

UNITED STATES SPECIAL OPERATIONS COMMAND  
7701 Tampa Point Boulevard  
MacDill Air Force Base, Florida 33621-5323

USSOCOM MANUAL

Number 350-6

15 September 2011

Training

SPECIAL OPERATIONS FORCES BASELINE INTEROPERABLE  
ROTARY WING AND TILTROTOR  
INFILTRATION/EXFILTRATION TRAINING STANDARDS

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FOREWORD

**1. Purpose.** This manual prescribes policy and procedures, assigns responsibilities, and directs actions that govern the management and conduct of United States Special Operations Command (USSOCOM) Special Operations Forces (SOF) rotary wing and tiltrotor aircraft infiltration (infil)/exfiltration (exfil) training. In addition, it provides a consolidated reference for assisting commanders at all levels in preparing SOF to execute infil and exfil operations.

**2. Applicability.** This manual is applicable to personnel assigned to Headquarters (HQ) United States Special Operations Command (USSOCOM); USSOCOM Components and sub-unified commands, to include United States Army Special Operations Command (USASOC); Marine Corps Forces Special Operations Command (MARSOC); Air Force Special Operations Command (AFSOC); Naval Special Warfare Command (NAVSPECWARCOM); and Joint Special Operations Command (JSOC). Non-SOF personnel assigned or attached to SOF units will comply with this manual when conducting SOF infil/exfil operations.

**3. Proponent.** The proponent for this manual is HQ USSOCOM, J7/9, Director for Training, Doctrine and Capability Development (J7/9). Users are invited to send comments and suggested improvements directly to: USSOCOM, ATTN: J7/9-T, 7701 Tampa Point Blvd., MacDill AFB, FL 33621-5323.

(J7/9-T)

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\*This Manual supersedes M 350-6, 18 June 2007. (See [Summary of Changes](#) on page ii.)

Pages: 240

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### SUMMARY OF CHANGES

**THIS MANUAL CONTAINS NUMEROUS CHANGES AND ADDITIONS TO INCLUDE INCORPORATION OF SPECIAL OPERATIONS FORCES BASELINE INTEROPERABLE STANDARDS. PLEASE REVIEW THE MANUAL IN ITS ENTIRETY BEFORE CONDUCTING ANY SOF INFIL OR EXFIL OPERATION INVOLVING THE USE OF ROTARY WING OR TILTROTOR AIRCRAFT.**

**NOTICE:** ALL RECORDS PERTAINING TO U.S. SPECIAL OPERATIONS COMMAND, THAT ARE CREATED BASED ON THIS MANUAL, MUST BE MAINTAINED AND RETAINED IAW THE CHAIRMAN OF THE JOINT CHIEFS OF STAFF MANUAL (CJCSM) 5760.01 VOLS I AND II.

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## CHAPTER 1

### GENERAL

#### 1-1. General.

a. The mission of USSOCOM is to provide fully capable Special Operations forces to plan and conduct special operations in worldwide support of U.S. policy and objectives. To that end, USSOCOM employs a dynamic, capabilities focused, training strategy based upon the Chairman Joint Chiefs of Staff (CJCS) Joint Training System (JTS) that ensures SOF operators will continue to master the individual and collective warfighting skills that enable operational and tactical success in all combat environments.

b. This manual provides the doctrinal foundation for the development of subordinate doctrine, tactics, techniques, and procedures, training literature and the conceptual framework to facilitate interoperability. It describes the core tasks that make up the consolidated Special Operations Forces Baseline Interoperable Standards (SOFBIS) for the associated skill sets that comprise SOF rotary wing and tiltrotor aircraft infil/exfil operations and training and authorizes USSOCOM units to conduct them IAW the provisions of this manual.

c. For the purposes of this manual, the definition of SOF rotary wing and tiltrotor aircraft infil/exfil capability (hereafter referred to as simply “infil/exfil”) includes, but is not limited to, those skill sets required to successfully conduct: Rappel, Fast Rope Insertion/Extraction System (FRIES), Special Patrol Insertion/Extraction (SPIE) System, Stabilized Body Operations (STABO), Ladder, Helocast, Hoist and Airland operations. The terms “helicopter” or “aircraft” refer to both rotary wing and tiltrotor aircraft (see note below) and will be used hereafter, as appropriate, to apply to both aircraft types.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**1-2. Scope.** The policies, procedures, responsibilities and standards established herein provide direction for the USSOCOM staff and all organizations, units, and forces conducting infil/exfil operations and training under the authority of USSOCOM.

**1-3. Objectives.** The USSOCOM Commander's Training Guidance directs that SOF must train and fight as part of a Joint, Interagency and International team, and has directed that an authoritative USSOCOM manual be published to establish joint baseline interoperable standards for the conduct of SOF rotary wing and tiltrotor aircraft infil/exfil operations. The manual will:

a. Provide guidance to Component training programs of record that produce and maintain sufficient numbers of SOF personnel to conduct infil/exfil operations worldwide in support of U.S. policy and objectives.

b. Provide baseline interoperable standards that reflect a common knowledge and understanding of SOF tactics, techniques and procedures (TTPs) to facilitate and mature the interoperability of the force.

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- c. Ensure Components conduct infil/exfil training and operations in a safe manner.
- d. Establish the reference document for a periodic assessment of the effectiveness and efficiency of Component training programs with respect to infil/exfil training.
- e. Ensure CDRUSSOCOM has visibility on all MFP-11 funded training programs within his authority.

**1-4. Proponency.**

a. **SOF Advocacy.** [USSOCOM Directive 10-1cc](#), *Terms of Reference—Roles, Missions and Functions of Component Commands*, 15 December 2009, states that advocacy for infil/exfil activities resides at HQ USSOCOM. As the SOF advocate, USSOCOM is responsible for conducting training readiness oversight, approving SOF baseline interoperable standards for infil/exfil operations and training as well as adjudication and approval of the following: concepts, tactics, techniques, procedures, doctrine, training programs, training support requirements, research, development, test and evaluation (RDT&E) and equipment. USSOCOM has approval, validation and certification authority.

b. USSOCOM will publish applicable joint regulatory guidance on infil/exfil operations and training for the Components. USSOCOM J7/9, in coordination with the Lead Component and Coordinating Components, will assess and validate that all Component training programs, syllabi, and courses of instruction are in alignment with the USSOCOM Joint Mission Essential Task List (JMETL), [USSOCOM Directive 350-1](#), *USSOCOM Military Training*, and meet or exceed the SOFBIS.

c. **Lead Component.** USASOC is designated overall Lead Component for USSOCOM Manual 350-6 and the associated responsibilities contained herein.

d. **Coordinating Components.** AFSOC, NAVSPECWARCOM, and MARSOC are designated Coordinating Components with equity in SOF infil/exfil for purposes of drafting or revision of policy for training standards, safety standards, doctrine, RDT&E or equipment.

**1-5. References.**

a. This manual is not an all-inclusive publication. It is the responsibility of the individual user to ensure he is utilizing the current references with all applicable changes.

b. The Glossary contains a list of references used in the formulation of this manual. It is the responsibility of the individual to ensure he is utilizing current references with all applicable changes.

c. Direct infil/exfil specific questions to USASOC G37 or the Component subject matter expert (SME).

USSOCOM, J7/9-TS (Training Standards)	DSN 299-8364
USASOC G37	DSN 239-8218
MARSOC G37	DSN 758-0852
AFSOC A3T	DSN 579-5124 / 2231

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NAVSPECWARCOM N32

DSN 577-0787

JSOC J37

DSN 383-0123

**1-6. Administrative.**

a. **Waivers.** Waiver authority is granted to Component Commanders and Commander, JSOC (COMJSOC). Authority may be delegated to appropriate subordinate commanders. Notification of waivers granted for training will be reported prior to training to USSOCOM, Director, Training, Doctrine and Capability Development Directorate (J7/9), Attention: Training (J7/9-T), and to the operations directorate of the Lead Component of this manual: U.S. ARMY SPECIAL OPERATIONS COMMAND G3, 2929 Desert Storm Drive, Fort Bragg, NC 28310.

b. **Exceptions.** Exceptions require USSOCOM approval. Each exception request for training will be forwarded prior to training to USSOCOM, J7/9-T. Attention: Training (J7/9-T), and to the operations directorate of the Lead Component of this manual: U.S. ARMY SPECIAL OPERATIONS COMMAND G3, 2929 Desert Storm Drive, Fort Bragg, NC 28310.

**c. Definitions.**

(1) **Waiver.** Written authority that permits temporary deviation from safety and operational standards for compelling reasons. Waivers are generally granted for a specific event or a short period of time (~30 days) pending cancellation or correction of the waived condition. Waivers are granted for specific situations and are applicable only to the hazards and exposures specified in the request. Waivers will not be interpreted to apply to other operations, locations, conditions, or units not specifically mentioned in the basic request, enclosures, and endorsements.

(2) **Exception.** Written authority that permits a long-term or permanent departure from safety and operational standards and directives for compelling reasons. Long-term is defined as either 1) the length of a deployment, 2) six month or more, or 3) until the scheduled date of review. Permanent exceptions will be reviewed every two (2) years at a minimum.

(3) **Special Operations Forces (SOF) Advocate.** For an area of interest, the SOF Advocate is responsible for conducting training readiness oversight and approving SOFBIS, as well as adjudication and approval of the following: doctrine, concepts, tactics, techniques, procedures, training programs, training support requirements, RDT&E and equipment. The Advocate, in coordination with the Lead Component and Coordinating Components will assess and validate that all component training programs, syllabi and courses of instruction are aligned with the USSOCOM JMETL, [USSOCOM D 350-1](#), *Training*, and meet or exceed the SOFBIS.

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**(4) Lead Component.**

(a) Lead Component is a term used to indicate a delegation of authority by a principal to a subordinate to act on the principal's behalf. Designated responsibilities are defined in [USSOCOM D 10-1cc](#). The exact nature and scope of the authority delegated will be detailed in Manual 350-X series training publications. A Lead Component may be limited to providing only administrative and support or coordinating common functions; or, it may be delegated authority, direction, and control over specified resources for specified purposes (formerly referenced as: Executive Agent (EA)). This modifies a term defined in JP 1-02, *Dictionary of Military and Associated Words*, and is a local USSOCOM definition that has not been approved for DOD-wide use.

(b) A Lead Component serves as senior advisor to the Commander, United States Special Operations (CDRUSSOCOM) on all matters pertaining to operations, training, doctrine, safety, equipment, and interoperability for USSOCOM active and reserve forces. The Lead Component will recommend SOF baseline interoperable standards and qualifications for all Components in the designated task, skill, or capability. This includes evaluation of the skill levels produced at all USSOCOM Component schools and training facilities, to include Contractor Owned/ Contractor Operated training venues, against SOF baseline qualification requirements. The Lead Component is required to coordinate with all Components for any proposed establishment/change recommendations.

(5) **Coordinating Component.** Component having equity in a subject (skill, capability, project, activity) for the drafting or revision of policy for training standards, safety standards, doctrine, RDT&E, or equipment that apply to multiple USSOCOM Components. Coordinating Components have the authority to call meetings, establish agendas, establish Plan of Action and Milestones (POA&M), establish tasks, conditions, and standards for project deliverables.

(6) **Proficiency.** Proficiency is a thorough competency derived from knowledge, training, and currency.

(7) **Peaks of Excellence (PoE).** Advanced capabilities that exceed an established SOFBIS that are developed because of Component unique requirements for a specific SOF skill set.

d. **Authorized Supplements.** USSOCOM Components and JSOC are authorized and expected to supplement this manual to clarify and amplify procedures, to address unique operating environments and establish Component Peaks of Excellence. When Service or Component publications and USSOCOM publications conflict, USSOCOM publications take precedence. Component supplements will not be less restrictive than this manual.

e. **Requested Changes.** Subordinate units are to provide one copy of contemplated supplements or changes to USSOCOM for approval, ATTN: J7/9-T, 7701 Tampa Point Blvd, MacDill AFB, FL 33621-5323. Changes must be routed, via memorandum, through the Lead Component, ATTN: USASOC G37, U.S. ARMY SPECIAL OPERATIONS COMMAND, 2929 Desert Storm Drive, Fort Bragg, NC 28310.

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**1-7. Explanation of Terms.** Acronyms and abbreviations that do not require definition are used throughout this publication. All references to masculine pronouns, “he, him, his”, in this manual refer to all personnel, both male and female.

- a. **WARNING.** Operating procedures, techniques, etc., which will result in personal injury or loss of life if not carefully followed.
- b. **CAUTION.** Operating procedures, techniques, etc., which will result in damage to equipment if not carefully followed.
- c. **NOTE.** Operating procedures, techniques, etc, which are essential to emphasize.
- d. “Will”, “shall” and “must” indicate a mandatory requirement.
- e. “Should” indicates a recommended procedure.
- f. “May” indicates an acceptable or suggested means of accomplishment.

**1-8. Decentralized Printing of Publications.** The Publications Control Officer at the USSOCOM Components and sub-unified commands will:

- a. Secure adequate copies of this publication to make distribution to their subordinate elements.
- b. Maintain a copy of this manual on file for reprints to provide re-supply when required.

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## CHAPTER 2

### ORGANIZATION AND RESPONSIBILITIES

**2-1. General.** SOF rotary wing and tiltrotor aircraft infil/exfil operations and training is a fundamental skill set for all USSOCOM Components. It is the responsibility of individuals instructing or conducting training to maintain proficiency in established joint processes and procedures necessary for the alignment and professional execution of an institutionalized training program. This chapter delineates specific responsibilities for key personnel and organizations in the planning, preparation, and execution of infil/exfil operations and training by USSOCOM Components and sub-unified commands.

#### **2-2. Specific Responsibilities.**

a. **Headquarters, United States Special Operations Command (HQ USSOCOM).** In accordance with (IAW) Title 10 United States Code (USC), Sec.164, 167, and the Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3500.01F, *Joint Training Policy and Guidance for the Armed Forces of the United States, 19 Nov 2010* and CJCSM 3500.03B, *Joint Training Manual for the Armed Forces of the United States, 15 Aug 2008*, HQ USSOCOM will:

(1) Prepare and train assigned forces.

(2) Provide authoritative direction to subordinate Component Commanders on all aspects of Special Operations Training.

(3) Publish the annual Special Operations Training Plan (SOTP), Commander's Annual Training Guidance and the annual Command Assessment Plan.

(4) Evaluate the effectiveness of all Special Operations (SO) training to ensure SOF capabilities support Geographic Combatant Commanders (GCC) mission requirements.

b. **USSOCOM, Directorate of Operations (J3).** Identify and validate operational requirements relating to special operations infil/exfil activities.

c. **USSOCOM, Directorate of Training, Doctrine, and Capability Development (J7/9).**

(1) Serve as the Office of Primary Responsibility (OPR) for all infil/exfil training requirements, standards, Courses of Instruction (COI), and all related issues.

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(2) Manage the development of all Joint SOF doctrine, concepts, and policies for rotary wing and tiltrotor infil/exfil skill set training.

(3) Serve as Advocate for the development and alignment of JMETLs, Joint Tactics, Techniques and Procedures (JTTP) and SOFBIS.

(4) Review Defense Readiness Reporting System (DRRS) and report annually on the development of Component Mission Essential Task Lists (METLs).

(5) Conduct biennial Joint SOF Assessment Teams (JSAT) assessments of infil/exfil related individual and collective training systems to determine:

(a) Effectiveness of programs (a MET-based assessment of the unit's training program).

(b) Achievement of, and adherence to, published SOFBIS.

(c) Efficiency of resource expenditures.

(d) A baseline for measuring progress in future assessments.

(6) Serve as the SOF advocate for the executive management, funding, development, fielding and certification of training simulators, devices, and training solutions prior to approval or material acquisition by Special Operations Research, Development and Acquisition Center (SORDAC) or other acquisition authorities.

(7) Track and maintain all waivers and exceptions submitted and approved by Components and authorized subordinate commanders.

(8) Promulgate proposed changes, revise USSOCOM M 350-6 as required, distribute changes, updates, and republish manual to USSOCOM units.

(9) Report annually on the status of infil/exfil training programs to the community of interest with reference to all the above responsibilities.

**d. USSOCOM, Joint Safety Office (SOSE).**

(1) Serve as the Command POC for Safety and Risk Management issues related to infil/exfil operations.

(2) Provide infil/exfil safety guidance and assistance to Components and HQ USSOCOM staff as requested.

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(3) Ensure critical Component level safety information related to infil/exfil operations and training is cross-walked between HQ USSOCOM and all Components.

(4) Identify and provide summaries of mishap/accident trends and analysis related to infil/exfil operations and training for the Commander and key staff to review and make recommendations through appropriate channels.

**e. USSOCOM Components.**

(1) Train, maintain and report on combat readiness of assigned forces to carry out assigned missions.

(2) Develop long-range training plans that link near-term and long-term training strategies, and update and publish annually.

(3) Develop and conduct specialized infil/exfil training COI that:

(a) Ensure the SOF Baseline Interoperable Standards are achieved.

(b) Ensure equipment utilized is DOD and/or USSOCOM authorized.

(c) Capture and incorporate SOF-unique Lessons Learned.

(4) Issue amplifying regulations, instructions, directives and manuals as required.

(5) Develop and publish a Component HQ infil/exfil METL that supports the HQ USSOCOM JMETL.

(6) Coordinate with other USSOCOM Components and USSOCOM, J7/9-T to evaluate and report on the status of and required upgrades to the infil/exfil training base at the annual training conference.

(7) Direct the development and publication of subordinate unit infil/exfil METLs that support the Component Headquarters' METL, the USSOCOM JMETL, and the GCC's JMETLs.

(8) Coordinate with other USSOCOM Components and USSOCOM J7/9-T for the development and fielding of simulations, simulators, training devices, and accompanying training solutions to support infil/exfil training.

(9) In coordination with the USSOCOM Lead Component, Coordinating Components, and HQ USSOCOM, develop/contribute to infil/exfil training publications and training materials.

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(10) Provide timely reports of Class A thru C mishaps, potentially high interest accidents, and all critical safety issues that might impact other Components, for inclusion in the Joint Monthly Safety Trend Analysis Report.

**f. Lead Component.**

(1) USASOC's Lead Component overall responsibility is defined in Chapter 1. USASOC will make recommendations on training, validation and interoperability to CDRUSSOCOM through USSOCOM Directorate for Training, Doctrine and Capability Development, J7/9.

(2) Specifically, and in coordination with the Coordinating Components', USASOC shall:

(a) Conduct a JSAT assessment or a curriculum review board every 24 months to revalidate infil/exfil programs of instruction (POI) or blocks of training for all USSOCOM Components.

(b) Assess and recommend SOFBIS infil/exfil Training and TTPs for all USSOCOM Components.

(c) Assess and recommend for validation that Service and civilian curriculums or blocks of training for basic and advanced skills meet or exceed the USSOCOM infil/exfil SOFBIS.

(d) Act as the primary Component interface with appropriate USSOCOM (J7/9, SORDAC) directorates to, coordinate, publish, and distribute all applicable joint publications and periodicals pertaining to infil/exfil operations, TTPs, and authorized equipment.

(e) Lead Component will work with and through Coordinating Components to ensure functional interoperability and reduce the multiplicity of equipment currently in use, while testing, evaluating, and recommending, standardized infil/exfil related equipment to the J7/9-TR or SORDAC, as appropriate, for approval.

(f) Develop, publish, and distribute applicable safety messages, equipment bulletins, and quality deficiency reports as required.

(g) Coordinate with appropriate Program Executive Office (PEO) to address infil/exfil training, operations, equipment, and safety issues during the annual training conference hosted by the Lead Component or HQ USSOCOM.

**g. Commanders.**

(1) Ensure qualification and training of every individual participating in infil/exfil operations.

(2) Ensure infil/exfil training is conducted IAW applicable regulations and directives.

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(3) Ensure training is recorded and validated. The information will be annotated on a memorandum and maintained by the unit.

(4) Develop and implement controls for hazards identified during the risk assessment process that will reduce or eliminate risks.

**h. Mission Commander/OIC/NCOIC.**

(1) Has overall responsibility for the coordination and safe conduct of the operation. The Mission Commander may delegate his authority, but remains responsible for actions and decisions made by personnel representing him.

(2) Appoints personnel to key positions and ensures each is fully qualified to perform his respective duties (e.g., safety officer, medical personnel, assistants, liaison personnel, etc.).

(3) Conducts mission briefings (if required).

(4) Prepares Operations Order (OPORD) or Memorandum of Instruction (MOI).

(5) Ensures load plans are accurately prepared.

(6) Completes manifest of personnel and equipment.

(7) In coordination with the Air Mission Commander (AMC), may delay or terminate an operation when circumstances or safety conditions preclude safe execution.

(8) Analyzes Extraction Zones (EZ)/Landing Zones (LZ)/Pickup Zones (PZ) considering terrain, elevation, weather, hazards, and training requirements and determines equipment to be utilized for the operation.

(9) Ensures sustainment training is conducted and completed IAW this manual.

(10) Is present or represented at the joint mission briefing.

(11) Ensures that personnel wear the proper uniform and safety equipment throughout the operation.

(12) Conducts a detailed risk assessment, utilizing but not limiting himself/herself to the above stated information and briefs implementation of control measures.

(13) Ensures any possible discrepancies in TTPs between units and/or personnel participating in the training or operational mission are resolved prior to mission execution (preferably at mission briefing).

**i. Responsibilities of Key Personnel.** The planning, preparation, execution, and operational phases of infil/exfil operations are detailed in the specific chapters of this manual.

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### CHAPTER 3

#### SAFETY, PLANNING, COORDINATION and MEDICAL

**3-1. General.** The purpose of the chapter is to outline safety, planning, and coordination requirements necessary for the successful completion of SOF infil/exfil operations.

#### **3-2. Safety.**

**WARNING:** Failure to follow established standards is the leading cause of helicopter infil/exfil mishaps, injuries and deaths. Leaders at all levels must know and enforce standards.

a. SOF training is inherently dangerous. Tough, realistic training while managing and mitigating risk are congruent endeavors. Success is defined as the implementation of sound risk management principles that maximize realism and combat effectiveness while identifying mitigating risk. All hands are responsible for immediately identifying and reporting unsafe situations and environments. Safety oversight and risk management will be fully integrated into all SOF infil/exfil operations. Immediate unit commanders will complete a thorough risk assessment prior to all infil/exfil events. Training and operations assessed as high or extremely high risk must be approved by the appropriate authority. Supporting aviation units will complete a separate aviation risk assessments IAW their unit Standard Operating Procedures (SOP) and Service regulations. Individual Component and sub-unified commanders will establish training, policy and procedure for use of night vision devices (NVDs).

b. Commanders will develop and implement controls for hazards identified during the risk assessment process that will reduce or eliminate risks. After all appropriate controls have been implemented, the residual risk (i.e., remaining risk) will be determined. An overall risk level will be assigned to the training event based on the most serious residual risk and approved by the appropriate authority. The senior supported commander will review risk assessments to ensure that the entire operation has been properly assessed and appropriate controls have been implemented. Risk approval will be IAW the published guidance governing the forces conducting the training and/or operation. Commanders must continuously evaluate and manage risk and never become so overconfident on mission accomplishment that risks are ignored.

c. Tactical safety considerations pertaining to helicopter infil/exfil operations and training are too numerous and situation dependent to address comprehensively in this publication. Specific tactical questions about safety should be addressed to the appropriate publication or unit SOP. Safety reporting responsibilities are addressed in [USSOCOM Directive 385-1](#), *Joint Safety Program*.

d. USSOCOM units and personnel will comply with applicable Component and USSOCOM regulations, directives, and standards when conducting SOF training and operations. When operating on an installation, units will comply with host installation regulations, directives and policies that do not conflict with Component or USSOCOM regulations.

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If a conflict exists between the host installation regulation, directive or policy, and this or other Component/USSOCOM regulations, directives or standards, the affected unit will notify their HQs through the unit's chain-of-command for resolution.

e. **Safety Officer (SO).** For the purposes of this manual, the SO is seen as a participating member of the operation and/or training event and should not be confused with the range safety officer.

f. **Water Operations.** Personnel participating in infil/exfil training that involves intentional operations overwater will successfully complete drown proofing and a swim qualification/test IAW Service regulations as well as be "current" in their swim qualification. Commanders at all levels will ensure personnel being trained have the appropriate swimming skills to safely accomplish all required training tasks. All personnel aboard aircraft that are operating beyond autorotation glide distance of land will wear a Service-approved flotation device. For swim or dive-related operations, an authorized swimmer/diver flotation device will be worn. Inflation requirements and associated warnings are addressed in applicable chapters of this document.

### 3-3. Planning.

a. Each operation will have designated objectives. Use the reverse planning sequence to ensure all planned events support those objectives.

(1) **Ground Tactical Plan.** Determine the task organization, mission, and ground tactical plan. Coordinate with appropriate air planners for best use of aviation assets to support the plan.

(2) **Landing Plan.** Determine the best landing sequence at each EZ/LZ/PZ for personnel, vehicles, aircraft, and equipment to safely support the ground tactical plan.

(3) **Air Movement Plan.** Move personnel, vehicles, aircraft, and equipment into the objective area in the sequence decided by the landing plan. Ensure positive control of all aircraft and vehicle movements.

(4) **Marshalling Plan.** Determine marshalling areas and arrival and departure sequence for all personnel, vehicles, aircraft, and equipment. Ensure planned marshalling areas allow safe ingress and egress of aircraft and provide adequate shelter for personnel.

(5) **Alternate Plans.** Develop alternate plans for each mission to accommodate mission changes based on intelligence, weather, aircraft/equipment malfunctions, and/or communications problems. An alternate aircraft load (bump plan) is necessary if conducting a multiple-aircraft operation to facilitate assembly on the EZ/LZ/PZ in case an aircraft is unavailable.

b. The supported unit will develop and publish an Operations Order (OPORD) or Memorandum of Instruction (MOI) to ensure adequate planning for all phases of the operation. Units are encouraged to develop checklists for use in planning infil/exfil operations.

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c. An AMC will be designated for each multi-aircraft operation. The AMC will oversee all air operations, advise the ground/maritime forces commander concerning the use of aviation assets and make aviation safety decisions concerning the operation. Supporting air units will provide liaison personnel to facilitate joint planning and execution when possible.

d. Most SOF infil/exfil operations will be conducted during hours of darkness. Unit commanders should orient their training operations accordingly, taking into consideration the proficiency of personnel to operate at night.

**3-4. Seats Out/Alternate Loading Procedures.**

a. Aircraft seats may be removed in accordance with Service directives. If airland is the primary method of infil/exfil, SOF helicopter operations with seats removed (alternate loading procedures), must be approved as denoted in [Appendix G](#) of this manual. Refer to Appendix G, "Rules for Seats Out and Alternate Load Procedures" for a comprehensive approval reference for all SOF and Non-SOF scenarios. The following items will be adhered to for seats out missions:

(1) Seats out/alternate loading requests should be initiated during the planning phase of the mission.

(2) Training missions requiring seats out/alternate loading will be approved for specific operations or exercises only; blanket approvals are not authorized.

(3) During combat operations the waiver authority may authorize seats out/alternate loading for a specific period of time.

b. When seats out/alternate procedures are used:

(1) Aircrew and passengers must be secured by a seatbelt, approved harness, approved aircrew restraint system, or individual alternate restraint.

(2) Door straps should be installed over any open aircraft entry or exit point where passengers could inadvertently fall from the aircraft.

(3) Aircraft chalk leaders will ensure that each passenger is pre-briefed on when to release their restraint and the offload sequence (this is especially critical when mission time constraints prevent aircraft rehearsals).

(4) If airland is the primary method of infil/exfil, passengers will be secured from before takeoff until the aircraft lands and the aircrew signals clear to offload.

(a) Early release of restraints must be mission essential.

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(b) During training, early release of restraints must be approved by the O-6 Commander authorizing the alternate loading procedures.

(c) During combat operations, early release of restraints must be approved by the mission briefing authority/risk acceptance authority for the mission.

(d) SOF infil/exfil operations mission passengers will be secured before takeoff.

**WARNING:** Air operations without the use of seats and seatbelts or adequate alternate restraints increases the probability and severity of injury or death. Operations without seats and seatbelts should be approved for operational/training necessity only, and never for convenience or matter of habit.

**WARNING:** Individual alternate restraints must be of a length and type that prevents the individual from being ejected from the aircraft during a crash or rollover situation.

### **3-5. Coordination.**

a. Ensure that all required coordination is completed prior to execution. Even the most simple aviation operations require extensive coordination between all participants to ensure safety and success.

b. Operations outside the Continental United States (OCNUS) in support of Deployments for Training (DFT), Mobile Training Teams (MTT), Joint Chiefs of Staff (JCS) sponsored exercises, and Joint Combined Exchange Training (JCET) have unique coordination requirements not normally considered, such as:

(1) Theater and Country clearances.

(2) Customs Declarations and clearances (especially, weapons, munitions, and high technology equipment).

(3) Country Team support.

(4) Host nation (HN) support.

(5) HN approval for EZ/LZ/PZ.

(6) Air Worthiness Release (AWR) and/or Flight Clearance (FC) as required.

c. Failure to conduct the required coordination for OCNUS operations can result in strained relations between allies and/or loss of valuable training time.

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**3-6. Medical Coverage.** When conducting training, a qualified and equipped medic (18D/Special Operations Combat Medic equivalent or Emergency Medical Technician (EMT)/Advanced Trauma Practitioner (ATP) knowledgeable in Casualty Evacuation procedures will be present with a Service-approved aid bag or equivalent, packed in accordance with unit standards, with litter, cervical collar, backboard or equivalent (buoyant for water operations), traction splint, and other equipment to stabilize the injured. Medics will develop an evacuation plan and coordinate requirements necessary to expedite evacuation and treatment of personnel on and off military installations. The evacuation plan will include, but is not limited to, the following:

a. Transportation: The type of transportation selected will be safe and capable of evacuating the injured in the event of an emergency. The transportation should be covered and large enough to carry an open stretcher. If situation warrants and/or the installation cannot support a medical emergency, any safe means of transportation may be used as a last resort to evacuate the injured.

b. Medical Facilities – Locations and Capabilities.

c. Hyperbaric Chamber (if conducting associated Dive operations).

d. Emergency Telephone Numbers.

e. Radio Frequencies and Call-Signs (Range Control and Medical Evacuation).

f. Route(s) to Medical Facilities.

g. Standard 9-Line MEDEVAC request format.

**NOTE:** For the conduct of operations, a complete medical plan will be briefed in detail in the OPORD. Planners must consider the worst case scenario in the event of a mass casualty. The absence of a medic, medical equipment, or transportation will terminate the operation.

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**CHAPTER 4**

**TRAINING**

**4-1. General.**

a. SOFBIS are developed from the roles, missions and functions of Component Commands as defined in [USSOCOM D 10-1cc](#). In this directive, paragraph four in each Component applicable appendix, lists the individual functional responsibilities of Mission, Capabilities, Skills and Tasks. Using those functional terms as a hierarchy of definitions, the SOFBIS will generally be established at the TTP level between capabilities and skills required.

b. The SOFBIS task lists in the following chapters describe “what,” is to be performed in terms common to joint training. Further refinement of each capability and/or task into its respective tasks, conditions and standards describes the “how” and combined with Component unique PoE are the responsibility of the Component Commanders and their training department SME’s.

c. The SOFBIS task lists provide the joint foundation upon which Component unique PoE are built. The task lists, along with their associated Conditions and Standards, serve as the baseline for the development of the JSAT biennial training assessment.

**4-2. Infil/Exfil Capability.**

a. Helicopter infil/exfil is a unit level/collective training capability built on the successful completion of Service or Component specific individual training skill sets as annotated in Table 4.1 below. Training programs utilize the “crawl, walk, run” teaching method to thoroughly teach the basics and rapidly advance the individual where he can safely complete a helicopter infil/exfil scenario. The individual skills and additional/associated standards ([Appendix H](#)) are assessed and graded within each Component’s training cycle.

<b>Table 4.1 Infil/Exfil Overall Tasks</b>	
<b>TASK #</b>	<b>TASK</b>
1	Conduct Rappel Operations
2	Conduct Fast Rope Insertion/Extraction System (FRIES) Operations
3	Conduct Special Patrol Insertion/Extraction (SPIE) Operations
4	Conduct STABO Operations
5	Conduct Ladder Operations
6	Conduct Helocast Operations
7	Conduct Hoist Operations
8	Conduct Airland Operations

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**4-3. SOF Baseline Interoperable Standards.** The fundamentals of infil/exfil operations and training integrate all the physical, mental and environmental factors necessary to conduct highly disciplined, complex Joint operations. SOF personnel are qualified to conduct infil/exfil training and operations after the successful completion of a comprehensive Component Commander approved and USSOCOM recognized training Programs/ Courses of Instruction (POI/COI), and/or inter-deployment training cycles; and/or Contractor Owned / Contractor Operated training venues. Component training requirements and standards may be higher in any area to allow for Service or Component PoE that may be mission area specific, but at a minimum the infil/exfil SOFBIS requirements will be met.

a. **Collective Standard.** A qualified individual will be able to effectively articulate and demonstrate proficiency in the execution of simple to complex tasks associated with helicopter infil/exfil operations. They are specifically trained to conduct rapid infil/exfil by exiting or hooking up to an aircraft, using various methods, in an area that may not provide suitable landing conditions.

b. To ensure safe infil/exfil operations and training, all participants must remain proficient (proficiency is defined as “skill and knowledge beyond the minimum required for upgrade”). Initial training must be continuously reinforced at the Unit/Command level in order to maintain proficiency.

c. Component training will be METL-focused to the maximum extent possible. SOF infil/exfil skill sets training plans will be unit specific. Training will be progressive to attain/maintain the skills required to conduct operations in support of assigned missions in projected operational environments. Collective training will be integrated with other METL-focused training as much as possible.

d. Component related Tactics, Techniques, and Procedures (TTPs) are addressed in the following Service and Component directives, regulations and manuals as well as the references in the Glossary (Section II) of this manual:

(1) USASOC: FM 3-05.210, *Special Forces Air Operations*.

(2) NAVSPECWARCOM: COMNAVSPECWARCOMINST 3000.3B, *Naval Special Warfare Air Operations Instruction*.

(3) MARSOC: MCRP 3-11.4A, *Helicopter Rope Suspension Techniques (HRST) Operations*.

(4) AFSOC: AFTTP 3-3.8, *Combat Fundamentals - GUARDIAN ANGEL and Special Tactics Forces*.

**NOTE:** Ensure any possible discrepancies in TTPs between units and/or personnel participating in the training or operational mission are resolved prior to mission execution (preferably at mission briefing).

e. Personnel who have not met the SOFBIS designated herein, as a rule, will not participate in infil/exfil operations with USSOCOM units without a waiver. This paragraph should not be construed to constrain or replace the on-scene commander’s authority and responsibility during combat or contingency operations to determine the proper course of action as the prevailing circumstances dictate.

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**4-4. Sustainment Training.** Sustainment training will be conducted within 72 hours prior to training events for Rappel, FRIES, SPIE, STABO, Ladder, and Helocast operations. As a minimum, sustainment training will consist of those areas specified in the following chapters.

- a. Rappel operations, see Chapter 5.
- b. FRIES operations, see Chapter 6.
- c. SPIE operations, see Chapter 7.
- d. STABO operations, see Chapter 8.
- e. Ladder operations, see Chapter 9.
- f. Helocast operations, see Chapter 10.

**4-5. Refresher Training.**

**a. Aircraft Operations Refresher Training:**

(1) All personnel assigned or attached to units within USSOCOM must complete refresher training prior to participating in helicopter infil/exfil operations if the individual has not conducted an operation within the last 12 months. Refresher training will consist of the following as a minimum:

- (a) Fitting and wearing of any special and individual equipment.
- (b) Actions in the aircraft.
- (c) Actions during the respective infil/exfil operation.
- (d) Safety considerations.
- (e) Emergency procedures.

(2) Refresher training will be taught by a current Rappel Master (RM), Fast Rope Master (FRM), Assistant Fast Rope Master (AFRM), SPIE Master (SPM), STABO Master (SM), Cast Master (CM), or Helicopter Rope Suspension Techniques Master (HRST/M), as appropriate, and familiar with aircraft procedures and mission/safety requirements.

(3) Lesson plans will be developed and the training conducted IAW this manual and unit SOPs.

(4) Aircrew will conduct refresher training IAW the appropriate aircrew training manuals and aviation unit SOPs.

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**b. Advanced Refresher Training.**

(1) All RM, FRM/AFRM, SPM, SM, CM and HRST/M qualified personnel assigned within USSOCOM units will complete advanced refresher training if they have not performed the duties of RM, FRM/AFRM, SPM, SM, CM, HRST/M or safety of respective operation on a helicopter operation during the last 12 month period.

(2) Advanced refresher training will be taught by a current RM, FRM, SPM, SM, CM or HRST/M for the respective training to be conducted.

(3) Individual unit lesson plans will be developed to support this requirement.

c. Other Training. Refresher training, such as annual refresher training or special training for personnel may be developed and conducted at the discretion of the unit commander.

**4-6. Rappel Master (RM) Training.** USSOCOM units are authorized to conduct RM training IAW Chapter 5 of this manual. Lesson plans and outlines will be developed and forwarded to the commander who has risk acceptance authority for approval.

**4-7. Fast Rope Master (FRM) and Assistant Fast Rope Master (AFRM) Training.** USSOCOM units are authorized to conduct FRM/AFRM training IAW Chapter 6 of this manual. Lesson plans and outlines will be developed and forwarded to the commander who has risk acceptance authority for approval.

**4-8. SPIE Master (SPM) Training.** USSOCOM units are authorized to conduct SPM training IAW Chapter 7 of this manual. Lesson plans and outlines will be developed and forwarded to the commander who has risk acceptance authority for approval.

**4-9. STABO Master (SM) Training.** USSOCOM units are authorized to conduct SM training IAW Chapter 8 of this manual. Lesson plans and outlines will be developed and forwarded to the commander who has risk acceptance authority for approval.

**4-10. Cast Master (CM) Training.** USSOCOM units are authorized to conduct CM training IAW Chapter 10 of this manual. Lesson plans and outlines will be developed and forwarded to the commander who has risk acceptance authority for approval.

**4-11. Helicopter Rope Suspension Techniques Master (HRST/M).** USSOCOM HRST/M(s) will comply with this manual for the RM, FRM, SPM, SM and CM training requirements, duties and currency items published herein. Initial HRST/M training and selection will be in accordance with Component/Service requirements.

**4-12. Aircrew.** Aircrew are authorized to receive RM, FRM/AFRM, SPM, SM and CM qualification training and may serve as such during training operations. Aircrew performing these primary duties will not be included in the minimum aircrew requirements, and are not authorized to perform aircrew duties while serving as such.

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## CHAPTER 5

### RAPPEL

**5-1. General.** Helicopter rappel provides a means of insertion, with or without an LZ, using various rappel methods, equipment, and rigging procedures. Rappel provides a method for inserting SOF personnel in critical areas when the aircraft cannot land.

