DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
WASHINGTON, DC 20380-0001

MCO 1510.104A

C 461
12 SEP 97

MARINE CORPS ORDER 1510.104A

From: Commandant of the Marine Corps
To: Distribution List

Subj: INDIVIDUAL TRAINING STANDARDS (ITS) SYSTEM FOR MARINE CORPS SPECIAL SKILLS - VOLUME 4

Ref: (a) MCO 1553.1B
(b) MCO 1553.2
(c) MCO 1553.3

Encl: (1) Description of an Individual Training Standard
(2) Management of Individual Training Standards
(3) Slimmary/Index of Individual Training Standards
(4) Common Individual Training Standards
(5) Training Support
(6) Individual Training Standards

1. Purpose. To publish revised ITS at enclosures (1) through (6) for Marine Corps Special Skills - Volume 4.

2. Cancellation. MCO 1510.104

3. Background

a. The references establish the system used to publish all training standards, provide policy, and assign training responsibilities, especially as applied to the Systems Approach to Training (SAT).

b. ITSs establish the training requirements for all Marines in the same occupational field (OccFld), Military Occupational Specialty (MOS), or billet. They provide a foundation upon which unit commanders and school directors build training packages for individual Marines as part of unit training plans or formal courses of instruction.

c. ITSs represent the skills needed by individual Marines that contribute to the unit mission as expressed in the Mission Performance Standards. Changes to doctrine or force structure or the introduction of new weapons or equipment may necessitate revision of this Order.

4. Summary of Revision. This edition encompasses numerous changes to ITS, training setting, sustainment factors, and grade to standard entries. Changes also include deletion/addition of tasks and references. Additionally, this Order consolidates all MOS 81XX and Small Boat Special Skills (SS). This ITS Order was developed using the Marine Corps Automated Instructional Management System (MCAIMS Plus) which has resulted in modifications to the content and appearance of the Order. In general, all ITS information is linked to tasks. Appendix D to Enclosure (5) lists references with associated tasks. Enclosure (6) now contains information on initial setting, and where applicable, Marine Corps Institute (MCI) materials, ammunition, and training materiel.

5. Information. ITSs are used by unit commanders and school directors to design, develop, conduct, and evaluate the individual training of Marines. Unit commanders are responsible for the sustainment of all individual tasks that have been deemed, through analysis, to support the unit's Mission Essential Task List (METL). Unit commanders can, therefore, use the tasks contained in this Order as the basis of individual training through Managed On-the-Job Training (MOJT), instruction in unit level schools, or incorporation in their training plans. School directors will derive Terminal Learning Objectives (TLO) and Enabling Learning Objectives (ELO) from the tasks, conditions, standards, and performance steps of each associated ITS. Task lists reported by formal schools on Course Descriptive Data (CDD) submissions will consist of tasks contained in this Order that are designated for training at the appropriate level in the formal school.

6. Action

a. Commanding General, Marine Corps Combat Development Command (CG MCCDC)

(1) Ensure that all schools use this Order to train personnel to the standards required by grade and MOS.

(2) Ensure that the MCI and the Training and Audiovisual Support Centers (TAVSC) provide standardized job aids and other training support requirements to facilitate training in units.

(3) Review, revise, and manage the upkeep of this Order in coordination with Operating Force and Supporting Establishment commanders and MOS/OccFld Sponsors.

(4) Ensure the Combat Development Process identifies the impact on training, by MOS and ITS, of all new equipment.

(5) Ensure coordination with the Commander, Marine Corps Systems Command (COMMARCORSYSCOM) to integrate the acquisition of new equipment into formal school training per the published ITSs.

b. Commanding Generals of the Marine Forces and Supporting Establishment Commands and Commanders of Separate Organizations not Commanded by a General Officer

(1) Use this Order as the basis for individual training.

(2) Conduct MOJT programs and/or instruction in unit level schools to satisfy initial, sustainment, and refresher training requirements in so far as the tasks support unit mission requirements.

7. Submission of Recommendations and Requirements. Recommendations concerning the content of this Order are invited, Submit recommendations for additions, deletions, or modifications to CG MCCDC (C461) via the chain of command.

8. Reserve Applicability. This Order is applicable to the Marine Corps Reserve.

K. T. HOLCOMB
By direction

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DESCRIPTION OF AN INDIVIDUAL TRAINING STANDARD

1. ITS Designator. Each ITS has a unique three-part identifier that represents the specific task, the duty area under which that task is included, and the MOS (or billet) with which it is associated. Each part is separated by periods. An example of an ITS Designator is 0311.02.08.

a. The first four positions ("0311" in the example above) represent the MOS or billet. For any ITS associated with an official MOS, the four digits must be identical to those assigned to the MOS in MCO P1200.7 (MOS Manual).

b. The middle two positions ("02" in the example above) represent the duty or functional area. Duty areas within a given MOS are assigned consecutive ascending Arabic numerals. Duty areas 1 through 9 are always preceded by a leading zero to allow for proper sorting. In the example above, "02" represents the second duty area under MOS 0311.

c. The last two positions ("08" in the example above) represent a specific task. Tasks within a specific duty or functional area are assigned consecutive ascending Arabic numerals. Tasks 1 through 9 are always preceded by a leading zero to allow for proper sorting. In the example above, "08" represents the eighth task within the second duty area under MOS 0311.

2. ITS Components. There are six basic components of an ITS, five of which are mandatory:

a. Task. The task describes a specific and necessary behavior expected of a Marine in a particular MOS or job. It is a clearly stated, performance-oriented action requiring a learned skill.

b. Condition(s). This portion of the ITS describes the equipment, manuals, assistance/supervision, special physical demands, environmental conditions, and location affecting a Marine’s performance of the task under real-world circumstances.

c. Standard(s). This portion of the ITS describes the level of proficiency to which the individual must perform the task.

d. Performance Steps. Collectively, the performance steps represent the logical sequence of actions required of the Marine to perform the task to standard. These actions are typically detailed in the references.

e. References. References are doctrinal publications, technical manuals, and other publications upon which the ITS and its performance steps are based. They should be readily available and provide detail to the procedures that are only slimmarized in the performance steps.

f. Administrative Instructions (Optional). Administrative instructions provide the trainer/instructor with special required or recommended circumstances, including safety precautions, relating to the training or execution of the task. These instructions may also clarify the meaning of the task.

3. ITS Training

a. Initial Training Setting. All ITSs are assigned an Initial Training Setting

that includes a specific location for initial instruction (Formal School or MOJT), level of training required at that location (Standard or Preliminary), a sustainment factor (number of months between evaluation or retraining to maintain the proficiency required by the standard), and a "Required By" rank (the lowest rank at which task proficiency is required).

b. Training Materiel (Optional). Training materiel includes all training devices, simulators, aids, equipment, and materials (except ammunition and Marine Corps Institute (MCI) publications) required or recommended to properly train the task under the specified conditions and to the specified standard.

c. Ammunition (Optional). This section includes any ammunition, explosives, and/or pyrotechnics required for proper training of the ITS.

d. Current MCI(s) (Optional). This section includes a list of any currently available MCI publications designed to provide training related to this task.

MANAGEMENT OF INDIVIDUAL TRAINING STANDARDS

1. ITS Use

a. ITSs form the basis for all individual training in formal schools and units. They are written for all MOSs in order to specify the critical skills required by units of their individual Marines in support of the unit's combat missions as defined in the unit's Mission Essential Task List (METL).

b. Formal school directors are responsible for reviewing all ITSs marked for initial training at the formal school. They must conduct courses of instruction on those ITSs appropriate for their student populations in terms of grade or rank. The task portion of each ITS taught in a given course must appear in the Task List (Item 24) of the CDD for that course. In accordance with SAT, a Program of Instruction (POI) must also be developed for the course.

c. ITSs provide measures of performance that can be used by unit commanders to diagnose individual deficiencies and design training. Noted deficiencies should be scheduled for remediation on training plans or through MOJT, as appropriate.

d. A Marine should continue to receive instruction on ITSs that support his unit's METL. Individual training cannot cease upon graduation from a formal school because formal schools cannot prepare every Marine to serve in every billet. Individuals should be given opportunities in the unit to gain experience and responsibility as quickly as possible.

2. ITS Maintenance

a. A relationship exists between ITSs and the threat to Marine forces. Changes in the threat often trigger corresponding changes in our weapons, equipment, or doctrine, which then necessitate producing new or updated training standards. Such action requires a team effort on the part of the operating forces, the formal schools, and staff agencies at both Headquarters, U.S. Marine Corps and the Marine Corps Combat Development Command (MCCDC).

b. ITSs are ultimately validated by unit commanders and school directors. Records of Proceedings (ROP) resulting from Course Content Review Boards (CCRB) conducted by formal schools are particularly well suited for recommending revisions. The ROP should contain a justification for each proposed addition, deletion, or change and should accompany any request to obtain authority to depart from the currently published ITSs. Unit commanders can recommend changes through participation in a school's CCRB or directly via the chain of command. Unless significant changes warrant earlier action, ITS orders are revised and republished on a 4-year cycle.

c. ITS management is a dynamic process involving user maintenance as the key to refining standards to best serve unit missions. ITS users should evaluate whether ITSs support or fail to support an MOS, and ITS components should be examined for realism and pertinence. Users are encouraged to submit recommended changes to published ITSs through the chain of command.

SUMMARY/INDEX OF INDIVIDUAL TRAINING STANDARDS

1. General. This enclosure is a summary listing of all ITS tasks grouped by MOS and Duty Area.

2. Format. The columns are as follows:

a. TASK. ITS Designator.

b. TITLE. ITS Task Title.

c. FS. Formal School. A mark appears in this column when the Formal School is designated as the initial training setting. An "S" indicates the task is taught to "standard" at the formal school. A "P" indicates that the formal school provides only "preliminary" instruction and it is up to the unit to provide follow-on MOJT instruction to teach the task to standard.

d. MOJT. Managed On-The-Job Training. An "S" appears in this column when MOJT is designated as the initial training setting. Instruction is always to "standard."

e. MCI. Current MCI Publication(s). An IXI in this column indicates that at least one MCI publication addresses this task. Consult enclosure (6) for details.

f. SUS. Sustainment Training Period. An entry in this column represents the number of months within which the unit is expected to train or retrain this task to standard provided the task supports the unit's METL.

g. REQ BY. Required By. An entry in this column depicts the lowest rank required to demonstrate proficiency in this task.

h. PAGE. Page Number. This column lists the number of the page in enclosure (6) that contains detailed information concerning this task.

MOS 8111, COMBAT RUBBER RECONNAISSANCE CRAFT COXSWAIN

DUTY AREA 01 - COMBAT RUBBER RECONNAISSANCE CRAFT (CRRC) GENERAL COXSWAIN SKILLS

SEQ	TASK	TITLE	FS	MOJT	MCI	SUS	REQ BY	PAGE
1)	8111.01.01	UTILIZE A NAUTICAL CHART		S			2 PFC	6-A-1
2)	8111.01.02	UTILIZE A NAUTICAL COMPASS		S			3 PFC	6-A-1
3)	8111.01.03	SAFELY OPERATE A SMALL CRAFT		S			3 Pvt	6-A-2
4)	8111.01.04	OPERATE IN CONJUNCTION WITH HAZARDOUS MARINE LIFE		S			3 PFC	6-A-3
5)	8111.01.05	MANEUVER A SMALL CRAFT WITHIN A CONFINED SPACE		S			3 PFC	6-A-3
6)	8111.01.06	MANEUVER A CRRC DURING AN OPEN OCEAN TRANSIT		S			3 PFC	6-A-4
7)	8111.01.07	COME ALONGSIDE ANOTHER VESSEL		S			3 PFC	6-A-5
8)	8111.01.08	UTILIZE REQUIRED KNOTS		S			3 PFC	6-A-5
9)	8111.01.09	INTERPRET SURF CONDITIONS		S			3 PFC	6-A-6

SEQ	TASK	TITLE	FS	MOJT	MCI	SUS	REQ BY	PAGE
10)	8111.01.10	ORGANIZE A BOAT TEAM	S		3		PFC	6-A-7
11)	8111.01.11	WATERPROOF EQUIPMENT	S		6		PFC	6-A-7
12)	8111.01.12	EXECUTE A CLANDESTINE LANDING AND WITHDRAWAL	S		3		PFC	6-A-8
DUTY AREA 02 -		COMBAT RUBBER RECONNAISSANCE CRAFT (CRRC) COXSWAIN						
1)	8111.02.01	PREPARE THE COMBAT RUBBER RECONNAISSANCE CRAFT (CRRC) FOR AN OPERATION	S		3		PFC	6-A-10
2)	8111.02.02	OPERATE THE 35/55 HORSEPOWER (HP) OUTBOARD ENGINE	S		3		Pvt	6-A-10
3)	8111.02.03	CONDUCT LANDING PROCEDURES WITH THE COMBAT RUBBER RECONNAISSANCE CRAFT (CRRC)	S		3		PFC	6-A-11
4)	8111.02.04	TOW A COMBAT RUBBER RECONNAISSANCE CRAFT (CRRC)	S		3		PFC	6-A-12
5)	8111.02.05	OPERATE COMBAT RUBBER RECONNAISSANCED CRAFT (CRRC) FROM AMPHIBIOUS SHIPPING	S		3		PFC	6-A-13
6)	8111.02.06	CONDUCT FIRST ECHELON MAINTENANCE ON THE COMBAT RUBBER RECONNAISSANCE CRAFT (CRRC)	S		3		PFC	6-A-14
7)	8111.02.07	CONDUCT FIRST ECHELON MAINTENANCE ON THE 35/55 HP OUTBOARD ENGINE	S		3		PFC	6-A-14

MOS 8112, RIVERINE ASSAULT CRAFT CREWMAN

DUTY AREA 01 -		RIVERINE ASSAULT CRAFT (RAC) SYSTEMS						
1)	8112.01.01	PERFORM RIVERINE ASSAULT CRAFT OPERATIONS CHECKS	S		3		Pvt	6-B-1
2)	8112.01.02	CONDUCT FUELING OPERATIONS ON THE RAC	S		3		Pvt	6-B-1
3)	8112.01.03	OPERATE RADIO COMMUNICATIONS SUITES	S		3		Pvt	6-B-2
4)	8112.01.04	PERFORM RADIO COMMUNICATION REMEDIAL ACTION	S		3		Pvt	6-B-6
5)	8112.01.05	PERFORM PREVENTATIVE MAINTENANCE OF COMMUNICATIONS EQUIPMENT	S		3		Pvt	6-B-7
6)	8112.01.06	OPERATE NAVIGATIONAL AIDS	S		3		Pvt	6-B-9
7)	8112.01.07	MAINTAIN THE RIVERINE ASSUALT CRAFT (RAC) TRAILER	S		3		Pvt	6-B-11
8)	8112.01.08	SUPERVISE PREVENTATIVE MAINTENANCE OF THE RIVERINE ASSUALT CRAFT (RAC) TRAILER	S		3		Sgt	6-B-12
DUTY AREA 02 -		RIVERINE ASSAULT CRAFT (RAC) OPERATIONS						
1)	8112.02.01	CONDUCT BRIEF FOR EMBARKED PERSONNEL	S		3		Pvt	6-B-13
2)	8112.02.02	LAUNCH THE RIVERINE ASSUALT CRAFT (RAC)	S		3		Pvt	6-B-14
3)	8112.02.03	TRAILER THE RIVERINE ASSUALT CRAFT (RAC)	S		3		Pvt	6-B-15
4)	8112.02.04	PILOT IN CONFINED SPACE	S		3		Pvt	6-B-15
5)	8112.02.05	MOOR A RIVERINE ASSUALT CRAFT (RAC)	S		3		Pvt	6-B-16
6)	8112.02.06	MANEUVER A RIVERINE ASSUALT CRAFT (RAC) IN ACCORDANCE WITH MARITIME RULES OF THE ROADS	S		3		Pvt	6-B-17
7)	8112.02.07	PILOT THE RIVERINE ASSUALT CRAFT (RAC) IN USING VISUAL MEANS	S		3		Pvt	6-B-19
8)	8112.02.08	PERFORM EMERGENCY MANEUVERS	S		3		Pvt	6-B-19

SEO	TASK	TITLE	FS	MOJT	MCI	SUS	REQ BY	PAGE
9)	8112.02.09	ANCHOR THE RIVERINE ASSUALT CRAFT (RAC)	S			3	Pvt	6-B-20
10)	8112.02.10	MAINTAIN ASSIGNED COURSE	S			3	Pvt	6-B-21
11)	8112.02.11	PILOT A RIVERINE ASSUALT CRAFT (RAC) USING ONBOARD NAVIGATIONAL EQUIPMENT	S			3	Pvt	6-B-21
12)	8112.02.12	NAVIGATE USING DEAD RECKONING	S			3	Pvt	6-B-22
13)	8112.02.13	NAVIGATE A RIVERINE ASSUALT CRAFT (RAC) USING ONBOARD, AVIGATIONAL EQUIPMENT	S			3	Pvt	6-B-23
14)	8112.02.14	PERFORM REMEDIAL ACTION FOR THE RIVERINE ASSUALT CRAFT (RAC)	S			3	Pvt	6-B-24
15)	8112.02.15	COMMUNICATE USING PROPER PROCEDURES	S			3	Pvt	6-B-25
16)	8112.02.16	PREPARE A RIVERINE, ASSUALT CRAFT (RAC) FOR EXTERNAL HELICOPTER LIFT	S			3	Pvt	6-B-26
17)	8112.02.17	PREPARE THE RIVERINE ASSUALT CRAFT (RAC) FOR AIR EMBARKATION	S			3	Pvt	6-B-28
18)	8112.02.18	DESTROY THE RIVERINE ASSUALT CRAFT (RAC)	S			3	Pvt	6-B-29
19)	8112.02.19	DECONTAMINATE THE RIVERINE ASSUALT CRAFT (RAC)	S			3	Pvt	6-B-30
20)	8112.02.20	MAINTAIN NIGHT VISION DEVICES (NVD)	S			3	Pvt	6-B-31
21)	8112.02.21	OPERATE NVGS	S			3	Pvt	6-B-33
		DUTY AREA 03 - RIVERINE ASSAULT CRAFT (RAC) WEAPONS						
1)	8112.03.01	MAINTAIN THE M2 MACHINEGUN	S			6	Pvt	6-B-35
2)	8112.03.02	SET M2 MACHINEGUN HEADSPACE AND TIMING	S			6	Pvt	6-B-35
3)	8112.03.03	PERFORM IMMEDIATE ACTION ON THE M2 MACHINEGUN	S			6	Pvt	6-B-37
4)	8112.03.04	ZERO THE M2 MACHINEGUN	S			6	Pvt	6-B-38
5)	8112.03.05	ZERO M2 MACHINEGUN NIGHT SIGHT	S			6	Pvt	6-B-40
6)	8112.03.06	MAINTAIN THE MK19 MACHINEGUN	S			6	Pvt	6-B-41
7)	8112.03.07	PERFORM IMMEDIATE ACTION ON THE MK19 MACHINEGUN	S			6	Pvt	6-B-42
8)	8112.03.08	ZERO THE MK19 MACHINEGUN	S			6	Pvt	6-B-43
9)	8112.03.09	ZERO MK19 MACHINEGUN NIGHT SIGHT	S			6	Pvt	6-B-44
10)	8112.03.10	MAINTAIN THE M240G MACHINEGUN	S			6	Pvt	6-B-46
11)	8112.03.11	PERFORM IMMEDIATE ACTION ON THE M240G MACHINEGUN	S			6	Pvt	6-B-47
12)	8112.03.12	ZERO THE M240G MACHINEGUN	S			6	Pvt	6-B-48
13)	8112.03.13	ZERO M240G MACHINEGUN NIGHT SIGHT	S			6	Pvt	6-B-49
14)	8112.03.14	ENGAGE A TARGET FROM A MOVING TARGET	S			6	Pvt	6-B-50
15)	8112.03.15	DIRECT MACHINEGUN MAINTENANCE	S			6	Sgt	6-B-52
16)	8112.03.16	CONTROL CRAFT/SECTION FIRES	S			6	Sgt	6-B-54
		DUTY AREA 04 - RIVERINE ASSAULT CRAFT (RAC) EMPLOYMENT						
1)	8112.04.01	MAINTAIN POSITION IN FORMATION/MOVEMENT TECHNIQUE	S			3	Pvt	6-B-55
2)	8112.04.02	DIRECT RIVERINE ASSAULT CRAFT (RAC) FORMATION/MOVEMENT	S			3	Sgt	6-B-56
3)	8112.04.03	COME ALONGSIDE ANOTHER CRAFT	S			3	Pvt	6-B-57
4)	8112.04.04	TOW A DOWNED CRAFT	S			3	Pvt	6-B-58
5)	8112.04.05	CONDUCT LANDINGS AND WITHDRAWALS	S			3	Pvt	6-B-59
6)	8112.04.07	CONDUCT MINE COUNTERMEASURES	S			3	Pvt	6-B-60
7)	8112.04.08	COVER ASSIGNED SECTOR OF FIRE	S			3	Pvt	6-B-61
8)	8112.04.09	ASSIGN SECTORS OF FIRE	S			3	Sgt	6-B-62
9)	8112.04.10	OCCUPY A WATERBORNE GUARDPOST	S			3	Pvt	6-B-64

SEO	TASK	TITLE	FS	MOJT	MCI	SUS	REQ BY	PAGE
10)	8112.04.11	SELECT A WATERBORNE GUARDPOST	S		3	Sgt		6-B-65
11)	8112.04.12	DIRECT AN INSERTION OR EXTRACTION	S		3	Sgt		6-B-67
12)	8112.04.14	DIRECT BOARD AND SEARCH OPERATIONS	S		3	Sgt		6-B-68
13)	8112.04.15	CONDUCT IMMEDIATE ACTION (IA) DRILLS	S		3	Pvt		6-B-70
14)	8112.04.16	CONDUCT ESCORT OPERATIONS	S		3	Pvt		6-B-71
15)	8112.04.17	WRITE A RIVERINE ANNEX	S		3	Sgt		6-B-72
16)	8112.04.18	ISSUE AN OPERATIONS ORDER	S		3	Sgt		6-B-73
		MOS 8114, RIGID RAIDING CRAFT (RRC) COXSWAIN						
DUTY AREA 01 -		RIGID RAIDER CRAFT (RRC) GENERAL COXSWAIN SKILLS						
1)	8114.01.01	NAVIGATE BY DEAD RECKONING	P		12	PFC		6-C-1
2)	8114.01.02	NAVIGATE USING COASTAL PILOTING	p		12	PFC		6-C-2
DUTY AREA 02 -		RIGID RAIDING CRAFT (RRC) OPERATION						
1)	8114.02.01	EMPLOY RRC SAFETY PROCEDURES ROUTINE/EMERGENCY OPERATIONS	S		6	PFC		6-C-3
2)	8114.02.02	MANEUVER A RIGID RAIDER CRAFT (RAC)	S		6	PFC		6-C-4
3)	8114.02.03	INTERPRET SURF ZONE CONDITIONS	S		6	PFC		6-C-4
4)	8114.02.04	COME ALONG SIDE ANOTHER VESSEL	S		6	PFC		6-C-5
5)	8114.02.05	ORGANIZE A BOAT TEAM	S		6	PFC		6-C-6
6)	8114.02.06	EXECUTE IMMEDIATE ACTIONS FOR A CAPSIZED BOAT	S		6	PFC		6-C-6
7)	8114.02.07	CACHE A RRC	S		6	PFC		6-C-7
8)	8114.02.08	WATERPROOF EQUIPMENT	S		6	PFC		6-C-8
9)	8114.02.09	MAINTAIN A MAGNETIC COURSE IN AN RRC	S		6	PFC		6-C-8
10)	8114.02.10	ANCHOR AN RRC	S		6	PFC		6-C-9
11)	8114.02.11	MOUNT AND SWING A NAUTICAL COMPASS	S		6	PFC		6-C-10
DUTY AREA 03 -		RIGID RAIDER CRAFT (RRC)						
1)	8114.03.01	PREPARE THE RIGID RAIDER CRAFT OPERATION	S		6	PFC		6-C-12
2)	8114.03.02	OPERATE THE 70 HORSEPOWER (HP) OUTBOARD ENGINE	S		6	PFC		6-C-12
3)	8114.03.03	CONDUCT LANDING PROCEDURES RAIDER CRAFT (RRC)	S		6	PFC		6-C-13
4)	8114.03.04	TOW AN RIGID RAIDER CRAFT (RRC)	S		6	PFC		6-C-14
5)	8114.03.05	TRAILER THE RIGID RAIDER RAIDER CRAFT (RRC)	S		6	PFC		6-C-15
6)	8114.03.06	CONDUCT FIRST ECHELON MAINTENANCE	S		6	PFC		6-C-15
7)	8114.03.07	CONDUCT FIRST ECHELON MAINTENANCE ON THE 70 HORSEPOWER (HP) OUTBOARD ENGINE	S		6	PFC		6-C-16
DUTY AREA 04 -		RIGID RAIDER CRAFT (RRC) AMPHIBIOUS LAUNCH AND RECOVERY						
1)	8114.04.01	LAUNCH AND RECOVER RIGID (RRC) FROM AMPHIBIOUS SHIPPING	S		3	Pvt		6-C-18

MOS SS14, MARITIME SMALL BOAT NAVIGATOR

DUTY AREA 01 - MARITIME SMALL CRAFT NAVIGATOR

SEQ	TASK	TITLE	FS	MOJT	MCI	SUS	REQ BY	PAGE
1)	SS14.01.01	UTILIZE NAVIGATION TECHNIQUES DURING SMALL CRAFT OPERATIONS	S		3		Cpl	6-D-1
2)	SS14.01.02	FOLLOW NAVIGATIONAL RULES OF THE ROAD	S		3		Cpl	6-D-1
3)	SS14.01.03	IDENTIFY AIDS TO NAVIGATION	S		3		Cpl	6-D-2
4)	SS14.01.04	USE A NAUTICAL COMPASS	S		3		Cpl	6-D-2
5)	SS14.01.05	PLOT THE COMPUTED VISIBILITY OF LIGHTS	S		3		Cpl	6-D-3
6)	SS14.01.06	ESTIMATE SET AND DRIFT OF CURRENTS	S		3		Cpl	6-D-4
7)	SS14.01.07	CONSTRUCT A CURRENT TRIANGLE	S		3		Cpl	6-D-4
8)	SS14.01.08	PLOT A DEAD RECKONING TRACK ON A NAUTICAL CHART	S		3		Cpl	6-D-5
9)	SS14.01.09	USE REQUIRED EQUIPMENT AND PUBLICATIONS FOR NAVIGATION	S		3		Cpl	6-D-6
10)	SS14.01.10	PILOT A SMALL CRAFT	S		3		Cpl	6-D-7
11)	SS14.01.11	PLOT GEOGRAPHIC COORDINATES	S		3		Cpl	6-D-7
12)	SS14.01.12	COMPUTE TIDAL CONDITIONS	S		3		Cpl	6-D-8
13)	SS14.01.13	USE NAUTICAL CHARTS	S		3		Cpl	6-D-9
14)	SS14.01.14	MOUNTING AND SWINGING A NAUTICAL COMPASS	S		3		Cpl	6-D-10
15)	SS14.01.15	DEVELOP OVER-THE-HORIZON (OTH) NAVIGATIONAL PLAN	S		3		Cpl	6-D-11
16)	SS14.01.16	PILOT A SMALL CRAFT DURING RIVERINE TRANSIT	P		3		Cpl	6-D-11

COMMON INDIVIDUAL TRAINING STANDARDS

1. General. This enclosure lists the ITS tasks common to more than one MOS within the OccFld. It is designed to assist the trainer in consolidating training for common tasks.

