SV Breezy

Preparation Guide

April 12, 2024

1) **Introductions**

- Crew experience
- Background
- Expectations

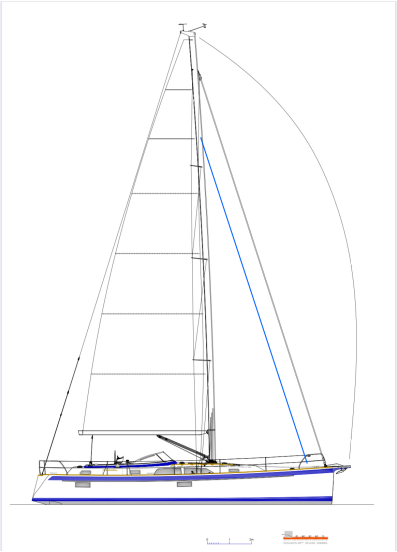
2) **Passage Synopsis**

Float plan

June 6: Depart Ellös
June 20: Arrive Lisbon
June 23: Arrive Gibraltar
June 24: Depart Gibraltar
July 1: Arrive Palma

Vessel description

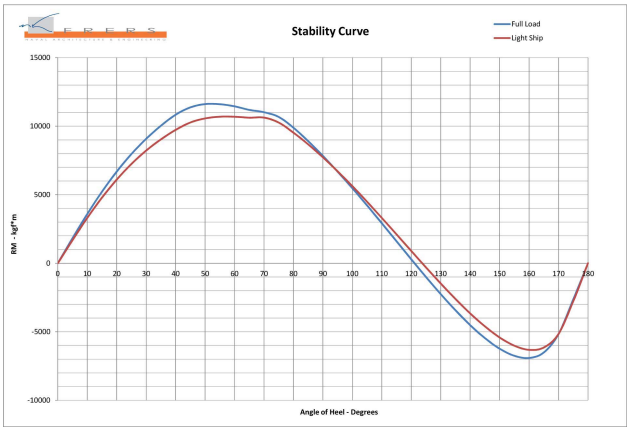
- 2024 Hallberg-Rassy 44
- 110% Genoa
- Selden in mast furling mainsail
- Removable inner forestay with storm jib
- Light wind inventory
  - Code Zero
  - Bluewater runner
- Lewmar Electric winches
- Raymarine Autopilot x2
- Max length: 47’5”
- Waterline: 42’3”
- Draft: 7’
- Air Draft: 71’ (21.6m)
- Displacement: 29,200 lbs
- Keel Weight(lead): 11,700 lbs
- Sail area: 1152 sqft
- Engine: Volvo D2-75
- Diesel Capacity 110g
- Water Capacity 196g
- 27kg Ultra Anchor and 9.5kg Fortress Anchor



Stability and performance

- Angle of vanishing stability 125 degrees with full load and 128 degrees empty
- Maximum righting moment is ~11000 Kgfm from 50-70 degrees with load
- Vessel will reach at 9-10 kts in a fresh breeze.
- Under power with Gori propeller expect 6 Kts at 1800 RPM with less than 1 gph fuel burn. Range 568NM

