Clipper Race Instructions - Cape Town to Fremantle

SECTION 3 - COURSE DETAILS
RACE 3 – CAPE TOWN TO FREMANTLE

REFERENCES

The race will be sailed in accordance with the instructions below and the references included in them to:

- Clipper 2017-18 Race Notice of Race, dated 20 May 2017
- Clipper 2017-18 Race Sailing Instructions, dated 21 June 2017

GENERAL INFORMATION

- All times are **local**, Cape Town (UTC +2 hrs) unless otherwise stated.
- Tidal Information on Tuesday 31 October at:
  - Cape Town HW 1239 1.59m
- Race distance is approximately 4754 nautical miles.
- The estimated finishing date is 21 – 25 November 2017
- All bearings shown are relative to True North.

ARRANGEMENTS PRIOR TO THE START

- 0630 - 1000 Immigration for all teams
- 1000 All crew on yachts
- 1100 Skippers dockside briefing
- 1200 First Clipper yacht slip lines
- 1245 - 1300 Parade of Sail
- 1400 Race start in Table Bay

START AND STARTING SIGNALS

The start for Race 3 will be at 1400 LT on Tuesday 31 October 2017

Sequence for the start will be :-

1350	10 minute warning signal	Clipper Race class flag and air horn blast
1356	4 minute preparatory signal	**'P'** flag raised and air horn blast (engines off)
1359	1 minute warning signal	**'P'** flag lowered and air horn blast
1400	Start	All flags lowered and sound signal.

The Class Flag shall be the Clipper Race Flag.
All flags will be shown on a committee vessel.
Sound signals shall be made by an air horn and are made to draw your attention to the flags.
The start will be signaled by an air horn blast.
The start sequence shall be called on VHF CH 77.
Engines are permitted to be used until the 4 minute preparatory signal.

STARTING LINE

The start line shall be between the mast on the committee vessel and a yellow inflatable buoy. The Committee Vessel will be a 48 ft catamaran named "Isla"

The start line will be located in Table Bay.

- The start line will be approx. 400m in length.
- The exact location of the start course and any marks will be determined by the Race Director and briefed at the pre-race skippers briefing.
- Any alterations to the proposed start courses shall be made on VHF Channel 77.
- The Clipper Race Committee reserves the right to change or adjust the published starting procedures or start course and any aspect of the race course to ensure the overall objectives of the Clipper Race are achieved.

START COMMUNICATIONS

The Race Officer will communicate on VHF CH 77 The stand-by channel will be VHF CH 72. All yachts are to check in with Race Control on VHF prior to the 10 minute warning signal.

The final 10 seconds before the start will be counted down on VHF. This shall not count as outside assistance; failure to hear the transmission will not be cause for redress.

INFRINGEMENTS

Reference SI 5 (extracts reprinted below)

- RRS 30.1 (Round – an – End Rule) will be in force for all starts but flag 'I' will not be flown.
- Yachts on the course side of the starting line (OCS) at the start will be penalised by a time penalty of 1 hour plus a further minute for every second over the line at the start signal.
- Whenever possible yachts over the line will be advised by the starting authority on the designated VHF channel.
- Yachts may avoid a penalty by returning around the pin end of the start line and then re-crossing the line.
- Entering a TSS – a minimum 6 hour time penalty will be applied to that yacht's finishing time (see exception below).

RACE MARKS

Race marks will be established buoys, race marks, navigational marks and virtual waypoints.

COURSE

Ref	Mark	Rounding	Comments
1	Start Course		Briefed at the pre-race Skippers briefing
2	Ice Limiting Latitude	STARBOARD	45° South – No yacht to go below this latitude
3	Rottnest Island	STARBOARD	Approx. position 32°00.437S, 115°30.247E
4	Fairway Landfall Buoy (L FL1W 10s)	STARBOARD	Approx. position 31°57.136S, 115°38.821E
5	FINISH	North to South	See below

WARNINGS

- Traffic Separation Schemes – no TSS shall be entered by a Clipper Race yacht (other than the TSS off Cape Town – see below) and should be considered an obstruction. If for safety reasons a yacht is compelled to enter a TSS then that yacht must comply with IRPCS Rule 10. To exonerate herself the yacht crossing into a TSS must return to the exact position they crossed into the TSS before resuming racing. For the avoidance of doubt, the magenta area of a TSS as shown on the chart shall constitute part of the TSS and shall not be entered.
- Positions of racing marks given are approximate. If a mark is out of position this will not be grounds for a yacht to protest the Race Committee or apply for redress. It is always the Skipper's responsibility to determine if any racing mark is surrounded by navigable water.
- When leaving Cape Town, care should be taken regarding the TSS. The Race Office has obtained permission for the fleet to cross the TSS at any angle required to complete the start course but all yachts shall give way to any commercial traffic.
- Skippers should be aware of the high volume of commercial traffic when departing Cape Town and in the vicinity of the start line.
- Skippers must keep a listening watch for Cape Town Port Control on VHF CH 14 and not impede the safe passage of any commercial traffic particularly around the start line and within the port of Cape Town
- Skippers are to be warned to beware of recreational boaters, in particular around the race start and finish areas.
- No yacht to be south of latitude 45° South. Penalties will apply.
- ***Safe Navigation*** Skippers are warned that marks of the course are not necessarily placed in safe navigable waters, in fact in some cases they are placed on land, and therefore they should **not** be used as route waypoints. The safe navigation of the yacht is the sole responsibility of the Skipper and as such the Skipper shall ensure that when deciding on routing and selecting route waypoints consideration is given to all navigational hazards, crew strength, visibility and whether it is day or night. As a rule of thumb and depending upon circumstances, during daylight a 5nm separation from a known navigation hazard should be considered and at night this should be significantly more, up to 10nm.

STEALTH MODE

As per Clipper SI 9, each yacht shall have the opportunity to use one period (of 24 hours) of Stealth Mode.

SCORING GATES

As per Clipper SI 10, there will be one scoring gate during race 3. This is not a compulsory gate for the race but the first three yachts through the gate will be awarded three points, two points and one point respectively. Any other yachts that pass through the scoring gate will not be awarded any points. Skippers shall record the GPS time (UTC) of crossing the scoring gate and email / contact the Race Office with these timings within 3 hours.

The scoring gate shall be between SG3 North at position 40°S 055°E and SG3 South at position 43°S 055°E

A digital photograph of the GPS time (UTC) shall be taken when crossing the scoring gate and retained on board. This photograph will be used to confirm the timings. The photographs from the first three boats to cross the scoring gate may be checked at the next stopover. Failure to produce the photographs when requested by a member of the race committee will result in disqualification from the scoring gate and the points will be awarded to the next team in line subject to examination of photographic evidence.

OCEAN SPRINT

As per Clipper SI 11, there will be an Ocean Sprint as part of race 3. The Ocean Sprint shall be between the lines of longitude 088°E and 095°E. Skippers shall record the GPS time (UTC) of crossing each of these lines of latitude and email / contact the race office with these timings within 3 hours.

The first three teams with the shortest elapsed time between the two designated points will receive three points, two points and one point respectively. The remaining yachts will receive no points for the ocean sprint.

A start and finish declaration must be submitted by each yacht regardless of whether it is the shortest elapsed time or not as this information is needed for a results table that will be published on the Clipper Race website.

A digital photograph of the GPS time (UTC) shall be taken when crossing the line of latitude. This photograph will be used to confirm the timings. The photographs from the fastest three boats in the Ocean Sprint may be checked at the next stopover. Failure to produce the photographs when requested by a member of the race committee will result in disqualification from the scoring gate and the points will be awarded to the next team in line subject to examination of photographic evidence.

JOKER

As per Clipper SI 12, each team is allowed to play their 'Joker' once only during the 2017-18 Clipper Race. It can be played in any individual race and in order to be eligible this request must be submitted to the Race Office in writing at the pre-race Skippers briefing on the day before departure of the nominated race. In the event that there is no planned Skippers briefing then a team must inform the Race Office in writing no later than 24 hours before departure of the nominated race.

The 'Joker' means that all points gained from the yachts finishing position at the end of the nominated race will be doubled. e.g. if a team finishes 1st then they will be awarded 24 points and if a team finishes 12th then they will be awarded two points.

Any points gained from Scoring Gates or Ocean Sprints will be unaffected.

REPORTING POSITIONS

Lead Skipper:

- 31/10 – 06/11 [redacted]
- 07/11 – 14/11 [redacted]
- 15/11 – Finish [redacted]

- As per Clipper SI 7, each skipper shall report the position of their yacht to the Race Office by email at 0600 and 1800 UTC each day. Amongst other things, this email shall contain DTF. The email shall be sent to [redacted] (do not copy in the Lead Skipper or other yachts).
- In the event of Satcom email failure the skipper shall endeavor to pass the scheduled reporting information and daily report back to the Race Office via the sat phone or the Lead Skipper or any other Clipper yacht on VHF.

FINISH LINE

- Skippers are to report their position and ETA at the finish line to the Race Office by phone or email when within 20 miles (or 2 hours) of the finish line.
- The finish line shall be between the Red 'A' Port Lateral Buoy (Iso 1r 2s) in approx. position 32°03.314S, 115°43.033E and the Red Port Lateral Beacon Tower (VQ 1r 15m6M) on the north breakwater in approx. position 32°03.233S, 115°43.471E
- The finish line shall be crossed from North to South.
- Skippers must record their own GPS time of crossing the finish line (UTC) and they must send this time to the Race Office via email or any other means within 30 minutes of finishing or as soon as practicable. There may be a finish boat.

ACTIONS AFTER THE FINISH

Once finished each team shall prepare their yacht for berthing and follow berthing instructions issued on VHF CH 77 by the Deputy Race Director.

COMMUNICATIONS WITH OTHER CLIPPER RACE YACHTS AND RACE CONTROL

In addition to monitoring VHF CH 16 and relevant harbour channels the Clipper Race yachts shall use the following VHF Channels :-
Primary VHF CH 77
Secondary VHF CH 72

[redacted]
Clipper Race Director 29 October 2017

Annex B

CV24's logbook for 31 October 2017

CLIPPER ROUND THE WORLD

CLIPPER ROUND THE WORLD 17-18

LOGBOOK FOR CV..24..

