



Dealing with Entrapment of a Sailor Under a boat/and or in rigging

Capsizing is a common occurrence for beginner and intermediate sailors in dinghy programming. Without quick reaction from the crew, a capsized boat will continue to turn over until the boat is turtled. Turning turtle means that the hull has completely turned over and the mast is vertical or nearly vertical below the water. Turtling is not a situation to be irrationally afraid of, however it is important for both athletes and coaches to understand the risks involved and be adequately prepared for situations where crew members may become tangled in rigging or submerged under the hull.

Situations where an athlete may be under the boat in a turtle or tangled in lines may occur on occasion. Coaches should aim to orchestrate a rescue from within the coach boat whenever possible. The coach boat is your primary safety platform and best tool for ensuring the safety and security of your athletes. The following is a basic response that can be applied any time an athlete MAY be stuck under the boat. The primary indicator for this procedure is approaching a boat where only one of the crew visible following a capsize (the steps assume a double handed boat).

1. Immediately check a capsized boat for two sailors.
2. If only one is visible make sure the visible sailor was working toward or on the dagger board.
3. Use a VHF radio to hail another coach boat or a coach on shore and indicate that you may have a crew member stuck under the boat.
4. Drive the coach boat to the mast side of the capsized boat and look for the second sailor.
5. From the coach boat, using either the shroud or the mast begins to right the boat working to the mast head. Once upright stabilize the boat in a capsize position.
6. If the trapped athlete is not responding immediately activate your EAP.
7. If two instructors are on the scene, one instructor enters the water and works to free the student, using either a knife or wire-cutters stored on the coach boat. If only one instructor is on the scene, position the coach boat in such a way that you can access the athlete and attempt to free them with a knife or wire cutters.
8. Once the injured crew member is free, secure both crew in the coach boat and continue to follow the EAP.
9. Following all emergency incidents debrief all athletes and coaches on the incident.

Most incidents will not progress past step 4, as once the mast is stabilized the athletes are able to free themselves without any secondary injury.

Be prepared – get equipped!

There are several pieces of essential equipment to be prepared for this type of rescue. All coaches should carry a sharp rigging knife with a sheep foot or Wharnccliffe type blade. Each coach boat should have a set of cross-over style (eg. Felco C7) wire cutters in a ziplock bag in the boat's safety box, and each coach on the water should carry a sharp rigging knife. Although quality cross cutters are expensive the carbon steel blades are ideally suited to cut through steel wire rope found on modern dinghies. Bolt cutters, pliers, vise grips, side cutters and knives are inadequate to cut through wire rope and are not a suitable substitute for carbon bladed cross-cutters.

Rope or webbing cutters are also effective in releasing athletes from harnesses that become tangled in rigging. Gill, Spinlock, Magic Marine and other manufactures make a version that will cut up to 6mm line but are completely encapsulated in a nylon handle making it virtually impossible for a panicked sailor to cut themselves. Dive knives or Leatherman style knives should be avoided as it is too easy to cut yourself when in an emergency. Usually cutting either both or one of the trapeze retractor shock cord or trapeze adjuster line releases the tension on the hook and allows the sailor to free themselves or at least gain enough freedom of movement to allow them to stay on the waters surface. Most of the other issues can be solved with a pair of wire cutters.

To optimize rescues of this type all sailing schools should, at a minimum, do the following:

1. Create a plan that integrates with a standard EAP that instructors use every time a boat capsizes.
2. Every coach boat on the water should have cross-over cutters suitable for cutting steel wire rope (Felco C7 are a reputable brand), a VHF or Personal Radio that is monitored by other coaches and on shore, and a sharp knife in addition to the required boating safety equipment.
3. Students should have rigging or rescue knives attached to their harnesses or life jackets.
4. Instructors must be regularly reminded of the inherent dangers of sailor entrapment with capsizing. It is very easy to become complacent during a season.
5. Clubs need to share their problems and solutions. Communicating frequently with all staff members, administrators and volunteers will improve the safety of every program.

The new CANSail system will increase the competence of instructors teaching trapeze and spinnaker, and also will allow Instructor Evaluators to spend more time training potential instructors on responses to situations like the one above. The addition of the Chutes & Wires component means that there will be a clinic available to highlight these issues and ensure that coaches have at least a theoretical knowledge of potential rescues. It will also mean the instructors that want to coach this level of student will be held to a high standard of sailing and coaching with all emphasis placed on the specifics of spin and trap including relevant safety procedures.

Moving forward the three most important things that need to be addressed in every program are:

1. Training of coaches in proper techniques and rescue methods
2. Make wire cutters a necessary part of all coach boat equipment and 'rescue knives' part of the personal gear for each coach and sailor on a trapeze boat
3. Ensure that students are trained in self rescue and the use of the rescue knives

Acknowledgements:

Many thanks to **Ontario Sailing's Learn to Sail/Race Committee** for putting this file together.

Sail Canada Learning Facilitators whom assisted include: **Rob Lytle, Graham Fraser** and **Ashley Lewis** with assistance from **Morten Fogh of Fogh Marine** in Toronto.