

BOAT PREPARATION FOR OFFSHORE RACING

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PRIOR TO LAUNCHING BOAT:

UNDERWATER:

Keel Shape:

- Template to design shape – perfect
- Trailing edge – square
- Particular attention to bottom & radius

Rudder Shape:

- Same as keel
- Minimize top gap between blade & hull

Rudder Weed Guard:

- Install with sharp edge & slide in front of leading edge gap

Rudder Fairing Flaps:

- To close vertical joint between rudder and skeg

Align Rudder:

- Mark dead center spoke on steering wheel, preferably with turks head so you can feel it at night

Running Gear:

- If max prop has straight leading edge, consider having it machined with aft slope
- Align 2-blade max prop so that upper blade is behind strut, mark shaft coupling while boat is out of water. Shaft brake is needed for some transmissions to allow battery charging by engine during race
- Make sure max prop is lubricated
- Make sure max prop cotter pins and allen screws are properly installed
- Fairing cone ahead of shaft zinc and strut
- Fair in saildrive gaskets, thru hulls, grounding plates, transducers
- For Martec props, rubber band blade before race start

Smooth Bottom:

- Wet sand 150g-400g, fore and aft with block

THRU HULLS:

- Lubricate
- Check for (2) hose clamps and hose condition
- Provide soft wood tapered plugs tied to each thru hull

PROPELLER STUFFING BOXES:

- Repack and adjust
- Check hose
- If PSS shaft seal type, check bellows and locking zinc in front of stainless hockey puck

FATHOMETER TRANSDUCER:

- No paint, smooth surface

SPEEDOMETER TRANSDUCER:

- Spinning freely and aligned fore and aft
- If sonic speed transducer, clean and align

PRIOR TO STEPPING:

- Check mast for all possible chafe and sharp edges
- Mast head lights
- Mast head wires, secure
- Check all other foredeck, steaming and running lights and wiring and guard over foredeck light
- Hook up 12volt battery at butt of mast and ring out all lights to ensure operation while mast on the ground
- Wind instruments turn freely, align
- VHF antenna connection clean and seal
- All shroud tangs holes round, pin secure, proper length and siliconed or taped smooth
- Check insulated backstay for single side band insulators
- Check swedges for cracks, 1x19 wire strands, rust, knicks in wire or rod
- Spreader tips, freely moving, boots/tape
- Spreader trailing edges, not filed thin by runners
- Check inboard spreader pins and tangs for integrity and cracks
- Inner forestay and babystay tang fairness
- Check all mast exit holes for round smooth edges and chafe bars
- Check sail track for smoothness
- Check spinnaker pole inboard lift
- Check all mast winches, if any
- Check gooseneck for pin wear and whole elongation
- Check vang gooseneck for same
- Check storm trysail track for smoothness and stop at bottom, and make sure track goes down near the deck
- Check all halyards for rope integrity, splices, and shackle strength and lubrication. At lanyards all shackle pins. Flemish eyes at bitter end of all halyard
- Check mast head sheaves for lubrication, run freely, check for nicks, sharp edges, particularly if you have wire halyards
- Double check that sheaves are proper type for halyard type
- Check for cracks in spinnaker halyard cranes and wire shackle pins secure to spinnaker blocks
- Check anti-chafe guards on mast head halyard exits
- Check all rope clutches to make sure operating properly
- Suggest halyards be taken to winch or real cleat for long durations
- Check partners for corrosion
- Check mast boot
- Check mast butt for corrosion and provision for Bermuda bolt, and mast step corrosion and proper butt trueness/angle
- Either string of nuts or bicycle chain and sufficient messenger lines for reaving lost halyards.

- Check backstay and vang hydraulics
- Hydraulic cylinders for seals, attachment points, and piston smoothness
- Check panel/pump gauges for operation and leaks
- Check deck chain-plates for integrity and leaks *ESPECIALLY FOR BOATS WHO HAVE STORED ON LAND WITH THE MAST STEPPED.*
- Check for shroud rollers moving freely
- Check turnbuckles, lubricate with lanolin and renewed turnbuckle boots
- All cotter pins proper length, taped/siliconed smooth
- Think about halyard exit labels
- Make sure halyards are not twisted inside mast; snake and mouse routine

BOOM:

- Check that foot track is smooth and lubricated
- Reefing sheaves are lubricated with no rough edges
- Reefing lines are in good shape
- No padeyes or sharp edges on boom
- Check vang and mainsheet bail areas for cracks
- Check inboard reefing horns or other arrangement is adequate and in good shape
- If preventer is installed on boom, make sure aft attachment point is padded

