

Authorised tractor drivers and mast derrick supervisors are listed in MSCP03 (Essential Information for Cruiser Owners) that is sent to every cruiser owner. Copies are also available in the Document Library in the Members Area of the MSC website and in the clubhouse files.

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1. Introduction.

With the ever increasing awareness in the prevention of accidents, the potential for action against Clubs or its members and the increasing interest being taken by the relevant authorities in the prevention of accidents, it is incumbent on Sailing Clubs and their Members to examine the practices adopted within their respective clubs and so far as is practicable take all reasonable steps to minimise or eliminate potential hazards identified.

Members in any event would wish to maintain the good safety standards within the Marconi Sailing Club and it is for this reason the following Safety Instructions are issued. They should not be considered to be all embracing, but rather to form the basis for good practice. It is up to each member to ensure the working practices with which they are engaged are safely carried out.

These instructions do not apply to or consider the 'At Work Situation' where any individual is carrying out the activity for hire or reward.

The instructions address three principal areas:

1. The use of safe working practices in order to ensure the safety of all persons involved in the use of the Mast Derrick for the stepping or un-stepping of masts and spars. Also the removal and installation of marine engines and equipment.
2. The correct use of equipment to ensure it remains in good working order and which may directly or indirectly contribute towards safety.
3. The preparation of the yacht and all equipment to ensure efficient and safe completion of the operation. (best practice operation instructions)

2. Safety

It is incumbent on the Mast Derrick Supervisor & Yacht Owner to assess the prevailing weather conditions and take into consideration the weather forecast for the likely period of the operation. (For all mast installation and removal the recommended maximum wind speed is 15 knots) It is also the owner's responsibility to ensure that an adequate support team is available as well as ensuring that team members are briefed with the procedure and their own tasks.

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2. Safety (cont)

Team: The club nominated “Dumper Driver” shall be familiar with the Dumper Operating Instructions MSCP87 & MSCP92. Additionally, the “Mast Derrick Supervisor” should be familiar with MSCP 78. The Dumper Driver or Mast Derrick Supervisor must not be pressurised to proceed should he believe that safety might be in any way be compromised and his decision is final.

- At **NO TIME** during the lifting or lowering operation should **ANYONE** at **ANY** time stand directly below the suspended load. Any operator or helper **MUST** stand well clear and control the load movement with the aid of guy ropes attached to the load.
- The yacht owner is responsible for ensuring that sufficient team members are available to safely complete the task, that no team member has any disability that might compromise the work or safety of other team members and that the team is fully briefed. A minimum of three people including the Mast Derrick Supervisor is recommended.
- The Mast Derrick Supervisor must ensure that the team is aware of the processes involved in the work to be carried out and the potential hazards that may be encountered. Specific jobs should be allocated to individuals.
- The yacht owner shall ensure that the team members are properly dressed for the work in hand and are wearing safety hard hats supplied by the club for common use.
- Consider what the plan is to position, release and remove all strops once the mast is erected as **members shall not climb the derrick** without written authorisation from a Board member.
- The Mast Derrick Supervisor is responsible for ensuring that all team members abide by the safety instructions.
- The Mast Derrick Supervisor has the responsibility to check before commencing any operation that the Mast Derrick lines are running freely, are not twisted on the winch and also that operating handles are available.
- The Mast Derrick Supervisor has the responsibility of ensuring that all safety equipment is available and reporting any malfunction or missing equipment to the Mast Derrick Coordinator and entering a report in the Mast Derrick Logbook kept in the mast container.
- When manual handling of masts, spars (and engines etc) is necessary (i.e. when being removed to and from storage or when being loaded or unloaded onto the trailer etc) the yacht owner shall ensure that sufficient numbers of fully able-bodied people are available to lift and manoeuvre with safety.
- The Mast Derrick Supervisor shall supervise all lifting and storage operations to ensure that safety is not compromised.

3. Use of Equipment and Yacht Preparation

Mast Derrick

The mast Derrick is rated to lift a maximum of 350 kilograms

The *yacht owner* is responsible for ascertaining the weight of the spars or equipment to be stepped or removed. Load cell equipment is available through the Mast Derrick Supervisor and is mandatory that each load is weighed in order to ascertain actual weight. This must be recorded in the log book with the name of the boat. If in doubt ask the equipment manufacturer. If the mast has been weighed on a prior occasion this will have been recorded and will be shown in the Mast Derrick Logbook, so it should not be necessary to re-weigh the mast unless there has been a significant change made to the mast since it was last weighed.

On each occasion prior to commencing use of the Mast Derrick it is necessary to ensure that:

1. The yacht owner has organised a Dumper Driver and a Mast Derrick Supervisor. In some cases it may be the same person.
2. The Mast Derrick Supervisor must ensure that hard hats, safety harness and mast support trestles (stored in the mast container), trailer wheel chocks (stored in the bin on the hard) and winch handles (stored in the mast container), are readily available.
3. The yacht owner must check that the working area around the Mast Derrick is clear from obstacles, including cars.
4. The Mast Derrick Supervisor must ensure that the Mast Derrick is in fully operational condition and there are no visible signs of damage to the rope cable. Any damage or missing items must be reported to the Mast Derrick Coordinator and a report entered into the Mast Derrick Logbook kept in the mast container.
5. With increasing usage, it is essential that yachts should occupy the Mast Derrick for the minimum possible time. Therefore, in preparation, prior to moving the yacht to the Mast Derrick be aware of other yacht movements planned for the day. Check that:
 - The yacht is prepared and ready to be moved. This includes un-jacking and clearing the area around the yacht for access. If using a trailer, the tyres are suitably inflated and the trailer is in working order. This includes the trailer steering.
 - The trestles provided are positioned prior to the yacht being placed under the Mast Derrick. The mast can then be removed from storage and placed on these trestles.
 - All tools necessary to complete the full task are available.
 - Mast navigation wiring is disconnected
 - Boom, all sails, vang and other connections to the mast are removed.
 - Standing rigging has been prepared with all bottle screws free to rotate.
 - Unattached items are removed or safely stored from the deck area.

