U.S. Department of Transportation

United States Coast Guard

COMDTINST M16114.24B

Coast Guard Boat Readiness and Standardization Program Manual

U.S. Department of Transportation
United States Coast Guard

Commandant
United States Coast Guard

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COMMANDANT INSTRUCTION M16114.24B

Subj: COAST GUARD BOAT READINESS AND STANDARDIZATION PROGRAM MANUAL

Ref:
(a) 41' UTB Operator's Handbook, COMDTINST M16114.2 (series)
(b) 44' MLB Operator's Handbook, COMDTINST M16114.3 (series)
(c) 47' MLB Operator's Handbook, COMDTINST M16114.25 (series)
(d) 49' Buoy Stern Loading (BUSL) Boat Operator's Handbook, COMDTINST M16114.22 (series)
(e) Naval Engineering Manual, COMDTINST M9000.6 (series)
(f) Boat Crew Training Manual, COMDTINST M16114.9 (series)
(g) Casualty Reporting Procedures (Materiel), COMDTINST M3501.3 (series)

1. PURPOSE. This Manual provides standardized guidance and procedures for ensuring the day-to-day readiness of Coast Guard boats and crews.

2. ACTION. Area and district commanders, commanders of maintenance and logistics commands, commanding officers of headquarters units, assistant commandants for directorates, Chief Counsel, and special staff offices at Headquarters shall ensure adherence to the content of this Manual. Internet release authorized.

3. DIRECTIVES AFFECTED. Coast Guard Boat Readiness and Standardization Program Manual, COMDTINST M16114.24A is canceled.

4. DISCUSSION. The Coast Guard's Readiness and Standardization Program serves four broad purposes:

   a. Promote readiness as a daily process.

   b. Support the unit Commanding Officer/Officer-in-Charge readiness and training program with specific information on individual boats and crewmembers.

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c. Provide the operational commander (usually a Group Commander) with an assessment of the effectiveness of his or her standardization/Ready for Operations program compared to Coast Guard wide averages.

d. Provide district staffs and the headquarters boat force manager (G-OCS) with an overall evaluation of the readiness and health of the entire boat force.

5. SIGNIFICANT CHANGES. Significant changes contained in this Instruction include:

a. Chapter 1

1. Definition of a Ready For Operations Team (RFO Team) including RFO Team responsibilities.
2. Addition of Engineering Changes (EC's), formerly known as BOATALT's.
3. Addition of the 49' Buoy Stern Loading (BUSL) boat as a standard boat.
4. Definition of "Bravo" and "Charlie" readiness conditions.
5. Addition of the NATON Standardization Team for the 49' BUSL.

b. Chapter 2

1. Addition of RFO Team visit preparation guidelines.

c. Chapter 3

1. Wording changes within the Visit, Material Inspection, Administrative Review, Underway Evaluations and Out-Brief paragraphs.

d. Chapter 4

1. Addition of the inspection of weight handling equipment during material inspections.

e. Chapter 5

1. Addition of the Commanding Officer (CWO only) for underway evaluation exercises.
2. Addition of Buoy Operations – Mooring Pull and Collision With Submerged Object as a required exercises for the 49' BUSL.
3. Identification of specific boat types for Required Exercises (Core Drills).
4. Addition of the 49' BUSL for Basic Engineering Casualty Control Exercises.

f. Enclosure (1)

1. Addition of numerous references within the Summary of Directives.

g. Enclosure (2)

1. Addition of an Administrative Checklist.

h. Enclosure (3)

1. Addition of a Rescue and Survival Systems Checklist.

i. Enclosure (4)

1. Addition of an Individual Training Record Review.

j. Enclosure (5)

1. Addition of underway drill checklists for Buoy Operations – Mooring Pull and Collision With a Submerged Object.

k. Enclosure (6)

1. Separation of search pattern drill checklist into Precision Navigation Patterns and Drifting Patterns.

l. Enclosure (8)

1. Various changes and additions to 47' MLB Basic Engineering Casualty Control Exercises.

m. Enclosure (10)

1. Addition of 49' BUSL Basic Engineering Casualty Control Exercises.

n. Enclosure (11)

1. Addition of Non-Standard Boat Material Checklists.

o. Enclosure (12)

1. Addition of Unit and RFO Checklists for Aids to Navigation Teams.

6. PROCEDURE. District, operational and unit commanders for all Coast Guard boat units shall ensure the procedures detailed within this Instruction are followed on a day-to-day basis. The manager for the Coast Guard Boat Readiness and Standardization Program is Commandant (G-OCS).

7. POLLUTION PREVENTION (P2) CONSIDERATIONS. Pollution prevention considerations were examined in the development of this directive and have been determined to not be applicable.

H. E. JOHNSON
Director of Operations Capability

RECORD OF CHANGES

CHANGE NUMBER	DATE OF CHANGE	DATE ENTERED	ENTERED BY

CHAPTER 1 - READINESS AND STANDARDIZATION PROGRAM – GENERAL

A. PURPOSE. This chapter provides the basic guidelines, standards and policies for implementing the Boat Readiness and Standardization Program.

B. GOALS.

1. **The Readiness and Standardization program is designed to:**

   a. Emphasize readiness and standardization as a daily process with operational commanders at the Group/Activity level continually aware of factors that limit the ability of their boats to safely operate at design limits.

   b. Improve boat crew safety and proficiency by standardizing procedures.

   c. Ensure boats are maintained under their prescribed preventative maintenance systems (PMS).

   d. Ensure that boats are supported and maintained in accordance with configuration management requirements.

   e. Provide a uniform method of measuring unit readiness and compliance with program standards.

2. **Standard and Non-Standard Boats:** Although this instruction discusses almost exclusively standard boats, at this writing the Coast Guard operates far more non-standard boats than standard ones. It is the intent of the Coast Guard to move toward including almost all boats in one of several standard boat classes. In the interim, operational commanders will continue to have complete responsibility for assessing the readiness and condition of all non-standard boats and their crews. Many of the practices and principles used for the assessment, administration and operation of standard boats should be used by operational commanders to help ensure the safety and effectiveness of their non-standard boats.

C. DEFINITIONS.

1. **Configuration Management:** A management discipline designed to preserve and control the *functional* and *structural* characteristics of a standard boat. Unlike cutters, standard boats are resources that do not have permanent crews. These resources must be as uniform as possible to support operational safety, maximize crew familiarity, and simplify training, maintenance and support. Configuration management controls the following elements of the Boat Readiness and Standardization program.

   a. **Boat Outfit/Stowage Plans:** The configuration requirements for standard boat outfits and equipment stowage plans are set forth in references (a), (b), (c) and (d).

   b. **Functional Configuration Requirements:** This applies to the operation of machinery (i.e. main engines, marine gears, etc.) and electronic/electrical systems and equipment.

Minimum performance requirements (full power) and operating parameters as set forth in references (a), (b), (c) and (d) are *functional configuration requirements.*

c. **Structural Configuration Characteristics:** This applies to the fit, form, and function of structural vessel parts. Watertight closures, vessel coatings, and mounted equipment locations are managed by *structural configuration requirements.*

2. **Standards and Standardization:** The uniform application of processes, procedures, or techniques to ensure boat crew safety, proficiency, configuration, and vessel reliability. Standards are promulgated by Commandant (G-OCS) and (G-SEN) and are contained in various publications and directives. Enclosure (1) provides a summary of directives, which contain policy, procedures and guidance affecting the Readiness and Standardization Program.

3. **Engineering Changes (ECs) (formerly known as BOATALTS):** These are the only authorized modifications to a standard boat. No one other than Commandant (G-SEN) is authorized to approve ECs to standard boats. Reference (d) provides amplifying details on the EC process.

4. **Standard Boat:** For the purposes of this manual, the following boat types are standard boats and are subject to the provisions of this manual: 41' Utility Boat (UTB), 44' Motor Lifeboat (MLB), 47' Motor Lifeboat (MLB) and 49' Buoy Stern Loading (BUSL) boat.

5. **Standardization Team (STAN Team):** A three to five member deployable evaluation team that consists of highly trained and experienced professionals specializing in the operational/deck and engineering aspects of each standard boat platform. Each team conducts biennial assessment visits to ensure the goals of the Readiness and Standardization Assessment (outlined in this manual) are achieved. These teams act as a deployable asset to the centers of excellence (UTBSC/NMLBS/NATON) for each standard boat platform, and in addition to providing field units with technical information, they support the centers by providing guidance and feedback to improve school training and program functions.

6. **Ready For Operations Team (RFO Team):** A minimum of three members, the RFO team consists of members designated by the operational commander. Teams conduct annual assessment visits to ensure the goals of the Readiness and Standardization Program are achieved.

7. **Operational Commander:** For the purpose of this instruction, *Operational Commanders* are defined as commanders of Groups, Activities, Air Stations and Greater Antilles Section, who exercise *direct* operational control of a subordinate unit with a standard boat or non-standard boat assigned. This definition specifically does not include Station Commanding Officers/Officers in Charge exercising operational control of a Station (Small).

8. **Unit Commander:** A commanding officer or officer in charge of a unit with a standard or non-standard boat assigned.

9. **Command Cadre:** The Commanding Officer or Officer in Charge, the Executive Officer or Executive Petty Officer, the Engineering Petty Officer and senior Boatswains Mate (at units with Commanding Officers) are a unit's command cadre.

10. **Disabling Casualty:** See the full definition in Chapter 4 of this Manual.

11. **Restrictive Discrepancy:** See the full definition in Chapter 4 of this Manual.

12. **Major Discrepancy:** See the full definition in Chapter 4 of this Manual.

13. **Minor Discrepancy:** See the full definition in Chapter 4 of this Manual.

14. **Readiness:** The ability of a boat to perform the functions and missions for which it was designed.

15. **Readiness Rating:** See the full definition in Chapter 4 of this Manual.

D. RESPONSIBILITIES.

1. **Commandant (G-OCS) shall:**

   a. Manage and oversee the continuity and effectiveness of the Readiness and Standardization Program.

   b. Establish materiel and boat crew evaluation standards and guidelines.

   c. Oversee resident boat crew training programs.

   d. Ensure funding necessary to maintain the Readiness and Standardization Assessment visit program.

   e. Review Readiness and Standardization Assessment visit schedules.

   f. Periodically provide observers to accompany STAN Teams during assessment visits.

   g. Consult with other headquarters program managers to ensure standards are developed to improve procedures, uniformity, and reduce sources of variation.

   h. Coordinate and sponsor an annual Readiness and Standardization Conference.

   i. Review and publish annual assessments and other statistics provided by the STAN Teams.

   j. Chair configuration control boards for standard boats and meet regularly.

2. **Commandant (G-SEN) will:**

   a. Promulgate ECs for standard boats.

   b. Promulgate the Preventative Maintenance System for standard boats.

   c. Review Boat Class Maintenance Plans for standard boats

   d. Review materiel standards, discrepancy classifications and STAN Team assessment criteria for standard boats.

   e. Continuously monitor materiel condition of standard boat fleet.

   f. Chair configuration control boards for standard boats in the absence of G-OCS.

   g. Periodically provide observers to accompany STAN Teams during assessment visits.

3. **Engineering Logistics Center (ELC) will:**

   a. Review and develop ECs for standard boats.

   b. Manage and develop changes to the Preventative Maintenance System for standard boats.

   c. Promulgate and maintain changes to master drawings and technical publications relating to standard boats.

   d. Manage, promulgate and update Boat Class Maintenance Plans (BCMP) for standard boats.

   e. Periodically provide observers to accompany STAN Teams during assessment visits.

   f. Publish quarterly statistics, notes, and pertinent information on ECs.

   g. Establish and validate materiel standards for standard boats.

   h. Manage MICA manuals for each class of standard boats.

4. **Maintenance and Logistics Commands (MLCs) will:**

   a. Provide technical, logistical, and administrative support beyond the capabilities of operational commanders, to units with standard boats.

   b. Verify during compliance audits whether operational commanders are conducting annual “Ready For Operations” (RFO) evaluations in accordance with the requirements in Chapter 2.

   c. Verify during compliance audits proper boat maintenance record keeping and documentation in accordance with this and other directives.

5. **District Commanders shall:**

   a. Ensure units with boats are provided adequate support by the chain of command.

   b. Ensure operational commanders execute the Readiness and Standardization Program and evaluations in accordance with this directive.

   c. Coordinate Readiness and Standardization Assessment visit schedules with each STAN Team using the following guidelines:

      (1) Only units with a standard boat OPFAC allowance shall be scheduled for an assessment visit.

      (2) Ensure STAN Team schedules do not conflict. Whenever possible, MLB/UTB/BUSL visits should be scheduled in alternating years.

      (3) Do not schedule Readiness and Standardization Assessment visits less than 30 days before or after planned yard availability.

      (4) Whenever possible, schedule assessment visits to every applicable unit before repeating the visit cycle.

   d. Ensure STAN Team report discrepancies and recommendations are addressed and promptly acted upon.

6. **Operational Commanders shall:**

   a. Monitor unit training and operations at subordinate commands to **ensure** boat crew readiness is maintained in accordance with applicable Commandant and District directives.

   b. Ensure unit commanders maintain operational readiness by correctly completing prescribed preventative maintenance.

   c. Act on restrictive discrepancy waiver requests and take action on discrepancies as outlined in Chapter 4 Section E of this Manual.

   d. Ensure units comply with standard boat configuration management requirements.

   e. Conduct RFO evaluations in accordance with Chapter 2 of this Manual.

   f. Provide or arrange for training, logistics, maintenance, and technical support beyond the capabilities of subordinate units.

   g. Provide operations and engineering department observers to accompany the STAN Team during all assessments. Observers should be members of the operational commander's RFO evaluation team described in Chapter 2, Section F.

   h. Train and maintain a competent RFO Team.

i. Take necessary action to resolve deficiencies noted in STAN Team reports in accordance with the requirements of this manual and other applicable directives.

j. Hold unit commanders accountable for unreported discrepancies.

k. Ensure that the boat(s) at each unit scheduled for a Readiness and Standardization Assessment is/are fully mission capable when the visit begins.

NOTE: STAN Teams will not conduct underway exercises when a boat has a disabling casualty. Operations will not be conducted with restrictive discrepancies without waivers. For personnel safety reasons, the STAN Team leader may decline to conduct underway exercises, if in his or her opinion there are discrepancies in any or all categories that, when combined, create an unsafe condition for the crew or endanger the boat. When a *restrictive discrepancy arises* during the assessment, the Stan Team will suspend underway exercises until the discrepancy is corrected or the waiver requirements of Chapter 4, Section E have been met.

7. **Unit Commanders shall:**

a. Ensure provisions of reference (f) are strictly adhered to and all certified boat crew personnel possess required performance skills.

b. Ensure compliance with functional and structural configuration management requirements in accordance with applicable Commandant directives (i.e., Operator's Handbooks, PMS Manuals, etc.).

c. Ensure required tests, inspections, and preventative maintenance procedures are performed correctly and completely and are documented properly in accordance with applicable directives.

d. Take action on discrepancies in accordance with Chapter 4, Section E.

8. **Ready For Operations Teams shall:**

a. Evaluate the unit training program IAW chapter 5 of this Manual.

b. Ensure written testing of unit personnel is performed IAW Chapter 5 of this Manual, (MLB test questions can be found on the National Motor Lifeboat School web-site at http://www.uscg.mil/hq/g-o/nmlbs/Standard/Testquestions/test.htm and UTB test questions on the RTC Yorktown web-site at http://cgweb.tcyorktown.uscg.mil/TCYORKWEB/utb/Tests/index.htm).

c. Evaluate the unit Survival Systems Program with regard to documentation, condition and use of equipment IAW the Rescue and Survival Systems Manual, COMDTINST M 10470.10 (series).

d. Evaluate boat platform and outfit for readiness and standardization IAW chapter 4 of this Manual.

e. Conduct underway drills IAW chapter 5 of this Manual.

f. Review overall compliance with the Boat Readiness and Standardization program and monitor/review the status of prior STAN/RFO assessments.

g. Conduct physical fitness evaluation as outlined by Chapter 3, Section A of the Boat Crew Seamanship Manual, COMDTINST M16114.5 (series) for all boat crew personnel. This evaluation will satisfy the annual physical fitness currency requirement.

9. **Standardization Teams (UTBSC/NMLBS/NATON) shall:**

a. Provide field units with technical information and guidance that will assist them in complying with program responsibilities.

b. Disseminate to the field the following information:

(1) New standard procedures and techniques used and/or problem areas regarding procedures and techniques employed by boat crews.

(2) Information that would assist units in meeting standardization program requirements.

c. Maintain liaison with Commandant (G-OCS) to ensure that Readiness and Standardization Program requirements are being met.

d. Coordinate with Commandant (G-OCS) to make appropriate changes to training syllabi, courses, or manuals when deficiencies are noted during assessment visits.

e. As members of the Coast Guard's Boat Centers of Excellence (UTBSC/NMLBS/NATON) assist in maintaining the boat operator's handbooks for the appropriate boat class. Propose interim changes to Commandant (G-OCS) as needed and produce updates to the operator's handbooks at least annually.

f. Recommend to Commandant (G-OCS) additions or deletions to boat outfit equipment or stowage plans that would enhance operational efficiency and/or safety.

g. Based on field observations and platform expertise, provide recommendations to Commandant (G-OCS), (G-SEN), ELC, and the MLC's that would increase machinery reliability and maintainability.

h. Recommend performance requirements for boat crew positions that would enhance proficiency and safety.

i. When directed by ELC, conduct prototype evaluations to determine the feasibility of a recommended EC. Review proposed configuration changes and provide recommendations for location and installation of new equipment.

j. At the direction of Commandant (G-OCS), conduct biennial Readiness and Standardization Assessments at each unit with a standard boat.

CHAPTER 2 - UNIT/GROUP READINESS EVALUATIONS

A. PURPOSE/SCOPE. Unit and operational commanders are responsible for maintaining the day-to-day readiness of their boats and crews. This is their central, most important responsibility and will not be effective without their support. This chapter promulgates policy, standards, and guidelines regarding required unit and operational commander readiness evaluations.

B. GOALS. While a dedicated Coast Guard infrastructure exists to provide resident training and biannual standardization evaluations, this cannot take the place of unit and operational commanders who are directly committed to the readiness of their boats and their crews. The goal of the Readiness and Standardization Program is to develop a multi-layered approach to fleet readiness; within which, operational and unit commanders have clearly defined requirements to evaluate and act upon materiel condition discrepancies and training deficiencies.

Without fully capable small boat platforms and fully qualified crews to operate them, our ability to safely conduct core Coast Guard missions, such as SAR, law enforcement and ATON, is greatly degraded.

C. UNIT EVALUATION REQUIREMENTS. The readiness of boats shall be continuously evaluated by the unit to ensure they maintain Bravo status. This constant evaluation is accomplished through a variety of programs including daily boat checks, the boat PMS schedule, and regularly scheduled, self-audited materiel readiness and standardization evaluations. Whenever a discrepancy is noted during any of these inspection programs it must be classified and acted upon based upon the standards as outlined in Chapter 4, Section E of this manual and the appropriate operator's handbook.

1. **Self Audits.** Self-audits of materiel readiness and standardization are recommended on a quarterly basis and prior to the operational commander's RFO evaluation or STAN Team Readiness and Standardization Assessment. While not a formal inspection, units should use the materiel inspection procedures provided in chapter 4 of this manual and the appropriate check-off list contained in the operator's handbook as guidance for conducting self-audits. Self-audits are also designed to assist units in maintaining work lists and Current Ships Maintenance Project (CSMP) records.

2. **Reports.** Since self-audits are an informal tool for the unit to monitor boat readiness and standardization, no formal reports of inspection are required unless otherwise directed by the operational commander. Reports for other aspects of unit monitoring, such as PMS completion, shall be as directed by appropriate directives or the operational commander.

D. OPERATIONAL COMMANDER EVALUATION REQUIREMENTS. Operational commanders shall conduct a Ready for Operations (RFO) evaluation at least annually at each unit. The RFO evaluation may be conducted at any time of the year. The RFO evaluation

shall be comprised of an evaluation of the unit's boat crew training program, survival systems program, a materiel inspection, and underway exercise evaluations. The operational commander shall issue a formal report of the RFO evaluation. Readiness and Standardization Assessments conducted by the Standardization Teams may not substitute for the operational commander's RFO evaluation.

1. **Preparation.** In preparation for a unit assessment, the RFO Team should at a minimum:

- Review previous RFO/STAN assessment reports
- Obtain the status of remaining material discrepancies from previous RFO/STAN visits
- Obtain information concerning incomplete EC's
- Compare prior RFO/STAN comments concerning the unit training program and rescue and survival systems program to current requirements as outlined in Enclosures (2), (3) and (4)

2. **Training Program Evaluation.** At a minimum, the RFO evaluation team shall make a complete review of training records to evaluate unit compliance with the requirements of the Boat Crew Training Manual, COMDTINST M16114.9 (series) and the requirements of Team Coordination Training, COMDTINST 1541.1 (series). Review of other unit training requirements not directly related to boat operations is at the discretion of the operational commander. In addition, written tests to evaluate boat crew knowledge of standard practices and procedures shall be administered.

3. **Rescue and Survival Systems.** Evaluate the unit rescue and survival systems program with regard to documentation, condition and use of equipment IAW the Rescue and Survival Systems Manual, COMDTINST M10470.10 (series).

4. **Materiel Inspection.** A materiel inspection shall be conducted in accordance with the procedures outlined in Chapter 4 of this Manual.

5. **Underway Exercise Evaluations.** Underway exercises shall be performed to measure how boat crews perform standard procedures, and evaluate the effectiveness of the unit's Boat Crew Training Program. Chapter 5 of this manual provides procedures for conducting these evaluations. Operational commanders may impose additional underway-training requirements due to unique operational requirements provided they are not contrary to or inconsistent with published standard procedures.

6. **RFO Evaluation Report.** Operational commanders shall provide unit commanders an RFO evaluation report. At a minimum, the RFO evaluation report must contain the following information.

   a. Based on evaluator observation, an evaluation of whether the unit is effectively executing the boat crew training program.

b. The results of the written tests administered.

c. Results of the physical fitness evaluation.

d. A statement for each standard boat indicating whether the boat is "Bravo" or "Charlie" as defined in Chapter 4 of this Manual. If a boat was found to be "Charlie" the specific reasons supporting the determination.

e. A detailed list of materiel discrepancies noted during the materiel inspection and full power trial.

f. Discrepancies that were noted and remain uncorrected from the last Readiness and Standardization Assessment or RFO Evaluation shall be identified.

f. A summary of underway exercise evaluations including a determination of boat crew proficiency and adherence to standard operating procedures. Copies of drill evaluation sheets may be included in this section.

E. EVALUATION TEAM COMPOSITION. The operational commander's RFO evaluation team will be comprised of the most qualified and experienced personnel available. Each evaluator must be thoroughly familiar with the references in Enclosure (1) that pertain to their field of expertise. The operational commander shall designate the RFO evaluation team in writing. The team shall consist of at least three personnel as follows:

1. **Team Leader.** The team leader should normally be the operational commander's surface operations officer or assistant, and be senior to the unit commander receiving an evaluation.

2. **Senior Boatswain's Mate.** The senior Boatswain's Mate shall be a currently or previously qualified standard boat coxswain. If staffing does not allow this, the individual shall be a graduate of the MLB Supervisor's Course or a senior coxswain/surfman from within the operational commander's other unit resources.

3. **Naval Engineer.** The Naval Engineer should be the operational commander's naval engineering department head or assistant. If staffing or experience does not allow this, the individual shall be the most experienced engineer within the operational commander's other unit resources.

F. SAFETY. Safety of personnel and the safeguarding of equipment must remain paramount during underway evaluations. For this reason, the following procedures apply.

1. **Coxswain Responsibilities.** The coxswain has ultimate responsibility for the boat and all persons aboard during a mission, including RFO evaluation. If concern for personnel or vessel safety arises, the coxswain shall halt the exercise until the unsafe situation or condition is corrected.

2. **Evaluator Responsibilities.** All safeguards must be taken to ensure that the evaluation environment does not become hazardous. When an evaluator observes an unsafe

condition, they shall inform the coxswain. If in the evaluator's judgment, personnel or property remain endangered, they shall terminate the exercise. If at any time it is discovered that the boat has a disabling casualty, underway exercises shall be terminated and the boat placed in "Charlie" until the discrepancy is corrected. If a restrictive discrepancy is discovered on the boat, underway exercises will be suspended until the discrepancy is corrected or the operational commander grants a waiver in accordance with Chapter 4, Section E of this Manual.

CHAPTER 3 - READINESS AND STANDARDIZATION ASSESSMENTS

A. PURPOSE AND SCOPE. The Readiness and Standardization Program is made up of multiple steps in a continuous cycle. The largest portion of this cycle rests with the operational and unit commanders as discussed in the previous chapters. To complete the cycle and ensure fleet wide boat readiness and configuration management, the STAN Teams conduct biennial unit visits.