**NOTE:** All ropes, carabiners, locking carabiners, rappel rings, and like mountaineering equipment used for rappelling must be Service-approved. Commercial manufactured equipment (i.e., figure eight, commercial rappel seats/harnesses, etc.) may be used if approved by the appropriate Service Component command for use during these types of operations.

#### 5-2. Objectives.

- a. To prescribe qualification and training requirements for maintaining proficiency in the conduct of helicopter rappel operations.
- b. To prescribe safety requirements, rappel methods, equipment, and rigging procedures in the conduct of helicopter rappel operations.
- c. To define the duties and responsibilities of key personnel during helicopter rappel operations.

#### 5-3. Safety.

**WARNING:** Personnel will not wear a Multiple Integrated Laser Equipment System (MILES) harness during any helicopter infil/exfil operation that uses ropes, ladders, cables, hoist or flotation devices.

**WARNING:** Sheathed knives if worn will be on opposite side of braking hand.

**CAUTION:** When weapons are installed in the exit door, it is possible for gear to get entangled in the weapon during the exit sequence. Care must be taken to ensure personnel remain clear of the weapon. Crewmembers must be prepared to assist personnel as required.

a. **Briefing.** Before conducting helicopter rappel training, the RM will give a safety briefing to all personnel that includes the following instructions:

- (1) RM will be secured to an aircraft tie-down fitting during helicopter operations.
- (2) Loose clothing and equipment are secured.

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- (3) Service-approved helmets and eye protection will be worn during all rappel operations.
- (4) Rappellers will wear gloves, identification tags and earplugs, and roll down their sleeves.
- (5) Weapons are slung with the muzzle opposite the brake hand.
- (6) All rappel seats and rappel equipment must be inspected by the RM before rappelling.

(7) [Redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[Redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[Redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) At no time will personnel approach or depart the aircraft unless directed by the CE/FE/AG.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:** [Redacted] Approach from the rear of the aircraft unless directed otherwise by the CE/FE.

(8) Upon boarding the aircraft, the rappeller sits or kneels down and maintains eye-to-eye contact with the RM.

(9) The rappeller will hook-up, and apply his brake hand to the small of his back, when directed by RM.

(10) The rappeller ensures that he has a belay man on his rope at all times when conducting training at a hover site.

(11) During descent, the rappeller maintains eye-to-ground contact.

(12) If the rappeller sees his ropes coming off of the ground or sees that his belay man has lost contro of his ropes, he immediately brakes and executes a lock-in. He then waits for commands from the RM.

(13) The belay man does not wear gloves. He keeps both hands on the ropes and his head/eyes on the rappeller at all times.

(14) Belay man should wear eye protection to protect eyes from rotor downwash during the operation.

**b. Guidance.** A detailed Risk Analysis/Assessment will be conducted prior to helicopter rappel operations.

(1) **Static (Elevators) Helicopter Rappel Training.** The following rules apply to static helicopter rappel training:

- (a) A qualified RM is on each aircraft.

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(b) A belay man is assigned to each rope and is responsible for:

1. Walking the rope from beneath the aircraft during the descent. Walking the rope is defined as removing the slack from underneath the aircraft by walking backwards with the rope as the aircraft descends/lands.

2. Ensures the ropes are not caught on the aircraft skids or tires nor allowed to be blown into the main or tail rotor system.

(c) Rappellers must remain attached to the aircraft by a safety line until they have hooked up to the rappel rope.

(d) The SO maintains communications at all times with the pilot by radio and alerts the RM and pilot of any unsafe conditions.

(2) **Tactical Aircraft Rappel.** The following rules apply to tactical helicopter rappel:

(a) A qualified RM is on each aircraft.

(b) The RM will be responsible for regulating all movements toward, away, and around the aircraft.

(c) Rappellers must remain attached to the aircraft by a safety line until they have hooked up to the rappel rope.

(d) RM releases or directs the CE/FE/AG to release the rope(s) once all rappellers are clear of the ropes.

(e) The primary RM will maintain positive communications with the aircrew utilizing aircraft communication when available or prearranged hand and arm signals.

#### **5-4. Personnel Qualification Requirements.**

a. **Initial Training.** All personnel will successfully complete the initial rappel training listed below under the supervision of a RM before beginning helicopter rappel qualification training in para 5-4.d.:

(1) Identify all rappelling equipment.

(2) Demonstrate the construction and attachment of the rappel seat and the rappel rope to seat.

(3) Identify unsafe attachments, equipment, rope connection, and seat constructions.

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- (4) Define terms used in rappelling operations.
- (5) Identify knots used in rappel operations.
- (6) Know the rappel commands.
- (7) Demonstrate rappelling positions.
- (8) Exhibit satisfactory performance from a 30 to 90 foot tower:

(a) Conduct two (2) rappels without equipment to include one (1) off the free (open, no wall) side of the tower.

(b) Conduct two (2) rappels with combat equipment and weapon to include one (1) off the free (open, no wall) side of the tower.

- (9) Demonstrate the ability to lock-in.

**b. Rappel Master (RM).** Selection of personnel for qualification as a RM should be based on the individual's demonstrated leadership capabilities, maturity (E-4 or above), knowledge and experience of rappel operations. The RM meets the requirements in paragraph 5-4a. and 5-4d. and successfully completes the following training:

- (1) Responsibilities/safety requirements.
- (2) Rappel capabilities of aircraft used.
- (3) Inspection and maintenance of equipment (to include rappel seat, gloves, ropes, etc.)
- (4) Ground training and hook-ups.
- (5) Selective knots (square knot, bowline, middle-of-the-rope bowline, end-of-rope prusik, middle-of-the-rope prusik, figure-eight).
- (6) Instructional techniques (familiar with instructing rappel operations).
- (7) Rigging of the aircraft.
- (8) Conduct of rappelling operations from aircraft.
- (9) Rappel rope construction/deployment bags.

**c. Safety Officer (SO).** The SO is a qualified RM.

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d. **SOF Baseline Interoperable Standards for Helicopter Rappel Qualification.** Upon completion of a USSOCOM recognized school/course, rappelling qualified personnel will have met all standards at the appropriate levels. Component training requirements and standards may be higher in any area to allow for Service or Component PoE that may be mission area specific, but at a minimum the SOFBIS requirements for helicopter rappel qualification are:

(1) Demonstrate confidence and proficiency in the techniques, procedures, and equipment used in rappelling from a helicopter.

(2) Demonstrate knowledge of all rappelling equipment and special equipment required for helicopter operations.

(3) Demonstrate preparation of the helicopter for rappelling.

(4) Conduct three (3) rappels satisfactorily from a helicopter from a height of no less than 60 feet. Two of the three rappels must include combat equipment and weapon.

(5)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

e. **Sustainment Training.** Units will receive formalized training in the procedures to be used during Rappel operations within 72 hours prior to the operation. At a minimum, this training will include:

(1) Rigging and inspection of individual equipment.

(2) Rigging/inspection of aircraft and accompanying equipment (if applicable).

(3) Hand and arm signals.

(4) Safety requirements and emergency procedures.

**NOTE:** If assets are available, and time allows, sustainment training should include rehearsal with actual mission loads and special equipment.

f. **Refresher Training.** Refresher training is routinely conducted to maintain the acquired skills. Personnel who have not performed an aircraft rappel during the past 12 months will receive refresher training consisting of the following:

(1) Review the construction of a rappel seat, equipment to be used and hook-up procedures.

(2) Conduct two (2) rappels on a tower wall, one without equipment and one with combat equipment and weapon.

(3) Conduct two (2) rappels from the free (open, no wall) side of a tower.

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(4) Aircrews will conduct refresher training IAW the appropriate aircrew training manual and aviation unit SOPs.

(5) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

g. **Rappel Master Currency.** To remain current, RMs will execute their duties in a tactical or training exercise once every 12 months.

h. **Rappel Master Refresher Training.** If the RM does not execute his RM duties within the 12 month time frame, he will undergo a refresher class consisting of the subjects listed in the paragraph 5-4.b. above. A current RM will teach the refresher class.

### 5-5. Personnel Duties and Responsibilities.

a. **Unit Commander.** Prior to participation in training, the unit commander will ensure subordinate commanders and mission commanders screen all personnel to ensure they are physically and professionally able to participate in operations.

b. **Air Mission Commander (AMC).**

- (1) Designated by the employing aviation unit.
- (2) Ensure all aircrew understand their responsibility concerning rappelling IAW this manual.
- (3) Responsible for ensuring all aircraft insert personnel on the designated objective.

c. **Pilot-in-Command (PC).**

(1) Ensures aircrew and non-aircrew are briefed and understand their responsibilities during rappelling operations to include aircraft safety and actions in the event of an emergency.

(2) Ensures all anchor points and equipment has been inspected for completeness, functionality and proper installation.

(3) Emphasizes procedural techniques for clearing, recovery and/or jettison of the ropes.

(4) Keeps the aircraft positioned over the objective with corrections from the CE/FE/AG as required.

d. **Safety Officer (SO).** The SO has overall responsibility for the safety of all rappellers and ensures that all safety precautions are adhered to.

e. **Rappel Master (RM).** The RM also has responsibility, along with the SO, in ensuring the safety of all rappellers. The RM is in charge of training on the ground, tower, and in the aircraft. The RM ensures all equipment (installation, unit, and personal property) is serviceable. The RM personally supervises the rappelling operation.

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## 5-6. Equipment.

a. **Care of Ropes.** The rappel rope is the rappellers' lifeline. Therefore, the rappeller must ensure it is properly maintained and inspected before use. A rappel rope is unserviceable if it is saturated with petroleum products, mildewed, excessively frayed, or if one strand stands out more than half of its diameter. The life of the rappel rope is directly related to the care that the rope receives.

- (1) Remove all knots after use.
- (2) Clean and dry the rope after use.
- (3) Store the rope in a ventilated area.
- (4) Coil neatly before storage.
- (5) Inspect the rope before and after use.
- (6) Keep nylon ropes away from heat source.
- (7) Maintain a rope usage log. Refer to [Appendix B](#).
- (8) Do not allow smoking near the rope.
- (9) Keep the rope away from grease, oil, gasoline, etc.
- (10) Store a wet rope by daisy chaining.
- (11) Clean a dirty rope with a mild soap before storing.

(12) Before and after use, the rope should be carefully inspected for excessive wear, cuts, mildew, or rotten spots (an applicable annotation should be made in a corresponding rope log, DA Form 5752-R, (See [Appendix B](#)). If any of these defects are found, the rope is unserviceable. Cutting it into usable parts destroys an unserviceable rope. If no sections are usable, the rope is cut into smaller parts and discarded.

- (13) Ropes should never be spliced together, stepped on, or dragged.

b. **Snap Link Inspection.** Snap links will be inspected before, during, and after use.

(1) The metal should be checked for cracks, grooves, burrs, rust, and flaws. The gate should open and close freely without binding. There should be no lateral movement when the gate is open.

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The gate spring action should snap shut when released. The locking notch should have a slant or slot so that the gate remains shut under the impact of a rappellers fall. The gate pins should not work their way out of their holes and should not be shorter than their holes. If there is a locking mechanism, it should be inspected to ensure that threads are not stripped and that the sleeve tightly locks the gate.

(2) If burrs, grooves, or rough areas are identified, the snap link should not be used. Rust should be removed with steel wool and the snap link wiped down with a clean dry cloth to remove all traces of oils or solvents. The spring should be lubricated using a dry graphite-based lubricant since such lubricants do not attract dirt.

(3) Refer to paragraph 5-1 "Note" for approved snap links.

**5-7. Operational Requirements.**

a. **Operational Requirements.** The following section discusses the medical and communications requirements, and the procedures to follow during unusual conditions (adverse weather/terrain conditions, night operations). Personnel must use sound judgment to determine what action to take depending on the nature and severity of the condition.

(1) **Medical Coverage.** See requirements in paragraph 3-6.

(2) **Communications Requirements.** During aircraft rappel training, the RM and SO will maintain radio communications with the aircrew/aircraft. Voice communications are required prior to commencing air rappelling, unless communications-out operations have been planned and coordinated. Additionally, the RM or SO will inform the PC to stop operations if an unsafe condition develops.

(3) **Adverse Weather/Terrain Conditions.** Rappel operations will not be conducted under the following conditions:

(a) Wind chill factors caused by rotor downwash, cruise airspeeds, and duration that could cause cold weather injuries through exposure.

(b) Water or ice on the rope inhibiting the ability of the rappellers to control their descent.

(c) The rope is exposed to the elements for a sufficient length of time to freeze, thereby reducing its tensile strength.

(d) Conditions, to include blowing particles produced by rotor downwash, that cause the aircrew or RM to lose visual contact with the ground.

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**(4) Night Operation Requirements.**

(a) Two chemlights/light sources will be attached at the end of each rope, log coil, or deployment bag.

(b) One chemlight/light source will be secured to the attachment point of the rope.

(c) Individual Component and sub-unified commanders will establish training, policy and procedure for use of NVDs.

**b. Aircraft Rappelling.**

(1) **Hand Signals for Directing Aircraft Movement.** Hand signals are in [Appendix A](#).

(2) **Deployment of Ropes.** Deployment of ropes from a helicopter is a critical task. It can cause a planned rappelling operation to fail, or it can increase the time required to conduct the operation. This is due to the likelihood of the ropes becoming entangled (fouled). To prevent this, ropes must be deployed using a positive control technique. Three of the techniques that may be used are listed below:

(a) **Deployment Bag Technique.** The rappeller places the deployment bag (standard) on a flat surface with the stow loop facing upward. If the deployment bag still has a static line, the rappeller removes it by cutting the static line where it attaches to the bag. A 12-foot section of the static line can be used as safety line in the aircraft.

**NOTE:** Deployment bag may need to be weighted.

(b) **Log Coil Technique.** The rappeller lays the running end of the double rope along the length of the coiling log. He then coils the double rope around both the running end of the rope and the coiling log. The rope must be coiled evenly and tightly.

**(c) Individual Rope Bag.**

1. The kernmantle is the only style rope used with this technique. This technique is used when it is foreseen the rope will become entangled with obstacles within the rappel area. The rappeller fastens a small rope bag to his rappel harness or equipment belt on the brake hand side of his body. The bag will hang approximately calf high. The running end (bottom) of the rope will have a larger locking snap link or the large end of a separate figure eight secured to the end of the rope.

2. The purpose of the large locking snap link or figure eight is safety. In the event the rappeller comes to the end of his rope prior to contact with the ground, this device will stop the rappeller. The large locking snap link or figure eight goes into the bag first, and the rope is then reverse coiled into the bag.

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**NOTE:** Alternate rigging IAW Service-approved Air Worthiness Release (AWR) and/or Flight Clearance (FC) is authorized.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Rappelling Operations.**

(b)(3)(10 U.S.C. § 130)

(2) **Rigging.** The RM rig [REDACTED] helicopter IAW current Service and Component directives, regulations and manuals as well as the references in the [Glossary \(Section II\)](#) of this manual to include current AWR/FC/Unit SOP.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(3) **Inspection/Safety Considerations.** The RM, with assistance from the CE/FE/AG, conducts the following:

- (a) Removes all seats.
- (b) Locks the doors in the open position. If no locks are present, remove doors to include small cargo doors.
- (c) All loose objects in the cargo compartment are secured or removed.
- (d) Pads and tapes all sharp edges on the floor, door ledge, and all protrusions on the skids. Ensures each door ledge has a scuff pad to protect the rope from contacting the metal door ledge.
- (e) Ensures primary and secondary rappelling anchor points are serviceable and securely attached to the aircraft structure.
- (f) If available, the headset/helmet and intercommunications (INTERCOM) jack for the RM is secured overhead.
- (g) Serviceable restraint harness is available for the RM.

(4) **Rappelling Procedures.** The RM ensures all personnel adhere to the rappelling procedures IAW current Service and Component directives, regulations and manuals as well as the references in the [Glossary \(Section II\)](#) of this manual to ensure the safe and efficient execution of the operation. These procedures will be rehearsed under the supervision of the RM. The pilot issues time warnings at 10-minute, 6-minute, and 1-minute intervals or as pre-briefed by the RM.

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

Rappelling Operations.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) **Rigging.** The RM rigs [redacted] helicopter IAW current Service and Component directives, regulations and manuals as well as the references in the [Glossary \(Section II\)](#) of this manual to include current AWR/FC/Unit SOP.

(3) **Inspection/Safety Considerations.** The RM and pilot (or his representative) conducts a joint inspection of the aircraft to ensure the safety of all personnel and serviceability of equipment.

(a) Cargo doors are locked in the open position or cleared for closing, depending on the mission.

(b) All loose objects in the cargo compartment are removed or secured forward.

(c) Sharp edges or protrusions on the cargo floor and door ledges that may come in contact with the rappeller or his rappelling rope are taped.

**NOTE:** Do not tape the door latches or handles. This can interfere with door operations.

(d) Primary and secondary rappelling anchor points are serviceable and securely attached to the aircraft structure.

(e) A headset/helmet and INTERCOM jack for the RM should be available and operational, and the INTERCOM extension cord is secured overhead.

(f) Serviceable restraint harness is available for the RM (provided by supported unit).

(g) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[redacted] Manual states otherwise.

(h) All rope(s) are retrieved or released before forward movement/descent of helicopter.

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(4) **Rappelling Procedures.** The RM ensures all personnel adhere to the rappelling procedures IAW current Service and Component directives, regulations and manuals as well as the references in the [Glossary \(Section II\)](#) of this manual to ensure the safe and efficient execution of the operation. These procedures will be rehearsed under the supervision of the RM. The pilot issues time warnings as pre-briefed.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Rappelling Operations.**

(b)(3)(10 U.S.C. § 130)

(2) **Rigging.** The RM rig [redacted] helicopter IAW current Service and Component directives, regulations and manuals as well as the references in the [Glossary \(Section II\)](#) of this manual to include current AWR/FC/Unit SOP.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(3) **Inspection/Safety Considerations.** The RM and pilot (or a designated representative) conduct a joint inspection of the aircraft to ensure the safety of all personnel and serviceability of equipment and cover critical roping safety considerations.

(a) Tie-down fittings and Fast Rope bars, if used, are serviceable.

(b) All sharp or protruding edges that may come in contact with the rappelling ropes are padded or taped.

(c) All ropes are retrieved or released before forward movement/descent of the aircraft.

(d) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(4) **Rappelling Procedures.** The RM ensures all personnel adhere to the rappelling procedures IAW current Service and Component directives, regulations and manuals as well as the references in the [Glossary \(Section II\)](#) of this manual to ensure the safe and efficient execution of the operation. These procedures will be rehearsed under the supervision of the RM. The pilot issues time warnings as pre-briefed.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Rappelling Operations.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) **Rigging.** The RM rigs [redacted] AW current Service and Component directives, regulations and manuals as well as the references in the [Glossary \(Section II\)](#) of this manual to include current AWR/FC/Unit SOP. [redacted]

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(3) **Inspection/Safety Considerations.** The RM and pilot (or his representative) conducts a joint inspection of the aircraft to ensure the safety of all personnel and serviceability of equipment and cover critical roping safety considerations.

- (a) Tie-down fittings are serviceable.
- (b) All sharp or protruding edges that may come in contact with the rappelling ropes are padded or taped.
- (c) All ropes are released before forward movement/descent of the aircraft.
- (d) Only one rappeller may be deployed at a time

**CAUTION:** The maximum amount of personnel at any given time on the ramp is three. This total amount includes the crew chief or flight engineer.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(5) **Rappelling Procedures.** The RM ensures all personnel adhere to the rappelling procedures IAW current Service and Component directives, regulations and manuals as well as the references in the [Glossary \(Section II\)](#) of this manual to ensure the safe and efficient execution of the operation. These procedures will be rehearsed under the supervision of the RM. The PC issues time warnings as pre-briefed.

**5-8. Safety Procedures.**

a. Should an emergency develop during rappelling, personnel will apply the distress, help or pick me up hand and arm signal by waving one hand overhead (see [Figure A-6](#)) to inform the crew. The pilot should lower the member to the ground or water safely.

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b. A knife or similar tool must be readily available in the event the rope needs to be cut due to an emergency.

**5-9. Signals and Commands.**

- a. All signals and commands between the aircrew and the supported unit will be coordinated.
- b. Hand signals for directing helicopter movement are contained in [Appendix A](#).
- c. Emergency signal from aircraft to personnel on rope(s) is activation of the aircraft's lower anti-collision light.

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CHAPTER 6

FAST ROPE INSERTION/EXTRACTION SYSTEM (FRIES)

**6-1. General.** The FRIES is used when a fast exit into a small or restricted area, to include overwater operations, is required. It provides a method for inserting and extracting SOF personnel in critical areas when the aircraft cannot land. When mission requirements include large amounts of equipment, or heavy crew-served weapons, unit SOPs will determine the technique of employment to ensure safety of personnel and equipment.

**NOTE:** Fast Rope operations are not approved for Army-wide use. SOF, Long Range Surveillance Detachments (LRSD), and Department of the Army (DA) schools with a USASOC approved program of instruction (POI) are the only approved Army units. All other Army supported units must receive approval through, Commander, USASOC, (AOOP-TID), Fort Bragg, North Carolina 28310-5200, prior to conducting any FRIES training/operations.

**6-2. Objectives.**

- a. To prescribe qualification and training requirements for maintaining proficiency in the conduct of Fast Rope operations.
- b. To prescribe safety requirements, Fast Rope methods, equipment and rigging procedures in the conduct of Fast Rope operations.
- c. To define the duties and responsibilities of key personnel during Fast Rope operations.

**6-3. Safety.**

**WARNING:** Personnel will not wear a MILES harness during any helicopter infil/exfil operation that uses ropes, ladders, hoist or flotation devices.

**WARNING:** Rope(s) will not be deployed until the aircraft is at a stabilized hover directly over the designated objective and the signal “ropes” is given by the CE/FE/AG to the FRM. Rope(s) must be fully recovered inside the aircraft or jettisoned prior to the aircraft departing.

**WARNING:** [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) until the aircraft is at a stabilized hover and given the signal by the CE/FE. Injury or death may occur.

**WARNING:** [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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**WARNING:** Injury or death may occur if ropers/personnel fall out of the aircraft during an operation requiring door straps to be removed.

**WARNING:** Ropes will not be jettisoned until all ropers have exited the aircraft and are clear of the rope(s) or secured in the aircraft.

**WARNING:** [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**WARNING:** Only Service-approved personnel lowering systems are authorized for use.

**WARNING:** The importance of a stabilized hover cannot be overemphasized. Ensure the aircraft maintains the lowest hover possible to conduct this operation.

**WARNING:** [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**WARNING:** [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[REDACTED]

**WARNING:** [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[REDACTED]

**WARNING:** The wearing of body armor during extraction operations can result in life-threatening situations due to the extraction harness causing the body armor to ride up and cause choking and/or reduce the flow of blood to the brain. If body armor is required, body armor with a cut away section below the [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) If other types of body armor are used, extreme care will be taken to monitor personnel for signs of choking/unconsciousness during extraction training.

**CAUTION:** [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[REDACTED]

**CAUTION:** The FRM will evaluate the roper's ability to conduct a controlled descent with his mission equipment during FRIES sustainment training. If the roper is unable to control descent during sustainment training, the FRM will direct the load be decreased until he can descend safely. Equipment that, due to its weight or bulk, cannot be carried by personnel during FRIES operations may be lowered by a lowering system.

**CAUTION:** Ropers will not place the rope between their groin and knees, this action may result in severe burns and discomfort. Approximately two-thirds down the rope slow the descent and keep a sharp lookout to avoid collision with fellow ropers.

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**CAUTION:** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) Personnel and equipment weights must not exceed the FRIES Bar capabilities.

**CAUTION:** The aircrew is responsible for ensuring accurate rigging of belay (lowering) equipment and safe deployment from the aircraft.

a. **Briefing.** Before conducting helicopter FRIES training, the FRM will give a safety briefing to all personnel that includes the following instructions:

- (1) Identification of key personnel, their duties and responsibilities.
- (2) Area hazards.
- (3) General tower/aircraft safety/emergency procedures.
- (4) Equipment associated with FRIES and its characteristics.
- (5) Personal equipment inspection.
- (6) Dog handling equipment inspection.
- (7) Methods of insertion/extraction to be used.
  - (a) Personnel
  - (b) Dog Handler / MPC
- (8) Hand and arm signals/emergency signals.
- (9) Medical coverage.
- (10) Communications requirements.
- (11) Night operation requirements.
- (12) Seats out operations.
- (13) Aircraft emergency shutdown procedures.

b. **Guidance.** A detailed Risk Analysis/Assessment will be conducted prior to FRIES operations.

- (1) The following equipment is required for all FRIES training/operations:

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- (a) Heavy work gloves.
- (b) Service-approved helmet (chinstrap fastened).
- (c) Eye Protection.
- (d) ID tags.
- (e) Sleeves down.
- (f) Hearing protection (when applicable).

(2) FRIES operations will not be conducted in densely wooded areas unless there are clear area(s) large enough to support the rope operation.

(3) All night FRIES operations will be regarded as no less than medium risk for the personnel conducting rope operations.

(4) Commanders will personally approve FRIES sites selected (on-site inspection is not required).

(5) The FRIES site must be selected so as to permit the ropers to clear the rope upon touching ground.

(6) During water operations training, safety boat (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) with motors running must be present prior to conducting overwater operations. The boat operators will be trained to operate the equipment they are using. All boat crew personnel will wear flotation devices.

(7) A minimum of one safety swimmer will be aboard each safety boat. The swimmer will be a graduate of the Combat Diver Qualification Course or a USSOCOM-approved waterborne infil course, scout swimmer course, or current Red Cross lifesaver or water safety instructor course. The safety swimmer must have swim fins, a face mask, and a Service-approved personal flotation device to help personnel, as needed. The swimmer cannot be the boat driver.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

#### 6-4. Personnel Qualification Requirements.

a. **Initial Training.** All personnel will successfully complete the initial FRIES training listed below before beginning FRIES qualification training in paragraph 6-4.d.:

- (1) Authorized by an O5 level commander to conduct FRIES training.
- (2) Briefed on the FRIES system, its purpose, capabilities, limitations, and emergency procedures.
- (3) Briefed on the duties and responsibilities of the PC, crewmembers and FRM/AFRM.

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(4) Complete hands-on training on the FRIES system.

(5) During descent, demonstrate the ability to use hands and feet to stop and hold a static position on the rope for 5 seconds, without difficulty, while wearing all required combat equipment.

(6) Demonstrate the ability to execute a controlled descent from a height of 10-15 feet.

(7) Requirements in Chapter 3, paragraph 3-2.f. for water operations.

(8) Aircrews will be qualified to perform their duties IAW an approved aircrew training program.

b. **Fast Rope Master (FRM).** Selection of personnel for qualification as a FRM should be based on the individual's demonstrated leadership capabilities, maturity (E-4 or above), knowledge and experience of FRIES operations. Personnel are qualified to perform the duties of FRM after they have met the requirements in paragraph 6-4.a. and 6-4.d., as well as the successful completion of the FRM training course. FRM training will include the following:

(1) Receive instructions and demonstrate proficiency on mounting the Fast Rope to the Fast Rope bar, and inspecting and preparing the aircraft for FRIES operations (i.e., - tape those items and areas that might be an obstacle or hazard to the Fast Ropers exiting the aircraft).

(2) Receive instructions and demonstrate proficiency in the performance of the following FRM duties:

(a) Coordination responsibilities.

(b) Troop briefings ([Appendix C](#)).

(c) Organization of the stick.

(d) Time warnings/commands.

(e) Deploying and retrieving ropes.

(f) Releasing and stopping the stick.

(g) Hand and arm signals.

(3) During FRM qualification training, personnel will participate in a total of seven (7) operations:

(a) Participate in three (3) operations from a Fast Rope tower, (2 day/1 night).

(b) Participate in four (4) operations from an aircraft, (2 day/2 night).

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(c) During the training requirement in item (3)(b) above, the individual will serve as the FRM on at least two (2) day operations and one (1) night operation.

c. **Assistant Fast Rope Master (AFRM).** Personnel performing these duties will be current FRMs.

d. **SOF Baseline Interoperable Standards for FRIES Qualification.** Upon completion of a USSOCOM recognized school/course, FRIES qualified personnel will have met all standards at the appropriate levels. Component training requirements and standards may be higher in any area to allow for Service or Component PoE that maybe mission area specific, but at a minimum the SOFBIS requirements for FRIES qualification are:

(1) **FRIES Infiltration.**

(a) Demonstrate, from a platform/tower, the proper techniques for boarding the aircraft, movement in the aircraft, grasping the Fast Rope, exit procedures, and descending the Fast Rope

(b) Conduct two (2) successful Fast Rope descents from a platform/tower (one without and one with combat equipment and weapon). Platform/tower height range is from 15 to 60 feet.

(c) Conduct three (3) aircraft insertions without equipment, (2 day/1 night).

(d) Conduct two (2) aircraft insertions with combat equipment and weapon, (1 day/1 night).

**NOTE:** Initial aircraft training will not exceed 30 feet during first Fast Rope descent. Units should conduct FRIES training at the lowest altitude possible. There is no additional training value to higher altitudes, only increased chance of injury (40 feet is the recommended altitude).

(e) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) **FRIES Extraction.**

(a) Demonstrate the proper techniques for donning the approved harness and connecting the harness and equipment to the FRIES.

(b) Conduct three (3) aircraft extractions without equipment, (2 day/1 night).

(c) Conduct two (2) aircraft extractions with combat equipment and weapon, (1 day/1 night).

e. **Sustainment Training.** Units will receive formalized training in the procedures to be used during Fast Rope operations within 72 hours prior to the operation. At a minimum, this training will include:

(1) Rigging and inspection of individual equipment.

(2) Rigging/inspection/procedures for the specific aircraft to be used and accompanying equipment.

(3) Hand and arm signals.

(4) Safety requirements and emergency procedures.

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- (5) Conduct of Troop briefing ([Appendix C](#)).

**NOTE:** If assets are available, and time allows, sustainment training should include rehearsal with actual mission loads and special equipment.

f. **Refresher Training.** Personnel who have not participated in FRIES operations during the past 12 months will undergo refresher training before being included in an operation. Refresher training for Fast Ropers consists of:

(1) A complete review of the FRIES system, its purpose, capabilities, limitations, emergency procedures.

(2) The execution of at least one (1) day and one (1) night FRIES (one without equipment, one with combat equipment and weapon) descent from a Fast Rope tower.

(3) The execution of at least one (1) day and one (1) night FRIES (one without equipment, one with combat equipment and weapon) descent from an aircraft.

(4) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(5) Aircrews will conduct refresher training IAW the appropriate aircrew training manual and aviation unit SOPs.

**NOTE:** Due to the inherent danger involved in the FRIES technique, commanders will consider initial qualification training to replace refresher training if the individual(s) have either exceeded 24 months or lack proficiency in the task.

g. **Fast Rope Master Refresher Training.** FRM refresher training is conducted IAW paragraph 6-4.f. and includes the execution of at least one FRM operation under the observation of a current FRM.

**6-5. Personnel Duties and Responsibilities.** The following personnel duties and responsibilities help to reduce/prevent most of the accidents that can occur when conducting FRIES operations. They also ensure thorough and effective training. All personnel involved in FRIES operations will plan and rehearse their tasks.

a. **Unit Commander.** Prior to participation in training, the unit commander will ensure subordinate commanders and mission commanders screen all personnel to ensure they are physically and professionally able to participate in operations.

b. **Air Mission Commander (AMC).**

(1) Designated by the employing aviation unit.

(2) Ensure all aircrew understand their responsibility concerning FRIES IAW this manual.

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(3) Responsible for ensuring all aircraft insert/extract personnel on the designated objective.

**c. Pilot-in-Command (PC).**

(1) Ensures aircrew and non-aircrew are briefed and understand their responsibilities during FRIES operations, including aircraft safety and actions in the event of an emergency.

(2) Ensures the FRIES assembly has been inspected for completeness and functionality with no visible metal fatigue or other structural weakness, and that it is installed properly.

(3) Emphasizes procedural techniques for clearing, recovery, and jettison of the Fast Ropes and/or for the aircraft prematurely departing the objective.

(4) Keeps the aircraft positioned over the objective with corrections from the CE/FE/AG as required.

**d. Fast Rope Master (FRM).** A FRM will be designated for each aircraft and has overall responsibility for the serviceability of the Fast Rope and safety of all Fast Ropers during conduct of operations, ensuring that safety precautions outlined in this manual are adhered to and is responsible for the following:

(1) Coordination of all aspects of troop and unit preparation to include procurement of sufficient FRIES equipment for the operation.

(2) Coordination of all support activities.

(3) Proper preparation of FRIES equipment. (Security and attachment of hardware)

(4) Adherence to the published time schedule and sequence of events of the operation.

(5) Assignment of qualified personnel to the duties of AFRM, and other key positions as required by the operation.

(6) Strict adherence to procedures for the planning, preparation, and execution of the operation as outlined in this manual, training circulars, unit SOPs, and local directives related to the specific training.

(7) Ensures that the mission commander is briefed on the training being conducted.

(8) Ensures that FRIES operations are conducted over terrain that permits the aircrews/FRMs/AFRMs to have visual contact with the ground, vegetation, or water.

(9) Relays time warnings.

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**NOTE:** Primary FRM will maintain positive communication with aircrew utilizing aircraft communication when available or prearranged hand and arm signals.

(10) Ensures that all personnel understand the techniques and responsibilities for FRIES operations. Ensures that one AFRM for each rope being used is onboard the aircraft when operating with more than one rope, and that the AFRM, once signaled by the FRM, deploys the ropes.

**NOTE:** [REDACTED] ← (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) he CE/FE/AG may deploy the rope(s) as briefed.

(11) Performs safety and serviceability checks on all FRIES and rigging equipment.

(12) Ensures the proper seating arrangement for all Fast Ropers, to include personnel restraints, and procedures in case of an emergency landing.

(13) Measures each rope to confirm length and informs the PC and CE/FE/AG.

(14) Verifies the aircraft is at a stabilized hover.

(15) Once signaled by the CE/FE/AG, authorizes the deployment of the rope(s).

**NOTE:** [REDACTED] ← (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) E/FE/AG receives the command from the PC, and deploys the rope(s) as briefed.

(16) Ensures the rope is free of obstruction and that a minimum of 5 feet (chemlights/light sources for night operations) of rope is on the ground.

(17) Briefs the correct method of deploying the Fast Ropes based on the following:

- (a) Height of the aircraft above the objective and length of rope.
- (b) LZ characteristics (i.e., rooftop, a large field).
- (c) Who will deploy the Fast Ropes.
- (d) When the Fast Ropes will be deployed.
- (e) Confirmation of the correct objective.
- (f) Designates one of the AFRMs as his replacement if he is unable to perform duties as FRM.

e. **Assistant Fast Rope Master (AFRM).** The AFRM will be a current FRM and assist the FRM in conducting FRIES operations. He will become the FRM should the FRM be unable to perform his duties. The AFRM:

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(1) Is responsible for rigging of the Fast Rope. Is responsible for the rope deployment after the FRM gives the signal for “Ropes” (on th (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) may deploy the rope(s)).

(2) Checks the rope after deployment and prior to anyone descending, ensuring that the FRIES attachment loops or a minimum of 5 feet (chemlights/light sources for night operations) are on the ground.

(3) Is the first man down rope after deployment, unless briefed otherwise by the FRM.

**WARNING:** Rope(s) will not be deployed until the aircraft is at a stabilized hover directly over the designated objective and the signal “ropes” is given by the CE/FE/AG to the FRM. Rope(s) must be fully recovered inside the aircraft or jettisoned prior to the aircraft departing.

f. **Crew Chief (CE)/Flight Engineer (FE)/Aerial Gunner (AG).** One individual will be designated for each rope being used. The crewmembers:

**NOTE:** Crewmembers may prepare and inspect the FRIES system and equipment located on the aircraft if an FRM is not available prior to conducting FRIES operations.

(1) Conduct pre-operational check (inspection) on FRIES assembly IAW the operator’s manual/checklist/AWR/FC.

(2) Relay time warnings.

(3) Signal the FRM to deploy ropes, after receiving command from pilot and verifying the aircraft is over the objective, at a stabilized hover.

(4) Signal the AFRM after verifying that the FRIES attachment loops (or a minimum of 5 feet of rope) are on the ground (chemlights/light sources for night operations) and clear of obstructions.

**NOTE:** If the AFRM can positively identify the rope is on the ground, he is not required to wait on the signal from the CE/FE/AG before exiting the aircraft, except for th (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) he AFRM must wait on the signal from the CE/FE/AG on (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(5) Observe the exit of the ropers.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(6) Ensures the aircraft remains over objective and advises of aircraft drift.

(7) Verify/ensure the rope and site remain safe throughout the Fast Rope operation. If the CE/FE/AG identifies an unsafe condition, the CE/FE/AG will signal ropers using either the stop stick (closed fist) or the fouled rope (closed fist, arms over-lapped forming an X) hand and arm signal. Additionally, the CE/FE/AG will keep the pilots informed of the existing situation.

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(8) Will ensure rope is clear of ropers prior to jettisoning. The CE/FE/AG will not jettison any rope until all ropers have exited the aircraft and cleared the rope(s) or ensure personnel are secured in the aircraft prior to rope release.

**NOTE:** The FRM and the CE/FE/AG are responsible for the safe conduct of the FRIES operation. Because there is considerable overlap between the duties and responsibilities of these personnel, they must coordinate closely before the operation to determine who is performing each duty.

**g. Individual Ropers will:**

(1) Understand all aspects of the FRIES and emergency procedures.

(2) Ensure correct equipment configuration.

(3) Maintain an orderly and rapid exit formation.

(4) Grasp rope firmly before exiting (do not jump for the rope).

(5) On exit, rotate body 90 to 180 degrees to clear the aircraft.

(6) Descend down rope controlling speed, breaking two thirds of the distance down to avoid landing on other ropers.

(7) Upon landing, be prepared to execute a good parachute landing fall (PLF) if necessary, and move rapidly away from the ropes avoiding the front of the aircraft.

(8) [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(9) Not carry equipment that, because of its dimensions or bulk, will interfere with the ability to safely execute FRIES training. Belay this equipment down in order to prevent injuries to personnel and/or damage to equipment.

**CAUTION:** The FRM will evaluate the roper's ability to conduct a controlled descent with his mission equipment during FRIES sustainment training. If the roper is unable to control descent during sustainment training, the FRM will direct the load be decreased until he can descend safely. Equipment that, due to its weight or bulk, cannot be carried by personnel during FRIES operations may be lowered by a lowering system.

(10) Maintain a 24-inch interval between their feet and the helmet of the roper below them.

(11) In the event of an emergency, ropers will "lock-in" by wrapping one leg around the rope and standing on the rope with the other foot.

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**6-6. Equipment.**

a. **System Description.** The FRIES consists of Fast Ropes, personnel extraction harnesses, extraction bridles and FRIES special mission kits.

**(1) Fast Rope.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**(2) Extraction Harness.** A Service-approved harness and secondary safety line will be used as the extraction harness for FRIES (see Figures 6-11, 6-12 and 6-14).