2. Format. The columns are as follows:

a. TASK TITLE. A listing of all tasks common to at least two MOSs.

b. COMMON TASK NUMBERS. A listing of the ITS designators for all ITSs containing the sam task title.

TASK TITLE	COMMON TASK NUMBERS	
ORGANIZE A BOAT TEAM.	8111.01.10	8114.02.05
WATERPROOF EQUIPMENT.	8111.01.11	8114.02.08

TRAINING SUPPORT

1. This enclosure summarizes four categories of training support by ITS for the entire OccFld:

Appendix A: Training Materiel

Appendix B: Current MCIs

Appendix C: Ammunition, Explosives, and Pyrotechnics

Appendix D: References

2. If support identified in any appendix is not applicable to this OccFld, the appendix will include a statement to that effect.

TRAINING MATERIEL

1. General. Training materiel includes all training devices, simulators, aids, equipment, and materials (except ammunition and MCIs) required or recommended to properly train a task under the specified conditions and to the specified standard.

2. Format. The columns are as follows:

a. MATERIEL. This column slimmarizes all training materiel used in support of at least one ITS task in this OccFld.

b. TASK NUMBERS. A listing of all ITS tasks supported by the corresponding training support item in the Materiel column. An asterisk (*) precedes any task for which the training support item is mandatory for execution of the task.

MATERIEL	TASK NUMBERS
12′ Rope/Line	*8111.01.08
35 Horsepower Outboard Engine	8111.02.02 *8111.02.07
55 Horsepower Outboard Engine	8111.02.02 *8111.02.07
550 Parachute Cord	8114.02.08
900 Series (5 Ton Truck)	8112.01.07 *8112.01.08 *8112,02.02 *8112.02.03 *8112.02.17
Amphibious Shipping (LCU, LCAC, LPD, LSD, etc.)	*8111.02.05 *8114.04.01
Blank Deviation Card	8114.01.01 8114.02.09 8114.02.11 SS14.01.05 *SS14.01.08 SS14.01.09 SS14.01.10 SS14.01.11 SS14.01.13 SS14.01.14 SS14.01.15
Camouflage (Cami) Net	8112.04.05 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12
Cargo Net Section(s)	8112.04.05 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12
Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms	*8112.02.07 *8112.02.12 *8112.02.13 8112.04.05 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12 *8112.04.17 8114.01.01 8114.01.02 8114.02.09 8114.02.11 *SS14.01.01 SS14.01.04 SS14.01.05 SS14.01.06 SS14.01.07 *SS14.01.08 SS14.01.09 SS14.01.10 SS14.01.11 SS14.01.13 SS14.01.14 SS14.01.15
Cloth/Rags	*8111.02.06 *8111.02.07 8112.02.20

MATERIEL	TASK NUMBERS
Combat Rubber Reconnaissance Craft(s)	*8111.02.02
Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete	*8111.01.02 *8111.01.03 *8111.01.04 *8111.01.05 *8111.01.06 *8111.01.07 *8111.01.08 *8111.01.09 *8111.01.10 *8111.01.11 *8111.01.12 *8111.02.01 *8111.02.03 *8111.02.04 *8111.02.05 *8111.02.06 *SS14.01.01 SS14.01.07 SS14.01.10 SS14.01.14 SS14.01.15 SS14.01.16
Cummins Engine with Raw Water Cooling System Attached	8112.04.05 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12
DS2 (or a mixture of 50/50 water and antifreeze)	*8112.02.19 8112.04.08 8112.04.09 8112.04.10 8112.04.12
Decontamination Materials	*8112.02.19
Deviation Table	*8111.01.01 *8111.01.02
Dummy Thermite Grenade	*8112.02.18 8112.04.05 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12
Equipment Repair Order (ERO)	8114.03.07
Field Medical Aid Fit	*8111.01.04
Hamilton Jet Cutaway	8112.04.11
Helicopter Rigging Support Team (HRST) Personnel	*8112.02.16
Landing Craft Utility (LCU)	8112.04.10
Lensatic Compass	SS14.01.11
Lifting Harness	8112.04.05 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12
Limited Technical Inspection (LTI) Worksheet	8114.03.06 8114.03.07
Mll Personnel Decontamination Apparatus	8112.04.09 8112.04.10 8112.04.11 8112.04.12
M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete	8112.03.01 8112.03.02 *8112.03.03 *8112.03.04 *8112.03.05 *8112.03.14 *8112.03.15 *8112.03.16 *8112.04.01 8112.04.05 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12 *8112.04.14 *8112.04.15 *8112.04.16
M240G 7.62mm Machinegun, SL-3 complete	*8112.03.10 *8112.03.11 *8112.03.12 *8112.03.13 *8112.03.14 *8112.03.15 *8112.03.16 *8112.04.01 8112.04.05 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12 *8112.04.14

MATERIEL	TASK NUMBERS
*8112.04.15 *8112.04.16	
Map(s) (Topographic)	*8112.04.17 SS14.01.11
Map, Map Overlay Paper, Protractor, Grease/Alcohol Marker(s)	SS14.01.11
Mapping Protractor	SS14.01.11
Mk19 40mm Machinegun, SL-3 complete	*8112.03.06 *8112.03.07 *8112.03.08 *8112.03.09 *8112.03.14 *8112.03.15 *8112.03.16 *8112.04.01 8112.04.05 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12 *8112.04.14 *8112.04.15 *8112.04.16
Nautical Charts	*8111.01.01 *8112.02.07 *8112.02.11 *8112.02.12 *8112.02.13 8112.04.05 *8112.04.07 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12 *8112.04.17 8114.01.01 8114.01.02 8114.02.09 8114.02.11 *SS14.01.01 SS14.01.04 SS14.01.05 SS14.01.06 SS14.01.07 *SS14.01.08 SS14.01.09 SS14.01.10 SS14.01.11 SS14.01.13 SS14.01.14 SS14.01.15
Nautical Compass and Mount	*8111.01.01 *8111.01.02 8114.01.01 8114.01.02 8114.02.09 8114.02.11 *SS14.01.01 SS14.01.04 SS14.01.05 SS14.01.06 SS14.01.07 *SS14.01.08 SS14.01.09 SS14.01.10 SS14.01.11 SS14.01.13 SS14.01.14 SS14.01.15
Nautical Slide Rule	SS14.01.09 SS14.01.10 SS14.01.11 SS14.01.13 SS14.01.14 SS14.01.15
Navigator’s Plotting Instrument Set	SS14.01.09 SS14.01.10 SS14.01.11 SS14.01.13 SS14.01.14 SS14.01.15
Navigators Drafting Set	*8111.01.01 *8112.02.07 *8112.02.11 *8112.02.12 *8112.02.13 8112.04.05 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12 SS14.01.10 SS14.01.11 SS14.01.13 SS14.01.14 SS14.01.15
Night Vision Device(s) (AN/PVS-5, AN/PUS-7B)	*8112.02.06 *8112.02.07 *8112.02.11 *8112.02.12 *8112.02.13 8112.02.20 8112.02.21 8112.04.05 *8112.04.07 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12
Parallel Rulers	*8111.01.01 *8112.02.07 *8112.02.11 *8112.02.12 *8112.02.13 8112.04.05 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12
Pre and Post Operation Checklist for Combat Rubber Reconnaissance Craft	*8111.02.01
Preventative Maintenance (PM) Forms	8114.03.06 8114.03.07

MATERIEL	TASK NUMBERS
Rigger's Tape (3/4", and/or 4")	*8112.02.16
Rigid Raider Craft Records	8114.03.06
Rigid Raiding Craft Hull	8114.03.04
Rigid Raiding Craft Transport Trailer	*8112.01.01 8114.03.05
Rigid Raiding Craft(s), SL-3 complete	8114.01.01 8114.01.02 *8114.02.01 *8114.02.02 *8114.02.03 *8114.02.04 8114.02.05 8114.02.06 8114.02.07 8114.02.08 8114.02.09 8114.02.10 8114.02.11 *8114.03.01 8114.03.02 8114.03.03 8114.03.04 8114.03.05 8114.03.06 8114.03.07 *8114.04.01 *SS14.01.01 SS14.01.07 SS14.01.10 SS14.01.14 SS14.01.15 SS14.01.16
Riverine Assault Craft Aft Sling Set	*8112.02.16
Riverine Assault Craft Antennas	*8111.01.03 *8112.01.03 *8112.01.04 *8112,01.05 *8112.02.15
Riverine Assault Craft Communication Helmet	*8111.01.03 *8112.01.03 *8112.01.04 *8112.01.05 *8112.02.15
Riverine Assault Craft Forward Sling Set	*8112.02.16
Riverine Assault Craft Trailer, SL-3 complete	*8112.01.07 *8112.01.08 *8112.02.02 *8112.02.03 *8112.02.16 *8112.02.17
Riverine Assault Craft with fully operational communications suite	*8111.01.03 *8112.01.03 *8112.01.04 *8112.01.05 *8112.02.15
Riverine Assault Craft(s), SL-3 complete	*8111.01.03 *8112.01.01 *8112.01.02 *8112.01.03 *8112.01.04 *8112.01.05 *8112.01.06 *8112.02.01 *8112.02.02 *8112.02.03 *8112.02.04 *8112.02.05 *8112.02.06 *8112.02.08 *8112.02.09 *8112.02.10 *8112.02.11 *8112.02.12 *8112.02.13 *8112.02.14 *8112.02.15 *8112.02.16 *8112.02.17 *8112.02.18 *8112.02.19 *8112.03.14 *8112.03.16 *8112.04.01 *8112.04.02 *8112.04.03 *8112.04.04 8112.04.05 *8112.04.07 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12 *8112.04.14 *8112.04.15 *8112.04.16
Safety Equipment	8111.01.03 8111.01.05 8111.01.06 *8111.01.07 8111.01.10 *8111.01.12 *8111.02.02 *8111.02.03 *8111.02.04 *8111.02.05
Slave Cable(s)	8112.04.05 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12
Stand-on Vessel	*8111.01.07 *8114.02.04

MATERIEL	TASK NUMBERS
Static Electricity Wand	*8112.02.16
Surf Observation and Report Format	*8114.02.03 *8114.04.01 SS14-01.06 SS14.01.15
Tactical Radio, SL-3 complete	*8111.01.11
Tool Kit	8111.02.06
Tow Line Set	*8111.02.04 *8112.04.04 8112.04.05 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12
Waterproof (WP) Bag(s)	8114.02.08
Waterproof Tape	8114.02.08
Waterproofing Materials	*8111.01.11 8114.02.08
Weapons Cleaning and Maintenance Equipment, Cleaning Solvents, and Lubricants	*8112.03.15
Wooden Ramps with extra dunnage	*8112.02.17

CURRENT MCI PUBLICATIONS

DOES NOT APPLY TO THIS ORDER.

AMMUNITION, EXPLOSIVES, AND PYROTECHNICS

1. General. This table slimmarizes (by DODIC and Nomenclature) the ammunition, explosives, and/or pyrotechnics required to properly train all ITSs associated with this OccFld.

2. Format. Beneath each type of ammunition, the following information is contained in columns along with any pertinent comments:

a. TASK. A listing of all ITS tasks requiring that type of Ammunition for proper execution.

b. INITIAL PROFICIENCY. The number of rounds required to support the initial proficiency training of the corresponding task.

c. PER ITERATION. The number of rounds required to support one iteration of the task.

d. ANNUAL SUSTAINMENT. The number of rounds required to maintain proficiency in the task on an annual basis. This is determined by dividing the "sustainment period" into 12 months and multiplying the result by the "per iteration" factor.

TASK	INITIAL PROFICIENCY	PER ITERATION	ANNUAL SUSTAINMENT
DODIC: A131 NOMENCLATURE: CTG 7.62MM, LINKED 4&1			
8112.03.12	24	12	24
8112.03.13	18	18	36
8112.03.14	400	400	800
DODIC: A576 NOMENCLATURE: CTG CAL .50, 4&1 LINKED, F/M2			
8112.03.04	12	12	24
8112.03.05	26	26	52
8112.03.14	320	320	640
DODIC: B542 NOMENCLATURE: CTG 40MM, LINKED, HE DP F/M			
8112.03.08	8	4	8
8112.03.09	6	6	12
8112.03.14	192	192	384
DODIC: B584 NOMENCLATURE: CTG 40MM, TP F/MK19 MOD 3			
8112.03.08	8	4	8
NOTE: DODIC B584 may be used in place of DODIC B542.			
8112.03.14	192	192	384
NOTE: DODIC B584 may be used in place of DODIC B542.			

REFERENCES

1. General. References are doctrinal publications, technical manuals, and other publications upon which an ITS and its performance steps are based. They should be readily available and provide the detailed procedures for accomplishing the task. This section includes a list of all reference publications associated with any task in this OccFld.

2. Format. The columns are as follows:

a. REFERENCES. This column summarizes all references associated with at least one ITS task in this OccFld.

b. TASK NUMBERS. A listing of all ITS tasks to which the corresponding reference is associated.

REFERENCES	TASK NUMBERS
American Practical Navigator, Volumes 1 and II	8111.01.01 8111.01.02 8112.02.12 8112.02.13 8114.01.01 8114.01.02 8114.02.09 SS14.01.01 SS14.01.03 SS14.01.04 SS14.01.05 SS14.01.06 SS14.01.08 SS14.01.09 SS14.01.10 SS14.01.13 SS14.01.14 SS14.01.15
Appropriate Engine Technical Manual	8114.02.06
COMNAVSURFPAC/LANT INST 3840.1B, Joint Surf Manual	8111.01.09 8114.02.03
Chapmans Piloting, Seamanship and Small Boat Handling	8111.01.02 8111.01.05 8111.01.06 8111.01.08 8114.01.01 8114.01.02 8114.02.02 8114.02.10 8114.02.11 8114.03.05 SS14.01.04 SS14.01.05 SS14.01.06 SS14.01.14
Dutton’s Navigation and Piloting, 14th Edition	8111.01.01 8114.01.01 8114.01.02 8114.02.09 8114.02.10 8114.02.11 SS14.01.01 SS14.01.03 SS14.01.05 SS14.01.06 SS14.01.07 SS14.01.08 SS14.01.09 SS14.01.10 SS14.01.13 SS14.01.14 SS14.01.15
Handbook of Nautical Rules of the Road, 2d Edition	8111.01.03 8114.02.01 SS14.01.02
Light List	SS14.01.05
Local Standing Operating Procedure (SOP)	8112.02.17
Nautical Chart #1	8112.02.07 8112.02.11 8112.02.12 8112.02.13 SS14.01.03 SS14.01.16
Nautical Chart Abbreviations and Symbols	8111.01.01 SS14.01.05 SS14.01.16

REFERENCES	TASK NUMBERS
OMC 55 HP Outboard Engine Manual	8111.02.02 8111.02.07
OMC 70 HP Field Service Manual	8114.03.01 8114.03.02 8114.03.03 8114.03.06
RRC Operators Manual	8114.03.01 8114.03.06 8114.03.07
Tidal Current Tables	SS14.01.12
Tide Tables	SS14.01.12
29LCA-AA-SSM-050, Sea Operations Landing Craft Air Cushion (LCAC)	8111.02.05
ATP-38, Amphibious Operations	8112.02.15
COMDINST MI6114.5A, U. S. Coast Guard Boat Crew Seamanship Manual	8111.01.07 8111.02.04 8114.02.01 8114.02.04 SS14.01.14
FM 23-27, MK 19 40mm Grenade Machinegun Mod 3	8112.03.06 8112.03.08 8112.03.09 8112.03.16
FM 23-65, Browning Machinegun, Caliber .50, HB H2	8112.03.01 8112.03.02 8112.03.04 8112.03.05 8112.03.16
FM 23-67, Machinegun 7.62mm M60	8112.03.16
FM 24-18, Tactical Single-Channel Radio Communications Techniques	8112.02.15
FM 55-501, Marine Crewman’s Handbook	8111.01.01 8111.01.02 8111.01.05 8111.01.06 8111.01.08 8112.02.01 8112.02.02 8112.02.03 8112.02.04 8112.02.05 8112.02.07 8112.02.08 8112.02.09 8112.02.10 8112.04.03 8112.04.04 8114.01.01 8114.01.02 8114.02.04 8114.02.05 8114.02.06 8114.03.03 8114.03.04 SS14.01.03 SS14.01.09 SS14.01.12 SS14.01.16
FM 71-1, The Tank and Mechanized Infantry Company Team	8112.04.15
FMFM 2-2, Amphibious Reconnaissance	8111.01.10 8111.01.11 8111.01.12 8111.02.03 8114.02.03 8114.02.05 8114.02.08 8114.03.03
FMFM 6-5, Marine Rifle Squad	8112.04.01 8112.04.02 8112.04.05 8112.04.07 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12 8112.04.14 8112.04.15 8112.04.16 8112.04.17 8112.04.18
FMFM 7-32, Raid Operations	SS14.01.15
FMFM 7-5, Doctrine for Navy/ Marine Corps Joint Riverine Operations	8112.04.01 8112.04.02 8112.04.05 8112.04.07 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12 8112.04.14 8112.04.15 8112.04.16

REFERENCES	TASK NUMBERS
	8112.04.17 8112.04.18
FMFM 7-5A, MAGTF Riverine Operations	8112.04.01 8112.04,02 8112.04.05 8112.04.07 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12 8112.04.14 8112.04.15 8112.04.16 8112.04.17 8112.04.18
FMFRP 6-15, Machineguns and Machinegun Gunnery	8112.02.20 8112.03.01 8112.03.02 8112.03.03 8112.03.04 8112.03.05 8112.03.06 8112.03.07 8112.03.08 8112.03.09 8112.03.10 8112.03.11 8112.03.12 8112.03.13 8112.03.14 8112.03.15 8112.03.16 8112.04.08 8112.04.09 8112.04.10 8112.04.11
M16114.5, Boat Crew Seamanship Manual	8114.03.03
MARFORLANT/PAC INST, P3000.15, Standards Procedures for Raiding Craft	8111.01.03 8111.01.06 8111.01.09 8111.01.10 8111.01.12 8111.02.03 8111.02.05 8114.02.01 8114.03.01 8114.03.03 8114.04.01 SS14.01.15
MCO 1510.90, Individual Training Standards (ITS) System for Marine Battle Skills Training (MBST), Volume 2-Corporal through Gunnery Sergeant	SS14.01.11
MCO 1510.89 W/CH 1, Individual Training Standards (ITS) System for Marine Battle Skills Training (MBST), Volume 1-entry Level	SS14.01.11
NAVEDTRA 10122-E, Boatswain’s Mate 1 & C	8111.02.04
NSW/USMC, Riverine Operations Handbook	8112.04.01 8112.04.02 8112.04.05 8112.04.07 8112.04.08 8112.04.09 8112.04.10 8112.04.11 8112.04.12 8112.04.14 8112.04.15 8112.04.16 8112.04.17 8112.04.18 SS14.01.16
TC 31-25, Special Forces Waterborne Operations	8111.01.10 8111.01.11 8111.01.12 8111.02.03 8114.02.05 8114.02.06 8114.02.07 8114.02.08 8114.02.09 8114.02.11
TC 90-6-1, Military Mountaineering	8111.01.08
TM 08509B-14, OMC "D" Model 35 HP Outboard Engine Manual	8111.02.02 8111.02.07
TM 08521A-10/1A, Operator’s Manual and Components List, Machinegun, 40mm, MK 19 Mod 3	8112.03.06 8112.03.08 8112.03.09
TM 08670-10/lA, Operator’s Manual, Machinegun, 7.62mm, M240	8112.03.10 8112.03.12 8112.03.13

REFERENCES	TASK NUMBERS
TM 08670B-10/1, Supplement 1, M240G	8112.03.10 8112.03.12 8112.03.13
TM 09557A-12 & P/11, Riverine Assault Craft Communications Suite System Manual	8112.01.03 8112.01.04 8112.01.05
TM 09557A-14/1, System Operation and Maintenance Manual with Component List for Riverine Assualt Craft	8112.01.01 8112.01.02 8112.01.07 8112.02.01 8112.02.02 8112.02.03 8112.02.04 8112.02.05 8112.02.07 8112.02.08 8112.02.09 8112.02.14 8112.02.16 8112.02.17 8112.02.18 8112.04.04
TM 09557A-14/2-1, Operation and Maintenance Technical Manual for Diesel Engine	8112.02.14
TM 09557A-14/3, Operation and Maintenance Technical Manual for Propulsion Waterjet Model 273	8112.02.14
TM 09557A-14/5, Instruction Technical Manual for R40X Radar	8112.01.06 8112.02.11 8112.02.13
TM 09557A-14/6, Owners/Users Manual for the Boat Masters Trailer	8112.01.06 8112.01.08 8112.02.13
TM 09557A-14/7, Instruction Technical Manual for Loran "C" Model 780	8112.01.06 8112.02.13
TM 09557A-14/8, Instruction Technical Manual for V820 Depth Finder	8112.01.06 8112.02.11 8112.02.13
TM 09557A-14/9, RAY 202 VHR Radiotelephone/Hailer, Operators Manual	8112.01.03
TM 09665A-13&P/1-1, Operation and Maintenance of the Combat Rubber Reconnaissance Craft	8111.02.01 8111.02.04 8111.02.06
TM 09665A-13&P/1-2, Operation and Maintenance of the Combat Rubber Reconnaissance Craft Over-the-Horizon Configuration	8111.02.01 8111.02.06
TM 09737A-14&P, 35 Horse Power IMARS	8111.02.02 8111.02.07
TM 11-5855-214-10, Operator’s Manual, Night Vision Sight, Crew Served Weapon AN/TVS-5	8112.02.20 8112.03.09 8112.03.13 8112.03.15
TM 11-5855-238-10, AN/PVS 5, 5A, 5B, and 5C	8112.02.20 8112.02.21 8112.03.05
TM 11250-10/1, Rigid Raider Craft Launch, Recovery, and Stowage Systems	8114.04.01

REFERENCES	TASK NUMBERS
TM 3-4230-204-12 & P, Operators Manual for M11 PDA	8112.02.19
TM 4700-15/1, Marine Corps Equipment Forms and Records	8111.02.01 8111.02.06 8111.02.07 8114.03.06 8114.03.07
TM 4700-15/1G, Maintenance Procedures	8114.03.06 8114.03.07
TM 4700-15/1H, 70 Horsepower Engine	8111.02.07 8114.03.01 8114.03.02 8114.03.06 8114.03.07
TM 9-1005-213-10, Operator’s Manual, Machinegun, Caliber .50, M2	8112.03.01 8112.03.04 8112.03.05
TM DRAFT, Riverine Assualt Craft Rigging Procedures	8112.02.16
U.S. COAST GUARD, Navigational Rules	8112.02.06 SS14.01.14
U.S. NAVY, Diving Manual, Volume 1,	8111.01.04
U.S.D.O.T., Navigation Rules	8112.02.06

INDIVIDUAL TRAINING STANDARDS

1. General. This enclosure contains all of the ITSs for this OccFld, grouped by MOS. Each MOS is contained in a separate Appendix to Enclosure (6).