B. GOALS. The assessment visit is designed to achieve several goals. These goals fall in line with the goals of the Readiness and Standardization Program as identified in Chapter 1. In addition to providing a venue to ensure Coast Guard standards are maintained, the visits provide on site, personalized technical and professional training and information sharing between the STAN Team and unit boat crew members. Operational and unit commanders should capitalize on these opportunities to improve their ongoing boat crew training programs, as well as use the materiel inspection results to correct operational deficiencies on each standard boat. The specific objectives of the Readiness and Standardization Assessment visits are to:

1. Evaluate the material condition of standard boats and ensure unit compliance with preventive maintenance (PMS) and configuration management requirements,

2. Evaluate the effectiveness of a unit's boat crew training program,

3. Evaluate boat crew performance skills essential for safe operation,

4. Evaluate the unit Survival Systems Program with regard to documentation, condition, and use of equipment IAW the Rescue and Survival Systems Manual, COMDTINST M10470.10 (series),

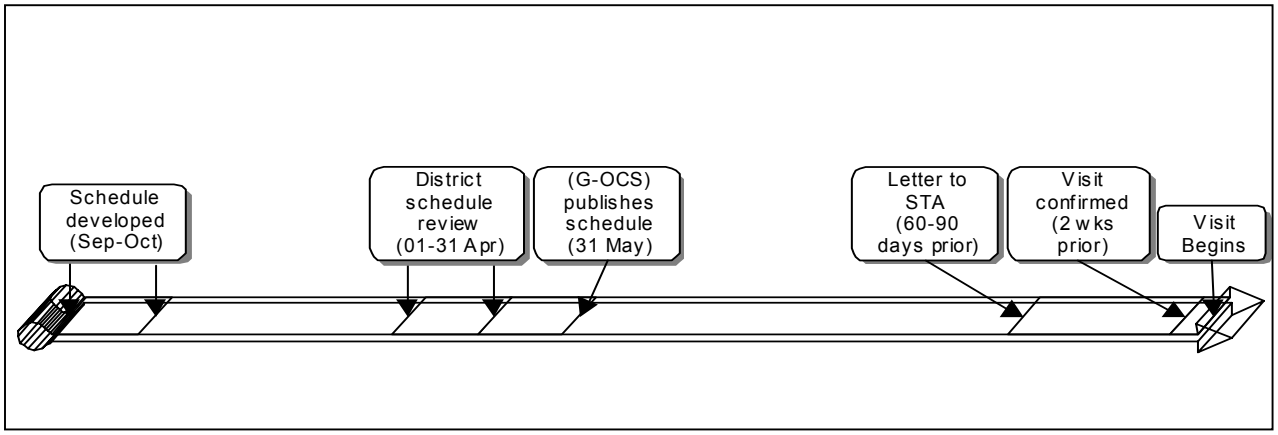
5. Determine whether boat crews adhere to standard operating procedures, and

6. Provide RFO evaluation guidance to the operational commander's observers.

C. PROCEDURES. To limit variation for the unit being evaluated, the procedures for the Readiness and Standardization Assessment visits are very similar to the RFO evaluation procedures set forth in Chapter 2. During the visit, a materiel inspection and full power trial will be conducted on each standard boat assigned to the unit (as related to the visiting STAN Team). Underway exercise evaluations will be conducted with all certified boat crew personnel.

D. GENERAL TIMELINE. This section provides the timeline of events surrounding a unit's biennial Readiness and Standardization Assessment visit. As an overview, each fall the STAN Teams work closely with each district to develop the next year's visit schedule. Units scheduled are later engaged at selected intervals in preparation for their visit. The comprehensive three or four-day visit (based on the number of boats and boat crew members) is conducted. Evaluation feedback is provided as the visit progresses, and at the conclusion of each underway drill. The visit concludes with an overall out briefing. The STAN Team provides a written Readiness and Standardization Assessment report to the operational

commander and Commandant. The cycle continues, as the unit institutes the feedback received and the system continually improves. The below figure depicts the timeline of events preceding an assessment visit.



1. **Schedule Development.** The program cycle is designed to allow biennial visits to each unit with an assigned standard boat. Development of the next year's visit schedule begins each fall. The schedule is a result of negotiations between the STAN Team and districts to achieve the biennial standard with consideration to district and local concerns.

   a. Planning. Between September and October of each year the STAN Team will develop a draft schedule. The schedule is based on the known location of each standard boat, date of the boat's last visit, and area of the country in which the boat is assigned. *Coordination between STAN Teams will minimize the possibility of a unit receiving a visit from two STAN Teams within one given year.*

   b. Initial contact. During the initial planning stage, the STAN Team is likely to communicate with both the district boat managers and individual units. This informal dialog is conducted to prevent unexpected problems and alleviate extensive changes to the schedule later.

   c. District response. By 01 April, the district boat managers will be forwarded the draft schedule for their review and formal feedback. To effectively manage this extensive annual schedule and STAN Team visit costs, minimal changes are desired after publishing the annual schedule. Therefore, districts should carefully review the schedule based on local concerns, boat assignment change plans, ongoing unit missions, etc. Written district commander response is due back to the respective STAN Team no later than 30 April.

2. **Publication.** By 31 May, the schedule will be finalized and published. Commandant (G-OCS) will publish the schedule in message format under the appropriate MLB, UTB and BUSL AIG routing.

3. **Unit notification.** Between 60 and 90 days prior to a visit (depending on the date in relationship to the schedule development), the unit will receive a letter from the STAN Team formally notifying them of their upcoming assessment visit. The letter also serves to pass important details related to the visit, invite the unit to address important preparation issues/questions, and request several items be made available upon the team's arrival. Then, no later than two weeks prior to the scheduled visit, the designated team leader will contact the unit to confirm the visit dates and address any last minute concerns the unit may have.

   a. The notification letter will address the following issues.

      (1) Dates of visit,

      (2) Schedule of events,

      (3) STAN Team Leader,

      (4) Key visit elements,

      (5) Drill platform requirements (towed boat),

      (6) Boat(s) intended to be inspected, and

      (7) Items needed for review upon arrival.

   b. Units must provide the following items to the STAN Team upon their arrival:

      (1) Last two Group RFO evaluation reports,

      (2) Station training records,

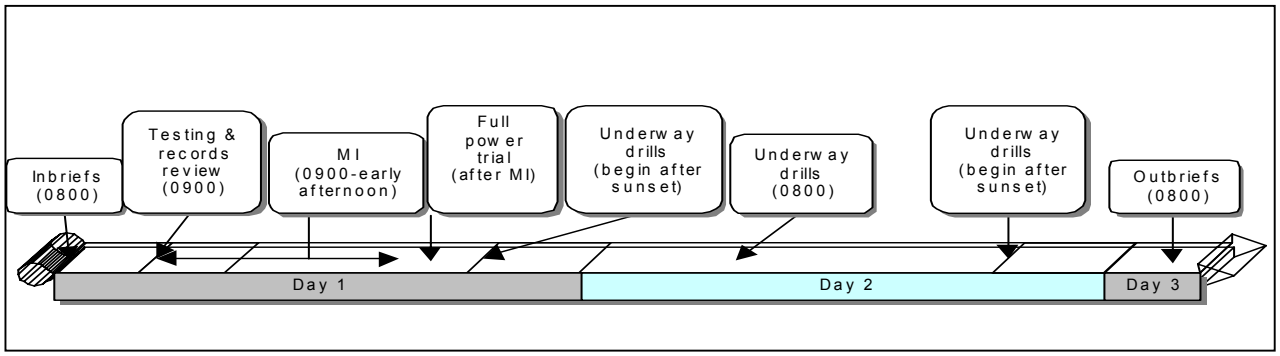
      (3) Rescue and Survival Systems PMS Log,

      (4) Underway hours for the last six months (boat & crew),

      (5) List of boat crews and a unit personnel roster, and

      (6) Unit boat records including the following engineering info:
         (a) DEMPS,
         (b) Last yard availability,
         (c) Last boat inspection report,
         (d) Last full power trial, and
         (e) EC/CASREP/CSMPs/ISO
         (f) PMS completion logs

4. **Visit.** The agenda for each assessment visit follows a routine schedule assuming the boat is Bravo. On the first day, an introduction and short in brief is provided to the unit, written tests are administered, a records review is conducted, and a dockside boat materiel inspection and underway-full power trial is completed. After completion of the materiel inspection the remaining days are dedicated to day and evening underway drills. Any remaining administrative review is also completed the second day. Upon completion of the assessment the unit is provided a summary out-brief. A more detailed description of the requirements for the materiel inspection and full power trial can be found in Chapter 4, the boat type operator's handbook, and appropriate technical publication. The underway drill scenarios are outlined in Chapter 5 and Enclosure (5) to this Manual.



a. Unit in brief. Upon arrival of the STAN Team and group staff representatives, usually about 0800 the first day, an all-hands briefing is conducted to introduce the team to the unit, discuss the agenda for the next few days, address any concerns, and answer any questions from the crew. Units may desire a one-on-one meeting between the STAN Team and unit/group command staff prior to the all-hands briefing. This meeting is welcomed and encouraged, especially if there are command issues that may impact upon the entire visit but are outside the concern of the whole crew.

> **Note: Group Operations and Engineering representatives shall accompany the STAN Team throughout the unit inspection. This includes, Operations and Engineering reps for the materiel inspection; Engineering rep(s) for the full power trial and casualty control drills; Operations reps for a majority, if not all, of both nighttime and daytime underway evolutions. Operational Commanders are encouraged to invite their servicing electronics support command to observe applicable portions of the materiel inspection**

b. Written testing. Immediately following the unit-in brief, certified boat crew personnel will take a short written exam for each qualified position (e.g., boat crewman will take the boat crew exam, coxswains will take the coxswain/rules of the road exam, boat engineers will take the boat crew and boat engineer exam). These exams will provide the command feedback as to the knowledge level of boat crew members about the platform. Areas of strength and weakness will be identified to allow better tailoring of the unit's training program. Areas of knowledge emphasized include boat handling,

procedures, navigation/piloting, rules of the road, operating boat equipment, and rescue and survival equipment.

c. Record review. While boat crew testing is being conducted, the STAN Team will begin reviewing the documents requested in the pre-arrival letter. These documents/records will allow the STAN Team to more fully evaluate the unit's ongoing efforts to maintain a strong training program, professionally develop boat crew personnel and properly maintain the standard boat assigned.

d. Materiel inspection. A thorough materiel inspection is conducted on each standard boat to ensure compliance with Commandant directed configuration management. This inspection is also an excellent opportunity for information sharing the latest platform news, helpful hints, supply sources for unique items, and a little personalized training between the STAN Team and boat crew personnel. The materiel inspection usually lasts until mid-afternoon (at a one standard boat unit). Materiel inspection procedures are discussed in the next chapter. Materiel inspection checklists for each standard boat are found in the applicable boat operator's handbook. For non-standard boats, use the district boat outfit list or the example checklist provided in Enclosure (11) of this Manual.

e. Full power trial. A full power trial is conducted as soon as the materiel inspection is completed (if sufficient daylight remains). During this evolution, the engineering STAN Team member (accompanied by unit and group engineering personnel) will check the boat engines and engine room as discussed in Chapter 4.

f. Administrative review. While the materiel inspection and full power trials are being conducted on board the boat, an administrative review will be conducted ashore. An assessment of boat and crew personal protective equipment (PPE) along with boat crew underway hours shall be completed before underway evaluations. The PPE assessment ensures all required equipment is available and in good working condition, and the unit PMS program meets the requirements of the Rescue and Survival Systems Manual. The boat crew member underway hours check is one factor available to validate the strength of the unit's ongoing training program. By comparing the crewmember's underway hours for the last currency maintenance period, the size of unit's operating area, unit training records, and other observable factors, the STAN Team is better able to evaluate the unit-training program. A verification of the unit's assigned boat inventory against the headquarters' allowance list will be made. This check is purely an information gathering measure and does not relate to the unit assessment visit.

g. Underway evaluations. Upon the successful completion of the preceding steps, the unit is ready for the underway boat crew assessment. All certified boat coxswains are expected to conduct at least one day and one night drill set. Boat crewmembers may participate in as many drills as necessary to allow each coxswain to perform the required drill sets. Enclosure (5) includes the drill check-off sheets for each available scenario.

h. Out-brief. Upon completion of the visit, out-briefs are offered to the unit command cadre. An all-hands out-brief is strongly encouraged to provide closure and a final evaluation of the hard work the crew put forth in preparing for the visit. Operational commander out-briefs are provided upon request and are normally conducted at the last unit visited within a group AOR. During out-briefing, STAN Team assessment findings will be reviewed and recommendations for change or improvement will be made.

5. **Reports.**

a. Readiness and Standardization Assessment Report. Within 30 days of an assessment visit, the STAN Team will provide a formal report to the operational commander via Commandant (G-OCS) and the district commander summarizing the results of each Readiness and Standardization Assessment visit. The report will inform the operational commander of strengths and weaknesses and recommendations for corrective action. It will address the following specific issues:

(1) Whether the unit is effectively executing the boat crew training program.

(a) Written test results showing the percentage of correct answers overall by subject and comparison to service wide averages.

(b) Training record review.

(c) Boat crew underway hours review.

(d) Command Cadre u/w hours and certification.

(2) Boat crew proficiency and adherence to standard operating procedures.

(a) Underway drill results showing the percentage of satisfactorily completed mission objectives in relation to the Coast Guard average.

(3) Whether the standard boats evaluated were “Bravo” or “Charlie” as explained in Chapter 4. If the boat is found “Charlie”, specific reasons supporting this determination will be provided.

(a) Deficiencies noted during the materiel inspection and full power trial. The enclosed lists will focus on maintenance (PMS), configuration management and safety deficiencies noted. Deficiencies and incorrect ECs that were noted but remain uncorrected from the last assessment visit will also be identified.

(4) Personal protective equipment assessment.

(5) Last Operational Commander RFO.

(6) Boat hull inventory verification.

(7) STAN Team comments.

b. STAN Team Assessment Analysis Report. Each STAN Team will furnish this report to Commandant (G-OCS) annually. The report shall provide recommendations to improve training programs, maintenance procedures, configuration management requirements and mishap trends.

CHAPTER 4 - MATERIEL INSPECTIONS

A. OVERVIEW. The purpose of the materiel inspection is to validate the readiness and standardization of the boat being inspected. The materiel inspection is performed both dockside and underway. The dockside portion consists of a complete visual inspection of all boat spaces. The condition of the hull, installed fittings, and watertight structures will be reported. A functional inspection of all installed machinery, weight handling equipment and boat outfit items will also be completed. During the underway portion, a full power trial will be performed in accordance with the appropriate PMS technical publication.

B. FORMAL MATERIEL INSPECTIONS. Formal materiel inspections shall be conducted during Group "Ready for Operations" evaluations and Readiness and Standardization Assessments. A formal inspection report containing the boat's materiel discrepancy list will be included in the RFO or Readiness and Standardization Assessment reports.

C. UNIT MATERIEL INSPECTIONS. Unit commanders shall conduct a materiel inspection once per month for each standard boat assigned to the unit. No formal documentation is required for this inspection other than necessary reporting of discrepancies. In addition, daily boat checks, as required by the appropriate PMS technical publication, represent the unit's opportunity to assess the materiel condition of standard boats on a daily basis. Any time materiel discrepancies are noted, units shall comply with the required actions as outlined in Section E of this chapter.

D. GUIDELINES/REFERENCES. Reference (a), (b), (c) and (d) provide the materiel inspection checklists for the appropriate standard boat. A materiel inspection normally requires a minimum of two personnel to conduct, preferably a Boatswain's Mate and Machinery Technician, both of whom possess extensive experience on the type of standard boat to be inspected and a working knowledge of the reference documents which checklist items are judged against. Each item on the materiel inspection checklist will be evaluated as standard or non-standard. When the minimum standard for a specific item cannot be met, the evaluator shall classify the discrepancy based upon the classification guidelines contained in the applicable boat Operator's Handbook. There are four possible classification categories; each requires a different level of action by the unit and operational commanders. These classifications are outlined below. In addition to this manual, the following are reference documents when conducting a standard boat materiel inspection:

- Applicable Operator's Handbook
- Applicable PMS Manual
- Naval Engineering Manual, COMDTINST M9000.6 (series)
- Color and Coatings Manual, COMDTINST M10360.3 (series)
- Rescue and Survival Systems Manual, COMDTINST M10470.10 (series)
- Additional technical publications and drawings, as appropriate

E. DISCREPANCY CLASSIFICATIONS AND REQUIRED ACTIONS. The readiness of standard boats shall be continuously monitored to insure that it is capable of unrestricted operations. This monitoring is accomplished through a variety of formal and informal inspection programs including daily boat checks, the boat PMS schedule, annual engineering inspections, Ready for Operations evaluations and Readiness and Standardization Assessments. Whenever a discrepancy is noted during any of these inspection programs it must be classified and acted upon based on the following standards.

1. **DISABLING CASUALITIES.** Disabling casualties are those, which make the boat not serviceable.

   a. **Actions (Underway)**. In the event a boat sustains a disabling casualty while underway, the boat shall immediately return to the nearest safe mooring, if able, and immediately be placed into Charlie status. In many cases, the boat will require assistance from another vessel.

   b. **Actions (Dockside)**. If a disabling casualty is identified while the boat is moored, the boat is not authorized to get underway until the casualty is corrected. The boat shall immediately be placed into Charlie status and repaired. Dockside materiel inspections may continue after discovery of a disabling casualty but the boat shall not get underway for full power trial or underway exercises until all disabling casualties are fully repaired.

Note: Operational Commanders may authorize, *in writing,* the movement of the boat for short distances under its own power only to facilitate haul-outs or corrective maintenance.

   c. **Reports**. Disabling casualties shall be reported to the Operational Commander by the most expeditious means, followed up by a boat status message as soon as possible but no later that 12 hours after the casualty is discovered. If the casualty cannot be repaired within 48 hours, a CASREP shall be sent within 24 hours of discovery of the casualty in accordance with reference (g). Operational Commanders are responsible for monitoring the status of repairs to disabling casualties.

2. **RESTRICTIVE DISCREPANCIES.** Restrictive discrepancies are those, which restrict the operations of the boat such that it can perform some missions, but not all missions safely. Boats with restrictive discrepancies shall only be operated if the Operational Commander has issued a written waiver. A verbal waiver is authorized, as long as a written waiver follows it up within 4 hours. When advised and with the concurrence of the Operational Commander, the authority to draft and send/transmit written waivers may be delegated per local SOP.

NOTE: A written waiver may be a letter, memorandum, e-mail or record message traffic. The written waiver shall: (1) identify the specific discrepancy which is waived, (2) describe the conditions under which the boat may be operated, and (3) concurrence on the measures to be taken to lessen or negate the hazard posed by the discrepancy. Written waivers shall be maintained as an annotation to Part III of the boat record as required by reference (e).

a. **Actions (Underway)**. In the event the boat sustains a restrictive discrepancy while underway, the coxswain shall immediately notify the parent unit with all pertinent information and a recommendation as whether to continue or abort the mission. The parent unit shall pass along the information pertaining to the casualty, the current mission and recommendations to the Operational Commander who shall immediately notify the unit as to whether or not continuing the mission is authorized, the conditions under which the boat may be operated, and precautions to be taken to lessen the hazards posed by the discrepancy.

b. **Actions (Dockside)**. The boat shall not get underway until the discrepancy is corrected, or a waiver has been received. Dockside materiel inspections may continue after discovery of a restrictive discrepancy but the boat shall not get underway for full power trial or underway exercises until all restrictive discrepancies are fully repaired or have been waived by the Operational Commander

c. **Reports**. Restrictive discrepancies shall be reported to the Operational Commander if the discrepancy cannot be repaired within 1 hour. If the casualty cannot be repaired within 48 hours, a CASREP shall be sent within 24 hours of discovery of the casualty in accordance with reference (g). Operational Commanders are responsible for monitoring the status of repairs to all restrictive discrepancies.

3. **MAJOR DISCREPENCIES.** Major discrepancies are those that degrade the effectiveness of the boat to perform one or more missions. The occurrence of major discrepancies shall be documented and a plan to correct these discrepancies shall be formulated and carried out by the unit. Operational Commanders are responsible for monitoring the status of the repairs to major discrepancies. It is suggested that, in conjunction with unit materiel inspections, operational commanders receive monthly reports as to the status of correction of major discrepancies.

4. **MINOR DISCREPENCIES.** Minor discrepancies do not affect the operational readiness of the boat. However, a boat with minor discrepancies does not meet the standardization criteria as established for that boat. The occurrence and repair of minor discrepancies shall be documented and monitored at the Station/Unit level.

F. READINESS RATING. Boats shall be assigned readiness ratings that shall be included in all inspection reports. Ratings shall be assigned in categories as described below:

a. Upon arrival

1. **Bravo:** The boat has no *Disabling Casualties* or *Restrictive Discrepancies*.
2. **Bravo (Restricted):** The boat has one or more *Restrictive Discrepancies* with waivers.
3. **Charlie:** The boat has one or more *Disabling Casualties* or the boat has *Restrictive Discrepancies* without waivers.

Note: If the boat is found to be *Charlie*, specific reasons supporting this determination will be provided.

b. <u>Upon departure</u>:

1. **Bravo:** The boat has no *Disabling Casualties* or *Restrictive Discrepancies*.
2. **Bravo (Restricted):** The boat has one or more *Restrictive Discrepancies* with waivers.
3. **Charlie:** The boat has one or more *Disabling Casualties* or the boat has *Restrictive Discrepancies* without waivers.

CHAPTER 5 - BOAT CREW QUALIFICATION AND PERFORMANCE EVALUATIONS

A. OVERVIEW. Unit assessments through practical exercises shall evaluate boat crew professionalism and measure human performance during both Group RFO visits and STAN Team visits. Group RFO teams should follow the same guidelines and procedures as the STAN Teams. The unit training program shall be evaluated by thorough training record review, knowledge based testing and the conduct of underway exercises utilizing the core and optional drills. Results of testing and records review, and recommendations for improvement, shall be provided to the unit command at the RFO or STAN Team out-brief. STAN Team test results will be compared to Coast Guard wide averages. Evaluations of specific drills and boat crew member performance will be provided at the conclusion of each sortie. Overall drill evaluations and recommendations for improvement will be provided to the command at the out-brief.

1. **Guidelines/References**. References containing procedural guidelines are found in enclosure (1).

B. PROCEDURES. STAN Team and Operational Commander Ready for Operations evaluation teams shall conduct the following evaluations.

1. **Knowledge based testing**. After the in-brief, written tests will be administered to all qualified coxswains, boat engineers, and boat crew members. Non-qualified crewmembers may also take the tests; however, their scores will not be recorded or reflected in the unit averages.

   a. Tests will consist of questions concerning boat crew duties, boat characteristics and equipment, normal and emergency procedures, seamanship, navigation, search and rescue, and rules of the road.

   b. Boat engineers shall take a combined engineering and crewmember test.

2. **Training Record review**. Individual and unit training records will be reviewed for content and format. Certification letters for each boat crew member will be checked and must be present. Currency maintenance and underway hours will be compared to ensure compliance with requirements. If a member's currency or certification is in question, the STAN Team or RFO leader may require another certified/current crew member for that position during drills. Each situation of this nature shall be documented in the Readiness and Standardization Assessment report.

3. **Exercises**. The STAN or RFO evaluator will select exercises from the lists below and determine how many of the exercises are required to adequately evaluate a unit. See Enclosures (5) through (10) for drill check-off sheets.

C. UNDERWAY EXERCISE EVALUATIONS. Underway exercises shall be performed to measure how boat crews perform standard procedures (boat crew readiness), and evaluate the effectiveness of the unit's boat crew training program.

1. **Evaluation Prerequisites**. The following prerequisites and standards shall be met when performing the exercises.

   a. Trainees will not normally participate during underway exercise evaluations, but may be on board as observers at the discretion of the evaluator.

   b. The boat being used shall have no disabling casualties. The operational commander shall address all restrictive deficiencies as necessary with written waivers as required in Chapter 4, Section E.

   c. Duty standing certified boat crews shall normally perform at least two required exercises; one during daylight hours and one at night. Non-duty standing certified personnel including the Commanding Officer (CWO only), Officer in Charge, Executive Petty Officer, Station (small) Supervisor, Senior Boatswain's Mate (at units commanded by a commissioned officer), Engineering Petty Officers, boat engineers, and boat crew members shall perform at least one required exercise.

NOTE: At all units, the Commanding Officer (CWO only), Officer in Charge, Executive Petty Officer, Engineering Petty Officer, and senior Boatswain's Mate (for units commanded by a commissioned officer) will be expected to perform at least one underway exercise if they have been assigned to the unit for more than six months.

   d. Sorties shall at a minimum include core drills as listed below.

D. REQUIRED EXERCISES (CORE DRILLS). Each underway exercise shall at a minimum include one or more of the core drills listed below.

1. **Day/Night Navigation and Piloting**
2. **Towing (UTB/MLB only)**
3. **Buoy Operations – Mooring Pull (BUSL only)**
4. **De-watering (UTB/MLB only)**
5. **Man Overboard (MOB) Recovery**

E. OPTIONAL EXERCISES. Optional exercises may be conducted in conjunction with, but not simultaneous to, required exercises. Please make note that procedures for optional drills may not be specifically addressed in the Operator's Handbooks or other references. In order to improve standardized procedures, please notify the National Motor Lifeboat School, UTB Systems Center or National Aids to Navigation School where omissions/deviations may exist.

1. **Reduced Visibility Navigation**
2. **Crewmember Piloting Proficiency**

3. **Search Patterns (Precision and Drifting)**

   a. Sector - Single Unit (VS)

   b. Expanding Square - Single Unit (SS)

   c. Creeping Line - Single Unit (CS)

   d. Trackline - Single Unit, Non-return (TSN)

   e. Trackline - Single Unit, Return (TSR)

   f. Parallel - Single Unit (PS)

4. **Basic Engineering Casualty Control Exercises (BECCE)**

   a. Fire in Engine Room (41'UTB, 44'MLB, 47'MLB, 49'BUSL)

   b. Loss of Steering (cable/hydraulics-41'UTB) (hydraulics-44'MLB, 47'MLB) (cable/hydraulics 49'BUSL)

   c. Loss of Steering (jammed rudder) (41'UTB)

   d. Collision with Submerged Object (41'UTB, 44'MLB, 47'MLB)

   e. Accidental Grounding (44'MLB, 47'MLB,)

   f. Loss of Main Engine Lube Oil Pressure (41'UTB, 44'MLB, 47'MLB, 49'BUSL)

   g. Main Engine High Water Temperature (41'UTB, 44'MLB, 47'MLB, 49'BUSL)

   h. Reduction Gear Failure (44'MLB, 47'MLB, 49'BUSL)

   i. Loss of Control of Engine RPM (44'MLB, 47'MLB, 49'BUSL)

   j. Loss of Fuel Oil Pressure (44'MLB, 47'MLB, 49'BUSL)

F. EVALUATION PROCEDURES. Evaluators shall assess boat crew proficiency and performance as follows:

1. **Pre-Brief.** Evaluators shall conduct a pre-brief before the exercise commences.

2. **Basis for Evaluations.** Evaluations will be based on how well each crewmember performs their duties. Each exercise provides a setting for the boat crew member to demonstrate required skills.

3. **Criteria.** Evaluators shall measure and evaluate boat crew performance and proficiency using the following criteria:

a. Procedures and methods appropriate for the situation,

b. Adherence to boat crew performance standards,

c. Crew member familiarity with boat systems, boat outfit equipment, and the stowage plan,

d. Crew member proficiency as an individual and as a team member, (team coordination and risk assessment),

e. Effective coxswain communications, including briefings and task assignments,

f. Crew understanding of commands and safe performance of tasks.

4. **De-Brief.** Evaluators shall de-brief the boat crew at the end of each exercise. This de-brief is normally conducted dockside.