LEG 3

REQUIREMENTS

Please be advised that the list below are requirements and must be adhered to without fail;

- It is a legal requirement that the logbook is filled out at least once an hour.
- The pages are numbered and it is forbidden to remove any of them for any reason.
- The GPS position must be backed up with visual confirmation of lights, landmarks or buoyage if possible.
- If coastal or inshore sailing a plot must be recorded on the relevant paper chart every hour.
- If making an ocean passage a plot must be recorded at least every 24 hours or more often if the Skipper requires.
- If 'going to sea' (i.e. sailing beyond sheltered waters) then a written passage plan must be filled out.
- The first day of the passage must include a crew list and any subsequent changes must be recorded.
- The Skipper is required to read the company's standard operating procedures on log filling.

NOTES ON COMPLETING THE LOGBOOK

This logbook has two pages for each day, starting at midnight. The left hand page is for regular navigational information and extends on to the next page for more general remarks and specific boat checks.

At the Back of the logbook, you can find the passage planning sections to be completed by all vessels in accordance with maritime law. Further information on passage planning can be found in the latest copy of Reed's Nautical Almanac.

It is recognised that there are many ways of recording the same information within a logbook and it may seem that there is a lot of information required and look daunting at first. However, you will come to appreciate the level of detail as it will clear up the many questions and queries levelled at you from the crew and from the company. More importantly it will aid you in getting to know your yacht better allowing you to make more informed decisions based on an accurate historical record. This will result in safer and faster sailing. Some of the headings and entries require further explanation so that there is conformity across the fleet of Clipper yachts.

Passage Plan

This is a legal requirement if sailing outside of 'sheltered waters'. Much of the information required for this section can be found in the Nautical Almanac, Admiralty Pilot books, local pilot books and UKHO charts. This page also includes a section to record any additional notes that may be required or deemed important. This is also where the names of crew on board can be listed. A separate passage plan MUST be completed for every Race.

The HW/LW section is included for passages within 'sheltered waters'. 'Sheltered waters 'are described as any area within the boundary of the Portsmouth forts in the Eastern Solent and the Needles in the West.

Pre-Departure checklist

This includes a check of the instruments and electronic aids to navigation. Make sure it is filled out correctly and returned to the Race Office prior to departure and in good time.

Maintenance and Routine checks

Apart from the usual information such as date, name of yacht, name of Skipper, etc. the maintenance and routine checks section must be filled out. All the checks listed MUST be carried out as a minimum daily inspection and the check boxes signed correctly. There are other checks to be carried out on the yacht and they will be highlighted in the Clipper Ventures Rig and Safety checklists. **This is the Skipper's responsibility and if not done will result in disciplinary action from the company.**

Time

Make an entry at least every hour. Local time should include any adjustment for BST (British Summer Time) if applicable. No entry is required if UTC and local time are the same. When on an ocean passage local time should reflect the apparent time. Subtract 1 hour for every 15 degrees sailed west and add 1 hour for every 15 degrees sailed east.

Latitude / Longitude

This should be recorded in the decimal format straight from the GPS.

Log

Should be a record of the nautical mileage (NM) and be taken from the same source. It is recognised that the GPS and the Garmin instruments both record a log and they rarely coincide. Please take the reading from the GPS instrument.

Power / Sail

This should include an entry such as P, S or MS for motor-sailing. If under power, do not forget to fill in the engine hours column on the right hand page of every day.

Wind Direction

Please fill this out in compass degrees and not as a compass direction, e.g. 045 degrees and **not** NW. Even small changes in direction can then be measured.

TWS and TWA

True Wind Speed and True Wind Angle. Wind speed should be measured in knots and **not** the Beaufort scale as even small changes can be recorded more accurately and allow you to make more informed decisions about sail choice and reefing.

AWS and AWA

Apparent Wind Speed and Apparent Wind Angle. Wind speed should be measured in knots and **not** the Beaufort scale as even small changes can be recorded more accurately and allow you to make more informed decisions about sail choice and reefing.

Barometer (mb)

Record the barometric pressure every hour in millibars (mb)

Sea State

Please record as a single or double letter;

C – Calm, 0.1m to 0.5m	S – Slight, 0.5m to 1.25m	M – Moderate, 1.25m to 2.5m	R – Rough, 2.5m to 4m
VR – Very Rough, 4m to 6m	H – High, 6m to 9m	VH – Very High, 9m to 14m	PH – Phenomenal, above 14m

Cloud

This is measured in OKTAS or 8ths. Please record as a number, 1 to 8.

Weather / Visibility

Record the current weather conditions e.g. Fair, Good, etc. Visibility is to be recorded as follows; Fog = Less than 1000 metres, Poor = 1000 metres to 2 NM, Moderate = 2 to 5 NM, Good = greater than 5 NM

Evolutions

Sail Plan/Observations/Notes and remarks. This should be an overview of the past hour.

Battery (Volts)

Note the 24v battery voltage in this box. The battery voltage should not be allowed to fall below 24.3v The generator needs to be turned on to ensure this does not happen and will need to be run for a minimum of 6 hours in order to bring the batteries back up to full charge.

Generator and Main Engine

If 'on' then the hours should be recorded in these boxes as a tick.

Fuel Day Tank

If below the full line then pump fuel into it. The day tank must always be kept full as this will allow you to estimate the level of fuel in the main tanks. Please place a tick in this box when completed.

Grey Tank

This should be pumped every hour as it will start to smell if left longer. Please place a tick in this box when completed.

Water Maker

If 'on' then the hours should be recorded in this box as a tick.

Bilges

This should consist of a visual inspection of the bilge by lifting the required sole boards. Please place a tick in this box when completed.

Fix on Chart

Place a GPS fix on the relevant chart in pencil. Do not be too heavy on the pencil as it will need to be erased at the end of your passage or before you hand the charts back to the company.

Initials

This is important because if any mistakes are made then enquiries can be made of the crew member. Experience has shown that for example the barometer reading can be misread which then leads to the next person to fill out the log receiving quite a shock when they see that the pressure has dropped by 6mb in an hour and then risen by as much again in the next hour.

Fuel Tank Levels

These should be recorded or estimated regularly. It is obvious that this will allow the Skipper to manage the yacht's resources more efficiently (particularly when motoring longer distances).

DATE: Oct 31, 2017	LOG OF YACHT: CUZ4
SKIPPER: [redacted]	TOTAL PERSONS ON BOARD: 18

PRE-DEPARTURE CHECKLIST COMPLETED AND RETURNED TO RACE OFFICE

DAILY MAINTENANCE AND ROUTINE CHECKS

SAFETY GEAR	BILGES	STEERING GEAR	DECK WALK	RIGGING	SAILS	ENGINE	GENERATOR	INITIALS
[redacted]	[redacted]		[redacted]					

UTC	LOCAL	LATITUDE	LONGITUDE	COMPASS COURSE	TRUE COURSE	COG	WATER SPEED (knots)	SOG (knots)	LOG (nM) from GPS	DISTANCE (nm)	POWER/ SAIL	WIND DIRECTION (degrees)	TRUE WIND SPEED (knots)	TRUE WIND ANGLE (degrees)	APPARENT WIND SPEED (knots)	APPARENT WIND ANGLE (degrees)	BAROMETER (mb)	SEA STATE
0911	11:11	S33 54.206	E18 25.347	—	—	—	—	—	11213	—	—	—	—	—	—	—	—	—
1311	15:11	S33 53.4	E18 23.6			060	4.9	4.9	11227	14	S	010	6	045	9.5	021	1010.8	CALM
1511	17:11	S33 53.05	E18 21.9			334	3.6	4.0	11235	8	S	265	6	035	10	017	1012.3	CALM
1600	1800	S33 53.483	E18 19.929	227	203	212	1.1	1.5	11238	3	S	340	5.8	058	6.8	053	1012.9	CALM
1800	20:00	S34° 01.05A	E18° 14.435	210		203	9.3	10.5	1250	22	S	059°	16.9	149	10.6	125°	1013.9	CALM
1915	21:15	S34 13 602	E18 21 139	160	146	140	11.0	6.6	1265	15	S	351	23.9	146	18.3	137	1013.0	Slight

Additional Notes: RACE START 1400 LOCAL.

HOURS	
ENGINE	
GENERATOR	
WATERMAKER	

FUEL TANK LEVELS:	%			
STARBOARD OUTER	25	50	75	100
STARBOARD INNER	25	50	75	100
PORT OUTER	25	50	75	100
PORT INNER	25	50	75	100

CLOUD (okt)	WEATHER / VISIBILITY	EVOLUTIONS / OBSERVATIONS / NOTES AND REMARKS / OVERVIEW OF LAST HOUR	REN. BATS	SOS	SAIL PLAN M	S	Y	A	BATTERY (Volts)	GENERATOR	MAIN ENGINE	CHECK DAY TANK	PUMP GREY TANK	WATER MAKER	BILGES	FIX ON CHART	INITIALS
——	——	AT DOCK; BOAT PREPPED.															
5/8	Good	RUNNING 7TH IN ROUND CANS RACE		-7	✓	✓	2	-	25.1	X	X	X	X	X	X	X	[redacted]
4/8	Good.	SAILED 4.9nm 1.6kn.		-8	✓	✓	2		25.1	-	-	-	-	-	-	-	[redacted]
6/8	GOOD.	SAILED 5.0nm 3.9KN	1	-8	✓	✓	2	-	28-3	✓	X	X	X	X	X	X	[redacted]
6/8	Good.			-8	✓	-	-	2	26.04	X	X	✓	X	X	X	X	[redacted]
6/8	good	Crime Watch on duty		8	✓		2		25.51	Y	X	X	X	X	✓	-	[redacted]

CV24's Small Commercial V	April 2015 and valid until 26 June 2018

SMALL COMMERCIAL VESSEL CERTIFICATE

The Committee of the IIMS Certifying Authority

Maritime & Coastguard Agency
Certifying Authority authorised by the MCA

5 YEAR CERTIFICATE

Name of Vessel: **CV 24**

Official No: **N/A**

Hin No: **CN MZR70006A313**

Port of Registry: **Portsmouth**

Gross Tonnage: **N/A**

Maximum No of Persons to be carried (including crew members) 24

Passengers: 12

Crew: 12

Unique Identification No : **C13SV2106974**

Name & Contact Details of Owner/Managing Agent:

Clipper Ventures
Unit 1
Granary & Baking Building
Weevil Lane
Gosport
Hampshire PO12 1FX

Length Overall: **21.32 m** **Beam 5.68 m**

Load Line Length: **N/A**

Date of Build: **2013**

This is to certify that the above named vessel was examined by

[redacted] AT **Hamble and Gosport Marinas** ON **27th June 2013**

and found to be in compliance with the requirements of the Code of Practice for the Construction, Machinery, Stability, Operation, Manning and Examination of Sailing or Motor Vessels, of up to 24 metres Load Line length, that do not carry more than 12 passengers by compliance with the equivalent provisions in the Annex to MGN 280 (M).