2. Format. For each ITS, the following elements of information are provided:

a. TASK. The task describes a specific and necessary behavior expected of a Marine in a particular MOS or job. It is a clearly stated, performance-oriented action requiring a learned skill.

b. CONDITION(S). This portion of the ITS describes the equipment, manuals, assistance/supervision, special physical demands, environmental conditions, and location affecting a Marine's performance of the task under real-world circumstances.

c. STANDARD(S). This portion of the ITS describes the level of proficiency to which the individual must perform the task.

d. PERFORMANCE STEPS. Collectively, the performance steps represent the logical sequence of actions required of the Marine to perform the task to standard. These actions are typically detailed in the references.

e. REFERENCES. References are doctrinal publications, technical manuals, and other publications upon which the ITS and its performance steps are based. They should be readily available and provide detail to the procedures that are only summarized in the performance steps.

f. ADMINISTRATIVE INSTRUCTIONS (Optional). Administrative instructions provide the trainer/instructor with special required or recommended circumstances, including safety precautions, relating to the training or execution of the task. These instructions may also clarify the meaning of the task.

g. INITIAL TRAINING SETTING. All ITSs are assigned an Initial Training Setting that includes a specific location for initial instruction (Formal School or MOJT), level of training required at that location (Standard or Preliminary), a sustainment factor (number of months between evaluation or retraining to maintain the proficiency required by the standard), and a "Required By", rank (the lowest rank at which task proficiency is required).

h. TRAINING MATERIEL (Optional). Training materiel includes all training devices, simulators, aids, equipment, and materials (except ammunition and Marine Corps Institute (MCI) publications) required or recommended to properly train the task under the specified conditions and to the specified standard. Mandatory items are preceded by an asterisk(*).

i. AMMUNITION (Optional). This table, if present, depicts the ammunition, explosives, and/or pyrotechnics required for proper training of the ITS.

j. CURRENT MCI(S) (Optional). This section includes a list of any currently available MCI publications designed to provide training related to this task.

MOS 8111, COMBAT RUBBER RECONNAISSANCE CRAFT COXSWAIN

DUTY AREA 01 - COMBAT RUBBER RECONNAISSANCE CRAFT (CRRC) GENERAL COXSWAIN SKILLS

TASK: 8111.01.01 UTILIZE A NAUTICAL CHART

CONDITION(S): Assigned as a coxswain, given maritime nautical publications, plotting equipment, and a CRRC.

STANDARD(S): To identify/Locate the position of navigational aids and measure direction/distance on a nautical chart, per the references.

PERFORMANCE STEPS:

1. Plot position on a nautical chart.
2. Determine latitude/longitude of a position on a nautical chart.
3. Measure distance on a nautical chart.
4. Determine direction on a nautical chart.
5. Identify navigational aids on a nautical chart.
6. Identify characteristics of navigational aids.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II
2. Dutton’s Navigation and Piloting, 14th Edition
3. Nautical Chart Abbreviations and Symbols
4. FM 55-501, Marine Crewman’s Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (2) Req By (PFC)

TRAINING MATERIEL:

1. * Deviation Table
2. * Nautical Charts
3. * Nautical Compass and Mount
4. * Navigators Drafting Set
5. * Parallel Rulers

TASK: 8111.01.02 UTILIZE A NAUTICAL COMPASS

CONDITION(S): Assigned as a coxswain, given a nautical compass, small craft, and deviation table.

STANDARD(S): By properly mounting the compass on the small craft and correctly convert assigned magnetic headings to compass headings during maritime navigation, per the references.

PERFORMANCE STEPS:

1. Mount a nautical compass on a small craft.

2. Convert magnetic headings to compass headings.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II

2. Chapmans Piloting, Seamanship and Small Boat Handling

3. FM 55-501, Marine Crewman's Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (PFC)

TRAINING MATERIEL:

1. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete

2. * Deviation Table

3. * Nautical Compass and Mount

TASK: 8111.01.03 SAFELY OPERATE A SMALL CRAFT

CONDITION(S): Assigned as the coxswain, given the mission to pilot a CRRC during daylight or limited visibility.

STANDARD(S): By maneuvering the CRRC on a designated course, per the references.

PERFORMANCE STEPS:

1. Identify coxswain responsibilities.

2. State proper man overboard recovery/search procedures.

3. State lost boat recovery procedures.

4. Follow the Nautical Rules of the Road

REFERENCE(S):

1. Handbook of Nautical Rules of the Road, 2d Edition

2. MARFORLANT/PAC INST, P3000.15, Standard Procedures for Raiding Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete
2. * Riverine Assault Craft Antennas
3. * Riverine Assault Craft Communication Helmet
4. * Riverine Assault Craft with fully operational communications suite
5. * Riverine Assault Craft(s), SL-3 complete
6. Safety Equipment

TASK: 8111.01.04 OPERATE IN CONJUNCTION WITH HAZARDOUS MARINE LIFE

CONDITION(S): Assigned as a coxswain, given a mission and a CRRC.

STANDARD(S): By successfully reacting to hazardous marine life in the conduct of a small craft operation, per the reference.

PERFORMANCE STEPS:

1. Identify first aid treatment for hazardous marine life injuries.
2. Identify steps taken to deal with marine plant life/organisms which pose a threat to small craft operations.

REFERENCE(S):

1. U.S. NAVY, Diving Manual, Volume 1

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (PFC)

TRAINING MATERIEL:

1. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete
2. * Field Medical Aid Kit

TASK: 8111.01.05 MANEUVER A SMALL CRAFT WITHIN A CONFINED SPACE

CONDITION(S): Assigned as a coxswain, given a CRRC, a designated route in a confined space, per the mission requirements.

STANDARD(S): By safely maneuvering the small craft in the designated space safely without damage to the craft or surrounding obstacles while adhering to proper small boat handling procedures, as stated in the references.

PERFORMANCE STEPS:

1. Identify CRRC characteristics that effect handling.
2. Identify environmental factors that effect CRRC handling.
3. Select the appropriate maneuver.
4. Execute the confined space maneuver.

REFERENCE (S) :

1. Chapmans Piloting, Seamanship and Small Boat Handling
2. FM 55-501, Marine Crewman’s Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (PFC)

TRAINING MATERIEL:

1. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete
2. Safety Equipment

TASK: 8111.01.06 MANEUVER A CRRC DURING AN OPEN OCEAN TRANSIT

CONDITION(S): Assigned as a coxswain, given a CRRC in the open ocean during daylight or limited visibility, and a mission.

STANDARD(S): By safely operating the CRRC, per mission requirements, and per the references.

PERFORMANCE STEPS:

1. Maneuver the CRRC at high speeds.
2. Maneuver the CRRC in a formation.
3. Maneuver the CRRC into different formations.
4. Maintain assigned speed.
5. Maintain assigned heading.

REFERENCE (S) :

1. Chapmans Piloting, Seamanship and Small Boat Handling
2. FM 55-501, Marine Crewman’s Handbook
3. MARFORLANT/PAC INST, P3000.15, Standard Procedures for Raiding Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (PFC)

TRAINING MATERIEL:

1. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete
2. Safety Equipment

TASK: 8111.01.07 COME ALONGSIDE ANOTHER VESSEL

CONDITION(S): Assigned as the coxswain, given a CRRC and a stand-on vessel.

STANDARD(S): By maneuvering the CRRC alongside the stand-on vessel to transfer troops and equipment, per the reference.

PERFORMANCE STEPS:

1. Identify transfer point.
2. Match stand-on vessel’s speed.
3. Come alongside the stand-on vessel.
4. Transfer troops and equipment.
5. Break away from the stand-on vessel.

REFERENCE(S) :

1. COMDINST MI6114.5A, U. S. Coast Guard Boat Crew Seamanship Manual

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (PFC)

TRAINING MATERIEL:

1. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete
2. * Safety Equipment
3. * Stand-on Vessel

TASK: 8111.01.08 UTILIZE REQUIRED KNOTS

CONDITION(S): Given a length of rope or tubular nylon, and a CRRC.

STANDARD(S): By correctly execute required knots, per the references.

PERFORMANCE STEPS:

1. Tie a square knot.
2. Tie a double sheet bend.
3. Tie a round turn with two half hitches.

4. Tie a figure eight.

5. Tie a retrace figure eight.

6. Tie a bowline.

7. Tie a tape (water) knot.

8. Secure a line to a cleat.

9. Secure a spring line.

REFERENCE(S):

1. Chapmans Piloting, Seamanship and Small Boat Handling

2. FM 55-501, Marine Crewman’s Handbook

3. TC 90-6-1, Military Mountaineering

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (PFC)

TRAINING MATERIEL:

1. * 12’ Rope/Line

2. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete

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TASK: 8111.01.09 INTERPRET SURF CONDITIONS

CONDITION(S): Assigned as a coxswain, given a CRRC and a designated surf zone.

STANDARD(S): By observing and analyzing the surf to determine if conditions will permit safe CRRC operations, per the references.

PERFORMANCE STEPS:

1. Identify the significant breaker height of a surf zone.

2. Identify the type of waves in a surf zone.

3. Identify the interval between waves in a surf zone.

4. Determine whether surf zone passage is possible.

REFERENCE(S):

1. COMNAVSURFPAC/LANT INST 3840.1B, Joint Surf Manual

2. MARFORLANT/PAC INST, P3000.15, Standard Procedures for Raiding Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (PFC)

TRAINING MATERIEL:

1. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete

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TASK: 8111.01.10 ORGANIZE A BOAT TEAM

CONDITION(S): Assigned as a coxswain, given a CRRC, boat team, and a mission.

STANDARD(S): By assigning positions and responsibilities to the boat team members to operate the CRRC, per the references.

PERFORMANCE STEPS:

1. Assign boat team organization by number (long and short count).
2. Assign individual responsibilities.
3. Brief the boat team.
4. Conduct counts.
5. Issue boat handling commands.
6. Complete boat team manifest.

REFERENCE(S):

1. FMFM 2-2, Amphibious Reconnaissance
2. MARFORLANT/PAC INST, P3000.15, Standard Procedures for Raiding Craft
3. TC 31-25, Special Forces Waterborne Operations

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (PFC)

TRAINING MATERIEL:

1. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete
2. * Safety Equipment

TASK: 8111.01.11 WATERPROOF EQUIPMENT

CONDITION(S): Assigned as a coxswain, given mission essential equipment, and required waterproofing materials.

STANDARD(S): To ensure it remains dry and mission capable for the duration of a small craft operation, per the references.

PERFORMANCE STEPS:

1. Inspect and conduct operational checks of equipment.

2. Pad and tape sharp edges.

3. Seal the equipment in a waterproof bag/container.

4. Provide an equipment lashing point.

5. Identify which of the three waterproof levels is required.

REFERENCE(S):

1. FMFM 2-2, Amphibious Reconnaissance

2. TC 31-25, Special Forces Waterborne Operations

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete

2. * Tactical Radio, SL-3 complete

3. * Waterproofing Materials

TASK: 8111.01.12 EXECUTE A CLANDESTINE LANDING AND WITHDRAWAL

CONDITION(S): Assigned as a coxswain, given a CRRC, assigned as part of a waterborne raid force.

STANDARD(S): By executing proper coxswain/boat team actions for a safe and successful landing and withdrawal, per the references.

PERFORMANCE STEPS:

1. Identify clandestine landing and withdrawal control measures.

2. Identify initial terminal guidance signals.

3. Identify the steps to a raid force landing.

4. Demonstrate actions on the beach landing site (BLS).

5. Identify the steps to a raid force withdrawal.

REFERENCE(S):

1. FMFM 2-2, Amphibious Reconnaissance

2. MARFORLANT/PAC INST, P3000.15, Standard Procedures for Raiding Craft

3. TC 31-25, Special Forces Waterborne Operations

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (PFC)

TRAINING MATERIEL:

1. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete

2. * Safety Equipment

DUTY AREA 02 - COMBAT RUBBER RECONNAISSANCE CRAFT (CRRC) COXSWAIN

TASK: 8111.02.01 PREPARE THE COMBAT RUBBER RECONNAISSANCE CRAFT (CRRC) FOR AN OPERATION

CONDITION(S): Assigned as a coxswain, given an SL-3 complete CRRC, and a mission.

STANDARD(S): By correctly assembling the CRRC with outboard engines, per the references.

PERFORMANCE STEPS:

1. Inventory/Inspect standard accessories.

2. Assemble the CRRC.

3. Lash standard accessories in the CRRC.

4. Lash equipment in the CRRC.

5. Prepare the CRRC for operation with the 35 horsepower over-the-horizon configuration.

6. Mount a dual 35D engines on the CRRC.

7. Conduct a pre-operation check.

8. Conduct the operation.

9. Conduct a post-operation check.

REFERENCE(S):

1. TM 09665A-13&P/1-1, Operation and Maintenance of the Combat Rubber Reconnaissance Craft

2. TM 09665A-13&P/1-2, Operation and Maintenance of the Combat Rubber Reconnaissance Craft Over-the-Horizon Configuration

3. TM 4700-15/1, Marine Corps Equipment Forms and Records

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (PFC)

TRAINING MATERIEL:

1. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete

2. * Pre and Post Operation Checklist for Combat Rubber Reconnaissance Craft

TASK: 8111.02.02 OPERATVE THE 35/55 HORSEPOWER (HP) OUTBOARD ENGINE

CONDITION(S): Assigned as a coxswain, given a CRRC, outboard engine, and mission.

STANDARD(S): By operating the craft with the outboard engine to complete the mission safely, per the references.

PERFORMANCE STEPS:

1. Prepare the fuel bladder.
2. Conduct a pre-operation check.
3. Conduct cold engine start-up procedures.
4. Conduct warm engine start up procedures.
5. Conduct a cooling system check.
6. Conduct emergency start-up procedures.
7. Operate the outboard engine throttle handle.
8. Shift gears.
9. Stop a running outboard engine.
10. De-water the outboard engine.
11. Troubleshoot engine problems.
12. Conduct a post-operation check.

REFERENCE(S):

1. OMC 55 HP Outboard Engine Manual
2. TM 08509B-14, OMC "D" Model 35 HP Outboard Engine Manual
3. TM 09737A-14&P, 35 Horse Power IMARS

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. 35 Horsepower Outboard Engine
2. 55 Horsepower Outboard Engine
3. * Combat Rubber Reconnaissance Craft(s)
4. * Safety Equipment

TASK: 8111.02.03 CONDUCT LANDING PROCEDURES WITH THE COMBAT RUBBER RECONNAISSANCE CRAFT (CRRC)

CONDITION(S): Assigned as a coxswain, during daylight hours or limited visibility, given a CRRC, and a mission.

STANDARD(S): By safely maneuvering through a surf zone to insert troops on a beach landing site (BLS), per the references.

PERFORMANCE STEPS:

1. Negotiate a surf zone from sea to shore.

2. Beach the CRRC.

3. Move the CRRC on land.

4. Launch the CRRC from the BLS.

5. Negotiate the surf zone from shore to sea.

6. Conduct immediate action procedures for a capsized CRRC.

REFERENCE(S):

1. FMFM 2-2, Amphibious Reconnaissance

2. MARFORLANT/PAC INST, P3000.15, Standard Procedures for Raiding Craft

3. TC 31-25, Special Forces Waterborne Operations

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (PFC)

TRAINING MATERIEL:

1. * Combat Rubber Reconnaissance Craft(s) with Eng-Engine, SL-3 complete

2. * Safety Equipment

TASK: 8111.02.04 TOW A COMBAT RUBBER RECONNAISSANCE CRAFT (CRRC)

CONDITION(S): Assigned as a coxswain, given a CRRC and either a second CRRC or a fiberglass hull boat, and required equipment.

STANDARD(S): By utilizing the correct and safe procedures to preclude damage to craft or injury to personnel.

PERFORMANCE STEPS:

1. Select the appropriate tow.

    a. Hasty tow.

    b. Short tow.

c. Long tow astern.

2. Prepare towing equipment.

3. Rig the CRRC for tow.

4. Conduct the tow.

5. Execute release procedures.

REFERENCE(S):

1. COMDINST MI6114.5A, U. S. Coast Guard Boat Crew Seamanship Manual

2. NAVEDTRA 10122-E, Boatswain's Mate 1 & C

3. TM 09665A-13&P/1-1, Operation and Maintenance of the Combat Rubber Reconnaissance Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (PFC)

TRAINING MATERIEL:

1. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete

2. * Safety Equipment

3. * Tow Line Set

TASK: 8111.02.05 OPERATE COMBAT RUBBER RECONNAISSANCE CRAFT (CRRC) FROM AMPHIBIOUS SHIPPING

CONDITION(S): Assigned as a coxswain, given a CRRC, amphibious shipping and appropriate sea conditions.

STANDARD(S): By launching and recovering a CRRC from amphibious shipping, per the references.

PERFORMANCE STEPS:

1. Identify the launch/recovery technique based on platform.

2. Prepare the CRRC for launch,

3. Launch the CRRC from amphibious shipping.

4. Prepare the CRRC for recovery.

5. Recover the CRRC aboard amphibious shipping.

REFERENCE(S):

1. 29LCA-AA-SSM-050, Sea Operations Landing Craft Air Cushion (LCAC)

2. MARFORLANT/PAC INST, P3000.15, Standard Procedures for Raiding Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (PFC)

TRAINING MATERIEL:

1. * Amphibious Shipping (LCU, LCAC, LPD, LSD, etc.)

2. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete

3. * Safety Equipment

TASK: 8111.02.06 CONDUCT FIRST ECHELON MAINTENANCE ON THE COMBAT RUBBER RECONNAISSANCE CRAFT (CRRC)

CONDITION(S): Assigned as a coxswain, given a CRRC, required equipment, and references.

STANDARD(S): By inspecting and identifying deficiencies and preforming preventative maintenance to ensure the CRRC remains combat capable, per the references.

PERFORMANCE STEPS:

1. Inventory CRRC equipment.

2. Conduct required scheduled maintenance.

3. Maintain CRRC equipment forms and records.

REFERENCE(S):

1. TM 09665A-13&P/1-1, Operation and Maintenance of the Combat Rubber Reconnaissance Craft

2. TM 09665A-13&P/1-2, Operation and Maintenance of the Combat Rubber Reconnaissance Craft Over-the-Horizon Configuration

3. TM 4700-15/1, Marine Corps Equipment Forms and Records

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (PFC)

TRAINING MATERIEL:

1. * Cloth/Rags

2. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete

3. Tool Kit

TASK: 8111.02.07 CONDUCT FIRST ECHELON MAINTENANCE ON THE 35/55 HP OUTBOARD ENGINE

CONDITION(S): Assigned as a coxswain, given a 35 or 55 HP outboard engine, required equipment, and references.

STANDARD(S): By inspecting and identifying deficiencies and performing preventative maintenance to ensure the engines remain combat capable, per the references.

PERFORMANCE STEPS:

1. Inspect an operating outboard engine.

2. Conduct required scheduled maintenance.

REFERENCE(S):

1. OMC 55 HP Outboard Engine Manual

2. TM 08509B-14, OMC "D" Model 35 HP outboard Engine Manual

3. TM 09737A-14&P, 35 Horse Power IMXRS

4. TM 4700-15/1, Marine Corps Equipment Forms and Records

5. TM 4700-15/lH, 70 Horsepower Engine

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (PFC)

TRAINING MATERIEL:

1. * 35 Horsepower Outboard Engine

2. * 55 Horsepower Outboard Engine

3. * Cloth/Rags

MOS 8112, RIVERINE ASSAULT CRAFT CREWMAN

DUTY AREA 01 - RIVERINE ASSAULT CRAFT (RAC) SYSTEMS

TASK: 8112.01.01 PERFORM RIVERINE ASSAULT CRAFT OPERATIONS CHECKS

CONDITION(S): Assigned as a RAC crewman and given an SL-3 complete RAC, trailer and the references.

STANDARD(S): By performing the required operational check on the RAC, per the reference.

PERFORMANCE STEPS:

1. Inventory SL-3 gear.

2. Perform a Pre-Operations check.

3. Perform a Pre-Launch check.

4. Perform checks during operations, as required.

5. Perform a Post Operations check.

6. Report all uncorrected deficiencies to maintenance.

REFERENCE(S):

1. TM 09557A-14/1, System Operation and Maintenance Manual with Components List for Riverine Assault Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Rigid Raiding Craft Transport Trailer

2. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.01.02 CONDUCT FUELING OPERATIONS ON THE RAC

CONDITION(S): Assigned as a RAC crewman and given an SL-3 complete RAC and a refueling facility.

STANDARD(S): By refueling the RAC without overflow or damage, per the required safety procedures and the reference.

PERFORMANCE STEPS:

1. Refuel from refueling source:

    a. Make fire extinguisher readily available.

b. Ensure ground line is connected, if required.

c. Turn off all power except engine starting power and leave starboard engine switch on.

d. Post a watch on the fuel gauge.

e. Open fuel cap and 2 inch gate valves.

f. Fuel the RAC until gauge reads full.

g. Close valves and cap.

h. Disconnect ground line and return fuel line.

i. Stow fire extinguisher.

j. Record amount of fuel received.

2. Refuel from another RAC or transfer fuel from one tank to another:

a. Complete steps 1.a. - d.

b. Open fuel tank access plate on full fuel tank.

c. Place intake hose from fuel transfer pump into tank.

d. Place output hose into fuel inlet.

e. Complete steps 1.e. - j.

f. Secure fuel access plate.

REFERENCE(S):

1. TM 09557A-14/1, System Operation and Maintenance Manual Components List for Riverine Assault Craft

ADMINISTRATIVE INSTRUCTIONS:

1. Fuel spills should be reported to the local HAZMAT representative and contained/removed.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.01.03 OPERATE RADIO COMMUNICATIONS SUITES

CONDITION(S): Assigned as a RAC crewman during day light or limited visibility, and given an SL-3 complete RAC with installed communications suite.

STANDARD(S): By successfully communicating with all stations and/or positions using both secure (covered) and unsecured (uncovered) modes, per the references.

PERFORMANCE STEPS:

1. Operate RAC intercom:
    a. Connect intercom helmet.
    b. Provide power to communications suite.
    c. Select desired radios for monitoring.
    d. Select individual position setting, as desired.
    e. Communicate from:
        (1) Position to position.
        (2) Station to station.
2. Operate the GRC-231:
    a. Mount the radio.
    b. Provide power to the communications suite.
    c. Place the GRC-231 into operation.
    d. Preset desired frequencies.
    e. Select the desired modulation.
    f. Set for secure operation.
    g. Tune the radio, as required.
    h. Transmit:
        (1) Unsecured mods.
        (2) Secure mode.
3. Operate the PRC-119:
    a. Mount the radio.
    b. Provide power to the communications suite.
    c. Place radio into operation.
    d. Load radio fill from:

(1) Local fill source.

(2) Remote fill source.

d. Transmit:

(1) Single frequency unsecured mode.

(2) Frequency hopping unsecured mode.

(3) Single frequency secure mode.

(4) Frequency hopping secure mode.

4. Operate the PRC-113 radio:

a. Install the radio set.

b. Provide power to the communications suite.

c. Place the radio into operation.

d. Preset desired frequencies.

e. Utilize the direction finding mode, as required.

f. Utilize the guard receiver mode, as required.

g. Transmit:

(1) Unsecured mode.

