

Ventilator Sailing Protocol



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SAFETY MEASURES TO ADDRESS BEFORE SAILING

Special Consideration for Adaptive Seating Specialist.

See attached photos indicating these very important safety features.

NOTE: It is imperative that all these functions are operational before attempting to have a ventilator dependant quadriplegic sail the Access 303S.

1. Sailing Seat

A special sailing seat is to be constructed by an Adaptive Seating Specialist. Use the fibreglass pattern supplied as a guide to the external dimensions and angle of the finished seat. This seat can either be for a specific sailor, or a general seat with adjustments – so long as the sailor is supported in the appropriate manner.

2. Strobe Operation Light

A flashing strobe light is to be mounted on the back of the sailing seat and wired to the ventilator. The flashing light indicates the correct operation of the ventilator.

3. Panic Button

Carefully positioned on the chin control so that it can be tapped by the sailor's cheek/chin to turn off the Strobe Operation Light to indicate that assistance is required.

4. Safety Boat

A safety boat manned with three personnel is to follow at the stern of the boat whenever a ventilated quadriplegic is sailing. The crew will consist of :

- ✓ Licensed rescue boat driver
- ✓ Experienced crew
- ✓ The sailor's carer who is familiar with ventilator operation, and needs of the sailor.

It is the carer's responsibility to keep a vigilant and constant watch on the strobe light and indicate to the boat driver if assistance is required. The safety boat will NEVER be out of vision of the strobe light.

5. Walkie Talkie

The ventilated sailor and carer are to wear voice activated walkie talkie to have the capability to communicate with each other. If additional walkie talkies are available the sailor may wish to take instruction from a sailing coach.



Ventilator Sailing Protocol

General

The PLV 100 ventilator and the grey plastic control box are located in a splash protected compartment behind the sailor. The patient circuit emerges through the forward port side of the compartment. Sealed batteries are located next to the centreboard case.



The batteries supply the ventilator and also power a strobe light (located on the seat backrest) which will operate at all times during normal ventilator function. The strobe light plugs into the control box which is in turn connected to the batteries and the ventilator alarm circuit. The strobe light stops operating in the event of a ventilator alarm.



A chin operated switch allows the sailor to call for support. A single push on this switch will turn off the strobe light and a (provided that the ventilator is operating normally) a second push switches the strobe back on. The call switch glows red when the strobe operates.

Everything is working properly if the strobe is flashing; the sailor requires immediate assistance if the strobe stops.



Never forget that this system relies on an observer to maintain watch on the strobe light, and to respond if the strobe stops flashing.

➤ **Equipment required in the dinghy**

The sailor needs to wear a voice activated walkie talkie.

➤ **Equipment required in the support boat**

A self inflating resuscitation bag and a portable suction device. These need a splash proof container suitable for easy transfer to the dinghy. The carer also needs the other walkie talkie.

➤ **Before setting out, fill fuel tank on the support boat, and ensure that the ventilator batteries have been fully charged.**

Basics for support boat operation

1. The support boat requires three crew:

- the helmsperson.
- the carer/attendant for the ventilated sailor and
- a crew member to assist the attendant to board the sailing dinghy if necessary.

The support crew must wear PFDs.

2. The support boat is to remain close to the ventilated sailor and positioned so the strobe can be seen.

3. At all times, a designated crew member of the support boat (not the helmsperson) is to maintain watch on the strobe light and have no other duty except when providing assistance. **Should the strobe cease operation, the support boat is to immediately come alongside the ventilated sailor and determine if assistance is needed.**

4. **Note:** The attendant needs on-the-water practice in boarding the sailing dinghy, before having to do this in an emergency.

Setting up the ventilator

1. Install the ventilator batteries. Fit the Ventilator Safety Circuit Control Box with its 3 leads.



- a) Control box power input to plug into the power supply lead.
- b) Power output to plug into the ventilator top.
- c) Safety Circuit lead to plug into the ventilator base.



2. Locate the tie down cords to prepare for the ventilator.
3. Plug the safety circuit into the base and lower the vent into the compartment.
4. Plug in the control box and ventilator power leads.
5. Tie down the ventilator and fit the foam padding to localize the ventilator.

6. Fit the Patient Circuit, its 1" air line and 2 small bore clear tubes through the large hole behind the sailors left shoulder and push them onto their respective fittings at the top right hand corner of the ventilator.



7. Pass the chin operated panic switch and strobe light leads through the 1" hole behind the sailors right shoulder and plug them into the safety circuit control box.

8. Test the system: if the ventilator is on and working normally, the strobe flashes. If there is a problem, check all connections and try operating the call button (which may accidentally have been operated). Check that the strobe stops when the ventilator alarm sounds, or if the call button is pushed.