This certificate will remain in force until **26th June 2018** subject to the vessel, its machinery and equipment being efficiently maintained, annual examinations and manning complying with the Code of Practice, and to the following conditions:

Permitted area of operation is: **- Cat 0 Unlimited &**
Cat 2 up to 60 miles from a safe haven

MLC Endorsement: **This vessel is compliant with the UK National Legislation implementing the Maritime Labour Convention, 2006**

Operating Restrictions: **NONE**

Issued at: **IIMS HQ, PORTCHESTER UK on: 8th April 2015 – Reissue for MLC**

For and on behalf of **UK MARITIME & COASTGUARD AGENCY**

INTERNATIONAL INSTITUTE OF MARINE SURVEYING
Murrills House
48 East Street
Portchester Fareham
Hampshire PO16 9XS
United Kingdom

Name: [redacted]

Signature: [redacted]

(Details of Annual Examinations are recorded on SCV2 held on board the Vessel)
Further clarification of the validity of this certificate can be obtained the from the Certifying Authority

THIS CERTIFICATE IS TO BE HELD ON THE VESSEL AT ALL TIMES

Annex D

MCA letter dated 17 October 2013 regarding the second person on board Clipper Ventures' yachts

Bay 3/23
Spring Place
105 Commercial Road
Southampton
SO15 1EG
United Kingdom

Tel: +44 (0)23 8032 9100
Fax: +44 (0)23 8032 9FaxNumber
E-mail: Exams.section@mcga.gov.uk

[redacted]
Race Director
Clipper Ventures
Clipper Race HQ
Unit 1a, Granary and Bakery Building
Royal Clarence Marina
Weevil Lane
Gosport PO12 1FX

Your ref:
Our ref:

17 October 2013

Dear [redacted],

Course Title: Clipper Coxwain's Course

Whenever possible Clipper Ventures PLC should have suitably qualified persons onboard as required by The Safety of Small Commercial Sailing Vessels – A Code of Practice, Annex 7, 2.2.3 or 2.2.4 or as required by Marine Guidance Note 280 (M), Annex 3, Table 1.

The Maritime and Coastguard Agency (MCA) agree that when a vessel owned and operated by Clipper Ventures PLC does not have a second qualified person onboard as required, that a second person must be onboard who has successfully completed the Clipper Coxwain's Course, in addition to the fully qualified skipper.

This agreement only applies to vessels owned and operated by Clipper Ventures PLC, and is relevant to voyages when the vessel is 60 nautical miles or further from a safe haven.

Yours faithfully,

[redacted]
Registrar General

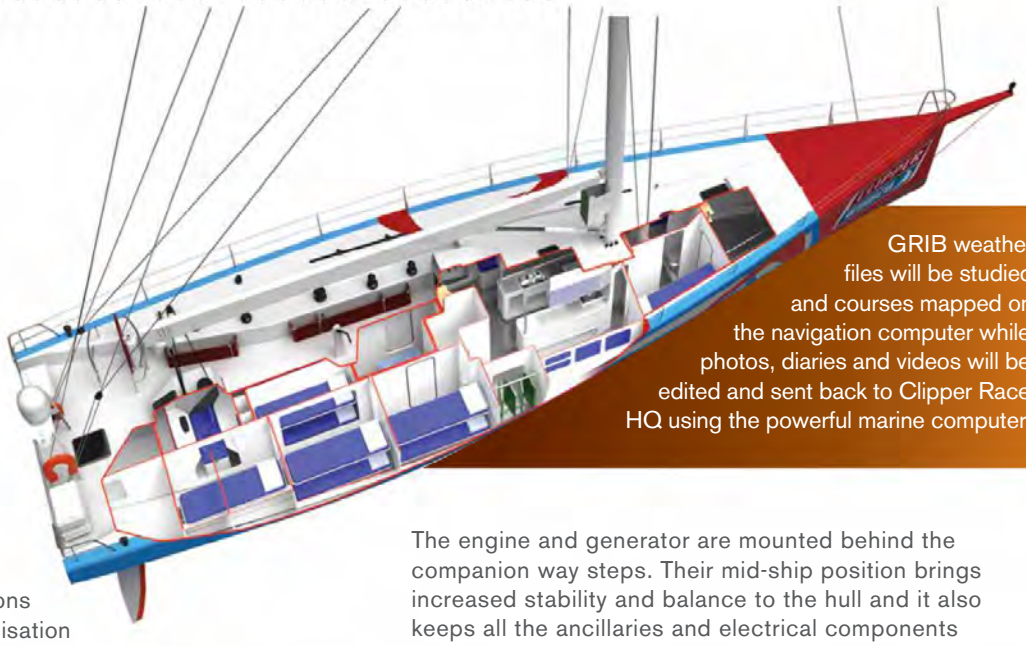
Extract of Clipper Ventures' Race Crew Manual

THE RACE OF YOUR LIFE

RACE CREW MANUAL V

CLIPPER ROUND THE WORLD

INTERNAL DESIGN



GRIB weather files will be studied and courses mapped on the navigation computer while photos, diaries and videos will be edited and sent back to Clipper Race HQ using the powerful marine computer.

You will find a stripped-out interior below decks with 24 bunks, a state-of-the-art navigation station and a simple galley. Watertight bulkheads and doors are placed at strategic locations to provide compartmentalisation in case of flooding.

The engine and generator are mounted behind the companion way steps. Their mid-ship position brings increased stability and balance to the hull and it also keeps all the ancillaries and electrical components in one maintenance-friendly area.

The navigation station is placed towards the stern, providing a closer link between the navigator and helmsman. It is equipped with all the latest navigation electronics, navigation computers and up-to-date satellite communications. This area of the yacht will provide the skipper and media crew member on board with the ideal area to work in.

Centrally, just aft of the mast, sits a simple horseshoe-shaped galley, which will feed in to the communal area. This is where crew briefings and all-important meal times can take place. Crew accommodation runs from the stern forwards in a series of double bunks and stops short of a watertight bulkhead towards the front third of the boat. Ahead of this is a large compartment for storing sails, with the main hatch located directly above.

DECK ROLES

On board the Clipper Race yachts we have an ethos of full participation; you will be able to get involved in all areas of the boat. Often, however, we find that crew will go on to specialise in the areas where their strengths lie.

By specialising they become more efficient at a job, understand how that job fits in with others on board, and this improves communication. In order for a crew member to specialise they need to understand all the roles so, even if you wish to be bowman, a few days in the snake pit will be invaluable. When training, specialisation is not encouraged, partly for this reason and partly to allow everyone to experience as much as possible.

The definition of the roles below is not absolute; each team finds different defining edges to each job. Each watch should be able to fill each slot so when all the crew is up, there will be double the hands in each area. To avoid confusion, clear guidelines need to be laid down for situations when the whole crew is up, otherwise crew will get in each other's way.

Bow

The bow is the high adrenaline position on the boat. The bowman leads the team on the foredeck and anything in front of the mast is their responsibility. You will need to be agile, strong and prepared to get very wet as you will often need to climb out to the end of the bowsprit.

Foredeck

The foredeck crew works closely with the bow and should be able to step into their shoes if they are injured or on mother watch. They play a key role in sail changes and preparing sails pre-hoist, as well as helping at the mast with the mainsail during reefs. Like the bowman you will need to be strong and agile.

Mast

The mast crew is normally made up of the last two members of the foredeck crew. They need to be able to work together in order to hoist as quickly as possible. Like the rest of the foredeck team they need to be strong and agile as well as being able to tie bowlines quickly under pressure and sometimes underwater!

Helm

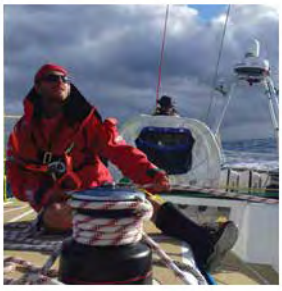
The art of good helming is the ability to maintain a steady course and get the most out of the yacht in all conditions and especially in light winds.

A good helm should develop a natural feel for the yacht and have the ability to remain focused when everyone else is working rapidly around them. They are often the first to notice changes in wind direction or strength and should communicate this information to the Watch Leader.

Snake pit

A good snake pit is always a step ahead of the game ensuring that each line is ready when needed.

This is the centre of operations for every manoeuvre. In the snake pit you control all of the halyards as well as many other sail controls. You should be able to lay your hands on any line, day or night, and prepare it for action in a flash. A small mistake in the snake pit can disrupt the momentum of any manoeuvre.



Trimmer

A good trimmer has an eye for what works built up by experience through trial and error. They should not be afraid to reverse what they have just done in a bid to find optimum sail angles. Good communication with the helm is paramount.

Cockpit

The cockpit is where all of the sheets are controlled. Every crew member should be able to operate any point of the cockpit rapidly and accurately. If the cockpit crew get it wrong it can cause a lot of extra work for the rest of the crew.

Watch leader

The watch leader is the skipper's 2IC. He or she is responsible for running the yacht when the skipper is sleeping. They must maintain a cohesive functioning team, coordinate sail changes and trimming as well as ensuring a steady course and standard of helming. In addition to this they must always have an eye on the meteorological and tactical situation. With good, all round knowledge they are able to act quickly to remedy a problem encountered during a manoeuvre.