(2) Secure mode.

5. Operate the PSC-3:

a. Install the radio set.

b. Provide power to the communications suite.

c. Place the radio into operation.

d. Preset desired frequencies.

e. Select the desired transmission mode.

f. Transmit:

(1) Line of sight secured mode.

(2) Line of sight unsecured mode.

(3) Satellite secured mode.

(4) Satellite unsecured mode.

6. Operate the RAY 202:

a. Place the radio into operation.

b. Select the proper channel (manual or from recall).

(1) Weather - WX 1, 2 or 3.

(2) Emergency - 16.

(3) Port control - 12.

(4) Navigation -13.

(5) DWX mode, weather, 16 and primary.

(6) Memorized channels.

c. Transmit message, (International, if required):

(1) Unsecured.

(2) Secured.

d. Scan:

(1) All channels.

(2) Dual watch 16 and primary.

e. Operate hailer.

f. Operate fog horn.

REFERENCE(S):

1. TM 09557A-12 & P/11, Riverine Assault Craft Communications Suite System Manual

2. TM 09557A-14/9, RAY 202 VHR Radiotelephone/Hailer, Operators Manual

ADMINISTRATIVE INSTRUCTIONS:

1. Safety hazards include: sufficient current for electrocution, and shock or radio frequency burns from the antennas.

2. Ensure all communications equipment is off before starting the engine.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Riverine Assault Craft Antennas

2. * Riverine Assault Craft Communication Helmet

3. * Riverine Assault Craft with fully operational communications suite

4. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.01.04 PERFORM RADIO COMMUNICATION REMEDIAL ACTION

CONDITION(S): Assigned as a RAC crewman and given an SL-3 complete RAC with a malfunctioning communications suite.

STANDARD(S): By initiating and successfully conducting remedial action to correct the malfunction and return the communication suite to full operation, per the reference.

PERFORMANCE STEPS:

1. Check the power supply source:

   a. Check radio on/off switches.

   b. Check battery switches.

   c. Check circuit breakers.

   d. Check power switches.

   e. Check power cables.

2. Check the frequency.

3. Check all switches for correct settings.

4. Check key settings.

5. Check all cable connections.

6. Check antenna connections.

7. Inform communications maintenance section of any uncorrected deficiencies.

REFERENCE(S):

1. TM 09557A-12 & P/11, Riverine Assault Craft Communications Suite System Manual

ADMINISTRATIVE INSTRUCTIONS:

1. Safety hazards include sufficient current for shock, electrocution and/or radio frequency burns from the antennas.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Riverine Assault Craft Antennas

2. * Riverine Assault Craft Communication Helmet

3. * Riverine Assault Craft with fully operational communications suite

4. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.01.05 PERFORM PREVENTATIVE MAINTENANCE OF COMMUNICATIONS EQUIPMENT

CONDITION(S): Assigned as a RAC crewman and given an SL-3 complete RAC, installed communication suites, cleaning materials and the reference.

STANDARD(S): To ensure all pieces are free of dirt, debris, rust, corrosion, and fully operational; if discrepancies are noted and reported to the maintenance section for repair, per the reference.

PERFORMANCE STEPS:

1. Antenna preventative maintenance:

    a. Conduct SL-3 inventory.

    b. Inspect cables for frays, cracks, and/or cuts in the insulation.

    c. Inspect connectors for dirt, rust, corrosion, and/or worn threads.

    d. Inspect carrying case for frays, tears, mildew, and serviceability.

    e. Conduct operational check.

    f. Complete equipment records.

    g. Report discrepancies.

2. Radio preventative maintenance:

    a. Ensure the CVC helmet is clean, serviceable, and operational. Use contact cleaner and pencil erasers to clean all metal connections.

    b. Ensure the intercom control boxes are clean and operational. Use a rag to remove dust, dirt, and moisture, and use a paint brush or toothbrush to get at difficult areas.

    c. Inspect control units:

        (1) Inspect surfaces for dirt, rust, and corrosion.

        (2) Ensure that screws and mounting bolts are present and tight.

(3) Inspect cable receptacles lock-nuts for tightness.

d. Inspect mounts:

(1) Inspect surfaces for dirt, rust, and corrosion.

(2) Ensure that screws holding mounts to the RAC are in place and tight.

(3) Inspect placement of receptacle cover and chain.

(4) Ensure the grounding straps are attached.

(5) Inspect dust covers for serviceability.

(6) Inspect shock mounts for rust.

(7) Inspect clamps for cleanliness, rust, corrosion, excessive wear, and proper operation.

e. Inspect cable system:

(1) Inspect cables for breaks, tears or frays.

(2) Ensure that cable connector lock-nuts are tight and free of dirt, rust, and corrosion.

(3) Inspect connectors for dirt, rust, and corrosion.

f. Conduct operational check.

g. Complete equipment records.

h. Report all discrepancies to maintenance section.

REFERENCE(S):

1. TM 09557A-12 & P/11, Riverine Assault Craft Communications Suite System Manual

ADMINISTRATIVE INSTRUCTIONS:

1. Safety hazards include sufficient current for shock, electrocution and/or radio frequency burns from the antennas.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Riverine Assault Craft Antennas

2. * Riverine Assault Craft Communication Helmet

3. * Riverine Assault Craft with fully operational communications suite

4. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.01.06 OPERATE NAVIGATIONAL AIDS

CONDITION(S): Assigned as a RAC crewman and given an SL-3 complete RAC with installed navigation equipment, and the mission to assist the coxswain.

STANDARD(S): To correctly set-up, monitor, and report readings to the coxswain to enable timely and accurate decisions, per the reference.

PERFORMANCE STEPS:

1. Operate RAC radar:

    a. Place radar into operation.

    b. Determine bearing and range to an objective.

    c. Determine range and bearing to selected waypoint.

    d. Set up an alarm zone.

    e. Operate in the Time mode.

    f. Operate in the Off Center mode.

    g. Operate in the Zoom mode.

    h. Determine range and bearing between two objects.

2. Operate depth finder:

    a. Place system into operation.

    b. Operate in standard mode.

    c. Adjust range.

    d. Determine depth - displayed on the screen.

    e. Set shallow water alarm.

    f. Select the proper frequency.

    g. Operate Shift mode to maintain bottom view without altering range.

    h. Operate trip log.

    i. Operate in the Split screen mode:

        (1) Select Standard/Plot, Standard/Temporary, etc.

        (2) Adjust, as required.

    j. Calibrate system.

k. Operate in the Navigation mode.

3. Operate Global Positioning System (GPS):

a. Place GPS into operation - press power key.

b. Select correct geodetic datum:

(1) 0 = Japan.

(2) 1 = USA (WGS-84/NAD-83)

(3) 2 = Canada/Alaska.

(4) 3 = Europe.

(5) 4 = Australia.

(6) 5 = USA (WGS-72)

c. Initialize the system.

d. Enter a waypoint:

(1) Bearing and range.

(2) LAT/LONG.

(3) Memorizing current position.

e. Determine bearing/range to waypoint.

f. Determine craft velocity/cross track error.

g. Set up an automatic route sequence.

h. Set anchor watch alarm.

i. Set off-course alarm.

4. Operate a LORAN system:

a. Place the system into operation - press power key.

b. Initialize the system.

c. Enter a waypoint:

1) Memorize current position.

2) LAT/LONG.

3) Range and bearing.

d. Determine bearing/range to waypoint.

e. Determine craft velocity/cross track error.

f. Set up automatically sequenced route.

g. Set anchor watch alarm.

h. Set off-course alarm.

REFERENCE(S):

1. TM 09557A-14/5, Instruction Technical Manual for R40X Radar

2. TM 09557A-14/6, Owners/Users Manual for the Boat Masters Trailer

3. TM 09557A-14/7, Instruction Technical Manual for Loran "C" Model 780

4. TM 09557A-14/8, Instruction Technical Manual for V820 Depth Finder

ADMINISTRATIVE INSTRUCTIONS:

1. This task contains the generic steps for the current navigational aids: R40X Radar, V820 Depth Finder, RAYSTAR 920 GPS, and RAYSTAR 780 Loran "C".

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.01.07 MAINTAIN THE RIVERINE ASSUALT CRAFT (RAC) TRAILER

CONDITION(S): Assigned as a RAC crewman and given an SL-3 complete RAC, a trailer, PM forms, and the references.

STANDARD(S): By performing prescribed first echelon maintenance on the trailer, and completing all applicable documentation, per the references.

PERFORMANCE STEPS:

1. Conduct a fresh water wash down.

2. Perform first echelon scheduled maintenance.

3. Report uncorrected discrepancies to the maintenance section.

REFERENCE(S):

1. TM 09557A-14/1, System Operation and Maintenance Manual with Components List for Riverine Assault Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. 900 Series (5 Ton Truck)

2. * Riverine Assault Craft Trailer, SL-3 complete

TASK: 8112.01.08 SUPERVISE PREVENTATIVE MAINTENANCE OF THE RIVERINE ASSUALT CRAFT (RAC) TRAILER

CONDITION(S): Assigned to the billet of Boat Captain, and given the mission to maintain a RAC, and given required equipment, personnel, maintenance forms and records, and technical manuals.

STANDARD(S): By ensuring personnel are briefed and assigned maintenance duties, and that those-duties are performed per all orders and regulations. Inspect maintenance conducted on the RAC to ensure it has been done properly, and keep the unit commander informed of the craft's status, per the reference.

PERFORMANCE STEPS:

1. Determine what schedule maintenance is required:

   a. Daily, weekly, monthly, quarterly, semiannual, and annual.

   b. Operational hours.

2. Identify maintenance requirements by echelon:

   a. lst - Operator.

   b. 2d through 5th - Organizational, Intermediate and Depot maintenance.

3. Make required entries in craft log.

4. Ensure monthly SL-3 gear inventories are completed.

5. Report all uncorrected deficiencies and equipment shortages to maintenance section.

REFERENCE(S):

1. TM 09557A-14/6, Owners/Users Manual for the Boat Masters Trailer

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Sgt)

TRAINING MATERIEL:

1. * 900 Series (5 Ton Truck)

2. * Riverine Assault Craft Trailer, SL-3 complete

DUTY AREA 02 - RIVERINE ASSAULT CRAFT (RAC) OPERATIONS

TASK: 8112.02.01 CONDUCT BRIEF FOR EMBARKED PERSONNEL

CONDITION(S): Assigned as a RAC crewman and given an SL-3 complete RAC, mission essential equipment and embarked personnel.

STANDARD(S): To ensure a thorough safety procedures and immediate action drill brief is conducted prior to launch, per the references.

PERFORMANCE STEPS:

1. Assemble RAC crew and embarked personnel.

2. Review safety procedures.

    a. Brief use, location, and operation of safety equipment:

        (1) Personnel floatation devices (PFD).

        (2) Life ring and beacon.

        (3) First aid kit.

        (4) Distress signaling devices.

        (5) Fire extinguishers.

    b. Brief passenger safety considerations.

    c. Brief radar operation hazards (Do not look at radar within six feet during operation).

    d. Brief man overboard/search and rescue procedures.

    e. Brief embark troop seating and placement.

        (1) Three points of contact at all times.

        (2) Secure positions during maneuvers.

    f. Brief communications operation hazards.

        (1) High voltage to equipment.

        (2) Radiation/Shock hazard from antennas.

    g. Explain prepare for launch/maneuver commands.

    h. Brief communication plan.

    i. Brief medical plan.

    j. Brief report procedures.

k. Brief chain of command.

l. Brief embarked personnel responsibilities.

m. Brief current/forecasted weather conditions.

REFERENCE(S):

1. FM 55-501, Marine Crewman's Handbook

2. TM 09557A-14/1, System Operation and Maintenance Manual with Components List for Riverine Assault Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.02 LAUNCH THE RIVERINE ASSUALT CRAFT (RAC)

CONDITION(S): Assigned as a RAC crewman and given an SL-3 complete RAC that requires trailering.

STANDARD(S): Without damaging the RAC, trailer, or injuring personnel, launch the craft, per the references.

PERFORMANCE STEPS:

1. Establish communications with vehicle driver.

2. Ensure RAC is far enough in the water.

3. Ensure prelaunch is conducted.

4. Ensure there is a winch operator.

5. Launch craft at a controlled speed and clear all obstacles.

REFERENCE(S):

1. FM 55-501, Marine Crewman's Handbook

2. TM 09557A-14/1, System Operation and Maintenance Manual with Components List for Riverine Assault Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * 900 Series (5 Ton Truck)

2. * Riverine Assault Craft Trailer, SL-3 complete

3. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.03 TRAILER THE RIVERINE ASSUALT CRAFT (RAC)

CONDITION(S): Assigned as a RAC crewman and given an SL-3 complete RAC, RAC trailer, and a prime mover vehicle.

STANDARD(S): Without causing any damage to the RAC or injury to personnel, maneuver the RAC onto the trailer, per the references.

PERFORMANCE STEPS:

1. Establish and maintain communications with the winch operator.

2. Approach the trailer at a controlled speed.

3. Use buckets, throttles, and helm to control and position the RAC.

4. Ensure the RAC is positioned properly on the trailer.

5. Once the winch operator signals RAC is secured, shut down all RAC systems.

REFERENCE(S):

1. FM 55-501, Marine Crewman’s Handbook

2. TM 09557A-14/1, System Operation and Maintenance Manual with Components List for Riverine Assault Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * 900 Series (5 Ton Truck)

2. * Riverine Assault Craft Trailer, SL-3 complete

3. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.04 PILOT IN CONFINED SPACE

CONDITION(S): Assigned as coxswain and given an SL-3 complete RAC.

STANDARD(S): Without damaging the craft while piloting and maneuvering the craft, per the references.

PERFORMANCE STEPS:

1. Analyze the available space.

2. Determine the required maneuver.

3. Conduct the maneuver:

a. Crabbing - inboard bucket reverse, use helm, throttle, and outboard bucket adjustments between forward and reverse to maintain position.

b. Maintain position - buckets in zero speed, observe reference point and adjust buckets and helm.

c. Pivot on the bow - starboard pivot, starboard bucket in reverse, use helm, throttles, and outboard bucket adjustments to pivot on the bow.

d. Move straight astern - both buckets in reverse, turn helm the Same way you want the bow to move.

REFERENCE(S):

1. FM 55-501, Marine Crewman’s Handbook

2. TM 09557A-14/1, System Operation and Maintenance Manual with Components List for Riverine Assault Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.05 MOOR A RIVERINE ASSUALT CRAFT (RAC)

CONDITION(S): Assigned as a RAC crewman and given an SL-3 complete RAC, a pier, and the mission to secure the craft.

STANDARD(S): By executing commands from the coxswain to secure the RAC safely without injuring or damaging the RAC, per the references.

PERFORMANCE STEPS:

1. Select a mooring site.

2. Place the fenders on the inboard side of the RAC.

3. Secure the bow and stern lines to the RAC.

4. As the RAC comes alongside the pier, coxswain signals to secure the lines to the pier and shuts down the engines.

5. Secure s spring line.

6. Be prepared to cast off on command.

REFERENCE(S):

1. FM 55-501, Marine Crewman’s Handbook

2. TM 09557A-14/1, System operation and Maintenance Manual with Components List for Riverine Assault Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.06 MANEUVER A RIVERINE ASSUALT CRAFT (RAC) IN ACCORDANCE WITH MARITIME RULES OF THE ROADS

CONDITION (S): Assigned as a RAC coxswain and given an SL-3 complete RAC during day or night movement.

STANDARD(S): Without colliding with another craft or object and without injuring personnel, per the references.

PERFORMANCE STEPS:

1. Observe right of way.

a. A power driven vessel underway shall keep out of the way (give way) to:

(1) A vessel not under command.

(2) A vessel restricted on her ability to maneuver.

(3) A vessel engaged in fishing.

(4) A sailing vessel.

b. For additional information, see the references.

2. Overtake another vessel:

a. Reduce speed in advance to reduce wake.

b. Give proper sound signal to indicate your intent to alter course.

(1) one horn blast alter course to port.

(2) Two horn blasts alter course to starboard.

(3) Resume course and speed when clear of other vessel(s).

c. Crossing situation (if you see their port side you are the give way vessel).

(1) Stand on vessel maintains course and speed.

(2) Give way vessel alters course and speed.

(3) Allows stand on vessel to pass across their bow.

(4) Resume course and speed.

(5) Take all necessary precautions to avoid collision.

d. Meeting situation:

(1) Reduce speed in advance to reduce wake.

(2) Give proper sound signal to indicate intent to alter course, usually both alter to starboard.

(a) Danger/doubt; five horn blasts signals confusion.

(b) Other signals, same as previous.

(3) Resume course and speed when well clear of other vessel.

e. Operate in reduced visibility:

(1) Maintain safe speed (stop in 1/2 visible distance).

(2) Give proper sound signals.

(a) One prolonged horn blast every minute for underway vessel.

(b) Two prolonged horn blasts every two minutes for stationary vessel.

(3) Maintain radar watch.

(4) Maintain depth finder watch.

(5) Ensure proper lighting is maintained.

f. Identify vessel type and heading at night by light configuration.

(1) Red light - port side of vessel.

(2) Green light - starboard side of vessel.

(3) Green and Red light - bow of vessel.

(4) White light stern of vessel.

(5) Yellow light towing vessel.

3. Properly utilize navigational aids.

REFERENCE(S):

1. U.S. COAST GUARD, Navigational Rules

2. U.S.D.O.T., Navigation Rules

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Night Vision Device(s) (AN/PVS-5, AN/PVS-7B)

2. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.07 PILOT THE RIVERINE ASSUALT CRAFT (RAC) USING VISUAL MEANS

CONDITION(S): Assigned as a RAC coxswain and given an SL-3 complete RAC, nautical chart(s), site information, tactical mission, and the references.

STANDARD(S): By utilizing any visual aids, and the characteristics of the river, safely maneuver craft both during day and at night, per the references.

PERFORMANCE STEPS:

1. Select nautical chart.

2. Determine route.

3. Interpret river characteristics along route.

4. Pilot to specific location.

REFERENCE(S):

1. Nautical Chart #1

2. FM 55-501, Marine Crewman’s Handbook

3. TM 09557A-14/1, System Operation and Maintenance Manual with Components List for Riverine Assault Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms

2. * Nautical Charts

3. * Navigators Drafting Set

4. * Night Vision Device(s) (AN/PVS-5, AN/PVS-7B)

5. * Parallel Rulers

TASK: 8112.02.08 PERFORM EMERGENCY MANEUVERS

CONDITION(S): Assigned as a RAC coxswain, given an SL-3 complete RAC, and a mission with an emergency situation.

STANDARD(S): By executing required maneuver(s) to prevent damage to the craft and personnel, per the references.

PERFORMANCE STEPS:

1. Determine the required maneuver.

2. Announce "STANDBY".

3. Perform the maneuver.

    a. Emergency stop - throttles down, buckets in reverse then throttles back to full until stop is complete.

    b. Emergency 180 degree turn - turn helm hard over until boat has completed half the turn, then center helm. As craft stops, re-orient on intended course.

REFERENCE(S):

1. FM 55-501, Marine Crewman’s Handbook

2. TM 09557A-14/1, System Operation and Maintenance Manual with Components List for Riverine Assault Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.09 ANCHOR THE RIVERINE ASSUALT CRAFT (RAC)

CONDITION(S): Assigned as RAC coxswain and given an SL-3 complete RAC and the requirement to maintain an anchorage.

STANDARD(S): Without dragging or swinging into an obstacle(s), per the references.

PERFORMANCE STEPS:

1. Select anchorage.

2. Prepare anchor and tackle.

3. Determine scope (distance from cleat to bottom X five for calm, eight for normal and 10 for severe conditions).

4. Set the anchor by backing away from anchor.

5. Secure anchor line and feel for dragging.

6. Weigh anchor by moving toward the anchor and recovering line.

7. Clear fouled anchor, as required.

8. Stow anchor and tackle.

REFERENCE(S):

1. FM 55-501, Marine Crewman’s Handbook

2. TM 09557A-14/1, System Operation and Maintenance Manual with Components List for Riverine Assault Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.10 MAINTAIN ASSIGNED COURSE

CONDITION(S): Assigned as a RAC coxswain, given an SL-3 complete RAC, and given a course and speed.

STANDARD(S): By maintaining assigned heading within 2 degrees error, and speed within 0.5 knots, during periods of reduced visibility, per the reference.

PERFORMANCE STEPS:

1. Receive magnetic course.

2. Apply compass error.

3. Steer craft to required heading.

4. Maintain ordered heading and speed.

REFERENCE(S):

1. FM 55-501, Marine Crewman’s Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.11 PILOT A RIVERINE ASSUALT CRAFT (RAC) USING ONBOARD NAVIGATIONAL EQUIPMENT

CONDITION(S): Assigned as a RAC coxswain and given an SL-3 complete RAC, a designation and assigned route, during periods of reduced visibility.

STANDARD(S): By correctly piloting the craft to the given destination using navigational aids, per the references.

PERFORMANCE STEPS:

1. Select the proper nautical chart(s).
2. Identify aids to navigation on the radar.
3. Identify river characteristics on the radar.
4. Confirm river characteristics with the depth finder.
5. Pilot to the specific location.

REFERENCE(S):

1. Nautical Chart #1
2. TM 09557A-14/5, Instruction Technical Manual for R40X Radar
3. TM 09557A-14/8, Instruction Technical Manual for V820 Depth Finder

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Nautical Charts
2. * Navigators Drafting Set
3. * Night Vision Device(s) (AN/PVS-5, AN/PVS-7B)
4. * Parallel Rulers
5. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.12 NAVIGATE USING DEAD RECKONING

CONDITION(S): Assigned as the Boat Captain and given a mission and the necessary navigational equipment and information.

STANDARD(S): By measuring distance to within 0.1 nautical mile, direction to within two degrees, and plotting positions to within six seconds of accuracy, per the references.

PERFORMANCE STEPS:

1. Select nautical chart.
2. Plot geographic coordinates.

3. Conduct a chart study.

4. Construct dead reckoning track.

5. Determine distance, speed, and time.

6. Determine course to steer.

7. Navigate to destination.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II

2. Nautical Chart #1

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms

2. * Nautical Charts

3. * Navigators Drafting Set

4. * Night Vision Device(s) (AN/PVS-5, AN/PVS-7B)

5. * Parallel Rulers

6. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.13 NAVIGATE A RIVERINE ASSUALT CRAFT (RAC) USING ONBOARD NAVIGATIONAL EQUIPMENT

CONDITION(S): Assigned as a Boat Captain and given a mission, an SL-3 complete RAC, the necessary navigational equipment, and the references.

STANDARD(S): By identifying a specific destination, and using the RAC navigational electronics, correctly navigate the craft to the given destination, per the references.

PERFORMANCE STEPS:

1. Select nautical chart.

2. Plot geographic coordinates.

3. Enter coordinates as way points in the GPS and/or LORAN C.

4. Access course information on the radar.

5. Confirm course information with the radar and depth finder.

6. Navigate to destination.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II
2. Nautical Chart #1
3. TM 09557A-14/5, Instruction Technical Manual for R40X Radar
4. TM 09557A-14/6, Owners/Users Manual for the Boat Masters Trailer
5. TM 09557A-14/7, Instruction Technical Manual for Loran "C" Model 780
6. TM 09557A-14/8, Instruction Technical Manual for V820 Depth Finder

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms
2. * Nautical Charts
3. * Navigators Drafting Set
4. * Night Vision Device(s) (AN/PVS-5, AN/PVS-7B)
5. * Parallel Rulers
6. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.14 PERFORM REMEDIAL ACTION FOR THE RIVERINE ASSUALT CRAFT (RAC)

CONDITION(S): Assigned as a RAC crewman and given an SL-3 complete craft with an unidentified malfunction.

STANDARD(S): By correctly troubleshooting to identify the malfunction, and initiating remedial action to return to full function, per the references.

PERFORMANCE STEPS:

1. Troubleshoot:
    a. A fuel system malfunction.
    b. An electronic systems malfunction.
    c. A powerplant malfunction.
    d. A propulsion system malfunction.
    e. A raw water cooling system malfunction.

f. A steering system malfunction.

2. Identify source of malfunction.

3. Initiate, as required:

a. Remedial action to return to full function.

b. Emergency procedures.

c. Activate auxiliary systems.

4. Report all uncorrected deficiencies to maintenance.

REFERENCE(S):

1. TM 09557A-14/1, System Operation and Maintenance Manual with Components List for Riverine Assault Craft

2. TM 09557A-14/2-1, Operation and Maintenance Technical Manual for Diesel Engine

3. TM 09557A-14/3, Operation and Maintenance Technical Manual for Propulsion Waterjet Model 273

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.15 COMMUNICATE USING PROPER PROCEDURES

CONDITION(S): Assigned as a RAC crewman on a tactical mission, and given an SL-3 complete RAC with the communications suits installed.

