

Notes for preparing MRC boats for transport to/from Regattas

1. **Aim of the training:** To safely move boats and other MRC equipment to and from regattas without loss of equipment, nuts, washers etc. and without damage to boats or equipment.
2. **Attendance at Boat Loading and Unloading:** It is essential that at least ½ of the crew attends either loading and unloading. Those attending boat loading must be at the regatta end to assist in the preparation of the boats for racing. Likewise, those loading at the regatta must be at boat unloading at MRC to re-rig the boats. As the equipment is both expensive and complex, more than ½ of the crew should be in attendance at boat loading and unloading.
3. **Riggers**
 - a. **Stainless riggers – removal and refitting**
 - i. **Basic Tools needed:**
 - (1) 11 mm spanner – a combination of ring at one end and open ended at the other is best.
 - (2) Adjustable (shifting) spanner,
 - (3) 200 mm flat screwdriver
 - ii. **Parts of the rigger:** Main arm, tension arm, back arm, pin, pin top nut, height washers, pin clamping boss, gate, rigger bolts.
 - iii. **Steps to remove:**
 - (1) Slightly loosen the pin top nut.
 - (2) Undo the nuts on the rigger bolts attaching the back and tension arms to the boat.
 - (3) Place the nuts in the adjacent heel cup.
 - (4) Undo the nuts on the main arm and remove the rigger from the boat.
 - (5) Replace the nuts on the rigger bolts, leaving the bolts in the boat. (Do not turn them around)
 - (6) Gently close up the tension and back arms so that they are roughly parallel to the main arm.
 - (7) Repeat for all riggers, then tape the set of riggers together and label them with the boat name.
 - iv. **Steps to replace:**
 - (1) Undo the tape and place the rigger in the boat on its correct seat. The seat numbers are stamped on the main arm near the rigger bolt holes.
 - (2) Undo a set of rigger bolt nuts. Place the nuts in the adjacent heel cup.
 - (3) Confirm with a coach whether the boat is to be rigged using the top or bottom holes in the main arm. Using the top hole suits lighter crews.

- (4) Attach the main arm and put the nut on the higher of the two rigger bolts – just a couple of turns will do to loosely hold the rigger in place.
- (5) Attach the tension arm and turn its nut a few turns.
- (6) Attach the back arm and turn its nut a few turns. It may be necessary to push the back arm bolt back through its hole in the boat to allow the bolt to pass through the hole in the arm.
- (7) Tighten all nuts. They need to be just tight, but not too tight, or the boat ribs will be crushed.
- (8) Tighten the pin top nut, ensuring that the height adjusting washers are correctly positioned.
- (9) If the back arm requires adjustment of its length, refer to the lesson on rigger adjustment.

b. Alloy riggers - removal and refitting

i. Basic tools needed:

- (1) 10 or 11 mm spanner (depending on the age of the boat)
- (2) Adjustable spanner and
- (3) 200mm flat screwdriver

ii. Parts of the rigger: Tubular rigger frame (incorporates main arm and tension arm), rigger bolts, back arm (fragile), pin, height adjusting washers, gate, pin top nut.

iii. Steps to remove

- (1) Slightly loosen the pin top nut, so that the back arm is free to rotate when the rigger is removed. If this is not done, damage can occur in transport or storage.
- (2) Undo the nut on the rigger bolt attaching the back arm to the boat. Place the nut in the adjacent heel cup.
- (3) Undo the nuts on the frame and remove the rigger from the boat.
- (4) Replace the nuts on the rigger bolts, leaving the bolts in the boat.
- (5) Gently close up the back arm so that it is roughly parallel to the main arm.
- (6) Repeat for all riggers, then tape the set of riggers together and label them with the boat name.

iv. Steps to replace:

- (1) Undo the tape and place the rigger in the boat on its correct seat. The seat numbers are stamped on the main arm near the rigger bolt holes.
- (2) Undo a set of rigger bolt nuts. Place the nuts in the adjacent heel cup.

- (3) Confirm with a coach whether the boat is to be rigged using the top, middle or bottom holes in the main arm. Using the top holes suits lighter crews.
- (4) Attach the main arm and put the nut on the higher of the two rigger bolts – just a couple of turns will do to loosely hold the rigger in place.
- (5) Attach the tension arm and turn its nut a few turns.
- (6) Attach the back arm and turn its nut a few turns. It may be necessary to push the back arm bolt back through its hole in the boat to allow the bolt to pass through the hole in the arm.
- (7) Tighten all nuts. They need to be just tight, but not too tight, or the boat ribs will be crushed.
- (8) Tighten the pin top nut, ensuring that the height adjusting washers are correctly positioned.
- (9) If the back arm requires adjustment of its length, refer to the lesson on back arm adjustment

c. Wing riggers - removal and refitting

- i. **Parts of the rigger:** Main arm (Wing), back arm (fragile), pin, gate, height adjusting washers, pin top nut, rigger bolts.

ii. Steps to remove

- (1) Slightly loosen the pin top nut, so that the back arm is free to rotate when the rigger is removed. If this is not done, damage can occur in transport or storage.
- (2) Undo the nut on the rigger bolt attaching the back arm to the boat. Place the nut in the adjacent heel cup.
- (3) Undo the nuts nearest the bow on the wing and place these and their bolts in the adjacent heel cup. (This sequence allows the other two nuts to hold the rigger balanced while you do this.) Next undo the two nuts nearest the stern and remove the rigger from the boat.
- (4) Replace the bolts and nuts, leaving the bolts in the boat. (The John Chestney 8 is an exception to this rule, due to the variable length bolts used at that stage of wing rigger development. For this boat, attach the bolts to the riggers.)
- (5) Gently close up the back arm so that it is roughly parallel to the wing.
- (6) Repeat for all riggers, then tape the set of riggers together and label them with the boat name.

iii. Steps to replace:

- (1) Undo the tape and place the rigger in the boat on its correct seat. The seat numbers are stamped on the wing near the pin.
- (2) Undo a set of rigger bolt nuts. Place the nuts and bolts in the adjacent heel cup.

- (3) Attach the wing and loosely tighten one of the stern bolts first, which will hold the rigger balanced. Put all the bolts and nuts on loosely in turn, before tightening them all. In some boats, the back arms share a bolt with the wing of the rigger behind, so check for this before tightening the nuts.
- (4) Attach the back arm and turn its nut a few turns.
- (5) Tighten the pin top nut, ensuring that the height adjusting washers are correctly positioned.
- (6) If the back arm requires adjustment of its length, refer to the lesson on back arm adjustment

4. Preparing a boat for transport

- a. Remove and tape up the riggers in accordance with the methods taught in lessons above. Write the boat name on the tape. Ensure the rigger bolts are tightened sufficiently so the nuts do not loosen during the trip.
- b. Ensure the seats are removed or secured. Generally, it is better to remove single acting seats, and to secure double acting seats.
- c. Ensure all Foot stretcher adjusting nuts, and slide nuts are tightened.
- d. If the boat has a sound system, ensure the cable is secured in the boat.
- e. Check the rudder top nut to ensure it is not loose.
- f. Push the rubber bungs into the hull, and ensure any rigid plastic bungs are secured.
- g. If the boat is to be split, ensure it is kept level during the splitting operation, so that no strain is exerted on the section or bolts.

5. Loading the Trailer.

- a. Load boats from the top down and from the inside out.
- b. Place the oars in the trailer with blades to the rear, and curved up. Sweep oars go in first, and sculls go in second, on top of the oars, if there is a mixture in the trailer. (Sometimes, we'll have the sculls in the truck or a second trailer.)
- c. Leave enough slings in the shed for those who stay behind.
- d. Don't forget the red rags, the first aid kit, the spares box, the cox boxes, and their chargers if needed, and the tent.
- e. Racing Sculls should be loaded using one of MRC's vee supports, to save space and weight. These are stored in the Captain's locker with the boat ties.
- f. Private boat owners who have arranged transport on the MRC trailer should bring their own ties.
- g. When putting riggers in the bottom of the trailer, ensure they sit as flat as possible, so they don't bounce up and damage boats when the trailer hits a bump.

6. **Spares at regattas:** MRC takes spare bolts, nuts, washers and thumbscrews to every regatta. Members should ensure that they take the trouble to replace any missing washers, nuts etc. when rigging at the regatta or re rigging back at the shed. Sometimes the bolt threads wear or are damaged, and this only becomes apparent at the regatta. The spares are carried in a small blue box, which is normally kept in the Captain's Locker, and transported in the tool box on the front of the trailer.
7. When a boat is ready to be loaded, Stroke of the crew or a nominated crew member should advise the person in charge of loading the trailer, that the boat is secured as set out above and ready for loading.
8. If all of the above is observed, there should not be any missing nuts or damaged equipment