Standing orders

Each skipper will publish a set of standing orders. While these will vary from boat to boat the fundamental standing orders will be the same across the fleet. The aim of the standing orders is to enable the safe and efficient operation of the crew and yacht. The standing orders should be followed at all times and will include at least the following topics:

- Informing the skipper
- Use of life jackets and life lines
- Safety on deck
- Winch safety
- Ships Log and chart work
- Lookout
- Watch handover
- Traffic
- Safe navigation and passage planning
- Gas procedure
- Working aloft
- Smoking
- Ship and personal hygiene
- Prescription medicine
- Alcohol
- Drugs, weapons, laws of the land
- Swimming
- Safety drills

It is very important that all crew members are aware of the standing orders and comply with them at all times. In the absence of the skipper from deck it is the watch leaders' responsibility to ensure they are enforced.

The watch leader

Each watch will be led by a watch leader. This will be a member of the crew who has been selected by the skipper to lead the watch in the skipper's absence. To be a good watch leader you do not necessarily need to be the best sailor on board but you will need outstanding leadership, communication and decision making skills. These are required in order to motivate your watch, keeping them working together effectively and also making appropriate decisions concerning the performance and safety of the yacht within the boundaries set by the skipper.

Responsibilities of the watch leader:

- Ensuring the skipper's standing orders and instructions are carried out by the crew
- Waking the skipper when needed or if in any doubt
- Sailing the yacht, her safety and the safety of the crew
- Maintaining course control and standard of steering
- Maintaining a cohesive functioning team
- Coordinating sail handling and trimming
- Avoiding other vessels
- Keeping track of yacht positions by regular fixing
- Ensuring an up to date log is kept
- Overseeing daily checks on standing and running rigging as well as all deck fittings and safety equipment
- Analysing changes in wind strength and direction with a view to pass detailed information onto the skipper and navigator

When to wake the skipper

The skipper is ultimately responsible for everything that happens aboard their yacht. However it is unrealistic to expect them to be awake all of the time; in fact it is important that everyone on board gets as much sleep as possible in order to be able to continue functioning as an efficient crew member. This is no different for the skipper. Before going below most skippers will tell the watch leader when or under what circumstances they should be woken. In order for the skipper to sleep they will need to be confident that they will be woken up when appropriate. The skipper should always be woken for any form of emergency or if the watch leader has any doubts concerning:

- any injury or illness to any crew member
- any damage to the yacht or systems not working as expected
- whenever visibility is reduced
- whenever there is a significant (skipper to define) change in the expected weather conditions
- whenever another ship or yacht is within a three mile radius
- whenever a ship is considered to be on a collision course (irrelevant of distance)
- when approaching land or a navigation hazard the skipper shall specify an 'inform/wake me' distance for known navigation hazards or land (eg. "Wake me when we are at this point or distance,") whenever there is a concern or a question over set, drift or course to steer
- an MOB situation
- an evacuation due to fire or flooding
- on receipt of urgent communications from other Clipper vessels, the Clipper Race Office or on receipt of any MAYDAY or PAN PAN call and
- whenever there is concern over the crew or ship's safety

Nobody should hesitate to call the skipper. They are on call 24 hours a day. If in doubt, SHOUT!

ROLES ON BOARD

In addition to sailing your boat and maintaining your boat during the race there will also be other roles that need to be fulfilled that may not seem that obvious initially.

Medic

This role is normally filled by someone who has medical training, a doctor, nurse, paramedic or even a vet. Working with the skipper (who is also medically trained) they take responsibility for the welfare of the crew, treating any illness or injuries that occur on board. The medic is supported by doctors in the UK who are on call 24 hours a day to offer advice and support, as well as other medics within the fleet who offer advice within their own areas of expertise.

Sail repair

In any ocean race it is inevitable that sails will be damaged and need repairing. When a spinnaker is blown it is replaced by a smaller, heavier sail. The down time can cost miles so it is important to be able to repair them as quickly as possible. The Clipper Race yachts carry heavy duty sewing machines for this purpose.

The sail maker/repairer will often find themselves working under great pressure in hot, cramped conditions.

Engineer

The race yachts are full of mechanical equipment such as generators, engines, watermakers, plumbing, pumps, steering gear etc. all of which require regular maintenance. The engineer is responsible for carrying out this work, ensuring that the yachts equipment remains in good working order. If things go wrong the engineer may be required to come up with improvised solutions to keep the yacht operating until it reaches port.

Photography and media

State of the art satellite communications systems are on board each Clipper 70 makes it easy to send back video and photos to Race HQ, as well as live broadcasts mid-race.

James Rogers, media and round the world crew member on board Qingdao, said: “On board we decided that keeping the best record of our adventure was going to be really important from the off. We took advantage of all the kit that the media team provided, as well as the cameras that crew had brought to capture the action.

“It is just the simple pleasure of looking back over the videos, photos and blogs and being reminded of one of the thousands of memories that you find hard to believe are real when you have returned to your normal life.”

Team Coordinator

This is a highly demanding role as the Team Coordinator is responsible for the majority of administration related to the day to day running of a race yacht. The skipper’s time requires careful management and it is important for them not to try and micro manage the campaign. The Team Coordinator will normally liaise with the Clipper Race Manager and the Boat Secretary to ensure that the skipper is presented with all pertinent information in a timely manner. Via the Team Coordinator, the skipper can then delegate tasks to the various other heads of department within the team.

Boat Secretary

Helps to co-ordinate team events/contacts and acts as a useful focal point for communications to the skipper and Team Coordinator. This is a great position for someone doing a later leg of the race as a lot of their job requires them to have a decent internet connection and the ability to provide information for leggers waiting to join the boat. The boat secretary will normally also manage the team's social media threads.

Social Secretary

This role would either suit a round the world crewmember or a group of leggers acting as a committee. Responsibilities include: Organising all crew social events, crew parties, management of the crew kitty, sorting out crew entertainment whilst racing and the organisation of crew clothing. This role requires significant commitment prior to the start and at each stop over.

Quartermaster/Chief Victualler

This role carries significant amounts of responsibility. The role of the Quartermaster is to ensure that all the correct supplies are purchased, prepared, loaded and correctly stowed aboard prior to the start of each race. Their main responsibilities include: Organising the menu plan (taking into account the nutritional and dietary requirements of the crew for each specific leg), organising the purchases of food stores in each port, managing the menu whilst at sea, tracking the usage of stores and implementing stock takes pre-stopover. This position would ideally suit a round the world crewmember with experience in organising logistics, menus and food supplies for large groups of people. The Quartermaster will be assisted by several other crewmembers at each stopover and will also be responsible for managing the yacht's food budget on the skipper's behalf.

Safety Officer

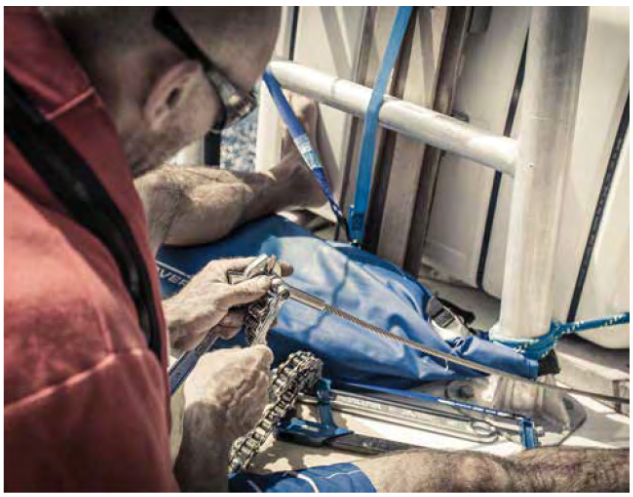
The role of the Safety Officer (SO) is to ensure that all safety equipment is checked and maintained in a fully operational condition. The role will include ensuring that all safety equipment is on board prior to the start, is fully operational and undamaged and if relevant is within its service dates. The role also includes ensuring that all crew are kept up to date and trained on how to use the safety equipment correctly i.e. running fire drill practice. The SO will also ensure that new crew joining the yacht are fully briefed on the operation of safety equipment and are familiar with drills.

Stopover Manger

The Stopover Manager works in conjunction with the skipper and the Team Coordinator to manage the day to day maintenance and activities that are required to be carried out during each of the stopovers. This position requires a lot of commitment in port and will normally be shared around the crew from stopover to stopover to ensure everyone gets their fair share of R+R between races. Crew members with hands on project and man management experience would be well suited to this role.

Bosun

The Bosun is responsible for the routine maintenance, care and repair of all sailing related deck equipment including sails, standing and running rigging, winches, halyards, sheets, guys, blocks, stanchions, guard wires, dinghy, etc. The Bosun will organize the repairs and maintenance pre-start, during each leg and at each stopover port, ensuring sufficient spares and tools are carried on board and topped up when used. They are also responsible for ensuring the deck and hull of the yacht look clean, tidy and free from rust stains before arrival in port. Some training will be given for this role prior to the start. While the Bosun manages all of the above, they will be calling on team mates of assistance with the rolling jobs list.



THE ART OF GYBING ↘

Gybing

Gybing with an asymmetric tends to be simpler than gybing a symmetrical spinnaker, due to the reduced number of control lines to be attended to. However, timing, excellent communication and coordinated team work are essential if the gybe is to run smoothly.

There are also two methods of gybing an asymmetric spinnaker that you are likely to use dependent on wind strength:

In stronger winds

The sail should be gybed outside of itself with the sheets running outside of the tack line as mentioned earlier in the Preparing for a Hoist section.

In lighter winds

The sail can be gybed between its own luff and the forestay. This is known as an inside gybe and the sheets should be run between the tack line and forestay.

Listed below are the steps required for both methods:

- Tack line to be pulled on tight to straighten the luff and stabilise the sail
- Helm keeps the boat on a steady course, normally a broad reach while;
  - Bowman checks that both sheets are free to run and that the lazy sheet has not dropped below the end of the bowsprit (usually only a problem in outside gybes)
  - Active trimmer ensures that slack from the working sheet is flaked and free to run
  - Second trimmer loads the new sheet onto the new winch
  - Two crew ready on the grinder, ready to take in the last of the sheet after the second trimmer has tailed in all they can. (Double check that the grinder is directed to the correct winch and that the winch is in top gear)
- Preventer is disconnected and main sail is centred
- Running backstays are switched over
- Main trimmer stands by for a big ease on the mainsheet once the mainsail has gybed over.