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(a) Personnel will ensure that their individual harnesses are properly fitted and worn, with minimal slack in the leg straps to prevent the harness from riding up during extraction.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) Because of continuing changes in load bearing equipment designs and the introduction of protective equipment such as body armor, all equipment must be carefully inspected after rigging to ensure that all equipment is compatible with the harness being used and does not create an unforeseen hazard for personnel.

**(3) FRIES Hardware Kit.**

**(a)**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(see Figure 6-

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**(b)**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

b. **Equipment Inspection.** Before conducting a Fast Rope operation, the equipment must be inspected for serviceability. The FRM and AFRM perform the following checks and observations:

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(1) **Rope.**

(a) Before conducting a Fast Rope operation, thoroughly inspect the Fast Rope and verify length. Check the eyelets on the end for excessive wear. Check the rope along its entire length for fraying. Snags in the rope from normal use do not weaken the rope. Also, do not use a rope with several frayed strands in one spot. When the Fast Rope becomes wet, S-fold or hang it in a dry, warm area to dry completely before further uses. When the Fast Rope is used in saltwater, wash it in fresh water before drying.

(b) Inspect the rope for contamination of acid, alkaline compounds, salt water, fire extinguishing solutions, or petroleum-based solvents. Although used ropes gradually change color, such changes do not indicate a decrease in strength unless the change is due to contact with strong chemicals. Changes in color caused by chemicals are spotted; changes occurring because of use are uniform throughout the length of the rope.

(c) Measure and tag rope with the proper length.

(2) **Special Mission Hardware Kit, I-Bar.** Inspect for security and condition of the Fast Rope bar IAW current aircraft AWR/FC/Checklist.

c. **Care and Maintenance of FRIES Rope.**

(1) Proper care of the Fast Rope is required. A chemically active environment can degrade the strength of the ropes.

(2) The ropes will be stored safe from harmful fumes, heat, chemicals, moisture, sunlight, rodents, and biological attack. The ropes will be stored in a dry place, on grating where air circulates freely.

(3) Ropes will not be stored unless they are clean. Hang the ropes in loops over a bar or beam, and spray with water to remove the dirt. The spray should not be so powerful that it forces the dirt into the fibers. After washing, allow ropes to dry and shake them to remove the rest of the dirt.

**6-7. Operational Requirements.**

a. **Operational Requirements.** The following section discusses the medical and communications requirements, and the procedures to follow during unusual conditions (adverse weather/terrain conditions, night operations). Personnel must use sound judgment to determine what action to take depending on the nature and severity of the condition.

(1) **Medical Coverage.** See requirements in paragraph 3-6.

(2) **Communications Requirements.** During FRIES training, the FRM and SO will maintain positive communication with the aircrew by utilizing air to ground communication. If there is a loss of communication between the SO and aircrew, terminate training until communication is reestablished.

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Additionally, the FRM or SO will inform the PC to stop operations if an unsafe condition develops. During extractions, the SO (via the FRM) will inform the PC that all personnel are ready for extraction. During tactical missions, prearranged signals will be used to communicate between the mission and aircrew personnel (i.e., flashing light or chemlight/light source signals).

(3) **Adverse Weather/Terrain Conditions.** During the risk assessment for FRIES training the following conditions will be considered:

(a) Wind chill factors caused by rotor downwash, cruise airspeeds, and duration that could cause cold weather injuries through exposure.

(b) Water or ice on the rope inhibiting the ability of the roper to control their descent.

(c) The rope is exposed to the elements for a sufficient length of time to freeze, thereby reducing its tensile strength.

(d) Conditions, to include blowing particles produced by rotor downwash or water spray, that cause the aircrew or FRM to lose visual contact with the ground.

(4) **Night Operation Requirements.**

(a) [Redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[Redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) [Redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[Redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(c) [Redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[Redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(d) Individual Component and sub-unified commanders will establish training, policy and procedure for use of NVDs.

b. **Training Altitudes.** FRIES should always be done at the lowest altitude possible. The length of the rope should not dictate proficiency training from aircraft. There is no additional training value to higher altitudes, only increased chance of injury.

**6-8. Aircraft Rigging.**

**NOTE:** Alternate rigging IAW Service-approved AWR/FC is authorized.

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

a. **Rigging of Fast Rope** [redacted] **NOTE:** For Fastrope operations using the [redacted] ee  
COMNAVSPECWARCOMINST 3000.3B).

(1) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:** [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) CEs/FEs/AGs will instruct passengers on the procedure.

(2) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(4) Inspect the FRIES hardware for cracks, corrosion, and security hardware IAW the Operator's Manual/Checklist/AWR/FC.

(5) Rig the Fast Rope to the Fast Rope bar as follows:

(a) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[redacted] (b)(3)(10 U.S.C. § 130)

(b) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(c) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[redacted] (b)(2), (b)(3)(10 U.S.C. § 130), (b)(7)(E)

(d) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see [Figure 6-2](#)).

(e) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

b. **Rigging of the Fast Rope Deployment Bag System from** [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**WARNING:** [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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**CAUTION:**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:** Aircrew calls (commands) may be different between these rigging procedures and the Aircrew Training Manual (ATM). The ATM will take precedence.

**NOTE:** Chemlights are optional for day operations.

**(1) PREFLIGHT PROCEDURES.**

**(a) Operations.**

1. Remove the Fast Rope from the Fast Rope Bag and inspect it in accordance with TM 10-1670-262-12&P. Inspect the Fast Rope Bag and the two large attaching rings (see [Figure 6-24](#)) for serviceability.

2. Attach the Fast Rope to the attaching loop on the bag (see [Figures 6-25 and 6-26](#)); back coil the Fast Rope back into the bag.

3. Secure the Fast Rope Bag with hook pile tape and a plastic buckle (see [Figure 6-27](#)).

4. Inspect the attaching hardware for serviceability (release strap with either

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**(b) Night Operations.**

1. Preflight the Fast Rope Bag by installing four chemlights to the bottom attaching loops and four chemlights to the equipment rings on the top of the bag (see [Figure 6-29](#)).

2. Remove the Fast Rope from the bag and install chemlights 5 inches from the end of the Fast Rope and activate.

3. Install chemlights on the release handles and secure with retainer bands (see [Figure 6-39](#)).

**(2) INSTALLATION PROCEDURES.**

**(a) Inspect the FRIES bar. Remove**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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**NOTE:** If safety lanyard is used, it will be secured t (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) Ensure the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figure 6-34).

(c) Attach the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figure 6-40).

(d) Attach both the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figure 6-41).

(e) Adjust the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figure 6-42).

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(f) Adjust the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figure 6-43).

**c Rigging of Fast Rope to MH-6.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(1) Inspect the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figure 6-4).

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) Remove the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(3) Insert the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(4) (b)(3)(10 U.S.C. § 130) see Figure 6-3).

**d. Rigging of Fast Rope t** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(1) Remove all (b)(3)(10 U.S.C. § 130)

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- (2) Ensure floor area is free of all oil/fluids/trip hazards.
- (3) Remove the forward door/step and install probe cover (if required).
- (4) Inspect the forward and aft FRIES system for cracks, corrosion, and security IAW the AWR.

The [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
 [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

- (5) Rig the Fast Rope to the FRIES bar as follows:

- (a) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
 [redacted] (b)(2), (b)(7)(E), (b)(3)(10 U.S.C. § 130) (see [Figures 6-6 and 6-7](#)).

**NOTE:** [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
 [redacted] (b)(2), (b)(7)(E), (b)(3)(10 U.S.C. § 130)

- (b) Back coil Fast Rope and secure.

**e. Rigging of the Fast Rope** [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) The following rigging procedures include instructions for inspecting the Fast Rope Bag, Fast Rope, and FRIES bar, rigging procedures for the Fast Rope Bag, and aircrew commands for releasing the Fast Rope Bags during day and night operations.

**WARNING:** [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**CAUTION:** Ensure [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
 [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:** Aircrew calls (commands) may be different between these rigging procedures and the Aircrew Training Manual (ATM). The ATM will take precedence.

**NOTE:** Chemlights are optional for day operations.

**NOTE:** Secure safety chemlights to release handle with a retainer band (see Figure 6-28).

**(1) Preflight Procedures.**

**(a) Operations.**

1. Remove the Fast Rope from the bag and inspect it in accordance with appropriate Manual. [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see [Figure 6-24](#)) for serviceability.

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2. (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figures 6-25 and 6-26) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

3. (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figure 6-27).

4. Inspect the attaching hardware for serviceability.

a. (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figure 6-28).

b. (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) see Figure 6-28).

**(b) Night Operations.**

1. Preflight the Fast Rope Bag by installing (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figure 6-29).

2. Preflight the Fast Rope Bag by installing (b)(3)(10 U.S.C. § 130), (b)(2)  
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

3. Install (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figure 6-28).

**(2) Installation Procedures.**

(a) Inspect the FRIES bar. (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(b)(2), (b)(3)(10 U.S.C. § 130), (b)(7)(E)  
(b)(2), (b)(3)(10 U.S.C. § 130), (b)(7)(E) (see Figure 6-30).

(b) Place the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(see Figure 6-31).

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(c) Secure to (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figure 6-32).

(d) Secure the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figure 6-33).

(e) Ensure (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figure 6-34).

f. Rigging of Fast Rope t (b)(3)(10 U.S.C. § 130)  
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figures 6-19 and 6-20). (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figure 6-21).

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- (1) Ensure floor area is free of all oil/fluids/trip hazards.
- (2) Inspect the forward and aft FRIES system for cracks, corrosion, and security.
- (3) Rig the Fast Rope to the FRIES bar as follows:

- (a) Insert (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)
- (b) Install the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)
- (c) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:** If (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) only.

(4) Configure the cabin for the number of personnel and type of mission. Secure the deploying personnel to the cargo compartment floor using approved personnel restraints.

- (5) Hand rails. Each handrail consists of the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

g. **Rigging of Fast Rope to** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) aircraft is rigged for Fast Rope operations IAW Air NTTP 3-22. Combat Aircraft Fundamentals (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

h. **Rigging of Fast Rope to** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) aircraft (b)(3)(10 U.S.C. § 130) If the aircraft has an (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) The RM and pilot must agree to this procedure before exercise/training commences.

i. **Rigging of Fast Rope, Other Aircraft.** Units may use other DOD, Non-DOD or HN aircraft not listed in this manual provided the following guidelines are followed.

(1) **DOD Aircraft.** The aircraft must be rigged and equipped IAW current parent Service directives. The aircrews must be trained in FRIES equipment and procedures.

(2) **Non-DOD Aircraft.** The aircraft must have an Airworthiness Directive (AD) and the aircrews must be trained in FRIES equipment and procedures.

(3) **Host Nation Aircraft.** A competent US authority should evaluate the airworthiness and safety of all FRIES equipment and procedures prior to commencing training with HN. At a minimum, the FRIES equipment will be inspected by a current FRM and approved by the senior person on site.

**NOTE:** The training level of aircrews will be incorporated into the ground commander's risk assessment.

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## 6-9. Fast Rope Insertion Operations.

a. **Conducting Fast Rope Operations.** Fast roping is an inherently dangerous operation. The risks of personal injury and equipment damage can be reduced only by constant attention to detail and strict adherence to the procedures delineated in this manual. Conducting Fast Rope operations with heavy loads requires personnel to be proficient in these operations. A recommended checklist with the sequence of actions for Fast Rope operations is contained in [Appendix D](#). The following procedures are common to all units and aircraft, with differences noted (commands may differ between Components/Services):

### (1) FRM/AFRM Duties:

- (a) Briefs ropers and aircrew.
- (b) Inspects personnel for proper equipment configuration and conducts brief backs.
- (c) Relays pre-briefed time warnings to personnel.
- (d) Maintains general orientation to the flight route.
- (e) Makes sure personnel are in order of exit before the 1-minute warning.
- (f) FRM will give the command to exit the aircraft.

### (2) AFRM Duties:

- (a) Attaches the Fast Rope to the aircraft IAW this manual and unit SOP, conducts safety checks, and secures chemlight/light source with tape to the FRIES attachment point and one on each side of the bottom end of the rope and another chemlight/light source 5 feet higher.
- (b) Makes sure the rope is properly configured for deployment.
- (c) Breaks chemlights/light sources, if required, at pre-briefed time warning. The CE/FE/AG will break the chemlights/light sources if required.
- (d) Confirms objective on final approach.
- (e) Once signaled by the FRM, deploys rope and ensures attachment loops are on the ground. (During night operations, two horizontal chemlights/light sources are seen and verified by the crewmember wearing NVDs).

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~~FOR OFFICIAL USE ONLY~~**(3) Aircrew Duties:**

(a) The pilot arrives over the insertion point at the briefed hover altitude (not to exceed rope length). The pilot announces the Fast Rope execution command “Ropes, Ropes, Ropes.”

(b) The appropriate CE/FE/AG will verify position over objective and ensure the aircraft is at a stable hover, and then give the hand signal for rope deployment (a vertical motion of the arm with open palm extended toward the exit) to the FRM/AFRM.

(c) The CE/FE/AG is cleared to release the ropes or pull the ropes back in, as previously coordinated once all personnel are cleared from the rope(s). The pilot will depart when advised by the CE/FE/AG that the ropes have been released or secured.

**(4) Roper Duties:**

**WARNING:** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) until the aircraft is at a stabilized hover and given the signal by the CE/FE. Injury or death may occur.

(a) At the command “GET READY”, which is given at the 1-minute warning, remove restraint device and take the exit position. AFRM prepares rope for deployment.

(b) At the command “ROPES”, AFRM deploys ropes and gets ready to exit aircraft, giving the command “GO” and leaving the aircraft. (H-47) CE/FE/AG may deploy ropes when directed by the PC.

(c) Maintaining an orderly and rapid exit formation, each roper will grasp the rope with both hands (does not jump for the rope). As the head of the preceding man goes below the edge of the aircraft door, the roper exits by rotating the body 90 to 180 degrees (to ensure equipment clears the aircraft), hugs the rope into his body, and places it between the arches of the feet. Once the rope is between the boots, the roper will keep his hands just below eye level; arms bent no more than 90 degrees at the elbow, elbows tucked into the sides.

**CAUTION:** Ropers will not place the rope between their groin and knees, this action may result in severe burns and discomfort. Approximately two-thirds down the rope slow the descent and keep a sharp lookout to avoid collision with fellow ropers.

(d) Prepare to land just before impact with the ground. Take your feet off the rope and spread the legs approximately shoulder width apart, knees slightly bent, and land. Maintain the grasp on the rope for balance and move out.

(e) Be prepared to brake.

(f) Remain conscious of ropers above and below the rope.

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(g) Be prepared for collision that may cause ropers to prematurely let go of the rope.

(h) Be prepared to execute a PLF if you experience excessive speed during descent.

**b. Aircraft Procedures:**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(a) The crewmembers will notify the FRM of each checkpoint the aircraft passes as required or pre-briefed. The crewmembers will pass on the 10, 6, and 1-minute (or as pre-briefed) warnings to the Fast Rope personnel.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) Ropers may release their personnel restraints, and position themselves for roping no earlier than the one minute warning.

**WARNING:**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**WARNING:** The danger exists for ropers/personnel to fall out of the aircraft during an operation requiring door straps to be removed.

**CAUTION:**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**CAUTION:** Ensure ropers are thoroughly briefed on proper opening techniques of (b)(3)(10 U.S.C. § 130) cargo doors. Do not inadvertently jettison cargo door window when attempting to open the cargo door.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(c) At the 1-minute warning, the AFRM/FRM will remove (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

As the aircraft enters the terminal phase of the maneuver at the EZ/LZ/PZ, the pilot will call "ROPES, ROPES, ROPES" to signal the CE/FE/AG. The CE/FE/AG will confirm that the aircraft is at a stable hover and give the pilot terminal area commands, if needed, to maneuver over the precise objective area.

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(d) When the crewmember is satisfied that the aircraft is in position, he will signal the FRM “ROPES” using the hand and arm signal (open palm toward door, in a vertical motion).

(e) The AFRM pulls the quick release tab on the Fast Rope restraint device (if installed), and deploys the rope when given the "ROPES" signal from the FRM. The CE/FE/AG will announce to the pilots “ROPES OUT”.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(f) The CE/FE/AG will signal the AFRM after verifying that the FRIES [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) for night operations) and clear of obstructions.

**NOTE:** If the AFRM can positively identify the rope is on the ground, he is not required to wait on the signal from the CE/FE/AG before exiting the aircraft.

(g) The CE/FE/AG will announce “ROPERs AWAY” when the first roper exits the aircraft. The CE/FE/AG will continue to monitor the operation to verify/ensure that the rope and site remain safe throughout the Fast Rope operation. If the CE/FE/AG identifies an unsafe condition, the CE/FE/AG will signal the FRM/AFRM using either the stop stick (closed fist) or a fouled rope/area (closed fist, arms over-lapped forming an “X”). Additionally, the CE/FE/AG will keep the pilots informed of the existing situation

(h) The CE/FE/AG will confirm the ropers are secured in the aircraft or free and clear of the ropes. The CE/FE/AG will then jettison or retrieve the ropes back inside the aircraft.

**WARNING:** Ropes will not be jettisoned until all ropers have exited the aircraft and are clear of the rope(s) or secured in the aircraft.

(i) Crewmember(s) will advise pilots “ROPES CLEAR” and the aircraft will depart

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**FAST ROPE COMMANDS (Specific [redacted] Fast Rope Bag System).**

(1) At the **1-minute** warning, the FRM will release the **YELLOW** secondary release strap snap shackle using the **YELLOW** pull-to-release handle attached to the large attaching ring on the Fast Rope Bag.

(2) After the crewmember is satisfied that the helicopter is in position, he will signal the FRM “**ROPES**” using the hand and arm signal (open palm toward door, in a vertical position).

(3) The FRM will pull the primary [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(4) The crewmembers will announce to the pilots “**ROPES OUT.**”

(5) Crewmembers/FRMs will announce “**ROPERs AWAY**” when the first roper exits the aircraft.

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(a) Ropers may release their personnel restraints, and position themselves for roping no earlier than the one minute warning.

**NOTE:** If fast roping from both sides of the aircraft, a FRM will be positioned on both sides of the aircraft, on the most forward pod position (closest to the pilot).

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) When the aircraft is at a stabilized hover over the objective area, the pilot will give the FRM the command "ROPES". The FRM will relay the command and rope(s) will be deployed by the roper(s) on the rear portion(s) of each pod. Before descending, the roper shall ensure that a minimum of (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) On each pod, the rear positioned roper will descend first followed by the forward positioned FRM. The FRM and the aircrew shall agree on a means of communicating to the pilot when the FRM departs to descend (i.e. tapping the pilot on the leg). This means of communication will assist the pilots determining when to jettison the Fast Rope.

(c) If fast roping from only one side, a thorough briefing must occur to discuss the 'crawl through' technique and any asymmetric load hazards which could cause catastrophic aircraft drift.

**WARNING:** During crawl-through operations, the pilot on the fast roping side of the aircraft cannot accurately determine when the Fast Roper who crawled through has indeed departed down the rope, due to inherent lack of visibility. To aid the pilot on the Fast Rope side, an alternate means of ensuring all Fast Ropers are on the ground should be briefed in detail prior to infil.

(d) The pilot(s) will verify the ropers are free and clear of the ropes before cutting away the Fast Ropes.

**NOTE:** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**CAUTION:** When weapons are installed in the exit door, it is possible for gear to get entangled in the weapon during the exit sequence. Care must be taken to ensure personnel remain clear of the weapon. Crewmembers must be prepared to assist personnel as required.

**WARNING:** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(a) Crewmembers will inform the FRM/AFRM of all pre-briefed time warnings. At night, the crewmember at each FRIES station will break the chemlights/light sources attached to the Fast Ropes at the 6-minute mark.

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**WARNING:** The FRM/AFRM will not position himself aft of the ramp hinge until the aircraft is at a stabilized hover and he receives the signal from the crewmember.

(b) When stabilized at a hover, the PC will call “ROPES, ROPES, ROPES.”

(c) The CE/FE at each FRIES station may deploy Fast Ropes. When the Fast Ropes have been deployed, the aft right-hand (R/H) crewmember will announce “AFT ROPES OUT” (if applicable), and the forward crewmember will announce “FORWARD ROPES OUT” (if applicable).

**WARNING:** No ropers are allowed aft of the ramp hinge until the aircraft is at a stabilized hover. Injury or death is likely due to ease of falling out of the aircraft.

**NOTE:** The CE/FE and the AFRM will positively identify that the ropes are on the ground. During night operations, note that both chemlights/light sources must be horizontal to the ground.

(d) When personnel/equipment exit the aircraft, the aft R/H crewmember will announce “AFT ROPING IN PROGRESS” (if applicable), and the forward crewmember will announce “FORWARD ROPING IN PROGRESS” (if applicable).

(e) Although all crewmembers are responsible for maintaining the aircraft at a stabilized hover with minimum drift, and clear of obstructions, the aft R/H crewmember will make the primary calls.

(f) Crewmembers at each FRIES station will visually confirm personnel/equipment are clear and will release or retrieve the ropes as briefed.

(g) The aft R/H crewmember will announce “AFT ROPES RELEASED (if applicable), AFT READY”.

(h) The forward crewmember will announce, “FORWARD ROPES RELEASED” (if applicable), “FORWARD READY, CLEARED FOR FLIGHT.”

**NOTE:** The forward CE/FE will not call “ROPES RELEASED”, “FORWARD READY”, or “CLEAR FOR FLIGHT” until he hears the aft CE/FE call “Aft Ready”.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**FAST ROPE COMMANDS (Specific [redacted] Fast Rope Bag System).**

1. At the **6-minute** warning, the crewmember will release the [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[redacted] (b)(2), (b)(3)(10 U.S.C. § 130), (b)(7)(E)

[redacted] (b)(2), (b)(3)(10 U.S.C. § 130), (b)(7)(E) (see Figure 6-35).

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2. At the **3-minute** warning, the pilot will (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(b)(2), (b)(3)(10 U.S.C. § 130), (b)(7)(E)

Figure 6-36).

3. At the **1-minute** warning, the (b)(3)(10 U.S.C. § 130), (b)(1)1.4g, (b)(7)(E) (see Figure 6-36).

4. Once the aircraft hovers over the objective, the crewmember will relay to the pilot that the aircraft is over the objective.

5. The pilot will give the command “ropes” and the crewmember will (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see Figure 6-37) to release the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(2), (b)(3)(10 U.S.C. § 130), (b)(7)(E)

(b)(2), (b)(3)(10 U.S.C. § 130), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**WARNING:** The aft-most troops must be the first to exit the aircraft. Only those troops and the scanner may proceed to the rear of the aircraft. The maximum personnel in position during Fast Rope operations will be the scanner on the ramp with the next roper and three ropers on the rope, with the remaining ropers spaced evenly (24-27”) throughout the cabin behind the ramp hinge.

**WARNING:** The PC is responsible for ensuring that all crewmembers are aware of the length of the ropes. Failure to do so may result in serious injury to deploying personnel or damage to the aircraft.

**WARNING:** When using rope(s) with heavy attachment hardware (such as a metal sleeve and ring), ensure all personnel are clear below the aircraft before releasing the rope.

**WARNING:** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**CAUTION:** Fast Rope operations in conditions that require high power settings will increase the movement of the rope and may prevent Fast Rope operations all together.

**CAUTION:** To ensure the rope remains vertical, it is very important that there is no break in the deployment of ropers. It is recommended that the roper on the ground does not release the rope until the next roper has taken hold of the rope (see Figure 6-22).

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**CAUTION:** The rotor downwash characteristics (see Figure 6-23) o end to blow the free end of the Fast Rope at an angle away from the rear of the hovering aircraft.

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**NOTE:** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:** The ideal rope for Fast Rope operations from (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) due to better vertical properties.

(a) Deploying troops should remain secured until directed by the scanner, normally when the aircraft is configured at (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) At the one-minute call, deploying troops should begin standing up for deployment. 24-27” (an arms length) should be maintained by the deploying troops for CG limitations. Troops should not proceed to the ramp (when signaled by the CE/FE) until just prior to the aircraft entering a hover. The rope should be moved into position for deployment at the 1-minute call.

(b) The rotor downwash characteristics (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) end to blow the free end of the Fast Rope at an angle away from the rear of the hovering aircraft. When more of the Fast Rope is on the ground ( $\geq$  (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) this effect is minimized. Also, when conducted over confined areas such as buildings this effect is negligible. The best altitude/rope length combinations are (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) with a (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) Fast Rope operations in conditions that require (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(c) After the rope is deployed, grabbing the rope and pulling it towards the ramp edge will be helpful to the first roper (provides the roper with a vertical rope which allows him to properly grab the rope with his hands and feet). Once the first roper is on the rope, it should remain vertical without any assistance. This is the case as long as there are people on the rope, which makes it very important to ensure that there is no break in the deployment of the ropers.

(d) From the ramp deployment location, at all altitudes, a majority of the rope will stay on the ground for (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) As a roper slides down the rope it will straighten out beneath the roper. Once the roper reaches the ground and releases the rope, the rotor downwash will blow the rope away from the aircraft once again. It is recommended that the roper on the ground does not release the rope until the next roper has taken hold of the rope.

(e) **Water Fast Rope Operations.** Deploy the fast rope upon entering the insertion zone. (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
and possible injuries. Once personnel are deployed, slowly climb and accelerate to allow recovery of the rope prior to high speed flight (if not released).

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**6-10. Emergency Procedures.**

a. While in flight, the aircraft adheres to the normal procedures for inflight emergencies. FRM controls personnel movement in the aircraft and communicates changes to the operation to the personnel. The following safety procedures are adhered to while executing FRIES operations:

(1) Signal to stop stick (cease FRIES operations), stop personnel movement in the aircraft and will maintain positive control of first/next roper (see [Appendix A](#)).

(2) Signal fouled rope/fouled area. Stop personnel movement in the aircraft and wait for further instructions. This signal is used to provide roper(s) with situational awareness of a rope problem or a target/objective area problem (see [Appendix A](#)).

(3) Ensure that the ropers are clear.

(4) Take appropriate action.

**b. Procedures for an unsafe drift or premature liftoff are as follows:**

(1) Roper(s) will lock in.

(2) CE/FE/AG/FRM will signal to stop stick.

(3) CE/FE/AG will direct aircraft to objective.

(4) Continue operations.

**c. Procedures for a hung roper:**

(1) CE/FE/AG signals the FRM with “STOP STICK” hand and arm signal, informs the pilot, and keeps the pilot apprised of the situation.

(2) The FRM will control personnel movement in the aircraft and communicate changes to the operation to personnel.

(3) The pilot will descend the aircraft if possible to relieve tension on the rope and to lower roper(s) to the ground/surface.

**d. Procedures for Fouled Rope/Area:**

(1) CE/FE/AG signals the FRM with “FOULED ROPE/AREA” hand and arm signal, informs the pilot, and keeps the pilot apprised of the situation.

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(2) FRM will control personnel movement in the aircraft and communicate changes to the operation to personnel.

(3) CE/FE/AG ensures the Fast Rope is clear and attempts to untangle/reposition the rope.

(4) The pilot and FRM will determine if FRIES operations will continue.

**e. Procedures for premature/unintentional deployment of the Fast Rope:**

(1) CE/FE/AG will signal FRM/AFRM with “STOP STICK” hand and arm signal (see [Appendix A](#)).

(2) FRM will control personnel movement in the aircraft and communicate changes to the operation to personnel.

(3) Notify the PC.

(4) Follow aircrew instructions.

(5) Be prepared to jettison rope.

**f. Hand and Arm Signals. (see [Appendix A](#))**

(1) Stop stick: extended arm with a clenched fist.

(2) Fouled Rope/Area: closed fist, arms over-lapping forming an “X”.

(3) Ropes: open palm toward the door, in a vertical motion.

(4) Aircraft movement: an open palm moving and facing in the direction required.

(5) Stop aircraft operations: extended arm with a clenched fist.

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**6-11. Equipment Lowering Devices.**

**WARNING:** Only devices that are Service-approved will be used for lowering personnel, equipment, rucksacks and MPCs.

a. **Lowering of Equipment, Rucksacks and MPC.** During FRIES insertions, equipment, rucksacks or MPC may need to be lowered. The approved procedures for this technique is to attach the equipment, rucksacks or MPC to a standard rappelling rope via a slipknot and half loop running the rope through a “rack system”. (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) The CE/FE/AG deploys the equipment, rucksacks or MPC and controls the descent via the rack brake. This system can handle up to (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**WARNING:** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(1) The preferred method is for all ropers (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) The lowering system will be attached to the FRIES bar by the aircrew, and the using unit will provide the lowering system. The using unit will rig the rucksacks, and the CE/FE/AG will assist in positioning the equipment in the aircraft.

(3) The aircrew is responsible for ensuring accurate rigging of belay (lowering) equipment to the aircraft and will lower the equipment when pre-briefed. However, in the event door guns are being used, the using unit should be prepared to provide one individual to control the equipment during lowering. Gloves will be used in the lowering process.

(4) This equipment lowering system can be used to (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**6-12. FRIES Extraction** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

a. **Helicopter/Equipment Preparation.** FRIES system will be inspected and configured by the crew or FRM prior to conducting FRIES operations IAW the operator’s manual and the AWR/FC.

**NOTE:** Crewmembers will prepare and inspect the FRIES system and equipment located on the aircraft if a FRM is not available prior to conducting FRIES extraction operations.

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**b. Additional required equipment.**

- (1) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see [Figure 6-14](#)).

**WARNING:** The wearing of body armor during extraction operations can result in life-threatening situations due to the extraction harness causing the body armor to ride up and cause choking and/or reduce the flow of blood to the brain. If body armor is required, body armor with a cut away section below the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) If other types of body armor are used, extreme care will be taken to monitor personnel for signs of choking/unconsciousness during extraction training.

- (2) Fast Rope with attaching loops (primary and alternate).
- (3) Chemlights/light sources (night operations).
- (4) Helmet, gloves, hearing and eye protection.

**NOTE:** Due to the variety of helmets and extraction harnesses and the possibility of interoperability problems, commanders with risk acceptance authority may waive the requirement for helmets during extraction operations.

- (5) Equipment extension (optional).
- (6) Fast Rope secondary safety line attachment points from the Fast Rope braided loop to:
  - (a) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)
  - (b) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)
- (7) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**c. Procedures.**

- (1) The aircraft will come to a hover in the immediate vicinity (EZ) of the personnel to be extracted.
- (2) Upon receiving the command “ROPES” from the PC, the crewmember will verify the aircraft is over the objective area. The CE/FE/FRM will then ensure all personnel are clear and will deploy the rope for hook-up.
- (3) Personnel will hook-up to the attaching loops located at the end of the FRIES rope.

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

see [Figure 6-13](#)). (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

will be used if available. (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(4) FRM will inspect all harnesses and hook-ups prior to giving the “UP” signal. The “UP” signal will be given until forward flight commences.

(5) Both the ground party and aircraft crew should monitor extracted personnel for any signs of distress or trouble. The aircraft should lower the extracted personnel immediately if there are indications of a problem.

**d. FRIES Extraction System Limitations.**

( (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(a) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(7)(E), (b)(2)

(b) Dual rope operations will accommodate a maximum (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

( (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**e. Signals and Commands.**

(1) All signals and commands between the aircrew and the supported unit will be coordinated.

(2) Hand signals contained in [Appendix A](#).

**6-13. Safety Procedures.**

**CAUTION:** When weapons are installed in the exit door, it is possible for gear to get entangled in the weapon during the exit sequence. Care must be taken to ensure personnel remain clear of the weapon. Crewmembers must be prepared to assist personnel as required.

a. Should an emergency occur during an extraction, personnel will apply the distress, help or pick me up hand and arm signal by waving one hand overhead (see [Figure A-6](#)) to inform the crew. The pilot should lower the member to the ground or water safely.

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

b. Airspeeds [redacted] During cold weather operations airspeed should not exceed [redacted]

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

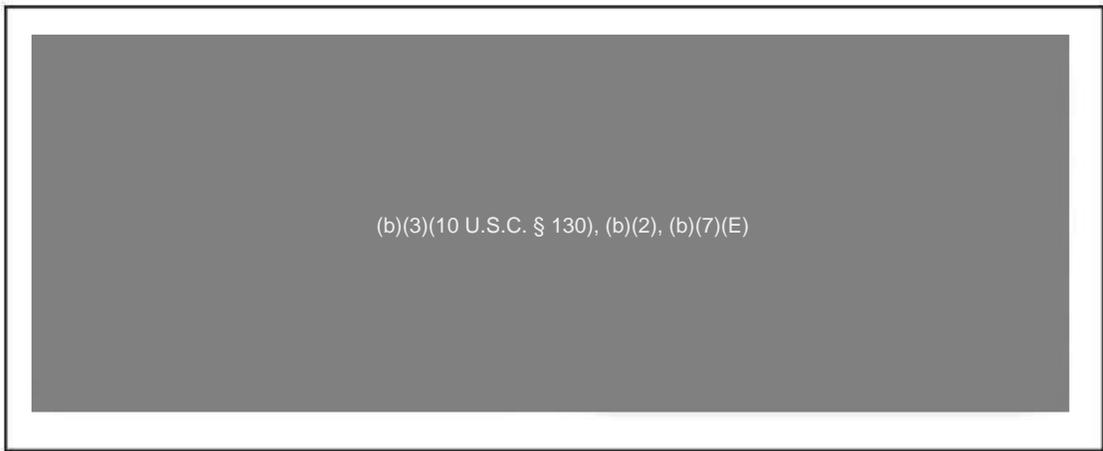
c. During training, maximum flight time [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

d. At least one [redacted] is required to maintain obstacle clearance between ropers and the ground.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**6-14. Signals and Commands.**

- a. All signals and commands between the aircrew and the supported unit will be coordinated.
- b. Hand signals for directing helicopter movement are contained in [Appendix A](#).
- c. Emergency signals from aircraft crews to supported unit will be briefed for operations.