SPINNAKER POLES:

- Make sure ends are operating freely

DECK:

- Check all fittings and hatches for leaks. Also check any deck prisms
- Check stanchions, padeyes, chainplates, handrails, tracks, chimney fittings, port lights, vents, and any other fitting where fasteners go through the deck
- Check all padeyes, stanchion bases, and tangs for structural integrity, corrosion, cracks
- Check lifelines for proper tension.
- Check wire integrity, if any rust: discard or replace
- All new lifelines must be exposed stainless steel wire
- No vinyl covered wire allowed, if replaced since 1999
- Pad all stanchion tops where appropriate
- Before race, tape lifeline gate pelican hooks shut
- Install lifeline netting from shrouds up to bow pulpit to keep sails/people on board
- Disassemble, clean and lube all deck winches. Replace any suspect parts such as springs, pawls.
- Align self tailing stripper so that sheet tail does not fall on incoming line
- Check all winch handles to make sure locking mechanisms are operating properly
- Check all genoa track blocks, main sheet blocks, spreader blocks, fore guy and after guy blocks, particularly if roller bearing types check for missing bearings
- Check all blocks pins and shackles for deformation or cracks
- Secure all pins on blocks with seizing wire, especially spreader blocks and after guy blocks
- Check that genoa track cars have adequate stops and provisions for another car for changing sails

- Make sure you have adequate winch handle holders, mesh type tail bags to keep spaghetti off deck and out of cockpit
- Check companionway washboard and sliding hatch securing requirements
- For ventilation, check that all dorades/air passages are clean and water scuppers are clear
- A nice secure dodger allows companionway to be kept open and dry. A grab bar on the aft end of the dodger is also nice
- If Vetus fans/ventilators are installed check batteries and solar panel operation
- Check compliance with all ORC requirements. Now called the International Sailing Federation Special Regulations Governing Offshore and Oceanic Racing 2002-2003, including US Sailing prescription

DOWN BELOW:

- Check that all heavy equipment is secured: including batteries, tool boxes, spare parts, tables, water tanks, etc.
- All removable floorboards must be secure
- All locker doors and hatches must be secure
- Stoves must be secure from coming off gimbaling attachments
- Ice box lid must be secure
- Weather cloths must be comfortable, strong and easy to use
- Suggest comfortable strap for keeping cook in the galley and a crashbar to keep him/her from crashing into the stove
- It's nice to have anti-skid material for galley counter
- Handrails/grabraills must be located appropriately and very strong, particularly near companionway, going through wide cabins, above bunks and in head
- Companionway steps must have very good non-skid as well as the floorboard landing below the companionway steps
- All sharp corners must be either removed, rounded or padded well
- Keep all heavy objects stored as low as possible on the boat and secure, preferably toward the center but as measurement rules allow
- Appropriately mark floorboards for thru hull locations and lockers for emergency/safety equipment and other needed supplies
- Prepare a laminated schematic, posted down below to identify all fire extinguishers, thru hull locations, emergency equipment locations and other emergency medical supplies
- In all storage compartments with sliding doors, a high fiddle or removable fiddle bars are recommended to keep contents where they belong
- As weight and storage space are precious, strip boat of all unnecessary items as rules permit.
- Everyone has a junk drawer at home. You have one on the boat too. Empty it!

SYSTEMS: CHECK, DOUBLE CHECK, TRIPLE CHECK!

ENGINE:

- Check belts, hoses, make sure you have a complete set of spares
- Have spare water pump for immediate swap out, and spare impeller(s) (remove soap for impellers)
- Check seastrainer

- Pump old fuel out of tanks and clean tanks
- Provide fuel measuring stick with notches in case fuel gauges go on the blink
- Check to make sure fuel vents are clean
- Make sure to have at least ½ dozen spare racors, in case of bad fuel somewhere
- Make sure have enough extra oil for 3-4 oil changes, in case hose has ruptured.
- Make sure you have at least (2) gallons antifreeze
- Check charging system operation before departing. If more than (5) years old, rebuild both alternator and starter or replace
- Check behind engine electrical panel, main house electrical panel, mast terminal strip and all running lights for corrosion and connections.
- Make sure heat exchanger has been boiled and cleaned out, make sure to remove old zinc pieces to ensure cooling system is complete.
- Make sure engine zincs have been changed, and spares available
- Check exhaust elbow. If more than (5) years old, replace
- Check exhaust pot, make sure in good shape, make sure drain pet-cock working
- Have gallon or two of diesel for priming or emergency
- Contact engine supplier and get basic spares kit(s) from them