The next six steps must be performed simultaneously as one fluid manoeuvre to ensure the boat does not come out of the gybe either too slowly and wrap the spinnaker, or too fast with the sail flogging hard on the new gybe.

The key aim is to have the clew of the spinnaker sufficiently eased so that it floats around from one side to the other as the boat passes through directly downwind:

- Helm calls, "helm to weather" and starts a slow but continuous turn downwind, only aiming to stop the turn as the boat come out on the other gybe on a broad reach - around 110 - 130 degrees Apparent Wind Angle (AWA), depending on wind strength."They must keep the turn going at all times throughout the manoeuvre but should adjust their rate of turn to keep in sync with the two sheet trimmers

- The trimmer on the old active sheet gives large, continuous eases, to send the clew of the spinnaker right forward of the forestay as the boat reaches dead downwind, then prepares to dump the sheet completely once the new sheet has the load of the sail and the clew is gybed over to the correct side

- While the old sheet is being eased, the trimmer on the new sheet tails in the slack that they are receiving on their sheet. They need to be careful not to take too much weight on their sheet until the clew has floated around to the new side of the forestay

- Once the clew has gone forward of the forestay the new sheet trimmer works with the grinders to rapidly sheet the spinnaker into the roughly correct trim for the new gybe, as the old trimmer let's fly and completely dumps the old sheet

- As the mainsail flicks over to the new side, the mainsheet trimmer rapidly eases the mainsheet so that the boat does not round up too fast, and allows for the preventer to be swiftly re-attached on the new side

- NB: After the old sheet has been released, it needs to be kept under control to prevent it dropping under the end of the bowsprit and potentially getting pulled under the boat

Please Note: *If the sail is being gybed inside the tack, the bow crew should be helping to pull the clew between the forestay and tack line at this stage. By pulling down on the new sheet just as the clew reaches the forestay, they help the sail to float through the gap between the forestay and the spinnaker's luff. If the sail is being gybed all the way around the outside of itself, the clew needs to be eased much further forward of the forestay than for an inside gybe.*

THE ART OF GYBING ↘

Tidy up:

- Normally the tack line needs easing and to be re-trimmed for the new course as it was pulled on tight before the gybe. If however, the new course is higher on the wind than before the gybe, the tack line will need to be kept on fairly tight
- Assuming the new course puts the apparent wind aft of a beam reach, the preventer should be re-attached as soon a practically possible and ground on tight again
- Any slack from the active sheet should be flaked neatly onto the deck to allow for a rapid ease or another gybe without the risk of twists jamming in the winch or blocks

Gybing an asymmetric smoothly and successfully every time takes plenty of practice and excellent team work. When it goes right it is a very rewarding experience, where the boat speed only temporally dips before the sail is filled on the new side and the boat is back up to target speed again.

If the manoeuvre goes badly and the sail wraps around the forestay or twists itself up, it is generally a better idea to abort the gybe and get the spinnaker re-inflated on the original gybe before attempting to gybe again. Often, trying to make a bad gybe stick will result in compounding the wrap and potentially damaging the spinnaker.

If the boat is helmed too rapidly through the turn and the trimmers do not get enough time to tail in the slack on the new sheet before the kite re-inflates on the new side, the spinnaker will start to flog hard. This puts massive shock loading into the sail and sheet, often resulting in damage to the clew of the spinnaker.

The only solution here is to keep the boat on a broad reach while the grinders winch the sail in like their lives depend on it. Next time the boat is gybed, the helm should slow the rate of turn down during the manoeuvre to keep better time with the sheet trimmers.

Dropping

There are many different ways to drop an asymmetric spinnaker but in this manual we shall look at the most commonly used method, the “letterbox drop” where the spinnaker is blanketed behind the mainsail during the drop and “posted” through the foot of the main sail and the top of the boom.

Letterbox drop set up:

- The lazy sheet should be removed from the blocks on the windward side and run forward to the forestay
- The lazy sheet should then be passed around the outside of everything, back down the leeward side and a bight (loop) of rope led through the gap between the top of the boom and the foot of the mainsail (the letterbox)
- This bight of rope should then be run through a snatch block on the windward rail and then back to a winch

The drop:

- In preparation for the drop, the crew need to get themselves in the correct positions as follows:
  - One crew ready to tail the Yankee halyard when the headsail is going up and then quickly switch onto easing the spinnaker halyard for the drop itself. It is imperative that they ensure the spinnaker halyard is correctly flaked and free to run all the way until the spinnaker is below deck
  - The trimmer on the active spinnaker sheet ensures that their sheet is flaked and free to run when the call is given to release their sheet
  - The bowman prepares to trip the tack line which will release the tack from the end of the bowsprit
  - All remaining available crew line up along the windward side of the boom, making sure they stay inboard of the lazy sheet and eventually the sail itself as it comes through the letterbox. (They must stay inboard, if they are outboard of the sail and it fills during the drop, they will be knocked over the side.) The two crew right at the boom have the vitally important job of 'bear hugging' the luff and leech of the sail together. This helps keep any wind out of the sail and prevents it from re-inflating part way through the drop
- Once crew are ready at their stations for the headsail hoist, the Yankee is hoisted which helps blanket the spinnaker during the drop
- The helm then steers the boat deep downwind before giving the command to "trip" the tack line
- Tack line is then tripped
- The crew then tail the lazy sheet and almost immediately release the active sheet to allow the clew to come through the letterbox. The crew at the boom should pull all the foot of the spinnaker through and get both the tack and clew together. The halyard can then be eased as the crew 'bear hug' the luff and leech of the spinnaker together, working toward the head of the sail as it is eased down
- It is important that the crew do not just pile the sail on deck as it drops. They need to ensure that the spinnaker all gets dragged down the main companionway as swiftly as possible to prevent it getting caught by a gust and pulled over the side
- Once all three corners of the sail (head, tack and clew) are through the letterbox, the sheets, halyard and tack retrieval line (if used) can be disconnected and reset for the next hoist
- While crew on deck tidy up and re-trim for the course, a team below deck work to wool the spinnaker as swiftly and tightly as they can, before re-packing the sail into the correct bag

As with all spinnaker work, timing, communication, team work and lots of practice are required to get drops running well. If the drop goes badly, there is a good chance that the spinnaker may end up in the water. Some very good advice follows in this next section about recovering a kite that has been pulled over the side and is full of water.

CV24 – pre-race overall manpower plan

TEAM *GREENINGS* - ROLES

	RACE DURATION	LEG 1	LEG 2
Skipper			
Coxswains			
Team Coordinator			
Treasurer			
Victualler			
Engineer			
Medical Assistant			
Safety Officer			
Bosun			
Sail-Maker			
Social Secretary			
Crew Fund Committee			
Accommodation Coordinator			
Accomodation Assistant			
UNICEF Ambassador			
Media			
Media Assistant			
Race Crew Supporter Liaison			
Watch Leader - Port		TBD - (Prep Week)	TBD - (Uruguay)
Assist. Watch Leader - Port		TBD - (Prep Week)	TBD - (Uruguay)
Watch Leader - Starboard		TBD - (Prep Week)	TBD - (Uruguay)
Assist. Watch Leader - Starboard		TBD - (Prep Week)	TBD - (Uruguay)
Stopover Manager		[redacted]	TBD - (@ Liverpool)
Assistant Victualler		TBD - (Prep Week)	TBD - (@ Liverpool)
Assistant Engineer		TBD - (Prep Week)	TBD - (@ Liverpool)
Assistant Bosun		TBD - (Prep Week)	TBD - (@ Liverpool)
Assistant Safety Officer		TBD - (Prep Week)	TBD - (@ Liverpool)

"SEA DRAGONS - Just Do It!"

UPDATED 4 July 2017

CV24's pre-race declaration submitted prior to departing Cape Town

CV24

ANNEX B CLIPPER 2017-18 RACE SAILING INSTRUCTIONS
RACE 3 – PRE-RACE DECLARATION FORM

CAPE TOWN TO FREMANTLE

- I have produced a written passage plan for Race 3: ☑
- I am satisfied that I have sufficient victuals on board for the passage ☑
- I am satisfied that I have sufficient gas on board for the passage ☑
- I am satisfied that I have full freshwater tanks on board for the passage (and spare jerry cans) ☑
- I am satisfied that I have a fully functioning watermaker on board for the passage ☑
- I have checked that I have full fuel tanks on board (fuel tanks, day tank & spare jerry cans) ☑
- I have received the latest Notice to Mariners (issued by Clipper Ventures) relevant to the forthcoming race ☑
- I have taken the above-mentioned Notice to Mariners into account in my passage plan ☑
- I have produced Standing Orders (based on SSOP 11) and posted them up in the boat ☑
- I have received and understand the Course Instructions (including the warnings) ☑
- I have briefed my watchleaders and crew about the course instructions, passage plan and Standing Orders ☑
- All crew have received a full safety brief and the safety brief declaration has been signed ☑
- I confirm that I have measured and recorded the accuracy of my navigation equipment (GPS/Radar/Depth sounder) ☐
- I have checked any sails following professional repairs in a sail loft ☑
- I will email the Race Office upon completion of the man overboard drill ☐

I have appointed [redacted] as my navigator,

and [redacted] is my nominated CRCC.

SIGNED: [redacted] **DATE:** 30 Oct 2017

Extract of Clipper Ventures' Standard Operating Procedures

CLIPPER VENTURES STANDARD OPERATING PROCEDURES (SOPS) FOR ON WATER OPERATIONS

SECTION 1
INTRODUCTION

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45	Use of Bowsprit	15 March 2017
46	Battery Master Switches	15 March 2017
47	Use of Dinghy	15 March 2017
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ANNEXES:		
A	Safety Brief Checklist (Training and Race)	15 March 2017
B	Safety Brief Checklist (Events)	15 March 2017
C	Crew Safety Brief Declaration	15 March 2017
D	Skippers Pre-Departure Declaration	15 March 2017
E	Incident Report Form Information	15 March 2017
F	Copy of Incident Report For	15 March 2017
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H	Log of Qualifications	15 March 2017
I	Man Overboard Procedure Card	15 March 2017
J	Crew Agility Test	15 March 2017

INTRODUCTION AND CONTACT DETAILS

To all Skippers, Mates, and Race Crew,

You will find that the Clipper 2017-18 Round the World Yacht Race is a very special race in very many ways including its regulations. On some occasions the Clipper Race yachts are treated identically to merchant ships, whereas in others they are following rules written for yachts racing around the Solent. There is no escape from the plethora of regulations, instructions and rules and nor should there be.