**Figure 6-1.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-2.**



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-3.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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**Figure 6-4.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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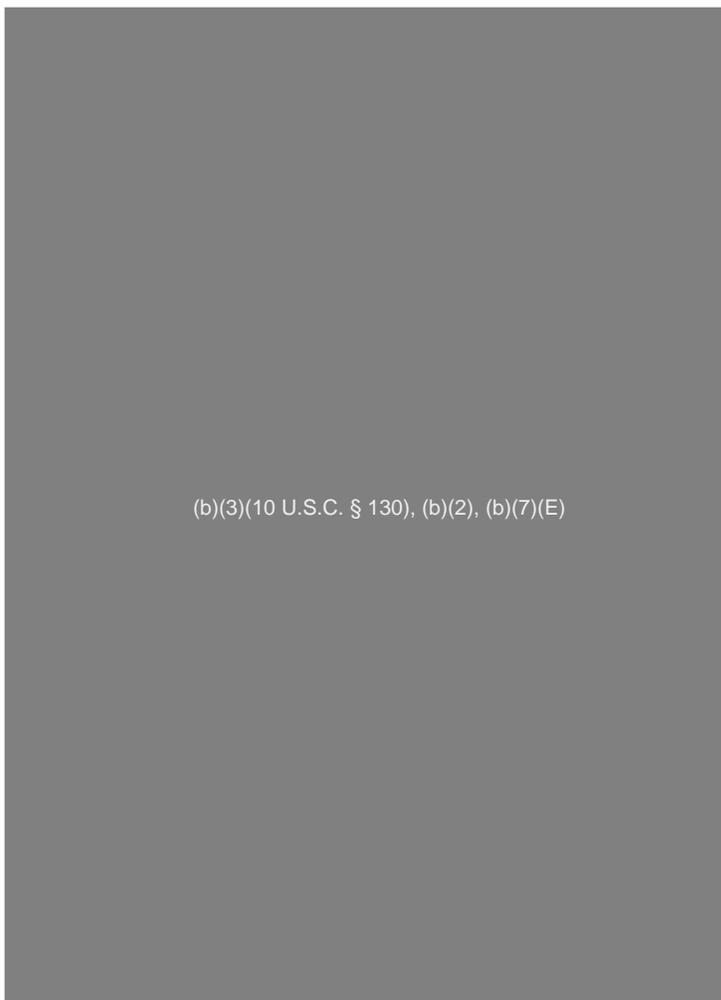


(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-5.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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**Figure 6-6.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-7.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-8.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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~~FOR OFFICIAL USE ONLY~~

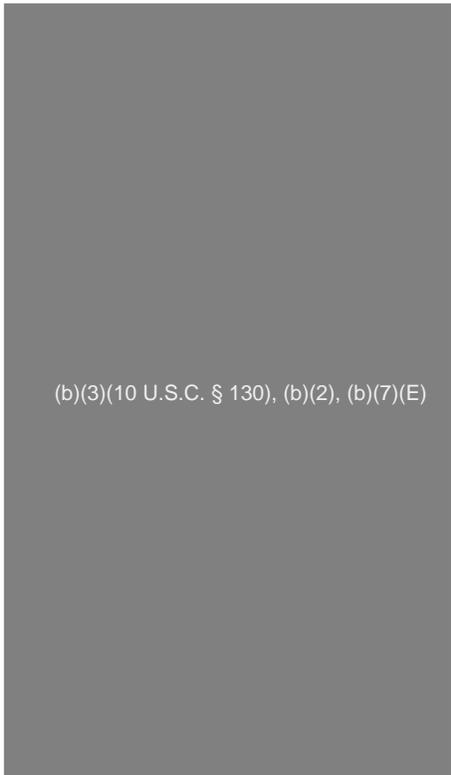


**Figure 6-9.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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~~FOR OFFICIAL USE ONLY~~

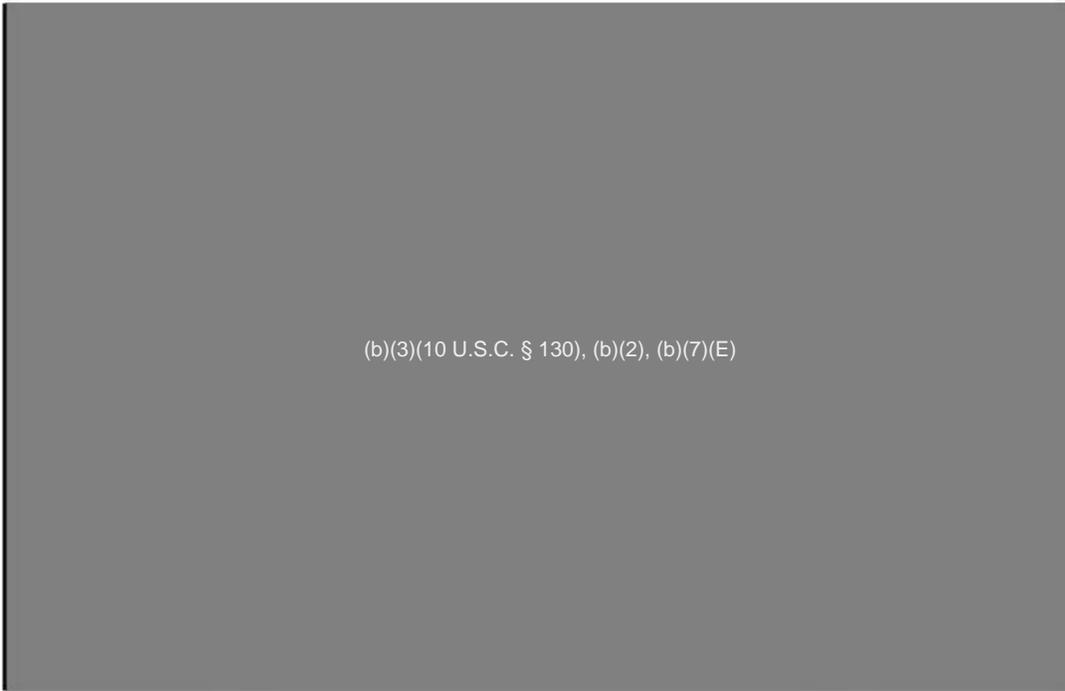


**Figure 6-10.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-11** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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**Figure 6-12.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



**Figure 6-13.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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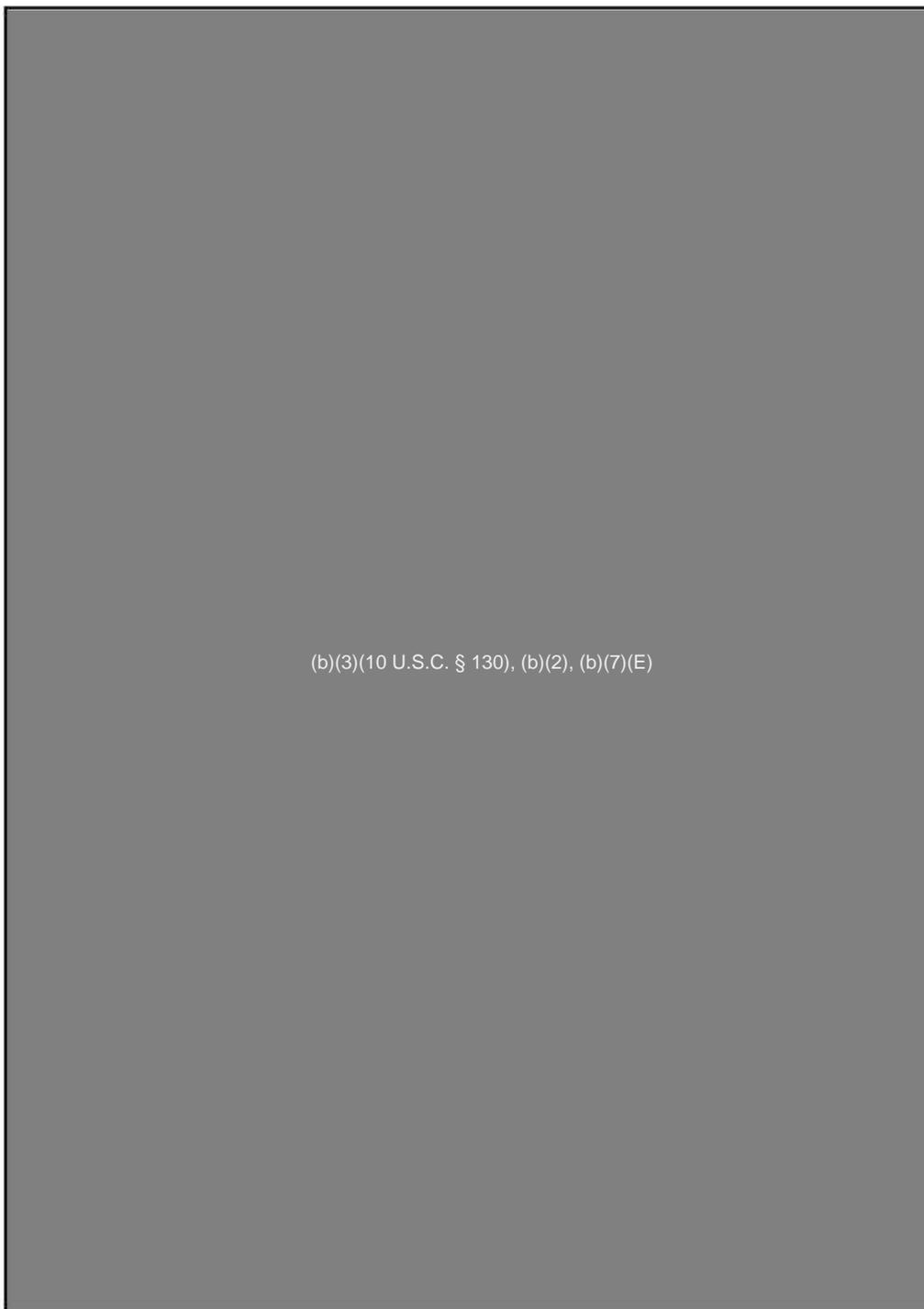
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-14.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-15.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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~~FOR OFFICIAL USE ONLY~~



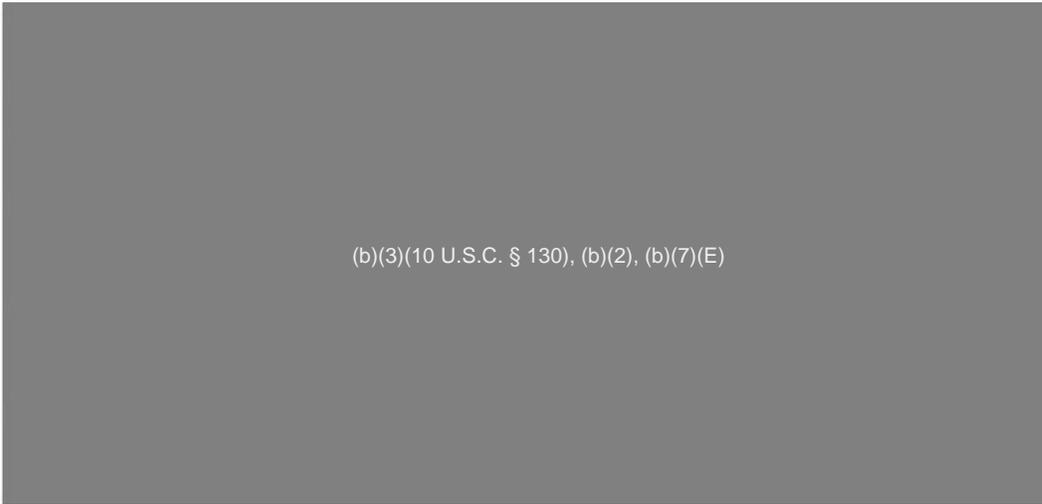
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-16.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-17**

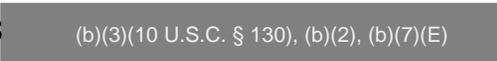


(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-18**



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-19.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-20**

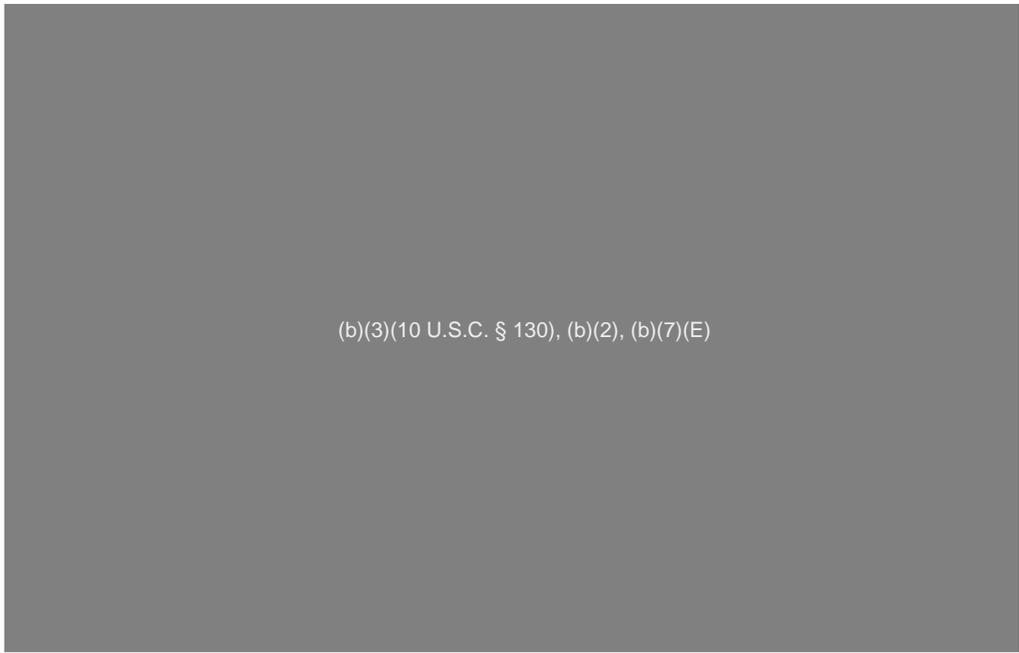
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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**Figure 6-21.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



**Figure 6-22.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

~~FOR OFFICIAL USE ONLY~~

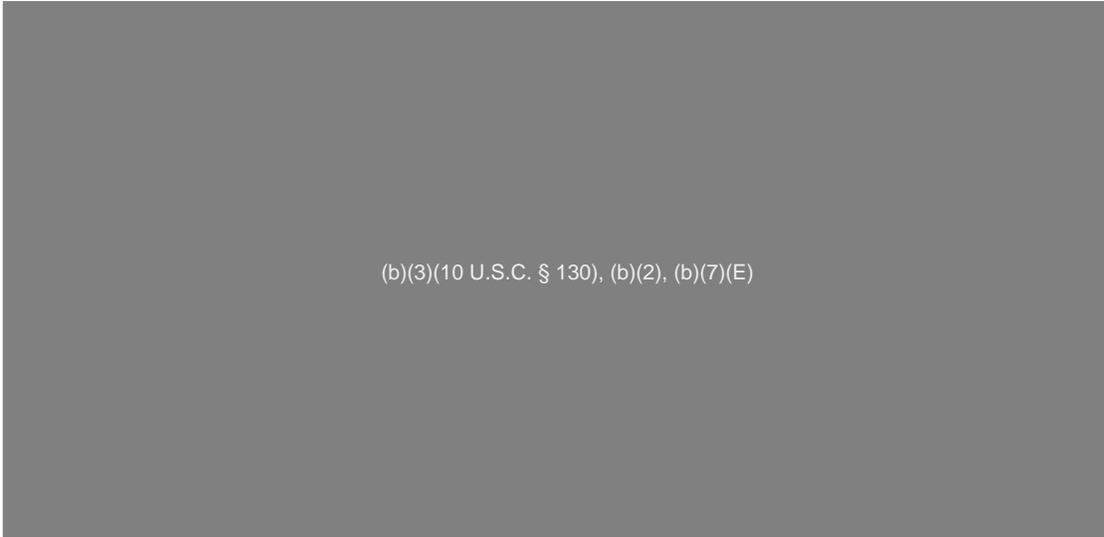
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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-23.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-24**

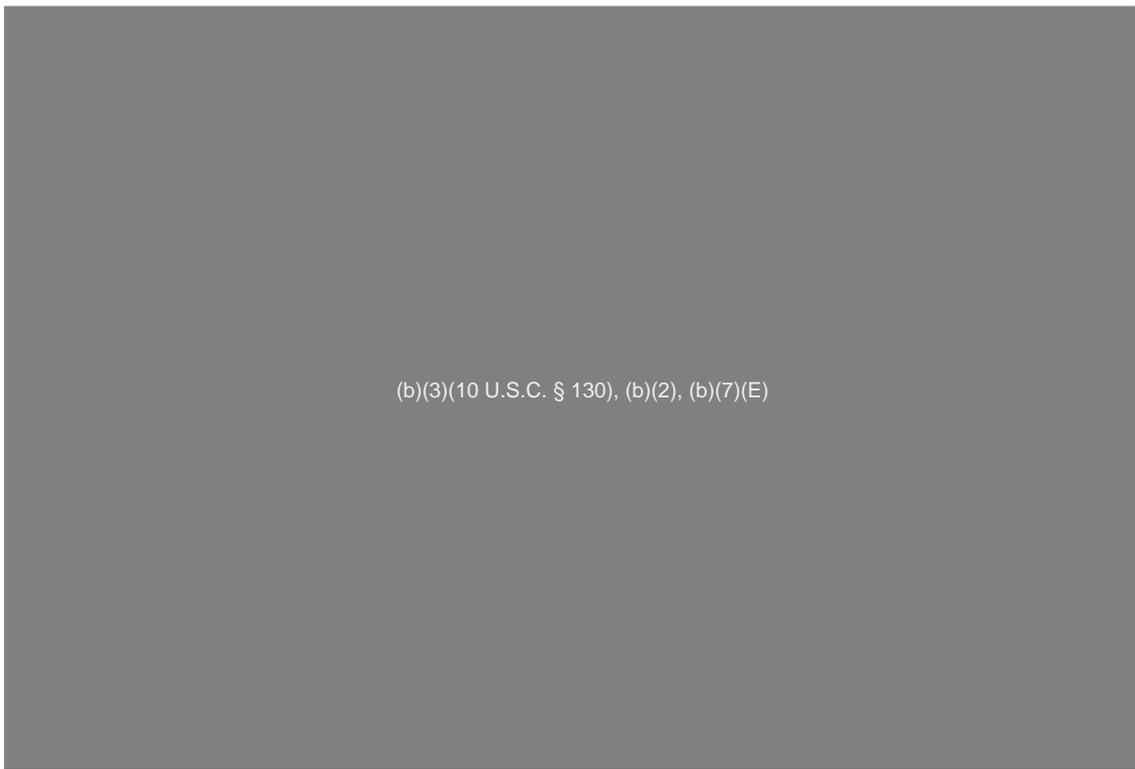
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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**Figure 6-25** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

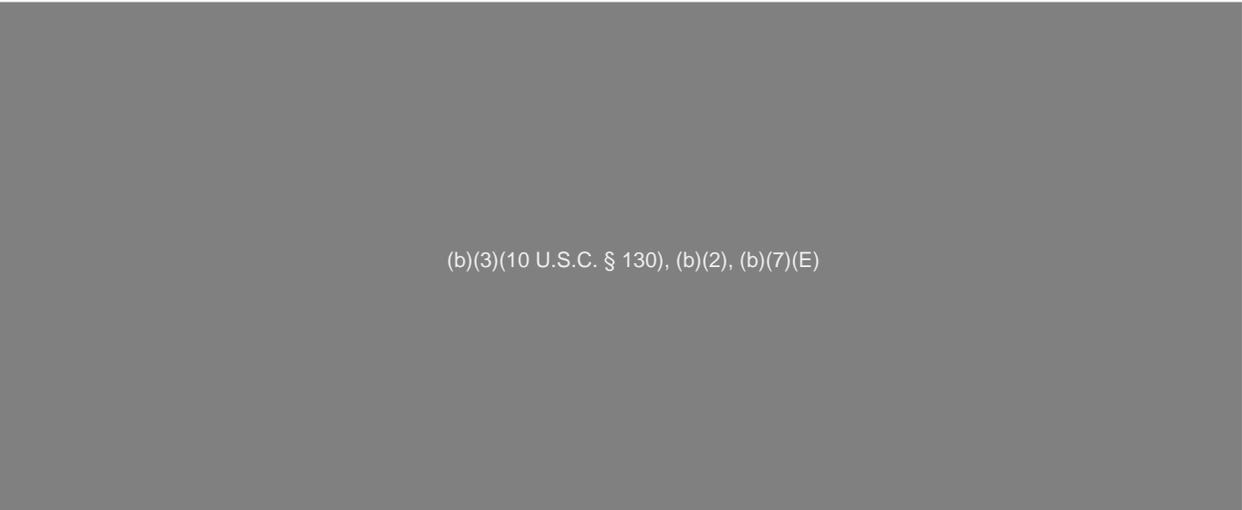


**Figure 6-26.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

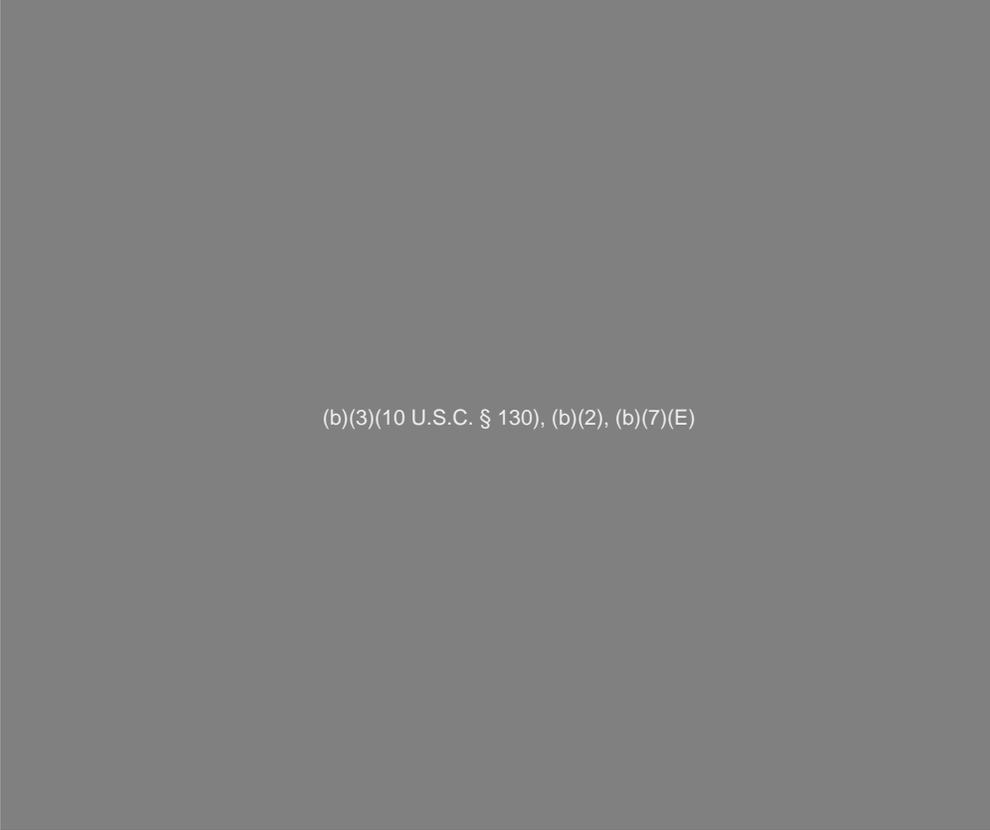
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**Figure 6-27.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

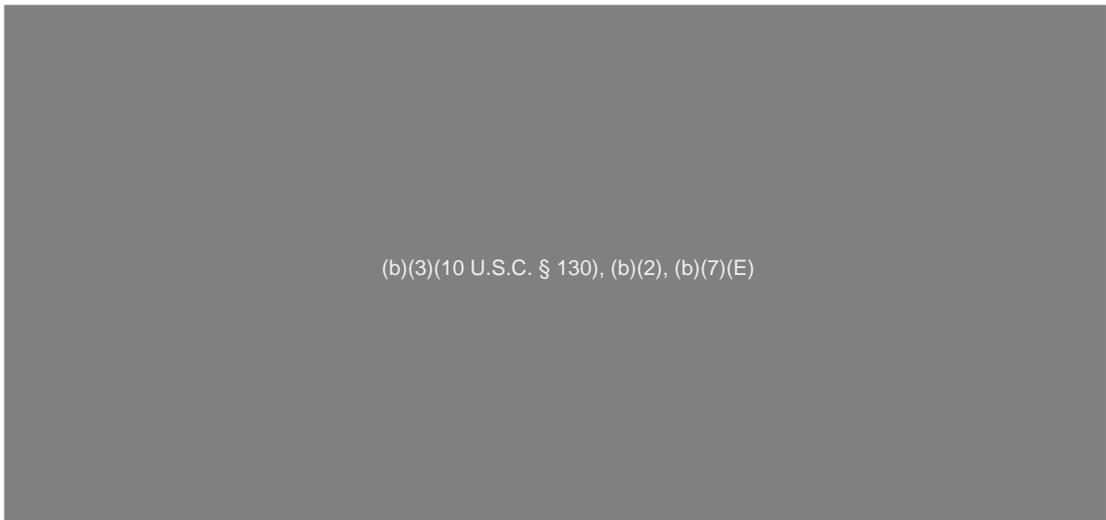


**Figure 6-28**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

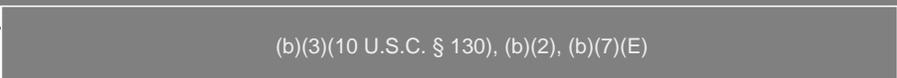
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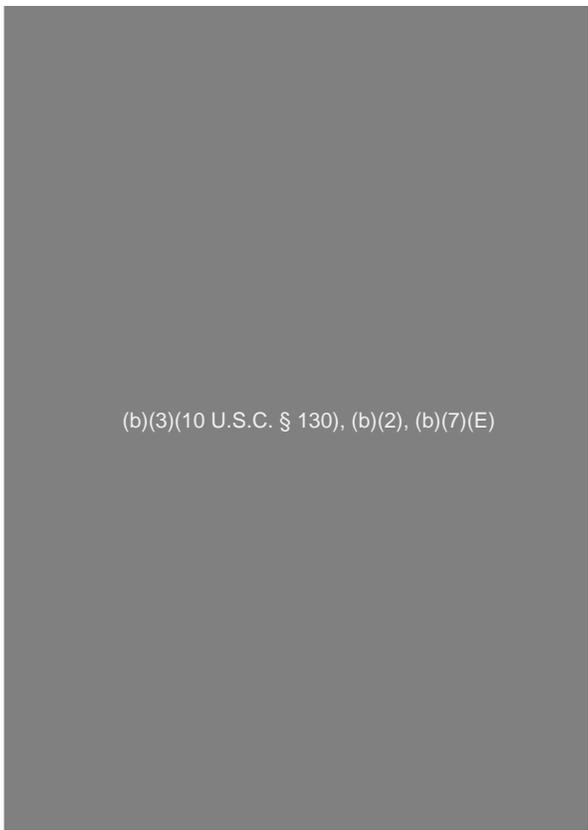


(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-29.**

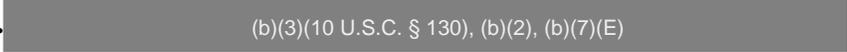


(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-30.**



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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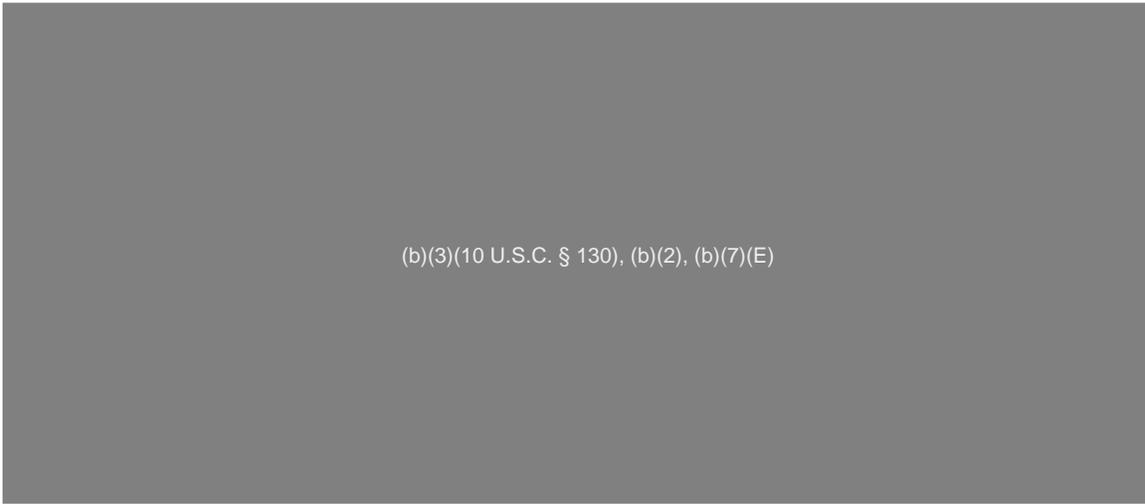
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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-31.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-32.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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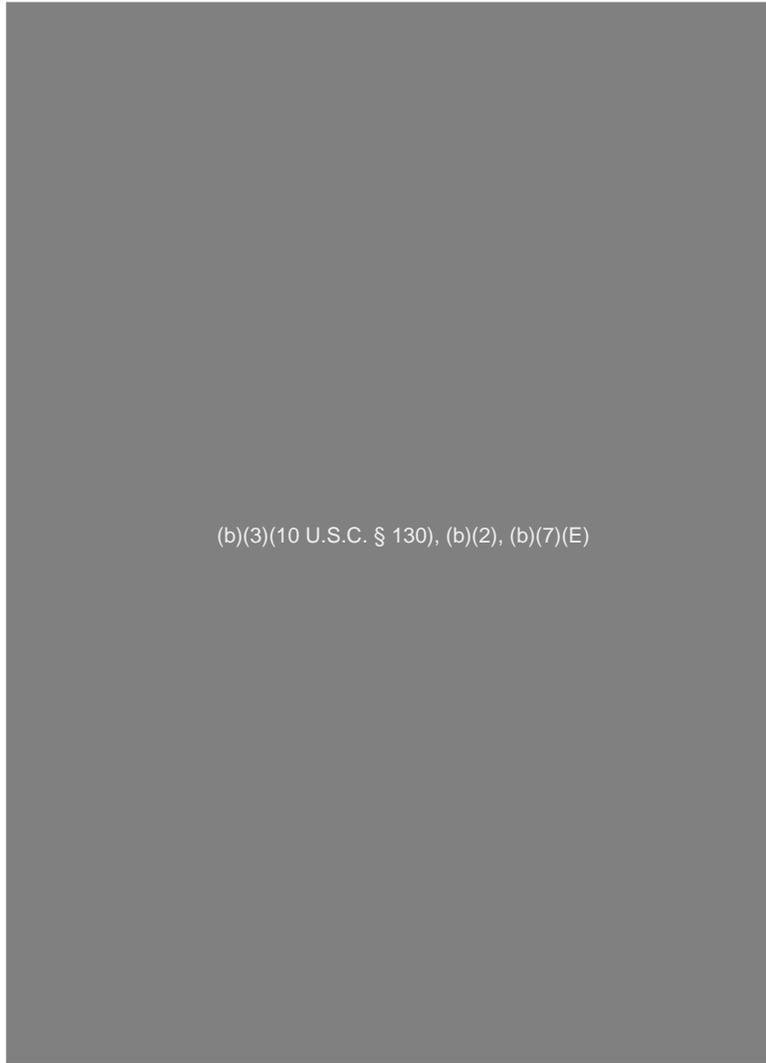


**Figure 6-33.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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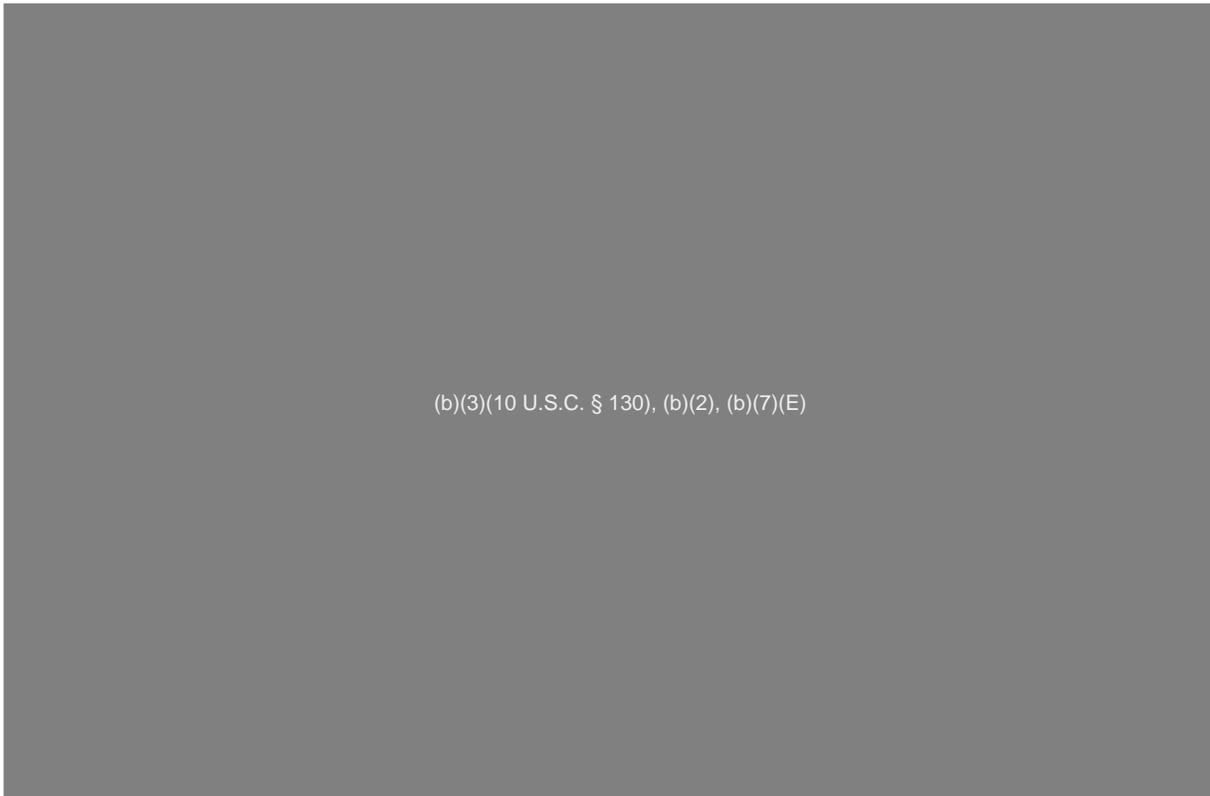


**Figure 6-34.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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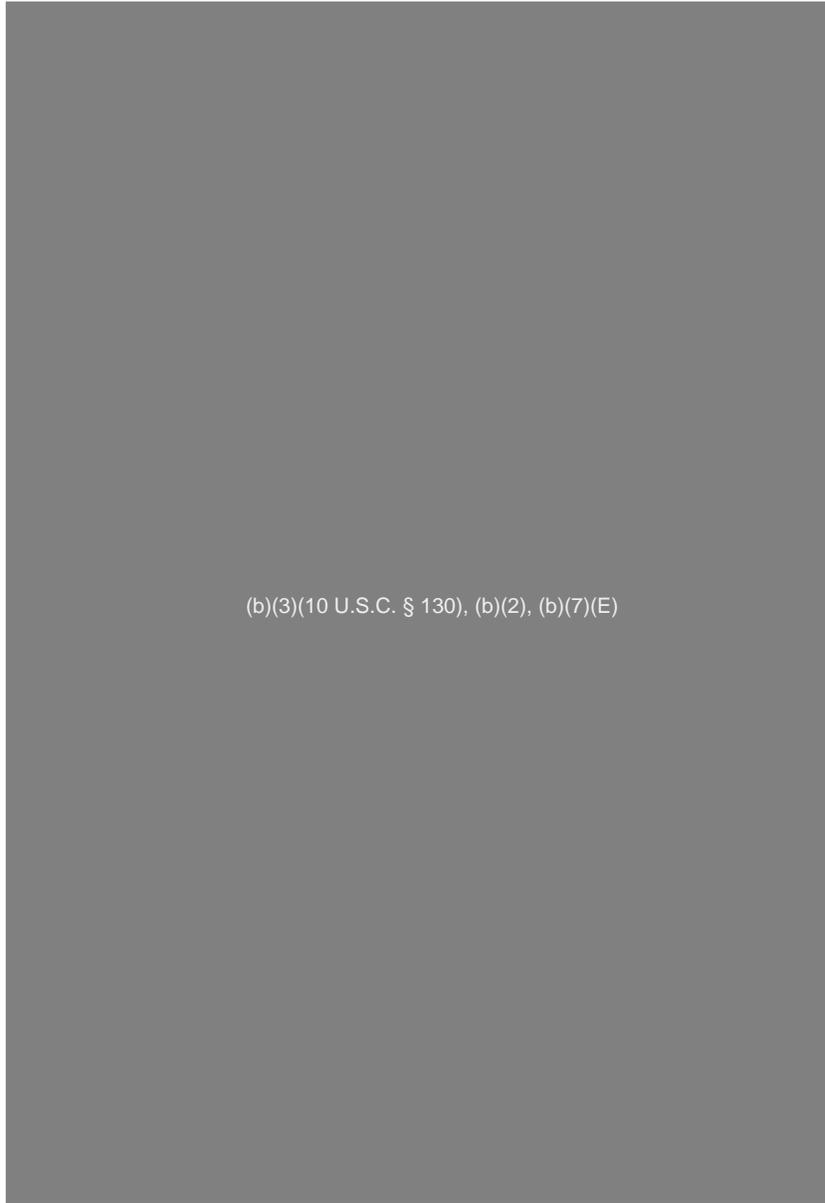
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-35.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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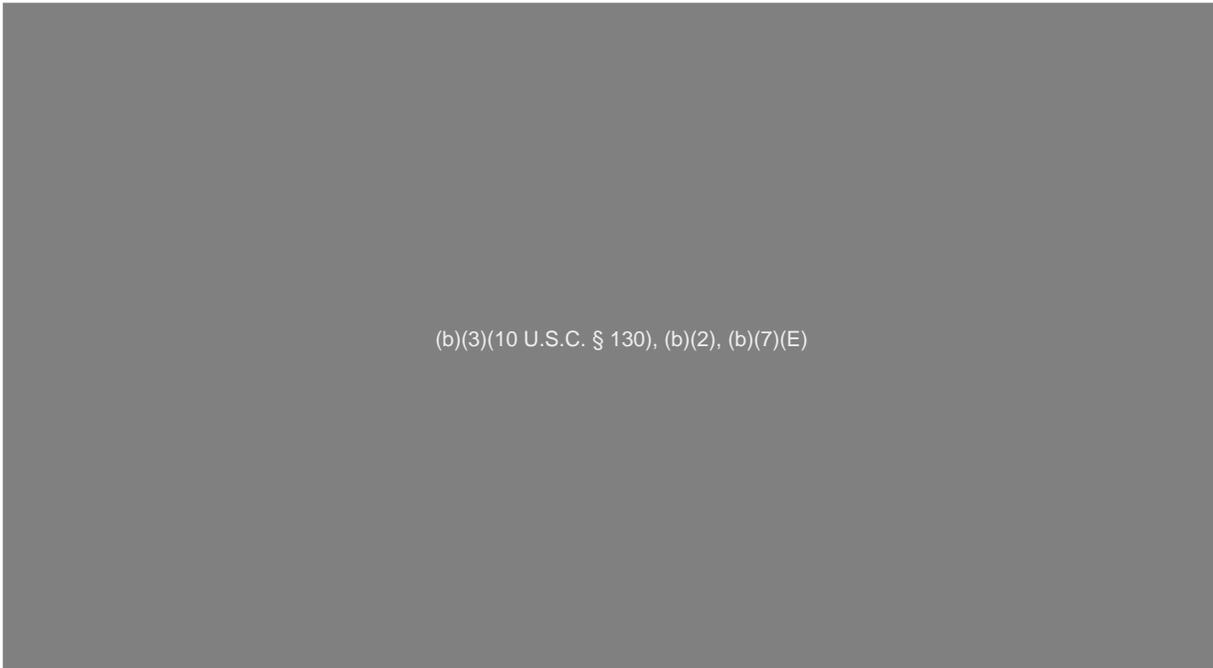
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-36.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-37.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-38.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

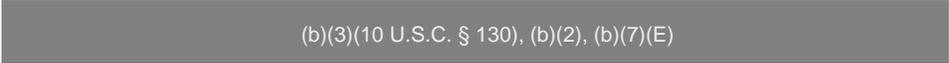
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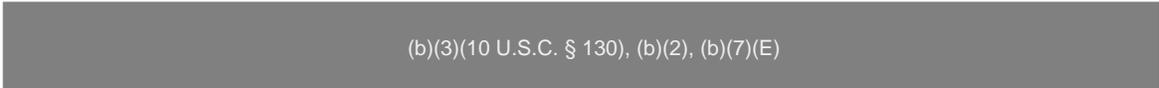
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-39.**



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

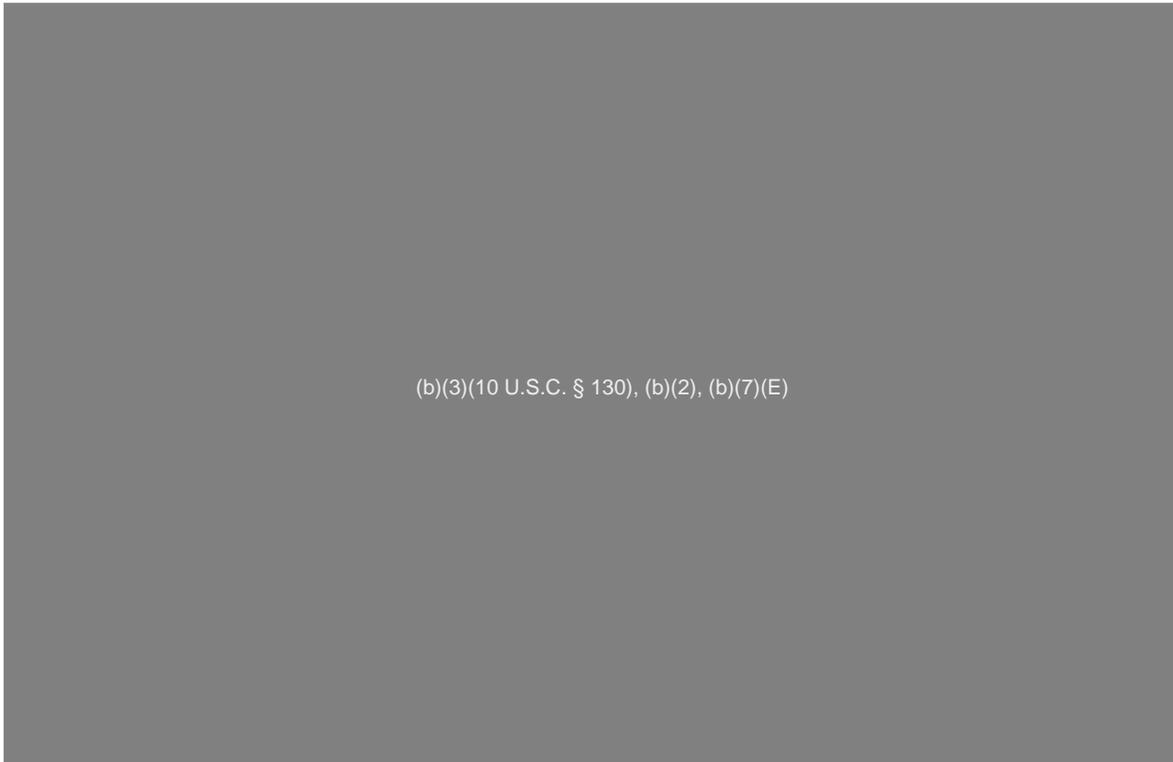
**WARNING:**



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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**Figure 6-40.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



**Figure 6-41.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-42** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 6-43.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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CHAPTER 7

SPECIAL PATROL INSERTION/EXTRACTION (SPIE) SYSTEM

7-1. General.

a. **SPIE.** SPIE was developed to rapidly insert or extract personnel from an area where landing is not possible. SPIE procedures can be used for rough terrain as well as water extraction (wet-SPIE) operations. Personnel, each wearing a

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

The helicopter lifts vertically until the personnel and the rope are clear of all obstructions and then transitions to forward flight. Airspeeds, altitudes, and oscillations must be closely monitored.

b. **Description.** The SPIE rope assembly is approximately

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

7-2. Objectives.