BATTERIES/CHARGING SYSTEM:

- Have new or almost new batteries, don't use old ones
- Have spare battery for running light (motorcycle battery)
- Have means of paralleling or jumping ships batteries to engine batteries

TRANSMISSION:

- Make sure shift cables are good and clean and adjusted properly
- Make sure you have spare transmission fluid for transmission, in case a leak develops
- Have spare couplings, set screws and key to reattach coupling if necessary

REFRIGERATION SYSTEM:

- Test system well in advance to make sure working properly. Let unit run at least one week prior to departure to double-check. If not working, don't fix, get different system.
- Make sure seals around doors are good

HEADS:

- Have rebuild kit on board
- Use RV toilet paper, not Charmin. It will dissolve quickly and not clog up the system.
- Do not put anything else down head

FRESHWATER SYSTEM:

- Flush and fill water tanks
- Check water system for proper operation
- Make sure you have foot pump or some kind of manual pump to get water out of the tank if necessary
- Add filters to water tanks, so boat water is drinkable. Suggest small Seagull purifiers to eliminate need for bottled water which cuts down on boat weight and clutter. You can refill tanks in Bermuda and have safe water all the way home

BILGE PUMPS:

- Must have manual, cockpit and down below bilge pumps
- Check to see if diaphragm okay and check hoses

- Check if intake suction seastrainer okay, if not one, add one
- Have handles secured and having spare handles or something that will substitute for a handle is a good idea
- Electrical bilge pump needs to be fairly new or replace
- Check float switch if installed – notoriously unreliable
- If discharge is below or near waterline, discharge hose must have vented loop or check valve.

VENTED LOOPS:

- All vented loops on the boat should be serviced (incoming and discharge for head, intake for engine raw water)
- Make sure vent fittings are cleaned out or replace
- Check hoses, ensure in good shape

PROPANE/NATURAL GAS SYSTEMS:

- Ensure systems in good shape, you do not want fumes down below
- Make sure tanks are full and that regulator, hoses, solenoid switch, and burners are checked
- Propane locker has to be vented properly and *CANNOT VENT OR DRAIN BACK INTO THE BOAT*
- Propane bottles must be secured

HEATERS, TV'S ENTERTAINMENT SYSTEMS, AIR CONDITIONERS:

- **LEAVE HOME!**
- **BLENDERS ARE ACCEPTABLE**

STEERING SYSTEM:

- Check quadrant position and tightness on rudder post
- Check cables, sheaves, pins, keyways, chain, sprocket, cable clamps
- Make sure proper tension on cable/chain
- Make sure have spares onboard

EMERGENCY TILLER:

- Quick access and trial run before race

EMERGENCY STEERING (IN CASE OF RUDDER FAILURE):

- Design, build, tryout

AFTER LAUNCHING AND STEPPING MAST:

- Ensure that mast wedges are tight, secure and mast boot is installed to prevent leaks
- Check all mast lights, wind instruments
- Tune rig at dock, mast in center of boat
- Wedges positioned for proper pre-bend if desired
- Secure shrouds, headstay and backstay and double-check all cotter pins and turnbuckles.
- Recheck, resecure, and tape all cotter pins, turnbuckles, and sharp edges
- During seatrial, double check all systems
- Seatrial should be at least ½ day long, preferably overnight

- Seatrial with emergency steering system to check function
- Adjust compass (compensate), highly recommended to have spare compass (either regular size or small handheld)
- Make sure all ferrous/magnetic objects are away from compass
- Check and calibrate all speed and wind instruments, test all communication electronics, perform single sideband radio check. (Remember to have your offshore license for your VHF, mandatory if outside US waters)
- Retune rig during sail trials
- During sail trials hoist all sails that will be going on the race and measure and mark halyards. Also measure and mark luff tape and head foil
- Also measure sheet locations on deck and mark sheet locations
- Label winches, blocks, and other leads
- Measure and provide pennants for all sails to ensure halyard shackle is at sheave height
- Review storm trysail setting, hoisting, and sheeting techniques. Consider disconnecting vang and lashing boom to deck
- Practice reefing to make sure reefing attachments on sail and shackles on boom all work together easily
- Reave all running rigging, sheets, guys, changing lines, and foreguys for all sails. And ensure proper length and shackles are all ready to go
- At conclusion of sail trials layout all loose sailing gear. primary and spares for inspection and decision on what to take and what to leave ashore

CLEAN UP BOAT AND PREPARE FOR INSPECTION AND GOOD LUCK!

NOTES:

