



Beach Pulling Winch - Basic Instructions for Operation and Safe Use

- ALL MEMBERS are to read and understand the instructions before operating the winch. Although a simple device, it is very powerful therefore requires some knowledge and care in order to operate safely.
- **READ** at least these **pages** before operating - Don't just rely upon what you may have been told.
- Only members are to operate the winch. It should not to be 'loaned out' or used for beaching larger craft other than the dinghies, safety RIBs and the race committee Dory.
- RO/OD are responsible for ensuring the winch is closed down at the end of race days. Otherwise, if YOU use it then remember to **CLOSE IT DOWN BEFORE YOU LEAVE** but leave with CLUTCH ENGAGED (this will prevent the cable being pulled out by vandals etc.).

FACTS

- The maximum length of cable is 100 metres and is sufficient to reach the edge of the shingle.
- The mechanism is designed to haul 1.5 tonnes on our beach incline (we are never likely to exceed this but take heed of the available forces at work!).
- The winch drum is driven at a constant 29 rpm and the speed of the cable is intentionally less than 'WALKING-PACE'. The gearbox fixed drive ratio is 50:1 and the motor is 4Kw 1450rpm requiring a three phase (415v) supply.
- The actual cable velocity will vary slightly as the effective diameter of the drum spindle increases (i.e. the spool fills up), but this is scarcely noticeable however as the spool is oversized for the amount of cable used.

ACCESS and PREPARATION

1. To access the winch for operation, lift up the flat cover over the winch house and secure it against being dislodged by wind. Beneath is a hinged control console set partly over the heavy-duty cable drum, gearbox and electric motor. The entire wooden winch house can be lifted off the concrete base for annual inspection and servicing.
2. Hinge the control console board upright and lock into position by sliding downward the slotted wooden peg at the back - to engage with the projecting bolt visible on the rear



support board. Ensure that the metal grill guard is correctly in place over the opposite side of the winch drum.

3. Normally the power will be left 'on'. The winch is operated using the hand-held YELLOW PENDANT CONTROL switch connected by flexible cable to the control system. This controller should be stowed inside the back of the console – do not leave it hanging down by the drum. The control voltage used is low (<24v) for safety reasons. The button on the pendant control unit must be held down to operate the winch motor. You may check for motor operation at this stage - but only with the cable drum drive disengaged using the clutch lever – refer to next section 'OPERATION' - item 8.
4. If the winch motor fails to operate, first check that the rotary main switch (yellow and red) on the console is 'on', then press the RESET BUTTON on the other console box. If winch still doesn't operate then refer to the supplementary instruction sheets for more information. Note that the main winch control panel is located under the stairs in the clubhouse accessed via the clubroom, although attention at that end should not normally be required.
5. The STEPS on the winch house enable a CLEAR VIEW DOWN THE BEACH so must be used for safe operation. The adjacent post or open main gate provides a useful handhold if required.
6. The cable emerges at the beach side of the tunnel via a sheave box under the beach path and should have a short length of heavy rope attached. Note here that the winch operator should always STOP the drive BEFORE the CABLE END REACHES THE TUNNEL ENTRANCE (a safety device exists to stop the drive motor and this has proved reliable so far – but please try do not provoke trouble through such inattention).



INSTRUCTIONS for SAFE OPERATION

1. NEVER operate single-handed to draw a boat unguided up the beach. As a minimum there MUST BE one person at the boat and one operating the winch.
2. Very young members and children ARE NOT ALLOWED TO USE THE WINCH. Children should not be allowed nearby when it is in operation.

Members with youngsters under their supervision please note that, regardless of intellect or enthusiasm, they are usually not tall enough to have a good general view, are more easily distracted from the RESPONSIBLE task at hand and often show unjustified confidence.

Any or all of which can create danger to themselves and others.

3. TEENAGE MEMBERS in particular, please take your responsibilities seriously when operating this powerful machine, so as to avoid possible injury to yourself and others. READ ALL THE INSTRUCTIONS, remember that accidents are avoidable and, above all, CONCENTRATE when you are in control.
4. ALWAYS use the winch house steps to ensure a CLEAR VIEW over the beach. Be constantly vigilant for people in the way or any obstructions e.g. especially someone stumbling in front of the boat being retrieved.
5. Be particularly VIGILANT when the boat approaches the beach path ramp. This is where a trolley wheel can be obstructed, where helpers often trip or stumble beneath the boat, and where bystanders get in the way. Be prepared to stop the winch or shout instructions when necessary.
6. The leading person at the boat end should use 'banksmen' hand signing protocol i.e. flat palm raised to stop and a high raised hand/arm rotary movement to indicate when it is safe to start pulling. One person in a party of helpers (e.g. for the safety boat) should be positioned at the bow checking that every one around the boat is in a safe position. This person should be the sole signaller to the winch.
7. The winch motor will only drive the drum one way, i.e. to PULL. When driven the cable winds on TOP of the drum having been drawn through the beach tunnel via a heavy roller guide visible at the winch house entrance. The cable is metal with a nylon core so treat it with respect – any bad kinks or broken strands occurring mid-length mean total replacement (expensive). The cable should always be self-centred on the tunnel



entrance roller. A tight (well-loaded) cable will lie down evenly across the drum provided that the underlying layers are also wound tidily on to the drum i.e. with NO LOOSE LOOPS. Try not to retrieve a totally unloaded cable.

8. To DRAW OUT CABLE first RELEASE the CLUTCH (this connects the motor drive to the drum) using the metal handled arm and by swinging it toward the Clubhouse. This draws back a simple dog clutch via a metal yoke and disconnects the cable drum from the motor/gearbox drive.

9. The drum is now free and cable may be drawn down the beach. Please ensure that the drum rim friction brake has been left very lightly 'on' otherwise THE DRUM MAY OVERUN* if the cable is drawn out too vigorously. Adjust the brake if necessary, using the brass screw on the brake band but not too tightly otherwise it will be tiring for the beach party.

**This results in a 'birds nest' which, if not corrected (...by running out and re-spooling the cable whilst under some load...), will result in loose cable on the drum leading to damage (by kinking) if awkward loops are trapped under heavy load. Loose cable loops rotating on the drum are also a potential danger and could snag the mechanism.*

10. RE-ENGAGE the CLUTCH to RETRIEVE. Be watchful along the cable and for instructions from the boat signaller – there may be problems at any point and the distance is usually too great for effective hailing.

11. As the cable end approaches the tunnel entrance be prepared to stop the winch early and BEFORE THE CABLE END HITS THE STOP. If this occurs a safety mechanism will stop the motor but the cable will then remain tightened under the pre-load until the drum is manually back-spooled. This is achieved by switching off the power (using the rotary switch), BEFORE reaching down to the motor gearbox coupling, gripping the flange disc (marked with white arrowed tape) and turning to release the load on the cable. With the cable now slackened the power may be restored but the RESET BUTTON must also be depressed to allow the winch to operate.

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