- a. To prescribe qualification and training requirements for maintaining proficiency in the conduct of SPIE operations.
- b. To prescribe safety requirements, SPIE methods, equipment, and rigging procedures in the conduct of SPIE operations.
- c. To define the duties and responsibilities of key personnel during SPIE operations.

7-3. Safety.

**WARNING:** The wearing of body armor during SPIE infil/exfil operations can result in life-threatening situations due to the harness causing the body armor to ride up and cause choking and/or reduce the flow of blood to the brain. If body armor is required, body armor with a cut away section below the neck (similar to the Army SOF BALCS-R body armor) should be used for SPIE operations. If other types of body armor are used, extreme care will be taken to monitor personnel for signs of choking/unconsciousness during SPIE operations.

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**WARNING:** Personnel will not wear a MILES harness during any helicopter infil/exfil operation that uses ropes, ladders, hoist or flotation devices.

**WARNING:** Rope will not be deployed until the aircraft is at a stabilized hover directly over the designated objective, exfil only.

**WARNING:** Personnel in the water should allow the rope to contact the water before touching to allow discharge of any static electricity prior to attempting to hook-up to the SPIE rope D-rings.

a. **Briefing.** A safety briefing will be conducted prior to all helicopter training/operations utilizing SPIE equipment. The briefing will consist of, but not be limited to, a review of the following:

- (1) Identification of key personnel and their duties and responsibilities.
- (2) Area hazards.
- (3) General aircraft safety/emergency procedures.
- (4) Equipment associated with SPIE and its characteristics.
- (5) Personal equipment inspection.
- (6) Method of insertion/extraction to be used.
- (7) Hand and arm signals/emergency signals.
- (8) Medical coverage.
- (9) Communications requirements.
- (10) Night operation requirements.

b. **Guidance.** A detailed Risk Analysis/Assessment will be conducted prior to SPIE operations.

- (1) The following equipment is required for all SPIE training/operations.
  - (a) Service-approved helmet.

**NOTE:** Due to the variety of helmets and extraction harnesses and the possibility of interoperability problems, commanders with risk acceptance authority may waive the requirement for helmets during extraction operations.

- (b) Eye protection.

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- (c) Sleeves down.
  - (d) Hearing protection (when applicable).
- (2) MILES harnesses will not be worn during SPIE operations.
  - (3) SPIE operations should not be conducted in densely wooded areas unless there are clear areas large enough to support the operation.
  - (4) All night SPIE operations will be regarded as medium/moderate risk, at a minimum.
  - (5) Commanders will personally approve SPIE sites selected (on-site inspection is not required).
  - (6) The SPIE site must be selected so as to permit the ropers to clear the rope upon touching the ground.
  - (7) During water operations training, safety boat (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) with motors running must be present prior to conducting overwater operations. The boat operators will be trained to operate the equipment they are using. All boat crew personnel will wear flotation devices.
  - (8) A minimum of one safety swimmer will be aboard each safety boat. The swimmer will be a graduate of the Combat Diver Qualification Course or a USSOCOM-approved waterborne infil course, scout swimmer course, or current Red Cross lifesaver or water safety instructor course. The safety swimmer must have swim fins, a face mask, and a Service-approved personal flotation device to help personnel, as needed. The swimmer cannot be the boat driver.

#### **7-4. Personnel Qualification Requirements.**

a. **Initial Training.** All personnel will successfully complete the initial SPIE training listed below before beginning SPIE qualification training in paragraph 7-4.c.:

- (1) Must be authorized by an O5 level commander to conduct SPIE training
- (2) Be thoroughly briefed on the SPIE system, its purpose, capabilities, limitations, and emergency procedures.
- (3) Be thoroughly briefed on the duties and responsibilities of the PC, CE/FE/AG, SPM and SO.
- (4) Complete hands-on training on the SPIE system.
- (5) Requirements in Chapter 3, paragraph 3-2.f. for water operations.
- (6) Aircrews will be qualified to perform their duties IAW an approved aircrew training program.

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b. **SPIE Master (SPM).** Selection of personnel for qualification as SPM should be based on the individual's demonstrated leadership capabilities, maturity (E-4 or above), knowledge and experience of SPIE operations. Personnel are qualified to perform the duties of SPM after they have met the requirements in paragraph 7-4.a. and 7-4.c., as well as the successful completion of the SPM training course. SPM training will include the following:

(1) Receive instructions and demonstrate proficiency on preparing the aircraft for SPIE operations.

(2) Receive instructions and demonstrate proficiency in the following SPM duties:

(a) Coordination procedures and responsibilities.

(b) Troop briefings.

(c) Throwing and retrieving ropes.

(d) Hand and arm signals.

(e) Emergency procedures.

(3) Personnel undergoing initial SPM qualification training will serve as SPM on at least one (1) day operation and one (1) night operation from an aircraft.

c. **SOF Baseline Interoperable Standards for SPIE Qualification.** Upon completion of a USSOCOM recognized school/course, SPIE qualified personnel will have met all standards at the appropriate levels. Component training requirements and standards may be higher in any area to allow for Service or Component PoE that may be mission area specific, but at a minimum the SOFBIS requirements for SPIE qualification are:

(1) Demonstrate proper techniques for donning an approved harness and connecting the harness and equipment to the SPIE system (personnel will ensure that their individual harnesses are properly fitted and worn, with minimal slack in the leg straps to prevent the harness from riding up during infil/exfil).

(2) Conduct two (2) SPIE operations without equipment, (1 day/1 night).

(3) Conduct two (2) SPIE operations with combat equipment and weapon, (1 day/1 night).

**NOTE:** For wet-SPIE training, a rehearsal should be conducted in a pool to familiarize personnel with procedures for working with the SPIE line. Training should include: 1) attaching themselves to the line and 2) emergency procedures should they become fouled in the line while in the water.

**NOTE:** Because of continuing changes in load bearing equipment designs and the introduction of protective equipment such as body armor, all equipment must be carefully inspected after rigging to ensure that all equipment is compatible with the harness being used and does not create an unforeseen hazard for the each member.

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d. **Sustainment Training.** Prior to conducting SPIE training, personnel will receive formalized training in the procedures to be used during SPIE operations within 72 hours prior to the operation. At a minimum, this training will include:

- (1) Rigging and inspection of individual equipment.
- (2) Rigging/inspection of aircraft and accompanying equipment (if applicable).
- (3) Hand and arm signals.
- (4) Safety requirements and emergency procedures.

**NOTE:** If assets are available, and time allows, sustainment training should include rehearsal with actual mission loads and special equipment.

e. **Refresher Training.** Refresher training is routinely conducted to maintain the acquired skills. Personnel who have not participated in SPIE operations during the past 12 months will undergo refresher training before being included in an operation. Refresher training for SPIE consists of:

- (1) A complete review of the SPIE system, its purpose, capabilities, limitations, emergency procedures.
- (2) The execution of at least one (1) day and one (1) night SPIE operation.
- (3) Aircrews will conduct refresher training IAW the appropriate aircrew training manual and aviation unit SOPs.

f. **SPIE Master Refresher Training.** SPM refresher training is conducted IAW paragraph 7-4.e. and includes the execution of at least one (1) SPM operation under the observation of a current SPM.

**7-5. Personnel Duties and Responsibilities.** The following personnel duties and responsibilities help to reduce/prevent accidents that can occur when conducting SPIE operations. They also ensure thorough and effective training. All personnel involved in SPIE operations will plan and rehearse their tasks.

a. **Unit Commander.** Prior to participation in training, the unit commander will ensure subordinate commanders and mission commanders screen all personnel to ensure they are physically and professionally able to participate in operations.

b. **Air Mission Commander (AMC).** When more than one helicopter is involved in the operation, the employing aviation unit designates the AMC and their responsibilities include:

- (1) Ensuring all aircraft and aircrews are at the appropriate locations for training, rehearsals and the operation.
- (2) Ensuring that all aircrew understand their responsibility concerning SPIE IAW this manual.
- (3) Ensuring that all aircraft infil personnel on the designated objective.

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c. **Pilot-in-Command (PC).**

(1) The PC assumes the duties of the AMC on single ship missions.

(2) Ensures the aircrew and all non-aircrew personnel are briefed and understand their responsibilities during SPIE operations, including aircraft safety and actions in the event of an emergency.

(3) Ensures the SPIE equipment rigging is inspected for completeness and functionality with no visible metal fatigue or other structural weakness, and that it is installed properly.

(4) Keeps the aircraft positioned over the objective with corrections from the crew as required.

(5) Emphasizes procedural techniques for clearing, recovery, jettison of the SPIE and/or aircraft premature departure from the objective area.

**NOTE:** The SPM and the CE/FE/AG are responsible for the safe conduct of the SPIE operation. Because there is considerable overlap between the duties and responsibilities of these personnel, they must coordinate closely before the operation to determine who is performing which duty.

d. **SPIE Master (SPM).** A SPM will be designated for each aircraft and has overall responsibility for the safety of all personnel conducting SPIE operations, ensuring adherence to safety precautions outlined in this manual. The SPM is responsible for the following:

**NOTE:** In the absence of a SPM the CE/FE/AG will assume SPM duties.

**NOTE:** The CE/FE/AG will rig the aircraft if a SPM is not available and secures all loose equipment to ensure nothing falls from the aircraft.

(1) **Preflight/Infil Duties.**

(a) SPM coordination of all aspects of troop and unit preparation to include procurement of sufficient SPIE equipment for the operation.

(b) SPM coordination of all support activities.

(c) SPM proper preparation of SPIE equipment.

(d) SPM briefs the pilot and other concerned personnel about details of the operation, especially the extraction and dismounting procedures.

(e) SPM makes requests through the CE/FE/AG to keep the pilot informed throughout the operation and maintains communications with the CE/FE/AG SPM.

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(f) SPM assignment of qualified personnel to the duties of SPM and other key positions as required by the operation.

(g) SPM strict adherence to procedures for the planning, preparation and execution of the operation as outlined IAW current Service and Component directives, regulations and manuals as well as the references in the Glossary (Section II) of this manual to include current AWR/FC/Unit SOP and local directives related to the specific training.

(h) SPM ensures that the AMC is briefed on the training being conducted.

(i) SPM ensures that SPIE operations are conducted over terrain that permits the aircrews/SPMs to have visual contact with the ground or vegetation.

(j) SPM will coordinate with CE/FE/AG to ensure that a headset is available for use.

(k) SPM will use a restraint device during the operation.

(l) SPM will rig or supervise the rigging of the aircraft and attaches the SPIE rope to the helicopter IAW the guidance in this chapter.

(m) SPM/CE/FE/AG checks the location of the emergency cutting device. Places the device where readily available, yet secure enough so as not to endanger personnel on the SPIE rope.

**NOTE:** SPM will maintain positive communication with aircrew utilizing aircraft communication when available or prearranged hand and arm signals.

(n) SPM ensures that all personnel understand the techniques and responsibilities for SPIE operations.

(o) SPM/CE/FE/AG performs safety and serviceability checks on all SPIE and rigging equipment.

**(2) Extraction Duties.**

(a) SPM, on arrival at the unit estimated position, assists the crewmember in determining the exact location of all personnel.

(b) When instructed by the pilot, the CE/FE/AG will signal the SPM to deploy the SPIE rope when the aircraft is hovering above the unit.

**NOTE:** [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) The CE/FE/AG may deploy the rope when directed by the PC.

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- (c) SPM deploys the rope, taking care to avoid striking personnel on the ground.
- (d) CE/FE/AG notifies the pilot when the rope is on the ground, and reports all altitude corrections needed to ensure personnel reach all SPIE system attachment points.
- (e) CE/FE/AG watches for the “thumbs-up” signal from all personnel.
- (f) CE/FE/AG, on receipt of the “thumbs-up” signal, advises the pilot that the unit is ready for extraction and requests a vertical liftoff.
- (g) CE/FE/AG advises the pilot of the unit position, the location of any potential obstacles, and the avoidance of horizontal movement. (reword all to clarify SPM and CM duties)
- (h) If a member becomes entangled with an obstacle during extraction, the CE/FE/AG notifies the pilot and requests the vertical lift be stopped. If the situation is critical, SPM prepares to cut the SPIE rope (the anchor point or cargo straps) after the personnel are secured to the obstacle or on the ground. On only the CE/FE/AG will perform this function.  
  (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)
- (i) When positive that all obstructions are clear, the CE/FE/AG advises the pilot to obtain a safe altitude that provides at least 100 foot clearance between SPIE personnel and known obstacles for training. PC will determine safe altitude for combat operations based on terrain, obstacles, and enemy situation.
- (j) At frequent intervals during the flight, CE/FE/AG advises the pilot on the safety status of all personnel. Maintains a constant visual cross-check with personnel, SPM, and airspace surveillance. SPM maintains a constant watch on the team and frequently checks security of the SPIE system attachments.

### (3) Dismounting Duties.

- (a) On arrival at the dismounting area, CE/FE/AG informs the PC as to the approximate distance of the rope from the ground.
- (b) Once the PC starts the vertical descent, CE/FE/AG continually informs him as to the approximate distance of the rope from the ground.
- (c) CE/FE/AG informs the PC of any horizontal drift that occurs and any obstructions near the SPIE rope. Also informs the pilot of any oscillation that may occur.
- (d) CE/FE/AG informs the PC when the rope is about 25 feet above the ground and again when it is 10 feet above the ground. Ensures that the rate of descent is slow enough to enable personnel to touch down and get out from under other personnel safely.

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(e) CE/FE/AG reports when the first man initially touches down, when the last individual begins to move away from under the helicopter, and when all personnel are disconnected.

(f) CE/FE/AG or SPM, on order of the pilot, either retrieves the SPIE rope into the aircraft or disconnects the SPIE rope and drops it to the ground.

(1) When using the

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(2), (b)(3)(10 U.S.C. § 130), (b)(7)(E)

(2) The type of knot used to connect the sling (or recovery) rope to the SPIE rope is self-tightening in nature (for example, the prusik knot). The SPM fastens the standing end of the sling rope to the deck tie-down or uses a snap link.

(3) Although it is important to keep the line out of the way, the primary consideration is its length. The retrieval rope must be long enough to account for any oscillation in the SPIE rope during flight.

**WARNING:** Rope will not be deployed until the aircraft is at a stabilized hover directly over the designated objective (Exfil).

e. **Safety Officer (SO).** The SO is responsible for safe and efficient extraction missions. His duties are as follows:

(1) Ensures radio or visual signal communication with the SPM or aircrew. Radio communication is required for training.

(2) Ensures all personnel have properly hooked up to the extraction rope, and verifies hook-up of the personnel safety sling.

(3) Ensures personnel and ropes are clear from all obstacles.

(4) Signals the SPM that personnel are ready for extraction.

(5) Assists personnel as they land at the let down area.

f. **Individuals.**

(1) Understand all aspects of the SPIE system and emergency procedures.

(2) Ensure correct equipment configuration.

(3) Ensure carried equipment's dimension or bulk will not interfere with the ability to safely execute SPIE operations.

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## 7-6. Equipment.

a. **Repair and Cleaning of Equipment.** Ropes are washed with a mild detergent, such as liquid dish soap, and cold water followed by a rinse in clean, fresh water. Ropes are dried at a temperature not to exceed 140 degrees Fahrenheit. Oil, grease, hydraulic fluid, and other petroleum stains can be removed with the cleaning agent xylene (Grade A or B, TT-X 916).

b. **Storage of Equipment.** To avoid ultraviolet deterioration, the nylon materials should be protected from the direct sunlight. The SPIE rope is stowed in an aviator's kit bag for protection when not in use. Bins or similar facilities are used for storage of SPIE equipment. Areas used for storage should be well ventilated and free of oil, acid, cleaning compounds, and other contaminants. Equipment must not be stored above or near hot water pipes or heating appliances.

## 7-7. Operational Requirements.

a. **Operational Requirements.** The following section discusses the medical and communications requirements, and the procedures to follow during unusual conditions (adverse weather/terrain conditions, night operations). Personnel must use sound judgment to determine what action to take depending on the nature and severity of the condition.

(1) **Medical Coverage.** See requirements in paragraph 3-6.

(2) **Communications Requirements.** During SPIE training, the SPM and SO will maintain positive communication with the aircrew utilizing aircraft communication when available or prearranged hand and arm signals/light signals. Additionally, the SPM or SO will inform the PC to stop operations if an unsafe condition develops. During extractions, the SO (via the SPM) will inform the PC that all personnel are ready for extraction. During tactical missions, prearranged signals should be used to communicate between the mission and aircrew personnel (i.e., flashing light or chemlight/light source signals).

(3) **Adverse Weather/Terrain Conditions.** During the risk assessment for SPIE training the following conditions will be considered:

(a) Wind chill factors caused by rotor downwash, cruise airspeeds, and duration that could cause cold weather injuries through exposure

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) The rope is exposed to the elements for a sufficient length of time to freeze, thereby reducing its tensile strength.

(c) Conditions, to include blowing particles or water spray produced by rotor downwash, that cause the aircrew or SPM to lose visual contact with the ground.

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**b. Night Operation Requirements.**

(1) Two chemlights/light sources will be attached at the bottom end of the rope and 5 feet higher to aid in determining the relationship of the SPIE rope to the ground.

(2) Individual Component and sub-unified commanders will establish training, policy and procedure for use of NVDs.

**7-8. Rigging of Aircraft.**

**NOTE: Alternate rigging IAW Service-approved AWR/FC is authorized.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**(1) Equipment.**

- a.
- b.
- c.
- d.
- e.
- f.
- g.
- h.
- i.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**(2) Installation.**

(a)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(2), (b)(3)(10 U.S.C. § 130), (b)(7)(E)

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(b) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[redacted] (b)(2), (b)(3)(10 U.S.C. § 130), (b)(7)(E)

(c) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[redacted] (b)(2), (b)(3)(10 U.S.C. § 130), (b)(7)(E)

**NOTE:** Care must be taken when using the UH-1 helicopter because of the ways in which it can be configured. Some [redacted]

[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[redacted] (b)(2), (b)(3)(10 U.S.C. § 130), (b)(7)(E)

[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**(1) Equipment.**

(a) [redacted]

(b) [redacted]

(c) [redacted]

(d) [redacted]

[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(e) [redacted]

(f) [redacted]

(g) [redacted]

aircraft.

(h) [redacted]

**NOTE:** [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(2) Installation.

(a) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(c) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(d) Optional: (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:** If installed, the SPIE rope may be directly attached to system limitations must not be exceeded, and (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) see Chapter 6).

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(1) Equipment.

(a)  
(b)  
(c) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(d)  
(e)  
(f)

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(g) Optional: [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(h) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**(2) Installation.**

(a) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(c) [redacted] (b)(2), (b)(3)(10 U.S.C. § 130), (b)(7)(E)

(d) Optional: [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:** If installed, the [redacted] may be directly attached to the [redacted] system [redacted] or limitations must not be exceeded, and FRIES bar must be configured for extraction operations (see Chapter 6).

**(3) SPIE Preparation.**

(a) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) Insure floor area is free of any oil.

(c) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(d) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(e) Inspect the forward and aft [redacted] system for cracks, corrosion, and security IAW the AWR. Tape the edge of the ramp and all sharp objects. Extend the aft [redacted] bars to the pre-briefed length. Remove the [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(f) [redacted] ope to th [redacted] ar by inserting th [redacted] (b)(3)(10 U.S.C. § 130)

[redacted] (b)(3)(10 U.S.C. § 130)

**NOTE:** A safety line will be used and secured to [redacted] ate only and not around th [redacted] bar.

[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**WARNING:** The [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (see [Figure 7-15](#)). Therefore, extreme care must be taken when working around this opening, especially during night operations. Personnel should be made well aware of this hazard during training and/or “dry run” iterations.

**NOTE:** Use locally procured padding around the edge of the cargo hook hole to protect slings from damage. Old fire hose usually works well for this purpose.

(1) Use [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) to the aircraft.

(2) Pass the [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (if present) and attach [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) appropriate stations;

(a) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) aircraft is [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**7-9. Operating Procedures.**

a. **Land.** The SPIE system is used only when the unit requires immediate extraction or is unable to move to a clear (open) position suitable for helicopter landing.

(1) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(3) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(4) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:** A landing can be made with the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) Personnel, once unhooked, keep the rope taut by walking it out to the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) makes a slow descent.

**b. Water Extraction.**

(1) The (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) For this

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(3) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**WARNING:** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) disconnect in case of emergencies.

**WARNING:** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**WARNING:** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) by aircraft downwash. This is significant in that it may reduce swimmer awareness and breathing ability. This is particularly important while personnel (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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~~FOR OFFICIAL USE ONLY~~**7-10. Safety Procedures.**

a. Should an emergency occur during an extraction, personnel will apply the distress, help or pick me up hand and arm signal by waving one hand overhead (see [Figure A-6](#)) to inform the crew. The pilot should lower the member to the ground or water safely.

b. [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

c. [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

d. At least one operable radar altimeter is required to maintain obstacle clearance between ropers and the ground.

e. The V-blade knife or similar cutting device must be readily available in the event the SPIE rope straps need to be cut due to an emergency or the rope becomes entangled.

f. A safety line will be secured around personnel utilizing a bowline or similar type knot.

**7-11. Signals and Commands.**

a. All signals and commands between the aircrew and the supported unit will be coordinated.

b. Hand signals for directing helicopter movement are contained in [Appendix A](#).

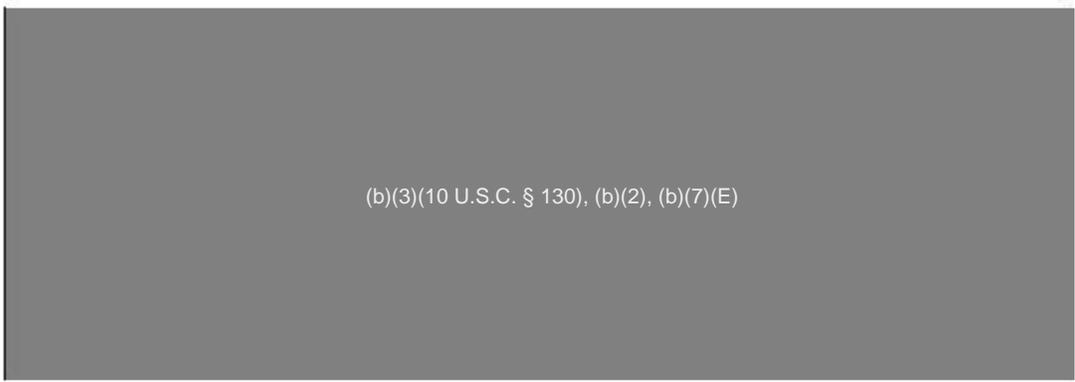
c. Emergency signals from aircraft crews to supported unit will be briefed for operations.

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 7-1.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

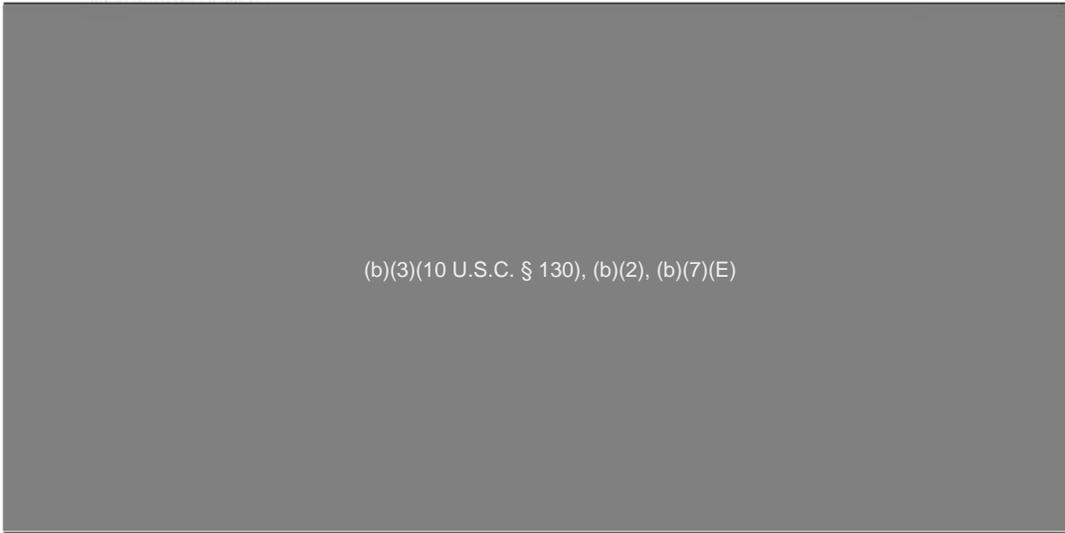


(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

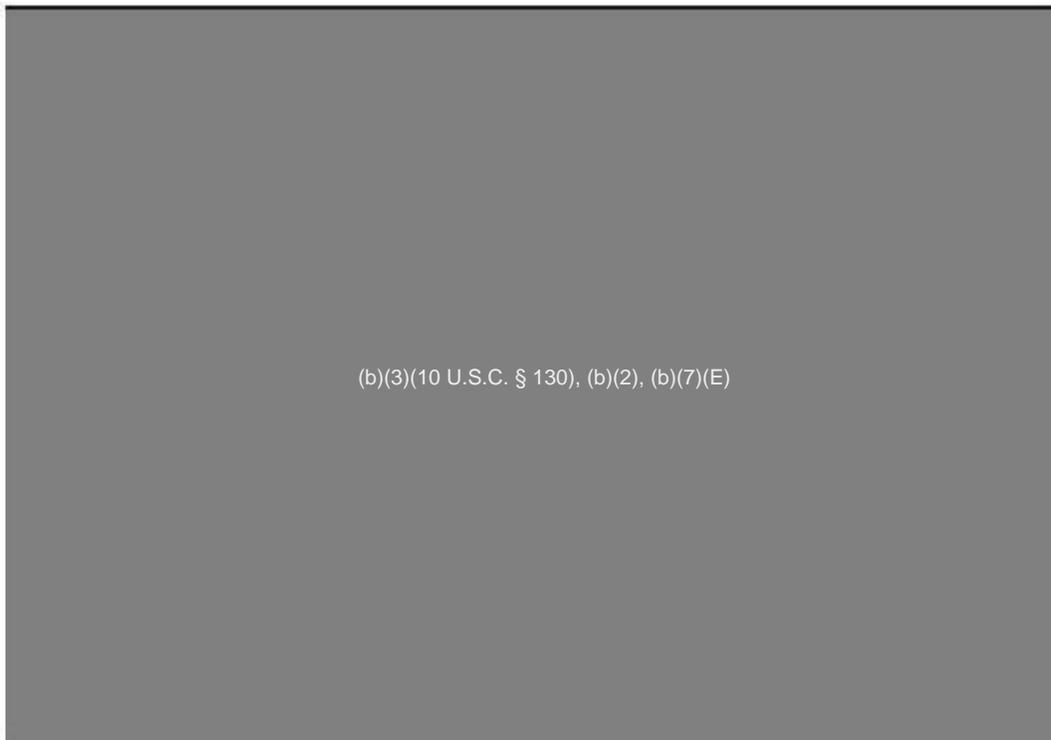
**Figure 7-2.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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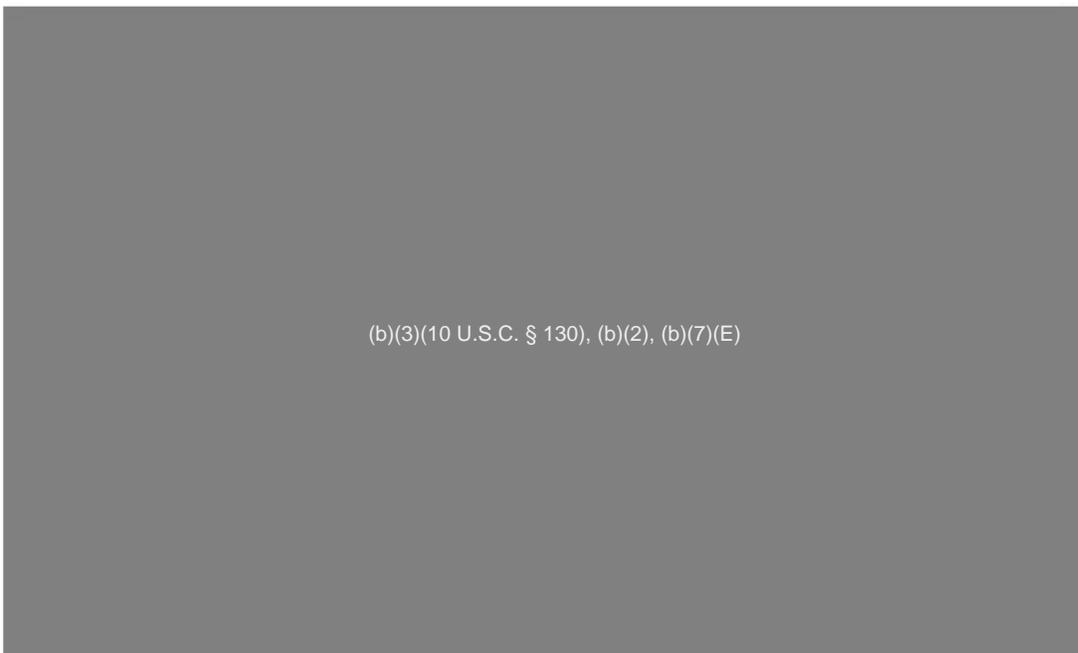
**Figure 7-3.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



**Figure 7-4.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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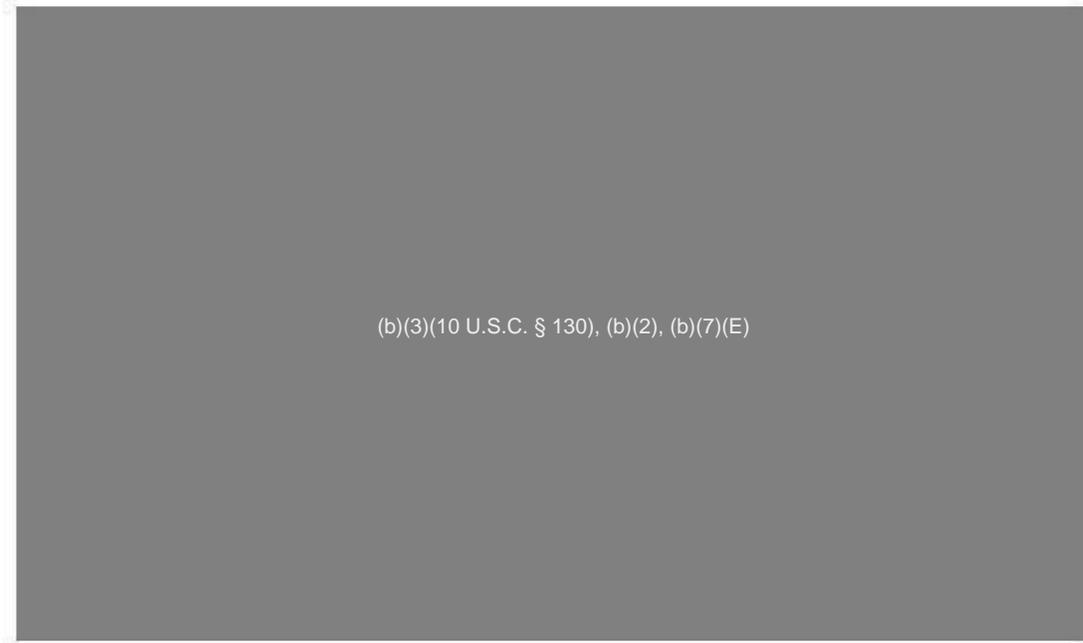
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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 7-5.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 7-6.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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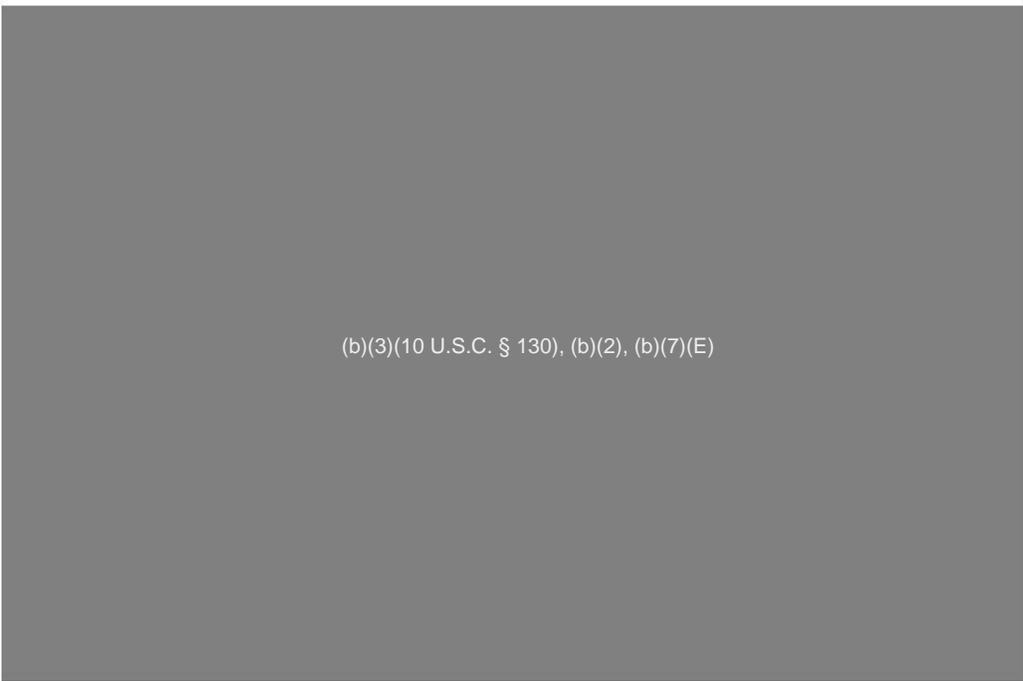
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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 7-7**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 7-8.**

(b)(2), (b)(7)(E)

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**Figure 7-9.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



**Figure 7-10**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

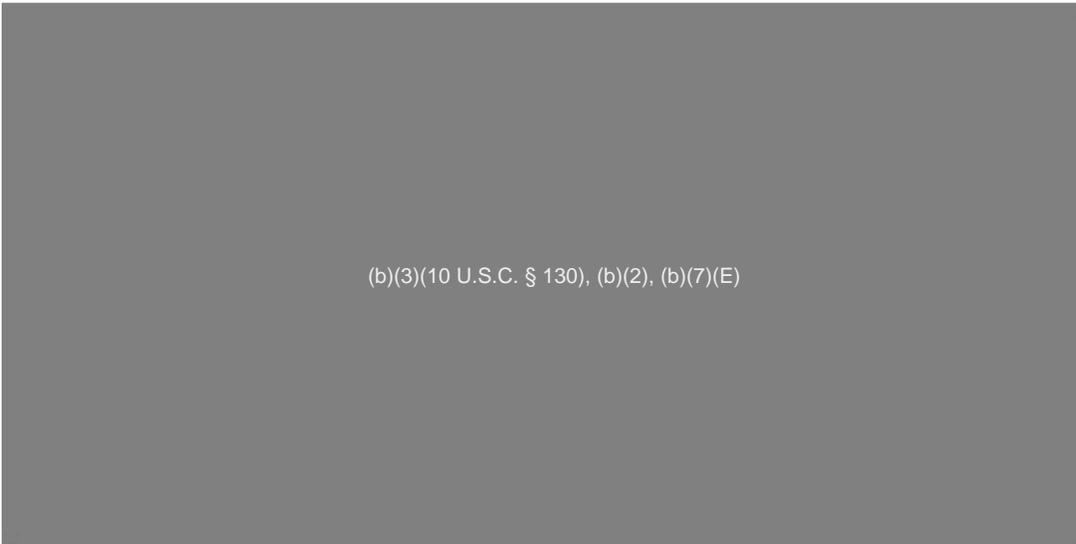
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**Figure 7-11.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

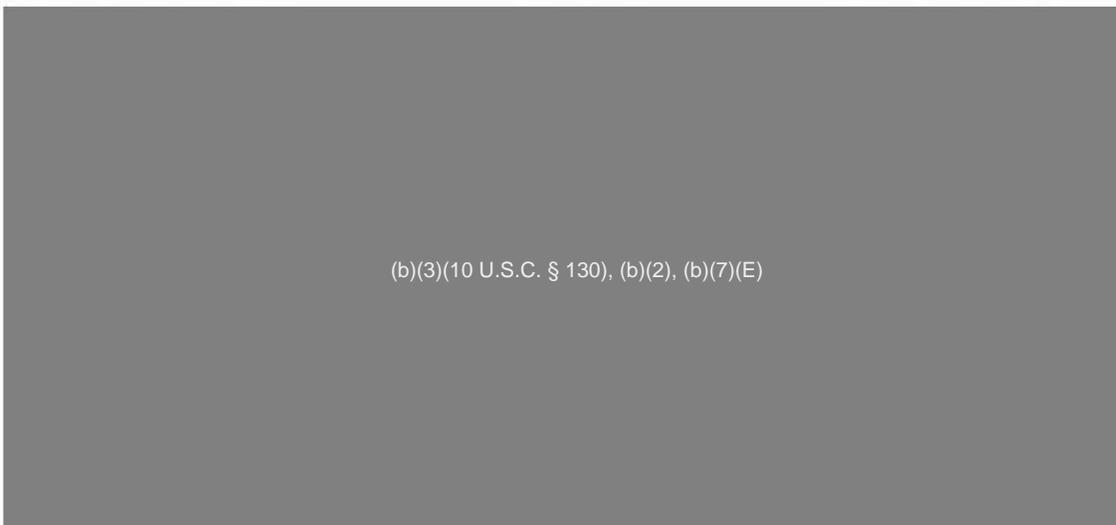


**Figure 7-12.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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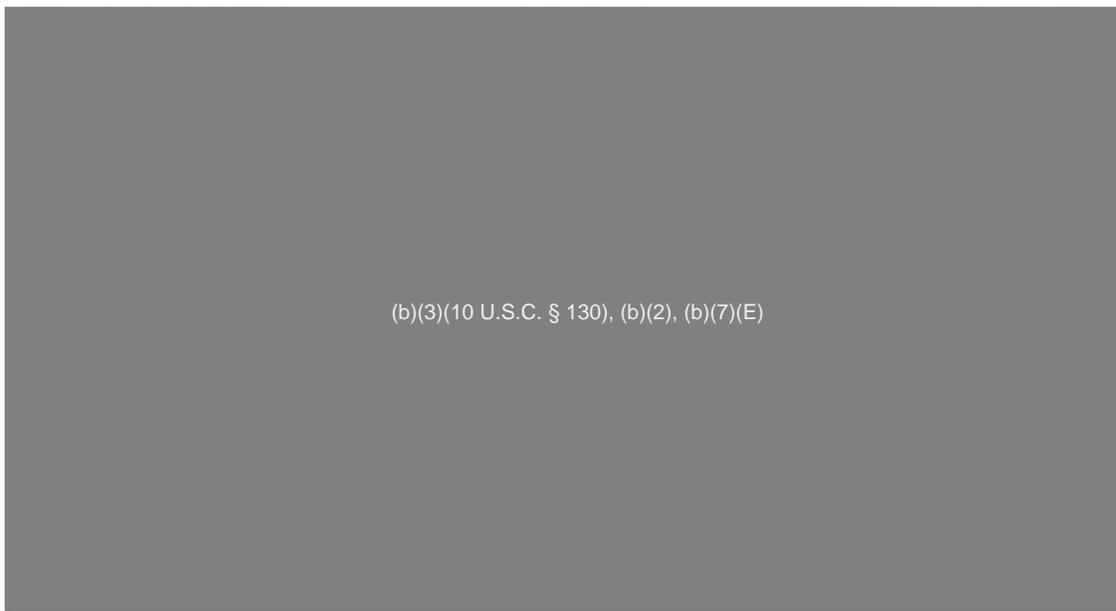
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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 7-13.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 7-14.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 7-15.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 7-16**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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## CHAPTER 8

### STABILIZED BODY OPERATIONS (STABO)

**8-1. General.** STABO systems are used to provide a means of rapid deployment and pickup of personnel by helicopter from areas that prohibit helicopter landings. STABO permits a maximum of four system units that may be connected and dropped simultaneously, which will allow the rappel or recovery of four individuals on one flight. On extraction, the helicopter will lift the individual(s) from the area with the personnel suspended beneath the aircraft, and move to an area where a safe landing can be made. The helicopter then lowers the personnel to the ground, lands, and allows the personnel to board the aircraft.