Design 1358 - H.R. 44



D1358 - H.R. 44 (Half Load) VPP Output

		True Wind Speed								
		6	8	10	12	14	16	20	25	30
Running Downwind	Vs (knot)	4.87	5.83	6.50	6.85	7.03	7.15	7.35	7.53	7.57
	TWA (°)	45	43.1	42.3	41.1	39.9	39	38.7	40.2	39.4
	VMG (knot)	**3.44**	**4.26**	**4.81**	**5.16**	**5.39**	**5.55**	**5.73**	**5.75**	**5.86**
True Wind Angle	40	4.39	5.51	6.25	6.73	7.04	7.24	7.47	7.51	7.64
	45	4.86	6.00	6.76	7.20	7.47	7.63	7.83	7.94	8.00
	52	5.37	6.51	7.27	7.64	7.85	7.97	8.17	8.33	8.42
	60	5.77	6.93	7.61	7.96	8.15	8.28	8.49	8.66	8.77
	70	6.06	7.20	7.82	8.19	8.43	8.57	8.79	8.99	9.14
	80	6.25	7.43	7.90	8.29	8.58	8.79	9.05	9.29	9.49
	90	**6.57**	**7.67**	**8.10**	**8.34**	**8.61**	**8.87**	**9.28**	**9.58**	**9.81**
	100	6.71	7.76	8.23	8.49	8.68	8.85	9.35	9.84	10.12
	110	6.65	7.71	8.23	8.58	8.82	9.01	9.35	9.89	10.42
	120	6.33	7.48	8.09	8.52	8.86	9.15	9.59	10.02	10.43
	135	5.43	6.72	7.58	8.12	8.53	8.88	9.56	10.34	11.07
	150	4.12	5.37	6.41	7.27	7.85	8.28	8.98	9.88	11.01
Running Upwind	Vs (knot)	5.14	6.17	6.99	7.30	7.39	7.69	8.37	9.19	10.13
	TWA (°)	138.1	141.2	143.7	149.3	158.5	164.9	170.5	170.8	168.1
	VMG (knot)	**3.82**	**4.81**	**5.63**	**6.28**	**6.88**	**7.42**	**8.25**	**9.07**	**9.91**

	Max Reaching Speed (knot)								
	6	8	10	12	14	16	20	25	30
Vs (knot)	**6.71**	**7.76**	**8.23**	**8.58**	**8.86**	**9.15**	**9.59**	**10.34**	**11.07**

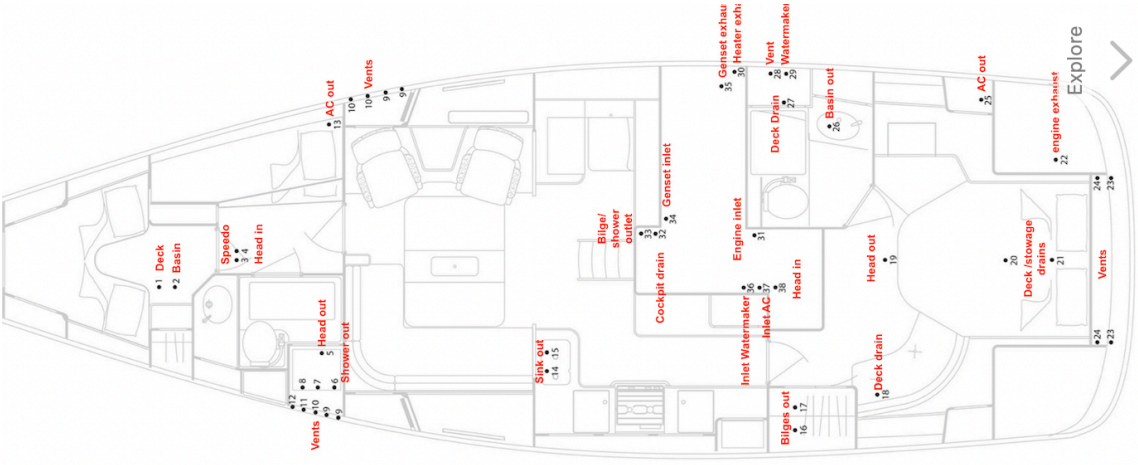
Sailing Displacement: 14900 kg
Sails: Main (63 m2), Jib (49 m2), A2 (172 m2)
TWS measured at masthead

Hallberg-Rassy 44 propeller measurments

	RPM	Knots	L/Hour	NM/L	L/NM	Theoretical range*
3 bladed Gori in normal gear	1000	2,80	1,50	1,87	0,54	663
	1300	3,80	2,10	1,81	0,55	642
	1500	4,60	2,50	1,84	0,54	653
	1800	5,60	3,50	1,60	0,63	568
	2000	6,20	4,30	1,44	0,69	512
	2300	7,00	6,20	1,13	0,89	401
	2500	7,60	7,70	0,99	1,01	350
	2800	8,20	11,20	0,73	1,37	260
	3100	8,40	17,10	0,49	2,04	174
3 bladed Gori in overdrive *This propeller is recommended for best fuel economy and low noice*	1000	3,20	1,50	2,13	0,47	757
	1300	4,60	2,40	1,92	0,52	680
	1500	5,60	3,20	1,75	0,57	621
	1800	6,80	4,80	1,42	0,71	503
	2000	7,60	6,40	1,19	0,84	422
	2300	8,40	10,20	0,82	1,21	292
	2500	8,60	16,00	0,54	1,86	191