STANDARD(S): With higher, adjacent, and supporting units, both in secure and unsecured modes, to facilitate mission accomplishment, per the references.

PERFORMANCE STEPS:

1. Employ proper net control procedures:

a. Keep transmissions as short as possible.

b. Use low power, if possible.

c. Use terrain to mask radio transmissions, if possible.

d. Change frequencies and callsigns, as required.

e. Conduct radio checks properly, as required.

2. Employ proper net security measures:

a. Authenticate messages requiring action.

b. Encrypt/Decrypt sensitive information, as required.

c. React to jamming by continuing to broadcast and report.

d. Use secure communications equipment, whenever possible.

3. Employ proper message handling procedures:

a. Draft messages in NATO format.

b. Transmit with breaks between lines.

c. Use pro-words.

REFERENCE(S):

1. ATP-38, Amphibious Operations

2. FM 24-18, Tactical Single-Channel Radio Communications Techniques

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Riverine Assault Craft Antennas

2. * Riverine Assault Craft Communication Helmet

3. * Riverine Assault Craft with fully operational communications suite

4. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.16 PREPARE A RIVERINE ASSUALT CRAFT (RAC) FOR EXTERNAL HELICOPTER LIFT

CONDITION(S): Assigned as a RAC crewman given the requirement to externally lift a PAC by helicopter, and given a sling set, 40,000 pound capacity with one additional apex fitting (40,000 pound capacity), tie-down strap, cargo, 10,000 pound capacity, (4 each), 550 para-cord, 2 inch adhesive tape, webbing, cotton, 1/4 inch, 80 pound breaking strength, the required references, a landing zone, and a CH-53.

STANDARD(S): By correctly rigging and inspecting the RAC for external lift in 15 minutes, per the references.

PERFORMANCE STEPS:

1. Prepare RAC:

a. When the trailer is going to be lifted with the RAC, make sure the trailer is secured to the hull with the three straps and the forward (bow) chain.

b. Engage the parking brake, or chock the wheels (forward and aft of the wheels).

c. Stack and secure any extra equipment at the lowest point possible inside the RAC.

d. Remove and stow forward and troop canopies.

2. Rig the RAC:

a. Forward sling set (2 sling legs).

(1) Connect two sling legs to apex fitting number 1. Position apex fitting number 1 on top of the bow hatch.

(2) Loop the chain end of the left and right sling legs through their respective lift provisions. Insert link 3 in the grabhook. Pull the sling leg taut to remove all slack in the chain.

b. Aft sling set (2 sling legs).

(1) Connect two sling legs to apex fitting number 2. Position apex fitting number 2 on top of the canvas cover.

(2) Loop the chain end of the left and right sling legs through their respective lift provisions. Insert link 10 in the grabhook. Pull the sling taut to remove all slack in the chain.

(3) Cluster tie or tape (breakaway technique) all sling legs together on top of the RAC to prevent entanglement during hookup and liftoff.

3. Hookup the RAC:

a. The helicopter support team (HST) static discharge person discharges the static electricity with the static wand.

b. The forward HST hookup person stands on the forward deck and places apex fitting number 1 onto the forward aircraft cargo hook.

c. The aft HST hookup person stands on the aft transom and places apex fitting number 2 on the aft aircraft cargo hook.

d. The HST hookup team then dismounts and remains close to the load as the helicopter removes the slack from the sling legs. When successful hookup is assured, the HST hookup team quickly exits the area underneath the helicopter to the designated rendezvous point.

REFERENCE(S):

1. TH 09557A-14/1, System Operation and Maintenance Manual with Components List for Riverine Assault Craft

2. TM DRAFT, Riverine Assault Craft Rigging Procedures

ADMINISTRATIVE INSTRUCTIONS:

1. De-rigging is the reverse of the preparation and rigging procedures in steps 1 and 2.

2. This load, with or without the trailer, is certified by the U.S. Army NRDEC for the CH-53E Helicopter at airspeeds up to, and including, 70 and 110 knots, respectively.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Helicopter Rigging Support Team (HRST) Personnel

2. * Rigger’s Tape (3/411 and/or 411)

3. * Riverine Assault Craft Aft Sling Set

4. * Riverine Assault Craft Forward Sling Set

5. * Riverine Assault Craft Trailer, SL-3 complete

6. * Riverine Assault Craft(s), SL-3 complete

7. * Static Electricity Wand

TASK: 8112.02.17 PREPARE THE RIVERINE ASSUALT CRAFT (RAC) FOR AIR EMBARKATION

CONDITION(S): Assigned as a Boat Captain and given the mission to air transport an SL-3 complete RAC, and given its associated equipment, personnel, and references.

STANDARD(S): By correctly rigging and inspecting the RAC for embarkation on a C-130, C-141, and C-5 aircraft, per the references.

PERFORMANCE STEPS:

1. Inventory RAC equipment.

2. Ensure RAC is SL-3 complete.

3. Check fuel level, 1/4 or less.

4. Weigh RAC and trailer.

5. Mark with masking tape the following:

    a. Center of balance.

b. Gross weight.

c. Axle weights.

6. Secure weapon mounts and gun covers.

7. Remove forward canopy and stow in troop compartment.

8. Remove troop compartment canopy and stow in troop compartment.

9. Remove boat guide poles from trailer and stow.

10. Load/Secure all embarked equipment into the troop compartment.

11. Fold down forward arch and secure in place.

12. Fold down rear arch and secure in place.

13. Secure RAC to trailer with four boat straps.

14. Stow crew served weapons.

REFERENCE(S):

1. Local Standing Operating Procedure (SOP)

2. TM 09557A-14/1, System Operation and Maintenance Manual with Components List for Riverine Assault Craft

ADMINISTRATIVE INSTRUCTIONS:

1. Only the antennas need to be lowered for transportation on a C-5 aircraft.

2. Assistance in determining center of gravity (CG), etc., can be obtained from the Marine Service Support Group (MSSG).

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * 900 Series (5 Ton Truck)

2. * Riverine Assault Craft Trailer, SL-3 complete

3. * Riverine Assault Craft(s), SL-3 complete

4. * Wooden Ramps with extra dunnage

TASK: 8112.02.18 DESTROY THE RIVERINE ASSUALT CRAFT (RAC)

CONDITION(S): Assigned as a RAC crewman on a tactical mission, and given an unsalvageable RAC due to combat damage, safety, or time constraints.

STANDARD(S): By rendering the RAC completely inoperable and of no material benefit to the enemy, per the reference.

PERFORMANCE STEPS:

1. Remove all gear that can be evacuated.

2. Position the craft where it will cause the most hazard to the enemy.

3. Place a thermite grenade in the following locations:

    a. Top of each engine.

    b. Top of fuel cells.

    c. Top of communication suite.

    d. Top of coxswain suite.

    e. Remove bolts and back plates from unrecovered weapons.

    f. Place unrecovered Ammunition on top of fuel cells.

    g. Ensure all fire extinguishers are emptied before ignition.

4. If time is lacking, fire on the RAC with all weapons while evacuating the area.

REFERENCE(S):

1. TM 09557A-14/1, System Operation and Maintenance manual with Components List for Riverine Assault Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Dummy Thermite Grenade

2. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.19 DECONTAMINATE THE RIVERINE ASSUALT CRAFT (RAC)

CONDITION(S): Assigned as a RAC crewman on a tactical mission, given a RAC that has been contaminated with either chemical or biological agents, an M11 PDA, dressed in MOPP 4 condition, and decontaminating solution number 2.

STANDARD(S): By executing the proper decontamination procedures without causing damage to the craft and equipment or injuring personnel, per the reference.

PERFORMANCE STEPS:

1. Prepare decontamination equipment for use.

    a. Fill or ensure the Mll is filled with DS2.

b. Ensure a serviceable nitrogen cylinder is in head assembly.

c. Insert arming pin and sealing wire in the head assembly if the PDA is not to be used.

2. Operate the Mll PDA to decontaminate the RAC and equipment.

a. Spray with DS2 only those surfaces that must be touched to continue the mission; i.e., controls, handles, hatches, etc.

b. Wait 30 minutes, if mission permits.

c. Wipe or wash off the DS2.

3. Repeat above steps, as required.

REFERENCE(S):

1. TM 3-4230-204-12 & P, Operators Manual for M11 PDA

ADMINISTRATIVE INSTRUCTIONS:

1. Safety: Read warnings in reference concerning the handling of DS2 and the emergency treatment to follow for first aid in case of contact with DS2.

2. Training: In the place of DS2 use a 50/50 mixture of water and antifreeze.

3. Limit the exposure of DS2 on the RAC electronics.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * DS2 (or a mixture of 50/50 water and antifreeze)

2. * Decontamination Materials

3. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.02.20 MAINTAIN NIGHT VISION DEVICES (NVD)

CONDITION(S): Assigned as a RAC crewman, given the mission to clean the night vision devices and night vision goggles and sights, and given a lens brush, lens tissue, lint free cloth, and water.

STANDARD(S): By performing in the correct sequence preventative maintenance and troubles tying checks, clean the night vision devices, using the proper equipment, substances and cleaning techniques so they pass the Boat Captain’s inspection.

PERFORMANCE STEPS:

1. Identify authorized/unauthorized cleaning materials.

2. Inspect all components for serviceability.

3. Clean all lenses.

a. Remove loose dirt with lens brush.

b. Clean the glass surfaces of the lenses with lens tissue.

c. Saturate the tissue with water to remove dirt that is caked on the surface.

d. Dry and polish lenses with a lint free cloth.

4. Clean exposed metal guard with a wet cloth.

5. Clean rubber eye guard with a wet cloth.

6. Clean the carrying and storage case with a clean cloth. Ensure case is free of all dirt and foreign matter.

7. Ensure all components are completely dry before storage.

8. Perform preventative maintenance checks and services (PMCS) before operation.

a. Inventory equipment.

b. Check batteries for corrosion.

c. Clean or replace, as required.

d. Check lens covers for function and serviceability.

e. Check knob contacts for smooth mechanical function.

9. Perform PM checks and services during operation.

a. Install batteries.

b. Turn switch to "ON" and check for intensifier tube glow.

c. Rotate switch and check for intensity change.

d. Check diopter adjust rings for focus and function.

e. Check focus knobs for focus and function.

f. Check Infrared (IR) illuminator for function.

10. After operation, remove batteries and store in storage case or bag.

11. Troubleshoot night vision devices, when problems occur.

12. Any discrepancies which cannot be corrected will be reported to higher echelon maintenance personnel for corrective action.

REFERENCE(S):

1. FMFRP 6-15, Machineguns and Machinegun Gunnery

2. TM 11-5855-214-10, Operator's Manual, Night Vision Sight, Crew Served Weapon AN/TVS-5

3. TM 11-5855-238-10, AN/PVS 5, 5A, 5B, and 5C

ADMINISTRATIVE INSTRUCTIONS:

1. Marines should be able to identify the level of authorized maintenance.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. Cloth/Rags

2. Night Vision Device(s) (AN/PVS-5, AN/PVS-7B)

TASK: 8112.02.21 OPERATE NVGS

CONDITION(S): Assigned as a RAC crewman on a tactical mission, and given a set of NVGs.

STANDARD(S): By employing the NVGs in an effort to identify possible danger areas, or ambush sites, and keep the Boat Captain informed within mission requirements and, per the reference.

PERFORMANCE STEPS:

1. Remove eyepiece lens caps.

2. Put on goggles and adjust straps.

3. Turn rotary switch to "ON".

4. Adjust focus knobs.

5. Adjust diopter adjust rings.

6. Pull and turn rotary switch to activate IR illuminator.

7. Install de-misting shields over inner eyepiece lens, as required.

8. Troubleshoot NVGs, as required.

REFERENCE(S):

1. TM 11-5855-238-10, AN/PVS 5, 5A, 5B, and SC

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. Night Vision Device(s) (AN/PVS-5, AN/PVS-7B)

DUTY AREA 03 - RIVERINE ASSAULT CRAFT (RAC) WEAPONS

TASK: 8112.03.01 MAINTAIN THE M2 MACHINEGUN

CONDITION(S): Assigned as a RAC crewman, and provided an M2 machinegun, tripod, Traverse and Elevation (T&E) mechanism, pintle, combination tool, authorized cleaning material, and lubricants, during daylight and darkness.

STANDARD(S): By disassembling and assembling the weapon within three minutes, to include detailed disassembly of required areas, and pass the Boat Captain's inspection, per the references.

PERFORMANCE STEPS:

1. Place the weapon in condition 4.
2. Disassemble.
3. Inspect.
4. Clean.
5. Lubricate.
6. Reassemble.
7. Adjust headspace.
8. Adjust timing.
9. Perform a function check.

REFERENCE(S):

1. FM 23-65, Browning Machinegun, Caliber .50, HB M2
2. FMFRP 6-15, Machineguns and Machinegun Gunnery
3. TM 9-1005-213-10, Operator's Manual, Machinegun, Caliber .50, M2

ADMINISTRATIVE INSTRUCTIONS:

1. The crewman must be able to identify and describe the function of the weapon and individual parts.

2. Disassemble and assemble steps are performed per FMFRP 6-15.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Pvt)

TRAINING MATERIEL:

1. M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete

TASK: 8112.03.02 SET M2 MACHINEGUN HEADSPACE AND TIMING

CONDITION(S): Assigned as a RAC crewman and M2 machinegun gunner.

STANDARD(S): By setting the headspace so that the "GO" end of the headspace gauge will enter the T-slot and the "NO GO" end will not, per the references.

PERFORMANCE STEPS:

1. Clear the weapon.

2. Adjust the headspace with the gauge.

    a. Raise the feed cover.

    b. Retract the recoiling parts and screw the barrel all the way into the barrel extension.

    c. Loosen the barrel two notches or clicks.

    d. Ride the bolt forward by slowly allowing the retracting slide handle to move forward.

    e. Pull the retracting slide handle to the rear one more time to ensure complete cocking and retraction of the firing pin.

    f. Slowly ride the bolt forward.

    g. Pull the retracting slide handle back until the barrel extension is 1/16 of an inch from the trunnion block.

    h. Raise extractor to an upright position and insert the "GO" end of the headspace gauge in the T-slot.

    i. If the "GO" end of the gauge does not enter freely, unscrew the barrel one notch at a time until the "GO" end enters freely.

    j. If the "NO GO" end of the gauge enters the T-slot, screw the barrel extension one notch at a time until the "GO" end enters and the "NO GO" end does not.

3. Set the timing.

    a. Ensure the gun is cocked and the bolt is forward.

    b. Retract the recoiling parts and place the "FIRE" timing gauge between the barrel extension and the trunnion block.

    c. Remove the backplate.

    d. Screw the timing adjustment nut down until it touches the trigger lever.

    e. Press on the trigger and make one-click adjustments until the weapon fires.

    f. Turn the timing adjustment nut up two more clicks.

g. Replace the backplate, remove the "FIRE" gauge, and re-cock the machinegun.

4. Check the timing.

a. Push back on the retracting slide handle and insert the "NO FIRE" gauge in the same place as the "FIRE" gauge, between the barrel extension and the trunnion block.

b. Depress the trigger, if the firing pin is released, correct for early timing.

c. To correct early timing, remove the backplate and turn the timing adjustment nut all the way down until it rests lightly on the trigger lever, and begin again.

d. If the firing pin does not release when the "NO FIRE" gauge is inserted, remove it and reinsert the "FIRE" gauge.

e. If the firing pin is released when the trigger is depressed, timing has been set.

REFERENCE(S):

1. FM 23-65, Browning Machinegun, Caliber .50, HB M2

2. FMFRP 6-15, Machineguns and Machinegun Gunnery

ADMINISTRATIVE INSTRUCTIONS:

1. The steps to set the correct headspace and timing must be done sequentially and within two minutes.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Pvt)

TRAINING MATERIEL:

1. M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete

TASK: 8112.03.03 PERFORM IMMEDIATE ACTION ON THE M2 MACHINEGUN

CONDITION(S): Assigned as a RAC crewman and gunner for the M2 machinegun while on a tactical mission, and receiving constructive enemy fire.

STANDARD(S): By quickly determining the cause of the interruption of operation and applying the correct immediate action to return the weapon to operation, per the reference.

PERFORMANCE STEPS:

1. Aim the weapon in a safe direction for five seconds in case of hang fire.

2. Charge the weapon and attempt to fire in the next five seconds.

a. Observe for ejection.

b. Observe for feeding.

3. If the weapon fails to fire, determine the condition and what immediate action steps are to he performed.

4. Cold weapon.

a. Place weapon on safe.

b. Visibly check to see if a round is still chambered.

c. If round is chambered, attempt to fire.

d. If weapon fails to fire and round is not ejected, use another weapon system to engage target.

e. Unload the weapon and remove the barrel.

f. Remove the round.

g. Reinstall the barrel and reload.

(1) If the weapon is hot, wait five minutes and perform cold gun steps

(2) If it is a runaway gun, hold the charging cable to the rear or twist the ammunition belt.

REFERENCE(S):

1. FMFRP 6-15, Machineguns and Machinegun Gunnery

ADMINISTRATIVE INSTRUCTIONS:

1. Less than 150 rounds in two minutes is a cold gun.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Pvt)

TRAINING MATERIEL:

1. * M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete

TASK: 8112.03.04 ZERO THE M2 MACHINEGUN

CONDITION(S): Assigned as a RAC crewman and gunner for the M2 machinegun, and given SL-3 complete M2, an assistant gunner, 12 rounds of ammunition (four 3 round belt required equipment and a known distance target on a field firing range.

STANDARD(S): By adjusting the strike of the round so that it coincides with the of point of aim of the weapon, per the references.

PERFORMANCE STEPS:

1. Place the weapon in condition 4.

2. Select a target on a field firing range with a known range.

3. Set the known range on the rear sight.

4. Ensure the range plate screw is centered on the adjustment groove on the range plate.

5. Set the rear sight windage to zero.

6. Lay the gun on the target.

7. Place the weapon in condition 1.

8. Aim in on target.

9. Fire a three round burst.

10. Observe the strike of the rounds.

11. Make correction for elevation.

12. Make corrections for windage.

13. Continue until zero is confirmed.

14. Lower rear sight and adjust the range plate.

15. Repeat for spare barrel.

16. Perform immediate action, as required.

REFERENCE(S):

1. FM 23-65, Browning Machinegun, Caliber .50, HB M2

2. FMFRP 6-15, Machineguns and Machinegun Gunnery

3. TM 9-1005-213-10, Operator’s Manual, Machinegun, Caliber .50, M2

ADMINISTRATIVE INSTRUCTIONS:

1. The Marine must know the eight types of .50 cal ammunition used with the M2 machinegun.

2. Although the ISMT currently has no RAC firing platform, the ISMT will be used to train the Marine on similar scenarios that better prepares the Marine to train to standard with live fire.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Pvt)

TRAINING MATERIEL:

1. * M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete

AMMUNITION:

DODIC	NOMENCLATURE	INITIAL PROFICIENCY	PER ITERATION	ANNUAL SUSTAINMENT
A576	CTG CAL .50, 4&1 LINKED, F/M2	12	12	24

TASK: 8112.03.05 ZERO M2 MACHINEGUN NIGHT SIGHT

CONDITION(S): Assigned as a RAC crewman and gunner for the M2 machinegun, and given an SL-3 complete M2, appropriate night sight, an assistant gunner, 26 rounds of ammunition (four 3 round belts), the required equipment and a known distance target on a field firing range.

STANDARD(S): By adjusting the night sight until the strike of the round coincides with the point of aim of the weapon, per the references.

PERFORMANCE STEPS:

1. Mount the sight and place into operation.
2. Place weapon in condition 1.
3. Seat the sight and re-tighten the mounting knob.
4. Place the known range aiming point on the target aiming point.
5. Aim in to target.
6. Fire a three round burst.
7. Observe the strike of the round.
8. Correct for elevation.
9. Correct for windage.
10. Continue until zero is confirmed.
11. Perform immediate action, as required.
12. Place weapon in condition 4.
13. Dismount the sight.

REFERENCE(S):

1. FM 23-65, Browning Machinegun, Caliber .50, HB M2
2. FMFRP 6-15, Machineguns and Machinegun Gunnery

3. TM 11-5855-238-10, AN/PVS 5, 5A, 5B, and 5C

4. TM 9-1005-213-10, operator's Manual, Machinegun, Caliber .50, M2

ADMINISTRATIVE INSTRUCTIONS:

1. The sight is seated by firing seven rounds (not into the target), then firing another seven, and then re-tightening the device.

2. Although the ISMT currently has no RAC firing platform, the ISMT will be used to train the Marine on similar scenarios that better prepares the Marine to train to standard with live fire.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Pvt)

TRAINING MATERIEL:

1. * M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete

AMMUNITION:

DODIC NOMENCLATURE	INITIAL PROFICIENCY	PER ITERATION	ANNUAL SUSTAINMENT
A576 CTG CAL .50, 4&1 LINKED, F/M2	26	26	52

TASK: 8112.03.06 MAINTAIN THE MK19 MACHINEGUN

CONDITION(S): Assigned as a RAC crewman and provided an SL-3 complete HK19 machinegun, tripod, cradle, tool bag, authorized cleaning material, and lubricants, during daylight and darkness.

STANDARD(S): By disassembling and assembling the weapon within three minutes, to include detailed disassembly of required areas, and passing the Boat Captain's inspection, per the references.

PERFORMANCE STEPS:

1. Place the weapon in condition 4.

2. Disassemble.

3. Inspect.

4. Clean.

5. Lubricate.

6. Reassemble.

7. Perform a function check.

REFERENCE(S):

1. FM 23-27, MK 19 40mm Grenade Machinegun Mod 3

2. FMFRP 6-15, Machineguns and Machinegun Gunnery

3. TM 08521A-10/lA, Operator's Manual and Components List, Machinegun, 40mm, MK 19 Mod 3

ADMINISTRATIVE INSTRUCTIONS:

1. The crewman must be able to identify and describe the function of the weapon and individual parts.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Pvt)

TRAINING MATERIEL:

1. * Mkl9 40mm Machinegun, SL-3 complete

TASK: 8112.03.07 PERFORM IMMEDIATE ACTION ON THE MK19 MACHINEGUN

CONDITION(S): Assigned as a RAC crewman and gunner for the MK19 machinegun while on a tactical mission, and receiving constructive enemy fire.

STANDARD(S): By quickly determining the cause of the interruption of operation and apply the correct immediate action to return the weapon to operation, per the reference.

PERFORMANCE STEPS:

1. Aim the weapon in a safe direction for five seconds in case of hang fire.

2. Charge the weapon and attempt to fire in the next five seconds.

    a. Observe for ejection.

    b. Observe for feeding.

3. If the weapon fails to fire, determine the condition and what immediate action steps are to be performed.

4. Cold weapon.

    a. Place weapon on safe.

    b. Visibly check to see if a round is still cham red.

    c. If round is chambered, attempt to fire.

    d. If weapon fails to fire and round is not ejected, use another weapon system to engage target.

    e. Disassemble.

f. Remove the round.

g. Reassemble and reload.

5. If it is a runaway gun, hold the grips with one hand and press the charger handle locks and lower one charger handle

REFERENCE(S):

1. FMFRP 6-15, Machineguns and Machinegun Gunnery

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Pvt)

TRAINING MATERIEL:

1. * Mk19 40mm Machinegun, SL-3 complete

TASK: 8112.03.08 ZERO THE MK19 MACHINEGUN

CONDITION(S): Assigned as a RAC crewman and gunner for the MK19 machinegun, and given an SL-3 complete MK19, an assistant gunner, a vehicle target (at least 400 meters), and four rounds of ammunition, on a field firing range.

STANDARD(S): By adjusting the strike of the round so that 2 out of 4 rounds strike the target, per the references.

PERFORMANCE STEPS:

1. Mount the weapon.

2. Place the weapon in condition 4.

3. Set the elevation.

4. Set the windage.

5. Place the weapon in condition 1.

6. Aim in on the target.

7. Fire a round (single shot).

8. Observe the impact of the round.

9. Make correction for elevation.

a. Estimate how short or long the round was.

b. If short, use the estimate to adjust the elevation knob clockwise to bring the sights up to tune target.

c. If long, turn the elevation knob counterclockwise to bring the sights down to the target.

10. Make corrections for windage.

a. Estimate how far to the right or left the round was from the target.

b. To adjust to the right, turn the windage knob clockwise.

c. To adjust to the left, turn the windage knob counterclockwise.

11. Continue until zero is confirmed.

12. Align the range plate scale.

13. Perform immediate action, as required.

REFERENCE(S):

1. FM 23-27, MK 19 40mm Grenade Machinegun Mod 3

2. FMFRP 6-15, Machineguns and Machinegun Gunnery

3. TM 08521A-10/lA, Operator’s Manual and Components List, Machinegun, 40mm, MK 19 Mod 3

ADMINISTRATIVE INSTRUCTIONS:

1. The Marine must know the types of ammunition used with the MK19 machinegun and state their purpose.

2. Training Practice (TP) ammunition is used for this task.

3. Although the ISMT currently has no RAC firing platform, the ISMT will be used to train the Marine on similar scenarios that better prepares the Marine to train to standard with live fire.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Pvt)

TRAINING MATERIEL:

1. * Mk19 40mm Machinegun, SL-3 complete

AMMUNITION:

DODIC	NOMENCLATURE	INITIAL PROFICIENCY	PER ITERATION	ANNUAL SUSTAINMENT
B542	CTG 40MM, LINKED, HE DP F/M	8	4	8
B584	CTG 40MM, TP F/MK19 MOD 3	8	4	8

DODIC B584 may be used in place of DODIC B542.

TASK: 8112.03.09 ZERO MK19 MACHINEGUN NIGHT SIGHT

CONDITION(S): Assigned as a RAC crewman and gunner for the MK19 machinegun, and given an SL-3 complete MK19, appropriate night sight, an assistant gunner, a vehicle target at a known distance (at least 400 meters), and 4 rounds of ammunition, on a field firing range.

STANDARD(S): By adjusting the night sight until two rounds impact on the target, per the references.

PERFORMANCE STEPS:

1. Mount the sight and place into operation.

2. Place weapon in condition 1.

3. Seat the sight and re-tighten the mounting knob.

4. Place the known range aiming point on the target aiming point.

5. Aim in to target.

6. Fire a round (single shot).

7. Observe the strike of the round.

8. Correct for windage.

9. Correct for elevation.

10. Continue until zero is confirmed.

11. Perform immediate action, as required.

12. Place weapon in condition 4.

13. Dismount the sight.

REFERENCE(S):

1. FM 23-27, MK 19 40mm Grenade Machinegun Mod 3

2. FMFRP 6-15, Machineguns and Machinegun Gunnery

3. TM 08521A-10/lA, Operator’s Manual and Components List, Machinegun, 40mm, MK 19 Mod 3

4. TM 11-5855-214-10, Operator’s Manual, Night Vision Sight, Crew Served Weapon AN/TVS-5

ADMINISTRATIVE INSTRUCTIONS:

1. Although the ISMT currently has no RAC firing platform, the ISMT will be used to train the Marine on similar scenarios that better prepares the Marine to train to standard with live fire.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Pvt)

TRAINING MATERIEL:

1. * Mk19 40mm Machinegun, SL-3 complete

AMMUNITION:

DODIC	NOMENCLATURE	INITIAL PROFICIENCY	PER ITERATION	ANNUAL SUSTAINMENT
B542	CTG 40MM, LINKED, HE DP F/M	6	6	12

TASK: 8112.03.10 MAINTAIN THE M240G MACHINEGUN

CONDITION(S): Assigned as a RAC crewman and provided an M240G machinegun, spare barrel with bag, tripod, Traverse and Elevation (T&E) mechanism, pintle, combination tool, authorized cleaning material, and lubricants, during daylight and darkness.

STANDARD(S): By disassembling and reassembling the weapon within three minutes, to include detailed disassembly of required areas, and passing the Boat Captain’s inspection, per the references.

PERFORMANCE STEPS:

1. Place the weapon in condition 4.
2. Disassemble.
3. Inspect.
4. Clean.
5. Lubricate.
6. Reassemble.
7. Perform a function check.

REFERENCE(S):

1. FMFRP 6-15, Machineguns and Machinegun Gunnery
2. TM 08670-10/1A, Operator’s Manual, Machinegun, 7.62mm, M240
3. TM 0867OB-10/1, Supplement 1, M240G

ADMINISTRATIVE INSTRUCTIONS:

1. The crewman must be able to identify and describe the function of the weapon and individual parts.

2. Disassemble and reassemble steps are performed, per FMFRP 6-15.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Pvt)

TRAINING MATERIEL:

1. * M240G 7.62mm Machinegun, SL-3 complete

TASK: 8112.03.11 PERFORM IMMEDIATE ACTION ON THE M240G MACHINEGUN

CONDITION(S): Assigned as a RAC crewman and gunner for the M240G machinegun while on a tactical mission, and receiving constructive enemy fire.

STANDARD(S): By quickly determining the cause of the interruption of operation and apply the correct immediate action to return the weapon to operation, per the reference.

PERFORMANCE STEPS:

1. Aim the weapon in a safe direction.

2. Charge the weapon and attempt to fire.

    a. Observe for ejection.

    b. Observe for feeding.

3. If the weapon fails to fire, determine the condition and what immediate action steps are to be performed.

4. Cold weapon.

    a. Place weapon on safe.

    b. Visibly check to see if a round is still chambered.

    c. If round is chambered, attempt to fire.

    d. If weapon fails to fire and round is not ejected, use another weapon system to engage target.

    e. Unload the weapon and remove the barrel.

    f. Remove the round.

    g. Reinstall the barrel and reload.

5. If the gun is hot, wait 30 minutes and perform cold gun steps.

6. If it is a runaway gun, hold the charging cable to the rear or twist the ammunition belt.

REFERENCE(S):

1. FMFRP 6-15, Machineguns and Machinegun Gunnery

ADMINISTRATIVE INSTRUCTIONS:

1. Less than 150 rounds in two minutes is a cold gun.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Pvt)

TRAINING MATERIEL:

1. * M240G 7.62mm Machinegun, SL-3 complete

TASK: 8112.03.12 ZERO THE M240G MACHINEGUN

CONDITION(S): Assigned as a RAC crewman and gunner for the M24OG machinegun, and given an SL-3 complete M240G, an assistant gunner, 12 rounds of ammunition (four 3 round belts), the required equipment and a known distance target on a field firing range.

STANDARD(S): By adjusting the strike of the round so that it coincides with the point of aim of the weapon, per the references.

PERFORMANCE STEPS:

1. Mount the weapon.
2. Place the weapon in condition 4.
3. Center the sights.
4. Place the weapon in condition 1.
5. Aim in on target.
6. Fire a three round burst.
7. Observe the strike of the rounds.
8. Adjust the front sight post, as required.
9. Make corrections for windage.
10. Continue until zero is confirmed.
11. Adjust range plate.
12. Record windage zero.
13. Perform immediate action, as required.

REFERENCE(S):

1. FMFRP 6-15, Machineguns and Machinegun Gunnery
2. TM 08670-10/lA, Operator’s Manual, Machinegun, 7.62mm, M240
3. TM 0867OB-10/1, Supplement 1, M240G

ADMINISTRATIVE INSTRUCTIONS:

1. If the front sight post blade is required to be rotated counterclockwise to a

point where its base is more then half way out of the assembly, it should be replaced with a number 2 front sight blade.

2. Although the ISMT currently has no RAC firing platform, the ISMT will be used to train the Marine on similar scenarios that better prepares the Marine to train to standard with live fire.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Pvt)

TRAINING MATERIEL:

1. * M240G 7.62mm Machinegun, SL-3 complete

AMMUNITION:

DODIC NOMENCLATURE	INITIAL PROFICIENCY	PER ITERATION	ANNUAL SUSTAINMENT
A131 CTG 7.62MM, LINKED 4&1	24	12	24

TASK: 8112.03.13 ZERO M240G MACHINEGUN NIGHT SIGHT

CONDITION(S): Assigned as a RAC crewman and gunner for the M240G machinegun, and given an SL-3 complete M240G, appropriate night sight, an assistant gunner, 18 rounds of ammunition, and a man-size target 300-500 meters away, on a field firing range.

STANDARD(S): By adjusting the night sight until the strike of the round coincides with the point of aim of the weapon, per the references.

PERFORMANCE STEPS:

1. Mount the sight and place into operation.
2. Place weapon in condition 1.
3. Seat the sight and re-tighten the mounting knob.
4. Place the estimated range aiming point on the target aiming point.
5. Aim in to target.
6. Fire a three round burst.
7. Observe the strike of the round.
8. Correct for elevation.
9. Correct for windage.
10. Continue until zero is confirmed.
11. Perform immediate action, as required.

REFERENCE(S):

1. FHFRP 6-15, Machineguns and Machinegun Gunnery

2. TM 08670-10/lA, Operator’s Manual, Machinegun, 7.62mm, M240

3. TM 08670B-10/1, Supplement 1, M24OG

4. TM 11-5855-214-10, Operator’s Manual, Night Vision Sight, Crew Served Weapon AN/TVS-5

ADMINISTRATIVE INSTRUCTIONS:

1. The sight is seated by firing three rounds (not into the target).

2. Although the ISMT currently has no RAC firing platform, the ISMT will be used to train the Marine on similar scenarios that better prepares the Marine to train to standard with live fire.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Pvt)

TRAINING MATERIEL:

1. * M240G 7.62mm Machinegun, SL-3 complete

AMMUNITION:

DODIC	NOMENCLATURE	INITIAL PROFICIENCY	PER ITERATION	ANNUAL SUSTAINMENT
A131	CTG 7.62MM, LINKED 4&1	18	18	36

TASK: 8112.03.14 ENGAGE A TARGET FROM A MOVING TARGET

CONDITION(S): Assigned as a RAC crewman on a combat equipped RAC and assigned as gunner on a crew served weapon with ammunition, during day or night, illuminated or non-illuminated.

STANDARD(S): By responding quickly to fire commands received from Boat Captain or other leader by placing effective bursts of fire on each target, using appropriate methods of target engagement, per the reference.

PERFORMANCE STEPS:

1. Engage point target.

    a. Set the rear sight for range.

    b. Lay the gun on the target with the correct sight setting.

    c. Engage targets on command.

    d. Adjust for movement of target or craft by manipulating the mount.

2. Engage linear targets.

a. Set the rear sight for range.

b. Lay the gun on the assigned flank.

c. Deliver initial burst outside the flank on command.

d. Adjust fire on the point of impact.

e. Traverse across the target past the other flank.

f. Continue to traverse back and forth until given the command to cease fire.

3. Engage wide targets. Same as linear except target split with another weapon.

4. Engage deep targets.

a. Set the rear sight for range.

b. Targets less than or equal to 200 midpoint range announced, equal to or less than 200 near end range for one gun and far end range for the other gun.

c. Lateral gun on the assigned end of the target.

d. Deliver initial burst on command.

e. Adjust fire on point of impact.

f. Search the assigned extent of the target.

g. Reverse the direction of the search.

h. Make elevation or depression changes, as required.

i. Continue covering the target until commanded to cease fire.

5. Engage deep targets where ends are not visible. Same as deep target except command includes target reference point or fire designation.

6. Engage deep target moving towards or away. Same as deep targets except "towards" targets are engaged near first, and "away" targets are engaged for first.

7. Engage oblique or area targets. Same as linear, wide and deep targets.

8. Engage an air target.

a. Apply one football field lead for fixed wing aircraft heading across front.

b. Apply 1/2 football field lead for rotary wing aircraft heading across front.

c. Apply 1/2 football field lead for aircraft approaching then retain the

weapon in position and let the aircraft fly into the fires.

d. Fire at the rapid rate for all air engagements.

9. Procedures for shooting a free gun from a moving boat.

a. Assume a tight position-elbows in.

b. Fire on the upward rocking in rough/choppy seas.

c. Aim low-walk rounds onto target.

d. Fire 10-15 round bursts.

REFERENCE(S):

1. FMFRP 6-15, Machineguns and Machinegun Gunnery

ADMINISTRATIVE INSTRUCTIONS:

1. Although the ISMT currently has no RAC firing platform, the ISMT will be used to train the Marine on similar scenarios that better prepares the Marine to train to standard with live fire.

2. The training of this task should include moving target scenarios for all weapons systems.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Pvt)

TRAINING MATERIEL:

1. * M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete

2. * M240G 7.62mm Machinegun, SL-3 complete

3. * Mkl9 40mm Machinegun, SL-3 complete

4. * Riverine Assault Craft(s), SL-3 complete

AMMUNITION:

DODIC	NOMENCLATURE	INITIAL PROFICIENCY	PER ITERATION	ANNUAL SUSTAINMENT
A131	CTG 7.62MM, LINKED 4&1	400	400	800
A576	CTG CAL .50, 4&1 LINKED, F/M2	320	320	640
B542	CTG 40MM, LINKED, HE DP F/M	192	192	384
B584	CTG 40MM, TP F/MK19 MOD 3	192	192	384

DODIC B584 may be used in place of DODIC B542.

TASK: 8112.03.15 DIRECT MACHINEGUN MAINTENANCE

CONDITION(S): Assigned as a Boat Captain and given a boat of Marines, the SL-3 complete crew served weapons, cleaning gear, lubricant, cleaning solvents, during daylight or darkness.

STANDARD(S): By supervising all scheduled and preventative maintenance of crew served weapons to ensure they remain combat ready, and identifying all discrepancies, per the references.

PERFORMANCE STEPS:

1. Ensure the authorized equipment, cleaning gear, and lubricant are available in sufficient amounts.

2. Brief Marines on the maintenance to be performed and the standards to be met.

3. Ensure all weapons are in condition 4.

4. Inspect weapons and identify discrepancies.

5. Ensure each weapon has all SL-3 components.

6. Supervise weapons disassembly and cleaning.

7. Inspect the weapons and all components (to include any optics) and point out corrections, if needed.

8. Supervise weapons assembly.

9. Supervise a function check.

10. Inspect ammunition.

11. Inspect gun books.

12. Inform immediate supervisor of the status of the maintenance.

REFERENCE(S):

1. FMFRP 6-15, Machineguns and Machinegun Gunnery

2. TM 11-5855-214-10, Operator’s Manual, Night Vision Sight, Crew Served Weapon AN/TVS-5

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Sgt)

TRAINING MATERIEL:

1. * M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete

2. * M24OG 7.62mm Machinegun, SL-3 complete

3. * Mk19 40mm Machinegun, SL-3 complete

4. * Weapons Cleaning and Maintenance Equipment, Cleaning Solvents, and Lubricants

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TASK: 8112.03.16 CONTROL CRAFT/SECTION FIRES

CONDITION(S): Assigned as a Boat Captain and given a mission that requires fire control, given a single RAC or section, required equipment, required ammunition, a section of fire, during daylight and darkness.

STANDARD(S): By directing and ensuring fire control and discipline of the RAC or section is maintained.

PERFORMANCE STEPS:

1. Alert the crew/section.
2. Announce the direction of the target.
3. Announce the description of the target.
4. Announce the range to the target.
5. Assign the proper craft weapons system.
6. Control the fires.
    a. Ensure the proper fate of fire is maintained.
    b. Adjust fires, as required.
7. Report, as required.

REFERENCE(S):

1. FM 23-27, MK 19 40mm Grenade Machinegun Mod 3
2. FM 23-65, Browning Machinegun, Caliber .50, RB M2
3. FM 23-67, Machinegun 7.62mm M60
4. FMFRP 6-15, Machineguns and Machinegun Gunnery

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (Sgt)

TRAINING MATERIEL:

1. * M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete
2. * M240G 7.62mm Machinegun, SL-3 complete
3. * Mk19 40mm Machinegun, SL-3 complete
4. * Riverine Assault Craft(s), SL-3 complete

DUTY AREA 04 - RIVERINE ASSAULT CRAFT (RAC) EMPLOYMENT

TASK: 8112.04.01 MAINTAIN POSITION IN FORMATION/MOVEMENT TECHNIQUE

CONDITION(S): Assigned as a RAC coxswain of a RAC during a combat mission, during daylight or darkness, as part of a RAC section or platoon.

STANDARD(S): By maintaining assigned position in the formation and moving per the visibility, weather, craft speed and riverine characteristics and enemy situation, per the references.

PERFORMANCE STEPS:

1. Receive the signal for the assigned formation.

2. On the execution command, move into the assigned position relative to the lead craft:

    a. Column.

    b. Staggered column.

    c. Wedge.

    d. Line.

    e. Flanking.

3. Receive the signal for the movement technique.

4. Move using the directed technique.

    a. Traveling - all boats same rate of speed.

    b. Traveling overwatch - lead craft maintain rate of advance, overwatch craft perform successive bounds to cover lead craft.

    c. Bounding overwatch - alternating bounds of lead and cover craft (leapfrog).

5. Observe safety considerations.

    a. During periods of reduced visibility, keep other craft in view, immediately announce a break in contact and reduce speed.

    b. Ensure a constant watch is maintained on the waterway, visual and electronic.

    c. Ensure sufficient distance between craft is maintained to safely respond to changes in speed or direction.

REFERENCE(S):

1. FMFM 6-5, Marine Rifle Squad

2. FMFM 7-5, Doctrine for Navy/Marine Corps Joint Riverine Operations

3. FMFM 7-5A, MAGTF Riverine Operations

4. NSW/USMC, Riverine Operations Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete

2. * M240G 7.62mm Machinegun, SL-3 complete

3. * 1*19 40mm Machinegun, SL-3 complete

4. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.04.02 DIRECT RIVERINE ASSAULT CRAFT (RAC) FORMATION/MOVEMENT

CONDITION(S): Assigned as a Boat Captain and given a section or platoon of RACs on a tactical mission that requires movement in formation.

STANDARD(S): By issuing appropriate commands that direct the RAC formation, based on the enemy threat and situation and the riverine characteristics, per the references.

PERFORMANCE STEPS:

1. Observe riverine conditions.

2. Consider enemy threat and situation.

3. Consider mission.

4. Signal formation.

   a. Wedge. (One at 45 degrees another at 315 degrees (V) - for all around firepower and security.)

   b. Column. (Flags vertical and parallel - for ease of control, flank firepower.

   c. Staggered column. (One at 45 degrees another at 135 degrees - more compact then column.)

   d. Line. (One at 90 degrees another at 270 degrees - used in landing.)

   e. Flanking. (One at 0 degrees another at 90 or 270 degrees in direction of movement - used in landings.)

5. Signal the movement technique.

   a. Traveling - Speed essential, enemy contact unlikely. (Right arm circular movement forward.)

b. Traveling overwatch - Speed and security important, enemy contact possible. (Arms extended to the side and brought up together overhead.)

c. Bounding overwatch - Security paramount, enemy contact imminent. (Left arm extended to sides then bent at elbow back and forth to the head.)

d. Herringbone - Provides security during halts, craft move toward banks. (Arms extended to sides and then bent at elbows back and forth to head.)

6. Give the execution signal. (Drop flags.)

7. Set a speed appropriate for conditions (no more than 75% top speed).

REFERENCE(S):

1. F14FM 6-5, Marine Rifle Squad

2. FMFM 7-5, Doctrine for Navy/Marine Corps Joint Riverine Operations

3. FMFM 7-5A, MAGTF Riverine Operations

4. NSW/USMC, Riverine Operations Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Sgt)

TRAINING MATERIEL:

1. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.04.03 COME ALONGSIDE ANOTHER CRAFT

CONDITION(S): Assigned as a RAC coxswain and given a RAC, embarked troops, required equipment, and another vessel underway.

STANDARD(S): By maneuvering the RAC alongside the underway vessel and safely transferring troops and/or equipment, per the reference.

PERFORMANCE STEPS:

1. Request permission to come alongside.

2. Place fenders out.

3. Ready line handlers.

4. Match stand on craft heading and speed.

5. Approach the stand on craft.

6. Come alongside craft.

7. Transfer equipment/troops.

8. Breakaway from other craft.

REFERENCE(S):

1. FM 55-501, Marine Crewman's Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.04.04 TOW A DOWNED CRAFT

CONDITION(S): Assigned as a coxswain on a RAC and given the requirement to tow another craft.

STANDARD(S): Without damage to equipment or injury to personnel, per the references.

PERFORMANCE STEPS:

1. Inspect fittings.

2. Inspect and prepare lines.

    a. Rig centering line to the port stern cleat.

    b. Rig tow line to the starboard stern cleat and stow excess.

    c. Rig bow line to bow tow point and stow excess.

3. Maneuver RAC for bow to stern tow.

    a. Come alongside and hand over line.

    b. Maneuver into a bow to stern position.

    c. Attach tow line to bow line on down craft.

    d. Gradually remove slack and tow craft.

4. Maneuver RAC for side tow side tow.

    a. Come alongside craft.

    b. Attach lines from bow to bow, stern to stern.

    c. Attach lines from inboard bow cleat of tow craft to inboard stern cleat of down craft, inboard bow cleat of downed craft to inboard stern cleat to tow craft.

    d. Gradually remove slack and tow craft.

REFERENCE(S):

1. FM 55-501, Marine Crewman's Handbook

2. TM 09557A-14/1, System Operation and Maintenance Manual with Components List for Riverine Assault Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Riverine Assault Craft(s), SL-3 complete

2. * Tow Line Set

TASK: 8112.04.05 CONDUCT LANDINGS AND WITHDRAWALS

CONDITION(S): Assigned as a RAC coxswain and given a RAC, embarked troops, and a tactical mission.

STANDARD(S): Without damage to the craft or injury to personnel, deliver or pick up troops from a designated landing site at night, per the references.

PERFORMANCE STEPS:

1. Identify/Select landing point.

2. Use minimum power for stealth and to avoid becoming hard aground.

3. Avoid obstacles.

4. Adjust for current or wind effects.

5. Maintain RAC perpendicular to shore until troops have debarked/ embarked.

REFERENCE(S):

1. P14M 6-5, Marine Rifle Squad

2. FMFM 7-5, Doctrine for Navy/Marine Corps Joint Riverine Operations

3. FMFM 7-5A, MAGTF Riverine Operations

4. NSW/USMC, Riverine Operations Handbook

ADMINISTRATIVE INSTRUCTIONS:

1. When withdrawing, reverse steps and ensure all RAC's turn in same direction to avoid collision.

2. When withdrawing troops, consider the extra weight and additional effort required to withdraw.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. Camouflage (Cami) Net
2. Cargo Net Section(s)
3. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms
4. Cummins Engine with Raw Water Cooling System Attached
5. Dummy Thermite Grenade
6. Lifting Harness
7. M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete
8. M240G 7.62mm Machinegun, SL-3 complete
9. Mk19 40mm. Machinegun, SL-3 complete
10. Nautical Charts
11. Navigators Drafting Set
12. Night Vision Device(s) (AN/PVS-5, AN/PVS-7B)
13. Parallel Rulers
14. Riverine Assault Craft(s), SL-3 complete
15. Slave Cable(s)
16. Tow Line Set

TASK: 8112.04.07 CONDUCT MINE COUNTERMEASURES

CONDITION(S): Assigned as a Boat Captain and given a RAC and a tactical mission.

STANDARD(S): By correctly locating, plotting on a chart, and reporting mines observed during patrols, per the references.

PERFORMANCE STEPS:

1. Maintain watch for mine/booby trap indicators.
    a. Lines entering the water.
    b. Unusual wakes in the channel.
    c. Trip wires.
2. Plot locations on chart.
3. Mark location.

4. Report location, as required.

REFERENCE(S):

1. FMFM 6-5, Marine Rifle Squad
2. FMFM 7-5, Doctrine for Navy/Marine Corps Joint Riverine Operations
3. FMFM 7-5A, MAGTF Riverine Operations
4. NSW/USMC, Riverine Operations Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Nautical Charts
2. * Night Vision Device(s) (AN/PVS-5, AN/PVS-7B)
3. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.04.08 COVER ASSIGNED SECTOR OF FIRE

CONDITION(S): Assigned as a Boat Captain and given a RAC and a tactical mission.

STANDARD(S): By reporting or engaging targets as directed, per the references.

PERFORMANCE STEPS:

1. Rotate mount or move weapon to appropriate position.
2. Maintain watch for navigational hazards.
3. Maintain watch for mine indicators.
4. Maintain watch for possible targets.
5. Report, as directed.
6. Engage targets, as directed.

REFERENCE(S):

1. FMFM 6-5, Marine Rifle Squad
2. FMFM 7-5, Doctrine for Navy/Marine Corps Joint Riverine Operations
3. FMFM 7-5A, MAGTF Riverine Operations
4. FMFRP 6-15, Machineguns and Machinegun Gunnery
5. NSW/USMC, Riverine Operations Handbook

ADMINISTRATIVE INSTRUCTIONS:

1. Dependent on the Rules of Engagement (ROE).

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. Camouflage (Cami) Net
2. Cargo Net Section(s)
3. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms
4. Cummins Engine with Raw Water Cooling System Attached
5. DS2 (or a mixture of 50/50 water and antifreeze)
6. Dummy Thermite Grenade
7. Lifting Harness
8. H2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete
9. M240G 7.62mm Machinegun, SL-3 complete
10. Mk19 40mm Machinegun, SL-3 complete
11. Nautical Charts
12. Navigators Drafting Set
13. Night Vision Device(s) (AN/PVS-5, AN/PVS-7B)
14. Parallel Rulers
15. Riverine Assault Craft(s), SL-3 complete
16. Slave Cable(s)
17. Tow Line Set

TASK: 8112.04.09 ASSIGN SECTORS OF FIRE

CONDITION(S): Assigned as a Boat Captain and given a RAC or RAC section on a tactical mission.

STANDARD(S): By effectively assign overlapping sectors of fire/observation, per the references.

PERFORMANCE STEPS:

1. Analyze enemy situation.

2. Analyze position in formation.

3. Analyze movement technique.

4. Assign overlapping sectors of fire/observation.

   a. Crew members.

   b. Other craft in formation.

5. Brief crews on potential targets.

6. Brief crews on rules of engagement.

REFERENCE(S):

1. FMFM 6-5, Marine Rifle Squad

2. FMFM 7-5, Doctrine for Navy/Marine Corps Joint Riverine Operations

3. FMFM 7-5A, MAGTF Riverine Operations

4. FMFRP 6-15, Machineguns and Machinegun Gunnery

5. NSW/USMC, Riverine Operations Handbook

ADMINISTRATIVE INSTRUCTIONS:

1. Dependent on the ROEs and priority to targets.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Sgt)

TRAINING MATERIEL:

1. Camouflage (Cami) Net

2. Cargo Net Section(s)

3. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms

4. Cummins Engine with Raw Water Cooling System Attached

5. DS2 (or a mixture of 50/50 water and antifreeze)

6. Dummy Thermite Grenade

7. Lifting Harness

8. M11 Personnel Decontamination Apparatus

9. M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete

10. M240G 7.62mm Machinegun, SL-3 complete

11. Mk19 40mm Machinegun, SL-3 complete

12. Nautical Charts

13. Navigators Drafting Set

14. Night Vision Device(s) (AN/PVS-5, AN/PVS-7B)

15. Parallel Rulers

16. Riverine Assault Craft(s), SL-3 complete

17. Slave Cable(s)

18. Tow Line Set

TASK: 8112.04.10 OCCUPY A WATERBORNE GUARDPOST

CONDITION(S): Assigned as a RAC crewman, given a RAC, and a tactical mission, occupy a waterborne guardpost during daylight or darkness.

STANDARD(S): By maintaining the guardpost, per the mission orders, and the references.

PERFORMANCE STEPS:

1. Place RAC into position, as directed.

2. Camouflage the RAC.

3. Maintain light and noise discipline.

4. Cover sectors of fire/observation.

5. Maintain assigned percentage of alert.

6. Engage target, as directed.

7. Interdict targets, as directed.

REFERENCE(S):

1. FMFM 6-5, Marine Rifle Squad

2. FMFM 7-5, Doctrine for Navy/Marine Corps Joint Riverine Operations

3. FMFM 7-5A, MAGTF Riverine Operations

4. FMFRP 6-15, Machineguns and Machinegun Gunnery

5. NSW/USMC, Riverine Operations Handbook

ADMINISTRATIVE INSTRUCTIONS:

1. Dependent on the rules of engagement.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. Camouflage (Cami) Net
2. Cargo Net Section(s)
3. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms
4. Cummins Engine with Raw Water Cooling System Attached
5. DS2 (or a mixture of 50/50 water and antifreeze)
6. Dummy Thermite Grenade
7. Landing Craft Utility (LCU)
8. Lifting Harness
9. M11 Personnel Decontamination Apparatus
10. M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete
11. M240G 7.62mm Machinegun, SL-3 complete
12. Mk19 40mm Machinegun, SL-3 complete
13. Nautical Charts
14. Navigators Drafting Set
15. Night Vision Device(s) (AN/PVS-5, AN/PVS-7B)
16. Parallel Rulers
17. Riverine Assault Craft(s), SL-3 complete
18. Slave Cable(s)
19. Tow Line Set

TASK: 8112.04.11 SELECT A WATERBORNE GUARDPOST

CONDITION(S): Assigned as a Boat Captain, given a RAC or RAC section, and a tactical mission.

STANDARD(S): By analyzing the tactical situation and selecting a waterborne guardpost, per the references.

PERFORMANCE STEPS:

1. Select a site that offers:

    a. Ease of entry/exit.

b. Cover and concealment.

c. Takes into account changing tidal and luminous conditions.

d. Satisfies mission parameters.

2. Position riverbank security.

3. Camouflage RAC.

4. Assign sectors of fire/observation.

5. Assign an alert status.

6. Maintain light and noise discipline.

7. Direct the engagement/interdiction of targets.

8. Report, as required.

REFERENCE(S):

1. FMFM 6-5, Marine Rifle Squad

2. FMFM 7-5, Doctrine for Navy/Marine Corps Joint Riverine Operations

3. FMFM 7-5A, HAGTF Riverine Operations

4. FMFRP 6-15, Machineguns and Machinegun Gunnery

5. NSW/USMC, Riverine Operations Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Sgt)

TRAINING MATERIEL:

1. Camouflage (Cami) Net

2. Cargo Net Section(s)

3. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms

4. Cummins Engine with Raw Water Cooling System Attached

5. Dummy Thermite Grenade

6. Hamilton Jet Cutaway

7. Lifting Harness

8. M11 Personnel Decontamination Apparatus

9. M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete

10. M240G 7.62mm Machinegun, SL-3 complete

11. Mkl9 40mm Machinegun, SL-3 complete

12. Nautical Charts

13. Navigators Drafting Set

14. Night Vision Device(s) (AN/PVS-5, AN/PVS-7B)

15. Parallel Rulers

16. Riverine Assault Craft(s), SL-3 complete

17. Slave Cable(s)

18. Tow Line Set

TASK: 8112.04.12 DIRECT AN INSERTION OR EXTRACTION

CONDITION(S): Assigned as a Boat Captain, given a RAC section and a tactical mission.

STANDARD(S): By using stealth to avoid detection, inserting or extracting a ground combat element at night, per the supporting units operation order/ mission and the references.

PERFORMANCE STEPS:

1. Review mission requirements.

2. Determine insertion/extraction site.

3. Perform dummy insertions/extractions, as applicable.

4. Multiple craft, multiple teams:

    a. Post flank and rear security craft.

    b. Conduct insertion/extraction.

    c. Rotate craft between insertion/extraction and security.

5. Multiple craft, single team:

    a. Insert craft cuts power and glides to insertion site.

    b. At the same time, escort craft, open engine covers and continues with engines on different RPM’s.

    c. Insert craft returns to formation and escort craft closes engine covers. Complete insertion/extraction.

7. Return to base or remain on station, as directed.

REFERENCE(S):

1. FMFM 6-5, Marine Rifle Squad
2. FMFM 7-5, Doctrine for Navy/Marine Corps Joint Riverine Operations
3. FMFM 7-5A, MAGTF Riverine Operations
4. NSW/USMC, Riverine Operations Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Sgt)

TRAINING MATERIEL:

1. Camouflage (Cami) Net
2. Cargo Net Section(s)
3. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms
4. Cummins Engine with Raw Water Cooling System Attached
5. DS2 (or a mixture of 50/50 water and antifreeze)
6. Dummy Thermite Grenade
7. Lifting Harness
8. M11 Personnel Decontamination Apparatus
9. M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete
10. M240G 7.62mm Machinegun, SL-3 complete
11. Mk19 40mm Machinegun, SL-3 complete
12. Nautical Charts
13. Navigators Drafting Set
14. Night Vision Device(s) (AN/PVS-5, AN/PVS-7B)
15. Parallel Rulers
16. Riverine Assault Craft(s), SL-3 complete
17. Slave Cable(s)
18. Tow Line Set

TASK: 8112.04.14 DIRECT BOARD AND SEARCH OPERATIONS

CONDITION(S): Assigned as a Boat Captain, given a RAC or RAC section, and a tactical mission.

STANDARD(S): By analyzing the tactical situation and directing the boarding and search operation of another vessel, ensuring security of friendly forces, per the references.

PERFORMANCE STEPS:

1. Brief the crew/section on the board and search.

2. Direct the approach phase.

    a. Intercept the contact of interest (COI) and announce intent.

    b. Lead craft takes up cover position.

    c. Additional craft take up rear security.

3. Direct the search phase.

    a. COI is secured to search craft by lines around a cleat and secured by foot.

    b. Crew is gathered in plain view and silenced.

    c. Personnel are searched, silenced and segregated.

    d. Craft master searches under supervision of search party.

    e. Cover personnel maintain security.

4. Direct the breakaway phase. Seized craft are towed/escorted or a prize crew returns the craft to base while crew is taken in custody.

    a. Cover personnel maintain watch on craft.

    b. Ensure craft goes about stated business. Does not return to warn other craft.

    c. Emergency breakaway: Boarding party abandons COI, cover craft takes COI under fire while support craft picks up boarding party.

5. A land based board and search requires that the COI be escorted to the search site by the escort craft while the flanks are secured by waterborne guard posts.

6. Report, as directed using the COI questionnaire.

REFERENCE(S):

1. FMFM 6-5, Marine Rifle Squad

2. FMFM 7-5, Doctrine for Navy/Marine Corps Joint Riverine Operations

3. FMFM 7-5A, MAGTF Riverine Operations

4. NSW/USMC, Riverine operations Handbook

ADMINISTRATIVE INSTRUCTIONS:

1. Dependent on ROEs.

2. May require the services of a local military representative or translator.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Sgt)

TRAINING MATERIEL:

1. * M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete

2. * M240G 7.62mm Machinegun, SL-3 complete

3. * Mk19 40mm Machinegun, SL-3 complete

4. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.04.15 CONDUCT IMMEDIATE ACTION (IA) DRILLS

CONDITION(S): Assigned as a RAC crewman and given a RAC on a tactical mission.

STANDARD(S): To minimizing exposure and risk to personnel and equipment by enemy fires, and to regain the tactical advantage, per the references.

PERFORMANCE STEPS:

1. Respond to an air attack.

a. Seek cover and concealment upon sighting of the aircraft. If concealment is not available, remain motionless.

b. If aircraft begins attack, turn 45 degrees in the direction of attack.

c. Disperse.

d. If in formation, move at maximum speed while retaining formation integrity.

e. If in covered and concealed position, remain motionless for at least 30 seconds after first aircraft has departed.

f. If engaged with bombs or spray, treat the attack as an indirect fore attack.

2. Respond to indirect fire by moving rapidly out of, or around, the impact and observation area.

3. Respond to direct fire.

a. Return fire with available weapons and attempt to suppress the enemy position.

b. Move at varying speeds in an erratic, angled path if being engaged by Anti-Tank Guided Missiles (ATGM).

c. Seek a covered and concealed position if return fire does not suppress the enemy position.

d. Elements in kill zone, evacuate zone.

e. Elements outside kill zone provide fire support and land embarked troops, if available, to sweep objective area.

4. Respond to a mine attack.

a. Move to a secure area (back along course and out of main channel).

b. Provide fire support for rescue/salvage operations.

REFERENCE(S):

1. FM 71-1, The Tank and Mechanized Infantry Company Team

2. FMFM 6-5, Marine Rifle Squad

3. FMFM 7-5, Doctrine for Navy/Marine Corps Joint Riverine Operations

4. FMFM 7-5A, MAGTF Riverine Operations

5. NSW/USMC, Riverine operations Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete

2. * M240G 7.62mm Machinegun, SL-3 complete

3. * Mk19 40mm Machinegun, SL-3 complete

4. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.04.16 CONDUCT ESCORT OPERATIONS

CONDITION(S): Assigned as a Section Leader and given a RAC section and a tactical mission.

STANDARD(S): By executing tasks, as directed, in the supported unit’s operation order, and per the references.

PERFORMANCE STEPS:

1. Issue Operations Order and Riverine Annex.

2. Post point, flank, and rear security.

3. Maintain assigned rate of movement.

4. Flank security becomes rear security during landing.

5. Point and rear security becomes flank security during landing.

6. Be prepared to provide fire support, as directed.

7. Be prepared to provide command and control support, as directed.

8. Be prepared to provide support, as directed.

9. Move to extract point, blocking position or maintain position, as required.

10. Conduct follow on operations, as directed.

REFERENCE(S):

1. FMFM 6-5, Marine Rifle Squad

2. FMFM 7-5, Doctrine for Navy/Marine Corps Joint Riverine Operations

3. FMFM 7-5A, MAGTF Riverine Operations

4. NSW/USMC, Riverine Operations Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * M2 Heavy Barrel .50 Caliber Machinegun, SL-3 complete

2. * M240G 7.62mm Machinegun, SL-3 complete

3. * Mk19 40mm Machinegun, SL-3 complete

4. * Riverine Assault Craft(s), SL-3 complete

TASK: 8112.04.17 WRITE A RIVERINE ANNEX

CONDITION(S): Assigned as a Boat Captain and Special Staff Officer on the Supported Commander’s staff, given a RAC Section, and a tactical mission.

STANDARD(S): By receiving the commander’s planning guidance, preparing and submitting the Riverine Annex to the operations order, per the references.

PERFORMANCE STEPS:

1. Receive tasking from the supported unit or higher headquarters.

2. Collect necessary navigation information.

3. Coordinate supporting arms for movement.

4. Develop scheme of maneuver and fire support plan.

5. Develop embarkation and debarkation plan.

   a. Riverine Landing Area Code name, multiple landing sites.

   b. Riverine Landing Sites Color, multiple landing points.

   c. Riverine Landing Points - Numbered.

6. Develop control measures.

   a. Embarkation point.

   b. Start point.

   c. Intermediate control measures (phase lines, checkpoints, etc.).

   d. Release point.

7. Prepare Riverine Annex.

8. Submit Riverine Annex to higher headquarters for incorporation into the Operations Order.

9. Issue fragmentary orders, as required.

REFERENCE(S):

1. FMFM 6-5, Marine Rifle Squad

2. FMFM 7-5, Doctrine for Navy/Marine Corps Joint Riverine Operations

3. FMFM 7-5A, MAGTF Riverine Operations

4. NSW/USMC, Riverine Operations Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Sgt)

TRAINING MATERIEL:

1. * Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms

2. * Map(s) (Topographic)

3. * Nautical Charts

TASK: 8112.04.18 ISSUE AN OPERATIONS ORDER

CONDITION(S): Assigned as a Boat Captain, given a RAC section, a mission to conduct a riverine operation, the supported unit's operations order, and the necessary navigation information.

STANDARD(S): By preparing and issuing a tactical order (five paragraph order format) to the section based on the received operations order, per the references.

PERFORMANCE STEPS:

1. Estimate the situation using Mission, Enemy, Troops and Fire Support available, and Terrain-Time-Space, and Logistics (METT-T-SL), and Key Terrain, Observation and Fields of Fire, Cover and Concealment, Obstacles, and Avenues of Approach (KOCOA) formulas.

2. Begin planning.

    a. Prepare and issue a warning order to all unit members.

    b. Plan available time by using the half rule and reverse planning methods.

3. Arrange for reconnaissance.

4. Make reconnaissance.

5. Complete plan.

    a. Update estimate of the situation.

    b. Make final coordination.

    c. Construct terrain model or sketch.

6. Issue the order.

    a. Give the situation concerning the enemy and friendly forces.

    b. Give the mission as a clear and concise statement of the task that must be accomplished.

    c. Assign tasks to subordinates that support scheme of maneuver.

    d. Give information on pertinent matters concerning administration and service support.

    e. Give information on the applicable methods of command and control.

7. Supervise all preparatory activities and phases of execution.

REFERENCE(S):

1. FMFM 6-5, Marine Rifle Squad

2. FMFM 7-5, Doctrine for Navy/Marine Corps Joint Riverine Operations

3. FMFM 7-5A, MAGTF Riverine Operations

4. NSW/USMC, Riverine Operations Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Sgt)

MOS 8114, RIGID RAIDING CRAFT (RRC) COXSWAIN

DUTY AREA 01 - RIGID RAIDER CRAFT (RRC) GENERAL COXSWAIN SKILLS

TASK: 8114.01.01 NAVIGATE BY DEAD RECKONING

CONDITION(S): Given an RRC, a mission, essential equipment, and site information.

STANDARD(S): By plotting within 6 seconds of accuracy, measuring distance within a tenth of a mile, and measuring direction to within one degree of error.

PERFORMANCE STEPS:

1. Select nautical charts.
2. Plot geographic coordinates.
3. Plot dead reckoning track onto nautical chart.
4. Measure distance on a nautical chart.
5. Determine direction on a nautical chart.
6. Determine by algebraic method compass error, magnetic course, and compass course.
7. Determine speed, time, or distance, using the D/ST formula.
8. Apply current sailing corrections.
9. Navigate to the specified location.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II
2. Chapmans Piloting, Seamanship and Small Boat Handling
3. Dutton’s Navigation and Piloting, 14th Edition
4. FM 55-501, Marine Crewman’s Handbook

INITIAL TRAINING SETTING: Formal School (Preliminary) Sustainment (12) Req By (PFC)

TRAINING MATERIEL:

1. Blank Deviation Card
2. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms
3. Nautical Charts
4. Nautical Compass and Mount

5. Rigid Raiding Craft(s), SL-3 complete

TASK: 8114.01.02 NAVIGATE USING COASTAL PILOTING

CONDITION(S): Given an RRC, a mission, navigational aids/other essential equipment, and site information.

STANDARD(S): To a specified location using coastal piloting at night, per the mission.

PERFORMANCE STEPS:

1. Select nautical chart.
2. Mount nautical chart on plotting board.
3. Select navigational aids.
4. Take bearings from navigational aids.
5. Determine position.
6. Determine adjusted course to destination.
7. Navigate to given location.
8. Utilize proper rules of the road.
9. Obey all regulations concerning the use of navigational aids.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II
2. Chapmans Piloting, Seamanship and Small Boat Handling
3. Dutton’s Navigation and Piloting, 14th Edition
4. FM 55-501, Marine Crewman’s Handbook

INITIAL TRAINING SETTING: Formal School (Preliminary) Sustainment (12) Req By (PFC)

TRAINING MATERIEL:

1. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms
2. Nautical Charts
3. Nautical Compass and Mount
4. Rigid Raiding Craft(s), SL-3 complete

DUTY AREA 02 - RIGID RAIDING CRAFT (RRC) OPERATION

TASK: 8114.02.01 EMPLOY RRC SAFETY PROCEDURES DURING ROUTINE/EMERGENCY OPERATIONS

CONDITION(S): Given an RRC, mission essential equipment, personal floatation device, and craft safety equipment.

STANDARD(S): By conducting a RRC operation using required safety procedures, per the references.

PERFORMANCE STEPS:

1. Receive mission.

2. Review safety procedures prior to launch.

    a. Inspect inventory and demonstrate the proper use of boat safety equipment.

    b. Ensure kill switch is properly attached to coxswain.

    c. Brief the man overboard/search and rescue procedures.

    d. Brief communications plan, primary, and alternate signals.

    e. Brief medical plan.

    f. Brief chain of command.

    g. Brief current/forecasts weather conditions.

    h. Brief report procedures.

3. Ensure safety personnel are briefed and in position.

4. Ensure communications have been established.

5. Ensure equipment has been packed and lashed properly.

6. Follow the navigational rules of the road.

7. Complete mission.

REFERENCE(S):

1. Handbook of Nautical Rules of the Road, 2d Edition

2. CONDINST M16114.5A, U. S. Coast Guard Boat Crew Seamanship Manual

3. MARFORLANT/PAC INST, P3000.15, Standard Procedures for Raiding Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. * Rigid Raiding Craft(s), SL-3 complete

TASK: 8114.02.02 MANEUVER A RIGID RAIDER CRAFT (RRC)

CONDITION(S): Given a fully equipped RRC with an engine, a mission, and required nautical equipment

STANDARD(S): Per the mission requirements, and the references.

PERFORMANCE STEPS:

1. Determine required maneuver.
    a. Confined space movements.
    b. Maneuver in formation.
    c. Conduct immediate actions.
2. Give the proper commands to the craft team.
3. Conduct the maneuver.

REFERENCE(S):

1. Chapmans Piloting, Seamanship and Small Boat Handling

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. * Rigid Raiding Craft(s), SL-3 complete

TASK: 8114.02.03 INTERPRET SURF ZONE CONDITIONS

CONDITION(S): Given a Surf Observation Report (SUROB), NATO format, and an RRC with engine.

STANDARD(S): By determining if surf conditions meet "GO" or "NO GO" criteria, per the references.

PERFORMANCE STEPS:

1. Determine surf conditions:
    a. Height of waves.
    b. Type of waves.

c. Interval between waves.

2. Determine if surf conditions meet or exceed the capabilities of the craft used.

3. Decide if entry is possible.

4. Determine entry technique unique to craft being used.

REFERENCE(S):

1. COMNAVSURFPAC/LANT INST 3840.1B, Joint Surf Manual

2. FMFM 2-2, Amphibious Reconnaissance

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. * Rigid Raiding Craft(s), SL-3 complete

2. * Surf Observation and Report Format

TASK: 8114.02.04 COME ALONG SIDE ANOTHER VESSEL

CONDITION(S): Given an RRC with an engine, troops and equipment, and a vessel underway.

STANDARD(S): By maneuvering the RRC alongside the underway vessel and safely offload troops and/or equipment, per the references.

PERFORMANCE STEPS:

1. Request permission to come alongside another vessel.

2. Approach stand on vessel.

3. Match stand on vessel course and speed.

4. Come alongside.

5. Properly tie off to stand on vessel.

6. Maintain contact with stand on vessel.

7. Transfer equipment and gear and troops.

8. Execute break away procedure.

REFERENCE(S):

1. COHDINST MI6114.5A, U. S. Coast Guard Boat Crew Seamanship Manual

2. FM 55-501, Marine Crewman’s Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. * Rigid Raiding Craft(s), SL-3 complete
2. * Stand-on Vessel

TASK: 8114.02.05 ORGANIZE A BOAT TEAM

CONDITION(S): Given a mission, boat team members, and a requirement to form a boat team.

STANDARD(S): By assign position and duties to each member to operate as a boat team, per the references.

PERFORMANCE STEPS:

1. Identify personnel.
2. Identify the positions of each man in the boat.
3. Issue the responsibilities of each man in the boat.
4. Command the boat team to fall in.
5. Conduct counts.
6. Issue boat handling commands.

REFERENCE(S):

1. FM 55-501, Marine Crewman’s Handbook
2. FMFM 2-2, Amphibious Reconnaissance
3. TC 31-25, Special Forces Waterborne Operations

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. Rigid Raiding Craft(s), SL-3 complete

TASK: 8114.02.06 EXECUTE IMMEDIATE ACTIONS FOR A CAPSIZED BOAT

CONDITION(S): Given an RRC team, capsized boat, personal flotation devices and boat safety equipment.

STANDARD(S): By righting the capsized boat, per the references.

PERFORMANCE STEPS:

1. Obtain head count of boat team.

2. Approach capsized boat.

3. Attach lines.

4. Right the boat.

5. Re-enter boat.

6. Obtain a second head count of boat team and account for all equipment.

7. Perform submerged engine procedures, as required.

REFERENCE(S):

1. Appropriate Engine Technical Manual

2. FM 55-501, Marine Crewman’s Handbook

3. TC 31-25, Special Forces Waterborne Operations

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. Rigid Raiding Craft(s), SL-3 complete

TASK: 8114.02.07 CACHE A RRC

CONDITION(S): Given a mission, a fully equipped RRC, and a cache site.

STANDARD(S): By camouflaging and concealing the RRC and equipment, per the mission requirements, and the reference.

PERFORMANCE STEPS:

1. Review mission.

2. Select the site.

3. Place security to cover the site.

4. Camouflage the site and gear.

REFERENCE(S):

1. TC 31-25, Special Forces Waterborne Operations

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. Rigid Raiding Craft(s), SL-3 complete

TASK: 8114.02.08 WATERPROOF EQUIPMENT

CONDITION(S): Assigned as an RRC operator, given mission essential equipment, pads, tape, waterproofing bag/container(s), lubrication fluid, ALICE pack/sea bag, and operation checklist.

STANDARD(S): By correctly padding and waterproofing equipment to ensure it remains dry during transit and is operational on arrival in the objective area, per the references.

PERFORMANCE STEPS:

1. Inspect equipment.
2. Clean and lubricate equipment, if required.
3. Perform operation check.
4. Pad and tape sharp edges.
5. Seal equipment in a waterproof bag or container.
6. Place bag in ALICE pack or sea bag.
7. Lash all equipment properly in boat.

REFERENCE(S):

1. F1-1FM 2-2, Amphibious Reconnaissance
2. TC 31-25, Special Forces Waterborne Operations

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. 550 Parachute Cord
2. Rigid Raiding Craft(s), SL-3 complete
3. Waterproof (WP) Bag(s)
4. Waterproof Tape
5. Waterproofing Materials

TASK: 8114.02.09 MAINTAIN A MAGNETIC COURSE IN AN RRC

CONDITION(S): Assigned as a RRC operator, given an RRC with engine, nautical compass, a course, and speed.

STANDARD(S): By maintaining a navigation track at a constant speed within +/- five degrees error, in a sea state of 0, for 20 nautical miles in a tactical situation at night, per the references.

PERFORMANCE STEPS:

1. Receive course and speed.
2. Repeat all commands.
3. Apply compass error.
4. Steer craft to required course.
5. Maintain ordered speed and course.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II
2. Dutton’s Navigation and Piloting, 14th Edition
3. TC 31-25, Special Forces Waterborne Operations

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. Blank Deviation Card
2. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms
3. Nautical Charts
4. Nautical Compass and Mount
5. Rigid Raiding Craft(s), SL-3 complete

TASK: 8114.02.10 ANCHOR AN RRC

CONDITION(S): Given an SL-3 complete RRC and essential equipment.

STANDARD(S): At a designated site so that the anchor does not drag, per the references.

PERFORMANCE STEPS:

1. Select anchorage site.
2. Prepare anchor and tackle.
3. Determine proper scope.

4. Set anchor.

5. Pick a reference point.

6. Clear fouled anchor, as required.

7. Get underway from anchorage.

REFERENCE(S):

1. Chapmans Piloting, Seamanship and Small Boat Handling

2. Dutton’s Navigation and Piloting, 14th Edition

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. Rigid Raiding Craft(s), SL-3 complete

TASK: 8114.02.11 MOUNT AND SWING A NAUTICAL COMPASS

CONDITION(S): Given a compass, compass rose, and an SL-3 complete RRC.

STANDARD(S): During craft operation as required to maintain course, per the references.

PERFORMANCE STEPS:

1. Determine requirement.

2. Mount compass to the craft.

3. Swing the compass, as required.

4. Record deviation, construct a deviation card and mount.

REFERENCE(S):

1. Chapmans Piloting, Seamanship and Small Boat Handling

2. Dutton’s Navigation and Piloting, 14th Edition

3. TC 31-25, Special Forces Waterborne Operations

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. Blank Deviation Card

2. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms

3. Nautical Charts

4. Nautical Compass and Mount

5. Rigid Raiding Craft(s), SL-3 complete

DUTY AREA 03 - RIGID RAIDER CRAFT (RRC)

TASK: 8114.03.01 PREPARE THE RIGID RAIDER CRAFT (RRC) FOR OPERATION

CONDITION(S): Given an SL-3 complete RRC with necessary equipment.

STANDARD(S): Per the references.

PERFORMANCE STEPS:

1. Inventory standard accessory and safety equipment for the RRC.

2. Inspect standard accessory and safety equipment for the RRC.

3. Fill fuel and VRO tank.

4. Inspect battery to ensure it is charged and properly connected to the terminals.

5. Perform hull and fitting inspection.

6. Pack equipment in the RRC.

7. Lash equipment in the RRC.

REFERENCE(S):

1. OMC 70 HP Field Service Manual

2. RRC Operators Manual

3. MARFORLANT/PAC INST, P3000.15, Standard Procedures for Raiding Craft

4. TM 4700-15/1H, 70 Horsepower Engine

ADMINISTRATIVE INSTRUCTIONS:

1. Use Pre-Operational/Pre-Launch checklist.

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. * Rigid Raiding Craft(s), SL-3 complete

TASK: 8114.03.02 OPERATE THE 70 HORSEPOWER (HP) OUTBOARD ENGINE

CONDITION(S): Given an SL-3 complete RRC with a 70 HP engine and the references.

STANDARD(S): Per the references.

PERFORMANCE STEPS:

1. Conduct pre-operational inspection of the engine.

2. Prime the fuel system.

3. Lower the engine into the water.

4. Place the engine gears in neutral.

5. Install the kill switch and attach lanyard to coxswain.

6. Start the engine.

7. Conduct underway checks and maintenance.

8. Perform post operation maintenance.

REFERENCE(S):

1. OMC 70 HP Field Service Manual

2. TM 4700-15/1H, 70 Horsepower Engine

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. Rigid Raiding Craft(s), SL-3 complete

TASK: 8114.03.03 CONDUCT LANDING PROCEDURES WITH THE RIGID RAIDER CRAFT (RRC)

CONDITION(S): Give a tactical mission, troops, and a fully equipped RRC.

STANDARD(s): By executing a landing through surf or benign waters at night, per the references.

PERFORMANCE STEPS:

1. Execute a landing through surf.

    a. Determine if surf conditions meet or exceed the capabilities of the RRC.

2. Identify landing technique for the mission.

3. Execute a J-Turn.

    a. Disembark troops.

    b. Depart the beach.

4. Beach the RRC.

    a. Disembark troops.

    b. Depart the beach.

REFERENCE(S):

1. OMC 70 HP Field Service Manual
2. FM 55-501, Marine Crewman’s Handbook
3. FMFM 2-2, Amphibious Reconnaissance
4. M16114.5, Boat Crew Seamanship Manual
5. MARFORLANT/PAC INST, P3000.15, Standard Procedures for Raiding Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. Rigid Raiding Craft(s), SL-3 complete

TASK: 8114.03.04 TOW AN RIGID RAIDER CRAFT (RRC)

CONDITION(S): Given an RRC, a disabled RRC requiring to be towed, and essential equipment.

STANDARD(S): By successfully rigging the lines and towing the disabled RRC, per the reference.

PERFORMANCE STEPS:

1. Pass signal for down boat.
2. Determine method for tow.
3. Rig the towing RRC.
4. Rig the disabled RRC for towing.
5. Connect tow line.
6. Cross deck a mechanic to the disabled RRC.
7. Spread load personnel from the disabled RRC around the towing RRC.
8. Tow the disabled RRC.
9. Execute emergency breakaway, if required.

REFERENCE(S):

1. FM 55-501, Marine Crewman’s Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. Rigid Raiding Craft Hull

2. Rigid Raiding Craft(s), SL-3 complete

TASK: 8114.03.05 TRAILER THE RIGID RAIDER CRAFT (RRC)

CONDITION(S): Given an SL-3 complete RRC, a trailer, a launch/recovery area, suitable sea state, and towing vehicle with driver.

STANDARD(S): Without damaging the RRC or injury to personnel, safely launch and recover an RRC from a trailer on the first attempt, per the reference.

PERFORMANCE STEPS:

1. Prepare craft for launch.

2. Conduct pre-launch inspection.

3. Launch from trailer.

4. Recover RRC.

5. Conduct post recovery inspection.

REFERENCE(S):

1. Chapmans Piloting, Seamanship and Small Boat Handling

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. Rigid Raiding Craft Transport Trailer

2. Rigid Raiding Craft(s), SL-3 complete

TASK: 8114.03.06 CONDUCT FIRST ECHELON MAINTENANCE

CONDITION(S): Given an SL-3 complete RRC, necessary equipment, and the reference.

STANDARD(S): By properly maintaining the RRC in combat condition, per the references.

PERFORMANCE STEPS:

1. Clean the RRC.

2. Inspect the RRC, per the TM.

3. Inventory SL-3 equipment.

4. Inspect SL-3 equipment.

5. Report discrepancies to maintenance section.

6. Maintain all records in accordance with the TM 4700.

REFERENCE(S):

1. OMC 70 HP Field Service Manual

2. RRC Operators Manual

3. TH 4700-15/1, Marine Corps Equipment Forms and Records

4. TM 4700-15/1G, Maintenance Record Procedures

5. TM 4700-15/lH, 70 Horsepower Engine

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. Limited Technical Inspection (LTI) Worksheet

2. Preventative Maintenance (PM) Forms

3. Rigid Raider Craft Records

4. Rigid Raiding Craft(s), SL-3 complete

TASK: 8114.03.07 CONDUCT FIRST ECHELON MAINTENANCE ON THE 70 HORSEPOWER (HP) OUTBOARD ENGINE

CONDITION(S): Given a 70 HP outboard engine, necessary tools, and equipment and the references.

STANDARD(S): Per the references.

PERFORMANCE STEPS:

1. Inspect all connections.

2. Inspect for corrosion.

3. Inspect for cleanliness.

4. Lubricate grease fittings.

5. Inspect gear case oil level.

6. Conduct fresh water flush of engine for two minutes.

7. Change/Add gear case oil, as required.

8. Report discrepancies to the maintenance section.

9. Maintain all records in accordance with the TM 4700.

REFERENCE(S):

1. RRC Operators Manual

2. TH 4700-15/1, Marine Corps Equipment Forms and Records

3. TM 4700-15/1G, Maintenance Record Procedures

4. TM 4700-15/1H, 70 Horsepower Engine

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (6) Req By (PFC)

TRAINING MATERIEL:

1. Equipment Repair Order (ERO)

2. Limited Technical Inspection (LTI) Worksheet

3. Preventative Maintenance (PM) Forms

4. Rigid Raiding Craft(s), SL-3 complete

DUTY AREA 04 - RIGID RAIDER CRAFT (RRC) AMPHIBIOUS LAUNCH AND RECOVERY

TASK: 8114.04.01 LAUNCH AND RECOVER RIGID RAIDER CRAFT (RRC) FROM AMPHIBIOUS SHIPPING

CONDITION(S): Given an RRC, an assembled launch and recovery device on a Landing Platform Dock (LPD) at night, in up to, and including, sea state 3.

STANDARD(S): Per the references.

PERFORMANCE STEPS:

1. Assemble the launch and recovery device.
    a. Identify parts to be assembled.
    b. Assemble the launch and recovery device.
    c. Disassemble the launch and recovery device.
    d. Conduct preventive maintenance on the launch and recovery device.
2. Stage RRC for launch.
    a. Prepare craft for lifting.
    b. Move craft for lifting.
    c. Connect craft to hoist.
    d. Attach security lines.
    e. Place craft on dolly.
3. Establish communications.
4. Check equipment for proper packing and lashing procedures.
5. Launch the RRC.
    a. Order boat team into craft.
    b. Signal to lower stern gate.
    c. Start engines, as props enter the water.
    d. Place engines in reverse and back out of the launch and recovery device.
6. Recover the RRC.
    a. Visually confirm sterngate is lowered on the LPD.
    b. Position craft so that #1 man can attach recovery line to craft.
    c. Maneuver craft into the launch and recovery device until it reaches the boat position.

d. Shut engines off and raise them.

7. Stow the RRC.

a. Prepare craft for hoist.

b. Connect hoist.

c. Attach security lines.

d. Move craft to cradle.

e. Move craft to storage position.

f. Secure craft.

REFERENCE(S):

1. MARFORLANT/PAC INST, P3000.15, Standard Procedures for Raiding Craft

2. TM 11250-10/1, Rigid Raider Craft Launch, Recovery, and Stowage Systems

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Pvt)

TRAINING MATERIEL:

1. * Amphibious Shipping (LCU, LCAC, LPD, LSD, etc.)

2. * Rigid Raiding Craft(s), SL-3 complete

3. * Surf Observation and Report Format

MOS SS14, MARITIME SMALL BOAT NAVIGATOR

DUTY AREA 01 - MARITIME SMALL CRAFT NAVIGATOR

TASK: SS14.01.01 UTILIZE NAVIGATION TECHNIQUES DURING SMALL CRAFT OPERATIONS

CONDITION(S): Assigned as a small craft (CRRC, RRC) navigator, a small craft, and a destination, and the references.

STANDARD(S): By determining and maintaining course and speed to arrive at the designated-point, per the references.

PERFORMANCE STEPS:

1. Identify the four major classifications of navigation.
2. Identify the five problems of navigation.
3. Identify the members of the navigation team.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II
2. Dutton’s Navigation and Piloting, 14th Edition

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Cpl)

TRAINING MATERIEL:

1. * Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms
2. * Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete
3. * Nautical Charts
4. * Nautical Compass and Mount
5. * Rigid Raiding Craft(s), SL-3 complete

TASK: SS14.01.02 FOLLOW NAVIGATIONAL RULES OF THE ROAD

CONDITION(S): Assigned as navigator on a small craft during an operation, given a craft, essential equipment, and during daylight or darkness.

STANDARD(S): By navigating the craft to designated point, per the reference.

PERFORMANCE STEPS:

1. Select two types of navigation rules.
2. Identify factors governing the safe speed of a vessel.

3. Describe the maneuver of vessels in sight of one another.

4. Identify light configurations for a vessel.

5. Identify sound and light warning signals.

REFERENCE(S):

1. Handbook of Nautical Rules of the Road, 2d Edition

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Cpl)

TASK: SS14.01.03 IDENTIFY AIDS TO NAVIGATION

CONDITION(S): Assigned the navigator on a small craft, and given the reference.

STANDARD(S): Per the references.

PERFORMANCE STEPS:

1. Identify chart symbols.

2. Identify light phase characteristics of navigation aids.

3. Identify buoy characteristics.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II

2. Dutton’s Navigation and Piloting, 14th Edition

3. Nautical Chart #1

4. FM 55-501, Marine Crewman’s Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Cpl)

TASK: SS14.01.04 USE A NAUTICAL COMPASS

CONDITION(S): Assigned as a navigator on a small craft mission.

STANDARD(S): To arrive in the objective area on time schedule, per the references.

PERFORMANCE STEPS:

1. Identify the nomenclature of the nautical compass.

2. Given different combinations of variables incorrect for one or more of the variables.

3. Given different combinations of variables correct for one or more of the variables.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II

2. Chapmans Piloting, Seamanship and Small Boat Handling

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Cpl)

TRAINING MATERIEL:

1. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms

2. Nautical Charts

3. Nautical Compass and Mount

TASK: SS14.01.05 PLOT THE COMPUTED VISIBILITY OF LIGHTS

CONDITION(S): Assigned as a navigator, and with the aid of the references.

STANDARD(S): Per the references.

PERFORMANCE STEPS:

1. Identify the terms used in computing the visibility of lights.

2. Identify the publications and tables used in computing the visibility of lights.

3. Compute the visibility of a light.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II

2. Chapmans Piloting, Seamanship and Small Boat Handling

3. Dutton’s Navigation and Piloting, 14th Edition

4. Light List

5. Nautical Chart Abbreviations and Symbols

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Cpl)

TRAINING MATERIEL:

1. Blank Deviation Card

2. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms

3. Nautical Charts

4. Nautical Compass and Mount

TASK: SS14.01.06 ESTIMATE SET AND DRIFT OF CURRENTS

CONDITION(S): Assigned as a navigator on a small craft, and given a surf report and the references.

STANDARD(S): By correctly determining the given body of water's current characterstics, per the references.

PERFORMANCE STEPS:

1. Identify current terminology.
2. Identify the types of currents.
3. Estimate set and drift of oceanic currents.
4. Identify the three phases of tidal current.
5. Estimate set and drift of tidal currents.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II
2. Chapmans Piloting, Seamanship and Small Boat Handling
3. Dutton's Navigation and Piloting, 14th Edition

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Cpl)

TRAINING MATERIEL:

1. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms
2. Nautical Charts
3. Nautical Compass and Mount
4. Surf Observation and Report Format

TASK: SS14.01.07 CONSTRUCT A CURRENT TRIANGLE

CONDITION(S): Assigned as a navigator on a small craft mission, given a surf report and the references.

STANDARD(S): Per the references.

PERFORMANCE STEPS:

1. Identify current sailing terminology.

2. Construct an estimated current triangle.

3. Determine the course to steer, and speed of advance.

4. While underway, determine the set and drift of the actual current.

5. While underway, construct an actual current triangle.

REFERENCE(S):

1. Dutton’s Navigation and Piloting, 14th Edition

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Cpl)

TRAINING MATERIEL:

1. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms

2. Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete

3. Nautical Charts

4. Nautical Compass and Mount

5. Rigid Raiding Craft(s), SL-3 complete

TASK: SS14.01.08 PLOT A DEAD RECKONING TRACK ON A NAUTICAL CHART

CONDITION(S): Assigned as a navigator for a small craft mission and with the aid of references.

STANDARD(S): Per the references.

PERFORMANCE STEPS:

1. Select the elements of dead reckoning.

2. Solve time, speed, and distance problems.

3. Identify terms used on a dead reckoning track.

4. Label a dead reckoning track.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II

2. Dutton’s Navigation and Piloting, 14th Edition

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Cpl)

TRAINING MATERIEL:

1. * Blank Deviation Card
2. * Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms
3. Nautical Charts
4. Nautical Compass and Mount

TASK: SS14.01.09 USE REQUIRED EQUIPMENT AND PUBLICATIONS FOR NAVIGATION

CONDITION(S): Assigned as a navigator, and with a list of navigational publications.

STANDARD(S): By writing the definition and use for each specific navigation publication, per the references.

PERFORMANCE STEPS:

1. State the purpose of charts.
2. Identify the purpose of equipment used for small craft navigation.
3. Operate a nautical slide rule.
4. Obtain a magnetic bearing.
5. Assemble a nautical chart onto the plotting board.
6. Determine the position of a craft on the plotting board.
7. Determine the magnetic course.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II
2. Dutton’s Navigation and Piloting, 14th Edition
3. FM 55-501, Marine Crewman’s Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Cpl)

TRAINING MATERIEL:

1. Blank Deviation Card
2. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms
3. Nautical Charts
4. Nautical Compass and Mount
5. Nautical Slide Rule

6. Navigator’s Plotting Instrument Set

TASK: SS14.01.10 PILOT A SMALL CRAFT

CONDITION(S): Assigned as the navigator/coxswain on a small craft mission, given an SL-3 complete craft.

STANDARD(S): In order arrive at the objective area at the correct time, per the references.

PERFORMANCE STEPS:

1. Identify the three lines of position.
2. Identify the types of fixes.
3. During a navigation exercise, demonstrate one type of fix.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II
2. Dutton’s Navigation and Piloting, 14th Edition

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Cpl)

TRAINING MATERIEL:

1. Blank Deviation Card
2. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms
3. Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete
4. Nautical Charts
5. Nautical Compass and Mount
6. Nautical Slide Rule
7. Navigator’s Plotting Instrument Set
8. Navigators Drafting Set
9. Rigid Raiding Craft(s), SL-3 complete

TASK: SS14.01.11 PLOT GEOGRAPHIC COORDINATES

CONDITION(S): Assigned as the navigator on a small craft mission and given topographic coordinates.

STANDARD(S): On a topographic map, per the references.

PERFORMANCE STEPS:

1. Determine the geographic coordinate of a given point on a topographic map.

2. Plot geographic coordinates on a topographic map.

REFERENCE(S):

1. MCO 1510.90, Individual Training Standards (ITS) System for Marine Battle Skills Training (MBST), Volume 2-Corporal through Gunnery Sergeant

2. MCO 1510.89 W/CH 1, Individual Training Standards (ITS) System for Marine Battle Skills Training (MBST), Volume 1-entry Level

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Cpl)

TRAINING MATERIEL:

1. Blank Deviation Card

2. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms

3. Lensatic Compass

4. Map(s) (Topographic)

5. Map, Map Overlay Paper, Protractor, Grease/Alcohol Harker(s)

6. Mapping Protractor

7. Nautical Charts

8. Nautical Compass and Mount

9. Nautical Slide Rule

10. Navigator’s Plotting Instrument Set

11. Navigators Drafting Set

TASK: SS14.01.12 COMPUTE TIDAL CONDITIONS

CONDITION(S): Assigned as a navigator on a small craft mission, given the correct nautical charts, and maritime information.

STANDARD(S): For the given area of operations, per the references.

PERFORMANCE STEPS:

1. Identify tide terminology.

2. Identify the three types of tides.

3. Predict the height of the tide for any give time and location using tide tables.

REFERENCE(S):

1. Tidal Current Tables

2. Tide Tables

3. FM 55-501, Marine Crewman's Handbook

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Cpl)

TASK: SS14.01.13 USE NAUTICAL CHARTS

CONDITION(S): Assigned as a navigator on a small craft mission, given essential nautical information, and nautical charts.

STANDARD(S): To plot and follow a track to the designated objective area, per the references.

PERFORMANCE STEPS:

1. Identify the classification of a nautical chart.

2. Identify the marginal information of a nautical chart.

3. Identify the publications used to make chart corrections.

4. Make chart corrections.

5. Locate by latitude and longitude the geographic coordinates of a given position on a nautical chart.

6. Determine the distance between two points on a nautical chart within .1 nautical mile/6 second accuracy.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II

2. Dutton's Navigation and Piloting, 14th Edition

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Cpl)

TRAINING MATERIEL:

1. Blank Deviation Card

2. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms

3. Nautical Charts

4. Nautical Compass and Mount

5. Nautical Slide Rule

6. Navigator’s Plotting Instrument Set

7. Navigators Drafting Set

TASK: S14.01.14 MOUNTING AND SWINGING A NAUTICAL COMPASS

CONDITION(S): Assigned as a navigator on a small craft mission, given an SL-3 complete small craft, and navigational essential equipment.

STANDARD(S): By utilizing the compass to maintain desired course, per the references.

PERFORMANCE STEPS:

1. Identify the purpose of swinging the compass.

2. Identify the procedures for mounting a nautical compass.

3. Identify the procedures for swinging the nautical compass.

4. Construct a deviation table.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II

2. Chapmans Piloting, Seamanship and Small Boat Handling

3. Dutton’s Navigation and Piloting, 14th Edition

4. COMDINST M16114.5A, U. S. Coast Guard Boat Crew Seamanship Manual

5. U.S. COAST GUARD, Navigational Rules

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Cpl)

TRAINING MATERIEL:

1. Blank Deviation Card

2. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms

3. Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete

4. Nautical Charts

5. Nautical Compass and Mount

6. Nautical Slide Rule

7. Navigator’s Plotting Instrument Set

8. Navigators Drafting Set

9. Rigid Raiding Craft(s), SL-3 complete

TASK: SS14.01.15 DEVELOP OVER-THE-HORIZON (OTH) NAVIGATIONAL PLAN

CONDITION(S): Assigned as a navigator for an OTH small craft mission, given essential navigational aids, SL-3 complete small craft, and a designated point.

STANDARD(S): By analyzing the mission and developing a navigation track to be utilized to arrive at the designated point as required, per the references.

PERFORMANCE STEPS:

1. Identify the required liaison for navigation planning.

2. Identify items included in the navigation plan.

REFERENCE(S):

1. American Practical Navigator, Volumes I and II

2. Dutton’s Navigation and Piloting, 14th Edition

3. FMFM 7-32, Raid Operations

4. MARFORLANT/PAC INST, P3000.15, Standard Procedures for Raiding Craft

INITIAL TRAINING SETTING: Formal School (Standard) Sustainment (3) Req By (Cpl)

TRAINING MATERIEL:

1. Blank Deviation Card

2. Chart No. 1, Nautical Chart Symbols, Abbreviations, and Terms

3. Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete

4. Nautical Charts

5. Nautical Compass and Mount

6. Nautical Slide Rule

7. Navigator’s Plotting Instrument Set

8. Navigators Drafting Set

9. Rigid Raiding Craft(s), SL-3 complete

10. Surf Observation and Report Format

TASK: SS14.01.16 PILOT A SMALL CRAFT DURING RIVERINE TRANSIT

CONDITION(S): Assigned as a coxswain, given a riverine mission, an SL-3 complete small craft, and a river to transit.

STANDARD(S): By analyzing the nautical charts for the given mission and determining a course that will facilitate mission accomplishment, per the commanders guidance and the references.

PERFORMANCE STEPS:

1. Select the chart or topographic map.

2. Determine the route/course.

3. Interpret visual aids along the route/course.

4. Interpret river characteristics along the route/course.

REFERENCE(S):

1. Nautical Chart #1

2. Nautical Chart Abbreviations and Symbols

3. FM 55-501, Marine Crewman’s Handbook

4. NSW/USMC, Riverine Operations Handbook

ADMINISTRATIVE INSTRUCTIONS:

1. Non-availability of riverine training area at all training commands dictates that this task be taught as preliminary.

INITIAL TRAINING SETTING: Formal School (Preliminary) Sustainment (3) Req By (Cpl)

TRAINING MATERIEL:

1. Combat Rubber Reconnaissance Craft(s) with Engine, SL-3 complete

2. Rigid Raiding Craft(s), SL-3 complete