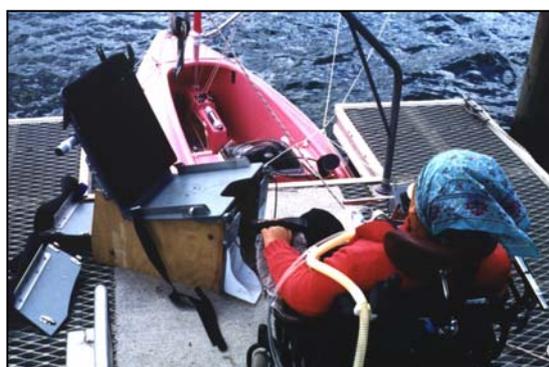
Do not go sailing if the system does not work.

9. Fit the dome to protect the ventilator, ensure that all the boats servo assist functions are working correctly, then prepare the seat.



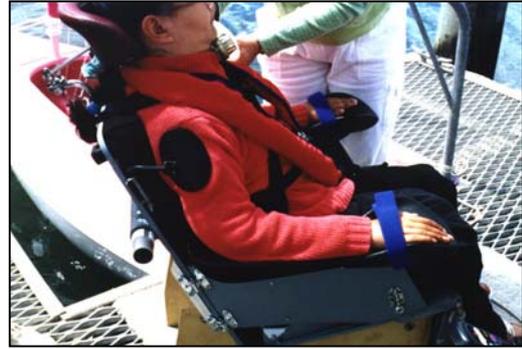
Seat preparation and transferring the sailor.

1. Before proceeding the boat should be in the water, sails fully reefed and the keel locked in place, and the servo assist electrics tested with the rudders parked in the centre.

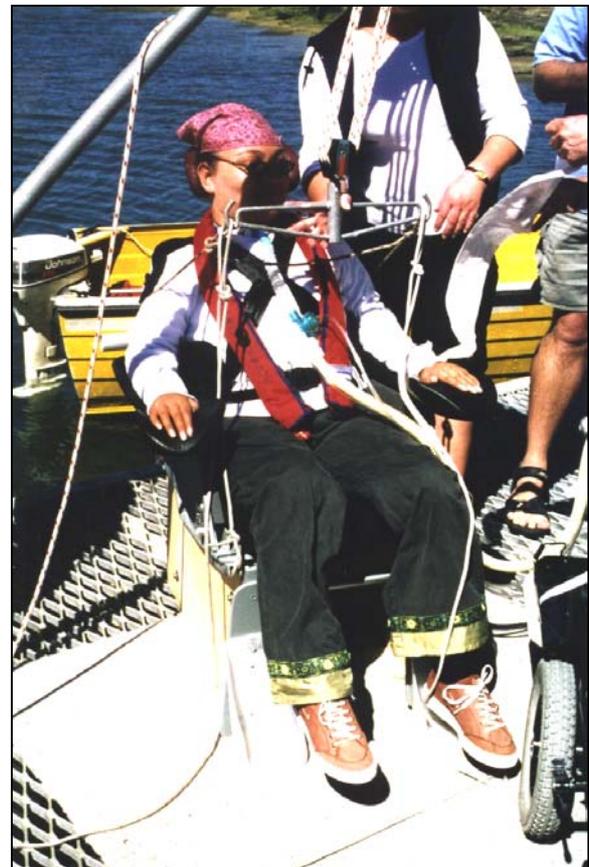


2. Set up the sailing seat on its stand correctly positioned beneath the transferring hoist. Open both or one of the arm rests and one or both the shoulder supports, clear the shoulder straps making ready for the transfer.
3. Position the wheelchair in preparation for transferring the sailor from chair to sailing seat.
4. Either transfer by hoist and sling or an experienced nurse/carer may transfer manually. The operation should be discussed and planned to be as efficient as possible to minimise the time changing from chair to boat mounted ventilators.

5. When the sailor is safely breathing via either the boats or the chair vent close the armrests/thoracic supports and shoulder supports, and cross both the shoulder harness and attach. Ensure they are below the inflatable life jacket, that is the jacket must be free to inflate outside the safety straps.



6. Insert the seat upper tube into the sailing seat and prepare the rope stops. The long stops go around the leg support's hinges, the short stops around the upper tube ends.



7. Prepare the boat by removing the dome, clearing away the patient circuit hoses and the joystick arm from the path of the sailing seat and switch on the ventilator. Also the boats servo assist electrics should have been tested and rudders and joystick parked at centre. If all is Ok proceed with the transfer.



8. Ensure the carer is standing by with the inflation bag, then take up the weight on the hoist, remove the air line, raise the sailor and swing her into the boat and carefully lower the seat into position. **Ensure the seat passes behind the manual joystick at the back of the centreboard case and doesn't ride above it.** ASAP attach the sailor to the boats patient circuit.

9. Remove the slings, tuck them along the sailor's arms, fit the servo assist joystick, lock it in the correct position with a 5mm allen key.

10. Check the ventilator settings, arrange the hoses, and fit the perspex dome hatch.

11. Unreef the sails to the appropriate area. Set the sheets for sailing to windward and adjust the jib sheet to fine tune the two sails relationship.

12. Finally have the sailor check the operation of the steering and sheet winch, test the walkie talkies, and when the safety boat is on station and waiting untie the paynter and push the boat out to give it momentum.

