

BYC Maine Cruise 2021

Offshore Safety Presentation – DRAFT 3/22/21

Safety at sea is built on a foundation of safety equipment and procedures required of all vessels for in-shore and coastal cruising. Offshore passages, potentially with crew that may be unfamiliar with your vessel, require well understood procedures and clear documentation of safety gear location. Readily accessible information and equipment, is key to keeping the crew safe and the vessel afloat for an extended period while help arrives.

Critical safety elements and equipment

- Boat diagram with location of operational elements and safety gear (samples below)
- Well-defined procedures for conditions, major events/emergencies:
 - Abandon ship (into liferaft or dinghy)
 - Imminent collision
 - Fire
 - Flooding
 - Fog
 - MOB
 - Medical emergencies
- VHF with DSC that monitors 13/16
- AIS (ideally transmit and receive; or receive only, e.g., radio)
- Chart plotter accessible to helmsman w/ paper charts as backup
- GPS Receiver - Multiple sources of location data
- EPIRB in ditch bag
- SOLAS flares
- Radar reflector on mast/rigging at or above the spreaders
- Satellite locator/communications (InReach, SPOT)
- Jacklines rigged on deck from cockpit to bow and attachment points in the cockpit
- Inflatable life vests w/ or in addition to harnesses and tethers for all crew; preferably with crotch straps
 - (Rule: all crew clipped in when on deck offshore, at night and in bad weather in the cockpit)
- Adequate number and capacity of fire extinguishers
- Large capacity bilge pumps – both manual (10 GPM minimum) and electric pumps. Buckets w/ lanyards
- Emergency tiller
- Lifesling w/ block and tackle
- MOM
- Sock-type heaving line
- Storm sail and dedicated sheets ready for deployment
- Liferaft that accommodates all crew
- Plugs tied each thru-hull plus an extra few
- Secure Storage – heavy items tied down (e.g., floorboards, batteries, stoves, toolboxes)

- Two anchors with rodes
- Boom preventer
- Cockpit knife

Briefing: A Second Take - “Do I Feel Lucky”

On our intended cruise to Maine, if you take the direct path from the Cape Cod Canal to Rockland, for 70 miles, or 12 hours (at 6 knots) you will be more than 20 miles from land. 20 miles is a good estimate of a sailboat’s VHF range to a tall receiver (i.e. Coast Guard).

How much equipment do you “need” for this trip if it’s your first experiment with offshore sailing - especially if you’re not sure if you will do this again, or regularly? Enough to make you feel comfortable. Yes there may be other cruisers nearby, but they are not TowBoat US - the boat must be self-sufficient.

In the old days, 1970’s and 80’s, there was no GPS, no EPIRBs, and no affordable liferafts or radar. Yet, people cruised to Maine, a lot. They used LORAN, paper charts, dinghies, and kept their eyes and ears open. Today we can mitigate more risks with more equipment. What they had, and we need equally, is judgement. Know your boat, know your crew, and know your weather. If you have doubts about any of them, don’t go, or don’t go offshore. Many others have said, “the most dangerous thing on a boat, is a schedule”.

A boat, well prepared for the “offshore” has/does the following:

1. Take a test sail with your crew, get beyond Newport into some swells, change a sail or reef, with each helmsman practicing picking up a lifejacket (i.e. man overboard). Find out if everyone’s seasick meds are working.
2. Do a safety briefing. Discuss the safety/emergency equipment is onboard, where is it stowed and, how is it used, and answer questions. Publish (e.g., tape to the inside of the head door), the safety equipment diagram.
3. Bring enough crew. Set a watch schedule, and use it from the beginning. Don’t surprise the crew after dinner by announcing who has the midnight to 2AM, and 2 to 4AM watches. Watch schedules should also specify who cooks, and does the dishes. Match the crew’s strength’s/weaknesses across watches.
4. Establish “Rules of the Boat”; when are lifejackets worn; when are harnesses clipped in; under what circumstances is the watch to wake/call the Captain; when should a approaching boat be contacted by radio; when, if at all, is alcohol consumed; who do you call if you need another hand on deck; when do you reef; when do you turn on the motor; etc.
5. Make sure the off-watch crew is comfortable; warm, dry (no leaky portholes), well fed, and can sleep (leecloths). Require crew to bring warm hats and gloves, foul-weather gear, and boots. The Maine water is cold which makes the air above it cold, the fog is penetrating, and then it will rain.