G. ADDITIONAL ASSESSMENT REQUIREMENTS. Operational commanders may impose additional assessment requirements due to unique operational requirements for specific units. Requirements contrary or inconsistent with published standard procedures are prohibited. Operational commanders should request written modification of procedures from Commandant (G-OCS), via the National Motor Lifeboat School, UTB Systems Center or National Aids to Navigation School in cases where approved procedures are insufficient.

COAST GUARD BOAT READINESS AND STANDARDIZATION PROGRAM

Summary of Directives

Directive	Subject Matter
1. **Training, Operations and General Information.**	
a. Boat Crew Seamanship Manual, COMDTINST M16114.5 (series)	Training Manual
b. Aids to Navigation Manual-Administration, COMDTINST M16500.7 (series)	AtoN administration procedures and requirements.
c. Aids to Navigation Manual-Positioning, COMDTINST M16500.1 (series)	AtoN positioning procedures and requirements.
d. Aids to Navigation Manual-Technical, COMDTINST M16500.3 (series)	AtoN technical procedures and requirements.
e. Aids to Navigation Manual-Seamanship, COMDTINST M16500.21 (series)	AtoN Operating Procedures
f. Boat Crew Qualification Guide Vol. III - Engineer, COMDTINST M16114.6 (series)	Qualification Guide
g. Boat Crew Training Manual, COMDTINST M16114.9 (series)	Training, qualification, and certification procedures.
h. Boat Crew Qualification Guide Vol. I - Crew Member, COMDTINST M16114.10 (series)	Qualification Guide
i. Boat Crew Qualification Guide Vol. II - Coxswain, COMDTINST M16114.11 (series)	Qualification Guide
j. Boat Crew Qualification Guide Vol. IV - Heavy Weather Coxswain, COMDTINST M16114.26 (series) **Under development**	Qualification Guide
k. Boat Crew Qualification Guide Vol. V - Surfman, COMDTINST M16114.27 (series) **Under development**	Qualification Guide

l. 41' UTB Operator's Handbook, COMDTINST M16114.2 (series)	Operating procedures, capabilities, functional configuration, requirements, boat outfit/stowage plans, and emergency procedures.
m. 44' MLB Operator's Handbook, COMDTINST M16114.3 (series)	" " "
n. 47' MLB Operator's Handbook, COMDTINST M16114.25 (series)	" " "
o. 49' Buoy Stern Loading (BUSL) Boat Operator's Handbook, COMDTINST M16114.22 (series)	" " "
p. Non-Standard Boat Operator's Handbook, COMDTINST M16114.28 (series)	" " "
q. Boat Crew Utilization, COMDTINST 5312.16	Crew endurance (fatigue).
r. Minimum Boat Crew Size for Coast Guard Boats, COMDTINST 16233.1	Crew sizes for boats.
s. Operational Risk Management COMDTINST 3500.3	Risk assessment and management.
t. Operator's Handbook or Manufacturer's Operational and/or Technical Publications	Operating procedures, capabilities, functional configuration requirements, boat outfit/stowage plans, and emergency procedures.
u. Personnel Qualification Standard (PQS) Buoy Deck Operations, COMDTINST M3502.12 (series)	Buoy deck operations PQS Oxyacetylene PQS
v. Personnel Qualification Standard (PQS) River Tender Operations, COMDTINST M3502.12 (series)	Chainsaw PQS
w. Short Range Aids to Navigation Servicing Guide, COMDTINST M16500.19 (series)	AtoN servicing procedures and requirements.
x. Coast Guard Station Operations Manual, COMDTINST M3100.6 (series)	Training requirements for stations.

2. **Naval Engineering**

a. Naval Engineering Manual, COMDTINST M9000.6 (series)	Engineering standards and practices.
b. Coatings and Color Manual, COMDTINST M10360.3 (series)	Preservation, coating, color and marking requirements for boats.
c. 41' UTB Preventative Maintenance System Manual, Tech. Pub. 2061	Preventative and corrosion maintenance procedures.
d. 44' MLB Preventative Maintenance System Manual, Tech. Pub. 2062	" " "
e. 47' MLB Preventative Maintenance System Manual, Tech. Pub. 3343	" " "
f. 49' BUSL Preventative Maintenance System Manual, Tech. Pub.	" " "
g. Rescue and Survival Systems Manual, COMDTINST M10470.10 (series)	Function, configuration, maintenance, and inspection of rescue and survival equipment.
h. NSTM Chapter 079 V2, Damage Control-Practical Damage Control, Section 079-22.19 through 079-22.54	Maintaining watertight integrity.
i. Manufacturer's Technical Publications	Engineering information for specific boats.

3. **Management**

a. Coast Guard Regulations Manual, COMDTINST M5000.3 (series)	
(1) Chapter 4-1	CO/OIC responsibilities relating to readiness and training.
(2) Chapter 5-1	Authority & responsibility of a coxswain.

b. Boat Management Manual, COMDTINST M16114.4 (series)	Boat management and reporting.
c. Operational Mission Performance Expectations-Groups, Stations, Aids to Navigation Teams, COMDTINST M16501.6 (series)	Operational missions.
d. Directives issued by Districts, Maintenance and Logistics Commands, Operational and Unit Commanders	Maintenance and logistics support policies. Organizational, intermediate and depot level maintenance support responsibilities.

4. **Supply Support**

a. Management Information for Configuration and Allowances (MICA) for the 41' UTB, ELCINST M4441.41 (series)	Spare/repair parts allowance requirements. Boat outfit parts list.
b. 44' MLB Boat Outfit and System Support Manual, ELCINST M4441.72 (series) (to become MICA)	" " "
c. Management Information for Configuration and Allowances (MICA) for the 47' MLB, ELCINST M4441.47 (series)	" " "
d. Management Information for Configuration and Allowances (MICA) for the 49' BUSL, ELCINST M4441.49 (series)	" " "

Administrative Checklist
Certification, Re-Certification and Currency Maintenance for Unit Boat Crews

Unit: _____ Date:_____

Inspector: _____

GENERAL: This checklist is designed to aid group, and unit staffs in complying with inspection and currency maintenance standards as set forth in this manual. Group staffs, as a guideline during inspections should use it. Use of this checklist is recommended for Group Ready for Ops (RFO) teams. **Note**: Within this text, "crewmember" refers to a specific position where "crew member" refers to any assigned position.

REFERENCE: Boat Crew Training Manual, COMDTINST M16114.9 (series)
Coast Guard Station Operations Manual, COMDTINST M3100.6 (series)
Naval Engineering Manual, COMDTINST M9000.6 (series)
Coast Guard Regulations, COMDTINST M5000.3 (series)

Maintenance of Command Certification.

	SAT	UNSAT
a. Are the CO (CWO)/OIC, XPO, Supervisor (Station Small), or Senior Boatswain's Mate (under a CO) current and certified surfman/coxswains in writing for each standard boat? Ref: BCTM Chap. 2		
b. Are the CO/XO (other than CWO) certified as boat crewmember in writing for each standard boat assigned? Ref: BCTM Chap. 2		
c. Has the CO/OIC's certification letter and currency maintenance documentation been signed by the Operational Commander or designated representative? Ref: BCTM Chap. 2		
d. Is the EPO certified as boat engineer in writing on each standard boat? Ref: M9000 and BCTM Chap. 2		

Boat Crew Examining Board.

	SAT	UNSAT
a. Are all members of the BCEB designated in writing? Ref: BCTM Chap. 2		
b. Does the BCEB consist of at least 1 experienced coxswain and 1 experienced engineer? Ref: BCTM Chap. 2		
c. Are written reports of the results of check rides and board interviews being provided to the unit commander? Ref: BCTM Chap. 2		

Training Petty Officer. **SAT UNSAT**

a. Has the unit commander designated the Training Petty Officer in writing? Ref: M5000.3		
b. Are all training records set up and maintained in proper order? Ref: BCTM Chap. 6		

Initial Certification. **SAT UNSAT**

a. Are qualification task items being documented for each boat type? Ref: BCTM Chap. 4		
b. Was a comprehensive check ride given for each boat type? Ref: BCTM Chap. 4		
c. Did the individual receive a written recommendation from the BCEB? Ref: BCTM Chap. 2		
d. Has the unit commander endorsed a certification letter listing specific boat types? Ref: BCTM Chap. 4		
e. Was a member certified as a boat crewmember on the type boat assigned prior to certification as an engineer? Ref: BCTM Chap. 4		
f. Was a member certified as a boat crewmember on any boat type prior to certification as a coxswain? Ref: BCTM Chap. 4		
g. Was a member certified as a boat coxswain on a SRB/MLB prior to certification as heavy weather coxswain? Ref: BCTM Chap. 4		
h. Was a member certified as a heavy weather coxswain on a SRB/MLB prior to certification as surfman? Ref: BCTM Chap. 4		

Re-Certification. **SAT UNSAT**

a. Is the documentation available for the member's initial certification for the specific boat type assigned?		
b. Did the member pass the physical fitness requirements with-in the past year from the re-certification date? Ref: BCTM Chap. 4		
c. Was a comprehensive check ride given for each boat type? Ref: BCTM Chap. 4		
d. Did the individual receive a written recommendation from the BCEB? Ref: BCTM Chap. 2		
e. Has the unit commander endorsed a re-certification letter listing specific boat types? Ref: BCTM Chap. 4		

Currency Maintenance. **SAT UNSAT**

a. Is the unit's AOR designated in writing? Ref: BCTM Chap. 5		
b. Are all assigned crew members completing at least 10% of their underway time at night? Ref: BCTM Chap. 5		
c. Are all assigned certified boat crew members logging a minimum of 36 hours and a minimum of 12 hours per boat type over a 6 month period? Ref: BCTM Chap. 5		
d. Is the annual physical fitness requirement being performed by all crew members and documented in their individual training records? Ref: BCTM Chap. 3		
e. Do training records have documentation for the biennial requirement for TCT? Ref: BCTM Chap. 5		
f. Do all coxswains/surfmen have a current (5-year) letter of completion for NAVRUL or DWO (also DWO-INTR/O)? Ref: BCTM Chap. 5		
g. Are the assigned boat crew members currency documentation being verified and endorsed by the unit commander? Ref: BCTM Chap. 4		
h. Is currency maintenance being tracked, maintained and documented by boat type? Ref: BCTM Chap. 5		
i. Are all boat crew members completing the currency maintenance requirements within the six-month allotted period? Ref: BCTM Chap. 5		
j. If an individual failed to complete all currency maintenance tasks within the allotted time, were the requirements for re-certification met? Ref: BCTM Chap. 4		
k. Are reserve personnel maintaining their qualification, certification and currency maintenance? Ref: BCTM Chap. 5		

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RESCUE AND SURVIVAL SYSTEMS CHECKLIST

Unit: _____ Date: _____

Inspector: _____

Item	Sat	Unsat
Using Current M10470.10 (series)		
Interim Changes completed:		
Rescue and Survival PO designated in writing by command. (1.B.2)		
Waiver requested for alternate SOS (G-OCS-2) (1.C.2)		
AF Form 538 used to document all issues of personal clothing and equipment. (3.A.2)		
Appropriate undergarments issued for dry suits (3.C.1) (insulated boots, thermal underwear (2), thermal socks (2), glove sys, headgear)		
MPC 2-1; CG-P1B or CG-P5 or CG-P6	XXX	XXX
• Separate Maintenance Log for each pump		
• Pump Type, Serial No. and In-Service Date recorded on Maintenance Log		
• Acceptance, Monthly, Quarterly and Post Use Inspections documented		
MPC 2-2; Stokes Litter	XXX	XXX
• Must be Stainless Steel (2.A.4)		
• Proper Patient Restraint Straps (gray, black, red, blue, green)		
• Floatation, Mesh, and ballast installed properly		
• Weight tested w/proper hoisting sling if designated for hoisting		
• Red Retro tape above gray restraint strap		
• White Retro tape above green restraint strap		
• "Helicopter Hoistable" tags in place on sling		
• R&S PO measured compression collars w/ Vernier Calipers		
• Manila lines have snap hook		
• Separate Maintenance Log for each litter, litter has unique ID		
• Serial No. and In-Service Date recorded on Maintenance Log		
• Acceptance, Semi-Annual, Quarterly and Post Use Inspections documented		

MPC 2-3; Ring Buoy	XXX	XXX
• Separate Maintenance Log for each Ring Buoy		
• Serial No. and In-Service Date recorded on Maintenance Log		
• Acceptance and Semi-Annual Inspections documented		
• Date of Inspection stenciled on light (1/2" lettering)		
MPC 3-1; Anti-Exposure Coverall	XXX	XXX
• Coverall has unique SN, 1/2" stencil, top inside slide fastener cover		
• Separate Maintenance Log for each Coverall		
• Serial No. and In-Service Date recorded on Maintenance Log		
• Semi Annual Inspection properly documented		
• Recommend Velcro on hood (BCSM)		
MPC 3-2; Dry Suit	XXX	XXX
• Dry Suit has unique SN, 1/2" stencil, inside suit adjacent to slide fastener		
• Separate Maintenance Log for each Dry Suit		
• Serial No. and In-Service Date recorded on Maintenance Log		
• Semi Annual Inspection properly documented		
MPC 3-3; Boat Crew Survival Vest	XXX	XXX
• Vest has unique SN, 1/2" stencil, on right hand pocket flap.		
• Separate Maintenance Log for each Vest		
• Serial No., In-Service Date and Pyro lot no. recorded on Maintenance Log		
• Semi Annual Inspection properly documented		
MPC 4-1; Type I or III PFD	XXX	XXX
• PFD has unique SN, 1/2" stencil, on CG Approval label		
• Separate Maintenance Log for each PFD		
• Serial No., In-Service Date and PFD Type recorded on Maintenance Log		
• Semi Annual Inspection properly documented		
Liferaft	XXX	XXX
• Weekly Inspection are Conducted and tracked (5.A.8)		
• Separate Maintenance Log for each Liferaft		
• Serial No., In-Service Date and Liferaft Type recorded on Maintenance Log		
• Annual Inspection Certificate placed in Boat Record		
Helmets are proper style and have SOLAS retro tape and pile tape attached. (3.B.2)		
Multiple Person Recovery System (MPRS)	XXX	XXX
• Separate Maintenance Log for each MPRS		
• Serial No. and In-Service Date recorded on Maintenance Log		
• Annual Inspection performed at an Authorized Facility (5.D.4)		
PFD's available as "Ready Issue" have PML and Whistle		

MPC LPSV; Life Preserver Survival Vest		
• Vest has unique SN, ½" stencil, on right hand pocket flap		
• Separate Maintenance Log for each vest		
• Serial No., In-Service Date and Pyro lot No. recorded on Maintenance Log		
• Required Inspections properly documented		
• LPSV PQS completed by each crewmember using the device		

Additional Comments (Use for Explanation of any Item Checked UNSAT):

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INDIVIDUAL TRAINING RECORD REVIEW

UNIT_____ RECORD OF_____ DATE_____

INSPECTOR _____

BOAT CREW POSITION_____ CERTIFICATION DATE_____

1. INSIDE FRONT COVER
   a. Completed indoctrination check-off sheets_____.
   b. Mis-filed Document(s)_____ Description_____

2. SECTION 1
   a. Certification Letters or Administrative Remarks (CG-3307) regarding PQS/JQR certification, revocation, and/or recertification _____.
   b. Small Arms Firing Reports (3029A) _____.
   c. Mis-filed Documents____ Description_____

3. SECTION 2
   a. Formal School Completion Letter(s)/Certificates_____
   b. Correspondence Course Letter(s)____.
   c. DWONR/NAVRUL____ Date____ Expired____
   d. Mis-filed Documents____ Description_____

4. SECTION 3
   a. Copies of correspondence related to advancement or promotion._____
   b. Performance Qualifications ____
   c. BO/BTM PQS_____.
   d. Boat crew qual PQS sheets_____.
   e. BCEB results_____.
   f. Record of U/W drills and operations_____. Night Operations (10%)____
   g. AOPS or TMT report reflecting completion of the most recent recurrent training____.
   d. Misfiled Documents____ Description_____

5. SECTION 4
   a. Record of TCT Training (Frequency-two years)____ Expired____
   b. Record of Lectures ____
   c. Mis-filed Documents____ Description_____

6. SECTION 5
   a. Misc Training Info____.

7. Total hour's u/w_____.

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UNDERWAY DRILL CHECKLISTS

REQUIRED EXERCISES

- Day/Night Navigation and Piloting (UTB/MLB)
- Day/Night Navigation and Piloting (BUSL)
- Towing (UTB/MLB)
- Buoy Operations – Mooring Pull (BUSL)
- Dewatering (UTB/MLB)
- Man Overboard (MOB) Recovery (UTB/MLB/BUSL)

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UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: DAY/NIGHT NAVIGATION AND PILOTING (UTB/MLB) SCORE: SAT / UNSAT

TERMINAL PERFROMANCE OBJECTIVE: Pilot a CG boat and arrive at a given position within standards.

CONDITIONS: Given a CG Boat with an operational GPS, RADAR, radio, compass, corrected chart of the operating area, and a certified crew operating within the prescribed limitation:

STANDARD: Departure made within 15 minutes of notification that exercise commences. Courses accurately plotted to turn points and given position within 3 degrees. Arrive at position within 5 minutes of ETA, accurate to within 100 yds and in accordance with procedures as set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
Group and Stations Communications	M16120.7 (series)
Watchstander Guide	
41' UTB Operator's Handbook	M16114.2 (series)
44' MLB Operator's Handbook	M16114.3 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue and Survival Systems Manual	M10470.10 (series)
Navigation Rules, International-Inland	M16672.2 (series)
GPS Operator's Handbook	Type Specific
RADAR Operator's Handbook	Type Specific

ENABLING OBJECTIVES:

1. PREPARATIONS:	SAT	UNSAT	REMARKS
a. Course and destination plotted accurately. (N)			
b. Variation and deviation factored in course. (N)			
c. All DR times and ETA calculated and labeled. (N)			
d. Chart corrected. (N)			
e. Depth at destination stated. (N)			
f. Distance to destination from shore and entrance stated. (N)			
g. Weather and tidal conditions stated. (N)			
h. Sea and bar conditions stated. (N/P)			
i. Direction and velocity of current stated. (N)			
j. Navigation lights energized (P)			

1. PREPARATIONS: (cont.)	SAT	UNSAT	REMARKS
k. Windows open if necessary. (P)			
l. Coxswain briefed crew. (T)			
m. Watertight integrity set. (P)			
n. Night vision not compromised (P/N)			
o. Departure made within 15 minutes. (S)			
p. Minimum of two waypoints entered into GPS. (P/N/O)			

2. UNDERWAY NAVIGATION:	SAT	UNSAT	REMARKS
a. Sound signals utilized. (P)			
b. Conduct of own vessel IAW Rules of the Road. (P/B)			
c. Aids to Navigation identified and utilized. (P/T)			
d. Effects of set and drift considered/compensated. (P/N)			
e. Course guidance provided to helm. (P)			
f. Speed over ground stated. (N)			
g. Radar used to supplement DR			
1. RADAR tune. (P)			
2. Check accuracy of course. (N)			
3. Adjust DR courses. (N)			
4. Ranges & Bearings used. (N)			
5. Waypoint information displayed on Radar screen. (P/O/E)			
6. Optimum use of Radar functions/capabilities. (N)			
h. Fathometer used to verify depth. (N)			
i. GPS:			
1. Course to steer/XTE used to maintain track line within .1 NM. (N/P/E)			
2. Utilize SOG/ETA function. (N/P/E)			
3. Final destination waypoint entered. (N/P/E)			

2. UNDERWAY NAVIGATION: (cont.)	SAT	UNSAT	REMARKS
j. DR navigation (Coxswain demonstrated application of time/distance/speed relationship). (N)			
k. Accuracy of final position within 100 yards. (N/S)			
l. Arrived O/S within 5 minutes of ETA. (N/S)			

3. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn. (P/T)			
g. Safety of vessel and crew not jeopardized. (S/T)			
h. Coxswain kept unit informed during evolution. (P/T)			

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UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: DAY/NIGHT NAVIGATION AND PILOTING (BUSL) SCORE: SAT / UNSAT

TERMINAL PERFROMANCE OBJECTIVE: Pilot a CG boat and arrive at a given position within standards.

CONDITIONS: Given a CG Boat with an operational DGPS, RADAR, radio, compass, SW III computer with electronic charting system and current electronic updates, ATONIS/APPS program, corrected electronic and paper chart of the operating area, and a certified crew operating within the prescribed limitation:

STANDARD: Departure made within 15 minutes of notification that exercise commences. Utilizing the Electronic Charting System, planned route and appropriate turning points entered, arrival alarms set, courses accurately plotted to turn points and given position within 3 degrees. Arrive at position within 5 minutes of ETA, accurate to within 30 yds and in accordance with procedures as set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
Groups and Stations Communications Watchstander Guide	M16120.7 (series)
49' BUSL Operator's Handbook	M16114.22 (series)
Rescue and Survival Systems Manual	M10470.10 (series)
Navigation Rules, International-Inland	M16672.2 (series)
DGPS Operator's Handbook	Type Specific
RADAR Operator's Handbook	Type Specific
Mariners Eye-25 Owners Manual	ME-25 for Windows
Echo Sounder Operational Manual	Raytheon V850
Automatic Pilot Operational Manual	COMNAV Marine 2001
Automated Aid Positioning Program (AAPS)	Current Version
Aids to Navigation Manual - Positioning	M16500.1 (series)
Aids to Navigation Manual - Seamanship	M16500.21 (series)
Flux Compass Handbook	Globemaster

ENABLING OBJECTIVES:

1. PREPARATIONS:	SAT	UNSAT	REMARKS
a. Course and destination plotted accurately utilizing the Mariners Eye program and the APPS program. Paper chart must be out and available for verification purposes. (N)			
b. Variation and deviation factored in course. (N)			
c. All DR times and ETA calculated and labeled. (N)			
d. Electronic and paper chart corrected. (N)			
e. Depth at destination stated. (N)			
f. Distance to destination from shore and entrance stated. (N)			
g. Weather and tidal conditions stated. (N)			

h. Sea conditions stated. (N/P)			
i. Direction and velocity of current stated. (N)			
j. Navigation lights energized (P)			
k. Windows open if necessary. (P)			
l. Coxswain briefed crew. (T)			
m. Water tight integrity set. (P)			
n. Night vision not compromised (P/N)			
o. Departure made within 15 minutes. (S)			
p. Complete course and destination programmed into computer. (N/O)			

2. UNDERWAY NAVIGATION:	SAT	UNSAT	REMARKS
a. Sound signals utilized. (P)			
b. Conduct of own vessel IAW Rules of the Road. (P/B)			
c. Aids to Navigation identified and utilized. (P/T)			
d. Effects of set and drift considered/compensated. Track set and drift compared to computer compensation. (P/N)			
e. Course guidance provided to helm. (P)			
f. Speed over ground stated. (N)			
g. Radar used to supplement DR			
1. RADAR tune. (P)			
2. Check accuracy of course. (N)			
3. Adjust DR courses. (N)			
4. Ranges & Bearings used. (N)			
5. Automatic pilot calibrated immediately after departure from dock/berth. (P/O/E)			
6. Optimum use of Radar functions/capabilities. (N)			
h. Fathometer used to verify depth. (N)			
i. DR navigation (Coxswain demonstrated application of time/speed/distance relationship). (N)			
j. Accuracy of final position within 30 yards. (N/S)			
k. Arrived O/S within 5 minutes of ETA. (N/S)			

3. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T)			
d. Crew always aware of others location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn. (P/T)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept unit informed during evolution. (P/T)			

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UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN:_____ENGINEER:_____

CREWMEMBER:_____CREWMEMBER:_____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: TOWING (UTB/MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: Pilot to a disabled vessel, take into stern tow, transit to a safe harbor, shift to an alongside tow and moor.

CONDITION: Given a CG boat with, required towing equipment, an operational GPS, RADAR, radio, compass, a certified crew operating within prescribed limitations, and a scenario of a disabled vessel, and using the heavy weather approach (bow into the predominate force).

STANDARD: In accordance with:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
41' UTB Operator's Handbook	M16114.2 (series)
44' MLB Operator's Handbook	M16114.3 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue and Survival Systems Manual	M10470.10 (series)
Navigation Rules, International-Inland	M16672.2 (series)
CG Addendum to National SAR Manual	M16130.2 (series)

ENABLING OBJECTIVES:

1. PREPARATIONS:	SAT	UNSAT	REMARKS
a. Coxswain/crew gather following information:			
1. Position of vessel in distress. (P)			
2. Number of POB, in PFD's. (P)			
3. Nature of distress. (P)			
4. Amplifying information as listed on SAR Check sheet. (P)			
b. Position of disabled vessel plotted on corrected chart. (N)			
c. Track lines to position of disabled vessel plotted. (N)			
d. Disabled vessel's position entered into GPS as waypoint. (N)			
e. Energize all navigational equipment. (N)			
f. Energize navigation lights and sound signal (Night & Restricted Visibility). (N)			

2. O/S EVALUATIONS AND PREPARATIONS:	SAT	UNSAT	REMARKS
a. Establish communications between disabled vessel and response unit. (O)			
b. Perform on scene assessment of disabled vessel. (P)			
c. Brief crew on procedures. (T/P)			
1. Equipment to be passed (as required). (T/P)			
2. Assigned tasks and positions. (T/P)			
3. Approach to be made. (T/P)			
4. Passing the towline (bridle considered). (T/P)			
5. No turns on tow bitt until towline is secured on disabled vessel. (P)			
6. Discuss emergency breakaway procedures. (P)			
d. Disabled vessel briefed on emergency procedures: (T/P)			
1. Equipment to be passed (as required). (P/T)			
2. Towing procedures. (P)			
3. Emergency communications (P/T)			

3. PASSING TOWLINE/EQUIPMENT:	SAT	UNSAT	REMARKS
a. Equipment passed as required. (i.e. pump, drogue, radio). (P)			
b. Approach made into predominate force. (B/P)			
c. Coxswain station keep in optimal position. (O/B/T)			
d. Towline passed using heaving line(s). (P)			
e. Line paid out and tended away from screws. (B)			
f. A working turn placed on tow bitt after towline is secured on disabled vessel. (O)			
g. Initial course set and towline adjusted. (B)			
h. Tow bitt made up. (O)			
i. Tow watch set and maintained. (P/T)			
j. Changed navigation lights (if needed). (N)			
k. Changed sound signals. (if needed). (N)			

3. PASSING TOWLINE/EQUIPMENT: (cont.)	SAT	UNSAT	REMARKS
l. Chafing gear installed. (if needed). (P)			
m. Safe towing speed maintained. (B/P)			
n. Disabled vessel status checked. (P)			

4. ALONGSIDE TOW:	SAT	UNSAT	REMARKS
a. Brief crew on procedures. (T)			
b. Disabled vessel briefed on procedures. (T)			
c. Deck prepared for alongside tow. (i.e. rigged fenders and alongside lines made ready). (O)			
d. Break tow bitt. (O)			
e. Set and drift of both vessels considered before making approach. (P)			
f. Approach made. (B)			
g. Drop tow approach or Back down approach properly executed. (P/O)			
h. Alongside lines passed to disabled vessel. (O/B)			
i. Alongside lines adjusted and control of vessel established. (O)			
j. Changed navigation lights. (if required). (N)			
k. Mooring instructions discussed with disabled vessel. (P/T)			
l. Bow pointer briefed and posted in effective location. (T)			
m. Vessels moored. (B/T)			

5. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			

5. CREW TEAMWORK AND COORDINATION: (cont.)	SAT	UNSAT	REMARKS
f. Crew safety and survival equipment properly worn. (P/T)			
g. Safety of vessel and crew not jeopardized. (S/T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME:_____BOAT #_____DATE:_____

COXSWAIN:_____ENGINEER:_____

CREWMEMBER:_____CREWMEMBER:_____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: BUOY OPERATIONS—MOORING PULL (BUSL) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: Safely conduct buoy deck operations.