Notice: These figures are approximate. Deciding factors are for example how clean the underwater body is, how clean the propeller is, how much loaded the boat is, seastate, windforce, wind direction and more. Measures have been carried out with a new, clean and empty boat under ideal conditions.
* The therotical range is based upon the assumtion that 355 litres out of the 365 litres in the

Through hulls and vent diagram



Route - *See table of waypoints below*

Crew

- Jeff Ament
- Tim Farrell
- Tom Haldis
- PYD Cat

Emergency equipment

- Liferaft (6 person) under cockpit sole
- Garmin inreach
- Cell phones
- Grab bags
- Charging block
- Flares

Emergency contacts

Nicole Haldis 1-612-803-2220

Sarona Farrell 1-626-622-6527

Amant

3) **Personal Gear**

- Foul weather Gear
- Inflatable PFD/Safety harness and tether
- Small flashlight
- Deck shoes / Wet shoes
- Warm and cool clothing
- Sea sickness medication
- Quick dry towel medium for shower
- Sun glasses
- Sun Protection lotion
- Passport
- Soft duffel. No rigid bags
- Pillow case
- Sleeping bag

4) **Watch Schedule**

#	Swedish Watch	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
1	**0200-0600**	TH	JA	C	TF	TH	JA	C
2	**0600-1200 ***	JA	C	TF	TH	JA	C	TF
3	**1200-1800 ***	C	TF	TH	JA	C	TF	TH
4	**1800-2200**	TF	TH	JA	C	TF	TH	JA
5	**2200-0200**	TH	JA	C	TF	TH	JA	C

Watch checklist

- Maintain course and speed (Hand steer 30min, Autopilot 30min)
- Watch for other vessels and obstructions

- Monitor sails and rigging, engine, steering gear, deck equipment and nav lights.
- Hourly safety check of the bilge and engine(if running)
- Logbook entry hourly for course, speed, weather, sea state
- End of watch, update DR position on chart.
- Notify Captain of:
    - Lightning
    - Ship within 2 miles
    - Barometer drop 5 MB in an hour
    - Significant change in wind or sea state affecting course, speed requiring sail plan change.
    - Mechanical or electrical problems
    - Bilge water increase
    - If your are in doubt of anything.

5) **Meal preparation**

- Galley chores
  - Watch 3 prepares 8am breakfast & cleans galley after breakfast.
  - Watch 4 Prepares 12pm lunch for crew & cleans galley after lunch.
  - Watch 5 Prepares 5pm & cleans galley after dinner.
  - Basic one pot meals offshore. Keeping it simple
- Menu- per Nicole. Alleriges none.

6) **Sleeping Accommodations**

- Forward Berth(2)- Tim and Jeff
- Middle berth(1)- Captain
- Salon (1)
- Aft berth(2)- TH

7) **Housekeeping**

A. Please keep dry gear and shoes stowed in lockers to avoid clutter in cabin and cockpit
B. Secure all loose items especially if heavy weather is forecast.
C. After breakfast-

- Inspect deck gear and lines forward and aft.
- Stow gear
- Bag trash
- Clean Galley
- Wipe/vacuum passageways
- Clean head
- Clean cockpit
- Cockpit cup holders pictured. Avoid heavy metal cups that can cause damage when dropped.

8) **Water conservation**

- SV Breezy is equipped with a Spectra Newport 400 water maker and 200L Water tankage. In case of water maker failure, there is a back up water supply for crew for the voyage as per the *offshore special regulations*. 0.5L/person/day. 4x14x0.5L= 26L

- Electric water pump should be secured throughout the voyage except during short periods when water is being used.
- Showers can consume large amounts of water. Please use “boat shower” technique and shower at least QOD.

