

Potential Measurement Issues On New Boats

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Brand new boats ex works do not by default comply to the rules. On a couple of details new boats measure very tightly or are even out of measure. Not all tight measurement details are critical. Some details are intentionally built to the limits. Especially those tight measurement details are critical, which are difficult to correct, no matter whether they are race relevant or not. If race relevant - positive or negative, the practical impact might be marginal in some details.

Summary

Ovington	correction	race relevant
O1. baseline length / waterline length / stem angle	easy	yes
O2. aft end of c/b slot	easy	no
O3. rocker: st.9, st.6, st.3	difficult	yes
O4. hull shape: st.9, st.6	difficult	yes
O5. keelband thickness: around st.9, >50mm before c/b slot	medium	no
O6. top of gunwhale between G/H: st.3	easy	no
O7. max. c/b lift (200mm)	easy	yes
O8. distance between side tanks at cockpit floor: st.11, st.6	difficult	no

Rondar	correction	race relevant
R1. deck height around mast gate	difficult	yes
R2. transom frame must be open, shall not form a buoyancy tank	easy	no
R3. hull shape: st.9, st.6	difficult	yes
R4. baseline length / waterline length / stem angle	easy	yes
R5. rocker: st.9, st.6, st.3	difficult	yes

Details

The Details refer to the measurement instruction numbers mentioned in the measurement book.

Ovington

O1. baseline length / waterline length / stem angle (inst.nr. 4.4)

On nearly all new boats ex works the baseline length is too long.

resolution options: stem sanding, slightly flatten stem angle to make baseline shorter

O2. aft end of c/b slot (inst.nr. 4.1)

On all new boats ex works the aft end of the centerboard slot is too far aft.

resolution options: glue-in a piece of plastic (close slot) to make the aft end move forward

O3. rocker: st.9, st.6, st.3 (inst.nr. 4.6)

Many new boats ex works are tight here. The rocker tends to be too flat, measures too large. This mainly applies to station 9.

resolution options: thicken-up keelband, fairing, no "bumps"

Attention - Impact !

Raising the keelband also raises the touching point of the templates. This increases the the distance between templates and hull. This detail (O4) is tight anyway, so correction is a compromise and needs a lot of care.

O4. hull shape: st.9, st.6 (inst.nr. 6.2)

The hulls tend to be too narrow, distance to templates too large. The latest boats have improved in this detail, but are still tight. However still a significant number of boats need correction on this detail, mainly around the waterline at station 9.

resolution options: filler-up hull shape with gelcoat, area fairing, decrease distance to templates

O5. keelband thickness: around st.9, >50mm before c/b slot (inst.nr. 8.2)

a) around station 9

Nearly all new hulls ex works have a too thin keelband around station 9. Even a down-bump is often visible in the keelband around station 9.

resolution options "too thin": thicken-up keelband, fairing, no "bumps"

Attention - Impact !

Raising the keelband also raises the touching point of the templates. This increases the the distance between templates and hull. This detail (O4) is tight anyway, so correction is a compromise and needs a lot of care.

b) >5cm before c/b slot

In 2014 we identified that most boats breached the rules by having keelbands >4.5mm thick at the front of the centerboard case where rubber gaskets are used on top of Dacron gaskets. Therefore we introduced a rule change in 2015 to loosen this detail. In the area 400mm after the forward end of the c/b slot and 50mm in front the keelband may be thicker now (6.0mm).

However depending on the way of fitting-out this detail may be critical or not, especially >50mm before c/b slot.

resolution options: flatten down keelband components

O6. top of gunwhale between G/H: st.3 (inst.nr. 6.3)

"Top of gunwhale" tends to be very low especially at station 3, very close to or even at line G. All new boats ex works are very tight in this detail, but most boats do not need correction.

resolution options: filler-up deck shape with gelcoat, area fairing, no "bumps"

O7. max. c/b lift 200mm (inst.nr. 9.2)

This detail is relevant for racing and rather important. Measuring needs training/introduction, at least careful thinking about all maximums/minimums configurable with the individual features of the fitting-out.

This detail purely depends on fitting-out features.

resolution options: depending on fitting-out, usually easy by applying limiters

O8. distance between side tanks at cockpit floor: st.11, st.6 (inst.nr. 12.3)

All new boats ex works are very tight in this detail, but luckily no boat needed correction so far. Distance is close to minimum at station 11, close to maximum at station 6.

resolution options: nearly impossible, return hull to supplier, luckily not needed so far

Rondar

R1. deck height around mast gate (inst.nr. 11.1)

Nearly all new boats ex works, both with new deck mould and old deck mould, have issues here. Deck height tends to be too high around the mast gate.

resolution options:

- sand down deck around mast gate, reinforce deck structure from below
- raise deck level at the sides by filling-up with gelcoat, fairing, no "bumps"

R2. transom frame must be open, shall not form a buoyancy tank

Rondar proposed a rule change together with their new model in 2014. This rule change was refused by international 505 members.

If current rules are respected by the builder/workshop, there is no issue.

R3. hull shape: st.9, st.6 (inst.nr. 6.2)

These details caused the major measurement issue and finally the diplomatic "grandfathering" during the worlds 2013 in Barbados. The hulls were far too narrow at stations 9 and 6. As far as we know Rondar did not create a new mould, but corrected the old mould. So this topic remains in focus. However the latest hulls were measuring well in these details.

R4. baseline length / waterline length / stem angle (inst.nr. 4.4)

On nearly all new boats ex works the baseline length is too short.

resolution options: stem modeling, slightly righten stem angle to make baseline longer

R5. rocker: st.9, st.6, st.3 (inst.nr. 4.6)

Many new boats ex works are tight here. The rocker tends to be too flat, measures too large. This mainly applies to station 9.

resolution options: thicken-up keelband, fairing, no "bumps"

Attention - Impact !

Raising the keelband also raises the touching point of the templates. This increases the the distance between templates and hull. This detail (R3) is tight anyway, so correction is a compromise and needs a lot of care.