4. Positioning the Yacht Relative to the Mast Derrick.

Ensure that the dumper driver is aware of where the yacht needs to be positioned; it is recommended that hand signals are used as detailed in section 7.

- The position of the yacht under the Mast Derrick must be agreed. This position should allow the mast/engine to be lifted safely and at the most efficient point. It is recommended that a team member is positioned to indicate to the Dumper Driver when the yacht is in the correct position under the Mast Derrick. The jib position can be adjusted to ensure accurate vertical location. A white datum block indicates the maximum reach of the jib. This will prevent excessive shunting to get the boat on the correct position.
- When the yacht is in position, the rubber wheel chocks provided need to be placed at each trailer or boat hoist wheel prior to the release of the dumper.

5. Stepping masts.

- Remember it is easy to drop tools etc. therefore ensure that all team members are wearing hard hats. If mast climbing is necessary, it is advisable to secure any tools with a lanyard attached to the harness.
- The mast should be fully rigged and ready for stepping before moving the yacht into position.
- Attach a heel guide rope around the mast near to the heel for control when lifting the mast into position.
- Place only the approved and tested lifting strop slightly above the balance point of the mast, usually at or near the spreaders. There should be a **slight** weight bias to the mast heel. The yacht owner shall ascertain the lifting point prior to commencing any lifting task. With some masts this point may not coincide with the spreaders, in which case you must use the club tested line that is capable of taking the full weight of the mast. This should be attached to the lifting strop and led down towards the mast heel and made fast to a **SECURE** cleat or strong point again that is capable of supporting the full weight of the mast. If unsure of a suitable strong point seek advice from the Mast Derrick Supervisor.
- Attach another separate suitable length of rope to the lifting strop so that the strop can be pulled down the mast after stepping. This may avoid climbing the mast to remove the strop shackle once the mast is stepped. This is not possible where the strop is fitted above a set of spreaders! Note: Climbing the Mast Derrick itself is not permissible.
- Ensure that the shackle on the lifting strop is fully hand tightened.
- When lifting the mast, control its movement by using the heel rope.
- Using the Mast Derrick winch, hoist the mast above deck level. Use one team member to steady the mast and ensure that the mast remains away from the jib.
- Move the yacht into position under the raised mast.

5. Stepping masts.(cont.)

- Carefully lower the mast to locate the mast heel onto the mast step or tabernacle sufficient mast weight must be maintained on the winch to keep the mast in an upright position.
- It is usually preferable to attach the forestay first. Attach and loosely tighten shrouds, and backstay. The rigging needs to be sufficiently tightened to allow safe movement (final alignment and rig tuning should be performed later, preferably on the water).
- Release the mast hoist stop. Note: Climbing the Mast Derrick is not permissible.
- Ensure that all lines are released and the jib raised before moving the boat.

6. Un-stepping a mast

Before moving the yacht into position under the Mast Derrick:

- Mast navigation wiring must be disconnected
- Boom, vang, sails and other connections to the mast must be removed.
- Running and standing rigging shall be prepared with all bottle screws free to move. It is not necessary to slacken the rigging tension at this stage.
- Place the approved and tested lifting stop slightly above the balance point of the mast, usually at or near the spreaders. There should be a slight weight bias to the mast heel. The yacht owner shall ascertain the lifting point prior to commencing any lifting task. With some masts this point may not coincide with the spreaders, in which case use the club tested line that is capable of taking the full weight of the mast. This should be attached to the lifting stop and led down towards the mast heel and made fast to a **SECURE** cleat or strong point again that is capable of supporting the full weight of the mast. If unsure of a suitable strong point seek advice from the Mast Derrick Supervisor.
- Attach a rope around the mast near to the heel for control when lifting. This rope will also be used to tie the mast back to the Mast Derrick jib while the yacht is moved.
- Using the winch, tension the lifting rope so that the lifting stop is able to take the mast weight.
- Remove all standing rigging using a logical sequence to avoid strain or shock on the rigging. Disconnect mast foot where applicable. **One team member must steady the mast during this operation.**
- The winch must now be used to raise the mast above the boat
- Tie back to the mast all standing and running rigging. (tidy-up)
- Hoist the mast above the guard rail height, ensuring control is maintained and tie the mast heel to the jib.
- Ensure that all lines to the yacht are released before moving the yacht away clear of the mast derrick

- Release the mast heel from the jib and lower mast onto the trestles. Wind conditions combined with mast size and weight can make lowering the mast from the Mast Derrick difficult. To prevent damage it is recommended that at least two team members are used to steady the mast and locate to the trestles. **Do not under any circumstances stand below the load.**

At the end of all operations ensure that the jib is hoisted and belayed in the upright position and all ropes are hanked for the next user. All equipment shall be correctly stored.

Any damage, missing items etc shall reported to the Mast Derrick Coordinator and/or entering a report in the Mast Derrick Logbook kept in the Mast Container.

Section 7 Approved Hand Signals follows on Page 7

Reviewed on 3rd April 2024 by the Health & Safety Committee

To be reviewed after 4 years. Next review due April 2028

7. APPROVED HAND SIGNALS.