9) **Navigation station**

Business office of the ship and should be used for navigation, log keeping, weather tracking and radio use. Avoid nonessential gear, food and liquids at nav station.

10) **Seasickness**

Treat with dramamine meclizine or scopolamine patch

11) **Heads**

- Get used to sitting down.
- Man wipes and toilet paper should be disposed of in bathroom trash
- Human waste only in the heads
- Flush 5 extra pumps after water is clean to ensure material has passed through pipes.
- Clean head after each use
- Toilet brushes are available if needed for cleaning the bowl after use.
- Turn off water supply to toilet after each use.

12) **No Smoking**

13) **Alcohol- Single during dinner hour only when off shore**

14) **Hatches**

- Open hatches can sink the boat at sea or cause damage to interior and equipment. All side hatches and forward top hatches are to remain closed for the duration of the cruise.
- Midship top hatches may be opened with captains permission during fair weather.

- Companionway hatch should be closed whenever there is potential for water incursion from rain or heavy sea conditions.

15) **Deck Safety**

- Safety harness with tether and MOB1 is required at night when alone in cockpit.
- No-one should go forward unsupervised. Notify helmsman when going forward. Foredeck light on prior to going forward at night.
- When going on deck, move carefully forward to jacklines then clip.
- Avoid clutter in cockpit
- Carry deck tool, Small flashlight.
- Accidental gybe avoidance: Remain cognizant of wind direction and boom position. We will use preventer when wind is aft of beam more than 90 degrees. In the event of an accidental gybe. Do not release the preventer. Immediately tighten main sheet. Follow procedure below.

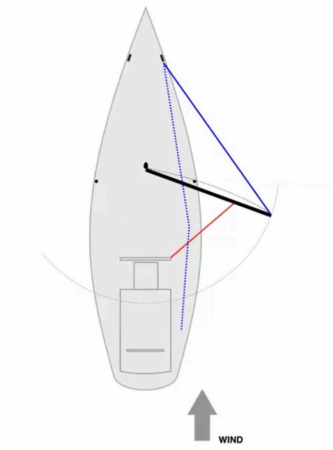
16) **Sail Handling**

A) **Stopper knots** on all lines

B) **Safety wraps** on all winches under tension

C) **Preventer**

- Always use a preventer when wind is aft of beam
- Fitting on boom end has dyneema cored line, stored along the boom that can be shackled to the preventer line pre-rigged on deck at midship cleat.
- Shackled end of the preventer line is run from midship cleat, outside the safety lines through the middle of the bow cleat and back to the midships cleat vs stern cleat.



D) **Recovering from an accidental gybe**

- Do not release the preventer line
- Tighten the mainsheet on the winch and gybe to the original tack.
- Tighten the mainsheet on the winch
- Ease preventer to the new tack while
- Simultaneously tightening mainsheet
- Ease traveller to midship. (PST)

E) **Controlled gybe (PST-Gybe-TSP)**

- Ease preventer (P)
- Tighten mainsheet until it is fully tightened (S)
- Center the Traveller (T)

- Gybe

- Release Traveller to leeward side (T)
- Ease the mainsheet (S)
- Tighten Preventer (P)

- Trim vang for proper sail trim

F) **Mainsail**

- Winches
- Halyard
- Mainsheet
- Traveller
- Vang
- Topping lift
- Downwind: Deeper than about 120deg, use about 1/3 main to keep it off the spreaders and give balance. Beyond 150deg, put it all away as it just blankets the headsails.
- Outhaul-Unfurling protocol
- Reefing-Furling protocol
- Manual backup procedure

G) **Genoa**

- Furling winch

- Manual back up procedure
- Fairlead and Genoa track
- Remain cognizant of leech flutter and this will damage sail and rigging
- Bear off, trim sheet or trim barber haul

H) **Staysail**

- Removable inner forestay
- Hanked on storm jib should be prerigged offshore.
- Used for strong winds(35-40+ ??) with storm jib
- Rigging procedure ?
- Sheets
- Fairleads? (low friction ring with dyneema line on mid cleat?) vs using Genoa Track need to be able to heave to.
- Trim staysail flat in strong winds

I) **Code Zero**

- Light wind fragile sail for upwind sailing.
- Good for ghosting in light airs when you can then create plenty of apparent wind. Use only up to 12-14 knots apparent. Needs to be gone by 14 knots apparent.

