

St. Andrew Boat Club



Chalky's Boat Advice Series

- i. Boat Cleaning and Maintenance
- ii. Boat/Blade Checklist Before Any Event

Boat Cleaning and Maintenance

All boats should be washed and checked after each outing. The Union Canal in Edinburgh does have its own issues with regard to racing shells. These issues include hull paint/gelcoat deterioration from oil spillage from barges, agricultural effluent and agricultural fertiliser run off as well as hull penetration/surface damage by solid debris, especially but not exclusively after a storm. Watch out for pieces of Garden Furniture and Tree branches. It may seem strange for an inner city environment to have issues from agriculture, but the main fill point of the east canal section is from the upper reaches of the River Almond at Almond Aqueduct, some 10 miles out in the countryside. Continued usage of uncleaned hulls results in permanent discolouration of the paint. Hull 'through skin' damage left unrepaired not only deteriorates the hull due to any water ingress, but may well result in a larger, more complicated, repair at a later date.

Badly damaged boats should be put out of use by applying a "Do not Use" sign, laminated copies of which are located below the Boat Booking Diary. Please also write up in the repairs/damage book and notify your squad coach and/or the club boatman. More serious incidents should also be reported immediately to the Club Captain email address sabccaptain@gmail.com

Apart from the usual washing of boat after outings, there is often a build-up of contaminants along the water line which requires further cleaning at regular intervals. To do this:

- Wash and rinse the boat as usual. Locate and retrieve the "Boat Cleaning Task Box". It should be on the metal shelving unit. The box contains various boat cleaning materials and safety kit, including eye goggles and disposable gloves [Personal Protective Equipment, PPE].
- DO NOT USE THESE MATERIALS IF YOU ARE IN ANY WAY UNFAMILIAR OR NOT CONFIDENT IN USING HAZARDOUS MATERIALS. DO NOT USE IF YOU HAVE A HISTORY OF SKIN REACTION TO SUCH MATERIALS. Read the label on the container[s] and use appropriate personal protective equipment. It is strongly recommended to do the boat cleaning outside the boathouse to avoid inhaling any solvent fumes.
- Firstly, any Duct tape glue residue left on the hull should be cleaned off using white spirit, which is stored in the locked hazchem cupboard (key in key cupboard). Use any old piece of clean towelling [NOT smooth linen] as a removal pad.
- Some boats, especially if of "Janousek" or "Stampfli" manufacture, may have chevrons or other areas coated with solvent based paints which will dissolve in white spirit. Check for suitability on a small area before proceeding to whole

boat. As an alternative, for cleaning Duct Tape Glue off such paint, Methylated Spirit may be used. Again this is in the HazChem cupboard.

- The next operation is to clean the hull. It is best to use a proprietary limescale cleaning spray such as the orange and mauve spray bottles of “Cillit Bang Limescale Cleaner™” which should be in the task box. Alternatively, a bucket of Oxalic Acid solution can be made up using water and the Oxalic Acid powder in the container which can be found in the “HazChem Cupboard”.
- Apply the spray to the external hull, evenly. The liquid can be spread out gently using a piece of rag/cloth. **DO NOT WIPE OFF AT THIS STAGE.** If application is done by first applying to one side of the hull from bow to stern stem and repeating along the other side, then the whole hull should be liberally covered. Do not “miss” any areas. Such ‘holiday’ areas will show up afterwards. Badly stained areas may require further treatment. Leave wet on the hull for 5 to 10 mins as per usage instructions on the bottle label. Use an old piece of towelling or similar rag with a rough texture and clean off the stain. Some vigorous application of added “elbow grease” WILL be required to thoroughly clean up.
- Wash off with liberal quantities of water. Repeat as required until whole hull is clean and shining white.
- Inspect the whole external hull for paint scrapes, holes etc. Write up defects on notice board. Allow the hull to dry and identify any areas requiring further work using pieces of masking tape/electrical tape adjacent to the damage. There is no point in applying polish etc if much further work is required to the boat. If competent, please refer to the advice sheet in the Boat Hull Repairs Task Box.
- Turn the boat right way up on it’s trestles and repeat above on the bow and stern canvas areas.
- Clean the inside of the boat with soapy water. Rinse off. Turn the boat over to empty out any residual water, turn back upright and sponge off. Use methylated spirit/white spirit as above to clean up any stubborn areas.
- Remove seats and foot stretcher assemblies. N.B. Some seats are impossible/extremely difficult to remove without removing the seat rail track ends.
- Clean seat rail tracks with soapy water [NOT Cleaning materials]. Use pieces of old towelling/rags.
- Clean seat wheels with a towelling rag and soapy water. **DO NOT USE GREASE OR ANY FORM OF GREASE/OIL BASED LUBRICANT BEFORE REPLACING.** The wheel bearings unless of a very old type use “sealed” bearings. Adding grease/vaseline/oil just attracts dirt and when the boat is in use, it changes into a water based slurry acting as a grinding paste damaging the slide bed. The inner curve of the seat rail is subjected to a heat treatment process known as “case hardening” which hardens the surface. Once this thin layer of metal is worn away, the soft aluminium core underneath wears away very quickly.
- Inspect stretcher assemblies, seats and seat rails. If all OK, refit to boat. Otherwise repair or replace.

- Wash out and clean up the coxswains cockpit. Check that the steering lines are running freely and the rudder is operational.
- Clean swivels/gates, especially the wearing surfaces, with soapy water. Again, DO NOT apply grease. If racing at high level, it is OK/may be worthwhile to use a spray silicone/water repellent spray as an additional short term lubricant on the gate sills/blade buttons.
- Any electrical connectors should now be checked and a VERY small amount of the OEM supplied lubricant applied to ease their connection/disconnection in use. This can be found in the electrical repairs box or the Cox Box charging cupboard.

Before continuing, it is best for all scrapes, holes and hull damage etc. are repaired. It is not worthwhile polishing the insides of boats. Other than that, the boat is now ready for final finishing of the hull surface.

Older boats will never recover their original gloss without a full paint respray, so cheaper polishes may well be a more appropriate choice. Select the polish from the task box according to the boat. [polish bottles are marked 'Gold' 'Silver' and 'Bronze' in line with boat usage levels] and apply following the container instructions. Gold Boats may benefit from using a powered polishing/buffing unit. Otherwise extensive use of "elbow grease" and polish on a pad of soft clean cloth is required. If competing at a high level event, it may be worthwhile to apply a final coating of a carnauba wax type polish or some other "go faster" grease immediately before racing.

Some hulls, including Empacher, some Sims hulls and a few other models have an external covering of a polyester based gel coat rather than paint. This is very hard wearing and polishes up well with hard work. However, such hulls are harder to repair. Older boats were painted using an acrylic polyurethane "two pack" solvent based system [also known as a "2k" system] utilised by professional car repair companies and cured in a [rather large] oven at 130 deg C. Such boats will clean and polish up very well, although there may well be some long term discolouration due to Ultraviolet [UV] light degradation in very old hulls. More modern hulls will be painted using a water based paint rather than the 2k system. This is due to modern day understanding of the detrimental effects of solvent based spraying. "Two Pack" or "2k" spraying is now a highly regulated process requiring specialised materials, filters, an air fed full face visor together with knowledge of the HSE/COSHH regulations licensed and administered by local authorities.

Boat/Blade Checklist Before Any Event

Often at events, there is little time to check the boat over or to rectify issues found immediately before racing. It is sound practice to set aside some time to check over your boat/blades etc before/after all outings. This will leave time to rectify any issues. Responsibility lies with everyone, not just the experienced. At an event, few people have sufficient time to do all the tasks required for themselves, never mind attending to others. With the best will in the world, no boatman can fix a broken rigger plate, reattach a broken wiring connector and reset a rudder on 3 different boats all within 2 mins. [And that comes from experience!]

Please note that last minute 'quick' repairs being done when boat loading is totally unacceptable. Excuses such as "It happened last night" will simply be met with the reply "You should have repaired it last night".

- Blade check. Check the spoons are in sound condition. If edges are showing signs of delamination, repair it or put out of use until repaired. A small delamination with the 'tail' still present is a simple glue job, so take the time and please repair it. Left unrepaired, further damage will likely occur which will become more difficult and time consuming to repair, never mind the loss of use pending full repair.
- Ensure the nylon spoon protectors on the blade tips are in place. These have been retrofitted to most older sculling blades and when time permits, they will be retrofitted to Sweep spoons. Again, if further damage/wear is done to the end of the spoon, it is a more time consuming job to refit the new replacement. Excessively worn spoons/cracked spoons are expensive to replace.
- Check the looms. They should show no evidence of cracking or delamination. A cracked loom will tend to break at the start of a race when it is under most stress.
- Check the handles. Ensure the handle clamp/adjustment bolts are free to move by undoing slightly. Retighten so it is secure. Seized/frozen bolts may need cutting off and replacing. Please repair or put out of use as any adjustment required at an event will not be possible.
- Check the button is not loose and is tightened straight across the sleeve. Older style sleeves often have a removable "backplate" which can come loose or needs replacing due to wear.
- Finally, make up a hot water/dettol disinfectant solution in a bucket according to bottle instructions. Protect your hands with a pair of stout rubber gloves. Use the disinfectant solution with a scrubbing brush to clean the handles. Rinse off handles in clean water before replacing on blade racks. It is good practice to do this once per week during warm weather and certainly immediately if any blood has been left on by a previous user/yourself.

Now move on to the Boat:

- If a coxed boat, have the cox check operation of the wiring/speakers. Repair as required.
- The cox/steersperson should also check the operation of the steering lines and the rudder. Inspect the steering cables. Look for wear points at the holes through the shoulder frames and that shoulder bolt/clips have not been tightened onto the cable. Ensure any wire joins have at least 2 cable clamps in place and that the screws are not frozen [immovable]. If “frozen” DO replace. Do not leave for ‘someone else’ to try and free up to adjust just before racing. After all, that ‘someone else’ could be you! Replace as required. There should be two clamps on each wire attached to the rudder arm/yoke. A constant issue with bow coxed boats is the arrangement on certain manufacturers boats which results in the wire jamming in the small pulley attached to the hull below the cockpit cover near to the tiller arm. This requires replacement of a small section of the steering wire, if not also replacement of the pulley, if worn. The pulley mounting may require undoing to allow inspection of the pulley. Replace if showing signs of wear/damage or if it does not rotate easily.
- ALL rigger bolts should have nuts and washers affixed and tightened up properly. I.e. firmly but not forcefully. The bolts through the boat affix the hull to the frame inside. If no rigger nuts are in place, then the hull may well separate from the frame. For boats with wooden frames, this allows water to get between the hull and frame. The wood then rots due to water ingress as well as damage due to freeze/thaw effects in winter months. The frame eventually breaks, rendering the rigger mount useless.
- Overtightened nuts often result in frame damage and/or rigger plate damage. Both situations are time consuming and possibly expensive to repair with extended time out of use.
- Seats, seat rails, shoes and footboards should be checked. See Guide notes on Boat Cleaning for advice on seats and slides.

Safety

Hatches

Please see SR Website: [http://www.scottish-rowing.org.uk/images/pdf folder/Racing/Preparation for racing - Some advice.pdf](http://www.scottish-rowing.org.uk/images/pdf_folder/Racing/Preparation%20for%20racing%20-%20Some%20advice.pdf)

“Hatches covering watertight compartments should be checked regularly to make sure that they are in fact watertight. Leaks can develop where the hatch mounting is sealed to the deck. Damage or wear to hatch covers can mean that they are no longer fully watertight when closed. Hatch covers should be closed when the boat is on the water.”

- Inspect and check the Hatch sealing rings. Ensure that all the securing bolts are present and that, preferably, “nylock” nuts are used to secure the bolts.

Standard nuts are often used by OEM's and while these will do the job, some time later in use, they slacken or even undo completely, thus compromising the integrity of the hatch and failing to serve it's purpose.

- Please ensure that any neoprene sealing rings used on Holt Allen [™] type hatches are in place, are secure and are in sound condition suitable for use. I.e. not cracked or broken etc.

Heel restraints

Please see SR Water Safety Code: [http://www.scottish-rowing.org.uk/images/pdf_folder/Oct_2011b - Water Safety Code Policy.pdf](http://www.scottish-rowing.org.uk/images/pdf_folder/Oct_2011b_-_Water_Safety_Code_Policy.pdf)

“All boats must be equipped with stretchers or shoes which allow the occupants to get clear of the boat without using hands and with least possible delay. If heel restraints are used each shoe must be independently restrained and restraints should not allow the heel to lift more than 7 cm”

- In practice, a distance of 5cm [2 inch]and often even less is more appropriate for 95% of boat users. I.e. those with foot size less than UK size 14.
- In practice, do not use old shoe laces as heel ties as they will rot in time. Please use Kevlar [™] based thin [3mm dia or 4 mm dia] cord. Some lengths of this may be found in my spares bag pockets or in the top left hand drawer of the white cabinet.
- In practice it is best not to use shoes with shoelaces. Best to use the style with overlapping velcro straps. If the Velcro [™] is no longer usable, please replace.

Bow balls

Please see SR Water Safety Code: [http://www.scottish-rowing.org.uk/images/pdf_folder/Oct_2011b - Water Safety Code Policy.pdf](http://www.scottish-rowing.org.uk/images/pdf_folder/Oct_2011b_-_Water_Safety_Code_Policy.pdf)

“Every boat shall carry securely affixed to the bow a solid ball of rubber or material of similar consistency, white in colour, with a diameter of not less than 4 centimetres, and incapable of being significantly deflected in any direction. This protection may also be afforded by a specially shaped bow of suitable material”

What to do with damaged kit

- Write up on the right hand whiteboard located between the steel shutters, any defects requiring attention. Blades should be propped vertically by the Boat Booking Diary.
- Boats should have a “Do not use” label affixed. Laminated copies of these notices are located below the boat booking diary.

- Any incidents/reports of kit failure should be entered in the “incident diary” again located near the boat booking diary. Please be accurate in describing any boat repairs required. Writing up a note on the whiteboard that a certain boat has collision damage on the bow canvas when the damage is on the stern canvas is not good enough.

Spares and Repairs

- Small spares such as nuts and bolts etc are in the clear top flat trays.
- Larger ready use spares such as blade buttons, fins and rudders etc. are in the labelled cabinet drawers next to the worktable outside the changing rooms. Please find and fix the easy stuff. Do not leave others - or the boat repair technician to fix! Six small jobs of 10 min each is 10 min of your [the user] time. It accumulates to 1 hr of my time!