#### **8-2. Objectives.**

- a. To prescribe qualification and training requirements for maintaining proficiency in the conduct of STABO operations.
- b. To prescribe safety requirements, STABO methods, equipment, and rigging procedures in the conduct of STABO operations.
- c. To define the duties and responsibilities of key personnel during STABO operations.

**8-3. Safety.** A safety briefing must precede operations using the STABO system. The briefing should consist of, but not limited to, a review of the following:

- a. Area hazards.
- b. General aircraft safety and emergency procedures.
- c. Equipment associated with STABO and its characteristics.
- d. Equipment inspection/proper donning of the harness.
- e. Method of extraction to be used.
- f. Hand and arm signals/emergency signals.
- g. Medical coverage.
- h. Communications requirements.
- i. Night operation requirements.

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**WARNING:** The wearing of body armor during STABO operations can result in life-threatening situations due to the harness causing the body armor to ride up and cause choking and/or reduce the flow of blood to the brain. The use of Interceptor, BALCS, and BALCS-R body armor is prohibited for STABO training. If other types of body armor are used, extreme care will be taken to monitor personnel for signs of choking/unconsciousness during extraction training.

**WARNING:** Personnel will not wear a MILES harness during any helicopter infil/exfil operation that uses ropes, ladders, hoist or flotation devices.

**WARNING:** When jettisoning suspended personnel at ground level, no attempt will be made to cut a taut suspension rope near or by the extracted personnel, as a stretched rope that is cut could spring upward and entangle in the rotor blades of the aircraft.

#### **8-4. Personnel Qualification Requirements.**

a. **Initial Training.** All personnel will successfully complete the initial STABO training listed below before beginning STABO qualification training in paragraph 8-4.d.:

(1) Personnel will be thoroughly briefed on the STABO system, its purpose, capabilities, limitations, and emergency procedures.

(2) Personnel will be thoroughly briefed on the duties and responsibilities of the PC, CE/FE/AG, SM and SO.

b. **STABO Master (SM).** Selection of personnel for qualification as a SM should be based on the individual's demonstrated leadership capabilities, maturity (E-4 or above), knowledge and experience of STABO operations. Personnel are qualified to perform the duties of SM after they have met the requirements in paragraph 8-4.a. and 8-4.d., as well as the successful completion of the SM training course. SM training will include the following:

(1) Receive instructions and demonstrate proficiency on rigging the helicopter, inspecting/preparing the STABO system, and donning of the STABO harness.

(2) Receive instructions and demonstrate proficiency in the performance of the following SM duties:

- (a) Coordination responsibilities.
- (b) Troop/aircrew briefings.
- (c) Organization of the personnel to be extracted.
- (d) Deploying the STABO system.

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(e) Hand and arm signals.

(f) Emergency procedures.

c. **Safety Officer (SO).** The SO will be a current SM and is responsible for safe and efficient extraction missions.

d. **SOF Baseline Interoperable Standards for STABO Qualification.** Upon completion of a USSOCOM recognized school/course, STABO qualified personnel will have met all standards at the appropriate levels. Component training requirements and standards may be higher in any area to allow for Service or Component PoE that maybe mission area specific, but at a minimum the SOFBIS requirements for STABO qualification are:

(1) Describe/demonstrate the procedures, techniques, and equipment necessary to conduct STABO extractions.

(2) Conduct a minimum of three (3) satisfactory STABO extractions to include one with combat equipment and weapon.

e. **Sustainment Training.** Prior to conducting STABO training, units will receive formalized training in the procedures to be used during STABO operations within 72 hours prior to the operation. At a minimum, this training will include:

(1) Rigging and inspection of individual equipment.

(2) Rigging/inspection of the aircraft and accompanying equipment (if applicable).

(3) Hand and arm signals.

(4) Safety requirements and emergency procedures.

(5) Rehearsals.

**NOTE:** If assets are available, and time allows, sustainment training should include rehearsal with actual mission loads and special equipment.

f. **Refresher Training.** Refresher training is routinely conducted to maintain the acquired skills. Personnel who have not participated in STABO operations during the past 12 months will undergo refresher training before being included in an operation. Refresher training for STABO operations consists of conducting at least one STABO operation under the observation of a current SM. Aircrews will conduct refresher training IAW the appropriate aircrew training manual and unit SOPs.

g. **STABO Master Refresher Training.** SM refresher training is conducted IAW paragraph 8-4.f. and includes the execution of at least one SM operation under the observation of a current SM.

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~~FOR OFFICIAL USE ONLY~~**8-5. Personnel Duties and Responsibilities.**

a. **Unit Commander.** Prior to participation in training, the unit commander will ensure subordinate commanders and mission commanders screen all personnel to ensure they are physically and professionally able to participate in operations.

b. **STABO Master (SM).** The SM will be aboard each extraction aircraft. SM will wear a restraint device while performing SM duties in flight. He communicates with the pilot and CE/FE/AG through the aircraft INTERCOM system, if available, or uses pre-determined hand and arm signals. He listens to communications between the pilot and the ground. The SM is responsible for safe and efficient extraction missions. The CE/FE/AG will assist the SM, and keep the pilot informed about the status of the operation. The SM duties are as follows:

(1) Ensures that the helicopter is properly rigged; conducts a thorough inspection of the STABO system, anchor system and aircraft tie-downs; and ensures that the aircrew are properly briefed.

(2) Verifies the aircraft is in the proper position for deployment of the STABO system.

(3) Prepares and deploys the STABO system (when signaled by the CE/FE/AG) manually to ensure that the system lands in the proper location; recovers and redeploys the system if the desired area is missed or if the mission is aborted. [REDACTED] nly the CE/FE/AG performs this task.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(4) Observes extracted personnel from the extraction site to a safe letdown area, and monitors aircraft speed. During flight the SM monitors the personnel for stability, obstacle/terrain clearance, unanticipated problems, and aircraft location in relation to the ground. CE/FE/AG will assist with monitoring the personnel on the rope.

(5) Collects equipment after the aircraft lands, and repacks equipment after completing the maintenance checks.

(6) May abort any portion of the operation due to any potentially unsafe condition.

c. **Safety Officer (SO).** The SO is responsible for safe and efficient extraction missions and acts as the SM on the ground with the extracted unit. The SO duties are as follows:

(1) Ensures all personnel have properly donned the harness.

(2) Ensures radio communication with the SM/aircrew has been established during training operations.

(3) Ensures all personnel have properly hooked up to the extraction ropes, and verifies use/hook-up of personnel safety sling.

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- (4) Ensures personnel/ropes are clear from all obstacles.
- (5) Signals the SM that the personnel are ready for extraction.
- (6) When present, assists personnel as they land at the letdown area.

**d. Air Mission Commander (AMC).**

- (1) Will be designated by the employing aviation unit.
- (2) Will ensure that all aircrew understand their responsibility concerning STABO operations IAW this manual and AV unit SOP.
- (3) Is responsible for ensuring that all aircraft deploy the STABO system at the designated objective area.

**e. Pilot-in-Command (PC).**

- (1) Ensures that the aircrew and non-aircrew personnel are briefed and understand their responsibilities during STABO operations, including aircraft safety and actions in the event of an emergency.
- (2) Ensures inspection of the anchoring device assembly for overall condition and security prior to use.
- (3) Emphasizes procedural techniques for clearing, recovery, and jettison of the personnel at ground level being extracted, as well as, procedures for the aircraft prematurely departing the EZ/PZ.
- (4) Keeps the aircraft positioned over the EZ/PZ with corrections from the SM/CE/FE/AG as required.

**8-6. Equipment.**

**a. STABO Suspension Equipment.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**b. Maintenance Check of STABO Deployment Bag.**

- (1) Replace broken or missing rubber retaining bands.
- (2) Replace broken stitching.

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- (3) Replace broken or damaged stow loops.
- (4) Repair holes or tears in bag.
- (5) Clean dirt, grease, and foreign material from the system.

**c. Maintenance Check of Suspension and Safety Ropes. All ropes will be checked for serviceability.**

- (1) Check for cuts, abrasions, melting, or fusing.
- (2) Check for bent, broken, rusted, or missing snap links.

**d. Packing Procedures**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

- (1) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

- (2) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

- (3) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**e. Personal Equipment.**

- (1) Service-approved helmet.

**NOTE:** Due to the variety of helmets and extraction harnesses and the possibility of interoperability problems, commanders with risk acceptance authority may waive the requirement for helmets during extraction operations.

- (2) Eye Protection.
- (3) Safety restraint harness to secure the SM to the aircraft during operations.

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**8-7. Operational Requirements.**

**NOTE:** Alternate rigging IAW Service-approved AWR/FC is authorized.

a. **Operational Requirements.** The following section discusses the medical and communications requirements, and the procedures to follow during unusual conditions (adverse weather/terrain conditions, night operations). Personnel must use sound judgment to determine what action to take depending on the nature and severity of the condition. (same wording as others)

(1) **Medical Coverage.** See requirements in paragraph 3-6.

(2) **Communications Requirements.** During STABO training, the SM and SO will maintain positive communication with the aircraft/aircrew. Communications are required prior to commencing STABO operations. Additionally, the SM or SO will inform the aircraft to stop operations if an unsafe condition develops. Precise hand and arm signals will be established in case of radio failure or poor communications due to static or noise overriding the audio output of the radio. During night operations, if radio communications are hampered, special procedures will be used along with hand and light signals.

(3) **Adverse Weather/Terrain Conditions.** STABO training and operations will not be conducted under the following conditions:

(a) Wind chill factors caused by rotor downwash, cruise airspeeds, and duration that could cause cold weather injuries through exposure [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) Water or ice on the STABO system.

(c) The STABO system is exposed to the elements for a sufficient length of time to freeze, thereby reducing its tensile strength.

(d) Conditions, to include blowing particles produced by rotor downwash, that cause the aircrew or SM to lose visual contact with the ground.

(4) **Night Operation Requirements.**

(a) [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(c)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

b. **Donning of the STABO Harness.** Personnel don their STABO harnesses and adjust them to fit properly. If the extraction is conducted in conjunction with a patrol, they don their harnesses before departing on the mission. Personnel don their harnesses as follows:

(1) Determine the size of the assigned harness (small, medium, large) to ensure the proper fit.

(2) Adjust the two harness web adjusters to allow maximum extension of the harness straps. Adjust the adjustable snap hook on each leg strap to provide the maximum extended length possible on each leg strap.

(3) Insert the left (loose) end of the pistol belt through the left harness strap (formed directly above the left leg strap connector V-ring).

(4) Repeat the above procedure on the right side of the harness, using the right end of the pistol belt.

(5) Position the (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) adjacent to the equipment attaching rings.

(6) Place each arm into the respective shoulder strap and don the harness.

(7) Connect the pistol belt ends and position the belt near the midsection of the body.

(8) Adjust each side of the harness by grasping and pulling each harness strap (loose) end through the web adjuster. Adjustment may be needed if the pistol belt is situated below the beltline.

(9) Extend

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(10) Because of continuing changes in load bearing equipment designs and the introduction of protective equipment such as body armor, all equipment must be carefully inspected after rigging to ensure that all equipment is compatible with the harness being used and does not create an unforeseen hazard for personnel.

(11) Safety lines will be attached between two individuals on same side of the aircraft. They must join at a point on the harness to provide a means for individuals to return together if separated during flight.

**NOTE:**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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**c. Deploying the STABO System.**

(1) Prior to the aircraft attaining the hover position for an extraction, the SM opens the extraction deployment bag (see Figure 8-6) by removing the two bag closing ties. The SM removes the two suspension rope snap links, located just inside of the deployment bag top end, and attaches the snap links to the anchor point (refer to specific aircraft requirements).

(2) The PC advises the CE/FE/AG, who will advise the SM when the aircraft is in the hover position and stable; then the SM manually drops a deployment bag. On the H-47 (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:** Th (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**d. Conduct of STABO Operations.**

**(1) Personnel Extraction Procedures.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(a) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

1. If (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

2. (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(c) Upon ensuring that all preparations for extraction have been completed, the SO or senior member signals the SM in the helicopter by radio or hand signals to commence extraction.

(d) Both the ground party and aircrew should monitor extracted personnel for any signs of distress or trouble. The aircrew should lower the extracted personnel immediately if there are indications of a problem.

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( (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(a) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) The SO and/or the senior member notifies the SM by radio or by hand signals when liftoff may begin. The aircraft lifts them from the area and moves with the personnel suspended beneath the aircraft to an area where a safe landing can be made. The aircraft then lowers the personnel to the ground, lands, and allows them to board the aircraft.

(3) **Lift-Out Procedures.** To ensure a safe and successful lift-out, the aircrew, SM, and STABO personnel must rehearse their activities on the ground. Every element must know the others' actions during this procedure. STABO personnel do the following:

(a) Ensures that the rope does not become entangled on the ground.

(b) Moves directly under the aircraft if possible.

(c) Uses hand and arm signals or communicates by radio (preferred method) to the SM when ready to be extracted.

(d) If two or more personnel are being extracted, link arms and legs together to prevent twisting while in flight.

(e) If three or more personnel are being extracted, spread and interlock legs; outside men extend arms. One person should be designated to control stability while in the air.

(f) If personnel are not riding at same height, hold onto whatever can be reached to avoid oscillation and twisting.

**NOTE:** If rappel ropes are used in the conduct of STABO, identical ropes should be used (i.e. age, usage history, pre-stretched, etc.).

(g) Should an emergency occur during an extraction, personnel will apply the distress, help or pick me up hand and arm signal by waving one hand overhead (see [Figure A-6](#)) to inform the crew. The pilot should lower the member to the ground or water safely.

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(4) **CE/FE/AG Duties during Flight.**

(a) Inform PC of the distance between the ropes and the ground, giving corrections as necessary.

(b) Inform PC when ropes are taut and when the personnel are off the ground and clear of obstacles (before forward flight).

(c) Monitors the personnel during flight for stability, obstacle/terrain clearance, unanticipated problems, and aircraft location in relation to the ground.

(d) Informs pilot of suspended personnel's progress during landing to ensure clearance of obstacles and if the landing is at the intended touchdown area.

(5) **Hand Signals for Directing Helicopter Movement.** Hand and arm signals are contained in [Appendix A](#).

e. **Aircraft Flight Speeds and Banking Maneuvers.** Extended aircraft flights with personnel suspended below the aircraft must not exceed pre-briefed airspeed and banking turns, based on aircraft restrictions.

f. **Emergency Procedures.**

(1) When a suspended individual becomes ensnared and liftoff is not possible, the pilot lowers the aircraft so that the individual can untangle or unhook from the rope at ground level.

(2) If after liftoff, suspended/entangled personnel are unable to free themselves, personnel are jettisoned at ground level by the SM on the pilot's command. Only the CE/FE/AG will do this on the H-47. Procedures are as follows:

(a) If the anchoring device assembly has sufficient slack, unsnap the extraction system suspension rope(s) and let it fall away from the aircraft to the ground.

(b) Should the extraction system suspension rope be under tension, cut the rope at the anchor point.

**WARNING:** When jettisoning a suspended individual at ground level, no attempt will be made to cut a taut suspension rope near or by the extracted person, as a stretched rope that is cut could spring upward and entangle in the rotor blades of the aircraft.

(3) If there is an engine failure, and the aircraft is unable to maintain altitude, the SM (CE/FE/AG on the H-47) jettison the suspended personnel free at ground level. Aircraft hydraulic and anti-torque problems may require the pilot to have a suspended individual jettisoned at ground level. Personnel will be briefed on emergency procedures prior to performing STABO training.

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**8-8. Safety Procedures.**

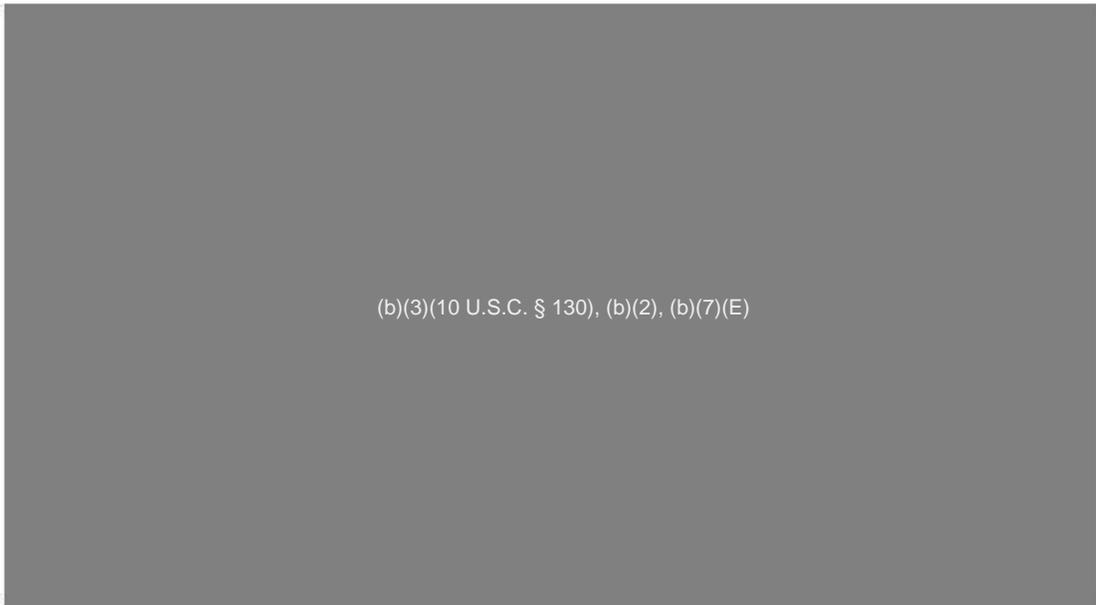
- a. Should an emergency occur during an extraction, personnel will apply the distress, help or pick me up hand and arm signal by waving one hand overhead (see [Figure A-6](#)) to inform the crew. The pilot should lower the member to the ground or water safely.
- b. Airspeeds shall not exceed (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) during cold weather and water operations.
- c. During training maximum flight time with personnel (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)
- d. At least one (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) is required to maintain obstacle clearance between ropers and the ground.
- e. The V-blade knife or similar tool must be readily available in the event the rope needs to be cut due to an emergency or the rope becomes entangled.

**8-9. Signals and Commands.**

- a. All signals and commands between the aircrew and the supported unit will be coordinated.
- b. Hand signals for directing helicopter movement are contained in [Appendix A](#).
- c. Emergency signals from aircraft crews to supported unit will be briefed for operations.

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-1**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-2**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

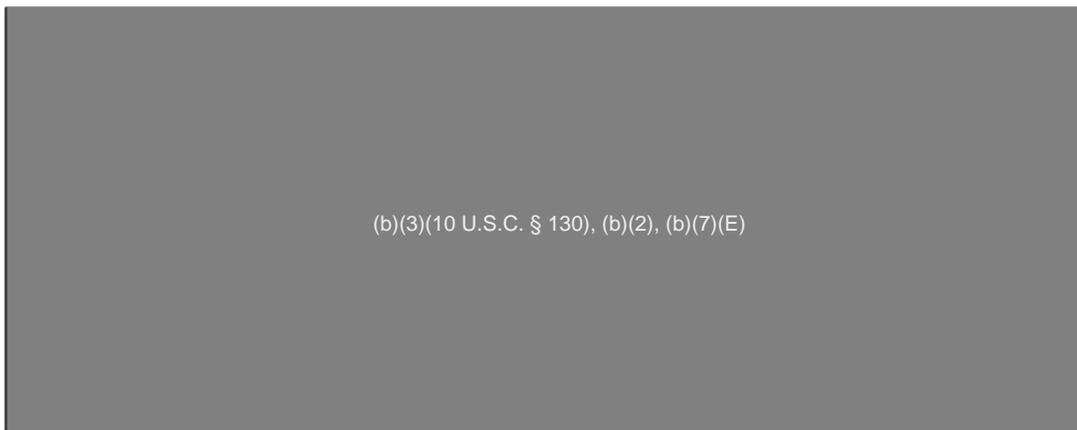
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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-3.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-4** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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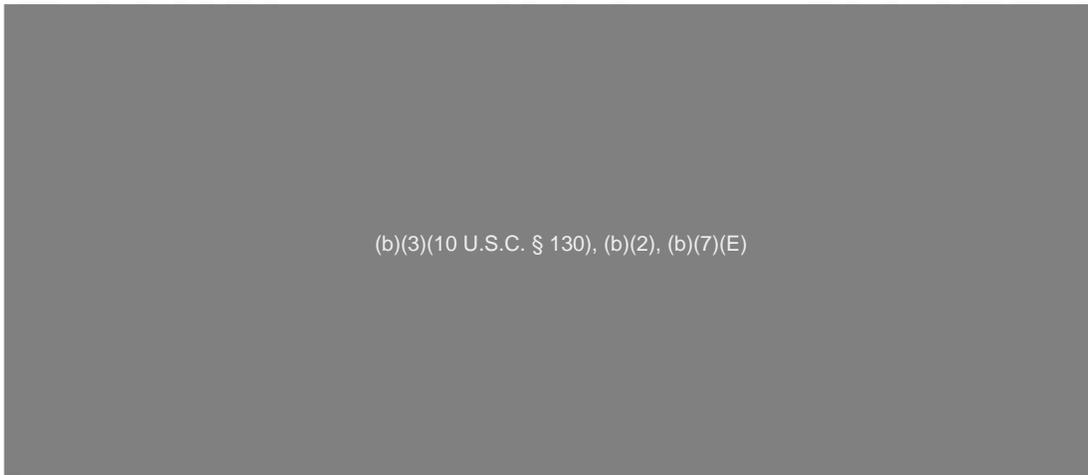
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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-5.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



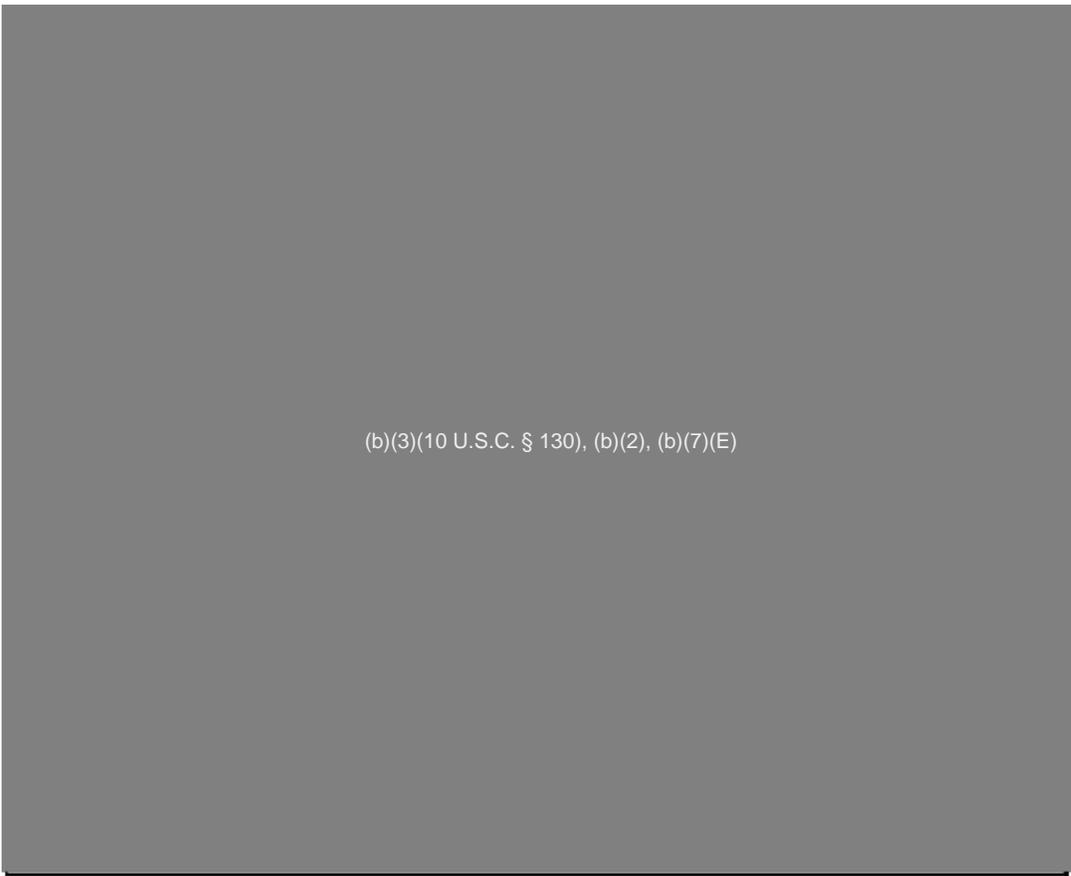
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-6.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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**Figure 8-7.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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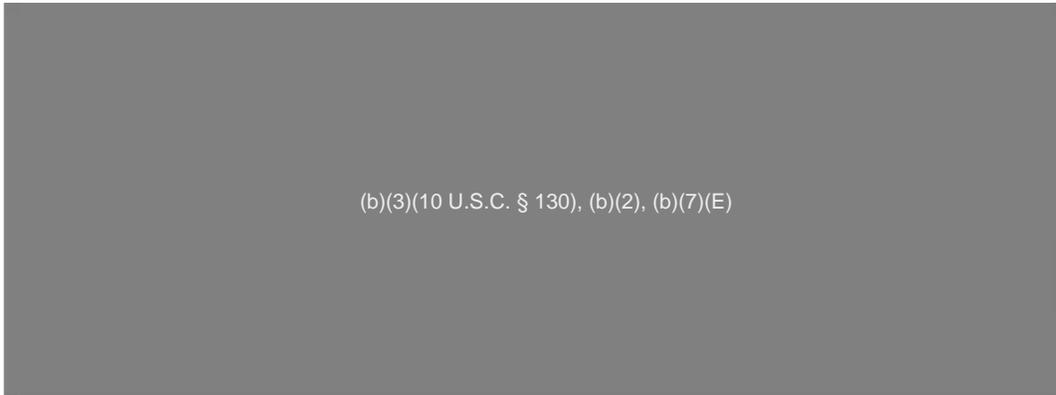
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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-9.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



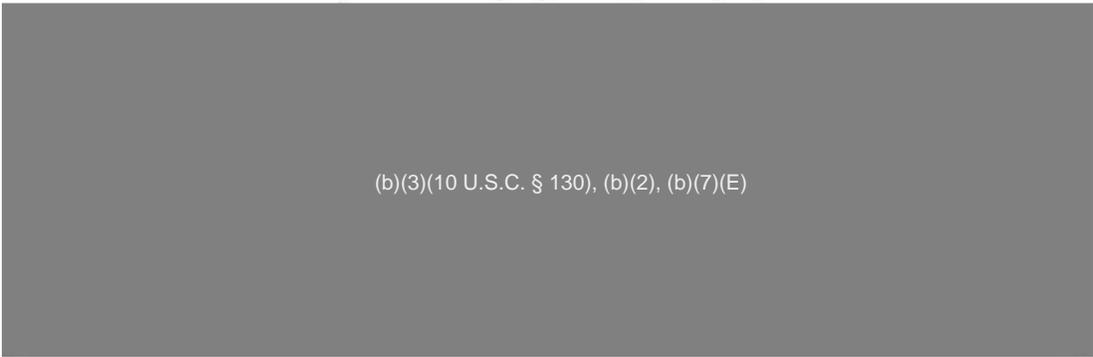
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-10.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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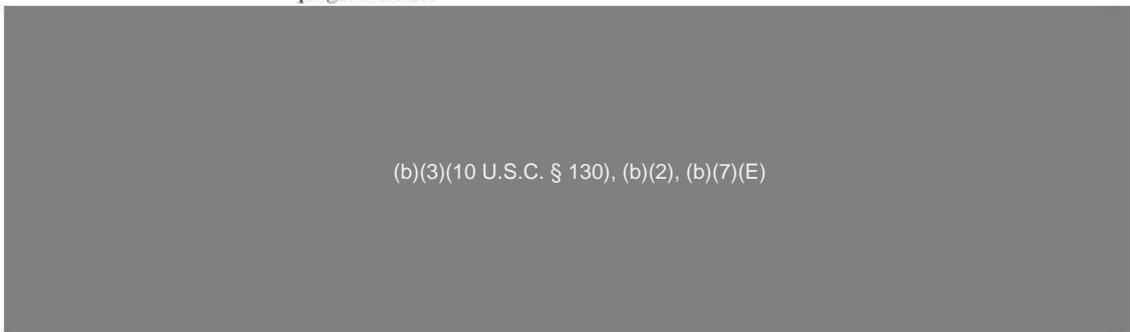


(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-11**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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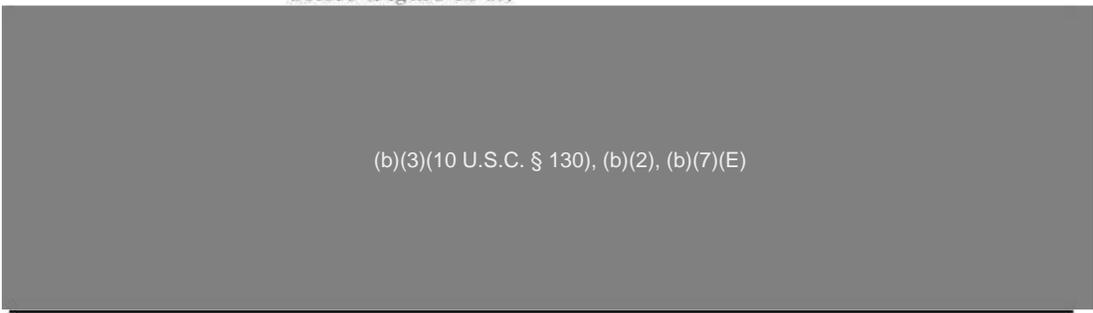


(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-12**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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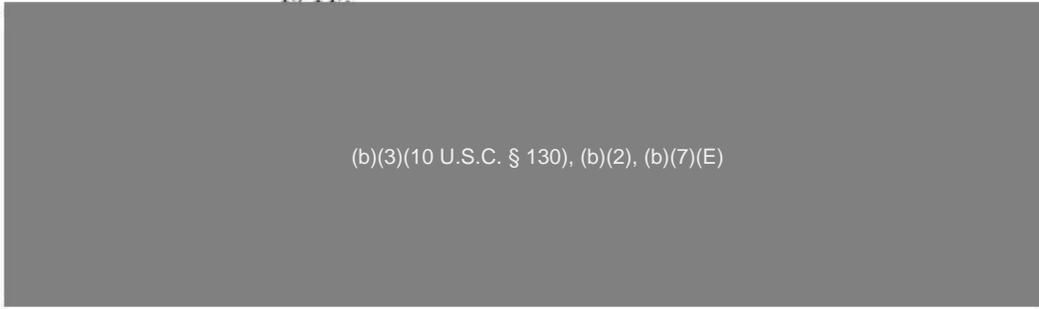
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-13.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

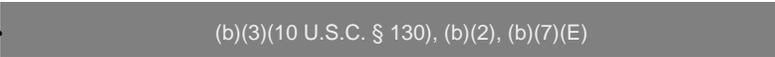
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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-14.**



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-15.**



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-16.**



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 8-17.**



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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## CHAPTER 9

### LADDER

**9-1. General.** Ladder operations are used to provide a means of infil/exfil of personnel by helicopter from areas which prohibit helicopter landings.

#### **9-2. Objectives.**

a. To prescribe qualification and training requirements for maintaining proficiency in the conduct of ladder operations.

b. To prescribe safety requirements, ladder methods, equipment, and rigging procedures in the conduct of ladder operations.

c. To define the duties and responsibilities of key personnel during ladder operations.

#### **9-3. Safety.**

**WARNING:** Personnel will not wear a MILES harness during any helicopter infil/exfil operation that uses ropes, ladders, hoist or flotation devices.

**WARNING:** For intentional overwater ladder operations, flotation devices will be inflated to 1/3 of their total capacity (or as pre-briefed). Personnel must understand this could hinder their egress during an aircraft accident/ditching sequence.

**WARNING:** Ladders will discharge static electricity generated by the aircraft. Do not permit personnel to make contact with the ladder until after it has contacted the surface.

**WARNING:** For emergency exfil, when personnel are secured to the ladder, aircraft must keep clear of ground obstacles, power lines, trees, and/or buildings. Aircraft must not exceed pre-briefed airspeed and banking turns, based on aircraft restrictions.

**WARNING:** Excessive airspeed with ladder loads may damage ladder aircraft anchors, potentially causing personnel injury/death and/or damage to aircraft systems.

**WARNING:** Do not deploy the ladder when personnel are directly below the aircraft as injury is possible from being struck by the ladder.

a. **Briefing.** A safety briefing will precede ladder operations. The briefing will consist of, but not be limited to, a review of the following:

- (1) Area hazards.

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(2) Sea State/s (if applicable) will be considered as part of the risk assessment. For training, water operations will not be conducted if Sea State is in excess of state 3 (3 foot chop, 4 foot swell).

(3) General aircraft safety.

(4) Equipment associated with ladder operations and its characteristics.

(5) Equipment inspection.

(6) Ground operations and loading.

(7) Safety warnings/commands.

(8) Medical coverage.

(9) Spreading/lowering of ladders.

(10) Movement within the aircraft.

(11) Emergencies.

(12) Ground-to-air communication requirements.

(13) Night operation requirements.

**b. Guidance.**

(1) Personnel on the surface should steady the ladder for ascending/descending personnel whenever possible.

(2) A Service-approved helmet and eye protection are mandatory for ground operations. Neither is required or recommended for conducting water operations.

(3) During water operations training, safety boats (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) with motors running must be present prior to conducting overwater operations. The boat operators will be trained to operate the equipment they are using. All boat crew personnel will wear flotation devices. Multiple aircraft operations conducting simultaneous training operations require one safety boat per aircraft. During water operations training, safety boats will move parallel and a minimum of 50 meters, not to exceed 100 meters, left or right of the aircraft flight path. Safety boats must be of a type and capacity to effect recovery of personnel.

(4) A minimum of one safety swimmer will be aboard each safety boat.

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The swimmer will be a graduate of the Combat Diver Qualification Course or a USSOCOM-approved waterborne infil course, scout swimmer course, or current Red Cross lifesaver or water safety instructor course. The safety swimmer must have swim fins, a face mask, and a Service-approved personal flotation device to help personnel, as needed. The swimmer cannot be the boat driver.

(5) A Service-approved flotation device is required during water operations. Inflate flotation devices to 1/3 of their total capacity (or as pre-briefed) prior to entering the water.

(6) Attach a chemlight/light source to themselves during overwater/night operations.

(7) Personnel will be secured to a tension bearing portion of the ladder prior to the aircraft departing into forward flight.

(8) Maximum load will not exceed ladder/aircraft limits.

(9) Aircraft should keep well clear of ground obstacles.

(10) Ladders must be recovered and secured prior to forward flight when no equipment or personnel are attached.

#### **9-4. Personnel Qualification Requirements.**

a. **Initial Training.** All personnel will successfully complete the initial ladder training listed below before beginning ladder qualification training in paragraph 9-4.c.:

(1) Personnel will be briefed on ladder equipment and purpose, capabilities, limitations, and emergency procedures.

(2) Personnel will be briefed on the duties and responsibilities of the PC, crewmembers, and SO.

(3) Requirements in Chapter 3, paragraph 3-2.f. for water operations.

b. **Safety Officer (SO).** Personnel performing duties as SO will be experienced in ladder operations.

c. **SOF Baseline Interoperable Standards for Ladder Qualification.** Upon completion of a USSOCOM recognized school/course, Ladder-qualified personnel will have met all standards at the appropriate levels. Component training requirements and standards may be higher in any area to allow for Service or Component PoE that maybe mission area specific. At a minimum the SOFBIS requirements for Ladder qualification are:

(1) Demonstrate use of all required ladder equipment.

(2) Demonstrate donning of harness, rappel seat and/or safety line to include ladder hook-up.

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- (3) Define and identify unsafe attachments or equipment related to ladder training.
- (4) Define terms used in ladder operations.
- (5) Demonstrate knowledge of all ladder commands.
- (6) Conduct one (1) ladder operation.

d. **Sustainment Training.** 72 hours prior to conducting ladder training, units will receive formalized training in the procedures to be used during ladder operations. At a minimum, this training will include:

- (1) Rigging and inspection of individual equipment.
- (2) Rigging/inspection of aircraft and accompanying equipment.
- (3) Hand and arm signals.
- (4) Safety requirements and emergency procedures.
- (5) Rehearsals.

**NOTE:** If assets are available, and time allows, sustainment training should include rehearsal with actual mission loads and special equipment.

e. **Refresher Training.** Refresher training is routinely conducted to maintain the acquired skills. Personnel who have not participated in ladder operations during the past 12 months will undergo initial training.

#### 9-5. Personnel Duties and Responsibilities.

a. **Unit Commander.** Prior to participation in training, the unit commander will ensure subordinate commanders and mission commanders screen all personnel to ensure they are physically and professionally able to participate in operations.

b. **Safety Officer (SO).** The SO will be assigned to each team of personnel conducting ladder operations and he will be located on the ground at the extraction point during training operations. The SO is responsible for the safe conduct of ladder operations and his duties are as follows:

- (1) During operations, ensures all required safety equipment is present. Refer to specific chapters under Medical Coverage when inspecting medical equipment and plan.
- (2) Conforms to time schedule as close as practicable.