- In any sort of wind, furl the Code 0 behind the headsail as this takes most of the power out of the sail and makes furling relatively easy.
- Rigging procedure

J) **Elvstrom Blue Water Runner**

- Downwind sail
- Light wind sail works fabulously up to about 20kts TWS and out to wind angles of about 155 degrees. Above that it really needs to go away and run with your genoa poled out.
- In any sort of wind furl the BWR behind the headsail as it takes most of the power out of the sail and makes furling relatively easy.
- BWR also doubles as a reacher out to about 110 degrees in lighter winds, say 15-17kts true.
- Rigging procedure

  - BWR/Code0 Furler: Facnor constant line fuller that makes a massive difference to control sail. It stops it slipping on the constant line and running out by itself, bit of a game changer!

K) **Whisker pole**

- Carbon fiber whisker pole is stored on the mast and secured by 2 mast car lines and topping 1 lift line.
- Mainsail should be up to leeward with preventer rigged
- Maintain boat head of 135-145 degrees
- Genoa is fully furled with slack in the Genoa sheets
- Attach both Guy lines to the end of pole (Guy lines stored in foredeck locker and are of equal length and interchangable)
- Unchock the pole
- Haul Car line so pole lifts weight off deck chock and disengage jaws from deck chock.
- Release Car line and walk pole to bow. Rest pole on bow deck locker
- Return to mast and secure car lines and snug the topping lift line

- Return to the bow and secure genoa sheet to the pole
- Secure one guy line to bow cleat and one to midship cleat **outside** lifelines.
- Return to the mast and raise the pole with topping lift. When clear of lifelines, lower car to 6 feet from deck and raise topping lift so that pole is at right angle with the mast. If secured properly, the guy lines should prevent pole from swinging.
- Adjust and snug both guy lines if needed
- Unfurl Genoa
- Use off windward side when wing on wing with mainsail

L) **Sail combinations**

- 2-12 knots: Code-0, full main
- 15-20 knots: Full Genoa, 75% main
- 20-25 knots: 75% Genoa, 50% main
- 25-30 knots 50% Genoa, 50% Reef Main
- 30-40 knots Storm Jib, 25% reef main, forereach
- 40-50 knots Heave to
- 50+ knots

17) **Weather routing**

- Predict wind
- iPhone/iPad- Available coastal and inland only.
- Garmin InReach- utilizes a short burst data modem so its not suitable for weather applications aside from texts from a dedicated weather routing service.
- Starlink- SV Breezy equipped with flat HP dish with Gen 3 Router

18) **Navigation**

- Papercharts- Plot position after every watch
- Raymarine MFD with Navionics installed
- Raymarine Quantum 2 Q24D Doppler 18" Radar & GPS antenna
- iPhone/iPad with Navionics- Available coastal and inland only
- Various pilot books for passage are onboard
- Celestial navigation- Sextant, Nautical almanac and site reduction tables on board

19) **Safety Brief**

Safety Equipment

- **EPIRB**- McMurdo G8 AIS with Return link system(RLS)
- **MOB1 Ocean signal** x2 - Manually activated
- **Baltic rescue sling**- 38m floating line and flotation sling
- **Dan Bouy Inflatable** with light (Yellow container)- Purpose is for easier tracking of MOB. Lift bungee and throw the container toward MOB. There is a 2m lanyard that will automatically trigger inflation. MOB has to swim to Dan Buoy. There are straps, a light and a whistle.
- **6 person life raft** beneath cockpit sole

Keep water out of the boat

- Maintain water tight integrity
- Sideports and forward hatches remain closed at all times offshore

- Cockpit lockers latched
- Inspect bilge hourly
- Head valves closed after every use

Don't fall off the boat

- Clip in with harness and tether at night when alone on deck and in rough conditions
- MOB1 transmitters available for night watch and crew going forward in rough weather
- Go forward on windward side
- Crawl when going forward in rough conditions
- Only go forward if someone else is watching
- Respect the power of a wave
- Lifelines are not to be used for support. They are the last resort.