CONDITIONS: Given a CG boat assigned and outfitted to work buoys and a certified crew operating within prescribed limitations.

STANDARD: Buoy hauled and reset in accordance with:

Rescue and Survival Systems Manual	M10470.10 (series)
Navigation Rules, International-Inland	M16672.2 (series)
Aids to Navigation Manual-Seamanship	M16500.21 (series)
Aids to Navigation Manual-Technical	M16500.3 (series)
Short Range Aids to Navigation Servicing Guide	M16500.19 (series)
Aids to Navigation Manual-Positioning	M16500.1 (series)
Aids to Navigation Manual-Administration	M16500.7 (series)
Operational Risk Assessment	CI 3500.3

ENABLING OBJECTIVES:

1. PREPARATIONS:	SAT	UNSAT	REMARKS
a. Material broken out and available. (P)			
b. Equipment on deck properly secured for transit. (P)			
c. Crew in personal protective equipment. (P/S)			

2. WORKING THE BUOY:	SAT	UNSAT	REMARKS
a. Safe approach made to the aid. (B)			
b. Proper day-shapes hoisted. (N)			
c. Buoy safely and efficiently hooked (including the use of mechanical devices). (P)			
d. Cross deck fair led, safely attached to buoy. (P)			
e. Standard hand signals used. (P/T)			
f. Buoy kept low to deck, handled smoothly. (P)			
g. Chain safely placed in chain stopper. (P)			
h. Appropriate method selected to secure buoy on deck. (P)			

2. WORKING THE BUOY (con't):	SAT	UNSAT	REMARKS
i. Appropriate tools and procedures used for disconnecting the mooring. (P)			
j. Mooring hoisted using safe, efficient method. Chain kept "up and down." Horse collar used. (P)			

3. SETTING BUOY	SAT	UNSAT	REMARKS
a. Chain faked and ready. (P)			
b. Shackle split keys spread at a 45-degree angle. (P)			
c. Buoy set and vessel maneuvered clear of buoy without damage to vessel or aid. (P)			

4. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain and Buoy Deck Supervisor briefed crew of specific job, safety, and mission responsibilities. (P)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain and buoy deck supervisor/safety supervisor provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (T/P/O)			
g. Safety of vessel not jeopardized. (T)			
h. Safety of crew not jeopardized. (T)			
i. Risk assessment made and used. (T)			

UNIT NAME:_____BOAT #_____DATE:_____

COXSWAIN:_____ENGINEER:_____

CREWMEMBER:_____CREWMEMBER:_____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: DEWATERING (UTB/MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: Assess the flooding of a vessel, take action and de-water.

CONDITIONS: Given a CG boat with required dewatering equipment, an operational GPS/RADAR, radio, compass, a certified crew operating within prescribed limitations, and a disabled vessel with a scenario of taking on water. The Coxswain and crew shall use Team Coordination skills and prosecute the evolution.

STANDARD: In accordance with:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
41' UTB Operator's Handbook	M16114.2 (series)
44' MLB Operator's Handbook	M16114.3 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue and Survival Systems Manual	M10470.10 (series)
Navigation Rules, International-Inland	M16672.2 (series)
CG Addendum to National SAR Manual	M16130.2 (series)

ENABLING OBJECTIVES:

1. PRE-ARRIVAL PREPARATIONS:	SAT	UNSAT	REMARKS
a. Coxswain/crew gather information:			
1. Position of vessel in distress. (N)			
2. Number of POB, in Pfd's. (P)			
3. Nature of distress. (P)			
4. Amplifying information as listed on SAR Check sheet. (P)			
5. Position of disabled vessel plotted on corrected chart. (N)			
b. Track lines to position of disabled vessel plotted. (P)			
c. Disabled vessel's position entered into GPS as waypoint. (N/O)			
d. Energize all navigational equipment. (P)			
e. Energize navigation lights and sound signal. (Night/Restricted Visibility) (N/P)			

2. O/S EVALUATIONS AND PREPARATIONS:	SAT	UNSAT	REMARKS
a. Establish communications between disabled vessel and response unit. (P/O)			
b. Visually inspected and discussed current condition with disabled vessel. (evaluate stability, amount of water on board, depth of water in space, watertight compartmentation or common bilge, etc.). (T/P/O)			
c. Coxswain and crew discussed course of addition. (T)			
d. Removal of POB evaluated and stated. (T)			
e. Dewatering capabilities of Disabled vessel determined. (P)			
f. Station advised (assistance requested if needed). (P/O)			
g. The level of risk associated with attempting to dewater (salvage) the D/V stated.) (T/B/O/P)			
h. Approach made to disabled vessel. (B)			

3. DEWATERING OPERATIONS:	SAT	UNSAT	REMARKS
a. Appropriate dewatering device determined. (R/O/T)			
b. Disabled vessel briefed on dewatering intentions. (P)			
c. Equipment passed (if required)(P)			
d. De-watering device used correctly (Portable pump started within 6 pulls). (O)			
e. Dewatering done in a timely manner. (O/P)			
f. Determined if the flooding is controlled. (P/T)			

4. PLUGGING AND PATCHING:	SAT	UNSAT	REMARKS
a. Source of flooding identified. (T/P)			
b. Proper materials used to reduce or stop flooding. (T/P)			
c. Flood watch set and maintained. (T/P)			

5. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			

5. CREW TEAMWORK AND COORDINATION: (cont.)	SAT	UNSAT	REMARKS
c. Crew assisted each other as needed. (T)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn. (P/T)			
g. Safety of vessel and crew not jeopardized. (S/T)			
h. Coxswain kept station informed during evolution. (P/T)			

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UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: MAN OVERBOARD (MOB) RECOVERY (UTB/MLB/BUSL) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: Recover a simulated crewmember fallen overboard.

CONDITIONS: Given a CG boat with an operational GPS or DGPS, radio, certified crew operating within prescribed limitations, and a scenario of one crewmember (life like OSCAR) fallen overboard and unconscious in the water.

STANDARD: MOB must be recovered within 3 minutes and in accordance with:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9C
41' UTB Operator's Handbook	M16114.2 (series)
47' MLB Operator's Handbook	M16114.25 (series)
44' MLB Operator's Handbook	M16114.3 (series)
49' BUSL Operator's Handbook	M16114.22 (series)
Rescue and Survival Systems Manual	M10470.10 (series)
Navigation Rules, International-Inland	M16672.2 (series)
CG Addendum to National SAR Manual	M16130.2 (series)
American Red Cross First Aid Course	

ENABLING OBJECTIVES:

1. EXECUTION:	SAT	UNSAT	REMARKS
a. Report of man overboard passed to coxswain. (T)			
b. Pointer/lookout watch assigned & positioned. (P)			
c. Life ring and strobe deployment discussed. (P)			
d. Sound signals discussed. (P)			
e. Establish electronic position using GPS/DGPS MOB Event function. (N)			
f. Spotlight or deck lighting used. (P)			
g. Crew briefed on pickup. (T)			
h. Determine general set & drift for approach based on prevailing weather. (N)			
i. Execute approach to MOB. (B)			
j. Execute direct pick-up of MOB. (P/B)			
k. MOB recovered within 3 minutes. (S)			

l. Crew demonstrates appropriate first aid. (P/T)			
m. Unit notified. (P/O)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T)			
d. Crew always aware of others location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn. (P/T)			
g. Safety of vessel and crew not jeopardized. (S/T)			
h. Coxswain kept unit informed during evolution. (P/T)			

UNDERWAY DRILL CHECKLISTS

OPTIONAL EXERCISES

NAVIGATION, PILOTING AND SEARCH PATTERNS

- Reduced Visibility Navigation
- Crewmember Piloting Proficiency
- Search Patterns (Precision Navigation Patterns)
- Search Patterns (Drifting Patterns)

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UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: REDUCED VISIBILITY NAVIGATION SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: Pilot the vessel, in reduced visibility, to a given position and return.

CONDITIONS: Given a CG boat with and operational GPS or DGPS, RADAR, radio, compass, corrected chart of the operating area, and a certified crew operating within the prescribed limitations.

STANDARD: Departure made within 15 minutes of notification that exercise commences. Course accurately plotted to turn points and given position within 3 degrees. Arrive within 100 yds of given position and in accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
41' UTB Operator's Handbook	M16114.2 (series)
44' MLB Operator's Handbook	M16114.3 (series)
47' MLB Operator's Handbook	M16114.25 (series)
49'BUSL Operator's Handbook	M16114.22 (series)
Navigation Rules, International-Inland	M16672.2 (series)
GPS/DGPS Operator's Handbook	Type specific
RADAR Operator's Handbook	AN/SPS 69

ENABLING OBJECTIVES:

1. PREPARATIONS:	SAT	UNSAT	REMARKS
a. Courses and destination plotted accurately. (N)			
b. Chart corrected. (N)			
c. Variation and deviation factored in course. (N)			
d. All DR times and ETA calculated and labeled. (N)			
e. Weather and tidal conditions stated. (N)			
f. Direction and velocity of current stated. (N)			
g. Sea and bar conditions stated. (P/T)			
h. Watertight integrity set. (P)			
i. Energized Navigation lights and sound signals (Night/Restricted Visibility). (P/O)			
j. Windows opened, if necessary. (P/O)			
k. Anchor rigged, if necessary. (P/O)			
l. All electronics energized. (P/O)			

1.PREPARATIONS: (cont.)	SAT	UNSAT	REMARKS
m. Lookout(s) designated and posted effectively. (P/N)			
n. Departure made within 15 minutes. (S)			

2. UNDERWAY NAVIGATION:	SAT	UNSAT	REMARKS
a. Sound signals utilized. (N)			
b. Security broadcast made, if appropriate. (P/O)			
c. Course guidance provided to helmsman. (N)			
d. Conduct of own vessel IAW Rules of the Road. (N)			
e. Aids to navigation identified and utilized. (N)			
f. Effects of set and drift considered/compensated. (N/P)			
g. Fixes plotted and confirmed by combination of DR, GPS, DGPS, RADAR and Fathometer. (N)			
h. Radar used to supplement DR using any combination of, EBL, VRM, cursor, floating EBL, to: (N)			
1. Check accuracy of course. (N)			
2 Adjust DR courses. (N)			
3. Correct for set & drift. (N)			
i. Radar tuned correctly. (N/P/O)			
j. Fathometer used to verify depth of water. (N)			
k. GPS/DGPS functions used as follows: (N)			
1. Determine course to steer. (N)			
2. Use Waypoints/Sail plan functions. (N/O)			
3. Use ETA function. (N/O)			
4. Use XTE function to determine set and drift and maintain track line within .1 NM (200 YDS). (N/O)			
5. Update ETA utilizing SOG function. (O)			
l. Arrive at given position within 100 yards. (N)			

3. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			

3. CREW TEAMWORK AND COORDINATION: (cont.)	SAT	UNSAT	REMARKS
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T)			
d. Crew always aware of others location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (S/T)			
h. Coxswain kept unit informed during evolution. (P/T)			

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UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: CREWMEMBER PILOTING PROFICIENCY SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: Crew pilots the boat back to the station, without the assistance of the coxswain.

CONDITIONS: Given a CG boat with an operational GPS or DGPS, RADAR, radio, compass, corrected chart of the operating area, and certified crew operating within prescribed limitations. The scenario is the coxswain becoming incapacitated and unable to pilot the boat.

STANDARD: Plot position of CG Boat in 5 minutes and within 100 yds of actual position in accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
41' UTB Operator's Handbook	M16114.2 (series)
44' MLB Operator's Handbook	M16114.3 (series)
47' MLB Operator's Handbook	M16114.25 (series)
49'BUSL Operator's Handbook	M16114.22 (series)
Rescue and Survival Systems Manual	M10470.10 (series)
Navigation Rules, International-Inland	M16672.2 (series)
GPS/DGPS Operator's Handbook	Type specific
RADAR Operator's Handbook	AN/SPS 69

ENABLING OBJECTIVES:

1. PREPARATIONS:	SAT	UNSAT	REMARKS
a. Unit notified of the situation. (P/O)			
b. Position plotted in 5 min. (S/N)			
c. Course and distance to destination plotted. (N)			
d. Variation and deviation factored in. (N)			
e. DR times and ETA calculated. (N)			
f. Shoal areas identified. (N)			
g. Set and Drift calculated or compensated using weather and tide. (N)			
h. Bar conditions discussed. (P/T)			
i. Navigation lights energized (Night/reduced visibility). (N)			
j. Crew member in charge briefed crew. (T/P)			
k. Anchoring of boat discussed. (T/P/O)			
l. Accuracy of position within 100 yds (N/S)			

2. UNDERWAY NAVIGATION:	SAT	UNSAT	REMARKS
a. Sound signals used, if appropriate. (N)			
b. Conduct of own vessel IAW the Rules of the Road. (N)			
c. Aids to navigation identified and utilized. (N/T)			
d. Night vision not compromised. (P)			
e. Course guidance provided to helm. (N/P)			
f. Radar bearings and ranges used to supplement DR. (N)			
g. Radar tuned correctly. (O)			
h. Fathometer used to verify depth of water. (N)			
i. GPS/DGPS functions used as follows: (N)			
1. Determine Course to steer. (N)			
2. Use Waypoints/Sail plan/Reverse sail plan. (O)			
3. Use ETA function. (O)			
4. Use SOG function. (O)			

3. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Crew member in charge briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Crew member provided appropriate and timely guidance throughout the evolution. (T)			
f. Crew safety and survival equipment properly worn and/or used. (R/T)			
g. Safety of vessel and crew not jeopardized. (S/T)			
h. Crew member in charge communicated with unit during operations. (T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: SEARCH PATTERNS (Precision Navigation Patterns) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: Pilot a CG boat and execute a search pattern.

CONDITIONS: Given a CG Boat with an operational GPS, RADAR, radio, compass, corrected chart of the operating area, certified crew operating within prescribed limitations. The Coxswain will be given a SAR scenario with a C2PC search pattern summary sheet or equivalent listing CSP and turn positions.

STANDARD: The CG Boat shall be underway within thirty minutes of being given search pattern and CSP. Turn points must be accurately plotted within 100yds and courses accurate within 3 degrees. Start at CSP within 100yds of plotted position. Boat shall complete search pattern within 5 minutes of ETA, and complete all turns within 50 yards of plotted position, in accordance with procedures as set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
41' UTB Operator's Handbook	M16114.2 (series)
44' MLB Operator's Handbook	M16114.3 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue and Survival Systems Manual	M10470.10 (series)
Navigation Rules, International-Inland	M16672.2 (series)
GPS Operator's Handbook	Type specific
RADAR Operator's Handbook	AN/SPS 69
CG Addendum to National SAR Manual	M16130.2 (series)

Creeping Line search pattern, Single Unit (CS)
STANDARD: The CS pattern will be run for a minimum of 5 legs, all turns must be 90 degrees, within 50 yards of the turn points, and the search should be completed within 5 minutes of the ETA.

Parallel search pattern, Single Unit (PS)
STANDARD: The PS pattern will be run for a minimum of 5 legs, all turns must be 90 degrees, within 50 yards of the turn points, and the search should be completed within 5 minutes of the ETA.

Track line, Single Unit Non-Return (TSN)
STANDARD: The TSN pattern will be run in it's entirety, all turns must be made within 50 yards of the turn points, and the search should be completed within 5 minutes of the ETA.

Track line, Single Unit Return (TSR)
STANDARD: The TSR pattern will be run in its entirety, all turns must be within 50 yards of the turn points, and the search should be completed within 5 minutes of the ETA.

ENABLING OBJECTIVES:

1. PREPARATIONS:	SAT	UNSAT	REMARKS
a. Coxswain chooses most appropriate scaled chart that covers the intended search area. (N/P)			
b. Courses (magnetic), CSP and turns plotted accurately. (N/P/S)			
c. DR times and total time to run calculated and stated. (N)			
d. Crew briefed on initial SAR check sheet items. (P)			
e. Coxswain passed search plans to communications watch. (T/P)			
f. Boat underway within 30 minutes of notification. (P/S)			

2. SEARCH PATTERN EXECUTION:	SAT	UNSAT	REMARKS
a. Station advised of O/S WX & start time of pattern. (P/O)			
b. Pattern started at designated CSP within 100 yds. (P/N/S)			
c. Sound signals utilized IAW Rules of the Road. (P)			
d. Conduct of own vessel IAW the Rules Of the Road. (P)			
e. Aids to Navigation identified and utilized. (N)			
f. Illumination used. Night vision not compromised. (P/O)			
g. Course guidance provided to helm. (N)			
h. Speed over ground stated. (N)			
i. Turns completed within 50 yds of their plotted positions (S)			
j. GPS used as follows: (N)			
1. Course to steer. (O)			
2. Use SOG function. (O)			
3. ETA function used. (O)			
4. All turns entered into GPS as waypoints. (N)			
5. Use XTE function to maintain track line within .1 NM. (N)			
k. Course & speed adjusted as necessary to stay on pattern track line (P)			
l. Fathometer used to verify depth. (N)			
m. Pattern completed within 5 minutes of ETA (N/S)			

3. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn. (P/T)			
g. Safety of vessel and crew not jeopardized. (T/S)			
h. Coxswain kept station informed during evolution. (P/T)			

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UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: SEARCH PATTERNS (Drifting Patterns) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: Pilot a CG boat and execute a search pattern.

CONDITIONS: Given a CG Boat with an operational GPS, RADAR, radio, compass, corrected chart of the operating area, certified crew operating within prescribed limitations. The Coxswain will be given a SAR scenario with a position to commence a search pattern.

STANDARD: The Search Patterns shall be commenced within 5 minutes of arrival at CSP within 100 yds of given position. Coxswain shall determine drift prior to starting pattern within 45º of actual drift. Boat shall complete all turns within 15 seconds of stated DR time, in accordance with procedures as set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
41' UTB Operator's Handbook	M16114.2 (series)
44' MLB Operator's Handbook	M16114.3 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue and Survival Systems Manual	M10470.10 (series)
Navigation Rules, International-Inland	M16672.2 (series)
GPS Operator's Handbook	Type specific
RADAR Operator's Handbook	AN/SPS 69
CG Addendum to National SAR Manual	M16130.2 (series)

Sector search pattern, Single Unit (VS)
STANDARD: The VS pattern will be run in its entirety with track spacing between 200 to 500 yards. The first leg shall be the direction of drift with all turns made 120 degrees to the right, within 15 seconds of their DR time. On the third, sixth, and ninth legs, steer toward the datum marker. The third, sixth and ninth legs shall end at the datum marker regardless of time run, the fourth and seventh legs are run as individual legs.

Expanding Square search pattern, Single Unit (SS)
STANDARD: The SS pattern will be run for a minimum of 5 legs with track spacing provided by the evaluator. The first leg shall be the direction of drift with all turns 90 degrees to the right, within 15 seconds of their DR time.

ENABLING OBJECTIVES:

1. PREPARATIONS:

	SAT	UNSAT	REMARKS
a. CSP plotted accurately, safe area determined. (N/P)			
b. All courses (compass) and turns calculated accurately within 3º. (P/N/S)			
c. DR times and total time to run calculated and stated. (N)			
d. Crew briefed on initial SAR check sheet items. (P)			
e. Coxswain passed search plans to communications watch. (T/P)			

2. SEARCH PATTERN EXECUTION:

	SAT	UNSAT	REMARKS
a. Station advised of O/S WX & start time of pattern. (P/O)			
b. Crewmember dropped datum marker overboard at CSP. (VS Only) (P)			
c. Coxswain determined direction of drift accurate to 45º. (P/N/S)			
d. Pattern started within 100 yds of CSP. (P/N/S)			
e. Pattern started within 5 minutes of arrival at CSP. (P/N/S)			
f. First leg of pattern in direction of drift. (000º C if drift cannot be determined) (P/N/S)			
g. Third, sixth, & ninth legs end at datum marker (VS ONLY). (P/S)			
h. Sound signals utilized IAW Rules of the Road. (P)			
i. Conduct of own vessel IAW the Rules Of the Road. (P)			
j. Aids to Navigation identified and utilized. (N)			
k. Illumination used. Night vision not compromised. (P/O)			
l. Course guidance provided to helm. (N)			
m. Speed over ground stated. (N)			
n. Turns completed within 15 seconds of their stated DR time. (N/S)			
o. On the third, sixth, and ninth legs, steer toward the datum marker. (VS Only) (P/N/S).			

2. SEARCH PATTERN EXECUTION: (cont.)	SAT	UNSAT	REMARKS
p. GPS used as follows: (N)			
1. Save feature used to record position of datum marker. (O)			
2. SOG function used to verify initial speed. (O)			
q. Course & speed based on engine RPM and compass course, not adjusted to counter set and drift. (P)			
r. Fathometer used to verify depth. (N)			
s. Final position of datum marker passed to SMC. (To determine set and drift of datum) (P)			

3. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn. (P/T)			
g. Safety of vessel and crew not jeopardized. (T/S)			
h. Coxswain kept station informed during evolution. (P/T)			

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UNDERWAY DRILL CHECKLISTS

OPTIONAL EXERCISES

41’ UTB BASIC ENGINEERING CASUALTY CONTROL EXERCISES (BECCE)

- Fire in the Engine Room
- Loss of Steering (cable/hydraulics)
- Loss of Steering (jammed rudder)
- Collision with Submerged Object
- Loss of Main Engine Lube Oil Pressure
- Main Engine High Water Temperature

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UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: FIRE IN THE ENGINE ROOM (41' UTB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: Combat a simulated main space fire.

CONDITIONS: Given a CG boat with required fire fighting equipment and installed systems, take corrective action for combating a fire in the main space.

STANDARD: Crewmembers shall demonstrate proper methods of controlling and extinguishing an engine room fire too large to be combated with only the portable fire extinguishers on board, in accordance with procedures set forth in:

Naval Engineering Manual	M9000.6 (series)
Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
41' UTB Operator's Handbook	M16114.2 (series)
Rescue and Survival Systems Manual	M10470.10 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced to neutral on both engines and then secured. (P)			
b. Crew notified of casualty. (P/T)			
c. Engineer check engine room through lower cabin view port to assess situation. (P)			
d. Station contacted and informed of situation and current position. (P/N)			
e. Electrical power secured. (P)			
f. On coxswain command, engineer energizes HALON system by pulling pin and actuating the handle (simulate). (T/P/O)			
g. Time marked when HALON system activated. (P)			
h. Crewman rig the anchor, if needed. (P/O)			
i. Life raft disconnected at weak link and moved forward. (P)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			

2. CREW TEAMWORK AND COORDINATION: (cont,)	SAT	UNSAT	REMARKS
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn. (P/T)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF STEERING (CABLE/HYDRAULICS) (41' UTB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: Given a steering casualty, take corrective action.

CONDITION: Given a CG boat, a certified crew operating in prescribed limitations, take corrective actions for a loss of steering, caused by a break in the steering cable.

STANDARD: Emergency tiller installed on the port rudderpost and positive control of both rudders maintained. In accordance with procedures set forth in:

Naval Engineering Manual	M9000.6 (series)
Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
41' UTB Operator's Handbook	M16114.2 (series)
Rescue & Survival Systems Manual	M10470.10 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced on both engines. (P)			
b. Crew notified of casualty. (T)			
c. Current position verified and situation evaluated. (P/T/N)			
d. Coxswain to steer with engines, if needed. (T)			
e. Engineer to investigate the casualty. (P)			
f. Crewman rig the anchor, if necessary. (P/O)			
g. Crewman provide emergency tiller from lazarette. (P/T)			
h. Engines placed in neutral. (P)			
i. Emergency tiller installed on the port rudderpost and positive control maintained. (S/P)			
j. Detach release pin on STBD rudderpost to disconnect steering cable. Tie cable out of way. (P/T)			
k. Test rudders for complete range of motion (full port to full STBD). (T/P/O)			
l. Tiller placed amidships. (P/O)			
m. Engines engaged separately. (P)			
n. RPM's kept at minimum speed. (P)			

1. CASUALTY: (cont.)	SAT	UNSAT	REMARKS
o. Standard steering commands utilized. (P/T)			
p. Station notified. (P/O)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn. (P/T)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF STEERING (JAMMED RUDDER) (41' UTB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: Given a steering casualty, take corrective action.

CONDITION: Given a CG boat, a certified crew operating in prescribed limitations, take corrective actions for a loss of steering, caused by a jammed rudder.

STANDARD: Emergency tiller installed on the port rudderpost and positive control of both rudders maintained. In accordance with procedures set forth in:

Naval Engineering Manual	M9000.6 (series)
Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
41' UTB Operator's Handbook	M16114.2 (series)
Rescue and Survival Systems Manual	M10470.10 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced on both engines. (P)			
b. Crew notified of casualty. (T)			
c. Coxswain to steer with engines, if needed. (T)			
d. Engineer to investigate the casualty. (P)			
e. Crewman rig the anchor, if necessary. (P/O)			
f. Crewman provide emergency tiller from lazarette. (P/T)			
g. Engines placed in neutral. (P)			
h. Emergency tiller installed on the port rudderpost and positive control maintained. (P)			
i. Engineer to remove tie rod bar between port and starboard rudderposts, if necessary. (P/O)			
j. Rudders exercised to determine which rudder is jammed. (P/O)			
k. Attempts made to free jammed rudder with tiller. (P)			
l. Rudder secured to prevent movement if unable to free jammed rudder. (P)			
m. RPM's kept at minimum speed. (P)			

1. CASUALTY: (cont.)	SAT	UNSAT	REMARKS
n. Standard steering commands utilized. (P/T)			
o. Station notified. (P/O)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn. (P/T)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: COLLISION WITH SUBMERGED OBJECT (41' UTB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: Crew simulates striking a submerged object while underway and takes appropriate action.

CONDITION: Given a CG boat with, a certified crew operating in prescribed limitations, take corrective action for striking a submerged object.

STANDARD: In accordance with procedures set forth in:

Naval Engineering Manual	M9000.6 (series)
Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
41' UTB Operator's Handbook	M16114.2 (series)
Rescue and Survival Systems Manual	M10470.10 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced to neutral on both engines. (P)			
b. Crew notified of casualty. (P/T)			
c. Coxswain verified position. (N/P/T)			
d. Engineer proceeded to the engine room to check for compartment flooding. (P)			
e. Crewman checked all other compartments for flooding. (P)			
f. Appropriate measures to reduce flooding taken, if applicable. (P)			
g. Engines engaged at various speeds to check for vibration. (P/O)			
h. Station notified of situation. (P/O)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			

2. CREW TEAMWORK AND COORDINATION: (cont.)	SAT	UNSAT	REMARKS
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn. (P/T)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF MAIN ENGINE LUBE OIL PRESSURE (41' UTB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: Given a simulated loss of lube oil pressure in a main diesel engine, take corrective action.

CONDITION: Given a CG boat with, a certified crew operating within prescribed limitations, take corrective action for loss of lube oil pressure.

STANDARD: In accordance with procedures set forth in:

Naval Engineering Manual	M9000.6 (series)
Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
41' UTB Operator's Handbook	M16114.2 (series)
Rescue and Survival Systems Manual	M10470.10 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced to clutch ahead on both engines. (P/O)			
b. Affected engine identified. (P)			
c. Crew notified of casualty. (T)			
d. Affected engine secured. (P/O)			
e. Current position verified and situation evaluated. (P/T/N)			
f. Engineer checked engine room through lower cabin view port to assess the situation. (P)			
g. Crewmember rig the anchor, if necessary. (P/O)			
h. Engineer entered engine room, Crewmember safety observer for Engineer. (P/T)			
i. Fire extinguishers O/S. (P/O)			
j. Bilge area checked for lube oil. (P)			
k. Lube oil checked for quality and quantity. (P)			
l. Station notified. (P/O)			
m. Return to station if cause cannot be determined or repaired. (P/T)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn. (P/T)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: MAIN ENGINE HIGH-WATER TEMPERATURE (41' UTB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: Given a simulated high water temperature in a main diesel engine, take corrective action.

CONDITION: Given a CG boat with, a certified crew operating in prescribed limitations, take corrective action for high water temperature.

STANDARD: In accordance with procedures set forth in:

Naval Engineering Manual	M9000.6 (series)
Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
41' UTB Operator's Handbook	M16114.2 (series)
Rescue and Survival Systems Manual	M10470.10 (series)

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1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced to clutch ahead on both engines. (P/O)			
b. Affected engine identified. (P)			
c. Crew notified of casualty. (P/T)			
d. Current position verified and situation evaluated. (P/T/N)			
e. Engine secured, if temperature continues to rise. (P/O)			
f. Overboard discharge checked. (P)			
g. Engineer checked engine room through lower cabin view port to assess the situation. (P)			
h. Crewmember rig the anchor, if necessary. (P/O)			
i. Engineer entered engine room, crewmember acted as safety observer for engineer. (P/T)			
j. Sea suction valves open. (P)			
k. Sea strainers checked, strainers shifted if necessary. (P/O)			
l. Bilges checked. (P)			
m. Cooling lines checked. (P)			
n. Raw water pump checked with back of hand. (P)			

1. CASUALTY: (cont.)	SAT	UNSAT	REMARKS
o. Expansion tank checked after engine has cooled. (P)			
p. Station notified. (T/P/O)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNDERWAY DRILL CHECKLISTS

OPTIONAL EXERCISES

44’ MLB BASIC ENGINEERING CASUALTY CONTROL EXERCISES (BECCE)

- Fire in the Engine Room
- Loss of Steering (hydraulics)
- Collision with a Submerged Object
- Accidental Grounding
- Loss of Main Engine Lube Oil Pressure
- Main Engine High Water Temperature
- Reduction Gear Failure
- Loss of Fuel Oil Pressure
- Loss of Control of Engine RPM

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UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: FIRE IN THE ENGINE ROOM (44' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After heat from a fire in the engine room sets off the alarm, identify the cause, prevent further damage, and take corrective actions.

CONDITION: While underway on a 44' MLB, with a certified crew operating within prescribed limitations, the fire alarm sounds and smoke/flames are visible through the engine room port light from a fire too large to be combated with the portable fire extinguishers on board.

STANDARD: In accordance with:

Naval Engineering Manual	M9000.6 (series)
Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
44' MLB Operator's Handbook	M16114.3 (series)
Rescue and Survival Systems Manual	M10470.10 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced to neutral on both engines. (P/O)			
b. Crew notified of casualty. (T)			
c. Engineer check engine room through engine room port light to assess situation. (P)			
d. Coxswain secures both engines with console fuel stops. (P/O)			
e. Station contacted and informed of situation and current position. (P/N)			
f. Engineer pull emergency fuel stops. (P/O)			
g. Engineer secures electrical power (all except VHF/FM radio) with coxswain concurrence. (P/T)			
h. On coxswain command, engineer energizes HALON system by pulling pin and depressing handle. (P/O)			
i. Time marked when HALON system activated. (P)			
j. Engine room kept shut for at least 15 minutes. (P)			
k. Crewman rigs the anchor, if directed by coxswain. (P)			
l. P-5 broken out for cooling deck and to back up Halon system if required. (P)			

1. CASUALTY: (cont.)	SAT	UNSAT	REMARKS
m. After 15 minutes, engineer checks engine room through engine room port light to see if fire is extinguished. (P)			
n. Once fire is determined to be extinguished, engine room hatch should be opened to ventilate space. (P)			
o. Fire watch established with portable fire extinguisher readied. (P)			
p. Engine room vented for 15 minutes. Forward hatches and scuttle opened to maximize ventilation if situation permits. (P)			
q. Engine room entered to determine cause of fire and assess damage. (P)			
r. Start engines and check operation, if possible. (P)			
s. Return to station if cause cannot be determined or repaired. (P)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

CAUTION: It is dangerous to enter a compartment during or after a fire without an OBA or other breathing apparatus. If it is absolutely necessary to enter the compartment, the compartment must be properly ventilated.

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF STEERING (HYDRAULICS) (44' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After lose of helm (steering) control, identify the cause, prevent further damage, and take corrective actions.

CONDITION: While underway on a 44' MLB at cruising speed, with a certified crew operating within prescribed limitations, the helmsman reports the helm turns in either direction with no rudder response (caused by a failure within the hydraulic system).

STANDARD: In accordance with:

Naval Engineering Manual	M9000.6 (series)
Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
44' MLB Operator's Handbook	M16114.3 (series)
Rescue and Survival Systems Manual	M10470.10 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced on both engines to clutch ahead. (P)			
b. Crew notified of casualty. (P)			
c. Current position verified and situation evaluated. (P/T/N)			
d. Position/heading maintained using engine control. (P/B)			
e. Crewman checks in well deck void, aft compartment and lazarette for hydraulic leaks. (P)			
f. Engineer checks engine room through engine room port light to assess situation. (P)			
g. Engineer enters engine room with crewman as safety observer. (P)			
h. Check bilges and look for obvious leaks. (P)			
i. Check gauge for pressure, if none, secure stbd engine. (P)			
j. Check fluid level in reservoir (3/4 full). (P)			
k. Crewmen rig anchor, if directed by coxswain. (P/O)			
l. Crewmen (wearing safety belts and helmets) ready emergency tiller. (P/O)			

1. CASUALTY (cont.):	SAT	UNSAT	REMARKS
m. Coxswain coordinated rudder commands and plan of action with crew. (T)			
n. Upon direction from coxswain tiller stepped and crewman gained control of tiller/rudder. (P/O)			
o. Engineer disconnect steering ram and secures to rudder shaft tube (**Caution**: tiller should be stepped before disconnecting ram). (P/O)			
p. Coxswain direct steering control check with tiller including full left/right turn. (**Caution**: There is danger to crewman at the tiller when backing due to pressures on the rudder surfaces which will swing tiller arm violently). (P/T)			
q. If casualty corrected before mooring, engineer reinstall steering ram while crewman maintains control of rudders. (P/O)			
r. Coxswain tests steering system full control at helm while crewman on tiller follows movement. (P/T)			
s. Coxswain directs tiller to be removed and stowed. (P)			
t. Coxswain safely maneuvers MLB to mooring. (P/O/B)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: COLLISION WITH SUBMERGED OBJECT (44' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After striking a submerged object, assess resulting damage, prevent further damage, and take corrective actions.

CONDITION: While underway on a 44' MLB at cruising speed, with a certified crew operating within prescribed limitations, the MLB hits a partially submerged log.

STANDARD: In accordance with procedures set forth in:

Naval Engineering Manual	M9000.6 (series)
Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
44' MLB Operator's Handbook	M16114.3 (series)
Rescue and Survival Systems Manual	M10470.10 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced to neutral on both engines. (P)			
b. Crew notified of casualty. (T)			
c. Current position verified and situation evaluated. (N/P/T)			
d. Determine what was hit, where the object is located and if it can still be seen. (P)			
e. Engineer check engine room through engine room port light to assess obvious flooding/damage. (P)			
f. Engineer enters engine room with crewman as safety observer. (P/T)			
g. Engineer checks bilges and shafts for leaks/flooding. (P)			
h. Crewman to check all other voids for flooding. (P)			
i. Coxswain conducts steering check. (P)			
j. Engines engaged individually at various speeds to check for vibration and isolate area of damage. (P)			
k. Return to station at reduced speed or on one engine, which would prevent additional damage or vibration. (P)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			

2. CREW TEAMWORK AND COORDINATION: (cont.)	SAT	UNSAT	REMARKS
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed of during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: ACCIDENTAL GROUNDING (44' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After striking a submerged object, assess resulting damage, prevent further damage, and take corrective actions.

CONDITION: While underway on a 44' MLB, with a certified crew operating within prescribed limitations, the MLB hits bottom but does not go fully aground and floats free.

STANDARD: In accordance with procedures set forth in:

Naval Engineering Manual	M9000.6 (series)
Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
44' MLB Operator's Handbook	M16114.3 (series)
Rescue and Survival Systems Manual	M10470.10 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. Coxswain maneuvers to stay in safe waters (deep enough for MLB and out of surf zone). (P/B)			
b. Crew notified of casualty. (T)			
c. Current position verified and situation evaluated. (N/P/T)			
d. RPM's reduced to neutral on both engines. (P)			
e. Engineer check engine room through engine room port light to assess obvious flooding/damage. (P)			
f. Engineer enters engine room with crewman as safety observer. (P/T)			
g. Engineer checks bilges and shafts for leaks/flooding. Also checks for proper cooling water circulation or debris in strainers. (P)			
h. Crewman to check all other voids for flooding and check lazarette for any signs of rudder or steering system damage. (P)			
i. Coxswain conducts steering check. (P)			
j. Crewmen rig anchor, if directed by coxswain. (P/O)			
k. Crewmen (wearing safety belts and helmets) ready emergency tiller. (P/O)			

1. CASUALTY: (Cont.)	SAT	UNSAT	REMARKS
l. If a jammed rudder is probable or identified, coxswain coordinate plan of action and rudder commands with crew. (T)			
m. Upon direction from coxswain, tiller stepped to good rudderpost and crewman gained control of tiller/rudder. (P/O)			
n. Engineer disconnect steering ram and cross connecting rod. Both secured for sea to rudder shaft tube (**Caution**: Tiller should be stepped before disconnecting either). (P/O)			
o. Coxswain direct steering control check with tiller including full left/right turn. (**Caution**: There is danger to crewman at the tiller when backing due to pressures on the rudder surfaces which will swing tiller arm violently). (P/T)			
p. Coxswain safely maneuvers MLB with emergency steering while accessing further damage. (P/O/B/T)			
q. Engines engaged individually at various speeds to check for vibration and isolate/access damage to propulsion system. (P)			
r. Return to station at reduced speed or on one engine, which would prevent additional damage or vibration. (P/O/B)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF MAIN ENGINE LUBE OIL PRESS. (44' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After loss of lube oil pressure in one main diesel engine, identify the cause, prevent further damage, and take corrective actions.

CONDITION: While underway on a 44' MLB at cruising speed, with a certified crew operating within prescribed limitations, the low lube oil alarm sounds and the L/O alarm light on the console illuminates.

STANDARD: In accordance with procedures set forth in:

Naval Engineering Manual	M9000.6 (series)
Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
44' MLB Operator's Handbook	M16114.3 (series)
Rescue and Survival Systems Manual	M10470.10 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced to clutch ahead on both engines. (P)			
b. Affected engine identified. (P)			
c. Crew notified of casualty. (T)			
d. Affected engine secured. (P)			
e. Current position verified and situation evaluated. (P/T/N)			
f. Engineer check engine room through engine room port light to assess the situation. (P)			
g. Crewmember rigs the anchor, if directed by coxswain. (P)			
h. Engineer enters engine room with crewman as safety observer. (P/T)			
i. Fire extinguisher readied. (P/O)			
j. Bilge area checked for lube oil. (P)			
k. Obvious lube oil leaks checked. (P)			
l. Lube oil gauge and line checked. (P)			
m. Lube oil pressure sending unit checked. (P)			
n. Lube oil checked for quality and quantity. (P)			

1. CASUALTY: (cont.)	SAT	UNSAT	REMARKS
o. Expansion tank checked after engine has cooled. (P)			
p. Source of problem identified and corrected or, (P/T)			
q. Return to station if cause cannot be determined or repaired. (P/T)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: MAIN ENGINE HIGH WATER TEMPERATURE (44' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After rising operating temperature of one main diesel engine sets off the alarm, identify the cause, prevent further damage, and take corrective actions.

CONDITION: While underway on a 44' MLB at cruising speed, with a certified crew operating within prescribed limitations, the high water temperature alarm sounds and the alarm light on the console illuminates.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
44' MLB Operator's Handbook	M16114.3 (series)
Rescue & Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced to clutch ahead on both engines. (P)			
b. Affected engine identified. (P)			
c. Crew notified of casualty. (T)			
d. Current position verified and situation evaluated. (P/T/N)			
e. Engineer check engine room through engine room port light to assess situation. Secure engine if temperature is 220° and rising. (P)			
f. Engineer enters engine room with crewman as safety observer. (P/T)			
g. Check bilge and for obvious leaks. (P)			
h. Feel brass pipe to determine which system the casualty is in. (P)			

IF THE PIPE IS HOT

a. Check sea suction valve. (P)			
b. Check and shift duplex strainer. (P)			
c. Check R/W pump cover with back of hand. (P)			
d. Ensure de-icing system is closed and muffler valve is open. (P)			

1. CASUALTY (cont.):

IF THE PIPE IS COOL	SAT	UNSAT	REMARKS
a. Check J/W belts and weep hole of pump. (P)			
b. Check entire U/W heating system. (P)			
c. Check L/O for quality and quantity. (P)			

NOTE: Even if pipe is cool, components of the R/W system may still be malfunctioning (i.e.: partially clogged strainers, missing vanes on impeller)

	SAT	UNSAT	REMARKS
i. Source of problem identified and corrected or, (P/T)			
j. Return to station if cause cannot be determined or repaired. (P/T)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: REDUCTION GEAR FAILURE (44' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After one reduction gear would not respond to Morse control shifts, identify the cause, prevent further damage, and take corrective actions.

CONDITION: While underway on a 44' MLB, with a certified crew operating within prescribed limitations, one of the reduction gears does not respond properly when the throttles are operated in forward and reverse.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
44' MLB Operator's Handbook	M16114.3 (series)
Rescue & Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. Both throttles brought to neutral. (P)			
b. Affected engine identified. (P)			
c. Crew notified of casualty. (T)			
d. Current position verified and situation evaluated. (N/P/T)			
e. Affected engine secured. (P)			
f. Crewmember rigs the anchor, if directed by coxswain. (P)			
g. Engineer checks engine room through engine room port light to assess the situation. (P)			
h. Engineer entered engine room with crewman as safety observer. (P/T)			
i. Bilge area checked for oil. (P)			
j. Check Morse control linkage. (P)			
k. Check for obvious leaks. (P)			
l. Check expansion tank for reduction gear fluid. (Use caution when opening expansion tank on a hot engine) (P)			
m. Check reduction gear fluid level. (P)			

1. CASUALTY: (cont.)	SAT	UNSAT	REMARKS
n. If full, restart engine and check reduction gear pressure when in forward and reverse (120-160 PSI). (P)			
o. If reduction gear fails to operate, secure engine. If there is not reduction gear oil, lock shaft. (P)			
p. Coxswain maneuvers boat safely back to moorings on one engine. (P/B)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF FUEL OIL PRESSURE (44' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After experiencing a loss in RPM's on one engine, identify the cause, prevent further damage, and take corrective actions.

CONDITION: While underway on a 44' MLB at cruising speed, with a certified crew operating within prescribed limitations, one engine begins to run rough and lose power.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
44' MLB Operator's Handbook	M16114.3 (series)
Rescue & Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced on both engines to clutch ahead. (P)			
b. Affected engine identified. (P)			
c. Crew notified of casualty. (T)			
d. Current position verified and situation evaluated. (N/P/T)			
e. Coxswain ensure engine stops are pushed in. (P)			
f. Engineer proceed to mess deck, ensure emergency fuel stops are pushed in. (P)			
g. Crewman rigs the anchor, if directed by Coxswain. (P)			
h. Engineer check engine room through engine room port light to assess situation. (P)			
i. Engineer enters engine room with crewman as safety observer. (P/T)			
j. Check bilges. (P)			
k. Check primary fuel filters. (P)			
l. Check entire fuel oil system for leaks. (P)			
m. Check governor and linkage. (P)			

1. CASUALTY: (cont).	SAT	UNSAT	REMARKS
n. Source of problem identified and corrected or additional assistance requested from station. (P/T)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF CONTROL OF ENGINE RPM (44' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After one engine fails to respond properly to Morse cable control, identify the cause, prevent further damage, and take corrective actions.

CONDITIONS: While underway on a 44' MLB at cruising speed, with a certified crew operating within prescribed limitations, the coxswain attempts to reduce speed but one engine stays at set RPM and does not respond to throttle control.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
44' MLB Operator's Handbook	M16114.3 (series)
Rescue & Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced on both engines. (P)			
b. Crew notified of casualty. (T)			
c. Current position verified and situation evaluated. (N/P/T)			
d. Coxswain pull engine stop for effected engine. (P/O)			
e. Turn into effected engine (if situation permits). (P/B)			
f. Pull emergency fuel stop for the effected engine. (P/O)			
g. Engineer checked engine room through engine room port light to assess the situation. (P)			
h. Engineer enters engine room with crewman as safety observer. (P/T)			
i. Engineer check governor and linkage. (P)			
j. Trip emergency air shutdown. (P)			
k. Coxswain maneuvers boat safely back to moorings on one engine. (P/B)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as required. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout the evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNDERWAY DRILL CHECKLISTS

OPTIONAL EXERCISES

47’ MLB BASIC ENGINEERING CASUALTY CONTROL EXERCISES (BECCE)

- Fire in the Engine Room
- Loss of Steering (hydraulics)
- Loss of Steering (electrical)
- Collision with a Submerged Object
- Hard Grounding
- Loss of Main Engine Lube Oil Pressure
- Main Engine High Water Temperature
- Reduction Gear Failure
- Loss of Fuel Oil Pressure
- Loss of Control of Engine RPM
- Low Voltage Alarm/Loss of Electrical Charging System

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UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: FIRE IN THE ENGINE ROOM (47' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After smoke/heat from a fire in the engine room sets off the alarm, identify the cause, prevent further damage, and take corrective actions.

CONDITION: While underway on a 47' MLB, with a certified crew operating within prescribed limitations, the fire alarm sounds and smoke/flames are visible through the engine room port light.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue & Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's of both engines reduced to neutral. (P)			
b. Crew notified of casualty. (T)			
c. Engineer checked engine room through engine room port light to assess situation. (P)			
d. Coxswain secured both engines with engine stops at steering station. (P)			
e. Engineer pulled emergency fuel stops in survivors compartment with coxswain concurrence. (P/T)			
f. Engineer energized CO2 system by releasing lock pin and depressing handle, or by pulling ring locally at CO2 bottle. (P/O)			
g. Crewman secured shutoff valves for both engine room air inlets located within aft buoyancy chamber. (P)			
h. Coxswain accounted for all persons on board. (P/T)			
i. Station contacted and informed of situation and current position. (P/N)			
j. Engineer secured nonessential electrical power at DC panels (all except VHF/FM radio) with coxswain concurrence. (P/T)			

1. CASUALTY: (cont.)	SAT	UNSAT	REMARKS
k. Crewman rigs the anchor for emergency use (fairlead line but anchor remains in bracket), if directed by coxswain. (P/O)			
l. Coxswain discussed relocation of P-5 portable pump forward, away from engine space, for emergency use. (P)			
m. Fire watch established, with portable fire extinguisher readied, in survivors compartment to monitor by observing through engine room port light only. (P)			
n. Coxswain coordinated with station for tow or other assistance emphasizing crew safety. (P/T)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

CAUTION: It is extremely dangerous to enter a compartment during or after a fire without an OBA or other breathing apparatus. The MLB should be towed back to the station. The compartment must be properly ventilated and the space tested for oxygen level before entering.

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF STEERING (HYDRAULICS) (47' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After loss of helm (steering) control, identify the cause, prevent further damage, and take corrective actions.

CONDITION: While underway on a 47' MLB at cruising speed, with a certified crew operating within prescribed limitations, the helmsman reports the helm turns in either direction with no rudder response (caused by a failure within the hydraulic system). The sounding of the low steering pressure alarm follows this symptom.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue & Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
RPM's of both engines reduced to clutch ahead. (P)			
Both engines secured when low steering pressure alarm on console sounds. (P)			
Crew notified of casualty. (P)			
Current position verified and situation evaluated. (P/T/N)			
Crewmen rig the anchor for emergency use (fairlead line but anchor remains in bracket), if directed by coxswain. (P/O)			
f. Engineer checked engine room through engine room port light to assess the situation. (P)			
g. Engineer entered engine room with crewman as a safety observer. (T)			
h. Checked bilges and looked for obvious leaks. (P)			
i. Checked gauge on reservoir for pressure, if no hydraulic oil or pressure, both engines remain secured. (P)			
j. Remainder of steering system checked from steering rams in lazarette to helm station on open bridge. (P)			

1. CASUALTY: (cont.)	SAT	UNSAT	REMARKS
k. Coxswain coordinated with station for tow or other assistance when risk assessment indicates crew or vessel safety will be jeopardized through continued operation. (P/T)			
l. Engineer discussed option of removing the sun gear from "both" hydraulic pumps before restarting engines. (P)			
m. Coxswain discussed option of removing hydraulic pump sun gears in order to gain use of engines for maneuvering. (P)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF STEERING (ELECTRICAL) (47' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After loss of helm (steering) control at one of the jog levers or the autopilot, identify the cause, prevent further damage, and take corrective actions.

CONDITION: While underway on a 47' MLB at cruising speed, with a certified crew operating within prescribed limitations, the helmsman reports: Scenario (1) a jog lever has no rudder response or is not responding correctly / Scenario (2) the autopilot is controlling vessel steering but is not responding correctly. No low steering pressure alarm accompanies this symptom. When checked, the hydraulic portion of the steering system is intact, full, and has the proper head pressure.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue & Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's of both engines reduced to clutch ahead. (P)			
b. Crew notified of casualty. (T)			
c. Scenario (1) Attempted to select steering station, reactivate jog lever control. Checked to ensure autopilot disengaged. Scenario (2) Checked autopilot select button. Determined what function the autopilot was in (auto/nav/power sys). (P)			
d. Steering control shifted to hydraulic helm. Engines brought to neutral if electro-hydraulic side of the steering system continues to effect hydraulic helm control. Vessel control established and vessel maneuvered to safe waters. (P)			
e. Current position verified and situation evaluated. (P/T/N)			
All steering stations checked to isolate extent of the steering problem. (P)			
Crewmen rig the anchor for emergency use (fairlead line but anchor remains in bracket), if directed by coxswain. (P/O)			
Engineer checked engine room through engine room port light to assess the situation. (P)			

1. CASUALTY: (cont.)	SAT	UNSAT	REMARKS
Engineer entered engine room with crewman as a safety observer. (T)			
Checked bilges and looked for obvious leaks. (P)			
Checked gauge on reservoir for pressure, if no hydraulic oil or pressure, secured both engines. (P)			
Checked electrical connections at electro-hydraulic steering valve (steering control solenoid actuator). (P)			
Checked power servo cylinder (steering ram) connections and autopilot rudder angle indicator connections in lazarette. (P)			
Checked steering system breakers in auxiliary machinery compartment. (P)			
Secured steering control breaker if faulty jog lever continues to interfere with hydraulic helm. Secured autopilot breaker if autopilot continues to interfere with hydraulic helm. (P)			
Coxswain coordinated with station for tow or other assistance when risk assessment indicates crew or vessel safety will be jeopardized through continued operation. (P/T)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed of during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: COLLISION WITH SUBMERGED OBJECT (OR BOTTOM) (47' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After striking a submerged object (or bottom), assess resulting damage, prevent further damage, and take corrective actions.

CONDITION: While underway on a 47' MLB at cruising speed, with a certified crew operating within prescribed limitations, the MLB hits a submerged object or momentarily goes aground.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue & Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's of both engines reduced to neutral (when in safe waters and out of surf zone). (P)			
b. Crew notified of casualty. (T)			
c. Determined what was hit, where the object is located and if it can still be seen. (P)			
d. Current position and depth of water verified and situation evaluated. (N/P/T)			
e. Engineer checked gear space and shafting for obvious flooding or damage. (P)			
f. Engineer checked engine room through engine room port light to assess obvious flooding or damage. (P)			
g. Engineer entered engine room with crewman as safety observer. (P/T)			
h. Engineer checked engine room bilges for flooding or obvious damage (particularly around the strut mounting points). (P)			
i. Engineer checked lazarette bilges for flooding, rudder or steering system damage. (P)			

1. CASUALTY: (cont.)	SAT	UNSAT	REMARKS
j. Engineer checked for proper cooling water circulation or debris in the strainers. (P)			
k. Crewman checked auxiliary and forward compartment bilges for flooding or obvious damage. Assessed situation by making observation through door port lights before entering the compartments. (P)			
l. Crewman checked forepeak void for flooding by removing drain plug at bulkhead 15. (P)			
m. Coxswain conducted steering checks including helm and jog lever control to identify limitations or isolate areas of damage. (P)			
n. Coxswain engaged engines and reduction gears individually at various speeds while engineer checked for vibration and assessed damage to propulsion system. (P)			
o. Returned to station at reduced speed or on one engine, if warranted, to prevent additional damage or vibration. (P)			
p. Coxswain coordinated with station for tow or other assistance when risk assessment indicates crew or vessel safety will be jeopardized through continued operation. (P/T)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed of during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: HARD GROUNDING (47' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After going hard aground, assess resulting damage, prevent further damage, and take corrective actions.

CONDITIONS: While underway on a 47' MLB, with a certified crew operating within prescribed limitations, the MLB hits bottom and becomes hard aground (unable to initially float free).

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue & Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's of both engines reduced to neutral. (P)			
b. Crew notified of casualty. Condition of crew assessed. (T)			
c. Current position and depth of water verified and situation evaluated. (N/P/T)			
d. Station notified of position and follow-ups made as situation is clarified. (P)			
e. Engineer checked gear space and shaft seals for obvious flooding or damage. (P)			
f. Engineer checked engine room through engine room port light to assess obvious flooding or damage. (P)			
g. Engineer entered engine room with crewman as safety observer. (P/T)			
h. Engineer checked engine room bilges for flooding or obvious damage (particularly around the strut mounting points). (P)			
i. Engineer checked lazarette for any signs of flooding, rudder or steering system damage. (P)			

1. CASUALTY: (cont.)	SAT	UNSAT	REMARKS
j. Engineer checked for proper cooling water circulation or debris in strainers. Engines secured if cooling is inadequate or if excessive debris (especially sand) is observed. (P)			
k. Crewman checked auxiliary and forward compartment bilges for flooding or obvious damage. Assessed situation by making observation through door port lights before entering the compartments. (P)			
l. Crewman checked forepeak void for flooding by removing drain plug at bulkhead 15. (P)			
m. Crewmen rig the anchor for emergency use (fairlead line but anchor remains in bracket), if directed by coxswain. (P/O)			
n. Crewmen take depth soundings all around vessel. Coxswain determined deepest water, extent of grounding, and potential for underwater damage. (P)			
o. Present and future state of tide, current, or other weather conditions considered with regard to re-floating or salvage options. (P)			
p. Anchor deployed if situation involves potential for being set further aground due to conditions. (P/O)			
q. Coxswain determined safest direction to deep water and method for extricating vessel safely and with least damage. (P/T)			
r. Conducted check of propulsion system integrity prior to attempting re-floating or salvage. Caution taken to reduce further damage. (P/T)			
s. Conducted check of steering system integrity. Rudder travel or limitations checked utilizing hydraulic helm (not jog levers). Caution taken to reduce further damage. (P/T)			
t. Coxswain maneuvered into safe waters (deep enough for MLB and out of surf zone) using only engines, if damage to steering system occurred. (P/B)			
u. Coxswain conducted steering check including helm and jog lever control to identify limitations or isolate areas of damage. (P)			
v. Coxswain engaged engines and reduction gears individually at various speeds while engineer checked for vibration and assessed damage to propulsion system. (P/T)			
w. Returned to station or appropriate haul-out at reduced speed or on one engine, if warranted, to prevent additional damage or vibration. (P/O/B)			
1. CASUALTY: (cont.)	SAT	UNSAT	REMARKS

x. Coxswain coordinated with station for tow or other assistance when risk assessment indicates crew or vessel safety will be jeopardized through continued operation. (P/T)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed of during evolution. (P/T)			

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UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF MAIN ENGINE LUBE OIL PRESSURE. (47' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After loss of lube oil pressure in one main diesel engine, identify the cause, prevent further damage, and take corrective actions.

CONDITIONS: While underway on a 47' MLB at cruising speed, with a certified crew operating within prescribed limitations, the EDM alarm sounds and indicates "Code 45" (oil pressure low).

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue & Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's of both engines reduced to clutch ahead. (P)			
b. Affected engine identified. (P)			
c. Crew notified of casualty. (T)			
d. Affected engine secured. (P)			
e. Current position verified and situation evaluated. (P/T/N)			
f. Crewmen rig the anchor for emergency use (fairlead line but anchor remains in bracket), if directed by coxswain. (P/O)			
g. Engineer checked engine room through engine room port light to assess the situation. (P)			
h. Engineer entered engine room with crewman as safety observer. (P/T)			
i. Bilge area checked for lube oil. (P)			
j. Obvious lube oil leaks checked. (P)			
k. Lube oil checked for quality and quantity. (P)			
l. Source of problem identified and corrected or, (P/T)			
m. Returned to station on one engine as necessary if cause cannot be determined or repaired. (P/T)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS

a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: MAIN ENGINE HIGH WATER TEMPERATURE (47' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After rising operating temperature of one main diesel engine sets off the alarm, identify the cause, prevent further damage, and take corrective actions.

CONDITIONS: While underway on a 47' MLB at cruising speed, with a certified crew operating within prescribed limitations, the EDM sounds an alarm and indicates "Code 44" (coolant temperature high).

STANDARDS: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue & Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's of both engines reduced to clutch ahead. (P)			
b. Affected engine identified. (P)			
c. Crew notified of casualty. (T)			
d. Current position verified and situation evaluated. (P/T/N)			
e. Coxswain secured engine if temperature is above 220 or if engineer reports steam is present. (P)			
f. Engineer checked engine room through engine room port light to assess situation. (P)			
g. Engineer entered engine room with crewman as safety observer. (P/T)			
h. Engineer checked engine temperature as indicated on mechanical gauge. (P)			
i. Checked bilges and engine for obvious leaks. (P)			
j. Felt brass pipe to determine which system the casualty is in. (P)			

IF THE PIPE IS HOT

(1) Checked sea suction valve. (P)			

1. CASUALTY: IF THE PIPE IS HOT (cont.)	SAT	UNSAT	REMARKS
(2) Checked and shifted duplex strainer. (P)			
(3) Checked R/W pump cover with back of hand. (P)			
(4) Ensured deicing system is closed. (P)			

IF THE PIPE IS COOL

(1) Checked J/W level on coolant recovery bottle. (P)			
(2) Checked weep hole of J/W pump. (P)			
(3) Checked L/O for quality and quantity. (P)			

NOTE: Even if pipe is cool, components of the R/W system may still be malfunctioning (i.e. partially clogged strainers or missing vanes on impeller)

	SAT	UNSAT	REMARKS
k. Source of problem identified and corrected or, (P/T)			
l. Affected engine secured and MLB returned to station if cause couldn't be determined or repaired. (P/T)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: REDUCTION GEAR FAILURE (47' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After one reduction gear would not respond to DDEC throttle station control, identify the cause, prevent further damage, and take corrective actions.

CONDITION: While underway on a 47' MLB, with a certified crew operating within prescribed limitations, one of the reduction gears does not respond properly when the throttles are operated in forward and reverse.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue & Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. Both throttles brought to neutral. (P)			
b. Crew notified of casualty. (T)			
c. Current position verified and situation evaluated. (N/P/T)			
d. Coxswain checked EDM for R/G pressure and secured engine if pressure is not within parameters. (P)			
e. Ensured active light is lit at control station. (P)			
f. Coxswain attempted to regain R/G control by changing to another throttle station or engaging backup control panel. (P)			
g. Coxswain secured effected engine. (P)			
h. Crewmen rig the anchor for emergency use (fairlead line but anchor remains in bracket), if directed by coxswain. (P/O)			
i. Engineer checked both Gear Interface Module breakers on 24V power panel. (P)			
j. Engineer removed deck plates over affected R/G. (P)			
k. Gear space bilge area checked for oil. (P)			

1. CASUALTY: (cont.)	SAT	UNSAT	REMARKS
l. Checked R/G lube oil level. (P)			
m. Checked R/G control valve electrical connections. (P)			
n. Engineer checked dirty oil filter indicator on duplex filter, if indicator has popped up, handle is shifted to other filter. (P)			
o. If no leaks are present and oil level is full, engine restarted and checked clutch application pressure (250 to 290 PSI) when engaged. (P)			
p. Secured engine if pressure was not within parameters. (P)			
q. After all mechanical checks have been made, proceeded to troubleshoot electronic controls. (P)			
r. Manually operated control valve if failure of the electronic control was determined. (P)			
s. Use of R/G "Come Home" device discussed if a long distance must be traveled during return to the unit. (P/B)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF FUEL OIL PRESSURE (47' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After experiencing a loss in RPM's on one engine, identify the cause, prevent further damage, and take corrective actions.

CONDITIONS: While underway on a 47' MLB at cruising speed, with a certified crew operating within prescribed limitations, one engine begins to run rough and lose power while the EDM sounds an alarm and indicates "Code 48" (fuel pressure low).

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue & Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's of both engines reduced to clutch ahead. (P)			
b. Affected engine identified and secured. (P)			
c. Crew notified of casualty. (T)			
d. Current position verified and situation evaluated. (N/P/T)			
e. Crewman rigs the anchor for emergency use (fairlead line but anchor remains in bracket), if directed by Coxswain. (P/O)			
f. Engineer checked engine room through engine room port light to assess situation. (P)			
g. Engineer entered engine room with crewman as safety observer. (P/T)			
h. Checked engine room bilge for fuel oil. (P)			
i. Checked emergency fuel cutout valves to ensure they are open. (P)			
j. Checked primary fuel filters. (P)			
k. Checked entire fuel oil system for leaks. (P)			

1. CASUALTY: (cont.)	SAT	UNSAT	REMARKS
l. Source of problem identified and corrected or additional assistance requested from station. (P/T)			
m. Coxswain maneuvered MLB safely using only one engine. (B)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF CONTROL OF ENGINE RPM (47' MLB) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After one engine fails to respond properly to DDEC throttle station control, identify the cause, prevent further damage, and take corrective actions.

CONDITION: While underway on a 47' MLB at cruising speed, with a certified crew operating within prescribed limitations, the coxswain attempts to reduce speed but one engine stays at set RPM and does not respond to DDEC throttle control.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue & Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. Both throttle control levers placed in clutch ahead position. (P)			
b. Crew notified of casualty. (T)			
c. Coxswain ensured throttle station is active and Synch function is off. (P)			
d. Coxswain shifted to another station and attempted to gain throttle control. (P)			
e. Emergency back-up panel used to gain engine control after checking other throttle stations. (P)			
f. Engine stop button used (push and hold down) to secure effected engine. (P)			
g. If engine fails to secure, engineer proceeded to survivor's compartment and pulled emergency fuel cut-off for affected engine. (P)			
h. Coxswain used emergency air shutdown if engine still fails to secure. (P)			
i. Coxswain maneuvered MLB safely back to moorings on one engine. (P/B)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout the evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed during evolution. (P/T)			

UNIT NAME: _____BOAT #_____DATE: _____

COXSWAIN: _____ENGINEER: _____

CREWMEMBER: _____CREWMEMBER: _____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOW VOLTAGE ALARM/LOSS OF ELECTRICAL CHARGING SYSTEM (47' MLB)

SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After recognizing a low voltage alarm or symptoms of problems with the 24-volt DC charging system, identify the cause, prevent further damage, and take corrective actions.

CONDITION: While underway on a 47' MLB at cruising speed, with a certified crew operating within prescribed limitations, the engineer/crewman reports: Scenario (1) a low voltage alarm (Code 46 ECM battery low) is displayed on the Electronic Display Module (EDM) / Scenario (2) a significant drop in voltage is indicated by dimming lights, electronics dropping off line, and/or DDEC III station control is deactivated. A low voltage alarm may/may not accompany Scenario (2).

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
47' MLB Operator's Handbook	M16114.25 (series)
Rescue & Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's of both engines reduced to clutch ahead. (P)			
b. Crew notified of casualty. (P)			
c. Engineer checked position of battery isolator switches located in the survivor compartment. (T)			
d. Engineer checked engine room through engine room port light to assess the situation. (P)			
e. Engineer entered engine room with crewman as a safety observer. (T)			
f. Checked both alternator/regulator reset switches (starboard engine room bulkhead). (P)			
g. Checked condition of starboard alternator belts for slippage, damage, or missing. Renew belts with onboard spares, as needed (P)			
h. Checked electrical connections at starboard alternator. (P)			

1. CASUALTY: (cont.)	SAT	UNSAT	REMARKS
i. Checked electrical connections at lube oil pressure switch. (P)			
j. Repeated checks above for port engine. (P)			
k. Checked fuse in 24-volt start panel (port engine room bulkhead). (P)			
l. Engineer checked all main battery connections in auxiliary machinery compartment (service pair forward, starting pair aft). Tightened and cleaned as necessary. (T)			
m. Engineer secured all non-vital equipment at the 24-volt DC power supply panel. (P)			
n. Engineer secured all non-vital equipment at the 12-volt DC power supply panel. (P)			
o. Engineer placed start and service batteries in parallel. (P)			
p. Engineer determined extent of electrical power loss, probable cause, and expected service duration for platform. Crew discussed impact on mission. (T)			
q. Coxswain established secondary communications with station (handheld portable VHF radio) in case primary power is lost. (P)			
r. Coxswain coordinated with station for tow or other assistance when risk assessment indicates crew or vessel safety will be jeopardized through continued operation. (P/T)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept station informed of during evolution. (P/T)			

UNDERWAY DRILL CHECKLISTS

OPTIONAL EXERCISES

49' BUSL BASIC ENGINEERING CASUALTY CONTROL EXERCISES (BECCE)

- Fire in the Engine Room
- Loss of Steering - Cable/Hydraulics
- Collision with Submerged Object
- Loss of Main Engine Lube Oil Pressure
- Main Engine High Water Temperature
- Loss Of Control Of Engine RPM
- Loss Of Fuel Oil Pressure

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UNIT NAME:_____BOAT #_____DATE:_____

COXSWAIN:_____ENGINEER:_____

CREWMEMBER:_____CREWMEMBER:_____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: FIRE IN THE ENGINE ROOM (49' BUSL) SCORE: SAT / UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After smoke/heat from a fire in the engine room sets off the alarm, identify the cause, prevent further damage, and take corrective actions.

CONDITIONS: While underway on a 49' BUSL, with a certified crew operating within prescribed limitations, the fire alarm sounds and smoke/flames are visible through the engine room port light.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
49' BUSL Operator's Handbook	M16114.22 (series)
Rescue and Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced to neutral on both engines and then secured. (P)			
b. Crew notified of casualty. (T)			
c. Engineer check engine room through lower cabin view port to assess situation. (P)			
d. OPCON contacted and informed of situation and current position. (P/N)			
e. On coxswain command, engineer energize fixed system by pulling pin and actuating the handle (simulate). (P/O)			
f. Time marked when fixed system activated. (P)			
g. Electrical power secured. (P/T)			
h. Crewman rig the anchor, if needed. (P/O)			
i. Life raft disconnected at weak link and moved forward.(P)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			

2. CREW TEAMWORK AND COORDINATION: (cont,)	SAT	UNSAT	REMARKS
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept OPCON informed during evolution. (P/T)			
i. Risk assessment made and used. (T)			

UNIT NAME:_____BOAT #_____DATE:_____

COXSWAIN:_____ENGINEER:_____

CREWMEMBER:_____CREWMEMBER:_____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF STEERING - CABLE/HYDRAULICS (49' BUSL) SCORE: SAT/UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After loss of helm (steering) control, identify the cause, prevent further damage, and take corrective action.

CONDITION: While underway on a 49' BUSL at cruising speed, with a certified crew operating within prescribed limitations, take corrective action for loss of steering.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
49' BUSL Operator's Handbook	M16114.22 (series)
Rescue and Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced on both engines. (P)			
b. Crew notified of casualty. (T)			
c. Coxswain to steer with engines, if needed. (B)			
d. Engineer to investigate the casualty; crewmember safety observer for engineer. (P)			
e. Crewman rig the anchor, if necessary. (P/O)			
f. Engines placed in neutral. (P)			
g. Manual system used to retain positive steering control. (B)			
h. Test steering for complete range of motion (full port to full STBD). (P)			
i. Engines engaged separately. (P)			
j. RPM's kept at minimum speed. (P)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Standard steering commands utilized. (T/P)			
b. Coxswain briefed crew of specific job and mission responsibilities. (T)			
c. Crew communicated effectively and assertively during evolution. (T)			
d. Crew assisted each other as needed. (T/P)			
e. Crew always aware of other's location. (T)			
f. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
g. Crew safety and survival equipment properly worn. (P/T/O)			
h. Safety of vessel and crew not jeopardized. (T)			
i. Coxswain kept OPCON informed during evolution. (P/T)			
j. Risk assessment made and used. (T)			

UNIT NAME:_____BOAT #_____DATE:_____

COXSWAIN:_____ENGINEER:_____

CREWMEMBER:_____CREWMEMBER:_____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: COLLISION WITH SUBMERGED OBJECT (49' BUSL) SCORE: SAT/UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After striking a submerged object, assess resulting damage, prevent further damage, and take corrective action.

CONDITION: While underway on a 49' BUSL at cruising speed, with a certified crew operating within prescribed limitations, the BUSL hits a submerged object.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
49' BUSL Operator's Handbook	M16114.22 (series)
Rescue and Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced to neutral on both engines. (P)			
b. Crew notified of casualty. (T)			
c. Coxswain verified position. (N/P/T)			
d. Engineer checked engine compartment for flooding. (P)			
e. Crewman checked all other compartments for flooding. (P)			
f. Source of flooding identified. (T/P)			
g. Proper materials used to reduce or stop flooding. (T/P)			
h. Flood watch set and maintained. (T/P)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			

2. CREW TEAMWORK AND COORDINATION: (cont.)	SAT	UNSAT	REMARKS
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept OPCON informed during evolution. (P/T)			
k. Risk assessment made and used. (T)			

UNIT NAME:_____BOAT #_____DATE:_____

COXSWAIN:_____ENGINEER:_____

CREWMEMBER:_____CREWMEMBER:_____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF MAIN ENGINE LUBE OIL PRESSURE (49' BUSL) SCORE: SAT/UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After loss of lube oil pressure in one main diesel engine, identify the cause, prevent further damage, and take corrective action.

CONDITION: While underway on a 49' BUSL at cruising speed, with a certified crew operating within prescribed limitations, take corrective action for loss of lube oil pressure.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
49' BUSL Operator's Handbook	M16114.22 (series)
Rescue and Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced to clutch ahead on both engines. (P)			
b. Affected engine identified. (P)			
c. Crew notified of casualty. (T)			
d. Affected engine secured. (P)			
e. Engineer checked compartment to assess the situation. (P)			
f. Crewmember rig the anchor, if necessary. (P/O)			
g. Engineer entered engine compartment, crewmember safety observer for engineer. (P)			
h. Fire extinguishers O/S. (P)			
i. Bilge area checked for lube oil. (P)			
j. Lube oil checked for quality and quantity. (P)			
k. OPCON notified. (P/T)			
l. Return to nearest safe port if cause cannot be determined or repaired. (P/T)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept OPCON informed during evolution. (P/T)			
l. Risk assessment made and used. (T)			

UNIT NAME:_____BOAT #_____DATE:_____

COXSWAIN:_____ENGINEER:_____

CREWMEMBER:_____CREWMEMBER:_____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: MAIN ENGINE HIGH-WATER TEMPERATURE (49' BUSL) SCORE: SAT/UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After rising operating temperature of one main diesel engine sets off the alarm, identify the cause, prevent further damage, and take corrective actions.

CONDITION: While underway on a 49' BUSL at cruising speed, with a certified crew operating within prescribed limitations, take corrective action for high water temperature.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
49' BUSL Operator's Handbook	M16114.22 (series)
Rescue and Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

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1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced to clutch ahead on both engines. (P)			
b. Affected engine identified. (P)			
c. Crew notified of casualty. (T)			
d. Engine secured, if temperature continues to rise. (P)			
e. Engineer checked engine compartment to assess the situation. (P)			
f. Crewmember rigged the anchor, if necessary. (P)			
g. Engineer entered engine compartment, crewmember acted as safety observer for engineer. (P)			
h. Sea suction valves open. (P)			
i. Bilges checked. (P)			
j. Cooling lines checked. (P)			
k. Heat exchanger and expansion tank checked after engine has cooled			
l. OPCON notified. (P/T)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (T/P/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept OPCON informed during evolution. (T/P)			
i. Risk assessment made and used. (T).			

UNIT NAME:_____BOAT #_____DATE:_____

COXSWAIN:_____ENGINEER:_____

CREWMEMBER:_____CREWMEMBER:_____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF CONTROL OF ENGINE RPM (49' BUSL) SCORE: SAT/UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After one engine fails to respond properly to throttle station control, identify the cause, prevent further damage, and take corrective action.

CONDITIONS: While underway on a 49' BUSL at cruising speed, with a certified crew operating within prescribed limitations, the coxswain attempts to reduce speed but one engine stays at set RPM and does not respond to throttle control.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
49' BUSL Operator's Handbook	M16114.22 (series)
Rescue and Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced on both engines. (P)			
b. Crew notified of casualty. (T)			
c. Current position verified and situation evaluated. (P)			
d. Coxswain pulled engine stop for effected engine. (P)			
e. Turn into affected engine (if situation permits). (B)			
f. Pulled emergency fuel stop for the effected engine. (P)			
g. Engineer checked engine compartment to assess the situation			
h. Engineer entered engine compartment with crewman as safety observer. (P)			
i. Engineer check governor and linkage. (P)			
j. Trip emergency air shutdown. (P)			
k. Anchor made ready, if necessary. (P)			
l. Coxswain maneuvers boat safely back to moorings on one engine. (P/B)			

2. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as required. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout the evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (T/P/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept OPCON informed during evolution. (T/P)			
i. Risk assessment made and used. (T)			

UNIT NAME:_____BOAT #_____DATE:_____

COXSWAIN:_____ENGINEER:_____

CREWMEMBER:_____CREWMEMBER:_____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: LOSS OF FUEL OIL PRESSURE (49' BUSL) SCORE: SAT/UNSAT

TERMINAL PERFORMANCE OBJECTIVE: After experiencing a loss in RPM's on one engine, identify the cause, prevent further damage, and take corrective action.

CONDITION: While underway on a 49' BUSL at cruising speed, with a certified crew operating within prescribed limitations, engine begins to run rough and lose power.

STANDARD: In accordance with procedures set forth in:

Boat Crew Seamanship Manual	M16114.5 (series)
Boat Crew Training Manual	M16114.9 (series)
49' BUSL Operator's Handbook	M16114.22 (series)
Rescue and Survival Systems Manual	M10470.10 (series)
Naval Engineering Manual	M9000.6 (series)

ENABLING OBJECTIVES:

1. CASUALTY:	SAT	UNSAT	REMARKS
a. RPM's reduced on engine(s) to clutch ahead. (P)			
b. Affected engine identified. (P)			
c. Crew notified of casualty. (T)			
d. Current position verified and situation evaluated. (N/P/T)			
e. Coxswain ensured engine stops are pushed in. (P)			
f. Engineer proceed to mess deck, ensured emergency fuel stops are pushed in. (P)			
g. Crewman rig the anchor, if directed by Coxswain. (P/O)			
h. Engineer checked engine compartment to assess situation. (P)			
i. Engineer entered engine compartment with crewman as safety observer. (P/T)			
j. Checked bilges. (P)			
k. Checked governor and linkage. (P)			
l. Source of problem identified and corrected or additional assistance requested from OPCON. (P)			

2. CREW TEAMWORK AND COORDINATION:

	SAT	UNSAT	REMARKS
a. Coxswain briefed crew of specific job and mission responsibilities. (T)			
b. Crew communicated effectively and assertively during evolution. (T)			
c. Crew assisted each other as needed. (T/P)			
d. Crew always aware of other's location. (T)			
e. Coxswain provided appropriate and timely guidance throughout evolution. (T)			
f. Crew safety and survival equipment properly worn and used. (P/T/O)			
g. Safety of vessel and crew not jeopardized. (T)			
h. Coxswain kept OPCON informed during evolution. (P/T)			
i. Risk assessment made and used. (T)			

Non-Standard Boat Material Checklists

The following Material Checklists are provided to assist the unit or RFO Team with material inspections.

The District Boat Outfit List is the primary source of appropriate outfit – if there is conflict between these checklists and the district checklists, the district list supercedes.

MATERIAL CHECKLISTS

- 55’ ANB
- TANB/OTHER NSB & TRAILER
- 64’ ANB

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UNIT NAME: _____ **DATE:** _____

55' ANB MATERIAL CHECKLIST (*recommended*)

References: Naval Engineering Manual, COMDTINST M9000.6B
Colors and Coating Manual, COMDTINST M10360.3
Rescue and Survival Systems Manual, COMDTINST M10470.10B
Applicable District Boat Outfit List *(The District Boat Outfit List is the primary source of appropriate outfit—if there is conflict between this recommended list and the district list, the district list supercedes.)*

Standards: The following standards apply to the 55' ANB's hull, superstructure, machinery, equipment, outfit, and all installed systems and accessories:

- Operates smoothly and correctly.
- Free of grease, oil, rust, and corrosion.
- Protective coatings applied correctly and neatly.
- Free of rips, tears, abrasions, and cracks.
- Outfit and equipment correctly installed, adjusted and stowed to specifications and design.
- Labels, test dates, and placards properly placed and up-to-date.

Items may be stowed in any location not contrary to published references.

Guidelines: This checklist requires a minimum of two personnel, preferably one Machinery Technician and one Boatswain's Mate both of whom possess extensive 55' ANB boat experience and a strong working knowledge of the contents of all references listed above. Each item on the checklist should be judged against applicable standards and references. Additional discrepancies, uninstalled ECs, etc. should be listed.

FORE PEAK	**SAT/UNSAT**	**REMARKS**
1. Anchor Line	☐ ☐	_____
2. Ground Tackle	☐ ☐	_____
MAIN DECK		
1. Anchor	☐ ☐	_____
2. 8ft/12ft Boat Hooks	☐ ☐	_____
3. Liferings/Marker Lights	☐ ☐	_____
a. Date	☐ ☐	_____
4. 75ft Heaving Lines	☐ ☐	_____
5. Sounding Rod	☐ ☐	_____
6. Portable Dewatering Pump (normally P1, P5 or P6)	☐ ☐	_____
7. Aft Console	☐ ☐	_____
8. Hand Rails and Chain	☐ ☐	_____
9. Lifelines	☐ ☐	_____
10. Tiller Caps	☐ ☐	_____
11. Buoy Guard	☐ ☐	_____
12. Winches/Port/Starboard	☐ ☐	_____
CRANE		
1. Boom/Davit	☐ ☐	_____
a. Cable	☐ ☐	_____
b. Pulleys	☐ ☐	_____

CRANE (con't)	SAT/UNSAT	REMARKS
c. Winch	☐ ☐	
d. Hook	☐ ☐	
e. Support	☐ ☐	
f. Weight test date	☐ ☐	
2. Jib	☐ ☐	
3. Wire Rope	☐ ☐	
4. Rotation	☐ ☐	
5. Labeled	☐ ☐	

PILOTHOUSE/MESSDECK

1. Exterior Door	☐ ☐	
a. Gaskets	☐ ☐	
b. Dogs	☐ ☐	
2. Lighting	☐ ☐	
3. Wiring	☐ ☐	
4. Bulkheads	☐ ☐	
5. Piping	☐ ☐	
6. Sink	☐ ☐	
7. Cabinet	☐ ☐	
8. Refrigerator	☐ ☐	
9. Microwave	☐ ☐	
10. Electric Stove	☐ ☐	
11. Fire Ext 5lb PKP	☐ ☐	
a. Date	☐ ☐	
12. Fixed Halon System, Placard	☐ ☐	
13. Clock (time tick?)	☐ ☐	
14. Binoculars	☐ ☐	
15. Hearing Protection	☐ ☐	
16. Hand held Horn	☐ ☐	
17. Corrected Charts for Area of Operations	☐ ☐	
18. Nav Gear (may be in coxswain's kit)	☐ ☐	
19. Nav Lights/dayshapes	☐ ☐	
20. Compass Deviation Table	☐ ☐	
a. Date of Last Adjustment	☐ ☐	
21. Light List	☐ ☐	
22. Tide Table	☐ ☐	
23. Coast Pilot	☐ ☐	
24. Coxswain Chair	☐ ☐	
25. Bench Seat Cushions	☐ ☐	
26. Bench Seat Compartments	☐ ☐	
27. Heaters	☐ ☐	
28. 24 VOLT panel	☐ ☐	
29. VHF-FM Radio	☐ ☐	
30. GPS	☐ ☐	

PILOTHOUSE/MESSDECK (con't)	SAT	UNSAT	REMARKS
31. Radar	☐	☐	
32. Helm (nut properly installed?)	☐	☐	
33. Alarm Panel	☐	☐	
34. Compass/Light	☐	☐	
35. Gauges (redlined/greenlined)	☐	☐	
36. Loudhailer	☐	☐	
37. Instrument Panel (console)	☐	☐	

EXTERIOR OF PILOTHOUSE			
1. EPIRB	☐	☐	
2. Vents Fuel/Air	☐	☐	
3. Mast	☐	☐	
4. Running Light/Mast Lights	☐	☐	
5. Windows	☐	☐	
6. Windshield Wipers	☐	☐	
7. Spotlight	☐	☐	
8. Speaker	☐	☐	
9. Loran Antenna	☐	☐	
10. VHF-FM Antenna	☐	☐	
11. GPS Antenna	☐	☐	
12. Handrails	☐	☐	
13. Liferaft and Release	☐	☐	
a. Date	☐	☐	
14. Horn	☐	☐	
15. Radar/Stand	☐	☐	

DECK BOXES PORT/STARBOARD			
1. Cargo Tie Downs	☐	☐	
2. Hard Hats/Goggles	☐	☐	
3. DC Plugging Kit	☐	☐	
4. Sledge Hammer	☐	☐	
5. Crow Bar	☐	☐	
6. Grapnel Hook/100ft Line	☐	☐	
7. Lead Line	☐	☐	
8. Leadsman's Hard Hat/Goggles	☐	☐	
9. Heaving Lines	☐	☐	
10. Tag Lines	☐	☐	
11. Swimmers Harness w/Knife	☐	☐	
12. Retrieving Harness	☐	☐	
13. Type III PFDs	☐	☐	
14. Wet Suit	☐	☐	
15. Swimmers Fins/Diving Mask	☐	☐	

LAZARETTE	SAT/UNSAT	REMARKS
1. Rudder Posts	☐ ☐	
2. Steering Ram	☐ ☐	
3. Lighting	☐ ☐	
4. Wiring	☐ ☐	
5. Stuffing Tubes	☐ ☐	
6. Mooring Lines	☐ ☐	
7. Fenders	☐ ☐	
8. Buoy Scrapers	☐ ☐	
9. Emergency Steering Disconnect	☐ ☐	
10. Emergency Tiller	☐ ☐	

ENGINE ROOM		
1. Bilge	☐ ☐	
2. Overhead	☐ ☐	
3. Bulkheads	☐ ☐	
4. Wiring /Brackets	☐ ☐	
5. Deck Plates	☐ ☐	
6. Stuffing Tubes	☐ ☐	
7. Air Compressor	☐ ☐	
8. Generator	☐ ☐	
9. Battery/Battery Charge	☐ ☐	
10. Shore Tie Switch	☐ ☐	
11. Sea Chest Valves	☐ ☐	
12. Breaker Box 24 Volt	☐ ☐	
13. 5 lb PKP	☐ ☐	
14. CO2	☐ ☐	
15. Battle Lanterns	☐ ☐	
a. Date	☐ ☐	

WORKSHOP		
1. Work Bench	☐ ☐	
2. Shelves	☐ ☐	
3. Collapsible Litter	☐ ☐	
4. First Aid Kit	☐ ☐	
5. Types I PFDs	☐ ☐	
6. Types III PFDs	☐ ☐	
7. Mustang/Dry Suits	☐ ☐	
8. SAR Vest	☐ ☐	
9. PKP Fire Extinguishers	☐ ☐	
a. Date	☐ ☐	
10. A/C Pump	☐ ☐	
11. Water Heater/Tank	☐ ☐	

WORKSHOP (con't)	SAT/UNSAT	REMARKS
12. Transformer	☐ ☐	
13. Overboard Discharge	☐ ☐	
14. Bilge	☐ ☐	
15. Gray Water Tank	☐ ☐	

CREWSPACE

1. Smoke Detector	☐ ☐	
2. PKP Fire Extinguisher	☐ ☐	
3. Eye Wash Station	☐ ☐	
4. Racks	☐ ☐	
5. Light	☐ ☐	
6. EMT Kit	☐ ☐	
7. Crew Lockers	☐ ☐	
8. Bulkhead Storage Lockers	☐ ☐	
9. Overboard Discharge	☐ ☐	

HEAD

1. Marine Toilet	☐ ☐	
2. Shower/Sink	☐ ☐	
3. Light	☐ ☐	

SWIM PLATFORM

1. Hatches	☐ ☐	
2. Spaces Free of Water	☐ ☐	

ENGINES	PORT SAT/UNSAT	STBD SAT/UNSAT	
1. Stern Tubes	☐ ☐	☐ ☐	
2. Coupling/Shaft	☐ ☐	☐ ☐	
3. Recirculation System	☐ ☐	☐ ☐	
4. Piping and Strainers	☐ ☐	☐ ☐	
5. Exhaust Piping and Strainers	☐ ☐	☐ ☐	
6. Exhaust Muffler/Silencer	☐ ☐	☐ ☐	
7. Reduction Gear	☐ ☐	☐ ☐	
8. Governor and Linkage	☐ ☐	☐ ☐	
9. Morse Control	☐ ☐	☐ ☐	
10. Air Vent Ducts	☐ ☐	☐ ☐	
11. Raw Water System	☐ ☐	☐ ☐	
12. Gauges w/Marking	☐ ☐	☐ ☐	
13. Starter	☐ ☐	☐ ☐	
14. Alternator	☐ ☐	☐ ☐	
15. Hot Start	☐ ☐	☐ ☐	
16. Wiring Engine	☐ ☐	☐ ☐	

ENGINES (con't)	**PORT**		**STBD**		
	SAT	**UNSAT**	**SAT**	**UNSAT**	
17. Block	☐	☐ /	☐	☐	_____
18. Head	☐	☐ /	☐	☐	_____
19. Blower Flapper Valve	☐	☐ /	☐	☐	_____
20. Lube Oil System	☐	☐ /	☐	☐	_____
21. Engine Mounts and Framing	☐	☐ /	☐	☐	_____
3. Steering Pump Starboard			☐	☐	_____
22. Steering Tank Starboard			☐	☐	_____
23. Hydraulic PTO			☐	☐	_____
24. Hydraulic Tank			☐	☐	_____

Remarks:

_____

_____

_____

_____

_____

_____

UNIT NAME: _____ **DATE:** _____

TANB/OTHER NSB & TRAILER MATERIAL CHECKLIST (*recommended)*

References: Naval Engineering Manual, COMDTINST M9000.6 (series)
Colors and Coating Manual, COMDTINST M10360.3 (series)
Rescue and Survival Systems Manual, COMDTINST M10470.10 (series)
Manufacturer's Instructions/Procedures
Applicable District Boat Outfit List *(The District Boat Outfit List is the primary source of appropriate outfit—if there is conflict between this recommended list and the district list, the district list supercedes.)*

Standards: The following standards apply to the TANB/NSB hull, superstructure, machinery, equipment, outfit, and all installed systems and accessories:

- Operates smoothly and correctly.
- Free of grease, oil, rust, and corrosion.
- Protective coatings applied correctly and neatly.
- Free of rips, tears, abrasions, and cracks.
- Outfit and equipment correctly installed, adjusted and stowed to specifications and design.
- Labels, test dates, and placards properly placed and up-to-date.

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CONSOLE	SAT/UNSAT	REMARKS
1. Gauges	☐ ☐	_____
a. Red Lined	☐ ☐	_____
2. Radio	☐ ☐	_____
3. Compass	☐ ☐	_____
a. Compass Card	☐ ☐	_____
b. Date	☐ ☐	_____
4. Engine Control	☐ ☐	_____
5. Engine Kill Switch (assembly & spare cord)	☐ ☐	_____
6. Navigation Lights	☐ ☐	_____
7. Horn	☐ ☐	_____
8. Windshield	☐ ☐	_____
a. Windshield Wipers	☐ ☐	_____
9. Power Trim	☐ ☐	_____
a. Gauges	☐ ☐	_____
10. VHF-FM Antenna	☐ ☐	_____
11. GPS/DGPS Antenna (transportable or hardwired)	☐ ☐	_____
12. Navigation Kit (may be in coxswain's kit)		
a. Red Light	☐ ☐	_____
b. Nav Slide Rule	☐ ☐	_____
c. Pencils	☐ ☐	_____
d. Compass and Divider	☐ ☐	_____

CONSOLE (con't)	**SAT/UNSAT**	**REMARKS**
e. Charts	☐ ☐	

UNDER CONSOLE	**SAT/UNSAT**	**REMARKS**
1. Fire Extinguisher	☐ ☐	
a. 5lb CO2	☐ ☐	
b. Date	☐ ☐	
2. Anchor	☐ ☐	
a. Anchor Line	☐ ☐	
b. Thimble	☐ ☐	
c. Swivel	☐ ☐	
3. Wiring	☐ ☐	
4. Stuffing Tubes	☐ ☐	
5. First Aid Kit/Eyewash	☐ ☐	
6. Boat pyro (aboard boat necessary only when preparing to depart)	☐ ☐	

DECK

1. Searchlight	☐ ☐	
2. Cleats	☐ ☐	
3. Fuel Fill	☐ ☐	
4. Fuel Vents	☐ ☐	
5. Paddles	☐ ☐	
6. Life ring w/Float light	☐ ☐	
7. Heaving Line	☐ ☐	
8. Boat Hook	☐ ☐	
9. Mooring Lines (nylon double braid)	☐ ☐	
10. Deck Plates	☐ ☐	
11. Bilge	☐ ☐	
12. Boom/Davit (only if installed)	☐ ☐	
a. Cable	☐ ☐	
b. Pulleys	☐ ☐	
c. Winch	☐ ☐	
d. Hook	☐ ☐	
e. Support	☐ ☐	
f. Weight test date	☐ ☐	

ENGINE SPACE

1. Battery Connection Cable	☐ ☐	
2. Engine	☐ ☐	
a. Engine Mount	☐ ☐	
b. Starter	☐ ☐	
(1) Electric Cable	☐ ☐	
(2) Exhaust	☐ ☐	

ENGINE SPACE (con't)	SAT/UNSAT	REMARKS
(3) Linkage	☐ ☐	
(4) Hoses	☐ ☐	
(5) Hot Start (if applicable)	☐ ☐	
(6) Alternator	☐ ☐	
(7) Bilge	☐ ☐	
c. Bilge Pump	☐ ☐	
3. Belts	☐ ☐	
4. Steering Cable	☐ ☐	
5. Throttle Cable	☐ ☐	
6. Lower Unit	☐ ☐	
7. Prop	☐ ☐	

HULL

1. Hull	☐ ☐	
2. Lettering/Decal	☐ ☐	
3. Numbering (Bow & Stern)	☐ ☐	
4. Rubrails	☐ ☐	
5. Transducer	☐ ☐	

TRAILER

1. Tires and Rims	☐ ☐	
2. Spare /Tire	☐ ☐	
3. Brakes	☐ ☐	
4. Lights	☐ ☐	
a. Wiring	☐ ☐	
5. Hitch	☐ ☐	
6. Pulley Winch	☐ ☐	
a. Cable	☐ ☐	
b. Hooks	☐ ☐	
7. Rollers	☐ ☐	
8. Pads	☐ ☐	
9. Fenders	☐ ☐	
10. Jack	☐ ☐	
11. Safety Chains	☐ ☐	
12. Tie-downs	☐ ☐	
13. Bearing 'buddies' or checkbearings	☐ ☐	
14. Data plate	☐ ☐	
15. Frame	☐ ☐	
16. Leaf springs	☐ ☐	
17. Axles	☐ ☐	
18. Dissimilar metals	☐ ☐	
19. License plates	☐ ☐	

Remarks:

_____
_____
_____
_____
_____
_____

UNIT NAME: _____ **DATE:** _____

64' ANB MATERIAL CHECKLIST

References: Naval Engineering Manual, COMDTINST M9000.6 (series)
Colors and Coating Manual, COMDTINST M10360.3 (series)
Rescue and Survival Systems Manual, COMDTINST M10470.10 (series)
Applicable District Boat Outfit List *(The District Boat Outfit List is the primary source of appropriate outfit—if there is conflict between this recommended list and the district list, the district list supercedes.)*

Standards: The following standards apply to the 64' ANB hull, superstructure, machinery, equipment, outfit, and all installed systems and accessories:

- Operates smoothly and correctly.
- Free of grease, oil, rust, and corrosion.
- Protective coatings applied correctly and neatly.
- Free of rips, tears, abrasions, and cracks.
- Outfit and equipment correctly installed, adjusted and stowed to specifications and design.
- Labels, test dates, and placards properly placed and up-to-date.

Guidelines: This checklist requires a minimum of two personnel, preferably one Machinery Technician and one Boatswain's Mate both of whom possess extensive 64' ANB boat experience and a strong working knowledge of the contents of all references listed above. Each item on the checklist should be judged against applicable standards and references. Additional discrepancies, uninstalled ECs, etc. should be listed.

PILOT HOUSE	SAT/UNSAT	REMARKS
1. Overhead	☐ ☐	_____
2. Binoculars	☐ ☐	_____
3. Charts	☐ ☐	_____
4. Dividers	☐ ☐	_____
5. Weems	☐ ☐	_____
6. Pencils	☐ ☐	_____
7. Pyro kit	☐ ☐	_____
8. Drill Book/Underway Log	☐ ☐	_____
9. Antenna	☐ ☐	_____
10. Radar	☐ ☐	_____
11. Search light	☐ ☐	_____
12. Horn	☐ ☐	_____
13. Loud hailer speaker	☐ ☐	_____
14. Ladder	☐ ☐	_____
15. Exhaust stack	☐ ☐	_____
16. Bulkheads	☐ ☐	_____
17. Deck	☐ ☐	_____
18. Windows and defoggers	☐ ☐	_____
19. Wiring	☐ ☐	_____
20. Electrical Outlets	☐ ☐	_____
21. Chart table	☐ ☐	_____
22. Storage benches	☐ ☐	_____
23. DGPS	☐ ☐	_____

PILOT HOUSE (con't)	SAT/UNSAT	REMARKS
24. Lighting	☐ ☐	
25. Chart light	☐ ☐	
26. Console	☐ ☐	
27. Compass	☐ ☐	
a. Compass Deviation Table	☐ ☐	
28. VHF Emer. Radio	☐ ☐	
29. Loud hailer	☐ ☐	
30. Air Horn handle	☐ ☐	
31. Radar screen	☐ ☐	
32. VHF Radio	☐ ☐	
33. Depth finder	☐ ☐	
34. Power panel	☐ ☐	
35. Circuit Breakers	☐ ☐	
36. Fire extinguisher	☐ ☐	
a. Date	☐ ☐	
37. Hydraulic oil tank (steering gear)	☐ ☐	
38. MDE Gauge panel	☐ ☐	
39. Helm (wheel)	☐ ☐	
40. Throttle controls	☐ ☐	
41. Boat Plate	☐ ☐	
42. Deck drains	☐ ☐	
43. Ladderwell	☐ ☐	
44. Handrail	☐ ☐	
45. Folding door	☐ ☐	
46. Emer. VHF Radio battery charger	☐ ☐	
47. Alarm panel	☐ ☐	

BRIDGE WINGS		
1. Life ring w/Marker light	☐ ☐	
2. Bell	☐ ☐	
3. Day shapes (B/D/B)	☐ ☐	
4. Flood light	☐ ☐	
5. Mast	☐ ☐	
6. Mast lights	☐ ☐	
7. Emer. VHF Radio battery	☐ ☐	
8. Deck drain vent	☐ ☐	
9. Doors	☐ ☐	
10. Door stops	☐ ☐	
11. Hand rails	☐ ☐	
12. Running lights	☐ ☐	
13. E/R exhaust fan	☐ ☐	
14. Deck	☐ ☐	

MESSDECK / PASSAGEWAY	SAT	UNSAT	REMARKS
1. Medical (EMT) kit	☐	☐	
2. Swimmer kit (Bag)	☐	☐	
3. Swimmers harness	☐	☐	
4. Personnel retrival line	☐	☐	
5. Lifejackets	☐	☐	
6. Hardhats	☐	☐	
7. Exterior Doors	☐	☐	
8. Overhead	☐	☐	
9. Bulkhead	☐	☐	
10. Deck	☐	☐	
11. Refrigerator	☐	☐	
12. Cabinets	☐	☐	
13. Mess Deck Table	☐	☐	
14. Storage benches	☐	☐	
15. Folding rack	☐	☐	
16. Sink	☐	☐	
17. Stove top	☐	☐	
18. Stove exhaust hood	☐	☐	
19. Deck drain	☐	☐	
20. Power panel	☐	☐	
21. Lights	☐	☐	
22. Electrical wiring	☐	☐	
23. Switches	☐	☐	
24. Water fountain	☐	☐	
25. Water heater	☐	☐	
26. VCR	☐	☐	
27. TV	☐	☐	
28. A/C vents	☐	☐	
29. Heat/air controller	☐	☐	
30. Loud hailer speaker	☐	☐	
31. Porthole	☐	☐	
32. Smoke detector	☐	☐	
33. Fire extinguisher	☐	☐	
34. Outlets	☐	☐	
35. First aid kit	☐	☐	

BERTHING / HEAD			
1. Doors (3)	☐	☐	
2. A/c vents	☐	☐	
3. Head exhaust fan	☐	☐	
4. Thermostat	☐	☐	
5. Outlet	☐	☐	
6. Deck	☐	☐	
7. Overhead	☐	☐	

BERTHING / HEAD (con't)	SAT	UNSAT	REMARKS
8. Bulkhead	☐	☐	
9. Lockers	☐	☐	
10. Drawers	☐	☐	
11. Berths with mattresses	☐	☐	
12. Smoke detector	☐	☐	
13. Lights	☐	☐	
14. Switches	☐	☐	
15. Electrical wiring	☐	☐	
16. Portlight	☐	☐	
17. Latches, hinges, doorknobs	☐	☐	
18. Loud hailer speaker	☐	☐	
19. Shower	☐	☐	
20. Sink	☐	☐	
21. Deck drain	☐	☐	
22. Toilet	☐	☐	
23. Piping	☐	☐	
24. Mirror	☐	☐	

MAIN DECK

1. Anchor w/6' ft 1/2" chain	☐	☐	
2. Anchor line, 100 ft 2" DBN	☐	☐	
3. Boat hook	☐	☐	
4. Rescue heaving line	☐	☐	
5. Fire Axe	☐	☐	
6. Life ring w/marker light	☐	☐	
7. Extension ladder	☐	☐	
8. Fenders	☐	☐	
9. Mooring lines, 2 3/4" X 30"	☐	☐	
10. Buoy deck lines, 3" X 20" DBN	☐	☐	
11. Climbing Tag Lines	☐	☐	
12. Sledge Hammer	☐	☐	
13. Buoy punch sledge	☐	☐	
14. Machete	☐	☐	
15. Marlinspike wrench	☐	☐	
16. Pry bar	☐	☐	
17. Crow bar	☐	☐	
18. Chain hook	☐	☐	
19. Buoy scraper	☐	☐	
20. Brush axe	☐	☐	
21. Nipper Chain	☐	☐	
22. Doubled Leg Sling	☐	☐	
23. Stokes litter	☐	☐	
24. Pressure sprayer	☐	☐	

MAIN DECK (con't)	SAT	UNSAT	REMARKS
25. Edge	☐	☐	
26. Deck	☐	☐	
27. Superstructure	☐	☐	
28. Hand rail	☐	☐	
29. Hatches	☐	☐	
30. E/R intake vent	☐	☐	
31. Cleats	☐	☐	
32. Flood lights	☐	☐	
33. Deck lights	☐	☐	
34. Tank vent tubes	☐	☐	
35. Tank sounding tubes	☐	☐	
36. Tank fills	☐	☐	
37. Chain stoppers	☐	☐	
38. Spud and spudwell	☐	☐	
39. Winches	☐	☐	
40. Deck tiedown fitting	☐	☐	
41. Fire station	☐	☐	
42. Water hose	☐	☐	
43. Air hose reel	☐	☐	
44. Outlet	☐	☐	
45. Crane	☐	☐	
46. Capstan	☐	☐	
47. Controllers	☐	☐	
48. Shore tie fitting	☐	☐	
49. Dogging wrench	☐	☐	
50. Chain box	☐	☐	
51. Loud hailer speakers	☐	☐	
52. Cutting torch	☐	☐	
53. Power pruner	☐	☐	
54. Bushwhacker	☐	☐	
55. Chainsaw	☐	☐	

FLAMMABLE LOCKERS

1. Climbing belts	☐	☐	
2. Climbing safety straps	☐	☐	
3. Climbing spikes	☐	☐	

ATON WORKSHOP

1. Doors	☐	☐	
2. Overhead	☐	☐	
3. Bulkhead	☐	☐	
4. Deck	☐	☐	
5. Deck drain	☐	☐	
6. Deck tiedown fittings	☐	☐	

ATON WORKSHOP (con't)	SAT/UNSAT	REMARKS
7. Fire extinguisher	☐ ☐	
8. CO2 actuator	☐ ☐	
9. Cabinet	☐ ☐	
10. Sink	☐ ☐	
11. A/C handler	☐ ☐	
12. Mirror	☐ ☐	
13. Eye wash station	☐ ☐	
14. Thermostat	☐ ☐	
15. Tool box	☐ ☐	
16. Switch	☐ ☐	
17. Loud hailer speaker	☐ ☐	
18. Electrical wiring	☐ ☐	
19. Outlet	☐ ☐	
20. Light	☐ ☐	
21. Piping	☐ ☐	
22. DC kit	☐ ☐	
23. Electrical kit	☐ ☐	
24. E/R ladderwell	☐ ☐	
25. Handrail	☐ ☐	

CARGO HOLD

1. Deckplate	☐ ☐	
2. Deck	☐ ☐	
3. Overhead	☐ ☐	
4. Bulkhead	☐ ☐	
5. Main wiring box	☐ ☐	
6. Pot. Wtr. Tank	☐ ☐	
7. Pot. Wtr. Pump w/pressure tank	☐ ☐	
8. Hoses	☐ ☐	
9. Piping	☐ ☐	
10. 100 lb CO2 bottles	☐ ☐	
11. Tool box	☐ ☐	
12. A/C system	☐ ☐	
13. Electrical wiring	☐ ☐	
14. Switches	☐ ☐	
15. Storage cabinet	☐ ☐	
16. Pot. Wtr. Hoses	☐ ☐	
17. Portable pump	☐ ☐	
18. Sewage holding tank	☐ ☐	
19. Dehumidifier	☐ ☐	
20. Outlet	☐ ☐	
21. Freezer	☐ ☐	
22. Access covers	☐ ☐	

CARGO HOLD (con't)	SAT/UNSAT	REMARKS
23. Fire extinguisher	☐ ☐	

CRANE PEDESTAL

1. Hoses	☐ ☐	
2. Swivel	☐ ☐	
3. Deck	☐ ☐	
4. Interior Walls	☐ ☐	

STEERING LAZARRETTE

1. Bilges	☐ ☐	
2. Overhead	☐ ☐	
3. Bulkhead	☐ ☐	
4. Piping	☐ ☐	
5. Electrical wiring	☐ ☐	
6. Steering ram	☐ ☐	
7. Hydraulic hoses	☐ ☐	
8. Light	☐ ☐	
9. Access holes	☐ ☐	

FOREPEAK/ VOIDS

1. Bilges	☐ ☐	
2. Bulkheads	☐ ☐	
3. Overheads	☐ ☐	
4. Access covers	☐ ☐	
5. Piping	☐ ☐	
6. Transducer	☐ ☐	

ENGINE ROOM

1. Bilges	☐ ☐	
2. Deck plates	☐ ☐	
3. Bulkheads	☐ ☐	
4. Overhead	☐ ☐	
5. Fire extinguisher	☐ ☐	
6. CO2 suppression nozzles	☐ ☐	
7. Fire alarm sensor	☐ ☐	
8. Engines	☐ ☐	
9. Electrical switchboard	☐ ☐	
10. Hydraulic sump tank	☐ ☐	
11. Pumps	☐ ☐	
12. Black water tank	☐ ☐	
13. Motors	☐ ☐	
14. Battery	☐ ☐	
15. Air compressor tank	☐ ☐	

ENGINE ROOM (con't)	**SAT/UNSAT**	**REMARKS**
16. Hydraulic hoses	☐ ☐	_____
17. Piping	☐ ☐	_____
18. Electrical wiring	☐ ☐	_____
19. Lights	☐ ☐	_____
20. Switches	☐ ☐	_____
21. Fuse panel	☐ ☐	_____
22. Controllers	☐ ☐	_____
23. Cables	☐ ☐	_____
24. Placards, labels, data plates	☐ ☐	_____
25. Shafts & seals	☐ ☐	_____
26. Transducers, sea chests	☐ ☐	_____

Remarks:

_____

_____

_____

_____

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_____

Unit and RFO
Aids to Navigation Team Checklists

The following Checklists are provided to assist the unit or RFO Team with inspections of Aids to Navigation Teams.

- MOORING PULL AND AID POSITIONING
- SERVICING MINOR LIGHTED FIXED AID
- ANT RFO GENERAL INFORMATION
- UNIT TRAINING
- ENGINEERING ADMINISTRATION
- AIDS TO NAVIGATION ADMINISTATION
- COMPLETION WORKSHEET

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UNIT NAME:_____BOAT #_____DATE:_____

COXSWAIN:_____ENGINEER:_____

CREWMEMBER:_____CREWMEMBER:_____

WEATHER DURING DRILL: WINDS_____SEAS_____CURRENT_____VIS_____

EXERCISE: BUOY OPERATIONS—MOORING PULL AND AID POSITIONING

TERMINAL PERFORMANCE OBJECTIVE: The purpose of this exercise is to determine the crew's ability to safely conduct buoy deck operations and position an aid. This evaluation may be made during an annual service, mooring evolution, or a buoy relief.

CONDITIONS: Given a CG boat assigned and outfitted to work buoys, position equipment, and a certified crew operating within prescribed limitations.

STANDARD: Buoy hauled, serviced, reset, position checked and recorded in accordance with:

Rescue and Survival Systems Manual	M10470.10 (series)
Navigation Rules, International-Inland	M16672.2 (series)
Aids to Navigation Manual-Seamanship	M16500.21 (series)
Aids to Navigation Manual-Technical	M16500.3 (series)
Aids to Navigation Manual- Servicing Guide	M16500.19 (series)
Aids to Navigation Manual-Positioning	M16500.1 (series)
Aids to Navigation Manual-Administration	M16500.7 (series)
Operational Risk Assessment	COMDTINST 3500.3

ENABLING OBJECTIVES:

WORKING THE BUOY

1. PREPARATIONS:

	SAT	UNSAT	REMARKS
a. Material broken out and available.			
b. Equipment on deck properly secured for transit.			
c. Crew in personal protective equipment			

2. WORKING THE BUOY:

	SAT	UNSAT	REMARKS
a. Safe approach made to the aid.			
b. Proper dayshapes hoisted.			
c. Buoy safely and efficiently hooked (including the use of mechanical devices).			
d. Cross deck fair led, safely attached to buoy.			
e. Standard hand signals used.			
f. Buoy kept low to deck, handled smoothly.			
g. Chain safely placed in chain stopper.			
h. Appropriate method selected to secure buoy on deck.			

2. WORKING THE BUOY (con't):	SAT	UNSAT	REMARKS
i. Appropriate tools and procedures used for disconnecting the mooring.			
j. Mooring hoisted using safe, efficient method. Chain kept "up and down." (49' BUSL: Horse collar used.)			

3. SERVICING BUOY/INSPECTING MOORING	SAT	UNSAT	REMARKS
a. Buoy cleaned, inspected, and repaired, as necessary.			
b. Recharged as necessary.			
c. Aid characteristic checked against Light List, chart, and ATONIS database.			
d. Measure and record initial battery voltage.			
e. Measure and record battery load test.			
f. Checked battery cable (megger).			
g. Verified battery serial number (recharge only).			
h. Measure and record solar panel output voltage.			
i. Conduct solar panel diode test.			
j. Air tested hull, if required.			
k. Checked vent valves for obstructions.			
l. Timed flasher for accuracy.			
m. Inspected retro.			
n. Verified hull serial number.			
o. Measured and recorded chafe, plus checked the overall condition of the chain.			
p. Inspected swivel for proper operation, installation and wear.			
q. Inspected shackles for proper installation and wear.			

4. SETTING BUOY	SAT	UNSAT	REMARKS
a. Chain faked and ready.			
b. Shackle split keys spread at a 45 degree angle.			
c. Buoy set and vessel maneuvered clear of buoy without damage to vessel or aid.			

POSITIONING THE BUOY

5. AID DATA:	SAT	UNSAT	REMARKS
a. ATONIS database updated with import from OSC Martinsburg (at unit).			
b. Positioning equipment checked and in proper working order: computer (laptop), DGPS receiver (Trimble), fathometer/leadline/sounding pole, compass (at pier).			
c. Aid folder reviewed (at unit or aboard boat).			
d. Appropriate charts aboard. Electronic charts updated.			
e. Aid folder compared to Light List, chart, and ATONIS database (at unit or aboard boat).			
f. Tide and current predictions calculated for aid.			

6. DGPS (at pier)	SAT	UNSAT	REMARKS
a. Appropriate differential beacon selected.			
b. Verify correct NMEA strings selected. 1) VHW if fluxgate compass is installed.			
c. Trimble receiver correctly configured: 1) GGA, GST, GRS, GSA, VTG 2) 2D/3D mode correctly selected 3) GPS Mode "Auto" selected 4) DGPS Mode "ON" selected 5) Correctly connected to computer 6) WGS-84 selected in DGPS mode			

7. AAPS (AUTOMATED AID POSITIONING SYSTEM)	SAT	UNSAT	REMARKS
a. Verify correct datum selected (usually NAD 83).			
b. Vessel Data correctly entered. 1) Correct draft value entered 2) Correct buoy port offsets 3) GPS/DGPS rcvr type/serial number			
c. Aid Data. 1) Assigned Position 2) Accuracy Classification 3) Tolerance Radius 4) Vessels heading updated 5) Light List number 6) Chart and edition number 7) Chain length entered correctly 8) WorkArea assigned			

8. AUXILIARY DATA	SAT	UNSAT	REMARKS
a. Buoy port.			
b. Short Stay.			
c. Excursion.			
d. Measured Depth			
1) Tide Correction (negative sign used with high tide)			

9. POSITIONING DATA VERIFICATION	SAT	UNSAT	REMARKS
a. Plot the Assigned Position (AP) on the chart.			
b. Does the Light List data agree with the chart and ATONIS?			
c. Do the charted characteristics agree with the ATONIS and Light List?			

10. POSITIONING AID	SAT	UNSAT	REMARKS
a. Found fix taken using excursion . - OR - Set fix taken using Short Stay.			
b. Current direction determined correctly.			
c. Soundings taken.			
d. Wind direction determined correctly.			
e. Position using DGPS, IAW Positioning Manual.			

11. COMPLETING AID DOCUMENTATION	SAT	UNSAT	REMARKS
a. Aid Position Report properly filled out, including remarks, printed and signed.			
b. Data exported to OSC Martinsburg.			

OVERALL

12. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Coxswain and Buoy Deck Supervisor briefed crew of specific job, safety, and mission responsibilities.			
b. Crew communicated effectively and assertively during evolution.			
c. Crew assisted each other as needed.			
d. Crew always aware of other's location.			
e. Coxswain and buoy deck supervisor/safety supervisor provided appropriate and timely guidance throughout evolution.			

12. CREW TEAMWORK AND COORDINATION (con't):

	SAT	UNSAT	REMARKS
f. Crew safety and survival equipment properly worn and used.			
g. Safety of vessel not jeopardized.			
h. Safety of crew not jeopardized.			
i. Risk assessment made and used.			

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UNIT NAME:_____BOAT #_____DATE:_____

COXSWAIN/CREWMEMBER IN CHARGE OF SERVICING:_____

CREWMEMBER:_____

WEATHER DURING DRILL: N/A

EXERCISE: SERVICE MINOR LIGHTED FIXED AID (only required if unit performs BUOY OPERATIONS—MOORING PULL AND AID POSITIONING with an unlighted aid)

TERMINAL PERFORMANCE OBJECTIVE: The purpose of this exercise is to determine the crew's ability to safely and properly conduct a fixed lighted minor aid servicing.

CONDITIONS: Given an aids-to-navigation crew with minor aids-to-navigation qualification operating within prescribed limitations.

STANDARD: Minor lighted aid serviced in accordance with:

Aids to Navigation Manual-Technical	M16500.3 (series)
Aids to Navigation Manual-Servicing Guide	M16500.19 (series)
Operational Risk Assessment	CI 3500.3

ENABLING OBJECTIVES:

1. PREPARATIONS:	SAT	UNSAT	REMARKS
a. Material broken out and available.			
b. Crew in personal protective equipment.			

2. SERVICING SIGNAL:	SAT	UNSAT	REMARKS
a. Aid characteristic checked against Light List, chart, and ATONIS database.			
b. Measured and recorded initial battery voltage.			
c. Measured and recorded battery load test.			
d. Recharged as necessary.			
e. Checked battery cable (megger).			
f. Verified battery serial number (recharge only).			
g. Measured and recorded solar panel output voltage.			
h. Conduct solar panel diode test.			
i. Timed flasher for accuracy.			
j. Inspected retro.			

3. SERVICING STRUCTURE:	SAT	UNSAT	REMARKS
a. Angle of obscurity checked (if applicable).			
b. Aid site brushed (if needed).			
c. Aid inspected for structural integrity.			
d. No Trespassing/Vandalism signs posted.			
e. Safety Climb installed (if required).			
f. Safety check conducted on ladders, stairs, railings.			

4. CREW TEAMWORK AND COORDINATION:	SAT	UNSAT	REMARKS
a. Risk assessment made and used.			
b. Coxswain (or crewmember in charge of servicing) briefed crew of specific job and mission responsibilities.			
c. Crew communicated effectively and assertively during evolution.			
d. Crew assisted each other as needed.			
e. Crew always aware of other's location.			
f. Coxswain (or crewmember in charge of servicing) provided appropriate and timely guidance throughout evolution.			
g. Crew safety and survival equipment properly worn and used.			
h. Safety of vessel/vehicle (if used) not jeopardized.			
i. Safety of crew not jeopardized.			

Unit Name: _____ **Date of Inspection: _____**

ANT RFO GENERAL INFORMATION

1. Inspection Team Members (Name and Unit):

_____ _____

_____ _____

2. Date of last Ready for Operations Inspection: _____ Unit provide list of outstanding discrepancies.

3. Date of last MLC Safety and Environmental Health Inspection: _____ Unit provide list of outstanding discrepancies.

4. Number of AIDS assigned to unit for primary servicing _____fixed _____floating _____lighted

5. AtoN Discrepancies: Unit provide list with aid name, light list number, discrepancy.

6. Any AtoN supply problems being experienced? Yes ☐ / No ☐

_____

_____

_____

_____

7. Is unit staffed to its Personnel Allowance List (PAL)? Compare PAL to assigned personnel, note + or – from PAL.

OinC _____ XPO _____ EPO _____

BM1 _____ BM2 _____ BM3 _____

MK1 _____ MK2 _____ MK3 _____

QM _____ EM _____ SN _____ FN _____

8. Description/Condition of vehicles assigned, including cranes, forklifts, etc.:

_____mileage/hours:_____

_____mileage/hours:_____

_____mileage/hours:_____

_____mileage/hours:_____

9. Outstanding Unit CASREPS: Unit to provide a complete list.

10. Pending CSMPs: Unit to provide a complete list.

11. Pending SSMRs: Unit to provide a complete list for both unit and assigned aids.

12. Pending ECs (formerly BOATALTs). Unit to provide a complete list.

Remarks:

_____

_____

_____

_____

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UNIT NAME: _____ **DATE:** _____

UNIT TRAINING

SAT / UNSAT

1. Unit Training Officer designated in writing. ☐ ☐

   Name _____

2. Does the unit have an established training program? ☐ ☐

3. Are the unit training records maintained? If used instead of paper records, are entries in the Training Management Tool module of the Abstract of Operations up-to-date? ☐ ☐

4. Are the individual training records (CG-5285) properly organized?

   Inside Cover: Completed indoctrination check-off sheets ☐ ☐

   Section I: Copies of Certification Letters or Administrative Remarks (CG-3307) for PQS/JQR certification, revocation, and/or recertification. Copies of Individual's Record of Small Arms Training (CG-3029A) ☐ ☐

   Section 2: Formal school completion letters. Correspondence course completion letters. ☐ ☐

   Section 3: Copies of correspondence related to advancement or promotion and Performance Based Qualification Sheets, including:

   - Boat crew qualification PQS sign-off sheets
   - Records of underway drills and operations
   - Boarding team member and boat crew practical examination assessments
   - AOPS or TMT report reflecting completion of the most recent recurrent training

   ☐ ☐

   Section 4: Records of lectures on form CG-5289 (Dept Training Record) ☐ ☐

   Section 5: Miscellaneous training records and information ☐ ☐

5. Is the unit receiving adequate quotas to schools?*
   a. Minor Aids to Navigation ☐ ☐
   b. Aid Positioning ☐ ☐
   c. OINC/XPO ☐ ☐
   d. Advanced Minor Aids ☐ ☐
   f. Major Aids ☐ ☐

6. Is the unit following the Boat Crew Training Program? ☐ ☐
   a. Is it based on the Boat Crew Training Manual (COMDTINST M16114.9 series) adjusted for unit boat type(s)? ☐ ☐
   b. Does the OINC issue certification letters to authorize personnel to operate assigned boat(s)? ☐ ☐

7. Is a PQS/JQR (watch qualification) program in effect?
   a. Coxswain ☐ ☐
   b. Boat Engineer ☐ ☐
   c. Crewman ☐ ☐
   d. Buoy Deck Supervisor (45' boats and larger) (Chap 4, AtoN Seamanship Manual) ☐ ☐
   e. Boom Operator (for boats with boom) (Chap 4, AtoN Seamanship Manual) ☐ ☐
   f. Oxyacetylene (COMDTINST M3502.12 (series)) ☐ ☐
   g. Tower climbing (AtoN Technical & Seamanship Manuals) (if unit climbs towers over 20') ☐ ☐
   h. Chain saw (COMDTINST M3502.13 (series)) (if unit performs brushing) ☐ ☐

8. Are qualification requirements for Engineering watchstanders adequate? (45' boats and larger) ..... ☐ ☐

9. Number of certified/qualified personnel available to perform unit mission?* ..... ☐ ☐

*Note: This is a subjective call by inspector and/or OINC. Provide specific amplifying information for an "UNSAT" entry.

_____

_____

Remarks:

_____

_____

_____

_____

UNIT NAME: _____ **DATE:** _____

ENGINEERING ADMINISTRATION

1. Are the following publications available and up to date? (Access by CD ROM or Web satisfactory) .... **SAT / UNSAT**

Naval Engineering Manual, COMDTINST M9000.6 (series).	☐	☐
MLC SOP	☐	☐
CG Naval Engineering Technical Publications	☐	☐
Manufacturers Instruction Books, and Service Manuals (as applicable to the individual unit)	☐	☐
Allowance List	☐	☐
PMS technical publications. (AUX/MP/EM/DC)	☐	☐
Drawings of boats and machinery (NETIMS acceptable)	☐	☐
Are the boats' blueprints indexed?	☐	☐
Boat Management Manual, COMDTINST M16114.4 (series)	☐	☐

2. Do the Engineering Standing Orders contain the following?

Boat Engineer duties in port and underway.	☐	☐
When to call the Engineering Petty Officer.	☐	☐
Daily routine of Engineering Department in port.	☐	☐
Instructions on the issue, use and replenishment of spare parts	☐	☐

3. Is/are the assigned boat(s) adequate for the unit's aid assignment list and specific area of operations? ..... ☐ ☐

Note: This is a somewhat subjective call by inspector and/or OINC. Provide specific amplifying information for an "UNSAT" entry.

_____

_____

4. CSMP files. (M9000.6D, Chapter 090.3.3).

Are CSMPs prepared for all major repair items to be corrected by the unit and any repairs beyond the unit's capability?	☐	☐
Are CSMPs filled out in accordance with detailed instructions contained in the reverse of CSMP card, FORM CG-2920?	☐	☐
Does each card contain enough information to allow preparation of a specification?	☐	☐
Are CSMPs submitted to MLC(v) for review and prioritization in accordance with MLC SOP?		

List CSMPs on file pending for over two years. (Full list required for General Information Checklist.)

_____ _____

_____ _____

_____ _____

5. Engineering Change Requests (ECR, formerly boatalt). (Full list of pending ECRs required for General Information Checklist.)

Does the ECRs file show completed and pending items? (M9000.6D, CH. 041.1.9.8)	☐	☐
Are there incomplete Class "A" ECRs issued before the last routine availability?	☐	☐
Are there incomplete Class "B" ECRs over three (3) years old?	☐	☐

_____

_____

6. Are Boat Record files maintained in a six part folder and divided into the following sections? (COMDTINST M16114.4) ..... **SAT / UNSAT**

Boat Record Book (CG-2580)

a. Is the boat transfer report located in back of Boat Record Book? (CG-2580) ..... ☐ ☐

b. Is a chronological hull and machinery record appended to the Boat Record? ..... ☐ ☐

Boat Inspection Reports (CG-3022) ..... ☐ ☐

CASREPs and CASCORs (kept for one year) ..... ☐ ☐

ECRs pending (CG-3378) ..... ☐ ☐

ECRs completed (CG-3378) ..... ☐ ☐

Pending CSMPs ..... ☐ ☐

Do the records include district or unit outfit lists / check-off lists? ..... ☐ ☐

Has a Full Power Trial been completed as required by applicable instructions? ..... ☐ ☐

7. Rigging Log (AtoN Seamanship Manual) ..... ☐ ☐

Remarks:

_____

_____

_____

_____

UNIT NAME: _____ **DATE:** _____

AIDS TO NAVIGATION ADMINISTRATION

1. Are the following publications available and up to date? (Access by CD ROM satisfactory) ..... **SAT / UNSAT**

Aids to Navigation Manual - Seamanship, COMDTINST M16500.21 (series)	☐	☐
Aids to Navigation Manual - Positioning, COMDTINST M16500.1 (series)	☐	☐
Aids to Navigation Manual - Technical, COMDTINST M16500.3 (series)	☐	☐
Aids to Navigation Manual - Admin, COMDTINST M16500.7 (series)	☐	☐
District ATON SOP	☐	☐
District Aid Assignment List	☐	☐
Automated Technical Guidelines, COMDTINST M16500.8 (series)	☐	☐
Aids to Navigation Information System (ATONIS), COMDTINST M16500.15 (series)	☐	☐
Lighthouse Maintenance Management, COMDTINST M16500.6 (series) if applicable	☐	☐
Lighthouse Preventive Maintenance System Manual, COMDTINST M16500.10 (series) if applicable	☐	☐
ATONIS/AAPS Unit User Guide (current edition)	☐	☐
Hydrographic Manual (NOAA) 4th Ed, COMDTINST M16500.2 (series)	☐	☐
Development of New Nautical Charts & Publications, COMDTINST M16502.10 (series)	☐	☐
Aids to Navigation Battery Release Reporting Requirements, COMDTINST 16478.10 (series)	☐	☐
Aids to Navigation Battery Tracking System, COMDTINST 16478.11 (series)	☐	☐
Short Range Aids to Navigation Servicing Guide, COMDTINST 16500.19 (series)	☐	☐
Light List, COMDTPUB P16502.1 (series)	☐	☐
Solar Design Manual, COMDTINST M16500.24 (series)	☐	☐
Aids to Navigation Visual Signal Design Manual, COMDTINST M16510.2 (series)	☐	☐
National Plan for Aton Battery Recovery and Disposal, COMDTINST 16478.12 (series)	☐	☐
U.S. Coast Pilot for area of responsibility	☐	☐
CHART 1	☐	☐
Tower Manual, COMDTINST M11000.4 (series) for aids over 20 feet tall	☐	☐

2. Are all buoys on station the authorized hull? ☐ ☐
   List any mismatches.

Aid name LLNR	Authorized	On Station

3. Does the unit submit recommendations for changes to assigned aids ☐ ☐

_____

_____

4. Does the unit review the Light List for agreement with assigned aids to navigation? ☐ ☐
   Have corrections been sent to district? ☐ ☐

5. Does the unit maintain a file of SSMRs for assigned aids that include pending, current and completed (as required)? ☐ ☐

6. Are AtoN Allowance spares maintained in accordance with district SOP? ☐ ☐

7. Is the unit adequately funded and are funds properly expended to support assigned aids? (Compare budget vs. expenditures in aid maintenance and shore maintenance categories). ☐ ☐

8. Does the unit maintain Battery Tracking Log & Folder? ☐ ☐
   a) Is the battery tracked from time received at unit to time it is disposed of? ☐ ☐
   b) Does the unit have an adequate number of tracking labels onboard? ☐ ☐
   c) Are DD 1149's on battery transfers (disposal) and bills of lading kept together in the battery tracking folder? ☐ ☐
   d) Are battery release messages sent IAW COMDTINST 16478.10 (series)? ☐ ☐

9. Are all batteries properly disposed of? ☐ ☐

10. Does the unit maintain Aid Folders for all assigned aids as follows:
    Note: Contents listed below are required, but the order in which they are kept is not. Alternate folder-keeping sequences are allowed, as long as all forms and information are properly maintained. Some districts may prescribe a particular sequence.

	SAT	**UNSAT**
a) 6 part folders containing the following sections.		
1) ATONIS Field Information Documents (FID)	☐	☐
2) Aid Positioning Reports (APR)	☐	☐
3) Related message traffic	☐	☐
a) Discrepancies	☐	☐
b) Corrections	☐	☐
c) Broadcast Notice to Mariners	☐	☐
d) AtoN Work Orders (3213/3213As)	☐	☐
4) Correspondence	☐	☐
5) Misc. Aid Positioning information	☐	☐
a) Accuracy Classification	☐	☐
b) Old Grids and Pre-Comps	☐	☐
c) Best Fix info	☐	☐
6) Misc. Aid Information	☐	☐
a) Discrepancy Response Factors (DRF Part I and II)	☐	☐
b) Service Interval Flowcharts (SIF)	☐	☐
c) Buoy Mooring Selection sheets	☐	☐
d) SSMRs	☐	☐

e) Photos (within 5 years) ☐ ☐

f) Vandalism documentation (i.e., evidence) ☐ ☐

g) Equipment list & historical info ☐ ☐

h) Old Sands Forms ☐ ☐

i) OINC Comments ☐ ☐

j) Solar calculations ☐ ☐

11. Check at least 10% of folders for lighthouses. Do the folders reflect proper maintenance of the aids in accordance with Lighthouse Maintenance Management, COMDTINST M16500.6 (series) and Lighthouse Preventive Maintenance System Manual, COMDTINST M16500.10 (series)? ☐ ☐

12. Does the unit use ATONIS? ☐ ☐

Note: Compare at least 10 ATONIS records against Aid Folders.

a) Are the unit aid data files current/correct? (check all fields) ☐ ☐

b) Is ATONIS used to schedule pending work? ☐ ☐

c) Is the unit current on all inspections/servicing? ☐ ☐

d) Is the current version of AAPS being used? ☐ ☐

e) Are imports/exports being conducted within 5 days of changing data? ☐ ☐

13. Are required charts maintained? (electronic or paper) ☐ ☐

14. Does unit have an instruction for designating which nautical charts/pubs are to be maintained? ☐ ☐

15. Are the latest editions of required navigation publications available and corrected to date? ☐ ☐

16. Does unit have a system for tracking status of changes/updates to nautical charts and pubs? ☐ ☐

17. Are Local Notices to Mariners received and verified weekly? ☐ ☐

Remarks:

_____

_____

_____

_____

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UNIT NAME: _____ **DATE:** _____

COMPLETION WORK SHEET

Note: Items marked UNSAT must have explanation.

Item	**SAT / UNSAT / N/A**	**Explanation/Comment**
Administration		
General Information Checklist Completed (no evaluation) ..		_____
Boatcrew/AtoN Training	☐ / ☐ / ☐	_____
AtoN Administration	☐ / ☐ / ☐	_____
Engineering Administration	☐ / ☐ / ☐	_____
Material Condition		
64' ANB	☐ / ☐ / ☐	_____
55' ANB	☐ / ☐ / ☐	_____
TANB/NSB	☐ / ☐ / ☐	_____
49' BUSL	☐ / ☐ / ☐	_____
Unit Unique (cable boat, BU)	☐ / ☐ / ☐	_____
Required Exercises		
Day/Night Navigation and Piloting.....	☐ / ☐ / ☐	_____
Towing.....	☐ / ☐ / ☐	_____
Man Overboard.....	☐ / ☐ / ☐	_____
Service Floating Aid (mooring/positioning)	☐ / ☐ / ☐	_____
Minor Fixed Aid Servicing	☐ / ☐ / ☐	_____
Optional Exercises		
Reduced Visibility Navigation.....	☐ / ☐ / ☐	_____
Crewmember Piloting Proficiency.....	☐ / ☐ / ☐	_____
Fire in the Engine Compartment.....	☐ / ☐ / ☐	_____
Loss of Steering	☐ / ☐ / ☐	_____
Collision with Submerged Object	☐ / ☐ / ☐	_____
Loss of Lubrication Oil Pressure	☐ / ☐ / ☐	_____
Main Engine High Water Temperature.....	☐ / ☐ / ☐	_____
Loss of Engine RPM Control	☐ / ☐ / ☐	_____
Loss of Fuel Oil Pressure.....	☐ / ☐ / ☐	_____

Is the unit ready for operations?	**Yes ☐ / No ☐**

Remarks:

_____

_____

_____

_____