These Standard Operating Procedures are to be read in conjunction with Clipper Ventures Supplementary SOP's (for Race Skippers only), the Clipper Race Training Manual and established regulations and practices. They are Clipper 2017-18 Round the World Yacht Race specific and are written to draw attention to various topics, apart from the obvious safety and legal regulations, and are to ensure a high degree of safety and professionalism throughout the Race. All Skippers and Mates are to read these procedures and are to sign to that effect on the following page.

This publication will be amended when required. It is important that all amendments are correctly recorded and that crew members' attention is drawn to the relevant changes. Amendments will be issued as whole sections.

Above all, the Clipper 2017-18 Round the World Yacht Race is designed to provide a lifelong memory of excitement and enjoyment to all those that take part. These SOP's will help everyone achieve this goal safely and efficiently.

Good sailing to all of you!

SECTION 8: LOG BOOKS AND POSITION FIXING

The logbook is a legal document and as such should be diligently completed, with, where possible, a minimum of one entry per hour (training/instruction/evolution permitting).

The entry should preferably be made on the hour but can be at any time, particularly after an evolution or course change. In addition to this a fix should be plotted on an appropriate paper chart at least once every hour, this fix should be confirmed by more than one method. When navigating in the vicinity of navigational hazards it may be necessary to increase the frequency of these fixes. When navigating across open oceans away from land and navigation hazards using large scale charts a paper chart plot every 12hrs is more appropriate providing progress is being monitored on electronic charts.

A tidy, accurate and interesting log is a sign of a well-run yacht and a direct reflection on the professionalism of the Skipper. As a minimum the items that should be in the log book, in addition to routine navigation entries are:

- For each training course or leg of the race the Skipper shall enter the names of all crew who are sailing before departure – if crew get off or change this should also be identified
- For corporate sailing the event details and numbers of people on board should be entered
- Latest weather report or analysis – this should be daily
- Tidal information
- Details of any incident that requires an Incident Report Form (IRF) to be completed (see section 8)
- **ANY** medications given to a crew/staff member whilst on board. This includes prescription medications that are self administered

When at anchor the log book shall be maintained as if the yacht were at sea.

When safely tied up in harbour with crew on board hourly entries in the log book are not required, however, if any significant event occurs such as an injury to a crew member or significant change in the material state of the yacht these events shall be recorded in the log.

The yacht's logbooks may be required and examined as evidence in the event of an accident. The Skipper is to ensure that entries in the logbooks are completed correctly at the appropriate times and entered in ink.

SECTION 9: PASSAGE PLANNING

Skippers should note that recent changes to SOLAS V regulations change the status of passage planning on small boats from simply good practice to a requirement under UK law for vessels going to sea. "Going to sea" is defined as proceeding outside of 'categorised waters'. MSN 1827 has full details. Most of the Solent area counts as categorised waters.

Skippers who are planning to stay within the Solent need not produce a formal passage plan, however, it is good seamanship and expected that Skippers shall still study the relevant

charts and obtain weather information, consider navigational hazards and alternative ports and brief the crew before departing port.

For any Clipper Ventures Yacht that is heading out of the Solent area it is the Skipper's responsibility to produce a formal passage plan for the intended voyage. This plan shall be written in the yachts log book and when provided (for all training courses) in the passage plan template. For this purpose the Solent is defined as the area inside the Isle of Wight between the Forts in the East and Hurst Castle in the West. Annex G contains the minimum requirements expected of a passage plan. Reeds Almanac and other publications also provide further advice on the contents of passage plans.

In producing a passage plan or leaving the marina Skippers shall ensure that they read all the notes and warnings on the appropriate electronic and paper charts for the area they are sailing, particular attention shall be paid to notes and warnings on electronic charts which may be hidden in the margins on raster scanned charts.

It is also imperative that the Skipper be aware of all relevant Notices to Mariners. Although Clipper may provide printed Local Notices to Mariners in your course/race paperwork folder, it is ultimately the Skipper's responsibility to make themselves aware of any current and relevant notices for the area of intended voyage.

SECTION 10: NAVIGATION IN COASTAL WATERS

When navigating in high density traffic/buoyage areas, particular care should be taken by skippers in relation to any navigational or IRPCS concerns. Before departure, the skipper shall ensure that there are sufficient, up-to-date charts and publications available onboard.

The skipper shall also ensure that a good lookout is kept at all times, by all available means. Crew should pass on any concerns they may have about traffic or other hazards to the sailing staff.

Whilst training exercises/briefings/de-briefs are underway, one of the staff members (skipper or mate) aboard should be not implicitly involved. This allows them to keep their "head out of the boat" and focused on the safe navigation of the vessel.

Pre-departure (daily), it is imperative that skippers confirm that that following equipment is functioning correctly:

- Depth sounder
- Radar
- Navigation lights
- AIS
- Foghorn
- GPS

SECTION 11: ACCIDENTS AND INCIDENT REPORTING

INTRODUCTION:

As a commercial company Clipper Ventures Plc has a legal requirement to report certain accidents or incidents to the Marine Accident Investigation Branch (MAIB) or other relevant national authorities. For **serious** accidents these reports must be made as soon as practically possible and certainly within 24 hours.

Do not contact MAIB directly – If necessary, this will be done by the appropriate Clipper Staff member as described below.

These accidents include: groundings, collisions, significant damage to the yacht and major/serious injury to crew members see (definitions below).

NB: A tethered Man-Overboard is considered to be a serious incident that will also need reporting to the MAIB by either a member of the Race or Training team.

In addition to this legal requirement and to ensure that we are continually looking at ways to improve safety on board our yachts, Skippers are required to inform the relevant Clipper staff member about any **minor injuries and accidents** onboard such as a successfully recovered MOB or accidental/crash gybes.

IF IN DOUBT, REPORT IT!

To ensure that we comply with the legal requirements, in the event of any grounding or an accident that injures a crew member or damages the yacht the Skipper shall:

- Ensure that the details of any accident are recorded in the log book.
- If accident occurs during race training – contact the Head of Training at the first reasonable opportunity and provide the details required for the Incident Report Form (See annex F)
- If accident occurs during a corporate event – contact the Event Manager or nominated deputy as soon as practically possible with the details of the accident and provide the details required for the Incident Report Form (See annex F)
- If accident occurs during the Clipper Race – Telephone the Race office at first reasonable opportunity if it is a major or serious injury and follow this up with an email with all the details. If minor injury email details to race office within 24 hours.
- When next in harbour the Skipper will be required to sign a Clipper Incident Report Form (IRF).

The Head of Training/Event Manger/Race Office will then inform the MAIB and appropriate national authorities.

DEFINITIONS:

- A **MAJOR INJURY** includes any fracture to, or loss of, a limb, loss of sight, or any other injury requiring resuscitation or leading to hypothermia or admittance to a hospital or other medical facility for more than 24 hours.
- A **SERIOUS INJURY** is an injury, other than a major injury, when the injured person is incapacitated for more than three consecutive days.
- A **MINOR INJURY** is any injury not covered by the above.
- **SIGNIFICANT DAMAGE** is defined as damage that impedes the performance of the yacht or must be repaired before proceeding to sea again
- The **FIRST REASONABLE OPPORTUNITY** should be considered to be after the Skipper has contacted any rescue services or given any relevant first aid treatment and the immediate situation is under control i.e. contact the coast guard and pick up

the MOB before contacting the Clipper Office, not the other way around.

SECTION 12: YACHT STANDARDS

YACHT CLEANLINESS AND HYGIENE:

The Clipper fleet is to be maintained at all times in an immaculate state. It is the Skippers responsibility to maintain his/her yacht in a clean and hygienic state. We often invite visitors and VIP's onboard or show existing and potential partners around. There will be very little or no notice of this, therefore you should ensure that the yacht you are working on is always clean and tidy. During the race we often allow crew to live onboard the yachts, however, it should be noted that this privilege will be withdrawn if you do not maintain your yacht in a clean and hygienic manner. The Clipper Training Manual includes details of good practices with regards to health and hygiene. As a minimum the following shall be followed in port and at sea.

- The yacht should be cleaned inside and out at least once a day
- The bilges should be checked and emptied on a regular basis (every log entry)
- The heads should be cleaned twice a day
- The galley and its equipment should be cleaned regularly with antibacterial cleaner
- The food hygiene guidelines (on display in the galley) are to be adhered to at all times by crew preparing food onboard so as to reduce the risk of crew sickness/food poisoning

PRESENTATION IN PORT:

It is imperative that the yachts are presented in a professional and seamanlike manner at all times whilst in port.

This should include:

- Yachts should be moored parallel to the pontoon / wall
- Yachts should be secured with 2 bow lines, 2 stern lines and 2 spring lines (1 forward, 1 aft)
- All mooring lines should be tight unless alongside a sea wall
- All sails and lines should be stowed below deck
- Running backstays should be back and secured hand tight
- The main sail cover should be on
- Sponsors boom banners should be displayed
- Forestay banners should be hoisted to the correct height (weather dependant)
- All sponsor flags should be flown in the correct order across the fleet (as advised)
- Decks and topsides should be washed down whenever possible and be free from rust stains
- The decks should be left clean and tidy
- All hatches shall be closed unless they are being actively used
- All washboards shall be in place if the boat is being left
- Shore power shall be connected when available
- Halyards shall be led forward away from mast

FLAG ETIQUETTE:

The Skipper is to pay particular regard for following the correct etiquette regarding flag hoists particularly that of the Ensign. The ensign on all yachts shall be flown at the same height.