Don't hit anything

- 24/7 watch. Keep an eye on the horizon
- Notify captain of anything uncertain
- Unclear NAVAID
- AIS traffic alarms with 3 mile CPA

Don't set boat on fire

- Turn off propane solenoid after use
- No hot matches in trash, wet first
- If stove fire flares up, turn off gas solenoid and cover with fire blanket and be ready fire extinguisher
- Know locations of fire extinguishers and how to use them
- If engine fire, turn off diesel fuel supply
- If electrical fire, turn off breakers

Man Overboard

1. Immediately tack boat to back sails and stop the boat
2. Simultaneously shout "man overboard" until another crew member arrives
3. Simultaneously push GPS MOB button
4. Assign spotter to maintain visual contact

5. Crew deploys Yellow inflatable Dan Buoy equipment
6. MOB retrieves Dan Buoy and activates MOB1 transmitter
7. Engine on
8. Throw Baltic rescue tether to MOB. If MOB is out of range of the throw line then secure it to the stern cleat and we will circle until they are able to grab the rope.
9. Once the line is attached to the MOB, haul them to midship on the leeward side where there will be protection from wave action. Ensure that the sling is firmly attached to man overboard and haul it tightly to the midship cleat. We will not be bringing man overboard to the stern as there is too much rise and fall from wave action and potentially lethal battering from the drop down swim platform.
10. Use main halyard on winch to lift MOB.

Fire

Stove fire- Yell "FIRE!" Secure propane solenoid. Spread the fire blanket over the flames. Be ready with fire extinguisher if necessary.

Engine fire- Yell "FIRE!" Secure engine, secured diesel fuel supply tank. Secure electrical breakers. Point fire extinguisher at base of flames.

Electrical fire- Yell "FIRE!" Secure electrical breakers. Point fire extinguisher at base of flames.

Flooding

- Yell "We're taking on water!"
- Determine source of flooding and if the ingress is below or above the waterline. (We will review all potential sources water ingress via through-hull fitting, engine room and rudder stock.)
- Pump out water with all available pumps and buckets.
- If hull is holed, block ingress of water with cushions, mattresses and anything else available.
- If broken through-hull valve or hose, slow water with wooden plugs, rags or your hands.

Abandon Ship

Captain's call: "Prepare to Abandon ship."

- Send MAYDAY
- Record GPS position
- Liferaft deployment- Cockpit table down and secure, Remove cockpit grate and lift liferaft from cockpit sole.
- Abandon ship bag, Water jug and yellow bottles.

Abandon ship bag with tether (Crew 1)

- First aid kit
- Flashlight
- Knife
- Spoon
- Pliers
- Energy bars
- Canned Food
- Sea sickness tablets
- Sunscreen and chapstick
- Dye marker

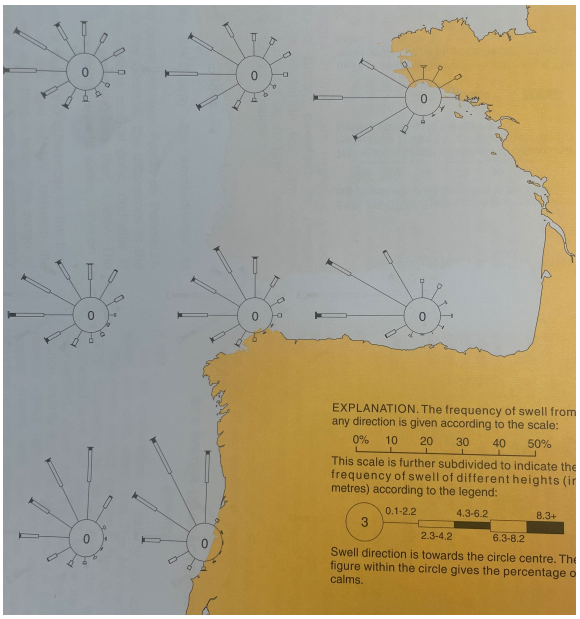
Water jugs with tether (Crew 2)