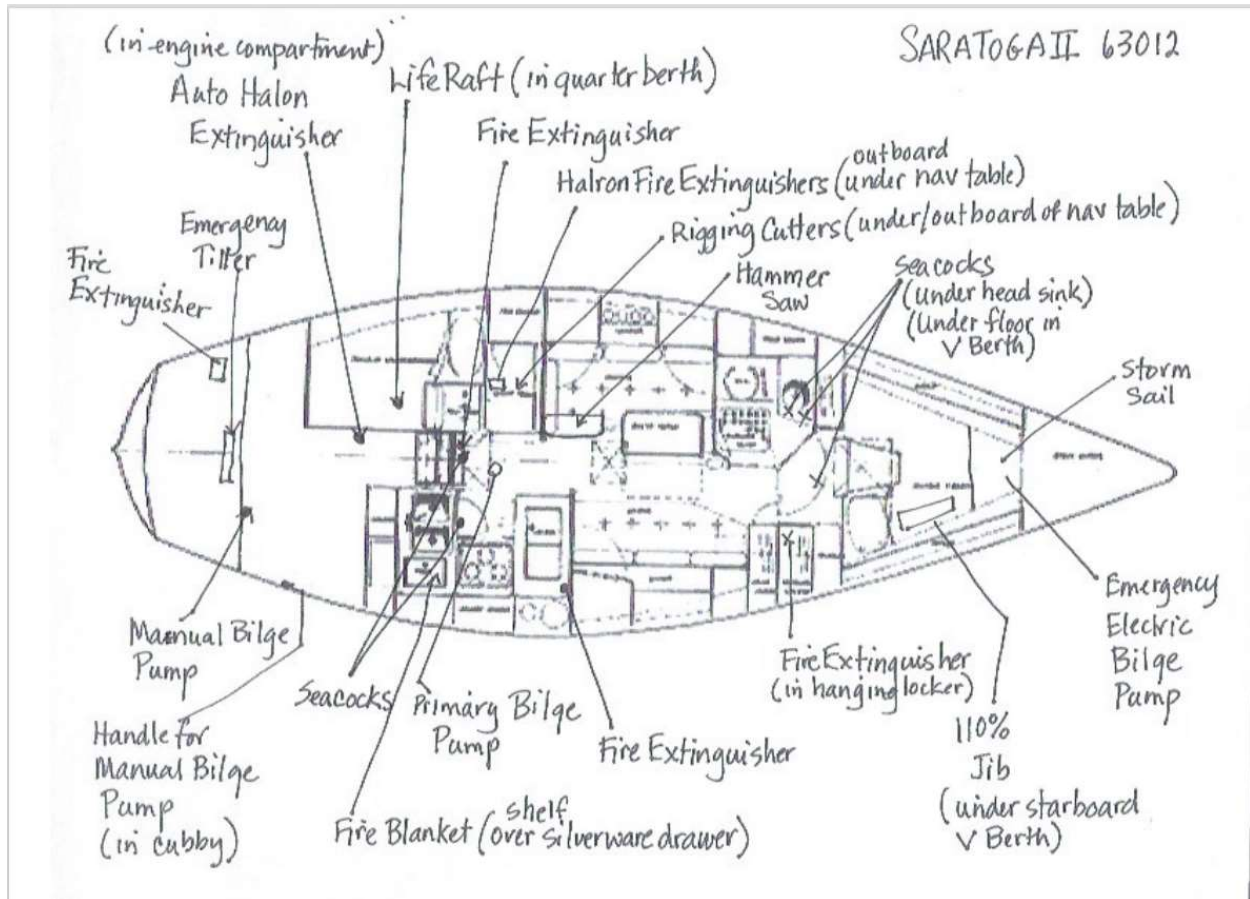
A safe boat offshore has a plan and equipment to deal with each of the following situations.

1. Abandon ship (into liferaft or dinghy), with a prepacked “grab bag” of equipment, including a waterproof handheld VHF, a device that gives location (i.e. nav app on phone in a plastic bag), flares and –if you have them- portable EPIRB/AIS device and inReach device (emergency call plus texts via satellite). SOLAS flares are vastly more visible than USCG approved flares. Don’t throw out the expired ones, they often still work for another few years, but do get new ones - they will perform better.
2. Imminent collision with commercial vessel. Avoid this with rested crew, a good lookout, radar, AIS, and early notification of Captain. Communicate with the vessel by name (available on AIS) on 13 and discuss collision avoidance procedures. A call to a ship that you don’t name is highly likely not to be returned.
3. Fire. Handy fire extinguishers, perhaps a fire blanket. The boat diagram should include the locations of stove fuel shutoff, engine fuel shutoff, and battery shutoffs.
4. Flooding. Wooden plugs for thru-hulls, bilge pump, second bilge pump, sturdy bucket, hose clamps, rescue tape (seal a split hose), perhaps underwater epoxy
5. Fog. A chart-plotter easily read by the helmsperson (could be an iPad running Navionics) is tremendously helpful. Have a fog horn, good ears, wipes for eyeglasses, good foul weather gear, and knowledge of alternate stopping places. Radar is very helpful if you learn how to use yours before you’re in the fog at night, and hear a big ship’s foghorn. AIS is helpful, but doesn’t see non-AIS boats. Keep in mind that in Maine your risk of hitting a rock in the fog is probably higher than being hit by another boat. This goes back to the chart-plotter thing.
6. MOB (man-overboard). Stay on the boat – life harness with tether, and jacklines. Throw cushions, MOM device (self-inflating, detachable, increases visibility). MOB button on chart-plotter. Life-sling type device for crew retrieval/recovery. STAY ON THE BOAT.
7. Medical emergencies. Prior knowledge of serious underlying conditions of crew members and their medications. Communications equipment. As much first-aid equipment as you need to feel comfortable (bandages, splints, pain relievers, Gatorade). Offshore medical book. There will be no ambulance arriving in 4-8 minutes.
8. Engine disabled. Sail
9. Sail rips. If jib rips, carry a second jib. If main rips, will reefing enable you to still use it? Sail without the main or rig the stormsail. Repair sail with sail repair tape and/or stitching.
10. Drinking water pump fails. Foot pump, bottles and/or siphon?
11. Head fails. See bucket above
12. Dead battery. Paper charts, compass, flashlights, hand-held devices (VHF, cell phone, iPad with battery packs for recharging). Solar panel(s)—emergency or fixed.

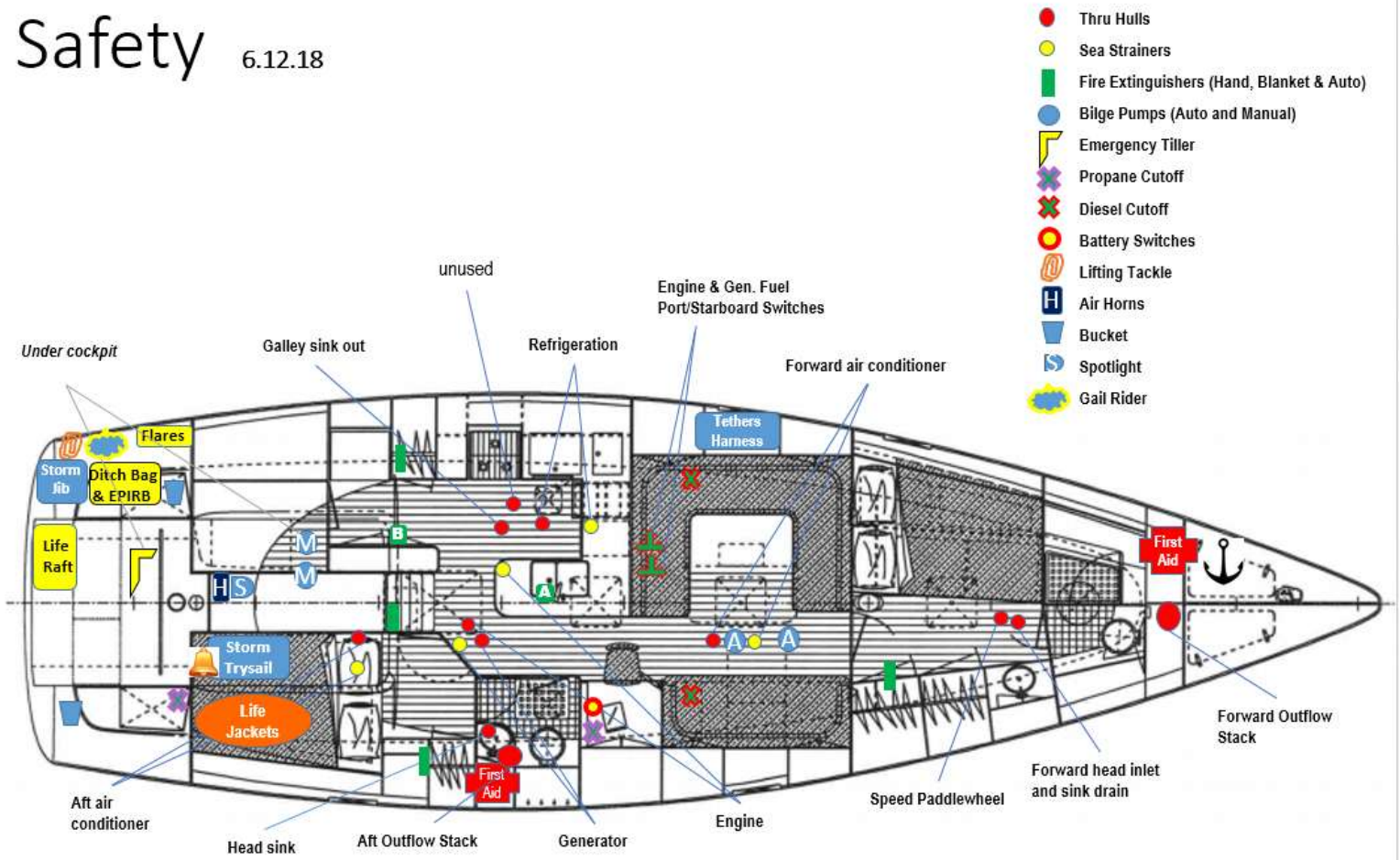
13. Planning. If you have a backup plan for what could happen, you're already in much better shape.

References:

Safety Monohulls <https://marionbermuda.com/2021-race/safety-monohulls>



Safety 6.12.18



Moon Shadow