ANNEX G – PASSAGE PLAN CHECKLIST

THE FOLLOWING ITEMS ARE THE MINIMUM THAT A SKIPPER SHOULD CONSIDER WHEN CREATING A PASSAGE PLAN:

- Up to date weather forecast for duration of passage
- Tidal heights and streams for departure and arrival ports
- Tidal stream and tidal gate analysis for passage
- Pilotage plan for arrival/departure port
- Communication requirements and channels for departure and arrival ports
- Prohibited areas/dangers
- Traffic lanes/ separation schemes
- Details of potential ports of refuge in the event of an emergency
- Planned route or training area marked on a chart with hazards identified
- Expected ETD and ETA

CV24's written passage plan for the voyage from Cape Town to Fremantle

PASSAGE PLAN	DATE 30 Oct 2017	SUNRISE/SUNSET	RISE:	SET:
FROM	CAPE TOWN	TO	FREEMANTLE	
YACHT NAME	CH 24	SKIPPER/MATE	[redacted]	
CREW	As per crew list			
WEATHER FORECAST	CT NW 3-5 for START OF RACE Going E Thursday SAT going W.			
CHARTS (FOR PASSAGE)	4 Packs on Board			
ALMANAC (NAME & PAGES)				
PILOT (NAME & PAGES)				
TIDAL STREAM ATLAS				
TIDAL AND OTHER CONSTRAINTS				

TIDAL HEIGHTS FOR PASSAGE	PORT NAME	TIME LW/HW	HEIGHT LW/HW	TIME LW/HW	HEIGHT LW/HW
STANDARD PORT:					
DIFFERENCE:					
LOCAL PORT:					
LOCAL TIME (e.g. BST)					

WAYPOINTS	1	2	3	4	5
POSITION (LAT)					
POSITION (LONG)					
LIGHT/SOUND/BUOY TYPE					

DETAILED NARATIVE PLAN:

RACE COURSE in PUBLIC BAY
SA to Port
ROTTNEST ISLAND STBD
Freemantle via fairway

DISTANCE FROM PREV WP	4700				
TRUE FROM PREV WP					
ETE					

PASSAGE SUMMARY					
PASSAGE DISTANCE	4700	ETD 23rd NAV	2017	ETA	
PASSAGE DANGERS	1	2	3	4	5
NAME	SA COASTLINE	Virtual Beacon	Aluthaus Bank	Coral reef	near Freemantle
POSITION (LAT)					
POSITION (LONG)					
DESCRIPTION					

REFUGES	
REFUGE 1 (SEE SEP SHEET)	CT
REFUGE 2 (SEE SEP SHEET)	Port ELIZABETH
REFUGE 3 (SEE SEP SHEET)	Recquin Islands
REFUGE 4 (SEE SEP SHEET)	

INFORM:	NAME	CHANNEL/TEL NO	DEP NOTIF TIME	ARR NOTIF TIME
COASTGUARD	CHIPPER HQ [redacted]	+44 [redacted]		
SAFETY CONTACT	[redacted]	7875 206337		

B

Clipper Ventures' Health and Safety policy statement

Health and safety policy

This is the statement of general policy and arrangements for: Clipper Ventures Plc	
[redacted]	**has overall and final responsibility for health and safety**

Statement of general policy	**Responsibility of: Name/Title**	**Action/Arrangements (What are you going to do?)**
Prevent accidents and cases of work-related ill health by managing the health and safety risks in the the office	[redacted]	Risk Assessments completed and actions arising taken.
Provide clear instructions and information, and adequate training, to ensure employees are competent to do their work	[redacted]	Ensure SOPs are reviewed and give to staff. Ensure SOPs are followed. External event SOPs and Risk Assessments are done.
Engage and consult with employees on day-to-day health and safety conditions	[redacted]	Any H&S concerns to be raised directly with [redacted]
Implement emergency procedures – evacuation in case of fire or other significant incident. You can find help with your fire risk assessment at: https://www.gov.uk/workplace-fire-safety-your-responsibilities	[redacted]	Ensure plans are in placed and known to staff visitors at all sites. External events are a particular risk and should have a fuller plan. Similarly marine operations need a fuller plan
Maintain safe and healthy working conditions, provide and maintain plant, equipment and machinery, and ensure safe storage/use of substances	[redacted]	Toilets and washing facilities provided and regularly cleaned. Ensure equipment is maintained and serviced as necessary.

Signed: * (Employer)		Date:	

You should review your policy if you think it might no longer be valid, eg if circumstances change.
If you have fewer than five employees, you don't have to write down your policy.

Health and safety law poster is displayed at (location)	Kitchen
First-aid box is located:	Kitchen
Accident book is located:	Office/Training Office

Also see SOPs for Marine Operations
Also see event SOPs and Risk assessments for external events

Company name: Clipper Ventures Plc Date of update:

What are the hazards?	Who might be harmed and how?	What are you already doing?	Do you need to do anything else to control this risk?	Action by who?		Done
Slips and trips	Staff and visitors may be injured if they trip over objects or slip on spillages.	General good housekeeping is carried out. All areas well lit, including stairs. No trailing leads or cables. Staff keep work areas clear, eg no boxes left in walkways, deliveries stored immediately.	Better housekeeping in staff kitchen needed, eg on spills. Constant Nagging Improve equipment, particularly coffee machines, cups, etc.	[redacted] [redacted]		
Electrical Appliances	Staff and visitors may be injured if electrical items are faulty	Ensure regular test (5 year) of electrical items. Staff aware to report all faults. Only Saphire to work within the cabling cupboard.				
Fire	Fire risks to staff and visitors	Regular inspection of all fire fighting equipment and alarms. Exits clear.				
Poor Lighting externally	Lighting on site can leave some female members of staff vulnerably.	Ensure female staff receive closest parking spaces	Fit external flood light at rear	[redacted]		
Security	Visitors and Staff working late may be vulnerable to attack by 3rd parties	Ensure all staff are aware that front and rear doors should be locked at 1730				
Video Displays	Staff risk posture problems and pain, discomfort or injuries, eg to their hands/ arms, from overuse or improper use or from poorly designed workstations or work environments. Headaches or sore eyes can also occur, eg if the lighting is poor.	Workstation and equipment set to ensure good posture and to avoid glare and reflections on the screen. Shared workstations are assessed for all users. Staff encouraged to include regular breaks or change of activity. Lighting and temperature suitably controlled. Eye tests provided for those who need them, reclaim on expenses Laptop users trained to carry out own DSE assessment for use	Email out some workstation and laptop training videos?	[redacted] to investigate		
Phones when driving	Risks of RTAs	Company policy of no use of phone without hands free to be made clear. Provide hands free in company vehicles.				
Lifting	Risk of back injury to staff	Distribute lifting pdf	Re-distribute in Feb 16			
Working at height	Risk of fall	Step ladders provided in Stores				

Office Maintenance	Risk of electrocution, burns, etc	All repairs to be completed by qualified contractors or landlords.				
Hygiene	Risk of infection, stomach bugs, etc.	Professional cleaners daily. Procedure in place for cleaning toilet and kitchen linen. Fridge regularly cleared out of out of date food.	More diligence needed in Kitchen	[redacted] to nag		
First Aid	Treatment of ill/injured staff visitors	A number of staff have ships captain and other first aid qualifications. Medical kits to be maintained	ClipperTelemed medical kits?	[redacted]		
Working with vulnerable people and minors	Risk of abuse to young people or vulnerable people.	All staff and contractors who work with anyone under the age of 18 or with vulnerable people will have a full criminal record review commissioned by the company within the last year.				

Clipper Ventures' risk assessment for navigation in coastal waters

Risk Assessment

Overall Area (e.g. training, corporate or racing):
All Sailing

Specific Activity (e.g. going aloft):
Navigation in coastal waters

Current Assessment Date/Signed By:
14th February 2017 / [redacted]

Identified Hazards:

Hazard Number	Description
1	Proximity of navigational hazards (e.g. land, shallows, rocks and navigation marks)
2	Density of traffic
3	Specific navigational zones (e.g. TSS's or Harbour Authority zones)

Existing Control Measures:

Hazard Number	Existing Control Measure
1 + 3	Sufficient, up to date charts on board; correct, up to date publications on board; choice of suitable area for sailing activity (e.g. open water to the SE of the Isle of Wight for spinnaker training)
2	Keeping a good lookout on all sides of the yacht, as emphasised by the IRPCS and the crew training manual.

Individual Hazard Assessment:

Hazard Number	Severity (i-iii)	Likelihood (i-iii)	Risk (i-v)
1	ii	ii	iii
2	ii	ii	iii
3	ii	ii	iii

Additional Measures to Reduce Risk:

Hazard Number	Further Action (showing date measure was introduced)
1	Updating of nautical publications by Skippers. Periodical checks and renewal of superseded publications to be overseen by the Head of Training. (5th February 2005)
2	Regular inspection of training methods by the Chief Instructor, and continued monitoring by the Skippers while at sea. (1st February 2006)
3	Monitoring of nautical publications by Skippers, and monthly checks by the Maintenance Manager. (5th February 2005)
1 – 3	Require Skippers to produce a written passage plan (with consideration for valid weather forecasts and ports of refuge on route) when navigating in uncategorised waters (10th November 2015) [Implemented November 2013]
1 + 2	Pre-departure checks to include test of: depth sounder, gps, radar, ais, nav. Lights, fog horn.

Risk Assessment Reference Table:

Severity of Harm/ Likelihood	i) Slightly Harmful	ii) Harmful	iii) Extremely Harmful
i) Highly Unlikely	Trivial Risk	Tolerable Risk	Moderate Risk
ii) Unlikely	Tolerable Risk	Moderate Risk	Substantial Risk
iii) Likely	Moderate Risk	Substantial Risk	Intolerable Risk

Likelihood Definitions:

i	Slightly Harmful:	Superficial injuries; minor cuts and bruises; eye irritation from dust; nuisance and irritation; ill-health leading to temporary discomfort
ii	Harmful:	Lacerations; burns; concussion; serious sprains; minor fractures; musculoskeletal disorders; temporary deafness; dermatitis; asthma; work related upper limb disorders; ill-health leading to permanent minor disability
iii	Extremely Harmful:	Amputations; major fractures; poisoning; multiple injuries; fatal injuries; occupational cancer; other severely life shortening diseases; acute fatal diseases

Risk Definitions:

i	Trivial Risk:	No action required, no documentary records need be kept.
ii	Tolerable Risk:	No additional controls required. Monitoring required to ensure standards are maintained.
iii	Moderate Risk:	Efforts should be made to reduce the risk, but the costs of prevention should be carefully measured and implemented. These measures should be implemented within a defined time period.
iv	Substantial Risk:	Work should not be started until the risk has been reduced. Considerable resources may have to be allocated to reduce the risk. Where the risk involves work in progress, urgent action should be taken.
v	Intolerable Risk:	Work should not be *started* or *continued* until the risk has been reduced. If it is not possible to reduce the risk even with unlimited resources, work has to remain prohibited.