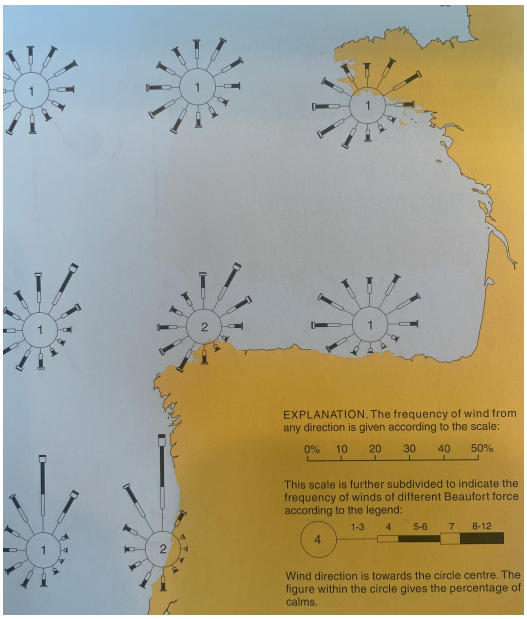
Yellow Dry Bag #1 (Crew 3)

- Flares

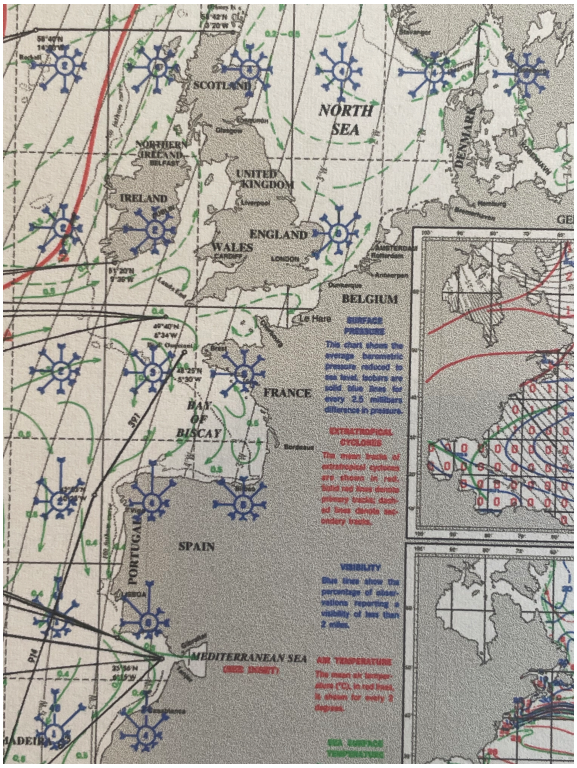
Yellow Dry Bag #2 (Crew 4)

- EPIRB
- VHF handheld radio with spare batteries in Plastic bag
- GPS Garmin Inreach with spare battery in plastic bag
- Charging block with cables in bag
- Cellphones in bag
- Passports and wallets in bag





Route



WPT		HDG To-	Dist. NM	Details	
	Hallberg Rassy Yard Ellös			Start	
1	Red lateral buoy	295	0.1		

