shall be obliged to satisfy himself that the one-design principle has not been violated and to do nothing during the course of his ownership to cause this principle to be violated."
2. Bow stiffeners in some of the oldest boats have tended to pop off, partly because the stiffeners were initially manufactured straight, without any built-in curvature. These may be replaced by slightly longer stiffeners; but more important, the stiffeners should be pre-formed to fit the curvature of the inside of the bow. (For limitations, see Construction Plan 3 MKB–10-G, 9 Dec 1981.)
3. The only approved deck sandwich material is 12mm (1/2") balsa core.
4. Epoxy resin is not allowed in laying up the hull, or in laying up large sections of repair work. It is permissible only as an adhesive to join breaks or to assist in the attachment of fittings.
5. Keel alterations shall conform to Rule 8.4.

HEAVY BOATS

A boat that weighs more than the minimum may have acquired a few kilograms through water absorption, possibly as much as 10kg.

Boats that go more than 57kg over the minimum nearly always do so because the owner has added equipment. Raised floorboards, console, winches, pumps, elaborate sheet trimming apparatus, many coats of bottom or topside paint all, in the aggregate, add considerable weight. If you have a heavy boat, particularly an old one, you should always be concerned with making it weigh less, not more, by removing unused hardware, simplifying rigging, or any other legal means.

BAILERS

From time to time, requests are received by the ODT about the possibility of installing automatic hull bailers. Bailers have been installed and tested in Etchells. They do not work well, and they are not safe. Bailers are not allowed in Etchells, see OD Rule 3.7.