

## **Are you ready to float?**

*Barry Tonge, April 2021*

As an SBYC member you will no doubt have a number of tasks on your pre-launch checklist. Two areas often neglected are thru-hull inspections and ensuring that adequate emergency protocols are in place to avoid or respond to any breaches in hull integrity.

It has been reported that 50% of all boats sinking at mooring are due to thru-hull failures. A 1.5" hole, one foot below the water line will bring 55 gallons of water into the boat within 40 seconds. A little preparation can go a long way to avoid an extremely bad day.

Perhaps you have a set of softwood conical plugs stashed (somewhere) on your boat and you feel that you are good to go. Good luck, if that's your best effort.

Hull integrity breaches could occur in several areas below the waterline:

1. Seacocks may fail in one of two manners: (A) the actual seacock mechanism fails or (B) the seacock/flange becomes unseated from the hull. In the first instance, you may not become aware a seacock has failed until an issue such as a hose leak occurs. In this case you could cut and plug the hose below any identified failure spot using a softwood plug or if evident that the seacock itself is leaking, remove the hose and enter a plug directly into the seacock. In the second instance, a softwood plug inserted into a seacock will not resolve the problem. You will require an external patch around the seacock/flange area.
2. Other thru-hull exposures such as a speedometers or temperature gauges exiting the hull of your boat have the same failure risks as noted above.
3. Inboard motors: There is a low risk of a boat flooding through an incorrectly adjusted stuffing box. A more likely risk to the boat would be through hull damage near the drive shaft external area in the hull due to physical contact with the propeller, or damage caused by a bent or unbalanced shaft causing vibration, hull stress and leading to hull cracks. The motor and shaft mounts along with the bearing shaft hull area should be inspected before launch. Motor vibration could have loosened mounting bolts during the previous season.
4. Hull damage: A collision event leading to hull damage below the water line can be surprising quickly managed with the correct emergency supplies on board. Some remedies can even be managed from within the boat such as the use of a SeaBung® plug.
5. Leaking around Keel bolts is a cause for immediate attention. While it is possible that a cleaning, tightening and sealing may fix the problem, leaking around Keel bolts can also signify substantive issues requiring detailed inspection. Always inspect before you launch.

## **Hull Leak Emergency Supplies:**

There are many emergency hull supplies available today that are advanced in effectiveness beyond the simple softwood conical plug. Here are some relatively inexpensive hull breach emergency supplies you might consider that can serve in multi-purpose breach events:

1. Forespar TruPlug Origina® and Forespar Sta-Plug Mini®.
2. Sea-Dog Emergency Deck Fill Plug® (can be used as a quick hose plug (1.5" hose)
3. LeakSeal® Self-Fusing Silicone Tape.
4. HullSurvivor Emergency Hull Seal® - 10 Inch Diameter
5. SeaBung Emergency Plugs®
6. Composite Patch®
7. Stay Afloat® (an alternative is to carry a toilette wax seal)
8. FlexTape® (comes in 4" X 5' roll) and can be used under water

## **Avoiding and dealing with an Emergency:**

1. Treat the areas around your thru-hulls as no “pack-zones”. Objects sliding around in your hull or objects that place pressure on your seacocks are inviting trouble.
2. Inspect all thru-hulls/seacocks while your boat is in on the hard. There are lots of articles on line on how to inspect seacocks. Inspect the area around the thru-hull for any sign of stress or cracks. Ensure any flanges appear well seated and solid.
3. Don’t go cheap on a bilge pump. You could witness 55+ gallons per minute entering your boat on a seacock or below the water line hose failure. That’s 3,300 + gallons per hour.
4. Ensure your portable bilge pump and your auxiliary manual bilge work. Is the auxiliary handle pump quickly accessible?
5. Have a hull emergency kit stocked and accessible. Minimum contents: thru-hull location chart, seacock and hull plugs, hose plug and hose repair tape, underwater emergency patch and underwater tape such as FlexTape®, dedicated wrenches and multi-head screw driver to service all thru-hull fittings, working headlamp, diving mask or swim goggles.
6. Ensure when placing a plug into a seacock you minimize any pressure on the seacock flange/hull fitting. Being overly aggressive in placing a softwood plug into a seacock may well create more problems.
7. Close all thru-hulls when departing the boat for any extended period. A good trick is to hang your ignition key for the boat’s in-board motor on the water impeller intake seacock to remind you to open the seacock before starting the motor. For those with an outboard find a quickly accessible seacock where you can hang your motor key as a reminder.
8. Lubricate your seacocks. You may already have a zerc style fitting on your seacock to allow for grease, or your fitting may have a 3/4” metal plug at its base that can be replaced with a zerc style fitting to allow for greasing. Some seacock units use rubber inserts that will dissolve in regular grease so you should use silicone-based waterproof grease instead.
9. Ensure your boat orientation for guests includes mention of emergency protocol and location of all emergency equipment, including your hull breach kit location.

Got a tip or a suggestion you think would be good to add - be delighted to receive your input and comments for future revisions: Barry Tonge, CaptainWabamun@gmail.com