WPT		HDG To-	Dist. NM	Details	
2	Green lateral buoy	275	0.9		
3	Fredagsholmen Lighthouse	300	0.4	FL WRG 3s	
4	Yellow special purpose Buoy	296	1.7		
5	0.5NM south of Special purpose beacon on land mass	269	1.9		
6	Yellow special purpose Buoy	249	16.4		
7	Arbitrary point 10NM N Hanstholm Light 57 16.84′ N 8 26.34E	237	91	White tower Fl(3) 20s period	
8	L08-G Platform 53 35.35N 4 35.68E	211	257		Begin traffic separation zone
9	VL 2a	198	17.7	R ISO(1) R 4s	Emergency Port Dan helder
10	VL 2 53 11.3N 4 21.08E	205	8	R LFL(1) R 10s	
11	Cardinal Buoy Tx-W 52 58.57N 3 57.13E	229	19.2	YBY Q(9) W 15s	3NM N or buoy to stay N of traffic zone
12	Cardinal Buoy Bv W 52 36.26N 3 29.93E	216	27.7	YBY VQ(9) W 10s Keep West	
13	Yellow special purpose Buoy NHr-S	220	61	Y FL Y - 10S	West of Yellow buoy
14	East Goowin lightvessel(NGA1324)	220	47.7	Fl.(4)W.R. period 10s 15M Red Hull with white tower	AIS (MMSI No 992351035). Horn: 1 bl. ev. 30s (bl. 3s, si. 27s).
15	Cardinal Buoy SW Goodwin 51 8.37N 1 29.38E Knuckle light of dover(NGA1276)	228	6.7	YBY Q(6)+LFL W 15s AIS Keep South Knuckle Fl.(4)W.R. period 10sv 49ft 15M	Time tides at Dover
16	Dungeness light(NGA1220) , Yellow Cs3 50 52.52N 1 1.78E	228	23	Fl.W.period 10s fl. 0.1s, ec. 9.9s	North of Traffic separation zone
17	Rampion Windmill farm 50 36.53N 0 13.92W	249	50.4		This vector is just south of the Royal Sovereign shoals (hazard in any sort of weather. Stay south. Then 2 miles south of Beachy head. In fair weather hug the 10m contour.
18	WPT N of Alderney 49 43.7 N 2 09.8W. Casquets light and Cap De La Hague	241	97.7	Alderney: Fl.(4)W. period 15s 121ft 12 M range Cap de la Hague: NGA 8304 Fl.W. 5s 157ft 23M	South of traffic separation zone

WPT		HDG To-	Dist. NM	Details	
19	WPT N of Ile D'Ouessant Brest	241	134	Various lights on island. Stiff tower light details Rock on north ent	HR DLR Southhamptom 023-80 45 40 00 Emergency port Falmouth
20	WPT W of Muxia Yellow special buoy	209	345	Biscay crossing leg. See notes. Y Fl Y 2.5s 2M range	Alternate is a Corona
21	Farilhões light on Berlenga island	184	243	W TR Fl(2) W 5s 13M range	Stay west of firing area off Berlenga islands
22	Cabo Raso light 38 42.26N 9 30.73W	170	47.5		
23	Red No2 Lisbon via Tagus river. Under Bridge 230' at Cristo Red statue	129	7.7	R FL R 10s 7M RAREF AIS	Cascais Marina
	Total NM		1507		

Scandinavia to Dover- Sailing conditions in the summer are generally good with occasional NW gale. Weather forecasts are reportedly reliable and accurate for 72 hours. Hazards: shipping, offshore drilling, and a shit ton of wind farms. Poor visibility may be an issue so the radar unit may be useful. Shipping separations zones should be avoided. It may be difficult to leave wide offing of the wind farms but entering wind farms should be avoided, it's illegal for Dutch and Belgian. Rotor tip 22m above High water(SV Breezy 21.6m). Offshore platforms, keep 500m away from these. Flash All round white (. . -) Morse 'U' every 15 seconds. Range 10M and relights doing the same with range of 2M and fog signals sounding 'U'. U for "U Betta stay away."

Dover Strait- Yacht crossing 10M straight could encounter 20 ships. Or one every 6 minutes. Shipping can be intense. Keep well inside the traffic separation zone. Anticipate fog in Dover. Fair eddy currents run along the coast inshore.
Dungeness - Beachy Head: See channel pilot pg 20 for lights and platforms.

Bay of Biscay to Lisbon- Worst conditions caused by SW gales. NW winds typically follow a depression. Wait in Falmouth until favorable conditions occur. Summer months, expect more NE winds. Aim for Cape Finisterre waypoint inside the traffic separation zone. (If necessary, landfall at Rio Lima: Small town with marina. Not with onshore winds due to breakers.) From Finisterre to Lisbon set

course west of Barlenga islands just north of Lisbon. Lisbon in 8 miles up the Tagus river. Look for Cascais marina.

Orca- Most recent Facebook posts:

"The Orcas (Iberian pod) are currently off the Atlantic Coast of Portugal on their annual migration pattern"

"There have been no encounters out near the shipping lanes. The danger zone appears to be near the edge of the continental shelf, or near other large changes in depth."