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(3) Ensures that a complete safety and operations briefing is provided to all participating personnel.

(4) Ensures positive communication with the aircrew has been established.

(5) Ensures each individual has properly hooked up to the ladders and soldiers/ladders are clear from all obstacles.

(6) Ceases ladder operations if any unsafe condition is apparent.

**c. Air Mission Commander (AMC).**

(1) Will be designated by the employing aviation unit.

(2) Will ensure that all aircrew understand their responsibility concerning LADDER operations IAW this manual and the aviation unit SOP.

(3) Is responsible for ensuring that all aircraft deploy the LADDER systems at the designated objective area.

**d. Pilot-in-Command/Aircrew.**

(1) Ensures a Thorough brief is given to all participants on the conduct of the operation, aircraft safety, and emergency procedures.

(2) Supervise or complete all aircraft preparation prior to the ladder operation.

(3) Ensure air to ground communications is functional before commencing ladder training.

(4) Abort the training if any unsafe condition is apparent.

(5) Issue the order to jettison the ladders during an actual aircraft emergency.

(6) Inspect ladders:

(a) Cables/ropes checked for frays.

(b) Rungs checked for security and cracks.

(c) Rigging checked for security.

(d) Rolled ladders checked to ensure they are secure to prohibit premature deployment.

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(7) Ensure the aircraft is properly rigged with the ladder system.

(8) Direct the pilot to maneuver the aircraft, clear of all obstacles, into position for deploying, recovering, or jettison of the ladders.

(9) Receive/relay hand and arm signals to the personnel being extracted on the ladders, and inform the pilot when the hook-up is complete.

(10) Direct the aircraft out of the extraction zone, keeping the ladders clear of all obstacles.

(11) Continually observe the personnel on the ladders, monitor aircraft altitude above obstacles, and immediately inform the PC of any unsafe conditions.

(12) Keep the PC informed as to the condition of the operation, giving corrections as required to ensure safety.

(13) Disconnect the ladder system when required.

(14) Mark ladders with chemlights/light sources during night operations at the point where.

(a) The ladder enters the aircraft.

(b) The bottom of the ladder.

(c) 3-5 feet from the bottom rung.

**e. Ladder Personnel.**

(1) Understand all ladder operation procedures and equipment.

(2) Adhere to all commands from the aircrew/SO.

(3) Bring to the attention of the aircrew or SO any unsafe condition during the training.

**9-6. Equipment.**

a. Ladders. All service-approved ladders are authorized for use.

b. Snap links / Carabineers (will conform to the standards in chapter 5).

c. Restraint harness for CE/FE/AG/safeties.

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- d. Headsets.
- e. Heavy duty tape (100 MPH)
- f. knife.
- g. 4”X4” block of wood (as required). (Mark’s block)
- h. Service-approved flotation devices for all personnel (for water ladder operations).
- i. Bolt cutters or alternate equipment to perform emergency jettison/cutaway procedures.
- j. Light source (required for personnel conducting overwater operations) and for ladder markings.

**9-7. Operational Requirements.**

a. **Operational Requirements.** The following section discusses the medical and communications requirements, and the procedures to follow during unusual conditions (adverse weather/terrain conditions, night operations). Personnel must use sound judgment to determine what action to take depending on the nature and severity of the condition.

(1) **Medical Coverage.** See requirements in paragraph 3-6.

(2) **Communications Requirements.** While onboard the aircraft, the ranking (or designated) individual or will maintain positive communication with the aircrew. When used, a ground party at the training site will maintain communications with the aircrew to relay pertinent information.

(3) **Hand Signals for Directing Helicopter Movement.** Hand signals are contained in [Appendix A](#).

(4) **Adverse Weather/Terrain Conditions.** Ladder operations will not be conducted under the following conditions:

(a) Wind chill factors caused by rotor downwash, cruise airspeeds, and duration that could cause cold weather injuries through exposure. Airspeeds shall not exceed (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) or during cold weather operations.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) Ice on the ladders inhibiting the ability of the climbers to control their ascent/descent.

(c) The ladder is exposed to the elements for a sufficient length of time to freeze, thereby reducing its tensile strength.

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(d) Conditions, to include blowing particles or water spray produced by rotor downwash, that cause the CE/FE/AG to lose visual contact with the ground.

(e) Training operations will not be conducted if sea is in excess of state 3 (3 foot chop, 4 foot swell).

**(5) Night Operation Requirements.**

(a) [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
 [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) The SM and the aircrew will wear appropriate NVDs during night operations. Individual Component and sub-unified commanders will establish training, policy and procedure for use of NVDs.

**b. Aircraft Preparation.**

(1) Secure aircraft doors in the open position. During cold weather operations, the doors may remain closed until time for ladder deployment.

(2) Remove or secure non-essential seats and equipment.

(3) Tape any sharp edges or protrusions that may come in contact with the ladders or personnel.

(4) If available, extend INTERCOM cords to desired locations and tape to prevent entanglements.

(5) Connect ladders to aircraft anchoring points IAW Service-approved procedures.

**9-8. Ladder Operations.**

**a. Conduct.**

(1) For extractions, personnel climb into the aircraft when possible. When personnel cannot climb into the aircraft, they will [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) After entering aircraft, all equipment will be properly secured.

(3) All Service-approved ladders are authorized for use. Ladder operations must follow the manufacturer's written limitations and restrictions for each type of ladder. Care must be taken not to exceed the attachment point limitations/capabilities.

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**b. Emergency Actions.**

(1) Should an emergency occur during an extraction, personnel will secure body to the ladder and apply the distress, help or pick me up hand and arm signal by waving one hand overhead (see [Figure A-6](#)) to inform the crew. The pilot should lower the member to the ground or water safely.

(2) In the event of an actual aircraft emergency, the PC will be the final authority as to the solution of the emergency and the action taken.

(3) When a suspended individual or ladder has become ensnared and an ascent is not possible, immediate steps will be taken to lower the aircraft until the personnel can unhook.

**WARNING:** Personal Flotation Devices (PFD), if inflated prior to exiting the aircraft, may hinder emergency egress from downed, underwater aircraft.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**WARNING** Personnel should be aware of the significant water spray created by aircraft downwash. This is significant in that it may reduce swimmer awareness and breathing ability.

**9-9. Safety Procedures.**

a. (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

c. At least one operable radar altimeter is required to maintain obstacle clearance between ropers and the ground.

**9-10. Signals and Commands.**

a. All signals and commands both routine and emergencies between the aircrew and the supported unit will be coordinated and briefed for the operations.

b. Hand signals for directing aircraft movement are contained in [Appendix A](#).

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 9-1.** (10 U.S.C. § 130), (b)(2), (

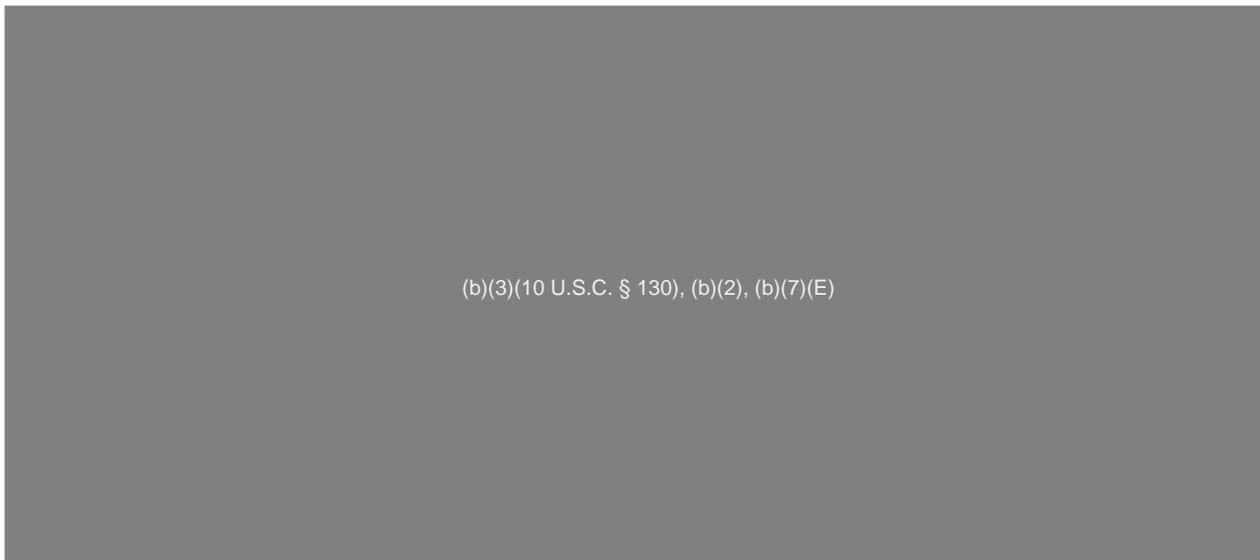


(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 9-2.** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 9-3.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)



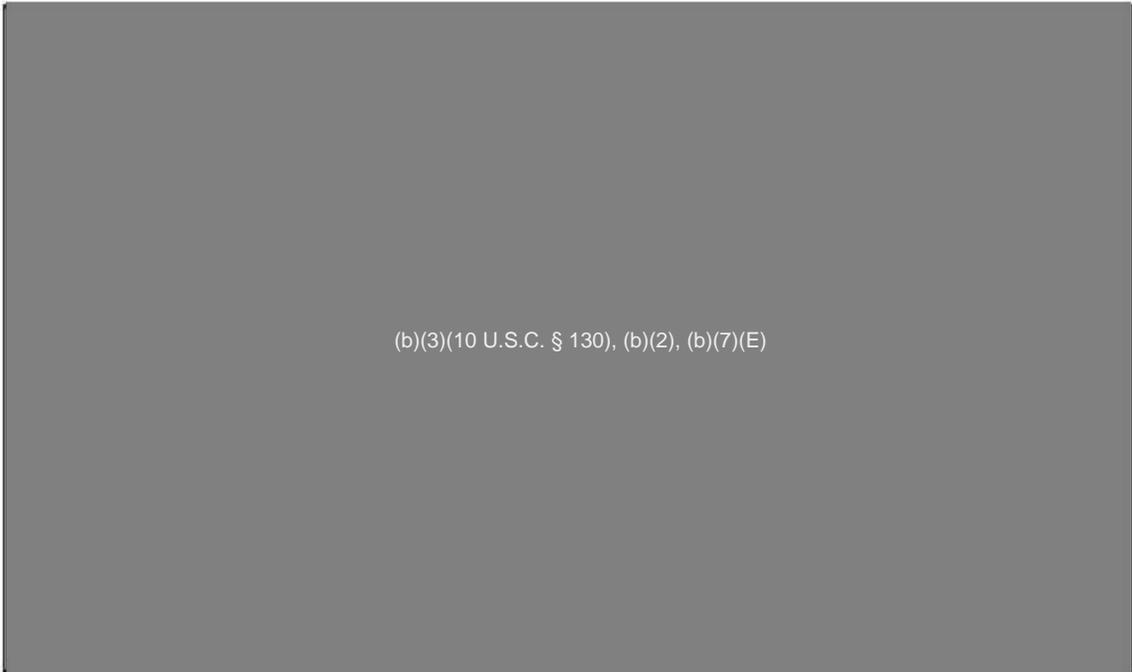
(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 9-4**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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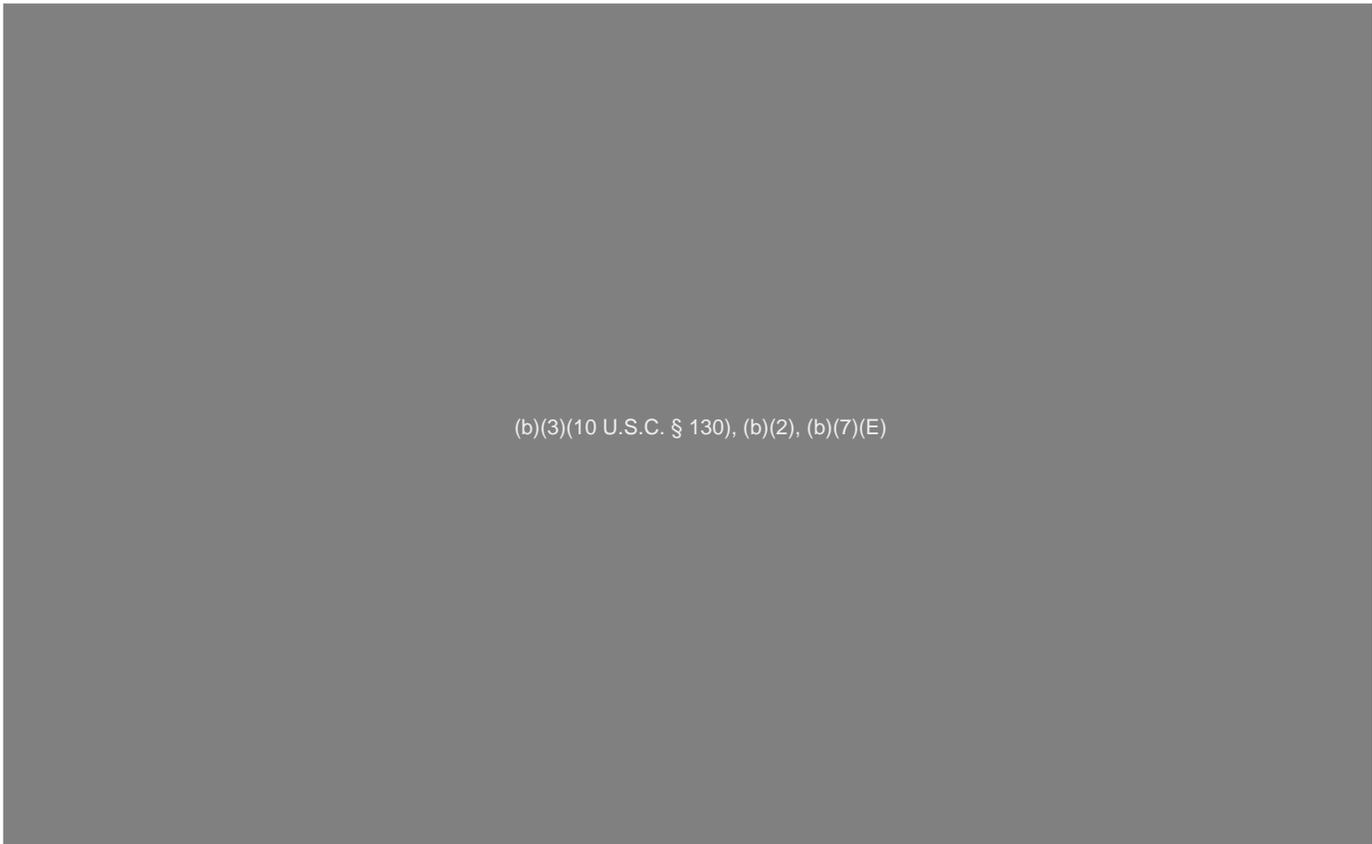


**Figure 9-5**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 9-6**



(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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**Figure 9-7**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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## CHAPTER 10

### HELOCAST

**10-1. General.** Helocast, or free-drop from a helicopter, is an effective means of inserting combat swimmers/divers and maritime mobility craft (MMC) such as the Combat Rubber Raiding Craft (CRRC) into a waterborne environment and may involve the use of a Special Operations Combat Expendable Platform (SOCEP).

#### **10-2. Objectives.**

- a. To prescribe qualification and training requirements for maintaining proficiency in the conduct of Helocast operations.
- b. To prescribe safety requirements, Helocast methods, equipment, and rigging procedures in the conduct of Helocast operations.
- c. To define the duties and responsibilities of key personnel during Helocast operations.

#### **10-3. Safety.**

**WARNING:** Personnel will not wear a MILES harness during any helicopter infil/exfil operation that uses ropes, ladders, hoist or flotation devices.

**WARNING:** Personnel will exit the aircraft only when directed by the CM.

**WARNING:** Aircraft must maintain forward movement, not allowing lateral or rearward drift during the operation.

**WARNING:** During casting operations, at the direction of the CM, inflate flotation devices to 1/3 of their total capacity (or as pre-briefed by the CM). Personnel must understand this could hinder their egress during an aircraft accident or ditching sequence.

**WARNING:** Soft Duck-Failure to ensure adequate weight distribution of the MMC equipment/motor may result in an aft Center of Gravity (CG) causing the craft to flip or become airborne after deployment. This could result in severe damage to the aircraft or boat and possible severe injury to personnel.

**WARNING:** No swimmers will exit the aircraft until the MMC is in the water and directed by the CM.

- a. **Briefing.** A safety briefing must precede Helocast operations (see [Appendix E](#)). The briefing should consist of, but not be limited to, a review of the following:

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- (1) Area hazards.
- (2) General aircraft safety/emergency procedures.
- (3) Equipment associated with the Helocast operation and its characteristics.
- (4) Equipment inspection.
- (5) Method of Helocast and/or recovery operation to be used.
- (6) Hand and arm signals/emergency signals.
- (7) Location of safety boats and how they are marked.
- (8) Medical coverage.
- (9) Communications requirements.
- (10) Night operation requirements.
- (11) [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

b. **Guidance.** Due to the hazards involved with Helocast, all aspects of planning and execution will emphasize safety and adherence to the following listed considerations:

- (1) [REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[REDACTED] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) During water operations training, safety boat [REDACTED] (b)(3)(10 U.S.C. § 130) (b)(2), (b)(7)(E) with motors running must be present prior to conducting overwater operations. The boat operators will be trained to operate the equipment they are using. All boat crew personnel will wear flotation devices. Multiple aircraft operations conducting simultaneous training operations require one safety boat per aircraft. During water operations training, safety boats will move parallel and a minimum of 50 meters, not to exceed 100 meters, left or right of the aircraft flight path. Safety boats must be of a type and capacity to effect recovery of personnel.

(3) A minimum of one safety swimmer will be aboard each safety boat. The swimmer will be a graduate of the Combat Diver Qualification Course or a USSOCOM-approved waterborne infil course, scout swimmer course, or current Red Cross lifesaver or water safety instructor course.

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The safety swimmer must have swim fins, a face mask, and a Service-approved personal flotation device to help personnel, as needed. The swimmer cannot be the boat driver.

(4) During training, an emergency evacuation vehicle must be stationed at the nearest boat landing site.

**NOTE:** During training, the absence of any safety equipment or personnel constitutes a termination of the Helocast operation.

(5) During training, radio communications must be established between the safety boats and the aircraft. Lack of air-to-ground radio communications constitute a cancellation of the operation.

(6) If available, the CM should have voice communications with the crewmembers.

(7) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(8) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(9) Casting operations should be done into the wind. In rivers or strong currents, cast into the current regardless of the wind conditions.

**WARNING:** Aircraft must maintain forward movement, not allowing lateral or rearward drift during the operation.

(10) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(11) In the event of an injured swimmer, the Helocast operation will cease until the cause and extent of the injuries are determined.

(12) During training, a Service-qualified medic will be located in one of the safety boats.

#### 10-4. Personnel Qualification Requirements.

a. **Initial Training.** All personnel will successfully complete the initial Helocast training listed below before beginning Helocast qualification training in paragraph 10-4.d.:

(1) Requirements in Chapter 3, paragraph 3-2.f. for water operations.

(2) Personnel will be thoroughly briefed IAW the Cast Master briefing listed in [Appendix E](#) prior to participating in Helocast training and operations.

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(3) Personnel will be thoroughly briefed on the duties and responsibilities of the PC, aircrew, CM, Safety Officer (SO), safety boat personnel and safety swimmers.

b. **Cast Master (CM).** Selection of personnel for qualification as a CM should be based on the individual's demonstrated leadership capabilities, maturity (E-4 or above), knowledge and experience of Helocast operations and must have participated in a Helocast operation within the past year. Personnel are qualified to perform the duties of CM after they have met the requirements in paragraph 10-4.a. and 10-4.d., as well as the successful completion of the following training under the supervision of a current qualified CM:

(1) Receive instructions and demonstrate proficiency on equipment rigging, inspecting/preparing equipment to be used in the Helocast operation, and in the conduct of the operation.

(2) Receive instructions and demonstrate proficiency in the performance of the following CM duties:

- (a) Coordination responsibilities.
- (b) Personnel/aircrew briefings.
- (c) Organization of the personnel involved in the operation.
- (d) Emergency procedures.
- (e) Hand and arm signals.

c. **Safety Officer (SO).** The SO must be designated by the Unit Commander (or designated representative), qualified in Helocast, and previously participated in the type of operation being planned.

d. **SOF Baseline Interoperable Standards for Helocast Qualification.** Upon completion of a USSOCOM recognized school/course, Helocast qualified personnel will have met all standards at the appropriate levels. Component training requirements and standards may be higher in any area to allow for Service or Component PoE that maybe mission area specific, but at a minimum the SOFBIS requirements for Helocast qualification are:

(1) Demonstrate confidence and proficiency in the procedures, techniques, and equipment necessary to conduct Helocast operations.

(2) Conduct a minimum of one (1) day and one (1) night Helocast operation without equipment.

(3) Conduct a minimum of one (1) day and one (1) night Helocast operation with combat equipment and weapon.

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**In addition, individuals conducting training with MMC (i.e. CRRC) will accomplish the following:**

- (4) Demonstrate loading, rigging and inspecting accompanying equipment in the MMC.
- (5) Demonstrate loading and rigging of the MMC on the aircraft.

e. **Sustainment Training.** Prior to conducting Helocast operations, units will receive formalized training in the procedures to be used during Helocast operations within 72 hours prior to the operation. At a minimum, this training will include:

- (1) Rigging and inspection of individual equipment.
- (2) Rigging and inspection of accompanying equipment in the MMC (if applicable).
- (3) Hand and arm signals/emergency signals.
- (4) Water entries (pool training when available).
- (5) Conduct dry land rehearsal.

**NOTE:** If assets are available, and time allows, sustainment training should include rehearsal with actual mission loads and special equipment.

f. **Refresher Training.** Refresher training is routinely conducted to maintain the acquired skills. Personnel who have not participated in Helocast operations during the past 12 months will undergo refresher training before being included in an operation. Refresher training for Helocast operations consists of conducting at least one Helocast operation. Aircrews will conduct refresher training IAW the appropriate aircrew training manual and unit SOPs.

g. **Cast Master Refresher Training.** CM refresher training is conducted IAW paragraph 10-4.f. and includes the execution of at least one CM operation under the observation of a current CM.

#### **10-5. Personnel Duties and Responsibilities.**

a. **Unit Commander.** Prior to the execution of Helocast training, the unit commander will ensure that all Personnel are screened to ensure that the following minimum standards are met:

- (1) Are free of any injury or physical condition that would cause a potential safety hazard during Helocast operations.

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(2) All casting personnel participating in the Helocast training have conducted a Combat Water Survival Test (CWST) IAW Service Regulations.

(3) Personnel participating in Helocast training will successfully complete drown proofing and a swim qualification/test IAW Service regulations as well as be “current” in their swim qualification. Commanders will ensure personnel being trained have the appropriate swimming skills to safely accomplish all required training tasks.

**b. Air Mission Commander (AMC).**

(1) Will be designated by the employing aviation unit.

(2) Will ensure that all aircrew understand their responsibility concerning HELOCAST operations IAW this manual and unit SOP.

(3) Is responsible for ensuring that all aircraft conduct the HELOCAST at the designated objective area.

**c. Pilot/Aircrew.**

(1) Thoroughly brief all participants on the conduct of the operation, aircraft safety, and emergency procedures.

(2) Supervise or complete all aircraft preparation prior to the Helocast operation.

(3) Ensure radio communications is functional before commencing training.

(4) Abort the training if any unsafe condition is apparent.

(5) Direct/maneuver the aircraft, clear of all obstacles, into position for deploying personnel.

(6) Continually observe the personnel and immediately inform the PC of any unsafe conditions.

(7) Keep the pilots informed as to the conduct of the operation, giving corrections as required to ensure safety.

(8) When directed by the pilot, the CE/FE/AG will signal the CM with the appropriate hand and arm signal. The CM then will verify the aircraft profile and deploy his personnel.

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**d. Safety Officer (SO).**

(1) Conform to the time schedule in compliance with safety standards and conditions existing at the time of the operation.

(2) Ensure that a complete briefing is provided to all participating personnel.

(3) Ensure that all safety and equipment requirements are met prior to initiating the Helocast operation.

(4) Ceases Helocast operations if any unsafe condition arises.

(5) Conduct a reconnaissance of the Helocast site, verifying water depth, and an obstacle-free environment.

**e. Cast Master (CM).**

(1) Assists the SO, when possible, in conducting a reconnaissance of the proposed drop area to ensure all safety and obstruction criteria have been adhered to.

(2) Conducts the CM briefing IAW [Appendix E](#).

(3) Conducts a visual safety check of the aircraft to ensure the proper rigging of all equipment.

(4) Conducts a safety inspection and equipment check of all swimmers verifying their equipment is properly worn/positioned and functional IAW Service Publications. Ensures flotation devices have a current inspection.

(5) Briefs the aircrew on all aspects of the Helocast operation to include hand and arm signals to be used to direct the aircraft into the exact position for the operation, and no-drop conditions and situations.

(6) Ensure communications are functional between all elements of the Helocast operation.

(7) Assign swimmer buddy teams and ensure all swimmers are seated in stick order. Verify that all the swimmers understand their assigned duties and follow commands. Swimmers will exit the aircraft only on the command of the CM.

(8) Cast the swimmers only if the aircraft is correctly aligned and safely within the limits of speed and altitude, and the safety boats are operational and offset parallel at a minimum of 50 meters and a maximum of 100 meters. When the swimmers surface, they will signal their buddy and the safety boat that all is "OK" or that they need assistance.

(9) Abort the Helocast operation if any unsafe condition exists.

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(10) Ensures swimmers wear flotation devices inflated to 1/3 of their total capacity (or as pre-briefed) and verifies they are inflated IAW unit SOP. Mission requirements will dictate the amount and type of flotation required.

f. **Safety Boat Supervisor.** The safety boat supervisor will ensure that the number of safety boats required for the training is on site (at a minimum, adequate safety boats to safely transport all personnel participating in the operation) IAW the Risk Assessment and swimmer proficiency. The safety boat supervisor is responsible for:

(1) Attending the operations briefing and thoroughly understanding the intent of the operation.

(2) Maintaining the effective control of all support in the Helocast area of operation.

(3) Briefing all safety boat personnel in the conduct of their assigned duties. Ensure that all personnel know the day and night emergency signal for "PICK ME UP NOW."

(4) Supervising the boat crews and the safety swimmers.

(5) Establishing and maintaining boat to aircraft communications.

(6) Inspecting the Helocast area for safe water depth, obstacles, and any potentially hazardous debris. The casting area and obstacles will be marked as required by the unit SOP.

(7) Obtaining and reporting accurate weather, wind, surf, and Sea State conditions.

(8) Ensuring that the following items are present in the safety boats:

(a) Medical kit and backboard.

(b) Primary and back-up radios.

(c) Buoys with weights and sufficient line to mark suspected areas of lost equipment.

(d) Appropriate lights for night operations.

(9) Ensuring the cast area is kept clear of debris, unnecessary personnel, equipment, and boats.

(10) Ensuring the safety boats move parallel and at a minimum of 50 meters and a maximum of 100 meters left/right of the aircraft's line of flight.

(11) Accounting for and ensuring each swimmer is not injured after water entry. The aircraft will maintain radio contact with the safety boat until all swimmers are accounted for.

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(12) Aborting the Helocast operation if any unsafe condition exists or arises.

g. **Safety Swimmers.** The safety swimmers are required to:

(1) Perform duties and follow commands as directed by the SO, and follow prescribed safety procedures.

(2) Assist in recovering equipment, aid injured or weak individuals in the water and remain with the individual until the safety boat or help arrives.

**10-6. Equipment.** Operational units will determine equipment requirements necessary to accomplish their mission in accordance with the unit SOP. However, all personnel involved in water operations will wear an approved flotation device.

**10-7. Operational Requirements.**

a. **Helocast Preparation Considerations.** When planning for the number of personnel per type of aircraft, use the standard troop loading/planning figures. Adjust these figures depending on aircraft configuration, type of equipment, and casting/ recovery procedures. Coordinate these items in advance with the aircrew.

(1) Rehearse the operation with all the swimmers, the actual aircrew, the accompanying equipment, and support personnel. Emphasize proper body exit position, exit timing, commands, and water entry positions during live casting rehearsals.

(2) Attach surface swim equipment to the swimmer IAW unit SOP. Ensure all swimmers wear Service-approved flotation devices.

(3) If using (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(4) With an (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

b. **Medical Coverage.** See requirements in paragraph 3-6.

c. **Helocast Operations.**

(1) CE/FE/AG will pass the pre-briefed time warnings to the CM. CE/FE/AG will signal the CM when the aircraft is in the proper profile and in the designated objective area. CM controls personnel movement and personnel/equipment deployment after being signaled by the CE/FE/AG.

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CE/FE/AG will signal the CM with the stop stick signal (closed fist) and fouled area (same signal as fouled rope) at the pilot’s discretion and anytime unsafe conditions exist. CE/FE/AG will keep the pilots informed about the status of the operation. Additionally, the CE/FE/AG will attempt to count the swimmers.

(2) When ramp casting, the CM gives the following commands:

- (a) GET READY. Ensure the personnel (swimmers or divers) remove their restraint device only on this command.
- (b) STAND UP.
- (c) CHECK EQUIPMENT.
- (d) SOUND OFF WITH EQUIPMENT CHECK.
- (e) STAND BY.
- (f) GO.

(3) If using a (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) Do this just prior to giving the commands. Ensure the helicopter has (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) (or as low as possible). Personnel cast the MMC on the CM’s command. Swimmers follow the MMC on the CM’s command.

(4) The aircraft should not (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) when deploying personnel.

(5) When casting from a ramp, swimmers assume a normal “prepare to land” attitude.

(6) When casting from a side door, cast from either a seated door position or from a skid. On the CMs command, swimmers push off and face opposite the direction of flight, assuming a normal “prepare to land” attitude without equipment or a modified (hands securing weapon and mask) “prepare to land” position with equipment.

(7) If casting (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) from (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) on the CMs command.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(8) If using bundles or rucksacks, throw them prior to the swimmer’s exit.

(9) Upon entering the water, give an “OK” signal to the CM and safety boats.

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**d. Recovery Operations.**

(1) When using a single rotor aircraft, lower an extraction device to the swimmers who are on-line or in a group as briefed in the casting/recovery area. At night each swimmer attaches a light source to the upper portion of his uniform or equipment that will be visible from above the water.

**NOTE:** Eye protection is recommended for coxswain of MMC operations.

(2) Hoist equipped aircraft may be used to recover and deploy personnel.

**10-8. Safety Procedures.**

a. Should a swimmer develop an emergency while in the water, the swimmer will signal the safety boat as briefed.

b. Safety boat crews will remain alert for emergency signal from swimmers. Safety boat crews will observe all swimmers for signs of distress.

c. Personnel participating in Helocast training will successfully complete drown proofing and a swim qualification/test IAW Service regulations as well as be “current” in their swim qualification. Commanders at all levels will ensure personnel being trained have the appropriate swimming skills to safely accomplish all required training tasks.

d. Swimmers wear flotation devices inflated to 1/3 of their total capacity (or as pre-briefed by the CM) IAW unit SOP. Mission requirements will dictate the amount and type of flotation required.

**10-9. Signals and Commands.**

a. All signals and commands between the aircrew and the supported unit will be coordinated.

b. Hand signals for directing aircraft movement are contained in [Appendix A](#).

**KANGAROO DUCK (K-DUCK) OPERATIONS**

**10-10. Kangaroo-Duck (K-Duck) Operations.** The K-duck was developed as a rapid insertion method for use from

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**WARNING:** Transporting the CRRC without the floor installed could cause the CRRC to fold up and possibly contact the rotor blades.

**WARNING:** During training, the CRRC will not be deployed if any personnel or safety boats are in the immediate vicinity of the deployment area.

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**WARNING:** (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
 (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) This could result in severe damage to the aircraft or boat and possible severe injury to personnel.

**CAUTION:** If the load becomes unstable during flight, a smooth reduction of airspeed may be required. If the load is unmanageable, it may be necessary to land or for the PC to order an emergency release of the CRRC.

**CAUTION:** Do not store more than fifty pounds in the bow of the CRRC when utilizing the K-duck harness.

**CAUTION:** The knife will not be placed in the vicinity of the restraining strap until cut command is given (if (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) knife is not used).

**10-11. Personnel Duties and Responsibilities.** These duties and responsibilities are in addition to those already listed in paragraph 10-5 as applicable.

**a. Unit Commander.**

(1) May terminate the CRRC operation at any time due to an unsafe condition, safety requirement, weather, or lack of training requirement.

**b. Air Mission Commander (AMC).** The AMC ensures that all crewmembers are trained to perform their duties during the CRRC operation.

**c. Pilot in Command (PC).**

(1) Ensures that the CRRC, aircraft, and other required equipment has been inspected and properly prepared for CRRC operations by the CE/FE/AG or CM as appropriate.

(2) Ensures that all aircraft requirements have been met, i.e., weight and balance, flight planning, fuel requirements, etc.

(3) May terminate the CRRC operation at any time due to any unsafe condition, safety requirement, weather, or lack of training requirement.

(4) May order the emergency release of the CRRC.

(5) Ensures that the CRRC is deployed on the designated objective.

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d. **Crew Chief (CE)/Flight Engineer (FE)/Aerial Gunner (AG).**

(1) Will ensure aircraft and other required equipment is inspected and prepared for CRRC operations IAW the AWR/FC and unit SOP.

(2) CE/FE/AG will ensure the CM is briefed on the use of all hand and arm and light signals prior to aircraft operations.

(3) Oversees the attaching of the raft to the aircraft and ensures compliance with the AWR/FC.

(4) Observes the status/security of the CRRC from the pick-up point through release, keeping the PC advised of the status of the passengers and the load.

(5) Will pass the time calls to the CM as directed by the PC and will make the proper calls to the PC in accordance with the ATMs and unit SOP.

(6) Directs the PC to maneuver the aircraft into proper position for CRRC hook-up and deployment.

(7) Informs the PC of any unsafe condition during the operation.

e. **Safety Personnel.** CRRC safety personnel will consist of:

(1) One Cast Master (CM) and two flight personnel [Crew Chiefs (CE), Flight Engineers (FE), or Aerial Gunners (AG)] aboard each aircraft.

(2) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

During this phase, both CE/FE/AGs will monitor the internal communication system (ICS) and keep the PC informed of the status of equipment and personnel.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

f. **Cast Master (CM).**

(1) Before the CRRC operation the CM will:

(a) Ensure the aircraft is properly rigged.

(b) Conduct a visual inspection of the CRRC system, "I" bar (FRIES), cargo hook, or Service-approved system.

(c) Confirm the removal of required aircraft antennas.

(2) Brief all personnel on the operation.

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(3) Conducts an inspection of personnel and equipment prior to boarding the aircraft.

(4) Assist the CE/FE/AG with attaching the CRRC to the aircraft and ensure the CRRC is in compliance with the AWR/FC.

(5) Assists the CE/FE/AG with observing the status/security of the CRRC during hook-up through release. Keeps the CEs/FEs/AGs advised of changes in the stability of the load.

**CAUTION:** If the load becomes unstable during flight, a smooth reduction of airspeed may be required. If the load is unmanageable, it may be necessary to land or for the PC to order an emergency release of the CRRC.

(6) Directs the CE/FE/AG to pass drop area maneuver request information to the PC.

(7) Deploys the CRRC when in the drop area and cleared by the aircraft PC, and signaled by the CE/FE/AG.

(8) Abort any part of the operation due to any unsafe condition.

## 10-12. Conduct of K-Duck CRRC Operations.

### a. CRRC Preparation.

(1) Install the floor and inflate the CRRC to  $\frac{3}{4}$  capacity.

**NOTE:** Ensure a system is installed and accessible to fully inflate CRRC once rigging is complete.

**WARNING:** Transporting the

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) Attach the Service-approved attachment system.

(3) Prepare and stow the motor arm up and strap the engine in place near the transom. Use some suitable padding between the motor and floor, and pad the prop.

(4) Ensure the paddles and gas tank are placed in position and tied down.

(5) Accompanying payload will be placed inside the CRRC as close to the center as possible. Ensure that only the CRRC is touching the aircraft. All large items i.e., rucks, water cans, will be tied with 1-inch tubular nylon line to the front towing ring. Run the line through each large item and tie off the line on the last item making sure that the free end of the line is tied to the transom. All small items will be secured to the floor by utilizing snap links or tied to a larger item. Pad all items as needed.

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**CAUTION:**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(6) Ensure CRRC is fully inflated once rigging procedures are complete.

(7) Ensure (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

b. **Helicopter Preparation/Attaching K-Duck to Aircraft.** The aircraft is rigged IAW with AWR/FCs, ATMs and appropriate Service technical manuals. New equipment/rigging procedures may be utilized once approved by the Service Component.

c. **Infil.**

(1) **Takeoff.** Upon departure, a safe airspeed will be obtained to determine how well the CRRC is riding before accelerating to mission airspeed.

(2) **Enroute.** The CM or CE/FE/AG will monitor the load and keep the PC informed as to the stability.

(3) **Arrival.** Upon arrival at the drop site, a progressive deceleration and descent will be initiated. The CM/CE/FE/AG will give corrections as to aircraft alignment with the drop area.

(4) **Deployment.** On the pilot's command, the CE/FE/AG will give the CM clearance to release the K-Duck, the CM is responsible for releasing the K-Duck. When CRRC is rigged for release from the cargo hook, the CM approves release of the K-Duck. After the CM releases the K-Duck, the CE/FE/AG will advise the pilot when the CRRC and personnel are clear of the aircraft. The CE/FE/AG call will be IAW the appropriate ATM. The pilot will maintain altitude and ground speed until the last swimmer has exited the aircraft.

**WARNING:** During training, the CRRC will not be deployed if any personnel or safety boats are in the immediate vicinity of the deployment area.

(5) **Departure.** The aircrew should confirm status of swimmers prior to departing the drop zone.

(6) **Emergency Actions.** In the event of an emergency, the PC will take the appropriate action and will make the decision to jettison the CRRC. If the decision to jettison is made, the aircrew or CM will jettison the CRRC, only on command of the PC.

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**SOFT DUCK OPERATIONS**

**10-13. Conduct of Soft Duck Operation** [redacted] he Soft Duck is a method of deploying a CRRC from a helicopter ramp. If the CRRC is partially deflated it is referred to as a "Soft Duck".

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

a. Use the following procedures for delivering boats and rafts from th [redacted]

(1) Concise briefings and good crew coordination are a must in conducting safe Helocast/CRRC operations. Aircrew and unit briefings will emphasize proper hand signals, time calls, and emergency procedures.

(2) CRRC Center of Gravity (CG) limitations will be discussed during both briefings. Failure to ensure adequate distribution of the unit's equipment may result in an aft CG, causing the craft to become near vertical during deployment.

