

STANDARD OPERATING PROCEDURES (SOP)
AND
REGULATIONS MANUAL



FOR
LARGE SAIL TRAINING CRAFT
AT
THE UNITED STATES NAVAL ACADEMY

SOP REVISION REQUEST FORM

INSTRUCTIONS: This form provides a feedback mechanism for the SOP document. In your comments, please be specific and provide the rationale for making the suggested change. Submit any proposed modifications or suggestions using this form to the appropriate program Director for review.

DATE:

CHAPTER, PAGE, SECTION:

RECOMMENDED CHANGE:

RATIONALE:

APPROVAL:

Submitted by: _____
Director, VOST _____
Director, OSTs _____
Vanderstar Chair _____
DDNAS _____
DNAS _____

Date: _____



DEPARTMENT OF THE NAVY
OFFICE OF THE COMMANDANT OF MIDSHIPMEN
UNITED STATES NAVAL ACADEMY
101 BUCHANAN ROAD
ANNAPOLIS MARYLAND 21402-5100

DIVPRODEVINST 3120.7B
16 APR 2019

DIVPRODEVINST 3120.7B

From: Deputy Commandant, Professional Development

Subj: PROMULGATION OF STANDARD OPERATING PROCEDURES (SOP) AND REGULATIONS MANUAL FOR U.S. NAVAL ACADEMY SAIL TRAINING CRAFT

Ref: (a) USNAINST 1500.5, US Naval Academy Sailing Programs
(b) USNAINST 5450.3, Naval Academy Organization Manual
(c) U.S. Navy Regulations
(d) PRODEVINST 3140.1, Hurricane Sortie and Mooring Procedures for Hazardous or Destructive Weather
(e) COMDTINST M16672.2D, Navigation Rules, International - Inland (72 COLREGS)
(f) Racing Rules of Sailing
(g) PMS MRC Deck
(h) Boat Information Book (BIB) for U.S. Naval Academy Navy 44 Sail Training Craft
(i) COMDTMIDNINST 5400.6L, Midshipman Regulations Manual
(j) DIVPRODEVINST 3530.2 Sail Training Craft (STC) Navigation Standards
(k) OPVA VINST 3500.39c, Operational Risk Management
(l) Coastal and Offshore Personnel Qualification Standards (PQS) for Large Sail Training Craft (STC)

Encl: (1) Standard Operating Procedures (SOP) and Regulations Manual for Large Sail Training Craft

1. Purpose. To promulgate the Standard Operating Procedures and Regulations Manual to be used both ashore and underway onboard large, offshore-capable Sail Training Craft (STC).

2. Cancellation. DIVPRODEVINST 3120.7A.

3. Background. The Naval Academy conducts sail training aboard a variety of STC. This manual augments guidance contained in reference (a) and guides the professional sail training of midshipmen.

4. Action. All sailing program personnel, to include midshipmen, staff and volunteers, shall strictly adhere to this instruction and be held accountable for its contents. This instruction is not all-inclusive and not a replacement for sound judgment. In all instances, those in positions of authority are responsible and accountable for compliance with this directive, and shall diligently enforce good order and discipline as it pertains to sound seamanship, navigation and conduct. Any person who finds that he or she cannot fulfill the letter and spirit of this instruction shall immediately notify the Director, Naval Academy Sailing.

5. Feedback/Changes. Omissions or recommendations for changing any part of this document shall be submitted via the Feedback Form to the appropriate program director. Feedback forms should include specific changes and the rationale for making them.


W. S. SWITZER

REVISION SUMMARY			
3/1/2019			Change DIVPRODEVINST 3120.7A to 3120.7B
3/1/2019	Chapter 1		No changes.
3/1/2019	Chapter 2		No changes.
3/1/2019	Chapter 3		No changes.
3/1/2019	Chapter 4	400.a.1)	Note: Replace last sentence with, "The manufacturer recommends inflating every two months, a schedule for inflation testing will be set by the Vanderstar Safety Chair each season."
3/1/2019	Chapter 5		No changes.
3/1/2019	Chapter 6	602	Delete "BST" column from Uniform Policy. (BST has their own SOP).
		607.1	Add new sentence 3, " <i>Eldridge Tide and Pilot Book</i> has a diagram of all the international signal flags."
3/1/2019	Chapter 7		No changes.
3/1/2019	Chapter 8	807.3.d	Change s1 to, "In order to expedite loading of extra equipment into the raft, it is recommended that a "grab bag" containing emergency abandon ship supplies be stowed in the starboard cockpit seat locker while underway."
3/1/2019	Chapter 8	810.1	Delete last sentence of paragraph, " Consult the checklist in Chapter 9. "
3/1/2019		810.3.a.1)	Add "NOTE: THE LARGE ANCHOR IS REQUIRED FOR OVERNIGHT OR WHEN THE BOAT IS UNATTENDED."
3/1/2019		810.3.b.2)	Delete s2, replace with, "Anchor watch is required overnight when the boat is occupied."
3/1/2019		810.3.c.1)	Change s1 to, "Navigator shall set the GPS...."
3/1/2019		810.3.c.3)	Add, "NOTE: THE NAVY 44 M2 HAS A TENDENCY TO REACT MORE TO HEAVY CURRENT WHEN THE WIND IS LIGHT, AND MAY RIDE OVER THE ANCHOR RODE. PAY ATTENTION TO TIDE CHANGES AND CONSIDER USING LESS RODE IN THESE CONDITIONS."
3/1/2019	Chapter 9	903	Under "Bilge", replace second and third checklist items with the following: "Use a disposable cup to take a sample of bilge water from bilge sump and check for oil or diesel. Use an "Oil-Zorb" sock-type oil absorber to remove any oil or fuel from the bilge." and "Once oil/diesel is removed, check operation of both manual bilge pumps, and the electric bilge pump. Post personnel

			on port side to observe discharge while testing to ensure oil/diesel is not being pumped out. The oil/diesel will float on top of the water. Stop operating bilge pumps if discharge is contaminated, and report to Cutter Shed."
3/1/2019	Chapter 9	904	Add new item in Pre-Underway: Verify that the Alternator Parallel switch, located between the Battery switches, is in the "OFF" position; top of lever pointing to the left.

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CHAPTER 1

100. OBJECTIVES

Sail training is an integral part of the professional development of midshipmen at the Naval Academy. Its purpose is to make competent leaders and sailors of midshipmen while developing endurance, self-reliance, and the will to win in the environment in which they will eventually serve as Naval Officers. Sail training teaches teamwork under the controlled stress of close living in a small boat while contending with the forces of nature, and provides unparalleled opportunity for midshipmen to develop leadership and seamanship skills in a small unit setting.

The objectives of the offshore sail training program(s) at the Naval Academy are to:

a. Provide safe platforms and procedures for the professional leadership and seamanship training of midshipmen afloat

b. Train midshipmen in the following areas:

- (1) Leadership and teamwork
- (2) Watchstanding
- (3) Small boat handling
- (4) Knowledge of and appreciation for the forces of wind and sea
- (5) Relative motion
- (6) Marlinspike seamanship
- (7) Meteorology and oceanography
- (8) Forehandedness and vigilance
- (9) Shipboard organization
- (10) Preventative and corrective maintenance systems
- (11) Piloting and Navigation
- (12) Damage control

c. Provide an instrument with which to promote the public image of the Naval Academy and the Navy and to assist in recruiting qualified applicants for enrollment at the Naval Academy.

d. Provide proficiency sailing on a not-to-interfere basis with scheduled professional training in accordance with reference (a).

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CHAPTER 2

200. UNDERWAY ORGANIZATION

201. COMMAND AUTHORITY

The Director, Naval Academy Sailing (DNAS) is the command authority for the operation of Sail Training Craft (STC) assigned to the Naval Academy. This authority is assigned in references (a) and (b). All persons embarked in Naval Academy STC are subject to this authority for purposes of training effectiveness and for good order and discipline.

202. OFFICER IN TACTICAL COMMAND (OTC)

During formally designated local training exercises and during summer training periods, DNAS may assign one or more Offshore Sail Training Squadron (OSTS) STC Skippers to the supervision of an OTC. This will normally be the senior qualified Unrestricted Line (URL) Officer embarked and will be so designated in an Operation Order (OPORDER). In cases where the senior URL officer is not, in the judgment of DNAS, the most experienced offshore sailor in the group, DNAS may designate an officer or civilian, other than the senior URL officer, as OTC. The OTCs responsibilities include coordination of: training evolutions, embarkation and debarkation of personnel, administration of program policy, communications and reports and other functions necessary for the safe and effective completion of training objectives. OTCs shall promulgate written supplements to DNAS OPORDERS. All OTC supplements will be submitted to DNAS for approval and signature.

NOTE: The OTC position is not filled in the Varsity Offshore Sailing Team (VOST) organization while competing. The Senior Coach in the Squadron shall fill duties normally assigned to the OTC, as stated above, while transiting and conducting out of area training evolutions such as DELMARVA.

203. SKIPPER/COACH

a. Only one individual on board can have ultimate command responsibility for the safety, well-being, navigation and overall efficiency of STC operations. This person must be qualified as a D-OS (Offshore Skipper) or D-CS (Coastal Skipper) per reference (I), the Coastal and Offshore Personnel Qualification Standards (PQS) for Large Sail Training Craft (STC).

- 1) For OSTs training, the D-OS Skipper is in charge. This may be a midshipman.
- 2) For VOST this individual may be a D-OS or D-CS midshipman Skipper or a Coach, depending on the operating area and evolution. The person in charge may be the midshipman Skipper even though a qualified Coach or a designated safety observer is on board. **The person in charge shall notify all crewmembers that they have assumed this responsibility before the STC gets underway.**

b. The provisions of reference (c) concerning the overall responsibilities of a Commanding Officer apply to the Skipper and Coach, except that they have no inherent authority under the Uniform Code of Military Justice. The unique training environment at the Naval Academy requires that command authority be exercised with discretion and in a manner that encourages the development of command and leadership expertise in Midshipmen. All persons embarking in Naval Academy STC shall understand this unique relationship.

203.1 ASSIGNMENT

- a. A D-qualified Skipper/Coach or Midshipman Skipper shall be onboard anytime:
 - 1) A VOST STC is in a competitive practice or event.
 - 2) A STC is sailing on a designated training evolution in the local OPAREA

- 3) A STC is sailing outside the local OPAREA
- 4) A STC is sailing overnight.

b. A local training plan, racing roster or OPORDER signed by DNAS shall designate the Skipper/Coach.

203.2 COMMAND ROLE

a. The Skipper/Coach and XO are the resources and coaches for the midshipmen in learning and carrying out their responsibilities. The Skipper/Coach and XO should concern themselves with midshipman skill training, leadership opportunities, coaching, and mentoring. The intent of Navy Sailing is only achieved by delegating to midshipman all normal boat responsibilities to include watchstanding and decision making where appropriate.

b. The Skipper/Coach who is responsible for STC safety must exercise this command prerogative when required to avoid danger (e.g., collision, grounding, personnel safety, etc.). However, this policy and the core of the program itself requires restraint, patience, coaching and the creation of an atmosphere in which the VOST Midshipman Skipper or OSTS Midshipman Watch Captain has authority over the boat and crew, as long as he/she is exercising the requisite judgment, leadership and seamanship to address the situation satisfactorily.

c. Command is a full-time responsibility. The Skipper/Coach is responsible for the safety of the STC and well-being of the crew at all times, on or off watch.

203.3 THE COACH'S ROLE WHEN RACING (VOST)

Except for those situations where the boat or crew will be endangered, the Coach affords midshipmen the latitude to make decisions. USNA policy encourages coaching advice and discussion of race plans, tactics and strategy; however, Midshipmen Skippers may reject such advice even if, in the eyes of the Coach, it will cost the boat places in a race. This restraint does not relieve the Coach that is assigned of his ultimate responsibility for the safety of the crew and the STC. In these instances, Midshipmen Skippers shall comply immediately with the Coach's orders, regardless of the impact on racing.

203.4 RESPONSIBILITY ASHORE

The Skipper's/Coach's responsibilities do not end while ashore, particularly when visiting ports away from the Naval Academy. The Skipper/Coach shall ensure that midshipmen uphold the highest standards of personal demeanor, grooming and STC smartness while in port. In this regard, Skippers/Coaches shall be responsible directly to DNAS.

204. EXECUTIVE OFFICER (XO)

The XO/Assistant Coach is subordinate to the Skipper/Coach and is second in command. In most evolutions he/she will be paired with the watch team opposite that of the Skipper/Coach, in order to bring to that section additional offshore sailing experience. The XO is responsible for execution of daily routine, supervising the crew in making the boat ready for sea, maintaining satisfactory cleanliness and stowage on board including messing, berthing and the head, ensuring crew members receive all mandatory training and ensuring crew members begin voyages with a complete seabag. The XO acts as Senior Watch Officer for crew and regulates liberty for the crew during the cruise block. While on watch, he/she shall perform those duties and responsibilities prescribed for the Skipper. The XO shall be D-CS qualified (or higher).

205. TRAINING

The Naval Academy sailing program has a unique training mission in support of the primary mission of the Academy. Its purpose is to make competent leaders and sailors of midshipmen while developing endurance, self-reliance, and the will to win in the environment in which they will eventually serve as Naval Officers. The program gives midshipmen the most realistic leadership and command opportunities possible; however, all midshipmen are in training and therefore subject to the authority and discipline of their mentors. Within safe limits, Skippers/Coaches shall give midshipmen maximum opportunity to exercise and develop their leadership, command and judgment skills.

206. POLICY

a. In all sailing evolutions, Skippers/Coaches shall afford the watch captain (OSTS) or Midshipman Skipper (VOST) the opportunity to direct the movements and manage the operation of his/her vessel, to the degree the midshipman is able to do so.

b. The Skipper/Coach shall intervene whenever and however necessary to prevent a midshipman from "getting in over his head." The Midshipman Skipper (VOST) shall defer immediately to the orders of the Coach in all matters relating to the safety of the STC.

207. PROCEDURES

207.1 ORDERS AND DETAIL ASSIGNMENTS

In Naval Academy sailing programs, the Naval Academy will provide all personnel performing Skipper/XO or coaching functions outside the local OPAREA with official orders (cost or no-cost depending on the voyage or function).

207.2 TRAINING AWARENESS AND COMPLIANCE

The Directors, VOST and OSTs, and other staff personnel as the Director may assign, shall ensure that these procedures are fully briefed, discussed and understood by all personnel who participate in the sailing program.

208. NAVIGATIONAL RESPONSIBILITY

The safe and proper navigation of STC is, at all times, the responsibility of the assigned Skipper/Coach. The Skipper shall delegate navigation authority to the embarked midshipmen whenever possible in order to enhance their training. However, ultimate responsibility will reside permanently with the Skipper.

208.1 COMMAND RELATIONSHIPS

The following operational relationships are established to ensure the timely and accurate handling of navigation information:

a. DNAS will publish an Operations Order (OPORDER), which will contain guidance concerning STC movements outside the local OPAREA. The Skipper shall ensure that the crew is thoroughly familiar with the guidance contained therein.

b. The Officer in Tactical Command (OTC), if assigned, shall publish an OTC Supplement to the OPORDER, outlining any additional requirements. Any deviations from the established program policies must be approved first through the Program Director and DNAS. The OTC will serve as liaison between the Naval Academy and the STCs in his squadron and, in consultation with DNAS staff, will make the

key operational-level decisions while underway. The OTC shall avoid, insofar as possible, intruding in the day-to-day decision making process of individual STCs.

c. The Skipper/Coach is responsible directly to DNAS for compliance with directives contained in the applicable OPORDER and will serve as Safety Officer during underway watchstanding.

d. The XO is responsible directly to the Skipper for compliance with all applicable directives and together with the Skipper will fulfill the role of Safety Officer during underway watchstanding.

e. Navigation Plotter shall be a distinct station in the watch rotation. The Watch Captain may assign the Navigation Plotter for the duration of a watch or may rotate the position among watch team members (not to include the Watch Captain). The Skipper/Coach must ensure that the crew understands the rotation policy prior to getting underway.

208.2 OPERATING AREAS

a. LOCAL OPERATING AREA. See Chapter 3 for the definition of the LOCAL OPERATING AREA and requirements within that area.

b. OPERATIONS OUTSIDE LOCAL OPERATING AREA. Operations which take STCs beyond the local OPAREA shall be directed by an OPORDER.

208.3 REQUIRED CHARTS, PUBLICATIONS AND EQUIPMENT

Each STC shall, at a minimum, carry the following items: (See Section 303 for exceptions to this rule in the local OPAREA.)

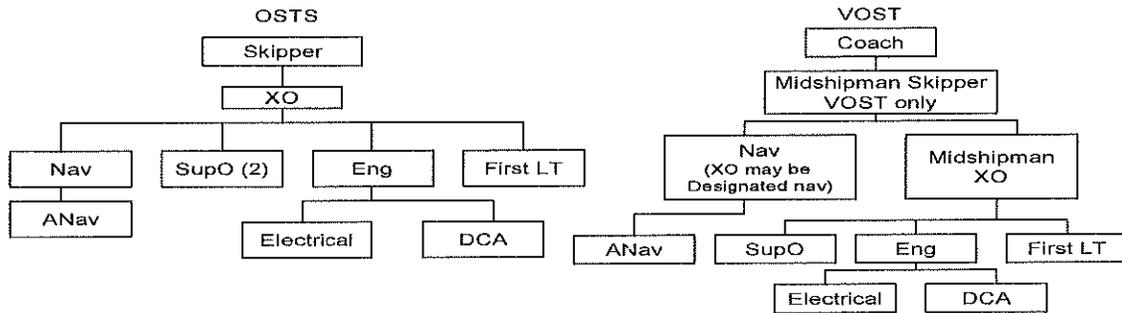
- a. Applicable charts (per list in OPORDER) updated with the latest applicable Notice to Mariners.
- b. Applicable volumes of Eldridge's Nautical Almanac, and Fleet Guides if applicable
- c. Nautical Almanac and H.O. 229, VOST only if applicable
- d. USCG Navigation Rules – International & Inland (i.e., COLREGS)
- e. Navigation Kit
- f. DIVPRODEV 3120.1B Sail Training Craft (STC) Navigation Standards.
- g. Applicable technical manual binder(s), BIB, SOP, and logbooks

208.4 NAVIGATION GUIDELINES

The proper interval for fixing the position of a STC varies depending on its speed of advance and proximity to navigational hazards. STC navigation shall adhere to the guidelines outlined in ref (j).

209. ORGANIZATION AND RESPONSIBILITIES

The diagram below depicts the administrative organization for STC. All hands shall be thoroughly familiar with the responsibilities of their primary billet, watch station and collateral duties.



209.1 MIDSHIPMAN SKIPPER (VOST ONLY)

The Midshipman Skipper is responsible for the safety, readiness and state of crew training when so designated for local area practices and racing. The Midshipman Skipper reports to the Coach, when the Coach is designated in the Command Role. The Midshipman Skipper shall:

- a. Conduct, and cause others to conduct, safe evolutions, training and passages.
- b. Improve safety through training and crew drills in casualty response.
- c. Keep apprised at all times of the navigation picture.
- d. Understand the responsibilities of and supervise each crew member in performing his primary billet.
- e. Supervise all man aloft evolutions.
- f. Prior to each departure, report readiness to get underway to the Coach, noting any deficiencies/discrepancies.
- g. Prepare evaluations of all underclass crew members and deliver to the Coach prior to cruise completion.
- h. Approve the underway menu/meal plan.
- i. Remain cognizant of the status of all maintenance.
- j. Act as Training Officer and develop and implement a regular schedule of training for both in-port and underway periods.

209.2 EXECUTIVE OFFICER (XO)

The XO is the Executive Department Head and second in command. The XO reports to and is responsible to the Skipper. The XO also acts as the Senior Watch Officer and may be assigned as the Navigator (VOST). The XO shall:

- a. Execute the daily routine.
- b. Supervise the crew's efforts to ready the boat for sea, including accomplishment of check lists. The XO shall make a personal report to the Skipper that "the boat is ready to get underway," noting any deficiencies or concerns.
- c. Maintain satisfactory boat cleanliness and stowage.
- d. Ensure crew members attend practice sails or special events on time, prepared and properly equipped.
- e. Ensure each crew member begins overnight or offshore voyages with a complete seabag.
- f. Ensure that berthing and head areas are clean.
- g. Conduct daily Messing and Berthing Inspections.
- h. Regulate liberty during cruise block, ensuring the crew is informed of liberty restrictions, muster and duty requirements.
- i. As **Senior Watch Officer**, shall:
 - 1) Maintain accountability for crew while in port IAW with OORDER and Squadron Duty Officer instructions.
 - 2) Maintain the Watch, Quarter and Station Bill as required by reference (b).

209.3 MIDSHIPMAN WATCH CAPTAINS (OSTS)

The Watch Captain is a billet and part of the underway watch routine. The Watch Captain reports to the Skipper, or XO if XO is on deck. The Watch Captain has overall responsibility for the safe operation of the STC, efficient performance of the watch and progress of the daily routine. OSTs Skippers shall appoint Midshipman watch captains in writing.

209.4 NAVIGATOR (NAV)

The Navigator (NAV) reports to and is responsible to the Skipper for proper preparation of charts, and shall ensure that the prepared charts are presented to the Skipper for his review prior to getting underway. The Navigator has responsibility for safe navigation of the sail training craft. The Navigator shall:

- a. Ensure that all required charts are prepared following Chapter 9, section 901, and that charts, navigation instruments and references are aboard prior to getting underway.
- b. Create a Navigation Plan prior to getting underway and measure progress underway with respect to that plan. Develop and brief a new plan if the situation changes significantly.
- c. Ensure that the watch teams maintain an accurate plot of the boat's position by all available means (visual, celestial and electronic).
- d. Train and supervise watch team navigation plotters in the principles and practice of visual and electronic navigation.

- e. Train the Assistant Navigator (ANAV) as a navigator.
- f. Stay aware of tides, currents, and forecasted weather conditions.
- g. Oversee maintenance of the Offshore Yacht Log (i.e., Narrative Log, Offshore Log and Bearing Log).

209.5 ASSISTANT NAVIGATOR (ANAV)

The Assistant Navigator (ANAV) reports to and is responsible to the Navigator for navigation readiness and accomplishing the navigation routine. The ANAV shall:

- a. Inventory the boat's navigation charts, publications and plotting aids, ensure all are aboard prior to each underway, and report this to the NAV before departure.
- b. Prepare charts for use at the direction of the NAV.
- c. Maintain all navigation equipment in good order.
- d. Oversee maintenance of the Offshore Yacht Log (i.e., Narrative Log, Offshore Log and Bearing Log).
- d. Monitor a weather broadcast at least twice daily.
- e. Ensure each crew member is trained on the proper operation of the GPS, chart plotter, radar, weather fax, AIS, VHF and HF radios, and navigation lighting systems. The ANAV shall ensure by individual walk-through that each crew member can properly operate these key navigation systems.

209.6 ENGINEER (ENG)

The Engineer reports to and is responsible to the XO for the safe operation and maintenance of the boat's auxiliary propulsion machinery and other mechanical equipment. He/She also functions as the boat's Fuel, Oil and Water King. The Engineer shall:

- a. Understand the operation and maintenance of the auxiliary engine, steering gear and associated equipment.
- b. Train each crew member on engine procedures, including pre-start checks, starting procedures, operating parameters and indications, operating limits and shutdown. The Engineer shall ensure by individual walk-through that each crew member can perform the pre-start check, engine start up, and engine shutdown.
- c. Monitor engine operation, fluid levels and fuel consumption on a daily basis.
- d. Oversee maintenance of the Engine Log.
- e. Advise the Skipper of the material readiness of the boat. The Engineer shall make recommendations to the Skipper for prompt correction of deficiencies and report deficiencies beyond crew capability to correct by submitting a discrepancy chit to the Cutter Shed.
- f. As **Fuel, Oil and Water King** shall:
 - 1) Coordinate receipt of fuel.

2) Fill and properly treat all water tanks prior to each underway.

3) Ensure a sufficient quantity of fuel, lube oil, transmission oil, and engine coolant is on board for the underway period.

g. Be personally responsible for accomplishing all engineering and steering Preventative Maintenance Systems (PMS).

h. Supervise inventory of tools, and engine spare parts kit.

209.7 SUPPLY OFFICER (SUPPO)

The Supply Officer (SUPPO) reports to and is responsible to the XO for procurement, receipt, storage, issue and accounting of all stores and equipment. He/She shall also act as the boat's Mess caterer. The Supply Officer shall:

a. Ensure all berthing mattresses and lee cloths are clean and serviceable prior to each departure for overnight sailing.

b. Establish the boat's stowage plan.

c. Supervise the inventory, usage and replenishment of galley gear and cleaning gear.

d. Develop an underway menu/meal plan for approval by the XO.

e. Supervise storage of major food on-loads, paying close attention to secure storage, safety and food freshness.

f. Keep the refrigerator (reefer) clean and stowed for easy access.

g. Control and restock the snack bin.

h. Control and issue food for meal preparation.

i. Maintain a running inventory of food and drink by storage location.

j. Oversee overall cleanliness of the galley.

k. Train each crew member in the proper operation of the refrigerator (reefer) system, the galley stove and oven, and the propane fuel system. The Supply Officer shall ensure by individual walk-through that each crew member can light and secure the stove and oven, and operate the refrigerator (reefer).

l. Monitor propane consumption.

209.8 FIRST LIEUTENANT (1LT)

The First Lieutenant (1LT) reports to and is responsible to the XO for equipment related to deck seamanship. He/She shall also function as the boat's Bos'n. The First Lieutenant shall:

a. Maintain satisfactory preservation and cleanliness of the boat's exterior and deck stowage areas.

- b. Maintain mooring lines, jacklines, anchors, winches and related equipment.
- c. Train crew in appropriate deck seamanship topics to include:
 - 1) Knots & hitches: bowline, square, sheetbend, clove hitch, figure 8, round turn and 2 half hitches, slippery reef knot, and trucker's hitch.
 - 2) Use of winches
 - 3) Proper cleating, coiling and faking of lines
 - 4) Preparations for sailing and securing from sailing
- d. Be personally responsible for accomplishing all deck preventive maintenance..
- e. As **Bos'n**, shall:
 - 1) Keep sails and rigging in good repair, sails folded and stowed properly when not in use
 - 2) Keep sails as dry as possible and, if stowed wet, ensure they are rinsed and aired out at the earliest opportunity.
 - 3) Inspect and inventory the contents of the Sail Repair Kit.
 - 4) Be personally responsible for accomplishing all sail, standing rigging and running rigging PMS, to include a daily inspection of deck equipment while underway

209.9 ELECTRICAL ASSISTANT (EA)

The EA reports to and is responsible to the Engineer for the proper operation and maintenance of electrical systems. The EA shall:

- a. Monitor the condition of all battery banks and make recommendations to the Engineer for charging.
- b. Inventory electrical repair equipment.
- c. Ensure sufficient distilled water is on board to replenish battery water levels for boats not equipped with gel-cell or AGM batteries.
- d. Ensure each crew member is trained to connect and disconnect shore power, and operate the ship's AC and DC electrical distribution systems.
- e. Troubleshoot electrical casualties, especially those relating to the charging system. Train the crew in electrical troubleshooting.
- f. Be personally responsible for accomplishing all electrical PMS.

209.10 DAMAGE CONTROL ASSISTANT (DCA)

The Damage Control Assistant reports to and is responsible to the Engineer for all damage control and safety related equipment. The DCA shall:

- a. Inspect and inventory damage control equipment prior to each offshore passage, including pyrotechnics, fire extinguishers, first aid kit, damage control kit and spare CO2 cartridges and bobbins for the inflatable life vests.
- b. Inspect all life jackets, safety harnesses, tethers, and manually inflate all inflatable life vests prior to each offshore passage. Repair or replace any defective personal safety equipment.
- c. Train crew members in the proper assembly, wear and use of the inflatable life vest and safety harness. Ensure by individual walk-through that each crew member knows how to assemble, adjust, and wear the harness and inflate the life vest, and how to replace the CO2 cartridges and bobbins.
- d. Train crew members in the proper use of the head, in the proper position of Y-valve, and in the disassembly and reassembly of the head. Ensure by individual walk-through that each crew member knows how to position the Y-valve for the head and the associated precautions.
- e. Prepare response plans and train the crew to respond to underway casualties.
- f. Be personally responsible for accomplishing all safety, hull and plumbing preventive maintenance and operational checks, including fresh water system, monitor head and holding tank volume, through-hull fittings, and bilge pumps.

209.11 TRAINING OFFICER (TRAINO)

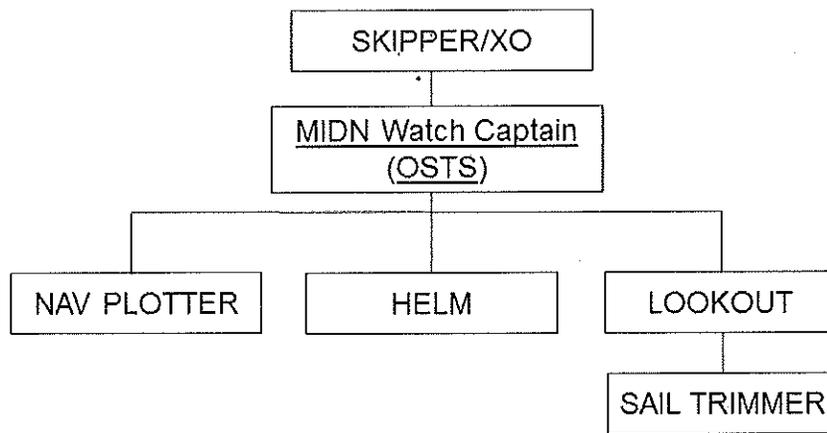
The Training Officer (TRAINO) is an optional billet onboard the STC and is assigned at the discretion of the Skipper/Coach. The XO TRAINO reports to the Skipper. A Midshipman Training Officer (if appointed) reports to the XO. The TRAINO is responsible for recommending a daily training plan, and ensuring all crew meet the overall requirements for training as outlined in the OPORDER.

209.12 OPERATIONS OFFICER (OPSO)

The Operations Officer (OPSO) is also an optional billet onboard the STC and is assigned at the discretion of the Skipper/Coach. The OPSO, if assigned, reports to the XO. The OPSO is responsible for planning and executing the daily schedule, training plans, and acts as the ship's communications officer.

210. UNDERWAY WATCHES

a. **WATCH TEAM ORGANIZATION.** A typical OSTs underway watch team has five members: the Skipper or XO, and four Crewmen. A minimum of two crew shall be topside at any given time. Under the direction of the Watch Captain, Midshipman watchstanders will be rotated through all watch stations periodically (about hourly) during the watch. A typical watch organization follows:



b. WATCH RELIEF. Watch relief is a formal process where responsibility is turned over. Prior to relieving the watch the oncoming watchstander shall:

- 1) Obtain sufficient rest. **Sleeping on watch is forbidden.**
- 2) Eat sufficient food and drink sufficient liquid.
- 3) Dress correctly. Take all clothing needed for watch when reporting on deck. Stow excess clothing in an accessible place before taking the watch to avoid disturbing off-watch personnel to look for more clothing. Foul weather gear should be ready in the wet locker. Wear inflatable tech vests (with integrated safety harnesses) at all times. Additionally, jacklines will be installed and safety tethers will be worn:
 - (a) From sunset to sunrise
 - (b) During periods of heavy weather
 - (c) During periods of restricted visibility
 - (d) At any other times when directed by the Skipper or XO
- 4) Review the navigation plot with emphasis on current position, expected navigation aids and hazards and desired course.
- 5) Read and initial the Night Orders daily.
- 6) (At night) Adjust eyes to darkness.
- 7) Determine the following, once topside:
 - (a) Relative position and movement of other STCs sailing in company
 - (b) Point of sail and sail combination in use
 - (c) Halyards in use
 - (d) Environmental/weather conditions

- (e) Location of all crew members and their station assignments
 - (f) Identity and location of all visible and expected nav aids and potential hazards to navigation
- 8) Obtain a face-to-face verbal turnover of information pertinent to the watch station being relieved. Formally relieve the watch by stating "I relieve you" and receiving the acknowledgment "I stand relieved." The Watch Captain relieves last.

210.1 WATCH CAPTAIN

The Watch Captain is the supervisor of the watch section. He/She has overall responsibility for the safe operation of the STC, efficient performance of the watch, training objectives, good order and discipline, and adhering to safe navigational and seamanship practices. The Watch Captain can be considered equivalent to the Officer of the Deck (OOD) aboard a Navy warship. The Watch Captain reports to the Skipper, or XO if XO is on deck. The Watch Captain (if Skipper, VOST only) reports to the Coach. He/She shall:

- a. Remain attentive to external conditions at all times; anticipate and respond to changes early:
 - 1) Weather: winds and seas
 - 2) Other vessels nearby
 - 3) Navigation hazards nearby
- b. Train the watch team.
- c. Review logs maintained by watchstanders.
- d. Take appropriate immediate action in response to casualties.
- e. Ensure the boat remains secured for sea, clean and properly stowed.
- f. Each watch visually inspect standing and running rigging and all spaces for abnormalities.
- g. Rotate the watch stations at an appropriate interval (about hourly; more frequently in cold or heavy weather).
- h. Ensure all watchstanders carry out the responsibilities of their stations.
- i. Supervise the watch team Nav Plotter.
- j. Implement the Low Visibility Bill when required.
- k. Enforce the use of tech vests, safety harnesses, tethers and jacklines.
- l. Ensure timely completion of meal preparation and post-meal cleanup as appropriate for the watch section.
- m. Coordinate all-hands evolutions with opposite Watch Captain

- n. Make required reports to the Skipper/Coach.

210.2 HELMSMAN

The Helmsman directs the movements and propulsion of the STC. The Helmsman may be viewed as the Conning Officer aboard a Navy warship. He/She reports to the Watch Captain and shall:

- a. Maintain a good lookout.
- b. Maintain the ordered course within 5 degrees. Inform the Watch Captain and the watch team navigator if unable to maintain the ordered course.
- c. Initiate course changes as required for contact avoidance and to avoid navigation hazards.
- d. Communicate with Watch Captain and initiate actions consistent with wind velocity changes, reduced visibility, and predicted or observed weather.
- e. Monitor sail trim at all times and adjust sails as required.
- f. Monitor conditions on deck. Be accountable for watch team safety at all times, especially during evolutions that requires the crew to leave the cockpit.
- g. Maintain a listening watch/scan on the VHF radiotelephone using the remote cockpit mic speaker. Alert the watch team navigator if the boat is hailed, if the OTC is transmitting, or if a distress call is heard.
- h. Issue the proper verbal standard commands for all maneuvering and seamanship evolutions.
- i. Respond (verbally or with hand signals) to acknowledge reports from the lookout.

210.3 LOOKOUT

The expectations for a Lookout are the same in any vessel underway. Every vessel shall at all times maintain a proper lookout by sight and hearing as well as by all available means appropriate to the prevailing circumstances as to take full appraisal of the situation and of the risk of collision. The Lookout reports to the Watch Captain. He/She shall:

- a. Maintain a proper lookout in accordance with Rule 5 of the USCG Navigation Rules (i.e., Rules of the Road). The lookout shall be stationed in a safe position to observe traffic and effectively communicate to the Helmsman. This may require moving to different positions in the cockpit when sails obstruct the view.
- b. Report all contacts to the Helmsman. The following should be included in the report:
 - 1) Type of contact (merchant, sailboat, etc.)
 - 2) Bearing (relative)
 - 3) Range (estimate in yards)
 - 4) Target Angle (in degrees relative)

5) Bearing Drift (left, right, CBDR)

Report the above items as soon as the information is apparent, then update the report periodically as additional information is gained.

c. The Lookout shall also function as Sail Trimmer during evolutions, on a not to interfere basis with assigned lookout duties.

210.4 NAVIGATION PLOTTER (Nav Plot)

The Navigation Plotter (Nav Plot) serves as the watch team navigator and reports to the Watch Captain. The Nav Plot has duties similar to a Quartermaster of the Watch (QMOW) on a ship. He/She shall:

a. Fix the position of the STC in accordance with the fix interval established by the Skipper. See section 208.4 for fix interval guidelines. Report all fixes to the Watch Captain. Keep Watch Captain advised on position relative to intended track.

b. Maintain the navigation plot adhering to the six rules of DR. DR two fix intervals ahead from every fix to ensure the boat is not standing into danger.

c. Make course-to-steer recommendations to the Helmsman.

d. Monitor VHF/HF radios and advise the Watch Captain of pertinent radio traffic. Ensure VHF radio is operating on scan when not in use

e. Maintain a radar watch (if warranted).

f. Maintain an AIS watch for contacts.

g. Maintain the Offshore Yacht Log.

h. Assist in meal preparation/cleanup on a not-to-interfere basis.

210.5 SAIL TRIMMER (GRINDER OR TAILER)

a. The Sail Trimmer (Grinder or Tailer) is responsible to adjust trim of sails (mainsail, genoa/jib, and spinnaker) consistent with wind direction and course being steered. The Sail Trimmer will also assist in other evolutions like tacking, gybing, reefing, etc. The Sail Trimmer is the only position unique to an STC, just as there are distinct functional watchstanders in Navy warships (i.e., sonar and weapons).

b. The Lookout can also function as a sail trimmer during evolutions, on a not to interfere basis with assigned lookout duties.

211. LOG, STANDING ORDERS AND NIGHT ORDERS

211.1 OFFSHORE YACHT LOG - MINIMUM REQUIRED ENTRIES

The Offshore Yacht Log is used to record all relevant data whenever a STC is underway. For Navy Sailing, this log serves as the ship's deck log, and it is required to be properly maintained in accordance with U.S. Navy Regulations. Sample log entries will be found in the front of each STC's logbook and should be used as a guide to properly maintain the log. The Offshore Yacht Log consists of the Narrative Log, Offshore Log and Bearing Log. Entries, made in black ink, should include:

a. LOCAL OPERATIONS. (The Offshore Yacht Log is only required to be used in the Local Operations Area when so directed by the applicable program director)

- 1) Name of Skipper/Coach(es) and/or XO
- 2) List ALL personnel embarked
- 3) Time underway
- 4) Training conducted
- 5) Time moored
- 6) Any embarked guests

b. EXTENDED OPERATIONS

- 1) Name of Skipper and XO
- 2) List all personnel embarked
- 3) Time underway
- 4) Training conducted
- 5) Hourly navigation, weather, sail combination, engine operation and bilge/refrigerator (reefer)/battery bank information

c. IN PORT, AWAY FROM USNA

- 1) Weather, engine operation/status and bilge/ refrigerator (reefer)/ battery bank information every four hours

d. SPECIAL CIRCUMSTANCES

- 1) Significant events, including casualties
- 2) All emergency drills
- 3) Events/races entered and results
- 4) Mayday and Pan-Pan calls received on the VHF radio

211.2 STANDING ORDERS

Each OSTS Skipper shall complete a set of Standing Orders prior to departure from the local OPAREA. The OSTS Skipper shall submit the Standing Orders to the OTC for review. The OSTS program encourages Midshipmen to assist the Skipper in drafting the Standing Orders. Each member of the crew shall read and initial the Standing Orders. Appendix A contains sample Standing Orders, which may be adopted in whole or modified as desired.

211.3 NIGHT ORDERS

Each OSTS Skipper shall draft Night Orders whenever a STC will be underway at night. The Night Orders shall include specific safety, navigational, operational, and training guidance that applies during the night. Appendix B contains a sample Night Order form.

212. BILGE LEVELS

The Navigation Plotter shall check bilge levels on the hour while underway (but not to interfere with navigation duties and responsibilities). On each occasion, the Navigation Plotter shall manually pump the bilges dry and record the number of pump strokes in the Offshore Yacht Log

NOTE: ALL CREW MEMBERS MUST ADHERE TO INTERNATIONAL, NAVY AND LOCAL POLLUTION CONTROL REGULATIONS. DO NOT PUMP BILGES OVERBOARD IF THEY CONTAIN ANY OILY WASTE. YOU CAN DETECT OILY WASTE BY A COLORFUL SHEEN ON THE WATER'S SURFACE.

213. ELECTRICAL POWER

Since vital electrical loads aboard STCs draw their power from storage batteries, maintain the battery banks at the proper charge level of 12.3V DC or higher. The crew shall operate the engine-driven alternators as needed to charge the batteries.

214. SQUADRON INTEGRITY

While transiting between ports, vessels shall maintain squadron integrity, which means they shall transit in company. In practical terms, all squadron STCs should remain within VHF communications range at all times with each other. The OTC Supplement shall define the proper interval between STCs and any additional communications requirements. If the OTC diverts a STC to a non-scheduled port for repairs, the OTC shall notify DNAS as soon as possible. In making the decision to divert, give preference to using ports with military installation support. This is not meant to preclude the use of civilian facilities in an emergency. Unless there are unusual circumstances, the OTC shall send a second or "buddy boat" to accompany when detaching a STC that is no longer voyage capable.

215. ORDERS REQUIRED FOR EMBARKATION

Orders must cover all personnel embarking in STC to ensure that both they and the government are protected. Civilian volunteers must have executed a Volunteer Service Agreement (form DD 2793), available from the respective Program Director. USNA will issue official travel orders for summer cruises as required. USNA will pay per diem as appropriate and in accordance with Naval Academy regulations and policy.

216. EMBARKATION OF NON-OFFICIAL PERSONNEL AND PROFICIENCY SAILING

Reference (a) specifies procedures for embarking guests aboard a STC, and the policies for Proficiency Sailing (PROSAIL).

217. SANTEE BASIN OPERATING PROCEDURES

This section governs the procedures to be followed by Cutter Shed or SCR D personnel conducting boat movements in the local OPAREA. These movements apply only to sail craft under engine power. Movement of a STC under sail must follow other procedures outlined in this instruction.

217.1 NAVY 44 AND CHARTERED STC BOAT MOVEMENTS UNDER POWER

a. At least one of the Cutter Shed or SCR D personnel assigned to move NAVY 44s and chartered STCs must be qualified as a boat coxswain. For training evolutions, a coxswain U/I must have a qualified coxswain on board. When moving a STC from one location to another, whether transferring a boat from one slip to another within the confines of Santee Basin or moving a boat to SCR D, the person

commanding the craft must be D-OS, D-CS or DNAS approved STC local area coxswain qualified. Prior to moving a STC, the crew shall accomplish the following:

- 1) Conduct Engine Start Checklist.
- 2) Ensure enough life jackets are available for each person on board.
- 3) Obtain permission from Santee Basin Control (VHF Ch 82A).

b. Each boat will have a minimum crew of one qualified helmsman as defined in 217.1 (a), one qualified coxswain and one line handler. Boat movements will be conducted during daylight hours only unless otherwise directed by the Cutter Shed Maintenance Director. Once underway, the boat coxswain will adhere to all regulations applicable to a sailing vessel under auxiliary power as outlined in the USCG Navigation Rules (i.e., COLREGS).

217.2 TOWING

If Cutter Shed personnel must tow a NAVY-44 or Class "A" boat, follow the guidelines below:

- a. The person in charge shall brief the evolution prior to commencing.
- b. Use a Rigid Hull Inflatable Boat (RHIB) to tow a STC because of the RHIB's maneuverability, power and soft rubber bladders. During a "dead stick" move of a STC, make up a RHIB bow and stern to the port or starboard quarter to provide the necessary thrust and control.
- c. Use qualified boat coxswains as RHIB operators.
- d. One line handler will remain aboard the STC at all times to assist with steering or to handle lines.
- e. A responsible Petty Officer will be on board either the RHIB or STC to act as a Safety Observer.

217.3 HURRICANE SORTIES

In the event of a hurricane sortie, participating personnel shall follow all requirements discussed in this section as well as those guidelines promulgated in reference (d). Additionally, prior to getting underway, each boat will have on board:

- a. Navigational charts with appropriate information about the assigned hurricane anchorages.
- b. Additional personnel as required to safely moor to designated mooring buoys.
- c. A copy of reference (d).
- d. Prior to embarking, the evolution shall be briefed by the person in charge.

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CHAPTER 3

300. EXCEPTIONS AND MODIFICATIONS TO SOP REQUIREMENTS

All offshore-capable STC are subject to these Standard Operating Procedures. When operating in the local area or when racing, as defined below, certain modifications apply. The following define the requirements and list the exceptions for such operations.

301. LOCAL OPERATING AREA

The LOCAL OPERATING AREA is defined as the area bounded by:

- a. Severn River, seaward of Route 50 Bridge;
- b. Annapolis inner harbor eastward of Annapolis harbor Green Can 1SC;
- c. Chesapeake Bay south of the Chesapeake Bay Bridge;
- d. North of a line connecting Thomas Point Shoal Light and Bloody Point Bar Light, or for VOST local racing only – North of a line connecting Green Can 83A and R84
- e. Program directors may authorize training outside the local area on a case-by-case basis.

302. RACING DEFINITIONS

- a. ROUND-THE-BUOY RACES include day races run outside of Chesapeake Bay Yacht Racing Association (CBYRA) Region 3 on short courses using drop marks or permanent buoys.
- b. POINT-TO-POINT DAY RACES include medium-distance races on pre-determined courses that do not include night sailing.
- c. DISTANCE RACES include all races that include night sailing.

303. REQUIREMENTS FOR LOCAL OPERATIONS

a. NAVIGATION

- 1) For OSTs, VOST practices and recreational sailing, the Skipper/Coach must ensure that appropriate charts and publications are on board prior to getting underway. This shall include the following:
 - (a) Charts 12270 and 12283, updated with the latest Notice to Mariners.
 - (b) Current edition of Tide and Current Tables or Eldridge's Tide and Pilot Book.
 - (c) U.S. Chart No. 1
 - (d) First Aid Kit and manual
 - (e) USCG Navigation Rules – International and Inland (COLREGS)
- 2) A navigation plot or DR is not required to be maintained while in the local OPAREA, but is highly encouraged both for vessel safety and crew training.
- 3) Chart preparation shall conspicuously highlight danger soundings and danger bearings.

- 4) Prior to getting underway for training in the local OPAREA, the Skipper/Coach shall hold a **navigation brief that includes:**
 - (a) The marine weather, wind and wave forecast (current and future).
 - (b) Visually outline on a chart the expected operating area, highlighting navigation aids and hazards, danger bearings and shoal water.
 - (c) Planned training evolutions
 - (d) Safety considerations
 - (e) Maintenance and personnel concerns.
- 5) The Skipper/Coach shall bear the ultimate responsibility for the safe navigation of the vessel. They must be fully aware of all hazards within the boundaries of the local OPAREA and avoid them.

b. **ADDITIONAL REQUIREMENTS**

- 1) For all RACES:
 - (a) The Skipper shall hold a crew meeting before the first race of the day to discuss the plan of the day, as well as any logistical, tactical or strategic considerations, including, but not limited to, a weather synopsis.
 - (b) The Skipper shall hold a crew meeting after the final race of the day in which the day's racing is de-briefed, plans are made for any repairs necessary and any other schedule considerations are discussed.
 - (c) Logbook entries to include:
 - (1) Title of event
 - (2) Finish position/ fleet size
 - (3) Boat performance in wind and wave conditions, sail combinations, weight placement, etc.
- 2) The STC Check Lists (found in SOP section 900) are required to be used during all local operations, as appropriate for the scheduled evolution(s).

304. EXCEPTIONS TO THE SOP WHEN RACING

a. VOST Skippers may adjust their STC's standard daily routine. To accommodate the particular race requirements, the Skipper may, with approval of the onboard Coach, organize the watch rotation and assign tasks as appropriate.

b. All crew members shall contribute to the position of lookout. The bow man should be positioned at the bow pulpit during the start sequence and remain there until on the final approach to the starting line and clear of other traffic.

c. During round-the-buoy racing, if conditions warrant, the Coach may authorize “not” rigging the preventer; however, this is a decision that should not be taken lightly, and should not be considered automatic by the Skipper. For distance races, preventers shall be rigged when on a broad reach or running (apparent wind angle 120 degrees or greater).

d. Section 405 does not apply when starting a race if the race committee has designated a VHF channel for use in recalling the fleet. Immediately following the start, skippers shall ensure that their radios are reset in accordance with section 405. They should include applicable racing channel(s) in their scan pattern.

e. Section 400.c(6) is modified to allow hiking against the lower lifeline.

f. Section 804.3 is modified only when actually racing, from 15 minutes prior to the preparatory signal for the boat’s class until the boat finishes or withdraws from the race, to allow the following:

- 1) Optional use of the safety harness; and
- 2) Repair/check only the item/items of concern rather than inspection of the entire rig when going aloft.

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CHAPTER 4

400. SAFETY

Safety is at all times a matter of utmost importance and requires the full attention of all hands. The overriding factor when considering a specific course of action shall be whether the contemplated action will unduly hazard the vessel or anyone aboard. This chapter promulgates basic safety precautions and procedures as a minimum standard; Skippers/Coaches are encouraged to add to this list as necessary.

a. **INDIVIDUAL GEAR.** USCG approved offshore inflatable lifejackets (tech vests) or USCG approved vest type (Type III) are carried aboard all STC. Inherently buoyant (Kapok) lifejackets may also be carried. The tech vests have an integrated safety harness. Tethers are used to clip an individual's harness to a fixed-location padeye or to jacklines. Personnel shall don appropriate personal safety equipment below deck before relieving the watch.

- 1) **LIFEJACKETS and SAFETY HARNESSSES.** All crew shall wear a tech vest at all times while underway overnight. Tech vests should be fit to the individual and labeled temporarily for the training block. CO2 cartridges should be checked for proper insertion (green indicator showing) and spare cartridges and automatic release bobbins carried on board. VOST may wear the vest type (Type III) lifejackets for inshore races and practices during daylight hours. A tech vest or life jacket shall be worn at all times when underway.

NOTE: If using Mustang inflatable lifejackets, it is strongly recommended to inflate each tech vest overnight using the manual inflation to check for air retention at the beginning of each overnight or voyage. DO NOT inflate the new inflatable lifejackets every training block. The manufacturer recommends inflating every 2 months, a schedule for inflation testing will be set by the Vanderstar safety chair each season.

- 2) **TETHERS.** Safety tethers (6' length) shall be clipped onto padeyes or jack lines when topside between sunset and sunrise, during periods of restricted visibility and during rough weather or as prescribed by the Skipper. Always attach the quick release shackle of the tether to both metal or webbing rings on the front of your harness. Tethers should be attached to harnesses before exiting the cabin, and clipped into the cockpit before coming on deck. They should be unclipped after entering the cabin. A second, mid-point shackle, or dual tether should be worn when working at the mast or on the foredeck, so that the secondary tether can be clipped to a new location before unclipping the primary tether. Tethers should be worn:
 - Sunset to sunrise,
 - During inclement weather
 - At the discretion of the Skipper/Coach
- 3) **JACKLINES.** Jacklines are lengths of webbing running fore and aft along the deck, and inside the cockpit.
- 3) **WHISTLE.** A whistle will be attached to each lifejacket. In addition, attach a suitable whistle at the helm station to be used as a boat's "General Alarm."

- 4) STROBE LIGHT. A seawater activated strobe light will be attached to each lifejacket. Each strobe light should be tested prior to an offshore departure or any night sailing evolution.
- 5) FOOTGEAR. All personnel shall wear non-skid deck shoes topside. See Section 602 for additional guidance.
- 6) JEWELRY. Do not wear jewelry aboard any STC.

b. STANDARD PROCEDURES. All procedures shall strictly conform to instructions contained in this Standard Operating Procedures (SOP) and Reference (h) (BIB) for Navy 44s, or the boat-specific operating instructions for chartered boats. All personnel embarked must become thoroughly familiar with the SOP and BIB. During training, there will be no emergency drills except those initiated by the Skipper. Record completion of all emergency drills in the Offshore Yacht Log.

- 1) ABANDON SHIP DRILLS. Abandon ship and emergency life raft station drills will be carried out regularly to ensure that all personnel are familiar with correct procedures. Each crew shall conduct abandon ship drills prior to departing the local OPAREA. (See Abandon Ship Bill, Section 806.)
- 2) MAN OVERBOARD DRILLS. Periodic man overboard drills will be conducted, including drills during hours of darkness. VOST crews shall conduct at least one man overboard drill each month during regular practice periods.
- 3) SAFETY BRIEFS. Safety briefs should be a routine precursor to all evolutions to insure that all hands are familiar with equipment and aware of potential hazards and all pertinent safety precautions. The Naval Safety Center's Operational Risk Management Methodology, Reference (k), is a systematic process for assessing and controlling the risks associated with any task or mission and shall be a part of all safety briefs.

c. EMERGENCY EQUIPMENT. Before proceeding to sea, all members of the crew shall be thoroughly familiar with the location and operation of all emergency and survival equipment on board.

- 1) SKIPPER INSPECTION. Prior to beginning an offshore passage, the Skipper/Coach will personally inspect all such equipment prior to getting underway for an offshore or coastal passage and will, in addition, conduct an inspection of the following equipment after it has been issued to individuals:
 - (a) All lifejackets
 - (b) Safety tethers
 - (c) Personal strobe lights and whistles
- 2) EPIRB. The Emergency Position Indicating Radio Beacon (EPIRB) will be tested by the Vanderstar Chair as recommended by the manufacturer. However, crews should still inspect their EPIRB in accordance with the manufacturer's recommendations prior to heading offshore.

- 3) SPOTLIGHTS. One high intensity 12V or handheld spotlight will be stowed in the cockpit during hours of darkness or significantly reduced visibility.
- 4) CREW RECOVERY EQUIPMENT. A horseshoe buoy with attached Man Overboard Pole and drogue, whistle and strobe light will be mounted at all times while underway. A Kapok life jacket will be kept in the cockpit adjacent to the helmsman. A Lifesling with a strobe light will be mounted on the stern pulpit and a 50-foot heaving line ("throw bag") will be attached in the cockpit within reach of the Helmsman.
- 5) LIFE LINES. No one shall lean, sit, stand, climb on, or clip safety tethers on the lifelines.

d. EQUIPMENT MAINTENANCE.

- 1) No maintenance will be performed on any electrical or electronic equipment without the express permission of the Skipper or Coach.
- 2) No maintenance will be performed in the engine compartment while the engine is operating unless authorized by the Skipper/Coach.

e. SUPERVISION. The Skipper/Coach or XO must personally supervise the following evolutions: Crew Aloft (Section 804), Fueling and Freshwater Filling, Towing and whenever a swimmer is working over the side.

401. USE OF PREVENTERS

The possibility of serious personal injury or damage to a STC due to an accidental jibe is very real. All hands must remain aware of this danger. Voyage planning and daily sailing procedures must reflect specific consideration of the threat of an accidental jibe. Common sense and good seamanship should always prevail. While individual conditions of weather, sea state, crew experience and training cannot be generalized and it is recognized that individual Skippers and Coaches must make decisions based on actual conditions, the following policy shall be followed:

a. Preventers shall be rigged and used whenever a STC is running with the wind at or abaft 120 degrees apparent (regardless of wind speed).

b. Crews shall be trained in the danger zones and safe zones of their respective STCs.

402. SAFETY EQUIPMENT OUTFITTING AND INSPECTIONS

All boats should be fully equipped with appropriate safety equipment. A standard stowage plan shall be posted and outfitting check should be conducted prior to departure from the Naval Academy. Skippers and Coaches shall ensure that their STC is in compliance with Chapter 9, Section 906, U.S. Coast Guard requirements and World Sailing Offshore Special Regulations (OSR). STC racing or operating in the local OPAREA shall comply with OSR Category 4 in local waters or as specified in the Notice of Race. STC transiting or racing in the ocean shall conform to OSR Category 1, unless otherwise specified in the Notice of Race or OPORDER.

403. SWIMMING

a. RESCUE SWIMMING. Anytime a swimmer is put into the water for rescue and assistance purposes he will wear a PFD and be tethered to the boat with a safety line.

b. RECREATIONAL SWIMMING

- 1) No one shall swim from a STC while underway making way.
- 2) No one shall swim from a STC in the local OPAREA without permission from DNAS and only in the mooring field in Carrs Cove SE of SCR D or south of FL G day marker "1E" off Bembe Beach.
- 3) When outside the local OPAREA, Skippers may permit swimming during daylight hours under the following conditions:
 - (a) Permission from the OTC, a designated onboard spotter, and use of the buddy system.
 - (b) Secure the engine, ignition switch, and engine battery switch in the "OFF" position prior to swimming.
 - (c) Lifejacket deployed from the transom and attached to the STC with a tether.
 - (d) Boarding line or Galerider rigged for boarding STC.
 - (e) **No swimming in a marina** or any other area that might have stray electrical current adjacent to docks.
 - (f) Swimming area limited to a 100' radius of the STC.

404. EMERGENCY/"MAYDAY" PROCEDURES

A plaque will be displayed at the navigation station with emergency communications procedures and a sample "Mayday" message customized for the craft. An example is shown below. All hands will be familiar with the use of radios and the proper procedures for transmitting an emergency message.

If your STC is equipped with Digital Select Calling (DSC) on both the VHF and HF radios, follow the radio specific procedure to transmit a DSC distress call on the dedicated DSC Channel 70 (VHF) or 4207.5 kHz (HF). For the HF radio, the Antenna SSB/Fax Switch must be set to "SSB".

If the GPS is required to be energized to transmit your position, ensure the GPS breaker and electronics unit are turned on.

SAMPLE "MAYDAY" VOICE MESSAGE

Speak **SLOWLY - CLEARLY - CALMLY**

- a. Ensure your radio is on.
- b. Select Channel 16 (VHF) or 4125 kHz (SSB). If unable to make contact on 4125 kHz, try alternate high frequency (HF) SSB emergency channels 6215, 8291, 12290 or 16420 kHz.
- c. Press microphone button and say: "**MAYDAY - MAYDAY - MAYDAY.**"
- d. Say: "**THIS IS _____, _____, _____, _____.**"

boat name boat name boat name your sail number

i.e. "This is the sailing vessel Brave, Brave, Brave, sail number NA 29"

- e. Say: "**MAYDAY**: _____ (your boat name)
- f. TELL WHERE YOU ARE (What navigational aids or landmarks are near?).

g. STATE THE NATURE OF YOUR DISTRESS.

h. GIVE NUMBER OF CREW ABOARD AND CONDITIONS OF ANY INJURED.

i. ESTIMATE PRESENT SEAWORTHINESS OF YOUR BOAT.

j. BRIEFLY DESCRIBE YOUR BOAT:

_____ FEET LONG; _____ FOOT DRAFT; SLOOP RIG;

_____ HULL (COLOR); _____ TRIM (COLOR);

AUXILIARY POWER; _____ HORSEPOWER;

FIBERGLASS CONSTRUCTION HULL, ONE MAST

k. END MESSAGE BY SAYING: "**THIS IS _____ . OVER,**"

l. RELEASE MICROPHONE BUTTON AND LISTEN: SOMEONE SHOULD ANSWER.

IF THEY DO NOT, REPEAT CALL, BEGINNING AT ITEM 3. IF THERE IS STILL NO ANSWER, SWITCH TO ANOTHER CHANNEL AND BEGIN AGAIN.

405. VHF RADIO WATCH

a. VHF channel 16 shall be continually monitored by STCs while underway.

b. Channel 13 (and Channel 9, in Coast Guard District I) shall be monitored at all times in restricted coastal waters or in areas where commercial traffic may be expected. Use the VHF "SCAN" function when monitoring more than one channel. Scan VHF Channel 82a or the designated squadron communication channel in the Local OPAREA and while underway and Channel 12 locally.

c. The VHF cockpit mic should remain in the "ON" and "SCAN" positions at all times, with volume set at a level so that communications can be heard.

d. The VHF radio shall not be used in the intercom mode as this renders normal VHF reception inoperable.

406. RADAR WATCH

A radar watch shall be maintained during reduced visibility and at other times as good seamanship dictates. A maneuvering board solution is always appropriate when working collision avoidance problems.

407. AIS WATCH

An Automatic Identification System (AIS) watch shall be maintained to identify potential collision risks with commercial traffic, and pleasure craft that are equipped with AIS. Recommended interval is every 15 minutes or more frequently as good seamanship dictates.

408. SHORE POWER

Connecting and disconnecting shore power is a potentially hazardous evolution. The procedures in Chapter 9, Section 904 shall be used to ensure that the connection is safely completed.

409. LPG STOVE

Though very safe when properly used, the operation of galley stoves aboard STCs requires strict adherence to established procedures. Each STC shall post the light-off procedure in a conspicuous location near the stove. The procedure may be found in the Boat Information Book or technical manual. **When lighting the stove, the bilge exhaust fan shall be operated to ensure that there is no gas in the bilges. LPG is heavier than air, and thus sinks. LPG has a sulphurous odor. When securing the stove, ensure that all gas is burned out of the lines by first closing the valve at the gas bottle, then turning off burners at stove after flame is extinguished.**

410. FUELING

The following procedures should be followed while filling diesel fuel in the STC to ensure safe operations and avoid overfilling. Before starting, determine an estimate of how much fuel (in gallons) is needed so that fuel pump gauge can be monitored in addition to the steps listed below:

- a. Turn engine off, bilge blower on.
- b. Sound the tank with the Tank Tender and record the volume in the Deck Log.
- c. Carefully remove deck fuel cap (amidships on port side). Have dual concurrence that it is the proper fill pipe, place an "oil-zorb" sock around deck fill, and have paper towels ready for any spillage.
- d. Remove the tank dipstick from the top of the fuel tank below deck, place an "oil-zorb" sock around opening.
- e. Position one person at the deck fill with the fuel nozzle, one at the tank tender, one at the dipstick hole on the tank with a flashlight, and one at the fuel pump to sound off gallons pumped.
- f. Begin **fueling slowly** when all are in position, the person at the tank below will monitor the level in the tank and call the "stop" command.
- g. **Do not overfill**, leave at least 1 inch below the tank top to prevent any fuel spillage in the bilge from the fuel pipe drainage.
- h. When finished, return the fuel nozzle to the attendant in the "up" position.
- i. Secure the dipstick back into the tank with a wrench, being careful not to cross-thread or over-tighten.
- j. Record the fuel capacity with the Tank Tender and record in the Offshore Yacht Log and the Engine Log.

k. Check condition of the o-ring in deck fill cap, secure cap hand tight with the deck key. Replace o-ring if damaged to prevent seawater leaking into the fuel tank.

l. Turn off bilge blower 2 minutes after completion of fueling.

411. SPINNAKER/HALYARD FLYING

Spinnaker and Halyard flying are not permitted for safety reasons.

412. SHIP'S BILLS

Ship's Bills are provided in Chapter 8 of this SOP. These Bills are designed to enhance safety and increase standardization throughout the program.

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CHAPTER 5

500. POLICY REGARDING INCIDENTS WHILE UNDERWAY

501. PURPOSE

This chapter sets forth policy regarding procedures to be followed in the event a STC is involved in a collision, grounding, or otherwise causes damage to civilian or military property.

502. RULES AND REGULATIONS

References (c) and (e), and (f), provide detailed guidance, regulations and procedures for collision avoidance at sea and all three are entirely consistent in the concept of collision avoidance and safety of life at sea. All personnel sailing in STCs must be thoroughly versed in these references, and competent enough at sea to apply the principles of collision avoidance.

503. POLICY

While the focus of this policy is on collisions between STC and civilian boats, it applies equally to all Naval Academy sailboats in all facets of the sailing program.

a. The prudent mariner knows the situation, knows the capabilities, and limitations of his craft and crew, and always leaves an escape route.

b. It is recognized that in the course of midshipman sail training, incidents may nevertheless occur. Differentiation is drawn between relatively minor incidents (incidents causing negligible personal or property damage), and more serious incidents (involving personal injury, or significant property damage to Navy or civilian craft).

504. PROCEDURES

Training, planning, common sense, and good seamanship are the keys to incident avoidance. Nonetheless, if a mishap occurs, prompt notification, accurate reporting, and candor in post mishap analysis will ensure that the U.S. Government is protected from undue claims, and that the training program will benefit from lessons learned. The Skipper/Coach must file an "Incident Report Form" (see Appendix F) with the respective Program Director, for review by the Vanderstar Chair and DNAS for all incidents, including grounding, collision, allision, injury, material damage, fire, and major corrective maintenance.

a. **MINOR INCIDENT REPORTING.** Minor incidents such as "touching bottom" (soft grounding in which the boat's forward progress is not stopped) shall be reported immediately upon reaching port to the pertinent program Director (OSTS or VOST) so that an underwater hull survey (or appropriate action) may be scheduled. Program Directors will review the circumstances surrounding the incident and, in coordination with the Vanderstar Chair, shall develop lessons learned to prevent similar instances from reoccurring.

b. ADMIRALTY INCIDENT REPORTING

1) All major (admiralty) incidents will be reported immediately to DNAS via the appropriate program Director. An admiralty incident is any in which two vessels underway strike each other; or in which a vessel strikes a pier, bridge, buoy or other object or causes wake damage; or in which personnel injury or death occurs. When a STC's forward progress is stopped due to contact with the bottom, this is considered an Admiralty incident. Failure to report serious groundings and mishaps may result in possible detrimental impact on the Navy's sail training program.

- 2) Information required for a complete investigation of the incident must be gathered. The Log(s) and navigation chart(s) should be collected and retained by the Skipper for safekeeping until landfall. These are legal documents and must be safeguarded. Photographs or video should be taken if camera equipment is available. **The Skipper should direct all crew members with specific knowledge of the incident to draft statements and should draft his or her own as well.** All of these records and reports should be turned over to the pertinent Program Director for Vanderstar and DNAS review at the earliest opportunity.

ADMIRALTY INCIDENT CHECKLIST

Complete the following checklist immediately in all cases of collision, wake damage or injury in which a STC is involved.

<u>ACTION</u>	<u>COG</u>	<u>COMPLETE</u>
Perform first aid, damage control, request/render assistance as required.	Skipper	_____
Upon knowledge of an incident, report by fastest, most efficient means (phone, VHF, HF) to: a. OTC b. OSTS/ VOST Program Director/Navy Sailing Duty Officer	Skipper	_____
Gather information for expected investigation.	Skipper	_____

Report immediately, even if information is incomplete or sketchy. Follow-up reports will be sent from the scene if requested by DNAS or higher authority.

If racing, and the STC can continue to race, complete initial reporting as soon as possible. Prepare for the protest hearing. Attend the protest hearing as directed by DNAS.

If not racing, communicate to the second party that the Navy is a self-insurer and has formal procedures, like any commercial insurance company, for paying damage claims. Tell the other party that they should expect to hear from the Navy within a few days. Do not accept blame or responsibility for the incident.

CHAPTER 6

600. SMARTNESS

601. STANDARDS

The sail training program at the Naval Academy has very high visibility with the potential for strong positive or negative reaction. Naval Academy STCs represent a significant taxpayer investment and are routinely under scrutiny, both in port and underway. The visual image projected is a powerful influence on the impression created by the training craft and their respective crew. Accordingly, Skippers and Coaches must ensure that the appearance and daily routine of their vessel and assigned crew are maintained at the highest possible military standard. Smart entries of both vessel and crew into port will be the standard, with immediate rectification of outstanding cosmetic deficiencies which could not be corrected at sea accomplished upon arrival.

602. UNIFORMS

The sailing uniform, as approved by the Superintendent, is listed below and may be modified only by DNAS. All personnel sailing aboard Naval Academy vessels are responsible for adhering to these regulations. All uniforms will be clean and in good repair. Midshipmen, staff, and all volunteers are reminded to comply with the spirit of these rules to represent the sailing program and the Naval Academy in the best light.

EVENT	OSTS	VOST	IC
LOCAL OPS	BLUE RIM/ KHAKI or BLUE POLO/ KHAKI OR WHITE POLO/KHAKI (INSTRUCTORS)	BLUE RIM/ KHAKI or BLUE POLO/KHAKI TEAM GEAR	REG PE GEAR OR ISSUED SAIL GEAR TEAM GEAR
ENTERING/ LEAVING LIBERTY PORT	BLUE POLO/ KHAKI	BLUE POLO/ KHAKI	
ROUND-THE- BUOY RACING		BLUE POLO/ KHAKI TEAM GEAR	
DISTANCE CRUISE/ RACE	BLUE RIM/ KHAKI	BLUE RIM/ KHAKI TEAM GEAR	
COLD WEATHER	NAVY SWEATSHIRT BLUE JACKET/ PULLOVER FOUL WEAX GEAR	NAVY FLEECE PULLOVER FOUL WEAX GEAR	
IC TRAVEL			BLUE POLO/ KHAKI
EVENTS ASHORE	MILITARY UNIFORM OF THE DAY OR BLUE POLO/ LONG TROUSERS OR SHORTS	MILITARY UNIFORM OF THE DAY OR BLUE POLO/ LONG TROUSERS OR SHORTS	MILITARY UNIFORM OF THE DAY OR BLUE POLO/ LONG TROUSERS OR SHORTS

NOTES:

a. The working uniform is the prescribed shirt and long khaki trousers with cotton web belt or NASS logo belt. Shirt tails will be tucked into the trousers. Khaki shorts may be substituted for trousers when the weather warrants. Shorts shall be identical in color to working khaki trousers, minimum 6" inseam, and fitted with belt loops.

b. The Naval Academy Sailing blue polo (with "N" logo) or embroidered crest or other "boat shirts" may be worn, when specifically approved by the appropriate Program Director.

c. A navy blue, white, or off-white Navy-related ball cap may be worn. When appropriate, the Skipper/Coach may authorize watch caps or other cold weather head gear.

d. Closed toe shoes or boots with non-slip, non-marking rubber shoes will be worn at all times while on deck. Shoes will be brown leather or primarily white. Running shoes, windsurfing or diving "booties," or Teva-type sandals are not acceptable.

e. Low-cut white or khaki socks may be worn based on personal preference. Grey rag wool or synthetic socks are authorized for cold weather.

f. For safety and uniformity, foul weather gear issued by the respective Program Director will be worn.

g. For events ashore, Skippers/Coaches shall wear one of the following, as dictated by the type and formality of the event:

- 1) Navy blue polo (Navy Sailing logo polo preferred) over long white or khaki trousers or skirt; or
- 2) Light blue or white dress shirt, necktie or bow tie, navy blue blazer and long trousers or skirt.

603. PERSONAL APPEARANCE

STC are military vessels and the military members of their crews are expected to maintain proper military grooming standards at all times.

604. MAINTENANCE OF STC APPEARANCE

Prior to arrival in port, all gear shall be stored in a seaman-like manner, sails furled securely and stowed properly, and lines coiled and hung as appropriate. Immediately upon arrival, topsides and decks will be given a fresh water wash down. The vessel's interior will be maintained in an orderly fashion (ready to receive visitors) at all times while inport.

605. COLORS

When STC are berthed at the Naval Academy, morning and evening colors are not required to be observed. During port visits away from the USNA complex, morning and evening colors shall be observed, with proper military decorum, as an example to the sailing community.

NOTE: THE BURGEE OR PERSONAL FLAG WILL NOT BE DISPLAYED FROM THE SPREADER.

606. SALUTES

As vessels in naval service, an STC should NEVER initiate a flag salute with another vessel. Salutes to naval vessels are to be made by manning the rail.

607. DRESSING SHIP

STC should Full Dress Ship on national holidays, the Navy Birthday and on special occasions while in port between 0800 and sunset. A STC should NOT get underway while "dressed" unless in a parade. The line of flags should be EQUALLY spaced and should be continuous from the waterline forward, to the stem, to the top of the mast, down to the transom, thence to the waterline aft.

607.1 ORDER OF FLAGS

In accordance with yachting tradition, the following sequence of signal flags for dressing ship will be used on Naval Academy vessels. Note that this is different from that used aboard Navy ships, as the small boat "flag bag" does not include number flags. *Eldridge Tide and Pilot Book* has a diagram of all the international signal flags. From forward to aft:

AB2, UJ1, KE3, GH6, IV5, FL4, DM7, PO third substitute, RN first substitute, STO, CX9, WQ8, ZY second substitute.

608. YACHT ETIQUETTE

Skippers should ensure that midshipmen are taught proper yacht etiquette and courtesy. It is in the interest of the sail training program that courtesy flags are displayed properly, other vessels are boarded properly, rafts are crossed properly, and launches are called and boarded properly. *Chapman Piloting: Seamanship & Small Boat Handling* is a good source of yachting protocol information.

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CHAPTER 7

700. ALCOHOL AND TOBACCO POLICY

In amplification of Reference (i) this policy statement provides guidance regarding the use of alcoholic beverages and tobacco by personnel associated with the Naval Academy's sailing program.

701. ALCOHOL

a. Alcoholic beverages will not be consumed by anyone, in any manner, while on board a STC. Alcoholic beverages are not permitted on the piers or quay walls or in the parking lot at Santee Basin.

b. Alcoholic beverages will not be consumed by any person who has not reached the legal drinking age at any function or activity of the Naval Academy's sailing programs.

c. Alcoholic beverages may be consumed by those of legal drinking age at officially sanctioned events sponsored by the NASS Social Committee or at events specifically sanctioned by Commodore, NASS (when not in conflict with Midshipman Regulations, NAAA policy, or team policy).

d. Fourth-Class midshipmen may not consume alcohol, regardless of their age.

e. Midshipmen in a duty status shall not consume alcohol at any sailing function.

f. Alcoholic beverages **MAY NOT** be stored or transported on board STC without the express written consent of DNAS.

i. No one may consume alcohol within 12 hours of the planned underway time (see COMDTINST 5400.6Q).

702. TOBACCO

It is the policy of the Navy, the Naval Academy, the Naval Academy Athletic Association and Naval Academy Sailing Squadron that tobacco products, including smokeless tobacco, have no place at USNA. Tobacco products shall not be used on board STC.

703. CONSEQUENCES

Failure to abide by any aspect of this policy shall result in administrative and/or disciplinary action.

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CHAPTER 8

800. SHIP'S BILLS

Ship's bills are documents that establish organization for various evolutions and may be modified by an STC Skipper/Coach where appropriate. Bill maintenance is assigned by billet and can be found in the RESPONSIBILITY section. Any modification requires Skipper/Coach approval.

801. COMMUNICATIONS BILL

801.1 PURPOSE.

Routine communications and continuing interaction in all situations is mandatory for effective and safe underway operations. Standard commands are used for common evolutions so that (1) Operational communications are short and clear, (2) Actions are understood quickly by all involved, and (3) Teamwork is enhanced. Using standard commands for common and repetitive evolutions supports developing the ability to lead and confidently direct the actions of a team. Clear, concise VHF and HF radio communications are vital to collision avoidance, rescue coordination and squadron organization.

801.2 RESPONSIBILITY

All crew members are responsible for the contents of this bill. The Skipper is responsible for ensuring compliance.

801.3 STANDARD COMMANDS.

Standard commands in the STC normally have two parts: (1) A preparatory command that positions personnel and completes preliminary actions; and (2) An initiating command that starts the evolution. The initiating command is understood to include actions for performing the evolution that are taken without further specific direction. Hand signals are useful to communicate from the bow to the cockpit. Specific procedures for performing sailing evolutions on the Navy 44 are contained in Chapter 3 of the Boat Information Book (BIB).

a. LINEHANDLING – DOCKING/MOORING

- 1) "Stand by your lines". Take station at all lines and stand ready for orders.
- 2) "Take lines in hand". When moored, remove lines from cleats / winches / chocks, and then maintain tension so that the boat does not move.
- 3) "Cast off (designated line)". Toss/pass the line ashore.
- 4) "Take in (designated line)". Bring the line on board.
- 5) "Ease". Allow line to slip and boat to move with negligible tension.
- 6) "Slack". Remove all tension, allow line to sag.
- 7) "Check". Keep moderate tension on the line, but allow it to slip. Normally used to slow movement of boat when entering slip/coming alongside a pier. Also used in adjusting position of boat in slip/alongside pier as Helmsman uses propulsion to achieve desired position.
- 8) "Tension". Take/keep all slack out of line, maintain tension on line without moving the

boat.

- 9) "Take". Pull in on line so as to move boat in the desired direction.
- 10) "Hold". Place turn(s) on cleat to prevent any slipping of line.
- 11) "Double". Remove eye of line from cleat on pier, pass line around cleat on pier, then take the eye back aboard to same boat cleat. Tend bitter end on the boat cleat. Creates two bights holding boat to pier but the line is able to slide around the pier cleat thereby equalizing strain on both bights.
- 12) "Put over (designated line)". Toss eye of the line to the pier at the location / cleat where it is to be secured.
- 13) "Put down (designated line)". Secure the eye of the line on the designated pier cleat.
- 14) "Make down all lines". Secure all lines to their respective cleats or winches with the appropriate knots at their current tension.

b. LINEHANDLING – UNDERWAY (U/W) SAILING

- 1) "Trim". Check the shape of the sail or its angle to the wind and adjust as necessary.
- 2) "Ease". Let out a sail, line or halyard. Hand signal to ease a halyard is rotating the index finger pointing down.
- 3) "Take". To pull in a sail or line. Hand signal to take a halyard is rotating the index finger pointing up.
- 4) "Tension". To put a load on a halyard, sheet or backstay.
- 5) "Hold". Stop what you are doing, such as grinding a winch or raising a sail, until further commands are given. Also a steering command "Hold your course. Hand signal is a fist.
- 6) "Made". Indicates a connection has been "made", as in a shackle or halyard is secured, or the new guy is secured or "made" into the spinnaker pole end when gybing.
- 7) "High". Indicates that a sail is fully raised and the luff properly tensioned.

c. TACKING – (turning the bow through the wind so the boom passes from one side of the boat to the other)

- 1) "Prepare to Tack". Helmsman preparatory command.
- 2) "Port (sheet) ready," "Starboard (sheet) ready, "Mainsheet ready". Required reports from sail trimmers.
- 3) "Tacking". Helmsman initiates the turn.
- 4) "Break". Working jib sheet casts off jib sheet from winch as sail starts to luff.

- 5) "On course". Helmsman advises crew that boat is on new course so they can trim accordingly.
- d. GYBING – (turning the stern through the wind so that the boom passes from one side to the other)
- 1) "Prepare to gybe". Helmsman preparatory command.
 - 2) "Port (sheet) ready," "Starboard (sheet) ready," "Main Sheet ready, preventer clear". Required reports from sail trimmers and indicates that preventer line is clear.
 - 3) "Gybing". Helmsman initiates the turn.
 - 4) "Break". Working jib sheet casts off jib sheet from the winch when the sail luffs.
 - 5) "Center the main". Helmsman command as wind approaches 150 to 160 degrees.
 - 6) "Gybe HO". Helmsman advises crew that mainsail is about to cross boat centerline.
 - 7) "On course". Helmsman advises crew that boat is steady on new course.
- e. REEFING
- 1) "Prepare to take the first (or second) reef". Helmsman preparatory command.
 - 2) "Mast ready," "Halyard ready," "Main Sheet ready." Required reports from crew.
 - 3) "Take the first (or second) reef". Helmsman initiates maneuver. Mainsheet eases boom vang and mainsheet.
 - 4) Halyard lowers main halyard until at the reefing cringle. Mast guides mainsail luff down, engages reefing cringle, reports "Made." Halyard raises the mainsail.
 - 5) Mast monitors luff tension. When proper, reports "High" and Halyard ceases grinding. Mast begins to grind in the reefing line.
 - 6) Mainsheet reports "Made" when clew is snug to boom.
- f. SHAKING A REEF
- 1) "Prepare to shake the reef" (or) "Prepare to shake the second reef" (if retaining the first reef). Helmsman preparatory command.
 - 2) "Mast ready," "Main Sheet ready," "Halyard ready." Indicates sail ties have been removed and crew is ready. Required reports from crew.
 - 3) "Shake the reef" (or) "Shake the second reef". Helmsman initiates maneuver.

- 4) Mast eases reef line. Halyard lowers mainsail a few inches. Mast disengages reefing cringle from the horn, reports "Clear." Halyard tensions and then grinds main halyard to raise mainsail.
- 5) Mast reports "High" when proper mainsail luff tension is achieved. When "High" is reported, Halyard ceases grinding.

g. HELMSMAN COMMANDS

- 1) "Heading up". A maneuver that moves the bow of the boat toward the wind, but does not tack. Trimmers may need to trim sails.
- 2) "Heading down". A maneuver that moves the bow away from the wind but does not gybe. Trimmers may need to ease sails.

h. WATCH RELIEF. Turnover of the watch requires a complete turnover of all watch information and operational status from the person being relieved to the individual assuming the watch. The following is an example of relieving the Helm. Relief of Watch Captain, Navigation Plotter, Lookout, Sail Trimmer and Skipper/XO should follow a similar format.

Individual relieving the watch: "I am ready to relieve you."

Person being relieved provides a full status of the current situation.

- 1) Sail configuration (example: mainsail with 1st reef, no. 3 jib on starboard halyard, starboard tack).
- 2) Point of sail (example: close hauled, close reach, beam reach, broad reach).
- 3) Course being steered, track course, and current speed (example: steering 160, track course 130, making 4 knots). Course being steered may differ from track course because of wind direction, currents, contact avoidance, or other reason. In some situations, course being steering may also be referenced to a geographic object ashore vice a compass heading.
- 4) Contact information (example: visual, AIS or radar contact, bearing, observed bearing change (drawing left, or right or – most important – constant bearing), range XXXX yards, range closing/ opening, and classification (e.g., merchant, sailboat, tug).
- 5) Navigation aids in sight and characteristics (e.g., Thomas Point Shoal Light bearing XXX, white flashing 6 seconds; red buoy 84 bearing XXX, flashing red 2.5 seconds).
- 6) Any material or system conditions that could limit operations (no 2 jib torn/out of service, head aligned to holding tank).

Individual relieving the watch: Repeat back the turnover information.

Person being relieved: "That is correct" (or restate anything that was incorrect).

Individual relieving the watch: "I relieve you."

Person being relieved: "I stand relieved."

NOTE: THE WATCH CAPTAIN IS THE LAST PERSON RELIEVED, AFTER ALL OTHER WATCHSTANDERS HAVE BEEN RELIEVED.

801.4 RADIO COMMUNICATIONS.

Using a common set of prowords greatly increases the chances that radio communications will be understood and successful, when communicating inter-squadron or with commercial traffic. The hailing channel should always be included in an initial call.

a. VHF and HF radio prowords and usage:

“Over”. I relinquish the net to a responder. I am expecting a response.

“Out”. I am finished with this conversation and I relinquish the net. I am not expecting a response to my transmission. Typically the station that started the conversation says this. If you are responding to a hail from a station you should not say “out”, as you don’t know if the other station has other items to discuss. It is also typical for a junior station to avoid saying “out” to a senior station as courtesy. The senior would be responsible for ending the conversation, even if they did not start it.

“Wait”. I need time to form a response. If the time needed will be more than a few seconds it should be used, “wait, out”

“Break” - I have finished communicating an idea and I am moving on to communicating something else in the same transmission. For example, “HONOR this is WARRIOR, I am turning right BREAK my anchor is ready for letting go, over”

“Say again” (“say again all after”/ “say again all before”). I did not understand all or part of your last transmission and I am requesting that you retransmit all or part (as indicated). Use of “repeat” is not proper.

“Roger”. I understood your last transmission. Typically said as the first part of a transmission that responds to another station. For example, “HONOR this is WARRIOR on 82A, over”
“WARRIOR this is HONOR, roger, over”.

“Interrogative”. The following is a question or inquiry.

“Correction”. An error was made in transmission and will continue with the last word correctly transmitted.

“I say again”. I am repeating a portion of a transmission

“Disregard this transmission”. This transmission is an error and should be disregarded. Usually followed immediately by “out”.

“Negative”. No.

“Affirmative”. Yes.

All numbers are said as a number 0 - 9. For example, “42” is pronounced “four two”. Also numbers should be pronounced to increase chances of correct understanding by the distant end, 3 is pronounced “tree”, 5 is “Feif”, 9 is “Niner”.

“.” is pronounced “decimal”.

To conduct a communications check, all that is required is a hail and a response. For example, "HONOR this is WARRIOR on 82A, over." "WARRIOR, this is HONOR, roger, over" "HONOR, this is WARRIOR, roger, out."

After two stations have established a connection, it is acceptable to only say "this is" instead of saying both station names, with consideration made to multiple stations participating in a conversation. For example, "HONOR this is WARRIOR, over." "This is HONOR, roger, over" "this is WARRIOR, roger, out."

Roll calls or other collective calls should be responded to in hull order.

Radio etiquette is especially important between military units, but is typically relaxed when working with merchants and recreational boats, although merchant mariners are familiar with military radio etiquette. However, when communicating with merchants/ civilians, don't let etiquette inhibit effective communication.

The first time contacting a unit you will typically conduct a "double call up" where your first transmission is only a hail and no other information is passed. This is establishing a connection. For example, "HONOR this is WARRIOR on 82A, over" "WARRIOR, this is HONOR, roger, over." "This is WARRIOR, my port running light is malfunctioning, over". "This is HONOR, roger, out.

If you are transmitting to a collective and you want verification that each unit received, you should end with "over" and not "out". Each unit in the collective would then reply with "roger, over" to indicate receipt. *A transmission not acknowledged is a transmission not received.* Sometimes the information you are transmitting is not required to verify receipt, in which case ending with "out" is acceptable.

b. Departing Santee Basin (USNA)

1) Use VHF Channel 82A to hail Santee Basin Control:

"Santee Basin Control, this is "BOAT NAME", Request permission to depart the basin, XX souls onboard, estimated hours out of basin "HRS" + "MINS", OVER" -- (i.e., 2+30 for 2.5 hours). Once acknowledgement is received, reply, "Roger, this is BOAT NAME, standing by 12, 13, 16, 82A, out".

2) Use VHF Channel 12 to issue sécurité call:

"Sécurité, sécurité, sécurité, this is BOAT NAME. All traffic, be advised that we are exiting Santee Basin, standing by 12, 13, 16, 82A, out".

3) Returning to Santee Basin (USNA)

Use VHF Channel 82A to hail Santee Basin Control:

"Santee Basin Control, this is BOAT NAME, request permission to enter the basin, XX souls onboard, OVER". Once acknowledgement is received, reply with "Roger, this is BOAT NAME, out."

802. GENERAL VISITING BILL

802.1 PURPOSE

To specify procedures for the control of visitors in STC, in order to ensure physical security of the boats, the safety of the guests and reasonable privacy for the crew.

802.2 RESPONSIBILITY

The Supply Officer is responsible for the maintenance of this Bill. The Executive Officer (XO) is responsible to the Skipper for the overall arrangements for receiving visitors and for directing implementation of the procedures in this Bill.

802.3 PROCEDURES

a. Within a squadron, the OTC shall determine which STC(s) will serve as host for "Visit Ship." He/she will then determine the number of crew required on board to receive visitors, and either post or determine visitation hours. The Supply Officer of the assigned craft will ensure that a presentable sign is posted on the pier or other suitable location, if required, designating visiting hours.

b. The XO shall:

- 1) Ensure the STC is presented in the most shipshape, hospitable and favorable light;
- 2) Ensure that duty personnel are trained to discuss highlights of the Naval Academy in general and the sail training program in specific; the current training cruise; and the mission of Navy Sailing, with emphasis on the professional leadership development of midshipmen morally, mentally and physically.
- 3) Ensure duty personnel are stationed topside to welcome visitors.
- 4) Ensure that the crew is properly attired in the STC Uniform of the Day.
- 5) Ensure all pilferable items are stowed and locked.

c. The In-port Duty Officer shall:

- 1) Serve as a professional, polished and engaging host for visitors.
- 2) Invite all visitors to sign the Offshore Yacht Log.
- 3) Provide visitors with an information bulletin and other PAO guidance as available.

Note: OTCs will carry a supply of PAO materials, which are available on an as-required basis.

d. All hands shall remember that STC are U.S. government vessels, purchased and maintained by tax dollars.

803. INPORT SECURITY BILL

803.1 PURPOSE

To provide for the security of STC and their equipment while in port. Security relates to protection from theft or vandalism; protection from inadvertent damage (from weather, fire, flooding, etc.); and protection of equipment (misuse or improper operation).

803.2 RESPONSIBILITY

The XO is responsible for the maintenance of this Bill. It must be emphasized that proper security is an all hands responsibility.

803.3 PROCEDURES

Prior to disembarking a STC, the Securing Check List (SOP, Section 908) will be completed. Personnel assignments are outlined below.

a. **THE NAVIGATOR.** The Navigator shall:

- 1) Inform the Skipper of the weather forecast with specific emphasis on predicted changes, the approach of heavy weather, tide and current conditions.
- 2) Account for and securely stow, all portable navigation and electronic equipment.
- 3) Properly secure unnecessary electronic equipment.

b. **THE ENGINEER.** The Engineer shall:

- 1) Ensure all non-essential DC breakers are secured.
- 2) Ensure all AC breakers are secured, with the following exceptions (with approval of the Skipper/Coach):
 - (a) Battery charger
 - (b) Any other AC loads as approved by the Skipper
- 3) Ensure the engine and house battery Perko switches are in the "OFF" position, unless a DC house load is to remain energized (e.g., refrigerator).
- 4) Ensure shore power cable/fittings are protected from the weather and from potential chafing.

c. **THE SUPPLY OFFICER.** The Supply Officer shall:

- 1) Remove all food items that might spoil.
- 2) Open refrigerator covers if reefer is not in use.

d. **THE FIRST LIEUTENANT.** The First Lieutenant shall:

- 1) Ensure all cockpit lockers are properly stowed and closed.
- 2) Ensure mooring lines are doubled and additional storm lines are rigged in the event of heavy weather or if outboard in a nest/ raft.
- 3) Ensure fenders are properly positioned so that they are not adversely affected by changing tides and wind.
- 4) Ensure proper chafing gear is used with mooring lines.

- 5) Ensure overhead hatches and companionways are closed and locked.
- 6) Ensure the mainsail is flaked neatly and the sail cover is in place.
- 7) Ensure binnacle covers are in place.
- 8) Ensure dorades are open and facing forward as applicable to provide proper ventilation below decks.

e. THE XO. The XO shall ensure all spaces are clean, that equipment is stowed properly and that all items on the securing check-off list are completed.

f. THE SKIPPER. The Skipper shall ensure that responsible duty personnel if at a military installation, or boat yard personnel if at a civilian facility, are informed of the following:

- 1) Naval Academy duty phone numbers and contact personnel as appropriate.
- 2) Other instructions as may be necessary.

803.4 PROCEDURES WHILE IN PORT

a. STC DUTY OFFICER. Additional duties and responsibilities exist in port. An in port duty section, separate from underway watch sections, is necessary to respond to emergent issues, conduct tours and ensure security of the STC.

A Duty Officer for each boat while in port parallels fleet practices to provide leadership and oversight of the in port routine. The responsibilities of the Duty Officer in port may be considered similar to the Watch Captain while underway.

The Duty Officer does not relieve crew members of duties assigned within their billet responsibilities, rather the Duty Officer takes any immediate actions judged necessary in that crew member's absence. Upon returning aboard, the normally designated crew member takes responsibility for the issue.

It is recommended that a Duty Officer be assigned for each day of a summer block. If the boat is underway, the assigned individual effectively draws a bye. However, if arrivals/ departures from port vary, there is always a clear, pre-determined assignment as Duty Officer. In similar manner, assignment of a Duty Officer during periods moored in Santee Basin will serve to train crew members for in port functions and routine.

b. INPORT DUTY SECTION. The inport watch for the squadron shall be set by the squadron Senior Watch Officer, at the direction of the OTC. The Duty Section shall consist of a minimum of two midshipmen per squadron. A sample Watch Bill is included in SOP Appendix C.

Duty Officer in Home Port. Responsibilities include the following:

- Duty period: 24 hours, relieve/assume Duty Officer about 0800 daily.
- In the morning, log out the engine log from Cutter Shed.
- Oversee underway preparations (Underway Check Lists).

- Represent the boat and crew in absence of Skipper and XO.
- Oversee securing boat in slip (Securing Check List).
- In the absence of the assigned billet individual, take any immediate actions judged necessary. Upon returning aboard, the billet holder takes responsibility for the issue.
- Prior to daily close of business, ensure repair chits for known deficiencies are prepared.
- Return boat folder and repair chits to Cutter Shed.

c. IN PORT DUTY SECTION (REMOTE PORT). The in port watch for the squadron shall be set by the squadron Senior Watch Officer, at the direction of the OTC.

- Maintain safe and adequate mooring of boat while docked, rafted, on a mooring, or at anchor.
- Ensure Colors is conducted daily (0800 and sunset).
- Run engine- at a minimum of one hour- in order to charge batteries, or run reefer (only applicable for boats not connected to shore power).
- Carry out designated security inspections and measures.
- Ensure continued safe operability of shore power when installed.
- Take direction from Squadron Duty Officer in absence of the Skipper and XO.

804. MAN OVERBOARD BILL

804.1 PURPOSE

To provide policy for the assignment of personnel, list individual duties and responsibilities and discuss proper procedures for recovering a man overboard (COB).

804.2 POLICY

a. Crews sailing Naval Academy STC shall employ the **NAVY QUICK STOP** man overboard recovery technique in the recovery of any man overboard. The Quick Stop maneuver minimizes the distance traveled away from the lost crew member and requires prompt maneuvering, sail handling, and recovery under sail and/or power. Chartered STC may use the FIGURE 8 or Reach to Reach man overboard recovery technique if approved by the respective Program Director.

b. The unique set of procedures and emergency responses required in a COB scenario shall not be initiated at random by the crew except in an actual COB situation. For example, if an object (not a person) should fall overboard, the watch shall not call out "MAN OVERBOARD" to expedite the recovery. The Skipper will approve any recovery maneuver proposed by the on-deck watch. The Skipper may call a COB drill at any time, being careful to identify the drill by saying "This is a drill, man overboard port (starboard) side," without notifying the midshipman crew ahead of time. The purpose of this policy is to prevent compounding a training evolution into an accident.

804.3 RESPONSIBILITY

a. All crew members are responsible for the contents of this bill. The Skipper is responsible for ensuring compliance.

b. At the beginning of each watch:

- 1) Each crew member shall check all his personal safety equipment including harness/life jacket, tether, strobe, whistle and foul weather gear. All gear shall be readily accessible throughout the watch (i.e., crew should not have to leave their watch posts to don appropriate safety gear).
- 2) Watch Captain will brief the watch section on the particular details of the COB recovery procedures that will be used, considering current conditions of wind, seas, and sails.
- 3) Watch Captain will check all COB recovery equipment to ensure that it is ready for immediate use.

804.4 TRAINING

Each individual on board will be instructed in the following:

- a. Actions to prevent falling overboard.
- b. Actions to be taken in the event that he/she falls overboard.
- c. Actions to be followed in the event that someone else falls overboard.

Training should be conducted prior to getting underway, as well as periodically while underway. Drills shall be conducted to ensure the successful execution of this bill.

804.5 EXECUTION OF CREW OVERBOARD RECOVERY PROCEDURES

a. PREPARATION. At the beginning of each watch:

- 1) The Watch Captain shall check all crew overboard gear to ensure its readiness for immediate deployment.
- 2) Each crew member shall check all his personal safety equipment including harness/lifejacket, PLB (VOST), strobe, whistle and foul weather gear. All gear shall be readily accessible throughout the watch (crew should not have to leave their watch posts to don appropriate safety gear).
- 3) The Watch Captain will brief the watch section on the particular details of the man overboard recovery procedures that will be used, considering the existing combination of wind, seas and sails at the beginning of each watch.
- 4) A lifejacket and a 50-foot heaving line shall be stored within easy reach of the helmsman.

b. IMMEDIATE ACTION

- 1) The person first sighting the person overboard should shout "CREW OVERBOARD, STARBOARD (PORT) SIDE!" and point with his/her arm at the victim. That person shall continue pointing at the victim until properly relieved or the victim is on deck. If he/she is the helmsman he/she should be immediately relieved.

NOTE: EXPERIENCE HAS SHOWN THAT THE PERSON POINTING TO THE VICTIM SHOULD BE FORWARD IN THE COCKPIT, IN FULL VIEW OF THE HELMSMAN.

NOTE: IF THE ENGINE IS ENGAGED WHEN THE PERSON FALLS OVERBOARD, HELM SHOULD TURN IMMEDIATELY TOWARD THE SIDE OF THE VESSEL THE COB FELL OFF, WHICH WILL PROPEL THE STERN AWAY FROM THE COB.

- 2) The helmsman should immediately begin to heave to, then reach for the pre-staged lifejacket and throw it to the COB in the water. Do not delay heaving to in order to throw the lifejacket. He should call out, "Heaving to." **DO NOT RELEASE THE JIB SHEET.** If under spinnaker:
 - (a) Ease the guy/spinnaker pole to the headstay and cleat.
 - (b) Stand by to ease sheet during the douse.
 - (c) Douse spinnaker, bring boat through head to wind, proceed as follows.
- 3) Deploy the horseshoe buoy with the strobe light and pole, the Lifesling or the inflatable MOM unit if supplied on board.
- 4) Call "**ALL HANDS ON DECK.**" The crew shall wear shoes and lifejackets. They shall also use tethers if required. The senior person on deck should direct those coming topside to appropriate jobs. **An experienced helmsman should take the helm.**
- 5) The Navigation Plotter shall activate the Crew Overboard function on the GPS to provide a reference point, and plot the position on the paper chart.
- 6) Utilize VHF radio to notify other vessels in the squadron or in the vicinity.

NOTE: WHILE HOVE TO, THIS IS THE TIME TO REGAIN COMPOSURE, ALLOW THE OFF-WATCH TO GET ON DECK, MAKE FURTHER ASSIGNMENTS – SUCH AS MAINSHEET TRIMMER, GENOA/ JIB HALYARD, FOREDECK AND ANY OTHER ORGANIZATION NECESSARY TO EFFECT RECOVERY.

- 7) Take up and secure any lines over the side, start the engine, and remain idling in neutral.
- 8) The Helmsman should bear off onto a broad reach. Order foredeck crew to douse the headsail.
- 9) Gybe onto opposite tack.
- 10) Harden up slowly, placing the COB just off the leeward bow. Time the boat's turn toward the COB such that when steady on course the apparent wind is 45-60 degrees off the bow (i.e., a close reach). Adjust mainsail trim to control boat speed during the final approach. Effect recovery over the leeward rail.
- 11) If the initial Quick Stop maneuver is unsuccessful, use the heaving line while near the victim to establish contact. Consider using the engine to then maneuver the STC to

facilitate a pick up being acutely aware of lines in the water, and the position of the victim.

- 12) Call for help. Inform other boats in company of the situation by transmitting a PAN-PAN or MAYDAY call. Receive acknowledgment.

c. SUPPLEMENTAL ACTION

- 1) When positioning the boat near a victim for a quick and safe recovery, consider the following:
 - (a) Turning radius.
 - (b) Optimum angle (45-60 degrees) to wind and seas for controlling speed and holding position near the victim.
 - (c) Maintenance of sufficient distance from the victim to prevent injury from pitching motion and the propeller.
- 2) Ensure that the victim will not become separated from the boat. Secure the victim to the boat using a line or halyard. A swimmer may be necessary if the victim is unconscious. If a swimmer is used, he or she must wear a lifejacket and remain tethered to the STC with a heaving line at all times.
- 3) Hoist the victim aboard the boat as quickly and safely as possible. The optimum method will vary. Some recommended methods are:
 - (a) Use of the Lifesling rigged to the spinnaker halyard. The main or jib halyard may also be used.
 - (b) Pulling the victim directly out of the water using two or more crewmen.
 - (c) Hauling the victim aboard by attaching a halyard to his safety harness. Instruct victim to keep arms at their sides to prevent harness from slipping over their head.
 - (d) Use a "poor man's ladder" (i.e., run a bight of line to a winch, dangle the bight over the side. COB uses bight as a footrest while bitter end is winched in, straightening the bight and hoisting the COB to the deck edge).
 - (e) The "GALERIDER" may be used to recover an injured or weak victim.
- 4) Once the victim is aboard, his or her physical condition should be carefully evaluated and proper first aid applied as required. Look for and treat symptoms of shock and hypothermia. Continue to monitor the victim.
- 5) Recover and stow all man overboard gear for future use.
- 6) Notify vessels in company and others cognizant of the situation that a recovery has been made and call for medical advice if needed.

804.6 CREW OVERBOARD RECOVERY (VICTIM PROCEDURES)

a. IMMEDIATE ACTION

- 1) Do not panic. Remember, when in the water the horizon is very close. The boat may seem to sail out of sight before turning around.
- 2) Swim to the lifejacket thrown from the boat and put it on or hold on to it. Conserve energy, especially if the water is cold. Assume the heat retention position. **DO NOT SWIM AFTER THE BOAT.**
- 3) If you can see the man overboard rig has been deployed, try to swim to it slowly. If its drogue is deployed, this should be possible without undue loss of energy.
- 4) Don't shout, as this will be a useless expense of energy.
- 5) Employ your survival equipment. Conserve energy and make yourself noticeable. Foul weather gear hoods are typically a bright color, and will be easier to see if you can put it on. It will also conserve body heat.
 - (a) In daylight, ensure your brightest clothing is above water.
 - (b) Get your whistle ready for use.
 - (c) At night or in low visibility, perform the above and deploy your personal strobe light so it can be seen.
 - (d) Splash the water around you. White water is more easily sighted from the boat than a passive or waving victim. This is especially effective at night when a searchlight is pointed near you.
- 6) When help arrives place the bight in the retrieval line around your chest and under your arms. If the Lifesling begins to drag you through the water, **IMMEDIATELY** turn around in the sling so that your back is toward the boat. The wash/wake from being dragged can drown a victim. Await further instructions from the boat.
- 7) Do not remove clothing or foul weather gear unless they are pulling you underwater. They provide vital insulation and buoyancy. Boots or shoes may be removed if necessary to swim.
- 8) Heat and energy conservation is extremely important. Most COB deaths occur from drowning after a victim loses consciousness from heat loss and can no longer keep his or her face clear of the water.

804.7 CREW OVERBOARD WHILE STILL TETHERED TO THE STC

a. IMMEDIATE ACTION

- 1) Helmsman should come into the wind immediately to stop or slow the boat down. If possible, position the boat so it is going slowly, close hauled, with the COB on the upwind side of the STC. The goal is to keep their head above water.
- 2) COB should blow their whistle to alert the crew that they are overboard.

b. SUPPLEMENTAL ACTION

COB should turn to face backwards if the forward motion of the boat is forcing water into their face. If the COB is being dragged by the boat and is in danger of drowning, as a last resort, they should consider releasing the snap shackle or cutting themselves free.

804.8 BACKGROUND INFORMATION FOR MAN OVERBOARD RECOVERIES

A man overboard situation is probably the most dangerous condition to which a crew member can be subjected. Even the strongest of swimmers can be injured while falling overboard, lose strength and consciousness from hypothermia before being recovered or become injured or immobilized by marine life or another boat. Because a man overboard is so vulnerable, every effort must be made to recover him/her as soon as possible regardless of how unfavorable the wind/sea conditions might seem.

Prevention is the best solution to crew overboard problems. In the event that a person does become separated from the boat, every effort must be made to return and **get him/her back aboard in the absolute minimum amount of time.**

The most important preventive measure is to always wear a safety harness and be attached securely to the boat. Many victims have been lost during short periods of time when they were not clipped in; such as moving in or out of the cockpit or entering or leaving the companionway. Clip and unclip from below-decks. Per section 400.a (1), harnesses must be used at night, during reduced visibility, during rough weather or any time that seems prudent. Experience gained while working in a harness makes it easier to get around.

The Quick Stop method is used to minimize the distance the boat travels away from the victim. It reduces both the time needed to recover the victim and the chance of losing sight of the victim in adverse conditions. If a conventional stopping method can be completed in one minute, a boat averaging five knots would travel over 150 yards from the victim to the turn point. Under the same conditions a boat can be "quick stopped" within heaving line distance of the victim.

Although the Quick Stop method is simple to perform, it should be practiced with various sail combinations to familiarize the crew with the procedure and with the responses of the boat in different conditions. Some Class A STC will need to perform the Figure 8 or Reach to Reach recovery instead of the Quick Stop because of specific boat maneuvering characteristics.

The immediate actions should be performed as quickly as possible. An alert helmsman can throw a lifejacket very close to a victim in half the time it would take to deploy most man overboard rigs. This will provide an immediate source of buoyancy for the victim so that he or she can conserve energy. Deployment of the man overboard rig provides a much more visible target to steer towards rather than only a person in the water. The man overboard rig should be deployed immediately after the lifejacket is thrown. The crewman pointing has an important job, in that pointing allows staying on target even if momentarily distracted or if heavy seas obscure his/her vision. Pointing should be done with an arm extended because the eye tends to follow wave action and can be led off target easily.

Because of the short distances traveled when using the Quick Stop method, navigation is not as critical as it might be during other types of recoveries, in which it is easier to lose sight of the victim. However, in the event that the victim is lost from sight, precise navigation will be required to search for the victim. Therefore, the GPS COB function on the chart plotter shall be enabled.

The next part of the recovery technique is stopping alongside the victim to get him or her back aboard. The mainsail can often be backed (using manpower on the boom or a foreguy attached to the end of the boom if shorthanded) to stop the boat and hold position near the victim. In certain wind and sea conditions it may be possible to hold position to windward of the victim with the wind abeam providing a lee and minimizing pitching. This will make it easier to get a heaving line to the victim and may create a lee of smooth seas. However, another consideration is that an approach to windward of the victim may cause the boat to be blown down onto the victim; in this event, the final decision on recovery side is a judgment call that rests with the Skipper/Coach.

In ocean conditions it can be difficult to hold a boat stationary for any length of time. It is extremely important that the victim be secured to the boat as soon as possible. The time spent in a second approach to an unconscious victim could mean the difference between life and death.

In high sea conditions, it may be better to keep the boat several yards from a victim to prevent injury from contact with the boat and/ or the propeller. In this case, a swimmer with a lifejacket and a safety line should go into the water to secure the victim until he or she can be brought aboard with minimum time spent alongside.

In summary, the best way to handle a man overboard is to prevent it from happening. If it does happen, remember the following key points:

- a. Minimize the distance traveled away from the victim.
- b. Maneuver with sails to place the boat in a recovery position in the shortest amount of time. Only use the engine as a last resort.
- c. Attach the victim to the boat so that he cannot be separated before the recovery is complete.
- d. Practice in a variety of weather conditions, and plan ahead.

805. CREW WORKING ALOFT BILL

805.1 PURPOSE

To establish procedures to be followed when crew or maintenance personnel go aloft.

NOTE: TIME SPENT ALOFT SHALL BE KEPT TO A MINIMUM, ESPECIALLY WHILE AT SEA, TO REDUCE THE RISK OF INJURY.

805.2 RESPONSIBILITY

The Skipper is responsible for ensuring compliance with this Bill with their midshipmen crew. Maintenance personnel shall check in with either DNAS, the Vanderstar Chair or the Cutter Shed Maintenance Director before going aloft in Santee Basin, or with SCR D personnel if at their facility, and shall comply with the following procedures:

805.3 PROCEDURES

- a. All personnel who go aloft will be instructed in the applicable safety precautions.
- b. No one shall go aloft without first obtaining permission from the Skipper, who will:
 - 1) Develop a plan for all work to be performed while aloft;

- 2) Ensure personnel going aloft use either the boatswain's chair or a climbing harness.
- 3) Ensure that the boatswain's chair/ climbing harness is properly secured (i.e., bight of jib halyard looped through "D" rings and secured with a bowline and snap shackle then made fast as well).
- 4) Ensure that a second jib halyard is secured to the person's safety harness.
- 5) Ensure that four (4) crew are available to assist on deck; one will tend the safety halyard on a winch, the second will tail the primary halyard on a winch, a third will pull on the halyard in rhythm with the man going aloft who will actively climb to expedite going aloft. If additional crew are available, they can assist with bumping the halyard up. The fourth crew person will be a safety observer only. He shall have no other assignment. The tailers should tend their halyards from a sitting or kneeling position to prevent tripping or falling during the evolution. All other personnel should remain clear of the area immediately surrounding the mast.

NOTE: THE CREW MEMBER GOING ALOFT SHOULD ASSIST BY ACTIVELY CLIMBING HIMSELF UPWARDS. THIS WILL EASE THE BURDEN ON THE LINE HANDLERS.

- 6) Ensure that all tools and equipment needed are secured properly to the boatswain's chair by line. A spare messenger may be rigged to facilitate sending tools and equipment aloft.
- 7) The person aloft should use a safety line to secure himself to the mast in sloppy weather. The safety harness tether is ideally suited for this purpose. A carabiner attached to another halyard led to the base of the mast and made fast will also keep the man aloft close to the rig. Additionally, it may be prudent to wear a Type I or III lifejacket and helmet to avoid injury. At sea, in rough weather it may be prudent to have an additional line attached to the person to reduce the tendency to swing as the boat moves. This line should be hand tended

c. Once the person working aloft is in position, both halyards should be secured and all personnel should stand well clear, but ready to assist. At least one person shall remain on deck.

d. To lower the person, care should be exercised to lower smoothly on both primary and safety halyards, while keeping at least two wraps on each winch. While lowering, pass line from hand to hand. Do not allow line to slide through fingers.

806. GENERAL EMERGENCY BILL

806.1 PURPOSE

To develop damage control procedures to minimize the effects of a major emergency. The three basic objectives of damage control are PREVENT, CONTAIN, and REPAIR. When there is more than one emergency at a time, the crew must also PRIORITIZE and fix the most potentially damaging problem first.

a. **PREVENT.** Take practical preliminary measures to prevent damage before danger occurs. Remove fire hazards; maintain damage control equipment in a ready condition for easy access and employment. Train the crew to work as a team. Knowledge of first-aid and damage control is vital.

b. **CONTAIN.** Once a mishap has occurred, contain the damage to keep it from getting worse. Minimize and localize damage by controlling flooding, maintaining stability, combating fires and administering first-aid.

c. **REPAIR.** Finally, when the damage has been contained, repair the boat to achieve as good a situation as possible so as to be able to continue and get the vessel out of harm's way.

806.2 RESPONSIBILITY

The Skipper is responsible for ensuring compliance with this Bill.

806.3 PROCEDURES

The following general emergency situations should be planned for and discussed amongst the crew:

a. **FIRE.**

- Communicate - The person discovering the fire **MUST** get the word out.
- Act quickly to extinguish the fire before it gets out of control. Immediately turn off the battery switch, propane or fuel lines, depending on the type of fire. Securing the source of a fire may be the best way to control it. Use fire extinguishers at the base of the fire.
- Know all escape routes from the interior; companionway, large hatch in mid-cabin and forward sliding hatch.
- After ensuring all crew are evacuated from the interior, close all openings into the vessel to starve fire of air.
- Beware of toxic fumes that may be emitted from some burning materials, stay low to avoid smoke inside the boat.

Fires are divided into different classes depending on the type of combustible material.

CLASS "A" – wood, paper, cloth, etc.

CLASS "B" – combustible liquids, fuels, oils, etc.

CLASS "C" – electrical

CLASS "D" – burning metal (flares)

i. **GALLEY FIRE (Class B)**

- (a) Turn off the propane switch at the galley panel.
- (b) Shut off gas knob in the propane locker.
- (c) Shut off burners and oven controls.
- (d) Extinguish the fire using fire blanket and/or fire extinguisher.
- (e) Account for all the crew.

ii. **ELECTRICAL FIRE (Class C)**

- (a) Turn "OFF" circuit breaker, engine and house battery selector switches.
- (b) Extinguish the fire.
- (c) Use caution to avoid electrical shock.
- (d) Once the fire is out, account for all the crew.
- (e) Ventilate the boat.
- (f) Selectively turn on electrical equipment until the faulty circuit is identified. Keep this circuit OFF.

WARNING: WHEN FIGHTING A CLASS "C" FIRE, THE POWER SOURCE MUST BE SECURED IMMEDIATELY. TURN BATTERY SWITCHES AND ALL BREAKERS OFF.

- iii. ENGINE FIRE (Class B and/or C)
 - (a) The inert gas system may be activated manually by the handle on the starboard side of the cockpit near the engine panel (Navy 44 only).
 - (b) Shutdown the engine immediately.
 - (c) Turn "OFF" the engine blower immediately so that the inert gas is not evacuated out of the engine box (Navy 44 only).
 - (d) Turn "OFF" the engine battery selector switch and the Engine Start breaker.
 - (e) Shut off the fuel at the fuel tank.
 - (f) Get a fire extinguisher ready in case the fire jumps the confines of the engine compartment.
 - (g) Do not open the engine compartment before the fire is completely out and the gas cylinder is completely discharged. This may introduce oxygen to the area and support combustion. Have a portable fire extinguisher ready when the compartment is opened.
 - (h) Evacuate crew not engaged in fighting the fire out of the cabin.
- 4) FLARE FIRE (Class D)

Fire extinguishers will not work on Class D fires. Your best course of action is to remove the burning flare from the boat, so it doesn't burn a hole through the bottom. It can be extinguished using dirt, if available. Exercise caution when picking up the burning flares to avoid personnel injury.
- 5) TYPES OF FIRE EXTINGUISHERS
 - (a) Water (Type A fires only)
 - (b) Baking Soda (Type B fires)
 - (c) Fire Blanket (Type A fires)
 - (d) Carbon Dioxide (Type C fires)
 - (e) Inert Gas; Halon or Halotron (Type B,C fires)
 - (f) Tri-Class (Type A,B,C) Multipurpose Dry Chemical
- 6) USING A FIRE EXTINGUISHER
 - (a) Carry the extinguisher in upright position, and approach the fire as closely as heat permits.
 - (b) Remove the locking pin from the valve.
 - (c) Grasp the handle and aim at the base of the fire.
 - (d) Squeeze the release lever.
 - (e) Direct the discharge at the base of the fire in a sweeping motion.
 - (f) Release the lever to close the valve as soon as conditions permit and continue to open and close it as necessary.
 - (g) When fighting fire in electrical equipment or on a bulkhead, direct the discharge at the bottom of the flame area. Sweep slowly from side to side and follow the flames upward as they recede.

b. FLOODING. Measures can be taken to permit partial dewatering in all cases except when structural failure results in the vessel breaking up. Each crew member must be familiar with the location of all through-hull fittings, installed manual and electric bilge pumps, and alternative

methods of dewatering and patching. The use of buckets for dewatering and the use of sails, bunk cushions or blankets as patches are only some of the possible solutions.

- 1) Locate hull leak source:
 - (a) Through-hull fittings. See STC diagram of through-hull fittings. If the through-hull is damaged, use the tapered, soft wooden plug that is tied nearby to plug the hole. Consider wrapping in oakum first, as that material expands when wet.
 - (b) Underwater appendages – check lower rudder bearing, the shaft and strut area, keel bolts.
 - (c) Hoses. Check engine sea water intake hose, and all fresh water system components (Potable water hose, pumps, water tanks, sewage system, etc.). If sailing in salt water, taste the bilge water to see if it's salty or fresh to help determine the source of the leak.
 - (d) Hole or cracked hull.

- 2) If you determine the hull is damaged, the first action is to stop the flow of water entering the boat.
 - (a) Stop the boat to reduce ram pressure.
 - (b) Heel the boat or tack in order to raise the damaged portion out of the water or as high as possible to reduce the pressure of the water coming in.
 - (c) Consider heaving to.
 - (d) Shutdown engine, turn engine battery selector switch to "OFF" (engine battery is located in the bilge). If ship service batteries under nav seat are in danger of flooding, turn house battery selector switch to "OFF" (if possible, make distress call on ship VHF first, it has longer range than hand held).
 - (e) Close watertight door and ALL seacocks.
 - (f) Plug any holes in the hull immediately. Small holes may be plugged temporarily by stuffing them with cotton duck, rags or wooden plugs. Larger holes may be temporarily plugged with stuffing material such as life jackets, seat cushions, sleeping bags, sails and wedges. Stuffing material used to plug holes should be sufficiently braced or shored to prevent loosening or slipping away due to motions of the boat at sea.
 - (g) Install a patch outside the hull. Since the pressure of the water is trying to force its way into the boat, it will expel what we try to stuff into the hole. Once the flow of water has been contained and minimized, thought should be given to putting a crash blanket over the hole from the outside. Water pressure will work in favor and try to force the patch into the hole.
 - (h) Get a fix. Contact the Coast Guard with a Pan-Pan or MayDay call at the direction of the OIC/Skipper.

- 3) If the hull continues to leak faster than the pumps can dewater the boat, prepare to abandon ship.

c. DISMASTING. Fracture and/ or failure of the mast is a serious casualty. The most probable causes include the failure of standing rigging, overpowering under sail, collision, and knockdowns. Great urgency is required to prevent follow-on hull damage when a fractured spar remains at least partially connected to the hull. If the spar cannot be recovered without risk of rupturing the hull it must be cut away in such a manner that it is completely clear. All hands must be familiar with the use of all the contents of the Damage Control Kit.

PROCEDURES:

- 1) Account for all crew members.
- 2) Do not turn on the engine. Shrouds, halyards, and sails can foul the prop.
- 3) Control and lash the broken section of the mast on deck to prevent it from punching a hole in the boat. If the mast cannot be controlled, get rid of the mast by pulling the cotter pins and use the drift pin to pound out the clevis pins, unfasten turnbuckles or cut off the shrouds with a hacksaw.
- 4) If the mast does not break cleanly, saw or shear off the mast at the stump.
- 5) Salvage as many sheets, halyards, sails and gear as possible for jury rigging.
- 6) In moderate seas, the mast can be lashed on deck. Pull all sails on board to prevent them from weighing down the mast. Pull the mast on board and lash it tightly to the lifeline stanchions.
- 7) Once the mast has been controlled, or cast off, then consider use of the engine after ensuring no lines are run over the side of the boat. Jury rig a mast and sails. Consider using the broken mast section if available and/or use the spinnaker pole. This will conserve fuel supply if safe harbor is a long distance away.

WARNING: SHROUDS AND LINES CAN BECOME ENTANGLED ON THE PROPELLER OR RUDDER. IF YOU CONSIDER PUTTING A CREW MEMBER IN THE WATER, SECURE A LINE TO THE CREW MEMBER AND TIE IT TO THE BOAT BEFORE THEY ENTER THE WATER

d. LIGHTNING STRIKES. When sailing in the vicinity of thunderstorm activity, take the following precautions to avoid or minimize damage from lightning strikes:

- 1) Track storm on radar or using personal hand-held devices, if within range, to try and avoid its direct path.
- 2) If avoidance is not possible, reduce sail early based on the forecast, reef and #3, storm sails or reef and take jib down and put down forward hatch if time allows.
- 3) Plot your position on the chart and commence dead reckoning. Check for sea-room to run with the storm on a beam reach or consider heaving to if there are no contacts nearby.
- 4) Radio your current position, speed and heading to OTC.
- 5) Turn "off" all electronic and unnecessary electric equipment at the equipment and turn "off" the breakers.
- 6) Place hand held VHF and hand held GPS in the stove, which acts as a Faraday cage in the event of a direct strike.
- 7) Put all non-essential crew below. Instruct them not to touch the mast or chainplate area. Any crew topside should avoid standing near or holding the rigging or anything metal, or dangling arms or legs overboard. Use gloves at the helm.
- 8) If struck, assess damage, check for electrical fires, check through-hull integrity and account for all crew.

e. LOSS OF STEERING

- 1) WHEEL WILL NOT TURN - Check for foreign object jamming the steering quadrant or cables in the steerage compartment aft of the engine.
- 2) BOAT DOES NOT RESPOND TO WHEEL
 - (a) If the steering cable comes loose from the quadrant, or if the cable breaks, the wheel will spin freely with no apparent effect.
 - (b) Control the boat by balancing the sails or heaving to.
 - (c) Remove the rudder cap and install the emergency tiller.

- (d) Inspect quadrant and reinstall cable.
- (e) If cable has broken, continue to sail with the emergency tiller.

3) RUDDER JAM OR LOSS OF RUDDER

- (a) Control the boat by balancing the sails or heaving to.
- (b) If the rudder is jammed and cannot be turned, rig an emergency rudder.
- (c) Rig a drogue with control lines either through the aft mid-ship chocks directly to the primary winches for the Navy 44 or to both ends of a spinnaker pole rigged across the boat, then run control lines to the winches. Pull the drogue from one side to the other to turn, while trimming sails accordingly. Emergency steering method should be tested during training.

806.4 EMERGENCIES UNDERWAY

The Skipper shall:

- a. Assume duties as on-scene leader, and direct necessary response action.
- b. Keep the OTC informed of all actions taken and provide a damage assessment.
- c. Evacuate personnel from the scene as necessary.

806.5 EMERGENCIES IN PORT

The Duty Officer shall:

- a. Assume responsibility for the coordination of response actions.
- b. Notify adjacent units, and Port Captain, USCG of the nature of the emergency and the type of assistance required.
- c. Evacuate all personnel from the scene as necessary.
- d. Take all steps necessary to ensure that the emergency does not spread to nearby vessels.
- e. Contact DNAS and/or other authorities (as provided in the OPORDER) at the Naval Academy.

807. ABANDON SHIP BILL

807.1 PURPOSE

To establish procedures for safe and orderly abandonment of STC.

807.2 RESPONSIBILITY

The Skipper is responsible for training and exercising all hands in the execution of the Abandon Ship Bill.

807.3 PROCEDURE

Abandoning ship is a measure of last resort necessary only in extreme cases. In cases where the vessel may be kept afloat the crew should stay aboard, as chances for survival and rescue in the open ocean are greatly enhanced by remaining with the vessel. The following procedures will be followed:

a. SITUATION ASSESSMENT. The Skipper will weigh all factors including weather, vessel condition, proximity to land, and likelihood of rescue and crew condition in developing an abandon ship plan.

b. ABANDON SHIP PREPARATION. When the word "Prepare to Abandon Ship" is passed,

- 1) All hands don Type 1 (Kapok) lifejacket's and adequate clothing to minimize the danger of exposure or hypothermia.
- 2) All hands proceed to their stations as assigned in the Watch, Quarter, and Station Bill. This Bill shall be posted conspicuously in the main cabin.

c. ABANDON SHIP EXECUTION. When directed by the Skipper to "Abandon Ship":

- 1) Each crew person should execute his or her responsibilities listed on the Watch, Quarter, and Station Bill.
- 2) If a crew person is incapacitated, a shipmate should assume that person's responsibility in addition to his own.
- 3) The liferaft lanyard shall be made fast to the leeward side of the STC before the raft is deployed. The raft shall only be deployed upon the order of the Skipper.
- 4) The crew should enter the liferaft expediently by stepping up into the liferaft. If crew persons must enter the water to get to the raft, they should be attached to a line made fast to the liferaft.
- 5) EPIRB, PLBs (VOST), flares, navigation equipment, survival equipment, extra water and food, clothing, and the ship's log should be loaded into the raft as time and conditions permit.

d. GRAB BAG CONTENTS. In order to expedite loading of extra equipment into the raft, it is recommended that a "grab bag" containing emergency abandon ship supplies be stowed in the starboard cockpit seat locker while underway. The following items are recommended for inclusion in the grab bag:

- 1) EPIRB
- 2) Handheld VHF radio in a waterproof bag
- 3) First aid kit
- 4) One rust-proof drinking cup
- 5) Light sticks
- 6) One daylight signaling mirror and one signal whistle
- 7) Flares
- 8) Food rations

NOTES:

"MAYDAY" CALLS SHOULD INCLUDE POSITION, NUMBER OF CREW AND NUMBER OF LIFE RAFTS. CALLS SHOULD BE CONTINUED UNTIL "ABANDON SHIP" IS ORDERED. (SEE SECTION 404)

ONCE LAUNCHED, THE LIFERAFT SHOULD BE TENDED CONSTANTLY UNTIL BOARDED. THE LIFERAFT SHOULD BE EQUIPPED WITH A SHARP KNIFE WRAPPED IN A WATERPROOF BAG AND SECURED TO THE LIFERAFT TO CUT THE TETHER WHEN ALL CREW ARE ABOARD AND/OR BOAT SINKS.

THE SKIPPER IS RESPONSIBLE FOR THE FINAL HEAD COUNT BEFORE CUTTING THE LIFERAFT LOOSE.

ONCE ACTIVATED, LEAVE THE EPIRB "ON". IT WILL CONTINUE TO TRANSMIT FOR UP TO 48 HOURS AND AN UNINTERRUPTED SIGNAL WILL FACILITATE QUICKER RESCUE. THE EPIRB SHOULD BE TETHERED OUTSIDE THE RAFT.

808. RESCUE AND ASSISTANCE BILL

808.1 PURPOSE

To provide guidelines should a STC find itself in a position to effect a rescue or render assistance at sea.

808.2 RESPONSIBILITY

The First Lieutenant is responsible to the Skipper/Coach for the execution of this Bill.

808.3 POLICY

Direct assistance requiring physical contact with a privately owned or operated craft will only be made if lives are in danger. In all other cases, STCs should stand by to assist while making every effort to contact appropriate government agencies or commercial towing or salvage companies. Examples are the Annapolis Harbor Master, the Maryland Department of Natural Resources Police, the U.S. Coast Guard and commercial firms recommended by those government agencies. It is important to note that tradition and law of the sea requires us to assist any mariner in distress. Nothing in this policy prohibits STC from assisting when life is endangered or other assistance is not available to save property. However, in most cases adequate rescue and assistance is rendered by standing by and maintaining a communications link with the proper authorities.

808.4 PROCEDURE

- a. **SKIPPER.** The Skipper shall supervise all rescue and assistance evolutions.
- b. **NAVIGATOR.** The Navigator shall ensure that all details of the rescue and assistance evolutions are properly logged in the Offshore Yacht Log.
- c. **COMMUNICATIONS**
 - 1) Establish communications with the distressed vessel via Channel 16 (VHF) or any means feasible. Ascertain the nature of the emergency (personnel injury, fire, flooding, etc.).

- 2) Unless there is an immediate danger to personnel, assistance shall be limited to utilizing the STC's communications systems to summon vessels that are properly equipped to effect a rescue (Coast Guard, Maritime Police, etc.).
- 3) If communication with other government or commercial rescue units cannot be effected, determine if the use of your vessel's EPIRB or VHF radio DSC programmable distress messaging function is necessary.

d. EXECUTION GUIDELINES. Specific instructions cannot be written to cover all possible rescue and assistance contingencies; however, after the above steps are performed, the guidelines below may apply:

- 1) If towing a disabled vessel is necessary for safety:
 - (a) Ensure towing bridle is properly rigged.
 - (b) Ensure your own vessel's screw is not fouled.
- 2) If involved in a search for man overboard:
 - (a) Establish communications with vessel in charge of search.
 - (b) Ascertain appropriate search pattern/plan for your vessel.
 - (c) Don't give up the search too quickly.
- 3) For recovery of personnel from sinking yachts:
 - (a) Beware of the danger from the masts and spars of sinking vessel. Note that a sinking sailboat may right itself as it sinks.
 - (b) Position your vessel to windward of the disabled vessel.
 - (c) Have all persons don life jackets
- 4) For fire on another vessel at sea:
 - (a) Approach the vessel from windward.
 - (b) Concentrate on saving lives rather than saving the vessel.
 - (c) Beware of fuel tank explosions - ascertain immediately the nature and quantity of fuel on board.
- 5) If a medical emergency exists:
 - (a) Be prepared to place personnel best qualified in first aid on board vessel concerned.
 - (b) Stand by until professional medical assistance arrives.

e. **PRIORITY.** A vessel in distress within a reasonable distance of your own position necessarily takes priority over all sail training/ racing evolutions. "Reasonable distance" is based on the Skipper/Coach's judgment.

809. LOW VISIBILITY BILL

809.1 PURPOSE

The purpose of this bill is to establish procedures for proceeding safely in fog or reduced visibility.

809.2 RESPONSIBILITY

The Watch Captain is responsible to the Skipper/ Coach for the execution of this Bill.

809.3 ACTION

When the Low Visibility detail is ordered, the following actions will take place:

- a. Post a lookout in the bow pulpit or at least near the bow as sea conditions dictate.
- b. Post the radar surface watch. (See section 406.)
- c. Commence sounding fog signals in accordance with reference (e).
- d. Reduce speed commensurate with the prevailing conditions and reference (e) requirement to maintain "safe speed."
- e. Display running lights in accordance with reference (e).
- f. Consider turning engine off to facilitate hearing sound signals or engines of other vessels.
- g. Consider making the following Sécurité transmission on VHF CH 13 or 16:

"SECURITÉ, SECURITÉ, SECURITÉ, THIS IS SAILING VESSEL _____ AT POSITION LAT ____, LONG ____ (OR 2 MILES EAST OF CAPE MAY BREAKWATER, WHICH EVER IS THE MOST CONCISE MEANS OF UNAMBIGUOUSLY LOCATING POSITION) PROCEEDING ON A HEADING OF _____ AT A SPEED OF _____. ALL VESSELS IN THE VICINITY PLEASE IDENTIFY THEMSELVES."
- h. When communications are established with other vessels, determine their location, course, speed and whether they hold your vessel on radar.
- i. Plug-in the spotlight and have it ready in the fog to train in the direction of suspected targets. The intensity of the spotlight will penetrate fog and illuminate obstructions when visibility from the naked eye is limited.
- j. Place an experienced helmsman on the wheel.

810. ANCHORING BILL

810.1 PURPOSE.

STC may anchor for either recreational or safety purposes. The Skipper may choose to anchor

for a lunch or dinner break, or overnight to allow crew to rest. The OTC may require their squadron to wait at anchor while a boat is in harbor getting repairs. Anchoring during bad weather may be the safest alternative.

810.2 RESPONSIBILITY

The Watch Captain and First Lieutenant are responsible to the Skipper/Coach for the execution of this Bill.

810.3 PROCEDURES

a. PREPARATION

- 1) Review proposed anchoring plan. Prior to arrival, the navigator determines the approximate depth of the water in the intended anchorage, drop bearings, danger bearings, and bottom type to determine which anchor to use.

NOTE: THE LARGE ANCHOR IS REQUIRED FOR OVERNIGHT OR WHEN THE BOAT IS UNATTENDED.

- 2) Bring the anchor to be used to the foredeck.
- 3) Install the anchor roller if available.
- 4) Unlash the anchor rode to be used and take it to the foredeck.
- 5) Ensure that the rode is attached to the anchor.
- 6) Ensure that the shackle is "moused" or secured shut with seizing wire or electrical tie.
- 7) Make the bitter end of the rode fast to the boat (i.e., a bowline around the mast works).
- 8) Select the side of the foredeck opposite to that side used to bring the jib down, if the jib is still on deck.
- 9) Lay out the rode from the anchor on the deck to the shrouds and back in switchbacks until the desired length of rode is acquired (the "J" measurement, 18.5', can be used to estimate rode length).
 - (a) Short term (lunch hook) requires personnel onboard. Length of anchor rode = 3X (water depth at high tide plus height of bow above the water).
 - (b) Overnight requires personnel onboard. Length of anchor rode = 5X water depth at high tide plus height of bow above the water.
 - (c) Unattended is all personnel ashore. Length of anchor rode = 7X water depth at high tide plus height of bow above the water.

b. AT THE ANCHORAGE

- 1) Visualize where the boat will be in the anchorage. Estimate a distance to windward equal to the amount of anchor rode to be used. This is where the anchor should be dropped.
- 2) Ensure there is sufficient room to clear other boats in the anchorage if the wind shifts.
- 3) Approach the anchor drop zone into the wind under engine.

- 4) As the boat approaches the drop point, put the engine in neutral.
- 5) Feed the anchor and rode out through the pulpit on the same side as it has been cleated until the anchor is AT THE WATER.
- 6) When way has been lost, lower the anchor hand over hand until it touches bottom. Dropping the anchor with no control may foul it on its own chain or rode.
- 7) Pay out rode and note approximately how much it took to reach the bottom. Compare this to the depth the navigator predicted so as to determine the accuracy of the amount of scope being used.
- 8) Put the engine in reverse, using small bursts in reverse until the anchor is set.
- 9) Take a "round of LOP's" to fix position on the chart. GPS position can also be used.

c. WHILE ANCHORED

- 1) Navigator shall set the GPS anchor alarm for a swing circle plus an acceptable wander distance.
- 2) Check the boat's position according to boat routine established by the Skipper. Anchor watch is required overnight when the boat is occupied.
- 3) It may be necessary to re-set the anchor if it drags or pulls due to a shift in current or weather.

NOTE: THE NAVY 44 M2 HAS A TENDENCY TO REACT MORE TO HEAVY CURRENT WHEN THE WIND IS LIGHT, AND MAY RIDE OVER THE ANCHOR RODE. PAY ATTENTION TO TIDE CHANGES AND CONSIDER USING LESS RODE IN THESE CONDITIONS.

NOTE: CONSIDER USING MORE RODE IF THE ANCHOR DRAGS IN ROUGH WEATHER.

d. DEPARTING FROM THE ANCHORAGE. The preferred method is to have two crew on the bow - one to take in on the rode as it comes slack, the other to "spot" the anchor and relay signals to the helm. Foredeck personnel should be prepared to deal with a mud covered anchor. Keep the anchor and rode to the side opposite where the jib is being readied to hoist.

- 1) Start the engine.
- 2) Place the engine in forward and work the boat up to the anchor following the signals of the spotter.
- 3) Uncleat the anchor rode and hold it at the ready snubbed on the cleat to provide holding friction.
- 4) Take in on the rode as it becomes slack.
- 5) When the boat is over the anchor and all slack is taken out, cleat the rode.
- 6) Take the boat out of gear and let the momentum of the boat ride over the anchor.

- 7) Feel the "slack" as the anchor is dislodged. Take in on the anchor rapidly to avoid it setting itself again. When off the bottom, report "Anchors Aweigh" to the helm.
- 8) Helm can put the boat in gear and with slow speed leave the anchorage.
- 9) As the anchor is brought up report, "In sight", and whether it is "clear" or "foul". Hold the anchor at the waterline.
- 10) Inspect the anchor for debris. If there is mud, etc. clinging to the anchor, hold the anchor in the water and let the wave action "wash" the anchor, being careful not to let the anchor scratch the hull.
- 11) When it is clean bring it up on deck. Report "anchor on deck".
- 12) Return anchor and rode to their stowed location.

811. TOWING OPERATIONS

811.1 PURPOSE

There may come a time when you will need to tow another STC or to be towed. Determine whether the tow will be astern or alongside. Generally towing astern is more convenient and safer in open ocean. Towing alongside is recommended within the shelter of a harbor when preparing to deliver the towed vessel to a dock.

811.2 RESPONSIBILITY

The Watch Captain and First Lieutenant are responsible to the Skipper/Coach for the execution of this Bill.

811.3 PROCEDURES

- a. TOWING ASTERN. These procedures apply to you as the tow vessel.

WARNING: THE TOW BRIDLE MUST BE CLEAR OF ALL STERN COMPONENTS FROM THE CHOCK ON ONE QUARTER OF THE VESSEL TO THE CHOCK ON THE OPPOSITE SIDE.

- 1) Communicate with the OTHER vessel and determine who will provide the towing hawser.
- 2) Rig a bridle that will be long enough to clear the stern components of your boat. Attach a snatch block in the middle of the bridle so the sheave will ride on the bridle.
- 3) Pass one end of the bridle through the chock on the transom (or through snatch blocks). Tie bridle to a stern cleat or a fitting that is through-bolted on the deck. Pass the bridle in through the chock or block on the other quarter. A loop can be tied into the end with a bowline to simplify engaging and disengaging the bridle. Take care to keep the bridle out of the water while maneuvering with the engine engaged.
- 4) Maneuver your vessel to pass close aboard.
- 5) If using the towed vessels hawser, skip to USING THE TOWED VESSELS HAWSER. If using your own hawser continue with this procedure.

- b. USING YOUR HAWSER.
 - 1) Tie the hawser to the snap shackle of the snatch block. Use a bowline.
 - 2) Pass the hawser to the other boat.
 - 3) Go to TAKING THE TOW.
- c. USING THE TOWED VESSELS HAWSER.
 - 1) Take the towed vessel's hawser.
 - 2) Tie the hawser to the snap shackle of the snatch block riding on the bridle. Use a bowline.
- d. TAKING THE TOW.
 - 1) Proceed forward slowly as the hawser is made ready.
 - 2) After you receive a signal, (visual, audible or by VHF radio) that the hawser is ready, slowly take tension on the hawser.
 - 3) Establish a steady strain on the line.
 - 4) Adjust speed through the water for sea conditions and compatibility of the tow line between the vessels.
 - 5) Check lines periodically for chafe.
- e. BEING TOWED ASTERN. Ready the foredeck for the hawser. Clear a path from the bow pulpit to the mast. Secure the hawser to a bow mooring cleat, and then tie to the mast with a bowline.
- f. USING YOUR OWN HAWSER.
 - 1) Tie it to the mast, then the cleat, and pass it through either side of the pulpit. Make it ready to pass to the towing vessel when it passes alongside.
 - 2) Pass it to the towing vessel.
- g. USING THE OTHER VESSELS HAWSER.
 - 1) When using the towing vessel's hawser, take it, pass it through the bow pulpit, secure to the cleat and tie it to the mast with a bowline.
 - 2) Place chafing gear in the pulpit if the boat will be towed long distances.
 - 3) Tend the hawser and call out the amount of slack in the line.
 - 4) As the line comes taut, call out the amount of strain.
 - 5) Helm. Steer the boat to align the boat with the towing vessel and keep the boat in trail.
 - 6) Use hand signals and/or VHF radio to communicate the desired boat speed. This is the responsibility of the vessel being towed.
 - 7) Monitor the hawser for security and chafe.

h. TOWING ALONGSIDE

NOTE: TOWING ALONGSIDE IS RECOMMENDED FOR SHORT DISTANCES IN CALM WATER. IT IS ALSO USED TO PREPARE THE TOWED VESSEL FOR DELIVERY TO A DOCK. CHANGING FROM TOWING ASTERN TO ALONGSIDE SHOULD BE DONE WITH SEA ROOM AND IN CALM OR PROTECTED WATER.

- 1) Lines required are bow, stern, forward spring, and aft spring. Fenders are required.
- 2) Communicate with the towed vessel and determine who will provide the lines and who will provide fenders. It is recommended that the towing vessel provide lines and fenders. This leaves the towed boat with its lines and fenders available for dockage when released from the tow.

WARNING: USE FENDERS TO KEEP THE BOATS APART. DO NOT ALLOW HANDS OR FEET INTO THE AREA BETWEEN THE BOATS.

- 3) Fenders should be rigged on the side that will be between the boats.
- 4) Tow vessel reduces power and swings out of line and allows the towed vessel to creep up alongside. Retrieve the "slack" towing hawser to keep it from fouling in the prop.
- 5) Establish a parallel course with the towed vessel.

CAUTION: KEEP THE TOWED VESSEL SLIGHTLY AFT OF DIRECTLY ALONGSIDE TO AVOID THE SPREADERS FROM "LOCKING HORNS" IN THE EVENT THE BOATS ROCK IN CLOSE PROXIMITY.

- 6) Pass lines across to the towed vessel. Use power as necessary to maintain an 'alongside' position with the towed vessel that is slightly aft of directly amidships.
- 7) Slowly draw in the bow and aft spring line to make the boats converge, drawing lines in as the distance is reduced.
- 8) Towing vessel should arrive alongside close enough to pass lines, yet far enough to ensure a safe margin. Choppy water could swing masts together and "lock horns" with the spreaders.
- 9) Pass lines across from one vessel to the other.
- 10) Take a light strain on the bow line so that the boats will be drawn together as the tow vessel starts to make way.
- 11) Adjust the length of the bow line to ensure that the spreaders will not "Lock Horns."
- 12) Adjust spring lines and the stern line to keep the vessels snug.
- 13) Signal to the towing vessel when ready to be towed.

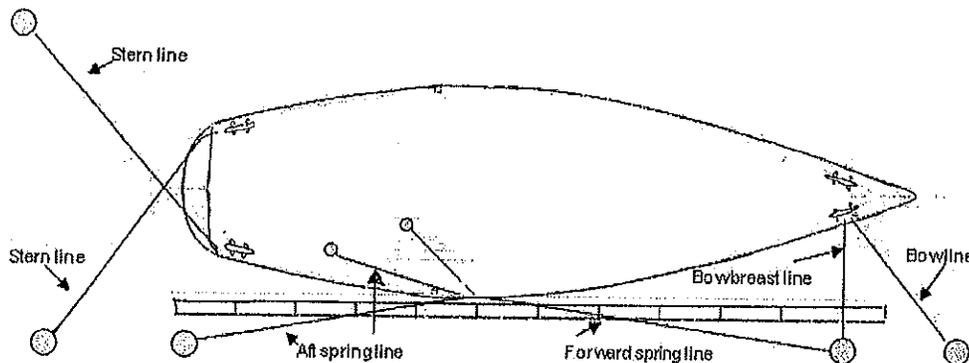
- 14) Towed vessel's rudder should be amidships. Let the towing vessel maneuver both vessels.
- 15) For close maneuvering, be prepared to use the helm in response to any request from the towing vessel.
- 16) Communicate with the towing vessel as to speed compatibility with your vessel. This is the responsibility of the vessel being towed.
- 17) Ready lines and fenders for docking when appropriate.

i. BEING TOWED ALONGSIDE

- 1) Use the same procedures as in 811.3 (h) 1. Use the towing vessel's lines and fenders to secure the two boats together. This will leave your lines available for docking when tow is cast off.
- 2) Steer your vessel to follow the tow vessel in trail.
- 3) Communicate with the tow vessel the desirability of the towing speed. This is your responsibility.
- 4) Make down spring lines, then bow and stern lines from the towing vessel.
- 5) Ready your docking lines and fenders to the free side of your vessel in preparation for being cast off and making a dock.

812. **MOORING**

The diagram below shows positions for mooring lines at a dock. The bow and stern lines keep the boat next to the dock, the forward and aft spring lines keep it from surging forward or aft. Breast lines are optional, and typically used to keep the vessel from moving away from the pier, or can be used to pull it close to the pier for boarding. Breast lines can be used at the bow, stern or quarter. Use fenders to protect the topsides from chafe. NEVER put hands or feet between the dock or pilings and the boat, use a fender instead.



Dock Mooring Line Positions

CHAPTER 9

900. CHECK LISTS

The following check lists are designed to standardize procedures within the sail training program. Each check list provides an easy to use, ready-reference that will help to ensure evolutions are completed in a seamanlike, professional and safe manner.

These check lists are designed to be used by the offshore capable sailing vessels assigned to the Naval Academy for the offshore sailing and racing squadrons. The term Sail Training Craft (STC) is used in a generic sense and does not imply a specific class of vessel (e.g., Navy 44 or TP 52). The appropriate vessel's technical manuals and/or boat information book should be used for vessel-specific equipment operations.

These check lists include:

- 901. UNDERWAY SAFETY EQUIPMENT CHECK LIST
- 902. UNDERWAY TOPSIDE CHECK LIST
- 903. UNDERWAY BELOW DECK CHECK LIST
- 904. ELECTRICAL SYSTEM CHECK LIST
- 905. UNDERWAY ENGINE START CHECK LIST
- 906. CREW BRIEFING CHECKLIST
- 907. ENTERING PORT CHECK LIST
- 908. SECURING CHECK LIST
- 909. HEAVY WEATHER CHECK LIST

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901. UNDERWAY SAFETY EQUIPMENT CHECK LIST

The following minimum of safety equipment shall be maintained on board and readily accessible at all times, to comply with MINIMUM USCG and World Sailing Cat 4 requirements (See ref (h) for full Navy 44 inventory requirements for OSTs).

INSHORE:

- _____ One (1) heaving line (50 FT of polypropylene line stowed in throw sock on stern pulpit and tied to the boat with a bowline).
- _____ One (1) horseshoe life buoy (Type V) with attached strobe and man overboard pole or currently inspected MOM8 unit.
- _____ One (1) Lifesling mounted on stern pulpit and tied to boat with a bowline.
- _____ Type I inherently buoyant (Kapok) lifejackets with chemical lights and whistles for each crew member.
- _____ Type I inflatable "tech vest" lifejackets with strobe lights and whistles for each crew member OR Type III lifejackets (VOST local area or day racing operations only).
- _____ Fire extinguishers (two minimum) verify charge in green range and shake lightly at beginning of block.
- _____ One (1) fire blanket.
- _____ One (1) EPIRB. Verify it is the correct EPIRB for the assigned vessel.
- _____ Flare kit.
- _____ One (1) pair binoculars.
- _____ One (1) manual and (1) canister air horn.
- _____ One (1) bell.
- _____ One (1) emergency tiller.
- _____ One (1) radar reflector.
- _____ Manual bilge pump handle(s) tied adjacent to manual bilge pump(s).
- _____ One (1) anchor with rode.
- _____ One (1) high intensity 12V handheld spotlight and charger.
- _____ Two (2) white flashlights with spare batteries.

- _____ Offshore first aid kit and first aid manual
- _____ Two (2) bailing buckets with a lanyard attached to each.
- _____ Toolbox (various tools).
- _____ Attach a suitable whistle at the helm station to be used as the boat's "General Alarm".
- _____ Position a lifejacket in the cockpit adjacent to the helmsman station.

OFFSHORE - add the following additional equipment when leaving the local OPAREA:

- _____ Liferaft.
- _____ Install jacklines port, starboard and in cockpit.
- _____ Safety tethers for each crew member, plus an extra or midpoint snap tether for 30% of the crew.
- _____ Spare CO2 cartridges and bobbins for inflatable PFDs
- _____ One extra inflatable PFD
- _____ Handheld GPS and spare batteries.
- _____ Handheld VHF radio with spare batteries.
- _____ Damage Control Kit.
- _____ Engine spare parts and fluids (Oil, coolant and small container of diesel fuel)
- _____ One (1) Galerider drogue.
- _____ Storm sails.
- _____ Report completion of checklist to Skipper/Coach or XO with any noted discrepancies or concerns.

902. UNDERWAY TOPSIDE CHECK LIST

- _____ Trim/hull integrity: Check trim at waterline for listing or low in the water and check hull integrity. Report any abnormalities.
- _____ Hatchboard: stow below in cabin wet locker chocks or designated stowage area.
- _____ Deck enclosure: Check that all lifelines, stanchions, and pulpits (bow and stern) are tight, securely fastened, pinned (cotter pin or ring ding), and taped.
- _____ Rigging: Check condition of standing rigging and turnbuckles. Ensure cotter pins are inserted, split and taped.
- _____ Winches and blocks: Ensure all freely turn by spinning several times. Ensure winch drum retaining drum is tight.
- _____ Inner forestay: Loosen if installed, disconnect and lead back through fairlead on mast, and secure to ring on deck aft of mast. Take out slack with block and tackle, ensure halyards aren't trapped.
- _____ Halyards: Move to bail at base of mast. Leave halyard closest to dock rigged to assist getting on the boat while docked. Ensure halyards are not trapped or crossed aloft. Lock halyard tails in self-tailor and coil on winches. Check condition of halyards for defects on rope tails, splices, and shackles.
- _____ Mainsail cover: Roll and stow below in aft hanging locker IF promptly getting underway; otherwise, leave cover on to protect the sail from sun damage until underway.
- _____ Preventers: Ensure they are rigged and run back to respective cabin-top winch with, tails stowed in sheet (line) bags.
- _____ Reefing lines: Rig and ensure they are free to run, with mast rope clutches open and tails run through respective blocks at the base of the mast.
- _____ Boom vang: Ensure lines are of equal length, and uncleated, lines free to run.
- _____ Main halyard: Attach to head of sail, stabilize boom by tightening mainsheet as needed but not excessive.
- _____ Jib sheets: Rig for designated headsail, tie together with a square knot forward of hatch guards on foredeck.
- _____ Mainsheet: Equalize port and starboard lengths, ensure traveler is cleated on both sides, as appropriate, lines free to run.
- _____ Instrument covers: Stow inside navigation table.
- _____ Compass binnacle cover: Stow in starboard cockpit seat locker.

NOTE: VHF COCKPIT MIC SHOULD REMAIN IN THE "ON" AND "SCAN" POSITIONS AT ALL TIMES, WITH VOLUME AT A LEVEL THAT COMMUNICATIONS CAN BE HEARD.

NOTE: VHF RADIO SHALL NOT BE USED IN INTERCOM MODE AS THIS RENDERS NORMAL VHF RECEPTION INOPERABLE

_____ Sail ties: Ensure at least 8 are on board (check mainsail). Sail ties are normally placed on the companionway hatch handrails inside the cabin when not in use.

_____ Hydraulic backstay tensioner: If installed, set to minimum or as weather conditions warrant. (Navy 44 is min 500 PSI, not to exceed 1700 PSI).

_____ Ensign: Place on staff in stern holder, tie to lifeline.

_____ Heaving line: Check that it is tied to aft pulpit with a bowline, ready to deploy.

_____ MOB pole, horseshoe life ring and strobe: Check they are free to deploy and tethered together, but NOT tied to the boat. Check operation of strobe (turn light right side up).

_____ Lifesling: Ensure it is tied to the boat with a bowline. Check operation of strobe. Refake line inside the bag if needed.

_____ Liferaft: Check that the inflatable liferaft (if issued) is properly stowed, and tied to boat.

NOTE: N44 liferaft hatch cover is not attached to boat once latch is opened. Check that N44 locker latch works freely and is secure, prior to departing overnight or out of the local area.

_____ Winch handles: Position as needed. (Navy 44- two double handled in port and starboard sheet bags in cockpit, two single handles in port and starboard holders under traveler, and one single handle in a forward dorade at base of mast).

_____ Dodger: Install on companionway hatch if weather conditions warrant. A dodger can be obtained from the Cutter Shed if not onboard.

_____ Dock/mooring lines: If doubled, single up all lines and secure them.

_____ Report completion of checklist to Skipper/Coach or XO with any noted discrepancies or concerns.

903. UNDERWAY BELOW DECK CHECK LIST

Tank levels (water, fuel, and waste):

_____ Check using the Tank Tender or gauge. Record levels in the Deck Log. Fill water or fuel tanks for intended use, and empty holding tank as needed.

_____ Verify 70 gal water tank gravity fill shut-off valve levers are closed after filling the day tank.

Open the following through-hull seacocks:

_____ Galley Salt Water Intake.

_____ Head Intake & Head Sink Discharge.

_____ Galley Sink & Ice Box Discharge.

_____ Engine Salt Water Intake.

Verify the following through-hull seacocks are open:

_____ Manual & Electric Bilge Pump Discharge.

_____ Port and Starboard Cockpit Drains.

Verify the following through-hull seacocks are set for local and inland waters operations:

_____ Head Discharge Y-Valve under head sink set to "Holding Tank". (See diagram on cabinet door for Navy 44).

_____ Head & Holding Tank Discharge closed.

_____ Verify speed impellers are installed port and starboard.

Bilge:

_____ Check bilge areas for dirt and debris that might clog the bilge pumps and remove.

_____ Use a disposable cup to take a sample of bilge water from bilge sump and check for oil or diesel. Use an "Oil-Zorb" sock-type oil absorber to remove any oil or fuel from the bilge.

_____ Once oil/diesel is removed, check operation of both manual bilge pumps, and the electric bilge pump. Post personnel on port side to observe discharge while testing to ensure oil/diesel is not being pumped out. The oil/diesel will float on top of the water. Stop operating bilge pumps if discharge is contaminated, and report to Cutter Shed.

NOTE: DO NOT discharge oily bilge water into Santee Basin or Annapolis Harbor.

Verify that the following equipment is at the Navigation station:

- _____ Charts 12270 and 12283 for local operations.
- _____ Hand bearing compass (issued in Grab Bag).
- _____ Navigation kit.
- _____ Log Book (Deck and Bearing Log).
- _____ Engine Log (Issued by Cutter Shed).
- _____ Boat Information Book (BIB).
- _____ Standard Operating Procedures (SOP).
- _____ Boat specific equipment operator manuals (COTS) for mechanical and electronics.
- _____ Perform VHF Channel 82A radio check with the Cutter Shed. Return VHF to "scan".
- _____ Sail inventory onboard to support planned evolutions.
- _____ Secure all loose items below deck (i.e., stow for sea).
- _____ Report completion of checklist to Skipper/Coach or XO with any noted discrepancies or concerns.

904. ELECTRICAL SYSTEM CHECK LIST

Pre-Underway:

- _____ AC 120v circuit breakers: Turn all to “OFF” position (Navy 44 – AC Mains, AC Outlets, and Battery Charger located on AC Main Panel).
 - _____ AC Main Breaker: Turn to “OFF” position (Navy 44- located on the port side in the aft quarter berth compartment).
 - _____ Shore power cable:
 - _____ Inspect for damage.
 - _____ Unplug at dock/pier **FIRST (NOTE: order is important to avoid risk of shock)**
 - _____ Unplug shore power cable in cockpit **LAST**, secure cover for receptacle.
 - _____ Coil and stow cable on finger pier hook for local ops, or on board for out of area operations.
 - _____ Battery banks: Check and record condition of Engine and House batteries in the Deck Log. (Navy 44 - utilize the voltage scanner on the DC electrical panel). Report any abnormalities. NOTE: Navy 44 house should always be read from the left monitor and engine from the right.
 - _____ Engine and House Battery Perko Switches: Turn to the “ON” Position.
 - _____ Verify that the Alternator Parallel switch, located between the Battery switches, is in the “OFF” position; top of lever pointing to the left.
- Energize the following DC circuit breakers** by placing in the “ON” position at the DC Main Panel and check operation. The VHF radio, SSB radio, instruments and chartplotter will also need to be powered “ON” at each device.
- _____ Engine Ignition (leave “ON” at all times while underway for emergency starts - Navy 44 only).
 - _____ Engine Blower, Navy 44 only.
 - _____ Bilge Blower (turn “OFF” after checking operation).
 - _____ VHF Radio (set radio initially to Channel 82A).
 - _____ SSB Radio (Navy 44 ensure antenna selector switch set to SSB) (turn “OFF” after checking operation).
 - _____ Instruments.
 - _____ Chartplotter.

- _____ AIS
- _____ Navigation Lights and Steaming Light (as applicable).
- _____ Cabin Lights (as applicable).
- _____ Other breakers as needed.
- _____ Report completion of checklist to Skipper/Coach or XO with any noted discrepancies or concerns.

Securing:

- _____ Turn the VHF radio, SSB radio, instruments and chart plotter “OFF” at each device.
- _____ DC circuit breakers: Turn all to the “OFF” position.

NOTE: IF KEEPING A DC LOAD ON (Navy 44):

- HOUSE BATTERY selector switch remains “ON”.
- Breaker(s) for desired load(s) remain “ON”.

- _____ Battery selector (Perko) switches: Turn engine start and house to “OFF” position.

Energize AC systems:

- _____ Shore power cable: Run under lifelines, along deck, around primary winch and plug into boat FIRST, then into power receptacle at dock. Never handle an energized cable.
- _____ AC Main Breaker: Turn to “ON” position. Ensure the green light is illuminated. If red light is lit, turn “OFF” the breaker and recheck the shore power cable connections. Repeat process until the green light is on.
- _____ AC main circuit breaker (and battery charger breaker) on the AC electrical panel: Turn to “ON” position.
- _____ Battery bank voltage: Check for an increased charge between 13.1v to 14.7v in both banks.
- _____ Report completion of checklist to Skipper/Coach or XO with any noted discrepancies or concerns.

905. UNDERWAY ENGINE START CHECK LIST

Engine Pre-Start:

- _____ Engine Log: Ensure it is onboard to record engine checks.
- _____ Seawater strainer: Visually inspect for any debris (use a flashlight). If the strainer holes can be seen, it is clean. Otherwise, clean out as needed.
- _____ Engine Saltwater Intake: Verify through-hull valve is OPEN.
- _____ Engine cover: Remove full engine cover at the beginning of each block for orientation, and prior to an overnight, a Delmarva, getting underway to a remote port, and getting underway for return to USNA. At all other times, checks may be done through the inspection hatches and ports.

Perform the following engine checks:

- _____ Check engine pan and bilge for any oil, coolant, seawater or fuel.
- _____ Check engine body for leaking oil, coolant or fuel.
- _____ Check for damage to components and loose bolts.
- _____ Check engine lubricating oil level with the oil dipstick. Check twice if low reading, wait 1 minute before withdrawing dipstick to check second time. If oil is low, add oil through the filler port to the top mark on the oil dipstick. **NOTE:** Engine should be level when checking oil and other fluids. If the boat is heeled over sailing, you may get inaccurate readings.
- _____ Check coolant level (only when engine is cold) at coolant tank on engine, not recovery tank.
- _____ Check the RACOR filter for evidence of water or excessive sludge in the sediment bowl. Drain any accumulated water and sediment as necessary.
- _____ Check Marine Gear (transmission) oil level with the transmission oil dipstick. If transmission oil is low, add transmission oil through the dipstick port until to the top mark on the dipstick. Be careful not to cross thread the plastic dipstick when screwing it back into the transmission case. Do not over tighten the dipstick cap.
(NOTE: Navy 44 dipstick for transmission should NOT be threaded back in to check oil level).
- _____ Check alternator belts for tension and excessive wear. Belts should deflect about $\frac{3}{8}$ to $\frac{1}{2}$ inch or so. Look for evidence of rubber dust, an indicator that the belt is loose or is wearing. If belts are too tight, too loose, or excessive wear noted, contact the Cutter Shed (or Skipper if underway) for further assistance.
- _____ Check that spare fluids are onboard (engine oil, transmission oil, coolant, small container of diesel fuel for refilling RACOR after draining)
- _____ Check fuel level in fuel tank to ensure there is sufficient fuel for intended operations.
- _____ Check SeaFire extinguisher in the engine compartment to verify gauge is in the green range.

Engine Start:

- _____ Shore Power (AC): Ensure it is disconnected prior to starting engine.
- _____ Engine Saltwater Intake: Double check that through-hull valve is OPEN.
- _____ Obtain permission from Skipper/Coach to start engine.
- _____ "Ignition" and "Engine Blower" breakers: Verify both are in "ON" position. (Navy 44)
- _____ Throttle: Check to ensure that the throttle lever moves smoothly before use.
- _____ Disengage engine transmission. Engine will only start if transmission is disengaged.
- _____ Move throttle forward to approximately the 10 o'clock position.
- _____ Turn the key switch to "ON". (Navy 44: If the alarm buzzer sounds and the alarm lamps come on, the alarm devices are normal. The coolant high temperature alarm should not come on).
- _____ Key switch: Turn to "START", then release back to the "ON" position once the engine starts. The key is spring loaded. For newer Navy 44 engine panels, push the bottom power switch "ON". When gauges are operational, push the top engine start button "ON" to start engine. Power switch needs to remain "ON" during operations.

WARNING: SHOULD ENGINE FAIL TO START WITHIN 15 SECONDS, DISCONTINUE ALL STARTING ATTEMPTS AND REPORT THE CONDITION TO THE SKIPPER/COACH.

- _____ Overboard discharge: Check for discharge and ensure it continues for 1-2 minutes.
- _____ Oil pressure: Check for normal range (8-78 PSI), shut down if not in normal range.
- _____ Check RPMs (600-800) with engine transmission disengaged and throttle in the neutral position. Advance throttle to 1200 RPMs with the transmission in neutral to warm engine.
- _____ Water temperature: Check after engine has sufficiently warmed up (takes about 10 minutes). If water temperature is in the normal range (160°-190° F), place throttle to the neutral position.
- _____ DC electrical panel: Verify that the batteries are charging when engine is running.
- _____ Record engine hours, oil pressure and water temperature in Engine Log when engine is warm.
- _____ Check for lines in the water at transom and starboard/port amidships before engaging transmission.
- _____ While tied to the dock, optest transmission by engaging the engine transmission (push silver knob in) then advance throttle in forward, back to neutral, then reverse. Return to neutral.
- _____ Loosen wheel dampener. Turn rudder full port and full starboard, check freedom of operation. Return rudder amidships.

NOTE: CHECK ENGINE OPERATING TEMPERATURE PERIODICALLY DURING OPERATION.

- _____ Report completion of checklist to Skipper/Coach or XO with any noted discrepancies or concerns.

906. CREW BRIEFING CHECK LIST

NOTE: THIS CHECK LIST IS NOT MEANT TO BE ALL INCLUSIVE, AND SHOULD BE TAILORED AS NEEDED TO THE OPERATION OR EVOLUTION AT HAND.

Underway brief (Skipper led):

- _____ Introduce any non-regular crew, coaches, and guests, brief them on danger areas of the boat.
- _____ Announce to the crew who will be in charge for the session (VOST Mid skipper or VOST coach)
- _____ Review marine weather forecast, to include adverse heat or cold, wind strength and direction, wave height, and possibility of thunderstorms, tornado warnings or fog.
- _____ Review tides and currents for intended OPAREA.
- _____ Review navigation plan for intended OPAREA on a chart, discuss all enroute navigation hazards, point out shoal water and establish danger bearings.
- _____ Review training or practice plan for the day, as briefed in Skippers meeting and as planned for individual boat.
- _____ Discuss objectives and set goals.
- _____ Review prior practice's lessons learned that will be utilized.
- _____ Discuss sails and equipment needed for training. Ensure crew has adequate and appropriate personal gear.
- _____ Discuss any material or personnel discrepancies.
- _____ Discuss operational risk management plan.
- _____ Receive report from XO (muster, personnel issues, discrepancies, inventories, overall readiness) XO shall pointedly query each individual crew member regarding their physical and emotional/mental status prior to making above report; I'M SAFE (Illness, medication, sleep, alcohol, fatigue, eating)
- _____ Make GO/NO GO decision
- _____ Discuss plan for slip/basin departure and transit to the training area.

Post sail debrief:

- _____ Define intended duration of debrief, prep in advance with notes
- _____ Set tone, usually with skipper or XO leading off with admission of their own error(s). For max effectiveness, debriefs should be nameless and rankless.
- _____ Execution vs. objectives (List positives and negatives that occurred)
- _____ Analyze execution (Create list of resulting successes and failures, then come up with cause and then root cause of each through discussion). These should distill into a list of lessons learned which should be actionable.
- _____ Discuss and determine how these lessons will transfer to future operations.
- _____ End debrief on a positive note.

NOTE: No one's mistakes should be left out (including skipper and coach). All are learning opportunities.

907. ENTERING REMOTE PORT CHECK LIST

Before entering the Delaware or Chesapeake Bay or other inland waterway from open ocean:

- _____ Position Y-Valve (MSD diverter) to holding tank while 12 nm or more offshore. Consider using macerator to empty the Waste Holding Tank if greater than half-full, and no pump-out facilities are available in port.
- _____ Conduct navigation and safety briefs.
- _____ Underway Engine Start Checklist: (SOP 905) Complete if approaching port under sail, start engine in accordance with check list prior to entering restricted waters.

Prior to docking/mooring:

NOTE: DOUSE HEADSAIL, BAG AND STOW BELOW DECKS. FLAKE MAINSAIL OVER BOOM AND SECURE WITH SAIL TIES.

- _____ Radio check: Complete with harbor master or shore side point of contact. Provide ETA and request mooring or docking instructions.
- _____ Line handling: Rig mooring lines/bring boat hook on deck and assign positions.
- _____ Transmission forward and reverse checks: conduct before entering restricted waterway.
- _____ Fenders: Deploy over the appropriate side.
- _____ Report completion of checklist to Skipper/Coach or XO with any noted discrepancies or concerns.

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908. DOCKING AND SECURING CHECK LIST

Docking:

- _____ Permission: Request to enter Santee Basin when ready on VHF Channel 82A, or obtain mooring/slip/docking assignment from marina dockmaster via hailing channel.
- _____ Waste Holding tank level: consider pumping out before mooring/docking if needed.

Santee Basin:

- _____ Spring lines: Run bitter end of line through closed chocks amidships aft to primary winches. Secure spring lines to primary winches by tying onto standing part of the line with two half hitches (do not secure line in Navy 44 self-tailor as it will damage the winch by popping off the cap).
- _____ Bow lines: Secure directly to bow cleats with line first around the aft end of the cleat (Navy 44) or as directed for other STC. Loop coil ends on bow pulpit.
- _____ Stern lines: Cross and run through closed chocks and tie to cleats (Navy 44) or through blocks to winches for other STC. Loop coil ends on stern pulpit.
- _____ Ensure bow of boat is at yellow marks on the assigned finger pier in Santee Basin.

NOTE: NAVY 44: LEAVE ENGINE BLOWER ON FOR 15 MINUTES AFTER SECURING ENGINE, TO REMOVE RESIDUAL HEAT FROM ENGINE COMPARTMENT AND PREVENT ACCIDENTAL DISCHARGE OF ENGINE BOX FIRE EXTINGUISHER.

NOTE: IF THE ENGINE HAS BEEN RUN AT HIGH SPEED PRIOR TO MOORING, REDUCE TO IDLE UNTIL TEMPERATURE IS 180° F OR LOWER BEFORE SECURING ENGINE.

Topside Deck Securing:

- _____ Main halyard: Attach to end of boom to act as a topping lift. Ensure boom is level horizontally with boom vang and outhaul eased. Pull traveler all the way over to the side of the boat away from the finger pier. Secure the mainsheet and traveler.
- _____ Backstay: Loosen to 500 PSI.
- _____ Reefing lines: Coil and loop coil over reefing horns at goose neck.
- _____ Halyards: Secure all forward. Take tension on the spinnaker halyard closest to the dock to assist getting on and off the boat. Attach the inner forestay to its fitting on the foredeck (Navy 44).
- _____ Mainsail cover: Put on, mast end first then aft end, secure snaps and webbing underneath.
- _____ Lines: Coil all neatly and hang from stowage rack in the port cockpit seat locker.
- _____ Stow winch handles and snatch blocks in the "hernia box" in the starboard cockpit locker.
- _____ Ensign: Furl and stow in wet locker.

- _____ Wheel dampener: Hand tighten. (Do not over torque).
- _____ Stow Lifesling below deck, in galley sink. Ensure strobe light is stowed with light lens down.
- _____ Install instrument covers and binnacle cover, and ensure radar is level.
- _____ Rinse deck and topsides with fresh water as required.

Below Deck Cabin securing:

- _____ Hatches: Close all and lock.
- _____ Equipment: Stow all used while training.
- _____ Verify that bilge pump and cockpit drain seacocks are OPEN
- _____ Close or verify that the following through-hulls are SHUT/CLOSED:
 - Engine Salt Water Intake;
 - Galley Sink and Ice Box Discharge;
 - Head & Holding Tank Discharge;
 - Head Intake & Head Sink Discharge; and,
 - Galley Salt Water Intake.
- _____ Maintenance chits: Prepare chits (one item per chit) and report them to Skipper/Coach.
- _____ Record engine hours in the deck log and in the engine log, note arrival time in narrative log.

Secure the engine, with permission of Skipper/Coach:

- _____ Push "STOP" button on engine control panel in the cockpit. Once alarms sound and engine stops, turn key to "OFF" position or push power switch to turn "OFF". **The emergency stop (pull lever) is next to the engine control panel and should only be used in emergencies.**
- _____ **De-energize DC systems and energize AC according to SOP 904:**

Upon leaving boat:

- _____ Trash: Take ashore and dispose of properly (put new trash bag in bin).
- _____ Deliver maintenance chits and engine log to Cutter Shed. Chits go into "Chit" box.

NOTE: IF MOORING AWAY FROM SANTEE BASIN, CONSIDER:

- POSITION CHAFE GEAR ON MOORING LINES
 - PLACE MULTIPLE FENDERS WHERE REQUIRED
 - RIG STORM LINES IF EXPECTING INCLEMENT WEATHER
 - IF MOORED IN A RAFT, STAGGER BOAT ALIGNMENT TO PREVENT RIGS FROM TOUCHING WHEN ROCKED BY WAKE. RECOMMEND MOORING BOW-TO-STERN ("CHINESE") TO ENSURE RIGS REMAIN WELL CLEAR OF EACH OTHER.
- _____ Report completion of checklist to Skipper/Coach or XO with any noted discrepancies or concerns.

909. HEAVY WEATHER CHECK LIST

THE HEAVY WEATHER CHECK LIST SHOULD BE CONSULTED ON RECEIPT OF INFORMATION THAT HEAVY WEATHER WILL BE ENCOUNTERED WITHIN THE NEXT 24 HOURS, OR AT THE DISCRETION OF THE SKIPPER/COACH. RESPONSIBILITIES ARE BROKEN DOWN BY BILLET.

A. SKIPPER / COACH:

- Adjust the watch bill as needed to maintain requisite expertise on deck.
- Ensure crew is well rested prior to onset of heavy weather.
- Monitor available weather products closely; consult with the OTC/Coach (VOST) to determine best course of action under the given conditions.
- Brief the crew on storm evasion tactics and precautions.
- Ensure crew uses tethers when topside.
- Issue seasickness medication well in advance of the storm.
- Review lightning strike procedures.

B. FIRST LIEUTENANT:

- Inspect running and standing rigging for chafe or other obvious problems.
- Secure all deck hatches. Inspect hatch dogs for security.
- Remove cockpit drain grates if installed.
- Turn dorade vents aft.
- Set companionway hatch in place, secure with retainer pins and attach lanyard.
- Set up inner forestay and running backstays as needed.
- Ready storm sails. Bend storm trysail to mast track and secure bagged sail on deck. Ensure sheets are attached to both storm sails. Place storm jib where readily available.
- Strike all unused sails and equipment below and secure for sea.
- Check man overboard gear for security and readiness.
- Check liferaft for security and readiness.
- Inspect anchors to ensure they are firmly seated in their restraining chocks. Ensure other heavy items below deck are secured.
- Break out Galerider and bend on largest anchor rode. Store below decks where readily accessible.

C. ENGINEER:

- _____ Verify battery charge and recharge if required.
- _____ Top off fluid levels in engine if required.
- _____ Pump all bilges and remove any debris that might clog bilge pump strainers.
- _____ Verify secure stowage of all spare parts.
- _____ Inspect steering gear for correct cable tension. Remove or secure any loose gear in the vicinity of the steering quadrant.
- _____ Shut all through-hulls except those actually in use.
- _____ Ensure Damage Control (DC) repair kit is positioned in a secure but accessible location. Ready two buckets for emergency use as bailers.

D. NAVIGATOR:

- _____ Assist the Skipper/Coach in evaluating options, including hazard avoidance, storm evasion and safe haven selection.
- _____ Continuously monitor weather broadcast updates on HF, VHF and weather fax. Note any developing trends and bring them to the attention of the Skipper/Coach.
- _____ Check flashlight batteries/replace as necessary.
- _____ Ensure emergency gear (flares, EPIRB, hand-held VHF and GPS) is stowed in assigned locations or in the abandon ship bag, ready and available for use. See SOP Ch 8 for abandon ship contents.

E. SUPPLY OFFICER:

- _____ Prepare a hot, substantial meal before the onset of the storm.

NOTE: DON FOUL WEATHER TROUSERS WHEN COOKING IN HEAVY WEATHER TO AVOID BURNS.

- _____ Prepare enough individually wrapped sandwiches to last the crew for at least 12 hours.
- _____ Place honey, peanut butter, chocolate chips, and other high-energy foods where they are convenient but secure.
- _____ Secure all storage compartments and loose gear. Eliminate any potential missile hazards in the event of a knockdown or pitch-pole.
- _____ Inventory water and food supplies to be taken off if forced to abandon ship. Secure these items in a readily accessible location.
- _____ Secure cabin sole plates with screws.

ALL: Report completion of checklist to Skipper/Coach or XO with any noted discrepancies or concerns

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