

“Strickly for Fun” Emergency Manual

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Advanced Retrieval System
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If you review this manual and provide comments to

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**I will provide you with a Microsoft Word version of this document,
that you may modify and use for any purpose on your boat.**

(But sending copies is still prohibited)

1. Purpose

The purpose of this manual is to let everyone know their responsibilities if an emergency arise.

While emergencies are extremely rare, it is best to be prepared, and we have a plan to deal with each of them.

You should study the emergency steps in detail, so that you know what to do.

Emergencies are best handled by teamwork.

The primary goal is to always avoid problems, and if there is a problem to identify it quickly.

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2. Fire

Time is critical, fires double in size every 15 seconds and must be stopped before the smoke is too thick to fight.

If you see smoke, yell Color, SMOKE and location. "WHITE SMOKE IN ENGINE ROOM"

If you see fire yell FIRE and location, "FIRE IN THE GALLEY/KITCHEN"

Crew gathers all available fire extinguishers/fire blankets and brings them to the fire. (To have extras).

Someone needs to retrieve large fire extinguisher from Engine room and to call Mayday then prep life raft.

- Galley Fire** Extinguisher and fire blanket is in the post just outside galley.
Sink faucet is on hose, will reach walls by stove, not for pan fire.
- Pan fire** Cover with blanket or place pan inside oven, do not use extinguisher.
- Propane** Propane switch by sink, or pilothouse or tank valves in cockpit.
- Barbeque Grill** turn off propane at tanks. No switches involved.
- Clothing** Use sink faucet to spray yourself or drop to floor and roll.
- Microwave or Oven** Shut door, get fire blanket.
- Pilothouse:** Fire Extinguisher by right door.
A/C Electrical main selector switch, use red button to turn off inverter, disconnect shore power.
If D/C fire-turn off main battery in saloon and guest stateroom, if paralleled, turn off.
Turn off switch in lazarette. If a backup inverter is running turn off, in guest stateroom.
- Guest** Fire extinguisher in forward closet on right side of boat.
- Stateroom:** Shower head is on a hose and can reach the bow thruster compartment.
Bow thruster fire, turn off guest stateroom power, & master in saloon, if parallel turn that off.
If D/C fire (or bow thruster still hot) cable cutter is inside night stand, cut at battery or in stairs.
Get fire blanket from engine room/galley and cover bow thruster or battery case.
- Engine room:** Pull manual release on floor by ER door to discharge fire extinguisher.
Smoke mask, fire retardant clothes in master head aft locker, check mask fit before entering.
10 lb fire extinguisher, fire blanket, cable cutter and flashlight is just inside door.
Hose with fresh water is by day tank.
White smoke-turn off DC master switches.
Blue/black smoke-fuel fire, fuel valves off, use blanket to cover, no extinguisher, no hose.
Additionally it is possible to fight fire from hatch in saloon floor or from lazarette.
Engine starter motor fire-power switch in lazarette port fwd bulkhead. Cable cutters aft wall.
- Lazarette:** Auto discharge fire extinguisher manual trigger on saloon floor by cockpit door.
Flashlight, cable cutter by engine room to lazarette door, fire extinguisher blanket @ other door.
Hose with fresh water is by day tank, and in aft cockpit.
Blue dark smoke-spare oil, lubs, use blanket to cover, no extinguisher.
White smoke-turn off electrical masters, and cable cutters by engine room door.
Inverter-Turn off power or cut DC cables, AC turn shorepower and inverter circuit breakers off.
- Saloon:** Extinguisher and fire blanket in post just outside galley.
Hose by aft door.
- Windlass:** DC master power switches (guest stateroom stairs to head and saloon starboard settee).
Fire extinguisher by right pilot house door, hose on foredeck.
- To use fire extinguisher:**
If you cannot remove the pin, place extinguisher on floor, step on body and pull pin.
Point at base of flame, work from outside in, force edges of fire back or into corner.
Pulse handle, sweeping motion, discharge lasts 15 seconds.
If too hot to enter, spray in air to cool the air.
- Smoke filled Space:** Smoke mask, from Master stateroom, check fit by sucking in.
Fire-retardant jumpsuit, collar up, fire gloves, wet down clothes in shower.

3. Collisions / Taking on Water

If a collision cannot be avoided.

Turn autopilot off by pressing STDBY.

Turn the boat to side-swipe the on-coming vessel.

Due to the bow wave you might miss the boat, or get off with a scratch!

YELL BRACE FOR IMPACT (DIRECTION)

1) Turn to direction. 2) Hold on. 3) Bend knees. 4) Bend arms. 5) Protect head from sharp objects.

After Impact:

Helmsman: If the generator is running turn generator off.

Turn off inverter by pressing red button until underline at Off

Turns off all A/C in power panel, all 120/240 volt meters read zero.

Reduce speed to minimum necessary (dead stop in calm seas steerage in rough).

Grab quick leak kit, from guest head and bring to captain.

(Dive mask, Nerf ball, toilet wax, towels, wedges, hammer, headlight.)

Captain: Start checking from point of impact.

When/if the high water alarm triggers start checking from engine room.

The time between the impact and alarm indicates how fast the leak is.

When hole found, yell its location and size. i.e. "6 inch hole guest head"

Stem major flow of seawater with quick plug supplies.

Shove Nerf ball, wax in hole, wedges or plugs into hole / crack.

If object is intruding into hull place cooking pot over hole and shore in place.

Mate/crew: Starts searching from guest head back.

Crew If crew can be spared, they continue checking for any additional leaks.

Check the bilge pickups are clear.

Deploy additional pumps; one in guest head, one in engine room, manual pump

When leak is flow is reduce to the level the pumps can keep up with:

Check and treat any medical injuries.

Keep checking that the bilge pickups are clear.

Take a moment to think about longer term patch.

Crew: Brings emergency patching kit to location of hole from engine room.

(Waterproof Epoxy, plywood strips, fast setting caulk, saws etc.)

Place patch of sufficient strength and durability for the trip to a place to get hauled.

Use fast set epoxy, plywood strips and fast caulk, pot over intrusion.

Use shoring to hold in place. 2x4's, motorcycle tie downs, jack and wedges.

Set up standalone bilge alarm near leak.

If water level rises to near battery level and you lose electrical lost call all maydays.

Small size hole: Wax, Epoxy, small crack in the hull, drill a hole at both ends to stop propagation.

Window /Hatch:Emergency hatch covers in lazarette (has handles & fastening system) use towels to patch.

If there is leak with an item sticking thru the hull.

Put a caulked pot over the item and brace, or tie down item.

If hole is large: Use foddering blanket, stored in deck locker.

4. Abandon Ship

Teri: Get EPIRB & Papers bag from wet locker and put around neck.
Call Mayday on VHF, Sat Phone (phone numbers next to sat phone) SSB.
VHF Lift read cover and press RED button 5 seconds and then when the radio switch to 16 talk.
If time alternate method is to press menu enter problem and then press red button 5 seconds.
Talk Slowly
Mayday(3) This is Strickly for Fun(3) Mayday WDB5096.
(Lat), (Long), (emergency), 17 meter white with blue canvas.
(number of board) Strickly for Fun WDB5096.
Grab 2 VHF handled radios, GPS and handheld satellite phone from battery barn.

*** IF the CAPTAIN has made the FINAL decision to ABANDON SHIP***

Scott: Confirm life raft line attachment line is attached to the boat in the locker.
Deploy life raft from under settee on downwind side of boat, (back to wind).
Yank line to inflate.
(If you deploy the life raft too soon, the wind will blow it to far away to enter!)

Guest/Scott: Haul raft back to boat, cleat off close by.
Confirm attachment line is attached to the locker, move water and flares bag to the cockpit.
Confirm attachment line is attached to the locker, move abandon ship bag to cockpit.

Teri or Guest: is first in raft.

Scott: Throw water bag to Teri/guest in life raft.
Throw grab bag to Teri.

Second Guest: Get 2 water jugs from lazarette.

IF TIME: Get Exposure suits from flybridge.
If seas allow; release the dinghy, keeping the cover, attach line to life raft.
Everyone takes sea sickness pills, patch.
Get extra food from galley and place in empty dry sack in life raft locker.
Get dry sack with extra clothes from each stateroom..
Everyone put on warm clothes.
Everyone drinks as much water as possible.
Everyone goes to the bathroom.
Throw saloon cushions into life raft.

To enter raft: Jump on it, missing other people in raft.
If in the water, go to life raft ramp, and use blue webbing to pull yourself up.
Heavy persons enter raft next and injured persons enter last, so no one lands on them.

Operating flares, pistol and other emergency devices, wear leather gloves in water/flares bag.
Handheld flares point horizontal, wearing gloves, hold over water (the slag drops!).
No one looks at flares while burning--it ruins night vision!
Point parachute flares upwind of boat 15° from vertical water and shoot.

Emergency escape hatches

Guest head thru large hatch.
Master stateroom thru ceiling panel with hand-hold.
Lazarette using ratchet and socket wire wrapped to ladder.

Time limited Life Raft items

2007 Vitamins, C batteries (6), Jolly Rogers (3 bags), Life raft rations
Aug / 2008 life raft, flares, VHF handheld batteries.

5. Man Overboard

- First Responder** Anyone seeing someone fall overboard yells "Man Overboard".
They point and keep pointing at the person in the water.
Never take their eyes off the person in the water, not for even a second.
Boat travels 100 ft in 6 seconds. In a 2 knot current a person drifts 180 feet a minute.

WATCH STANDER

- 1 Immediately press and HOLD the MOB button on the GPS system.
- 2 Throttle back, and place the engine into neutral (still holding the button)
- 3 Then looks at the GPS and when GPS asks for yes, press [enter].
- 4 Then give 5 blasts on his whistle (this lets person in water know we are looking for them)
One second on one second off

Decided if distance, seas and swimmers condition will allow person to swim to boat or return.

One option let person swim to boat, or back the boat to within 100 feet and stop.

If elect to return to person using life sling Scott will take the helm.

Deploy the life sling and circle the person

(which pulls the line to the person like a water-ski rope is pulled to a water skier).

NOTE: If you are the person overboard:

- 1 Shout "OVERBOARD" as soon as possible.
- 2 Don't swim after the boat, wait for the boat to stop or comes back to you.
- 3 Inflate life vest by pulling on the orange balls. (YOU WERE WEARING YOUR LIFE VEST right!)
- 4 If you have YOUR radio call on channel 16. (YOU WERE WEARING A RADIO)
- 5 Turn on your Strobe. This is exceptionally important at night.
- 6 To increase your visibility **splash water, wave colored clothing** held high.
- 7 Conserve strength and warmth by assuming the HEAT position.
Life Vest is Tight. Feet crossed at ankles, Knees to chest, hands around knees or in armpits.
Do not swim unless you can see the life sling or the boat.
- 8 Get your whistle ready to use, it is on the left side of you life vest (along with a signal mirror)
- 9 When the sling comes to you--put it on over your head and under your armpits.
- 10 If you can clip the two sides of the life sling buckle together do so.
- 11 We will pull you to the swim platform.
- 12 We will attach you to the boat before lifting.
- 12 If you cannot get up or it is too rough we will use the electric winch to lift you aboard.
(This is the same winch used to load/unload the 800 pound dinghy)

If you go overboard without someone watching we will commence a search backtracking our course with adjustments for current. You will know we know you are gone when you hear the horn.

Missing Person Search

Use horn 5 blasts to let person know we are looking for them.

Go to best guess spot and throw over floating life vest. This will show drift.

Use Binoculars when searching. When looking for a person keep your eyes scanning (left to right)

If person has radio begin calls.

We will search using the expanding box pattern. 1x, 1x, 2x, 2x, 3x, 3x, 4x, 4x etc.

Use of Hoist (mast boom) to raise someone out of the water.

Insert control from deck box.

Loosen guys and lower hoist to unhook dinghy,

Unhook and push over side 90° to the side of the boat.

Attach to life sling .

Lift out of water and swing to swim platform.

Also maybe need to use dinghy to get someone in or to look for someone.

6. Emergency Communication Procedures

Identify position

1. Make sure GPS is on, it is on the right side of the left instrument panel, label GPS 32.
2. Make sure current position is displayed (press pos button).

Use VHF radio first.

1. Make sure VHF radio is turned on (use the VHF 602).
2. Make sure the volume is turned up (3 o'clock position).
3. Turn squelch until is heard.
4. Press emergency button (lift cover first) and hold for 5 seconds panel counts down and 5 beeps.
5. After you see the channel 16 displayed press the button on the side of microphone to talk
6. TALK SLOWLY and release the push to talk button to be able to listen.
7. If no one responds wait one minute and repeat (try 3 times).

What to say:

8. **Mayday, Mayday, Mayday.**
9. **This is motor vessel "Strickly for Fun Strickly for Fun Strickly for Fun".**
10. **Position is** (*Read off of GPS*).
11. *State problem.*
 - i. **On fire & need rescue.**
 - ii. **Sinking & need pumps / rescue.**
 - iii. **Man overboard & need help searching.**
 - iv. **Drifting to rocks & need tow.**
 - v. **Medical emergency & need medical evacuation.**
12. (*Number of people on board*) **Souls on board.**
13. **The boat is 50 feet/17 meters long Trawler, white.**
14. **We are listening on channel 16.**
15. **This is vessel "Strickly for Fun".**
16. **Over.**
17. **Release microphone button.**
18. *Wait one minutes if no response- repeat.*

Extra data

Medical calls are pan, pan medico.

Mayday relay is: (*Mayday Relay* x 3) (*This is "Strickly for Fun" x 3*)

Mayday silence is (*SEELONCE MAYDAY to all stations*)

End silence is (*SEELONCE FEENEE*)

If you cannot reach anyone one on VHF channel 16 try 6, 22A, 72.

SSB mayday enter frequency as 21820, 41250, 62150, 82910, 122900, or 164200 and press enter.

Iridium Rescue phone calls

Atlantic Rescue Phone Number 000-1-(757) 398-6231

Pacific Rescue Phone Number 000-1-(510) 437-3700

Mediterranean rescue numbers are posted next to the sat phone.

7. Medical Evacuation

Contact medical service to arraigns evacuation.

Contact coast guard on channel 16 or 2,182.0.

Plan Identify direction where rescue craft is coming from and speed.

Intercept Turn to agreed upon intercept course.

Estimate location for pickup based on combined speed and distance.

Identify which Radio channels will be used.

Prep person Place life vest on patient (they will be going over water).

If this is a child determine which adult will accompany them.

Keep the patient warm (or cool).

Immobilize injured extremity, use Sam Split, inflatable splint or traction splint.

Document DRUGS (dosage and time), treatments, and symptoms again by time.

Put passport, credit card, money, insurance card, cell phone in a bag inside their clothes.

Prep boat Remove all outside items that can fly - especially lines, fenders, covers and BIMINI.

If night turn on boat deck lights, spotlight, deck lights.

Lower both antennas, 502 VHF antenna on top of mast is not removable.

Get smoke signals from flare bag in saloon.

Get headsets, handheld radio and book hook ready.

Keep watch Establish radio contact with rescue craft.

Use headset (from docking kit) to talk between helmsman and person helping with evacuation.

Use RADAR to watch for rescue craft.

When painted by radar Communicate with rescue craft.

Radio radar contact, distance and heading corrections.

Report wind direction and speed.

Radio wave heights and directions.

Radio height of mast is 30 ft and that all antennas are down.

Report any other traffic in the air or the water.

Update them on patient's condition.

Ask where they want to pick up, off aft boat deck, or front deck or dinghy.

Ask if they want you to pop smoke. (Lee side of boat)

Tell them if you need a rescue swimmer.

Since helicopters are piloted from starboard seat turn to place the wind over the port bow at 30 degrees.

If night, tell everyone to look away from helicopter to avoid temporary blindness from lights.

Get basket Wear gloves and helmet, water goggles, and headset.

Use boat hook to get steadying line.

Discharge static electricity before touching (let basket touch water or boat).

Get steadying line. One person manages this line to the litter.

Have lots of extra cable before letting anyone get in or disconnect the line.

(This is to prevent turbulence from yanking basket off boat.)

If you have to move the litter to get to the person disconnect the line.

Maintain tension on steadying line at all times.

Be prepared to use dinghy or life raft.

8. Remote Medical Report

Reporters Name: _____ Patient Name: _____
Vessel Name: Strickly for Fun Cell Phone Number: _____ - _____ - _____
Sat Phone Number: 1-480-768-2500 wait and then 8816-3155-6507
Date: ___ / ___ / ___ General Location: _____
General distance and time from Medical Help: _____
Illness/injury: _____

How did it happen/develop: _____
What as the patient doing prior to onset: _____
Diarrhea / Vomiting / Shortness of breath / Weakness / Pain
Temp: _____ BP: _____ / _____ Pulse: _____ Respirations : _____
Location of Pain: _____ Does it radiate to another part: _____
What makes it worse: _____ What makes it better: _____
Sharp / Stabbing / Constant / Dull / Cramping / Intermittent / Burning
When did it start: _____
Is it increasing / decreasing Severity 1 – 10: _____ Does it change with time of day: _____
What does the patient look like: _____
Sick, in pain, unconscious, delirious: _____
Head / scalp: _____
Facial coloring: _____
Eyes: _____
Ears: _____
Nose: _____
Throat/teeth/tongue: _____
Neck: _____
Chest and Ribs: _____
Abdomen: _____
Pelvis and genitalia: _____
Arms/legs/hands/feet: _____
Consciousness: _____ who, where, simple commands, two step commands
Medical equipment: _____
Medications Name: _____ Date/Time: _____ Dose: _____
Medications Name: _____ Date/Time: _____ Dose: _____
Medications Name: _____ Date/Time: _____ Dose: _____

Medical Advice: _____

Treatment Plan: _____

Re-contact: _____

9. Thru hulls.

Thru-hulls are the devices valves that stop water from a leaking hose flooding the boat.

Most leaks on a boat are from hoses leaking.

Operating the thru hulls / sea cocks – to stop a leaking hose!

To close turn 90° from direction of pipe. Notice location of stop screw and turn opposite direction.

Each thru hull is labeled.

If thru has failed, insert wooden plug and hammer it in. Each thru hull location has plug and hammer.

(Each location has 2 size plugs one for fitting, one for full thru hull).

Below the waterline thru hulls by location:

Guest stateroom thru hull locations under floor in center of stateroom.

Raritan head discharge **1.5” HF seacock**

Sealand T-12 sewage tank discharge **1.5” HF seacock**

Owner’s head thru hull locations cabinet under portlight.

Raritan head discharge **1.5” HF seacock**

Sealand T-12 gray water discharge **1.5” HF seacock**

Wet bilge thru hull locations center of engine room.

Salt water wash down thru hull **3/4” HF seacock**

Generator intake thru hull **3/4” HF seacock**

Marine Air pump intake **1.0” HF seacock**

Water maker intake **1.0” HF seacock**

Yanmar #JH3E intake thru hull **1.0” HF seacock**

Manual Bilge Pumps – in Saloon.

Lift floor panel up in saloon at rear door.

Insert handle in pump. Found inside of hatch at back (aft) side.

Pump back and forth. The best bilge pump is a scared crewmember!

The following table indicates how much water will get into the yacht for various size holes and how long it takes to sink!

Hole Diameter	Area	Times without spare pump in use.		Time with pumps.		
		GPM@5ft	lbs per minute	Time to sink	GPM-pumps	Minutes to sink
1	0.79	27	224	321.3	-35	Never
1.5	2.4	61	506	142.6	-5	Never
2	3.14	108	896	80.3	46	188.6
3	7.07	242	2009	35.8	180	48.2
4	12.57	430	3569	20.2	368	23.6
5	19.63	672	5578	12.9	610	14.2
6	28.27	968	8034	9	906	9.6

Emergency (Crash Pumps)

2,000 gph is located in engine room, 3,700 is located in forward bilge.

With one spare pump in use our bilge pumps can pump out 116 gallons per minute. (7,000 gallons an hour)
Our pumps can keep up with any broken hose or give us more time to plug a hole.

10. Run aground

First step: (2 minutes)

Teri Check for leaks.

Scott If hit slow try backing off right away.

Time with a big wave or wake from another boat to help off

Use wing engine and bow thruster to wrenching from side to side.

Once moving, do not stop.

If the tide is rising wait.

Second steps: (20 minutes)

Scott Advise Coast Guard if any danger.

All Put on life vests.

Shoes and gloves on all around.

Scott Check depth around boat, using battery depth finder from pilothouse on boat hook,
Or lead line from fallback crate in lazarette, or fishing rod & weight, or swimming.

Male Guest Help get dinghy down.

Scott Using dinghy to place anchors out in direction to pull off with longest scope possible.
Tie main anchor to bow of dinghy, throw anchor chain over, then cut the line to drop.
Kedge anchor is FX 55 attached to 50 ft chain and line already rigged.
May need to place multiple anchors to prevent blowing into rocks/beach etc.
Third anchor is CQR on bow, needs to be attached to line takes 5 minutes.

Third steps: Tilt boat by lifting dinghy to hoist, heeling to one side.
Pump water to other tank using deck hoses.
Lighten boat by removing water and fuel $(1450*6 + 350*8.3)=11,600$ lbs.
If we ask the Navy for help we must say the reason is "we are a hazard to navigation".
Scouring using high-pressure hose, props in forward (if anchored).
Bell 3 distinct strokes, a rapid ringing, 3 additional strokes every minute.

If lying over: If the tide is going out make sure boat tilts to uphill side. By line off mast, anchors etc.
Duck tape all vents, holes, hatches, windows, door, openings, lockers etc.
Turn off fuel, power and propane.
Protect hull from rocks using cushions.
Turn off bilge pump float switches if heeled over sharply and pump is running without water.

Leave boat: Leave boat using shutdown checklist.
Close all seacocks.
Double check bilge pump settings.
Turn off bilge pump float switches if heeled over sharply.
Underwater survey for damage rudder, props, hull, best route.
Place Lights-1 anchor, 2 red, 3 black balls.
Flags JG dangerous condition, JH not dangerous.
Last effort to swim to shore, use fender as buoy and anchor rope to shore.

11. Bad Weather Preparation

General If there is a lightning storm do not touch any metal.

1. Make sure crew has taken seasickness pills, and gets sleep before it is needed.
2. Brief crew on what to expect and review watch, sleep and abandon ship activities.
3. Push headliners up so there are no lose ones.
4. Make sure everything is picked up, no clothes, camera's, books left out.

Top Side

1. Install storm window covers. (Should be done early)
2. Install Jack lines. (Should be done early)
3. Check topside for any lines, FENDERS or items are left out.
4. Double tie dinghy cover.
5. Double tie Bimini back.
6. Lowers flags, lash all lines at mast.
7. Remove dorade vents Install vent covers.
8. Plug chain pipe with towel around chain and tie wraps.
9. Check anchors are secure. (Use wire cable/turnbuckle to secure anchor)

Sea Anchor Use Sea anchor deployment checklist.

Pilothouse

1. Log and plot weather forecast.
2. Log and plot present our position and positions, speed and courses of other boats.
3. Make sure safety harness, tether, helmet, swimsuit and goggles are available.

Staterooms

1. Every window and door is secure.
2. Knee pads for everyone.
3. Empty holding tank.
4. Both head overboard thru hulls should be closed, or get a fountain in the head.
5. Make sure head bowl is empty of water and remind crew to do this.
6. Make sure water tank is full, make not be able to make water latter.

Engine

Room

1. Polish fuel. (should have been done before, but repeat it if time available)
2. Test bilge pumps (normal and high volume and manual) operation.
3. Close water maker and air-conditioning thru hulls.
4. Extra detailed inspection of steering gear and engine as long as possible.
5. Check fuel filters, and replace any that show more then 2" inches of vacuum.
6. Check spare fuel filters are in quick access tool box.
7. Check fuel values and tank levels are set for 3 days of non-change operation.
8. Break out damage control kit, review with everyone and store it tied down in wet locker.
9. Get emergency window covers, review how to install, and store in wet locker.

Galley

1. Make sandwiches, warm drinks, get spill proof cups ready and remind crew to use them.
2. Shut off propane tanks.
3. Secure cookware, no bowls, no fruit, no bread left out etc.
2. Secure refrigerators, double check rods, stuff with towels inside holding item safety.
3. Install Lee cloth on saloon settee.
4. Bring blue bucket up for seasickness, with water, paper towels, breath mints.

Steering:

1. Takes waves at 20 degree's off the bow or stern.
2. In Head seas match boat speed to seas, keep bow from dropping by going slower.
3. If loosing steerage (especially following seas) a quick power bust increases control not speed.
4. If really rough, throttle up as wave approaches (bow up), retard it as waves hits (bow down).
5. Steering around bigger waves, especially true for beam seas, if caught beam too steer down wave.
6. In following seas increase throttle to maintain steerage as wave passes and rudder is less effective
7. In following seas take seas square to stern, when bow begins to bury, turn beam or bow to seas.

12. Sea Anchor Deployment / Retrieval

Sea Anchor Preparation

Pre-trip preparation. (2-4 hours)

- 1 Clean out foredeck and Portuguese Bridge lockers.
- 2 Move Sea anchor to port Portuguese Bridge locker.
- 3 Attach 180 ft braided line to sea anchor and store in locker.
- 4 Attach shackle and seizing wire to thimble, labeled Attach to STB Locker Line Top Thimble.
- 5 Label Sea Anchor Quick Link ATTACH BIG BALL FENDER HERE.
- 6 Move 300 ft line to starboard Portuguese Bridge locker, one thimble on bottom one on top.
- 7 Label top thimble ATTACH LINE FROM SEA ANCHOR.
- 8 Attach shackle and Seizing wire to bottom, thimble and label ATTACH TO LEADER LINE here.
- 9 Place Bruce anchor on port side of anchor roller.
- 10 Store extra seizing wire (cut to length here) and Philips screwdriver that fits in shackle hole.

Just before departure. (3 hours)

- 1 Move bow anchor to Lazarette.
- 2 Move Bruce anchor to bow.
- 3 Attach Braided Sea Anchor Leader Line to anchor chain.
- 4 Route leader line over bow railing, label Thimble ATTACH TO STB BOTTOM THIMBLE.
- 5 Wrap thimble in neoprene from engine room emergency tool box.
- 6 Attach line to Railing, Windlass, Portuguese Bridge railing with wire ties.
- 7 Move White Ball Fender to Port side of foredeck and attach to railing, protect deck from Ring.
- 8 Make sure both parts of anchor stop are safety wired to the boat.
- 9 Confirm anchor stop is set.
- 10 Rig Foredeck Jack Line.

Sea Anchor Deployment

- 1 Detach Leader Line from Portuguese bridge, remove rubber cover.
- 2 Attach Starboard Locker line bottom thimble to leader line (Labeled Attach to LEADER LINE).
- 3 Attach Starboard Locker line top thimble to sea anchor line (Attach LINE from ANCHOR).
- 4 Attach White ball fender to quick link on sea anchor trip line (Attach LARGE BALL FENDER)
- 5 Remove Sea Anchor shackle holding bag closed.
- 6 Face into the wind and Throw trip line out on up wind side of board.
- 7 Throw sea anchor bag over--not on top of trip line or fender.
- 8 Feed out 50 feet then snub it up on the midship cleat with ONE turn, to releases sea anchor.
- 9 IF Conditions allow: wearing safety harness and goggles remove Anchor Stop on Foredeck.
- 10 Deck crew indicates when ready to let out chain Pumping one hand up/down 3 Times
- 11 Helmsman in the pilothouse feeds out 150 feet of anchor chain (until the 3rd color band).
- 12 Helmsman indicates 150 feet is out by one second horn.
- 13 Deck crew indicates when to stop letting line out but pumping hand again.
- 14 Deck crew MUST SET chain stop.

Post Deployment

1. Bungee rudder amidships one to throttle quadrant, second to port fiddle, third to helm seat.
2. Maintain a watch, inspecting for chafe, bent hardware, other boats etc.
3. Watch should also inspect boat for damage and leaks.
4. Set anchor light.
5. Make radio calls every 15 minutes.
6. If lots of yaw place main/wing engine in slow reverse.

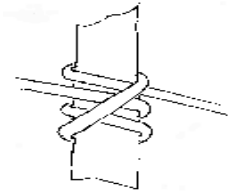
Retrieval

1. Everyone one on bridge has rubber shoes, radio, life vest and knife, get boat hooks
2. Motor up on retrieval fender, taking line in as we go.
3. Using boat hook get trip line and bring it in.
4. Bring in, repack using instructions from manual.

13. Drogue Deployment & Retrieval

Advanced Preparation-before starting the crossing.

1. Review instruction manual.
2. Position Delta Drogue in cockpit locker.
3. Position 5/8" anchor lines from anchor locker is in cockpit locker.
4. Position 5/8" anchor lines from Lazarette is in cockpit locker.
5. Attach 20 ft of 5/16" chain is attached to Delta drogue, using existing shackle.
6. Bring 100 foot line into cockpit locker. (From Sea anchor locker).
7. Confirm jack line is rigged and ready, check harnesses (2) and tether (2).
 - If going to deploy it during the night, set it while it is light.
 - Everyone one on bridge has rubber shoes, radio, life vest and knife.
 - Persons in cockpit uses tether line.
 - **NEVER STEP IN / ON LINE.**



Rigging

1. Get deck shoes, gloves, goggles, lifevests ready for crew, towels (drying off).
2. Have crew briefing.
3. Enter and exit the boat via a SIDE door not the cockpit door.
4. Move one sea anchor rode to cockpit.
5. Flake all line out in starboard walk around or cockpit.
6. Attach sea anchor line to chain on Delta drogue, using shackle from chain.
8. Feed both 5/8" line anchor thimbles out side hawse holes and bring back into cockpit.
9. Cleat both ends of 5/8" anchor line to side hawse holes with 50 feet ready to go to sea.
10. Attach other end of sea anchor rode to both eyes using shackle of sea anchor rode.
11. Run 100 ft line thru aft hawse hole and attach to shackle using a anchor bend.

Deployment

1. Heading down sea
2. With nobody standing on the line, take drogue out of bag and deploy over stern.
3. After 50 feet of line has played out, take a half turn on aft cleat to expand drogue.
4. Keep a little tension on line as deploying it.
5. After about 250 ft, cleat sea anchor rode -- drogue on same wave position as boat.
6. If this does not work let out more sea anchor rode and eventual let out bridle.
7. If bridle is deployed - add chafe protection to lines at transom. (Towels)

Retrieval

1. Everyone one has rubber shoes, radio, life vest and knife, get boat hooks(2)/
2. Crew briefing.
3. Confirming chain wheel is locked using chain pawl.
4. Release windlass clutch, using windlass handle from anchor locker.
5. Bring center line out and around to windlass.
6. While 2 people take in bridle lines use windlass to bring center line in to remove bridle.
7. Remove bridle lines and stow in cockpit locker.
8. Continue using windlass to bring line in until you can use boat hook to grab one corner.
9. Tip drogue to dump water out and bring in over transom.
10. **RELEASE CHAIN PAW.**
11. Bring in, stow wet and repack using instructions from manual.

14. Engine Failure

Engine Stops: (is the Prop Fouled?)

Check all valves, check fuel valve to engine and to day tank, fuel return valve.

Check day tank fuel level, reopen all sight tubes.

Check filters vacuum level, fuel color, presence of water, change selected filter to other.

Check for water in fuel, drain day tank fuel into a zip lock plastic bag (from quick tool box).

Examine engine.

Check fuel to primary filter. Change primary fuel filter. (Spare in quick access filter area, fuel manifold)

Bleed fuel lines: Open bleed plug of secondary on-board fuel filter.

Loosen fuel supply at fuel pump.

Loosen lines at injection nozzle. (Use backing wrench)

Throttle on full, crank until no air comes out, if batteries low, parallel in laz.

Examine fuel vents are clear on both sides of pilothouse, day tank on port side.

Check lift pump output and then check input, if bad replace with spare from Luger Box and re-bleed.

Check injector output all bad-replace pump (PelicanCase) some bad-replace those injectors (LugerBox)

Lack of Power (is bottom/props dirty or fouled?)

Do above **Engine stops checklist**.

Check engine temperature.

Check for leaking or defective fuel injectors.

Check air filter.

Check valve clearance, adjust according to Luger Operating Manual.

Engine Surging: Do above Engine stops checklist (except for lift pump).

Check for bad injectors.

Engine low oil pressure: Check oil level.

Check oil alarm vs pressure gauge vs manual gauge in specialized toolbox, spare sender in Luger box.

Make sure sensor and alarm electrical contacts are clean.

Oil filter could be plugged, replace oil filter spare in quick access filters.

Oil in coolant: Check transmission oil level, o-ring failed at keel cooler 90-degree bend-spare in Luger box.

Coolant in oil: Was coolant added to oil?

Cylinder-head gasket failed spare behind generator.

Fuel in oil: Lift pump failed spare in Luger Box.

Inject pump seals.

Engine overheat: Check water temperature sensor vs gauge verses handheld IR gun (expansion tank < 195).

If IR temp high check coolant level, or contaminated.

Check oil level.

If temp high @expansion tank replace thermostat, spare in Luger Box, or replace pump in Luger Box.

If IR temp low check sensor and alarm electrical contacts are clean, replace send spare in Luger box.

Engine under temp: replace check sender / thermostat spares in Luger box.

Engine will not turn over: What is voltage at on battery as cranking, if < 9 volts parallel switch.

If no 12 volt power to starter, check start switch port lazarette.

Check both solenoids, power to ignition switch, power from switch.

Check all leads are clean.

Replace starter / solenoid spare in aft. Port, cubby hole.

Solenoid Clicks once: Voltage drops Prop Jammed, Starter seized. Voltage high: solenoid loose wires.

Solenoid Clicks Multiple times: Battery voltage low parallel, loose / dirty connections – clean and tighten.

Engine turns over but does not start:

Do above **Engine stops checklist**.

Replace injector pump, Pelican box.

Started does not disconnect: Solenoid, start switch, damaged starter gear/ flywheel ring gear. Replace starter.

15. Electrical Failure

Helmsman Uses flashlight to take over steering from autopilot - using compass.

Teri Gets red LED head-light on.

Takes over helm.

Scott Uses flashlight from electrical panel (LED red) to check meters, circuit breakers and inverter.

Gets VOM from saloon, grey/orange (3 watt) headlamp from pilothouse & 10 LED flashlight from ER.

Starts checking from lazarette for problem.

Male Guest Gets Septor headlamp (7 LED) and pilothouse working light (10 LED).

Check for arcing-signs of fire under helm inside electrical panel.

Checks for fire, signs of arcing in forward stateroom floor and batteries and engine room.

Hang battery navigation lights from fallback crate in laz. (green on gas pedal side red on break).

Helps Scott with troubleshooting.

Second Guest Uses second 3 LED headlight from helm.

Gets portable GPS (bottom drawer port side of pilothouse, portable VHF from battery barn).

Get 10 LED lights from second draw for helmsman and self.

Places plastic bags in toilets.

Gets Vulcan flashlight out from battery barn.

Takes up watch for shipping.

Note: Tender has battery and lights, GPS etc...

Lights by person:

Teri	Pilothouse headlamp / red (drawer)	3 LED headlamp
	Helm work light	10 LED
Scott	Pilothouse/aster stateroom headlight	5 LED
	Engine room work light	10 LED
Male Guest	Pilothouse headlight	Septor
	Engine room aft work light	10 LED
Female Guest	Pilothouse working light	3 LED headlamp
	Saloon tool drawer	10 LED

Nav Lights Red, Green and White LED light from lazarette..

Steering Hand Steer using Compass and led light. Shorter watches.

Collision Post extra watch stander, (32 hours = 8 hrs/per/day) Night vision.

Navigate Portable GPS & charts.

Communicate Handheld VHF & Antenna, handheld Sat Phone - emergency wire power to SSB/Sat Phone.

Bilge pump Hand Bilge Pump, buckets.

Frig/freezer Limit use of refrigerator and freezers. Open once per meal. Good for 2 days!

Water backup Toilets Plastic bags & John

Shower Solar Bag from fallback crate.

Drinking galley Fill Pump pot and carry to galley.

Washing Fill 5 gallon bucket with 2 gallons using water pump from lazarette.

Cooking Grill, propane bypass and lighter to start stove, grill, or engine manifold.

Limits: If generator fails we cannot run washer/dryer, air-conditioning, water maker, oven.

16. Storm Anchoring

This process takes about 8 hours.

Equipment - uses dinghy

Extra Strong shackles (5) (1 on Bruce, 1 in shackle kit, 3 in storm anchor kit)
_” shackles (3)
_” swivel (1)
Sea anchor shackle, Sea anchor line
Chain, CQR leader chain
Bruce, CQR, Fortress anchor
Two anchor snubbers. (both from chain locker)
Seizing wire, water pump pliers, large screw driver, wire cutters.

Anchor set up

Bruce – Extra Strong _” shackle (1) – one end of chain
CQR – Extra Strong _” shackle (2) – other end of chain
Fortress – _” shackle – _” shackle (1) – sea anchor rode

Common point

Two anchors Chain – ES _” shackle (3) – _” swivel – _” shackle (2).
Fortress Sea anchor rode – sea anchor shackle – same _” shackle.
ES _” shackle (4) - CQR leader chain – ES _” shackle (5) – _” shackle (3) bow tow eye.

Steps After figuring out wind and wave directions.

Remove swivel from Bruce and attach directly to chain with ES _” shackle (1)
Power set this into expected highest winds, with trip line and fender, dive to check.

Remove CQR from chain, and remove chain from line.
Pull all chain out and tie chain to boat and detach original line from boat.
Attach CQR directly to other end of chain with ES _” shackle.(2)
Place CQR in dinghy and feed chain to dinghy to place 10 feet past where should set.
Power set this anchor using chain stopper and boat then dive anchor.

Attach ES _” (3) shackle to center of chain and _” swivel to _” shackle (1) to chain and buoy.
Attach Fortress to _” shackle to _” shackle (2), sea anchor rode.
Dinghy out 10 feet past set point and power set and dive.

Raise chain using trip line and attach sea anchor line to _” swivel on chain.
Attach _” shackle to ES _” shackle (4) to CQR leader chain
Attach CQR leader chain to ES _” shackle (5) to _” shackle (3) to bow eye.
Attach single line snubber to _” shackle at start of CQL leader chain using a shackle to bow eye.
Attach the two line snubber to chain using shackles just after _” shackle to both bow eyes.

Final preparations

Place all cushions, canvas, fenders under flybridge.
Drop antenna's, duck tape seat panels on flybridge, plastic over flybridge instruments.
Extra ties on dinghy, empty out dinghy spaces.
Review bad weather preparation from above.

17. Other Emergencies

Emergency Anchoring: This is used if the engine or steering fails and we are approaching shore.

Release anchor tie down, chain stop and windlass paw.

Release Windless (anchor winch by using handle to loosen clutch turning counter clockwise).

Automatic Fire extinguisher triggers:

Manual select engine running override. If this fails jumper around relay.

Leave Engine room doors closed.

Inspect with smoke mask, after it is out turn on all fans in engine room.

Open cockpit hatch to lazarette and door from lazarette to ER. (Air source)

Move blue blower to blow out from lazarette.

Open all hatches to living spaces, especially staterooms.

After ONLY Engine Room aired out can enter from master stateroom.

Lighting strike:

Check all thru hulls.

Check all electronics.

Get faraday cage from guest stateroom under berth. Remember tender has GPS and battery.

Check Compass with handheld compass, then Sun azimuth.

Suspicious vessel sighted:

Radio Coast guard.

Shine lights.

Loud hailer.

Everyone up.

Weave (hard to board weaving boat).

Stabilizers off (hard to board boat)

Earthquake: (1-2 miles past 50 ft contour). Most activity is over in 4-6 hours, 24 in extreme cases.

Hypothermia: Wrap in 4 inches of blankets, space blanket first (from grab bag).

Hot pad around neck and heated blue hot pads under arm pits.

Warm juice, sugar water. No caffeine, no alcohol.

Diving the boat-to remove a tangled net etc:

Try reversing prop first.

Make sure engine is turned off, and tagged that some one is diving.

Someone should be near to fetch tools, prevent other boats coming too close.

Tools to have ready are:

- 1 Helmet
- 2 Dive knife.
- 3 Gloves.
- 4 Dive headlamp, underwater 12V light also in dive crate under master berth.
- 5 Small hacksaw with coarse teeth blade.
- 6 Cotter pin puller. (Good to remove rope)
- 7 Heavy-duty wire cutters.

Remember to check the prop shaft and shaft seal frequently for the next few days.

18. Liferaft actions

- 1) Make sure everyone is accounted for.
If someone is in the water, toss them a line and drag them close then help them enter using the ramp.
- 2) Confirm the EPIRB is inside the liferaft, leave it off for the time being.
- 3) Secure everything inside the life raft, especially **Water Maker ,Sat Phone, VHF and grab bag.**
- 4) Remove anything sharp from people pockets and remove sharp shoes.
- 5) Assign watch stander to looks for lights, ships, anything floating by that is useful, monitors sea anchor.
- 6) If cold or rough, close up all entrances, if the temperatures is hot open them.
- 7) Stay attached to the boat, but have watch stander ready to cut the line to the boat if it actually sinks.
- 8) Check for injuries.
- 9) Confirm everything in liferaft especially EPIRB, Sat phone and VHF, grab bag are secure.
- 10) Confirm everyone has seasickness patches/medicines.
- 11) When line to boat is cut --Check if Sea Anchor deployed, if necessary deploy it.
- 12) After sea anchor is deployed get heavy people to UPWIND side. (Keep wind from tipping raft over).
- 13) If safe - carefully have someone watch and use GPS to find location
- 14) Then use portable sat phone to call:

Pacific Rescue 00-1-(510) 437-3700 [OK]

Atlantic Rescue 00-1-(757) 398-6231 [OK]

- 15) Read survival instructions in liferaft.
- 16) Carefully open plastic bag that holds the survival equipment, to allow reusing the bag.
 - Get black sea sick bags out of grab bag and issue one to each person.
 - Provide watch stander with sun glasses and sun screen.
 - Get bailer and have watch stander bale raft.
 - Get duct tape, trigger and cover EPIRB strobe.
 - Get mirrors and flares ready to use.
 - If code give everyone stocking cap to wear. (5 caps).
 - Rig radar reflector from grab bag to top of life raft.
 - If seas are calm deploy sea streamer.

Flares should only be used by the Captain. They can sink the liferaft.

- 17) If necessary inflate liferaft, especially the floor.
- 18) Assign an assistance watch stander to monitor chafe, keep raft inflated and dry.
- 19) Third person is making water.
- 20) Fourth person sleeps.
- 21) Based on sat phone communications
 - No water for 12 hours, then one bottle three times a day (hot or injured) or _ bottle if cold.
 - No food first 24 hours.
- 22) For urinal use bailing bucket, or door of liferaft.
- 23) For solid waste rig a rope to allow people to go out door.
- 24) Everyone review all safety instructions in life raft and this list.
- 25) Start making water by hand.
- 26) Start the log, open up deck of cards, joke telling.
- 27) Keep all gear secure and stowed away, keep VHF and flares readily at head.
- 28) Check for chafe, keep air tubes inflated. If tubes leak, ventilate CO₂ out of raft.
- 29) Be Careful when disposing of items overboard to not attract sharks.

19. Dinghy Engine Failure

Engine Stops, or does not start.

- Is kill switch in place.
- Check fuel..., try pumping bulb.
- Is the Prop Fouled?
- Is there electricity (check tilt)
- Bypass kill switch, key, alarms--disconnect control cable and use pliers to jump solenoid.
- Water in fuel, drain carburetor .
- Hand pump bulb and see if it runs.
- Replace inline fuel filter.
- Is there spark (spark plug wrench in toolbox under seat)?

Engine does not turn over.

- Is master switch on (inside center console)?
- Gear switch in neutral.
- Inline fuse ok
- Does battery have power (check with lights and tilt, voltmeter)?
- Is power getting to solenoid, bypass by using pliers.
- Hand start using supplied cable, and socket set, make sure key is left on.

Engine starts, but does not run at idle only at high rpm.

- Remove water from system (3000 rpm, choke till almost dies, rpm 3000 choke, 3 times)

Engine starts but no water telltale.

- Is the engine down.
- Use wire to clean out telltale exit, then try engine overheat options.

Engine overheats.

- Check water intake for obstructions.
- Check if telltale water is hot, if not continue back at reduced speed.

Poor acceleration.

- Is the bulb flat—check air vent open on fuel tank,
- Fuel filter is plugged.

Engine is flooded.

- Wait 15 minutes.

Started continues to run-engine whines after started.

- Turn engine off.
- Turn master switch off.
- Tap solenoid, retest by turning master switch on.