Previous Assessment Date/Signed by:
10th November 2015 / [redacted]
10th September 2014/ [redacted]
12th September 2013/ [redacted]
11th September 2012/ [redacted]
12th September 2011/ [redacted]

CV24 – Original skipper’s Standing Orders

SKIPPER'S STANDING ORDERS

All crew have a responsibility to follow these Standing Orders

- Treat all fellow crewmembers with respect and courtesy
- All crew are expected to carry out their duties properly
- All crew are expected to do their fair share of the work
- Treat the boat with respect, clean up after yourself
- **Lifejackets with a Safety tether attached must be worn on deck**, at all times the vessel is not secured to the dock.
- **Everyone shall clip** on during any of following: at night; when reefed; reduced visibility; when the True Wind Exceeds 15 Kts; or when the skipper or a Watch Leader instructs to do so. When **you want to.**
- **NO PERSONS SHALL REMAIN IN THE CCZ AT ANYTIME WHATSOEVER** when the boat is at sea.
- When **sailing downwind** (with Fore Guy rigged) the only permissible method is to pass underneath the traveller
- At least one watch leader on deck, alert and awake at all times
- Keep a vigilant look out at all times while not secured to the dock
- Log entries at least once an hour. Time, Latitude & Longitude COG/SOG, barometric pressure and other observation
- No oil or plastic to be discarded overboard at anytime
- No alcohol and recreational drugs onboard in any circumstances. Smoking at stern to leeward
- The Skipper is to be notified
  - Approach of any other vessel
  - Malfunction of any equipment
  - Setting or striking of any sails
  - Unusual sound, smell or unexplained signal
  - Any question of crew competency arises
  - Any question to the safety of the vessel or crew
  - Any significant change to the weather or sea state
  - Any significant change to vessel's speed or course
  - Any concern, confusion or discrepancy in navigation
  - A vessel has a CPA less than 2Nm or bearing on another vessel is not significantly changing

If you don't understand something ask a Watch Leader or myself

[redacted]

CLIPPER ROUND THE WORLD 17-18

Annex F to the independent investigation report of the grounding of *Vestas Wind* – recommended passage planning guidelines for ocean-going yachts

Annexure F

Recommended Guidelines for Passage Planning and Racing Using Electronic Charts

Guidelines for navigators in preparing a long passage leg – directed at an event like the Volvo Ocean Race and a boat of similar capability to a Volvo Ocean 65

1 The VOR attracts some of the best ocean racers and most skilled yacht navigators in the world – it is an elite event. All the navigators know what is required and have done it before in similar races, if not previous Volvos; some in even more demanding circumstances. Nevertheless it is easy to overlook a step or process and the results can be catastrophic.

2 The aviation industry provides an interesting example with a religious use of checklists. Even experienced pilots with tens of thousands of flying hours will go through a checklist in a routine manner to ensure nothing is overlooked or forgotten or a switch is left on the wrong setting. Just as a pilot cannot afford the aircraft to malfunction in the air, the Volvo navigator has little margin for error and a simple mistake or omission can have disastrous consequences.

3 While it should always be encouraged by navigators, there is little opportunity in the typical watch arrangements on a VO 65 to have an independent and thorough check of the navigator's work – the navigator needs to conduct his or her own checks and these guidelines could assist the navigator in developing a suitable checklist.

4 The team who produced the list is not professing to have all the answers or any superior knowledge. Indeed many of the ideas came from the interviews held with the crews. Nor is the team suggesting this is the only way to navigate a VOR 65. The guidelines are offered as just that; a guide for a navigator to check he or she has done all that is considered appropriate in the pre-planning, detailed planning and racing phases of fulfilling the onerous responsibilities of the role.

5 Any guidelines benefit from feedback and experience gained in their use. Comments on their usefulness and any observations for improvement are encouraged and should be forwarded to the Race Director (Jack Lloyd, jack.lloyd@volvooceanrace.com)

6 Note that these guidelines focus on seamanship. Each navigator will have additional items that are key to the competition such as developing sail crossover charts, routing polars, sea state sensitivity matrices, start acceleration tables, start rate of turn tables, up wash corrections for various headsails etc.

Pre-Race Preparation

- Obtain a copy of the Notice of Race and Sailing Instructions as soon as practicable and study them in detail – ensure you have an expert knowledge of these documents. Memorise the key aspects.

- Check all the navigation charts, systems and instruments that will be on the boat and satisfy yourself that they are fit for purpose and satisfactory for the race, identify and rectify any deficiencies
    - Ensure you are a competent operator of all fitted systems, with a detailed knowledge of their full capabilities, how they work and how they are calibrated – be aware of any inadequacies in the equipment and how they can be covered. Consider any single point of failures.
    - Ensure you have adequate detailed electronic chart coverage for all navigation systems onboard – all laptops/computer systems to be used and other chartplotters – at least 2 USB dongles for which chart license codes are available (one for each main computer) for the entire course. Carry the DVDs and the license codes for each dongle so that the detailed charts can be reloaded if necessary.
    - Arrange to have personal access to the navigation system programs and detailed charts for your own planning and preparation away from the boat
- Ascertain the quality of hydrographic survey across the race course – identify areas of poor survey where extra precautions may be required and/or additional information sourced.
- Determine what paper charts are required and obtain up to date copies
- Initial review of the Sailing Directions and Pilot Charts to determine the weather expected at time of year and an overview of the passage and navigational hazards
- Prepare an electronic version of all user manuals for the nav station equipment to be available onboard
- Document changeover arrangements to secondary sensors and systems (masthead sensors, speed, GPS, communications systems) where fitted in case of failure or calibration issues with the primary source
- Discuss with the skipper the navigation setup, available equipment, and best practices for use of Electronic Charts with their known shortcomings
- Agree with the skipper how the navigation of the boat will be managed and how the working relationships between skipper, navigator and watch captains will work

Detailed Planning

- Review the best available weather data and its influence on the passage – continually update before the start
- Prepare a number of likely track options and review for navigational hazards or constrictions – refine leading up to the start
- Conduct a close check of intended tracks for navigational dangers using the detailed electronic charts – pay particular attention to rounding marks, capes, straits, traffic separation schemes and exclusion zones – get details of tides and currents – make notes for later access
- Check expected tracks and the whole of the probable area of the race course on the mid-scale paper charts (1: 1 million to 1: 3.5 million) – identify navigational dangers – check how the dangers are represented on the electronic chart system – make hand written notes on the paper chart which provides complete coverage of the leg at the best scale – use for crew briefings

- Check rounding points, straits, or areas of navigational interest on larger scale paper charts, review tides, currents, any cautions and notes
- Review tracks on Google Earth and obtain any satellite images that might be helpful,
- Enhance visibility of all navigation dangers on the electronic charts with 'race notes', 'pins', 'danger circles' or 'marks' that will remain visible at all levels of zoom. It is sometimes helpful to name the hazard by naming the mark or pin.
- Detailed review of Sailing Directions paying particular attention to cautions, navigational dangers and comments on major navigational features that you expect to pass close by
- Keep crew engaged with occasional briefings – provide an overview of the leg – update weather forecasts – highlight main sailing features, areas of expected steady winds, transitions, unusual local effects
- Identify potential diversionary ports
- Calibrate the boat's instruments, swing compasses, adjust barograph offset
- Set depth limit and guard sector in navigation systems, as well as AIS CPA limit alarm, and radar alarm for those situations of reduced visibility where the radar will be used
- Work out the best settings on the navigation systems for different scenarios – coastal, open ocean, close proximity to dangers, night, day, when you are awake/asleep – what to have enabled or disabled and when to change
- Plan what alarms you require to be set on the navigation systems for different situations

Racing

- Optimise the nav station setup for the actual conditions being experienced
- Establish a routine check list to check the navigation safety each time you come to the nav station – also a routine 6 hourly check of:
  - Dangers in immediate vicinity
  - Dangers along intended track for the next 6 hours
  - Check the accuracy of the prime GPS system against another source – resolve any discrepancy – monitor GPS quality
  - Consider the need for watches on additional sensors – radar, depth sounder, good visual lookout, chartplotter, AIS
  - Brief the watch on things to expect, raising a light, sighting land, any navigational marks
- Note weather reports – work out your watch routine around the receipt of important weather reports, typically brief the crew every six hours
- Keep "Chart Bounds" enabled; only disable when a lot of charts create too much clutter – when disabled frequently check screen with the feature enabled as a possible alert to any obscured danger
- Investigate larger scale coverage indicated by Chart Bounds in the vicinity – zoom in within the chart bounds area
- When navigating in an area where there is little colour contrast between the background, charted depths and other features, experiment with different palettes to obtain improved contrast and more distinctive depths and features. For example, the black and white palette sometimes works well particularly when a tablet is in use.

- Daily review with skipper, navigator, and watch captains of the next 2 days sailing on the 1:3.5M paper charts with attention to hazards
- Prepare an update brief for watch captains before watch – preferred course and limits, any significant navigation points, expected depths, expected weather, other known traffic
- Monitor your sleep – attempt not to get over-tired – identify periods of high intensity and attempt to rest beforehand
- Review alarms set and whether those enabled are still appropriate
- Maintain a log book

List of Equipment to have onboard

- Paper charts to cover.
  - A single chart that covers the entire leg at the largest scale possible (most probably 1:10 million or 1:3.5 million)
  - Large scale charts at 1:500k or larger for the areas of the start, finish, and any capes or straits required to be passed
- A complete set of Sailing Directions aboard for the region including and surrounding the race course – a digital version on the boat's computers is satisfactory