(3) CRRC and personnel equipment must be securely attached and positioned inside the craft before loading the aircraft or the CRRC/equipment may snag on the aircraft during deployment.

**b. Boat/Raft Configuration.**

**NOTE:** [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(1) Remove keel guard if necessary. The boat may be laced to plywood or suitable material that will roll easily on the roller system (if installed).

(2) The [redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(3) The unit should attempt to limit the amount of equipment deployed in the boat or raft.

**c. Brief and Use the Following Procedures.**

(1) At the pre-briefed time warning, personnel who will deploy from the front, if this method is used, will move to the front of the cabin area. The personnel who will deliver the boat will prepare for exit in the aft.

(2) At the pre-briefed time warning, the personnel and crewmembers will prepare the boat for deployment by removing tie-down straps except bow or stern line.

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(3) The delivery unit leader may remain on INTERCOM until the “1-MINUTE” call. A pre-briefed crewmember on INTERCOM will relay the clear to deploy signal to the unit.

(4) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
The hover coupler may be used. The pilot not flying or the FE will call out radar altimeter readings to the pilot.

(5) When cleared to deploy, the pilot will give the execution command to the CE/FE/AG. When cleared, the designated crewmember or personnel will release the bow or stern line from the aircraft and push the boat out.

**NOTE:** The unit may exit the aircraft from either the door or ramp or both. If both are used, execute the ramp delivery first. These measures will reduce adverse pitch oscillations during deployment.

<b>ROLLED AND TETHERED DUCK (T-DUCK) OPERATIONS</b>
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**10-14. Rolled and Tethered Duck (T-Duck) Operations.** Rolled or tethered duck operations provide the capability to deliver a team and CRRC into the water within the full fuel range of the aircraft. Because the boats are transported uninflated inside the helicopter, they do not produce drag, which would lessen the fuel range.

**10-15. Personnel Duties and Responsibilities.** These duties and responsibilities are in addition to those already listed in paragraph 10-5 and 10-11 as applicable.

**a. Crew Chief (CE)/Flight Engineer (FE)/Aerial Gunner (AG).**

(1) Will ensure aircraft and other required equipment is inspected and prepared for CRRC operations IAW the AWR/FC, ATM and unit SOP.

(2) CE/FE/AG will ensure the CM is briefed on the use of all hand, arm and light signals prior to aircraft operations.

(3) Oversees the attaching of the rope to the aircraft (tethered duck) and ensures compliance with the AWR/FC and unit SOP.

(4) Will pass the time calls to the CM as directed by the PC and will make the proper calls to the PC in accordance with the ATM and unit SOP.

(5) Directs the PC to maneuver the aircraft into proper position for CRRC deployment.

(6) Disconnects the rope from the FRIES bar (tethered duck) and ensures the rope drops free of the aircraft.

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(7) Informs the PC of any unsafe condition during the operation.

f. **Cast Master.**

(1) Ensures aircraft is properly rigged. Rolled duck requires no special rigging. Tethered duck rigging is IAW current Service and Component directives, regulations and manuals as well as the references in the [Glossary \(Section II\)](#) of this manual to include current AWR/FC/Unit SOP.

(2) Inspects the rigging of the rope to the CRRC (tethered duck).

(3) Brief all personnel on the operation.

(4) Directs the CE/FE/AG to pass deployment area maneuver request information to the PC.

(5) Conducts an inspection of personnel and equipment prior to boarding the aircraft.

(6) Deploys the CRRC in the deployment area, when cleared by the aircraft PC and signaled by the CE/FE/AG.

(7) Abort any part of the operation due to any unsafe condition.

**10-16. Conduct of Rolled and Tethered Duck CRRC Operations.**

a. **Rolled Duck.** Rolled duck operations provide the capability to deliver a team and CRRC into the water. The boats are transported uninflated inside the helicopter, they do not produce drag, which would lessen the fuel range.

(1) **CRRC Preparation.** CRRC is prepared IAW current Service and Component directives, regulations and manuals as well as the references in the [Glossary \(Section II\)](#) of this manual.

(a) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) Load the CRRC into the cargo bay (CRRC may be used as a seat).

(2) **Infil/Deployment.**

(a) On the pilot's command, the CE/FE/AG will give the CM clearance to deploy the CRRC.

(b) The unit deploys the CRRC on the CM's signal.

(c) The CM ensures the CRRC is in the water and then gives the command for the cast personnel to exit the aircraft.

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(d) After the unit deploys the CRRC, the CE/FE/AG will advise the pilot of the status of the CRRC followed by status of the swimmers. CE/FE/AG calls will be IAW the appropriate ATM. The pilot will maintain altitude and ground speed until the last swimmer has exited the aircraft.

(e) Cast personnel assemble on the CRRC. Pre-designated personnel de-rig and inflate the CRRC, mount the engine, and place the CRRC into operation.

**WARNING:** Swimmers will not leave the aircraft until given a positive “GO” command by the CM.

(3) **Departure.** The aircrew will attempt to confirm status of swimmers prior to departing the drop zone.

b. **Tethered Duck.** The tethered duck is used for launching a CRRC in rough seas. The recommended

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

The

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

The CRRC being tethered to the aircraft allows the cast personnel to easily assemble on the CRRC. The tether also provides a positive path to the CRRC in rough seas or currents.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:** All requirements of Chapter 6 (FRIES) will be adhered to if conducting Fast Rope with personnel.

(1) **CRRC Preparation.** CRRC is prepared IAW current Service and Component directives, regulations and manuals as well as the references in the [Glossary \(Section II\)](#) of this manual.

(a) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b) Load the CRRC into the cargo bay (CRRC may be used as a seat).

(c) The CM connects the ground end of the rope to the tied crossbar of the rolled duck. Use a sling rope routed through the extraction loop of the rope and then routed and tied to the crossbar. Coil the Fast Rope on top of the CRRC.

(2) **Aircraft Preparation.**

(a) The CE/FE/AG attaches the Fast Rope to the aircraft IAW procedures outlined in Chapter 6, Fast Rope Insertion/Extraction System (FRIES) Training. Do not use a safety rope with this procedure.

(b) The CM inspects the release mechanism of the FRIES bar.

(3) **Infil/Deployment.**

(a) On the pilot’s command, the CE/FE/AG will give the CM clearance to deploy the CRRC.

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(b) The unit deploys the CRRC on the CM's signal.

(c) The CM ensures the CRRC is in the water and then gives the command for the cast personnel to mount the Fast Rope and slide into the water. Once in the water, cast personnel follow the Fast Rope hand over hand to the CRRC.

(d) The CE/FE/AG releases or retrieves the Fast Rope once cast personnel are clear. During combat operations, cast personnel disconnect the Fast Rope and allow it to sink. During training operations, the Fast Rope is not disconnected until safety boats have retrieved the Fast Rope.

(e) Cast personnel assemble on the CRRC and pre-designated personnel de-rig and inflate the CRRC, attach the engine, and place the CRRC into service.

(4) **Departure.** The aircrew will attempt to confirm status of swimmers prior to departing the drop zone.

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## CHAPTER 11

### HOIST

**11-1. General.** Hoisting is an effective means of extracting personnel, injured personnel, and equipment from the water or a confined area. Additionally, the hoist can be used to infil personnel and equipment.

#### 11-2. Objectives.

- a. To prescribe qualification and training requirements for maintaining proficiency in the conduct of hoist operations.
- b. To prescribe safety requirements, hoist methods, equipment, and rigging procedures in the conduct of hoist operations.
- c. To define the duties and responsibilities of key personnel during hoist operations.

#### 11-3. Safety.

**WARNING:** Personnel will not wear a MILES harness during any aircraft infil/exfil operation that uses ropes, ladders, hoist or flotation devices.

**WARNING:** Crewmembers performing hoist operations must be secured to the aircraft with a Service-approved restraint device. Personnel being hoisted must be secured to the rescue device at all times.

**WARNING:** Do not lower an oscillating rescue device close to the survivor. Injury or death may result from striking the survivor with the device. If the oscillation is severe, the load should be lowered to the ground/water to decrease the severity.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) Tag line procedures should be considered as a way to control and prevent pendulum and oscillation of the rescue device.

**WARNING:** Ensure that cable slack is kept to the minimum necessary to perform the recovery to lessen the chance of fouling or shock loading the cable. Excessive slack in the cable can be especially dangerous during night or water recovery when the survivor/swimmer cannot see the cable. The rescue hook/device must be marked with a chemlight/light source during night operations.

**WARNING:** Ensure the rescue hoist hook/device contacts the ground/water prior to contacting the survivor to dissipate the static electricity and to prevent injury or death to the survivor.

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a. **Briefing.** A safety briefing must precede hoist operations and will consist of the following:

- (1) Area hazards.
- (2) General aircraft safety to include emergency procedures.
- (3) Equipment associated with the hoisting operation and its characteristics.
- (4) Equipment inspection.
- (5) Method of hoist recovery operation to be used.
- (6) Hand-and-arm signals/emergency signals.
- (7) Medical coverage.
- (8) Communications requirements.
- (9) Night operation requirements.

b. **Guidance.**

(1) Service-approved individual equipment is required for all hoist training operations. The following is a recommended list of items each unit commander should require individuals to use for hoist training operations.

- (a) Extraction device/harness.
- (b) Eye protection. (when applicable).
- (c) ID tags.
- (d) Sleeves down. (when applicable).
- (e) Hearing protection.
- (f) Helmet (over-land operations)

(2) During water operations training, safety boats (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) with motors running must be present prior to conducting overwater operations. The boat operators will be trained to operate the equipment they are using. All boat crew personnel will wear flotation devices.

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(3) A minimum of one safety swimmer will be aboard each safety boat. The swimmer will be a graduate of the Combat Diver Qualification Course or a USSOCOM-approved waterborne infil course, scout swimmer course, or current Red Cross lifesaver or water safety instructor course. The safety swimmer must have swim fins, a face mask, and a Service-approved personal flotation device to help personnel, as needed. The swimmer cannot be the boat driver.

#### **11-4. Personnel Qualification Requirements.**

a. **Initial Training.** All personnel will successfully complete the initial hoist training listed below before beginning hoist qualification training in paragraph 7-4.b.:

(1) Be thoroughly briefed on the hoist system(s), purpose, capabilities, limitations, hand and arm signals and emergency procedures.

(2) Be thoroughly briefed on the duties and responsibilities of the individual, PC and CE/FE.

(3) Requirements in Chapter 3, paragraph 3-2.f. for water operations.

(4) Aircrews will be qualified to perform their duties IAW an approved aircrew training program.

b. **SOF Baseline Interoperable Standards for Hoist Qualification.** Upon completion of a USSOCOM recognized school/course, hoist qualified personnel will have met all standards at the appropriate levels. Component training requirements and standards may be higher in any area to allow for Service or Component PoE that maybe mission area specific, but at a minimum the SOFBIS requirements for hoist qualification are:

(1) Demonstrate knowledge of the hoist system, its purpose, capabilities and limitations.

(2) Demonstrate proper hand and arm signals and emergency procedures.

**11-5. Personnel Duties and Responsibilities.** The following personnel duties and responsibilities help to reduce/prevent most of the accidents that can occur when conducting hoist operations. They also ensure thorough and effective training. All personnel involved in hoist operations will plan and rehearse their tasks.

a. **Unit Commander.** Prior to participation in hoist training, the unit commander will ensure that all personnel are screened to ensure that the following minimum standards are met:

(1) Free of any injury or physical condition that would cause a potential safety hazard during hoist operations.

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**b. Air Mission Commander (AMC).**

- (1) Designated by the employing aviation unit.
- (2) Ensures that all aircrew understand their duties and responsibilities during hoist operations.
- (3) Responsible for ensuring all aircraft insertion/extraction personnel are on the designated objective.

**c. Pilot-in-Command (PC).**

- (1) Ensures aircrew and non-aircrew personnel are briefed and understand their duties and responsibilities during hoist operations, including aircraft safety and actions in the event of an emergency.
- (2) Ensures the hoist assembly is inspected (pre-operational check) for completeness and functionality with no visible metal fatigue or other structural weakness prior to use.
- (3) Emphasizes procedural techniques for clearing, recovery, and jettison of the hoist cable, and premature aircraft departure from the objective.
- (4) Keeps the aircraft positioned over the objective with corrections from the crewmembers.

**d. Crew Chief/Flight Engineer (CE/FE):**

- (1) Conduct pre-operational check (inspection) on hoist assembly IAW the operator's manual/AWR/FC/Unit checklist.
- (2) Inspect extraction device.
- (3) Gives position corrections to the pilot to maintain aircraft positioned over the survivors.
- (4) Deploys applicable rescue device, inserts, recovers personnel, and secures them in aircraft, if required IAW unit SOP.
- (5) Know hoist hand and arm signals.

**e. Individual survivor should:**

- (1) Know hoist hand and arm signals.
- (2) Understand hoist emergency procedures.
- (3) Signal for stokes litter extraction, if needed.
- (4) Hook-up to rescue device and signal aircraft when ready for exfil.

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(5) Signal if an emergency occurs.

**11-6. Equipment.** Operational units will determine equipment requirements necessary to accomplish their mission IAW the units SOP. Only Service-approved equipment is authorized for use during hoist operations. Personnel involved in overwater hoist training operations will wear a service-approved flotation device.

**11-7. Operational Requirements.**

a. **Hoisting Preparation Considerations.** When planning for the number of personnel per type of aircraft, use the standard troop loading/planning figures, found in unit Mission Planning Guide (MPG). Adjust these figures depending on aircraft configuration, type of equipment, and hoisting procedures. Coordinate these items in advance with the aviation unit.

b. **Medical Coverage.** See requirements in paragraph 3-6.

c. (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(1) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(3) Hoist operations will be accomplished per unit SOPs.

(4) The hoist operator in the cabin door will direct the pilot over the survivor while maintaining airspace surveillance. He deploys the proper rescue device based on mission requirements.

(5) The hoist operator will ensure the rescue hook/device contacts the ground/water prior to contact with the survivor.

(6) The aft CE/FE maintains airspace surveillance while keeping visual contact with the survivors.

(7) Once the hoist operator receives the “ready to hoist” signal from the survivor, he will hoist in slowly until survivor is off the ground or out of the water. Once the survivor is clear of obstacles, the operator will increase speed as appropriate.

(8) Once the survivor reaches the cabin door, the hoist assistant will turn the survivor to face away from helicopter. The operator will reel out the hoist cable and the assistant will pull the survivor into the aircraft.

(9) Once the survivor(s) are secured, the aircraft can continue the mission or reposition as necessary.

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(1) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(3) Hoist operations will be accomplished per aviation unit SOPs.

(4) The hoist operator in the cabin door will direct the pilot over the survivor maintaining airspace surveillance, while keeping visual contact with the survivor. He deploys the hoist with the proper rescue device based on mission requirements.

(5) The hoist operator will ensure the rescue hook/device contacts the ground/water prior to contact with the survivor.

(6) Once the survivor reaches the cabin door, the hoist assistant will turn the survivor to face away from aircraft. The operator will reel the out hoist cable and the assistant will pull the survivor into the aircraft.

**NOTE:** The hoist operator (CE/FE/AG) may elect to pull the survivor/swimmer into the aircraft without assistance from the other crewmember.

**NOTE:** CEs should consider closing the L/H cargo door during hoist operations to aid with personnel control and security in the aircraft.

(7) Once the survivor(s) are secured, the aircraft can continue the mission or reposition as necessary.

e. (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**NOTE:** Optimal (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**WARNING:** Excessive slack in the hoist cable can be extremely dangerous. If excessive cable slack becomes unmanageable, the survivor/rescuer should abandon the rescue device, move to a safe distance, and signal to have the excessive cable slack removed before re-attempting the extraction.

(1) The maximum (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) Hoist operations will be accomplished per aviation units SOPs.

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(3) The hoist operator ramp will direct the pilot over the survivor while maintaining airspace surveillance. He deploys the proper rescue device based on mission requirements.

(4) The hoist operator will ensure the rescue hook/ device contacts the ground/water prior to contact with survivor.

(5) Once the hoist operator receives the "ready to hoist" signal from the survivor, he will hoist in slowly until survivor is off the ground or out of the water. Once the survivor is clear of obstacles, the operator will increase speed as appropriate.

(6) Once the survivor(s) are secured, the aircraft can continue the mission or reposition as necessary.

**WARNIN**   personnel should be aware of the significant water spray created by aircraft downwash. This is significant in that it may reduce swimmer awareness and breathing ability.

g. **Night Operations Requirements.** A light source will be attached to hoist equipment according to Service-approved procedures.

#### 11-8. Safety Procedures.

- a. Live body hoist operations are, at a minimum, medium/moderate risk.
- b. Should an emergency occur during an extraction, personnel will apply the distress, help or pick me up hand and arm signal by waving one hand overhead (see [Figure A-6](#)) to inform the crew. The pilot should lower the member to the ground or water safely.
- c. Safety personnel/aircrews will remain alert for emergency signals from personnel.
- d. Tag line is required for Stokes/Stretcher. The line prevents pendulum or spinning motion.

#### 11-9. Signals and Commands.

- a. All signals and commands between the aircrew and the supported unit will be coordinated.
- b. Hand signals for directing helicopter movement are contained in [Appendix A](#).

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CHAPTER 12

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
SPECIAL VEHICLE LOADS

**12-1. General.** Internal Loading of special vehicles is considered the safest and most efficient means for delivering vehicles for Special Operations Units.

**12-2. Objectives.**

- a. To prescribe qualification and training requirements for the internal loading of special vehicles.
- b. To prescribe safety requirements, preparation and equipment used in the internal loading of special vehicles.
- c. To define the duties and responsibilities of key personnel during the internal loading of special vehicles.

**12-3. Safety.**

a. **Briefing.** A safety briefing will precede internal loading operations of special vehicles. The briefing will consist of, but not limited to, a review of the following:

- (1) Area hazards.
- (2) General aircraft safety/emergency procedures.
- (3) Equipment associated with the internal loading of special vehicles.
- (4) Hand-and-arm signals/emergency signals.
- (5) Communications requirements.
- (6) Night operation requirements.

b. **Guidance.** A detailed risk assessment will be conducted prior to special vehicles operations. The additional following requirements will apply:

- (1) Vehicle drivers will know all hand and arm signals.
- (2) The driver will have a primary and secondary means of escape once loaded into aircraft.
- (3) Vehicles dimensions will not exceed (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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- (4) All vehicles should be weighed before loading for infil.
- (5) Vehicle height is measured with normal operating tire pressure.
- (6) Static load rehearsals should be completed prior to loading.
- (7) Drivers should use NVDs for night operations.
- (8) All personnel should use hearing and eye protection.
- (9) The CE/FE secures the vehicle in accordance with unit SOP.

#### **12-4. Personnel Qualification Requirements.**

a. **Requirements.** Before participating in internal loading of special vehicles, personnel must meet the following requirements:

- (1) Aircrews will be qualified IAW unit aircrew training program.
- (2) Drivers must be familiar with the hand and arm signals used during internal loading of special vehicles.

b. **Initial Training.** Prior to participating in internal loading of Special Vehicles, personnel will be thoroughly briefed on:

- (1) The operation, its purpose, capabilities, and limitations.
- (2) Hand and arm signals and emergency procedures.
- (3) Duties and responsibilities of the Pilot-in-Command (PC), crewmembers, drivers, and team personnel.

**12-5. Personnel Duties and Responsibilities.** The personnel duties and responsibilities listed herein help to prevent most of the accidents that can occur during vehicle loading. They also ensure thorough and effective training. All personnel involved in internal loading of Special Vehicles will plan and rehearse their tasks.

a. **Unit Commander.** Prior to participation in training, the unit commander will ensure subordinate commanders and mission commanders screen all individuals to ensure they are physically and professionally able to participate in operations.

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~~FOR OFFICIAL USE ONLY~~**b. Air Mission Commander (AMC).**

- (1) Will be designated by the employing aviation unit.
- (2) Will ensure that all aircrew understand their responsibility concerning internal loading of Special Vehicles IAW this publication, unit SOP, and aircraft AWR/FC.
- (3) Will be responsible for ensuring all aircraft insert/extract personnel and vehicle on the designated objective.

**c. Pilot-in-Command (PC).**

- (1) Ensures that the aircrew and all non-aircrew personnel are briefed and understand their responsibilities during internal loading of special vehicles, including aircraft safety and actions in the event of an emergency.
- (2) Ensures that the aircraft, tie down rings, and restraint devices are inspected and are serviceable.

**d. Crew Chief CE/Flight Engineer (FE).**

- (1) Inspect tie down devices.
- (2) Will know all hand and arm signals.
- (3) Will guide, load, unload, and restrain vehicle.

**e. Driver and Team Personnel.**

**NOTE:** Drivers will be qualified, IAW service requirements, to drive the specific vehicle being used.

- (1) Will know all hand and arm signals before conducting any vehicle operations.
- (2) Should perform static load training prior to conducting internal loading operations.
- (3) Remove or secure all antennas.
- (4) If spare tire is mounted on (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) ensure tie-down clevis is not positioned on top of tire. Clearance must be maintained.
- (5) Fold mirrors inward.
- (6) Rucksack rails removed from outside of all vehicles.

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(7) Any equipment that is attached, hung from the sides, strapped to the front or back or top must be secured, and provide enough clearance to load the vehicle.

(8) If installed, ensure that the collapsible crane is secured to the vehicle to prevent damaging the aircraft.

(9) If ATVs, mini-bikes, trailers or any additional equipment is loaded, all items must be secured.

(10) (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(11) Transmission / Transfer case in 4-wheel drive low range.

(12) Know the following definitions.

(a) **Administrative On Load** – Vehicle is backed onto aircraft and set up for infil (Tactical Off Load).

(b) **Administrative Off Load** – Vehicle is driven onto aircraft and backed off for down load.

(c) **Tactical On Load** – Vehicle is driven onto aircraft for an exfil.

(d) **Tactical Off Load** – Vehicle is driven off aircraft for infil.

**12-6. Equipment.** Operational units will determine equipment requirements necessary to accomplish the mission.

**12-7. Operational Requirements.** Personnel conducting Internal Loading and Off Loading of Special Vehicles will adhere to the following:

- a. Internal Loading of Special Vehicles will be accomplished per unit SOP and aircraft AWR/FC.
- b. Crewmembers will signal Driver when “READY TO LOAD”.
- c. Driver will approach and perform proper load.
- d. Once vehicle is in the aircraft, the driver will receive the signal to “STOP THE ENGINE” and will set the parking brake.
- e. Crewmembers strap and secure the vehicle in aircraft.
- f. Crewmembers will make every effort to place driver by a window.

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g. During off loads, crewmembers or other designated personnel (when pre-coordinated) will release the straps.

h. Crewmembers will signal the Drivers to “START THE ENGINE”.

i. Crewmembers will guide vehicles out of aircraft.

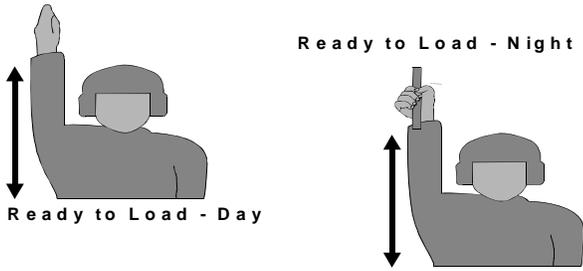
12-8.   **(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)** **Special Vehicle Loading Hand and Arm Signals.** See Figures 12-1 through 12-8 for vehicle loading and unloading hand and arm signals.

**12-9. Signals and Commands.**

a. All signals and commands between the aircrew and the supported unit will be coordinated.

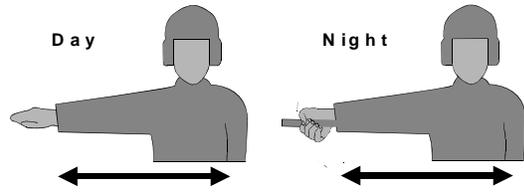
b. Hand signals for directing helicopter movement are contained in [Appendix A](#).

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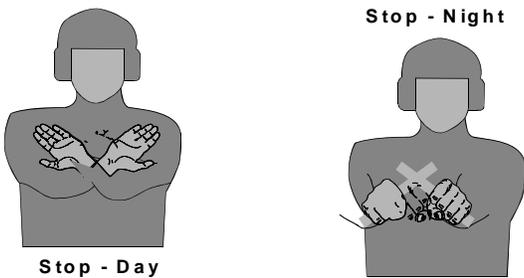
The extended arm during the day and chem light at night will be moved in a vertical motion to signal "READY TO LOAD"

Figure 12-1. Ready to Load Signal.



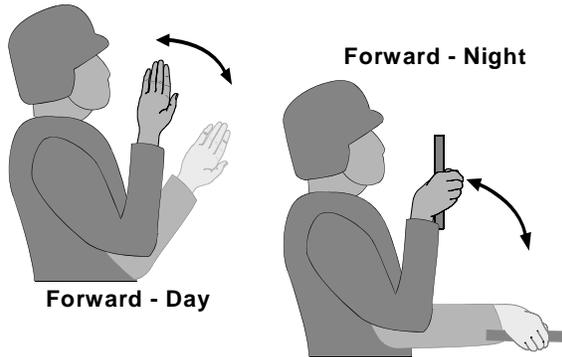
The extended arm during the day and chem light at night will be moved in a horizontal motion to signal "NOT READY TO LOAD"

Figure 12-2. Not Ready to Load Signal.



Arms crossed in the day and chemlights At night for the "STOP" signal.

Figure 12-3. Stop Load Signal.

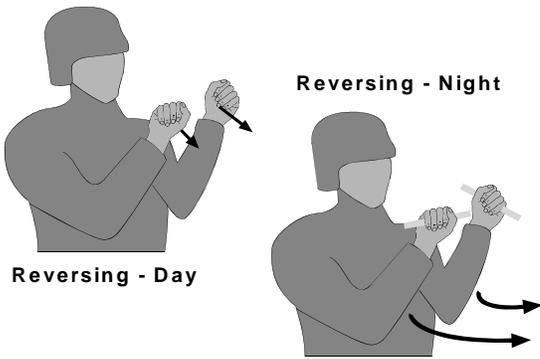


Palms at chest level facing crew member during the day and Chemlight at night, held vertically with a back and forth movement.

Figure 12-4. Forward Movement Signal.

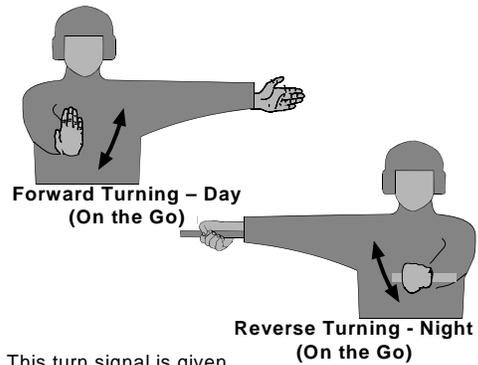
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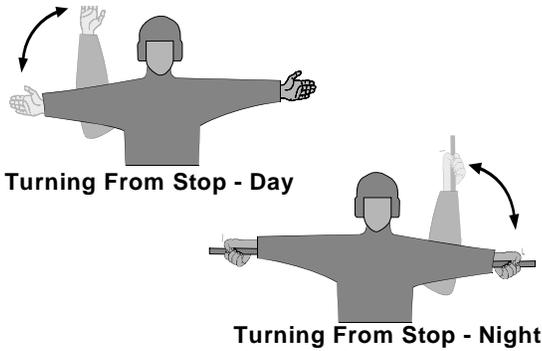
Fist at chest level during the day and chemlights in fist pointing at each other at night. This signal is given with a pumping action to signal reversing.

**Figure 12-5. Reverse Movement Signal.**



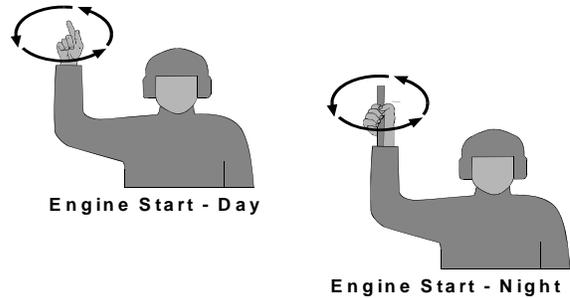
This turn signal is given to a moving vehicle. The signal fist in the day and horizontal chemlight in fist at night is held at chest level and performs a pumping motion for "Reverse on the Go". The "Forward on the Go" signal uses a palm facing the crew member during the day and a vertical chemlight at night in a pumping motion. A horizontal arm or chemlight will point in direction of turn.

**Figure 12-6. Moving Turn Signal.**



The signal arm will be held in the vertical position during the day and chemlight at night during the day and chemlight at night moved in a pumping motion. The other arm/chemlight will be pointed in the direction the tires need to be turned. This signal is given to a stopped vehicle.

**Figure 12-7. Stop Turn Signal.**



Hand or chemlight at head level moved in a circular motion signals "START ENGINE"

**Figure 12-8. Engine Start Signal.**

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CHAPTER 13

AIRLAND OPERATIONS

**13-1. General.** Airland is the most commonly used method of infil/exfil of Special Operations Forces and is always considered the primary means of infil/exfil for the ground force.

**13-2. Objectives.**

- a. To prescribe safety requirements and procedures in the conduct of airland operations.
- b. To define the duties and responsibilities of key personnel during airland operations.

**13-3. Safety.**

**WARNING:** When exiting the aircraft be aware of possible up-sloping terrain. Main rotor clearance from departing personnel may be limited and contact with the main rotors may occur.

**WARNING:** Team members performing airland operations must be secured to the aircraft with a Service-approved restraint device when conducting seats out operations. Personnel will adhere to the procedures outlined in chapter 3 of the regulation.

**WARNING:** [Redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[Redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**WARNING:** [Redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[Redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**WARNING:** [Redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)  
[Redacted] (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**WARNING:** Be aware of weapons systems installed on the aircraft. Avoid the weapons primary field of fire during infil/exfil operations.

a. **Briefing.** A safety briefing must precede airland operations. The briefing should consist of, but not be limited to, a review of the following:

- (1) Identification of key personal, their duties and responsibilities.
- (2) Area hazards.
- (3) General aircraft safety to include emergency procedures.
- (4) Equipment inspection.
- (5) Hand-and-arm signals/emergency signals.

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- (6) Medical coverage.
- (7) Communications requirements.
- (8) Night operation requirements.

**b. Guidance.**

(1) Service-approved individual equipment is required for all airland operations. The following is a recommended list of items each unit commander should require individuals to use during airland operations:

- (a) Approved alternate restraint device, (seats out).
- (b) Eye protection. (when applicable).
- (c) ID tags.
- (d) Sleeves down. (when applicable).
- (e) Hearing protection.
- (f) Helmet

**13-4. Personnel Duties and Responsibilities.** The following personnel duties and responsibilities help to reduce/prevent most of the accidents that can occur when conducting airland operations. They also ensure thorough and effective training. All personnel involved in airland operations will plan and rehearse their tasks.

a. **Unit Commander.** Prior to participation in training, the unit commander will ensure subordinate commanders and mission commanders screen all individuals to ensure they are physically and professionally able to participate in operations.

b. **OIC/NCOIC.** The OIC/NCOIC will ensure that all personnel are screened to ensure that the individual is capable of performing the tasks required by the aircrew and mission.

c. **Chalk Leader/Team Leader.** The chalk leader/team leader is responsible for the accountability and actions for offload and onload of supported ground personnel. Signal to aircraft crew when all personnel and equipment is loaded and ready for departure.

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d. **Air Mission Commander (AMC).**

(1) Designated by the employing aviation unit.

(2) Ensures that all aircrew understand their duties and responsibilities during the operations.

(3) Responsible for ensuring all aircraft insertion/extraction personnel are on the designated objective.

e. **Pilot-in-Command (PC).** Ensures aircrew and non-aircrew personnel are briefed and understand their duties and responsibilities during airland operations, including aircraft safety and actions in the event of an emergency.

f. **Crew Chief/Flight Engineer/Aerial Gunner (CE/FE/AG).**

(1) Conduct pre-operational check (inspection) of all required equipment IAW the operator's manual/AWR/FC/Unit checklist.

(2) Relay necessary time warnings to the passengers, and signal when key aircraft events will occur.

(3) Signal when it is safe to depart and load the aircraft.

**13-5. Operational Requirements.**

a. **Airland Preparation Considerations.** When planning for the number of personnel per type of aircraft, use the standard troop loading/planning figures, found in unit Mission Planning Guide (MPG). Adjust these figures depending on aircraft configuration, type of equipment. Coordinate these items in advance with the aviation unit.

b. **Medical Coverage.** See requirements in paragraph 3-6.

c. (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

This ensures visual contact between the passengers and the pilot. Remain aware of the effects of sloping terrain and main rotor clearance. Additionally, avoid the tail-rotor area due to limited clearance. Ensure the alternate restraint device is securely attached to an approved tie-down point on the aircraft prior to departure.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) Just prior to aircraft touchdown in the LZ, passengers seated on the external passenger system (EPS), will lift their feet so that their legs are parallel with the ground. Do not unhook until the aircraft touches down and the aircrew signals to exit. Be cautious of upward sloping terrain when departing the aircraft, and avoid the tail rotor area of the aircraft.

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d. [REDACTED]

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[REDACTED]

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) Once aboard maintain weapons with the muzzle pointed down and immediately don seatbelts or attach alternate restraint device to the aircraft. Ensure all seatbelts or restraint devices are securely fastened or attached to the appropriate anchor point. Figure 13-1 shows retaining strap configuration for

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

ersonnel attach lanyards to D-Ring on strap. Figure 13-2 shows a detailed

schematic of th

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(3) Prior to departure, ensure the cargo doors are closed, or the troop safety strap is connected both front and back across the opening of the cargo area.

(4) Complete tasks per time warnings IAW unit SOP/brief.

(5) When the mission dictates a rapid off load and the aircraft has slowed to safe speed, the cargo door may be opened and secured to the rear. At the “one minute” call the passengers seated in the door may remove the door strap from the forward attachment point and secure to the rear doorway bulkhead. When the door strap is removed, the passengers located in the center of the cabin will assist with the security of the passengers seated in the doorway by holding on to the uniforms/equipment of those passengers.

(6) At the “one minute” call personnel will locate the seat belt buckle or restraint harness anchor point and prepare to release/disengage. Do not release early unless authorized per chapter 3 of this regulation. Just prior to aircraft touchdown in the LZ, passengers seated in the door will lift their feet so that their legs are parallel with the ground.

(7) Once the aircraft has landed, the crew chief will give the pre briefed hand and arm signal to depart the aircraft. Passengers will release their seatbelts or restraint devices and exit per the chalk/team leaders brief.

(8) When exiting the aircraft, move directly out to the sides a safe distance away and prepare for the aircraft to depart. Avoid the tail and nose area when exiting due to main and tail rotor systems. Blowing dust will obscure visibility for a period of time during aircraft landing and departure.

e. (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

[REDACTED]

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(2) Once inside the aircraft, maintain weapons with the muzzle pointed down and immediately don seatbelts or attach alternate restraint device to the aircraft. Ensure all seatbelts or restraint devices are securely fastened or attached to the appropriate anchor point.

(3) Complete tasks per time warnings IAW unit SOP/brief.

(4) At the “**one minute**” time warning, all personnel will locate the seat belt buckle or restraint harness anchor point and prepare to release/disengage. Do not release early unless authorized per chapter 3 of this regulation.

(5) Once the aircraft has landed, the crew chief will lower the ramp and give the pre briefed hand and arm signal to depart. Passengers will release their seatbelts or restraint devices and exit per the chalk/team leaders brief.

(6) When exiting the aircraft, both left and right side personnel can exit at the same time. Once clear of the aircraft ramp, move to a position away from the aircraft, the recommended distance is 25 meters. Blowing dust will obscure visibility for a period of time during aircraft landing and departure.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(2) Once aboard maintain weapons with the muzzle pointed down and immediately don seatbelts or attach alternate restraint device to the aircraft. Ensure all seatbelts or restraint devices are securely fastened or attached to the appropriate anchor point.

**CAUTION:**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(3) Complete tasks per time warnings IAW unit SOP/brief.

(4) At the “**one minute**” call personnel will locate the seat belt buckle or restraint harness anchor point and prepare to release/disengage. Do not release early unless authorized per Chapter 3 of this regulation.

(5) Once the aircraft has landed (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E) and give the pre briefed hand and arm signal to depart the aircraft. Passengers will release their seatbelts or restraint devices and exit per the chalk/team leaders brief.

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

(6) When exiting the aircraft, both left and right side personnel can exit at the same time

(b)(3)(10 U.S.C. § 130)

move to a position away from the aircraft, the recommended distance is approximately 50 meters. Blowing dust will obscure visibility for a period of time during aircraft landing and departure.

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**13-6 Safety Procedures.**

- a. Earplugs or Service-approved hearing protection should be worn at all times while on aircraft.
- b. All passengers should wear eye protection to protect against flying debris.
- c. During night operations, passengers seated in the doorway/EPS should consider using NVDs to maintain situational awareness of aircraft flight/landing state.
- d. Ensure that all portable radio antennas are stowed prior to loading aircraft.
- e. Weapon muzzles will be pointed down while inside the aircraft.
- f. Exit and enter the aircraft once signaled by the aircrew.

**13-7. Signals and Commands.**

- a. All signals and commands between the aircrew and the supported unit will be coordinated.
- b. Hand signals for directing aircraft movement are contained in [Appendix A](#)

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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**Figure 13-1.**

(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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(b)(2), (b)(7)(E)

**Figure 13-2.**

(b)(2), (b)(3)(10 U.S.C. § 130), (b)(7)(E)

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## CHAPTER 14

### JOINT SOF ASSESSMENT TEAM (JSAT)

#### 14-1. General.

a. In accordance with [USSOCOM Directive 350-1, Military Training](#), and *CDRUSSOCOM Annual Training Guidance*, J7/9 will establish a JSAT to assess and make recommendations to the J7/9 Director of Training, Doctrine and Capability Development on specialized Component and Service training courses every 24 months. The purpose of the assessment is to validate that the course/block of training meets the SOFBIS and is taught in accordance with USSOCOM approved tasks, conditions, and standards (Appendix K), promote the appropriate level of uniformity and consistency across the Components, facilitates Component training collaboration, and recommend course/block of training certification/recertification to the J7/9 Director of Training, Doctrine and Capability Development.

b. The J7/9 Director of Training, Doctrine and Capability Development then reviews the JSAT recommendation and will certify or decertify the course and/or blocks of training.

c. J7/9-TS will coordinate and schedule JSAT assessment visits to Component rotary wing and tiltrotor infil/exfil courses. If required, Components will coordinate with their parent Service as required to facilitate the JSAT assessment visits.

#### 14-2. Specific Responsibilities.

a. USSOCOM J7/9-TS will provide the JSAT leadership and oversight responsible for:

- (1) Completing the package for the Chief of Staff tasker to Components for JSAT SME support.
- (2) Coordinating with Lead Component training representative and Component training personnel to facilitate JSAT assessment visits.
- (3) Coordinating with JSAT members prior to scheduled visits.
- (4) Providing a detailed agenda and the assessment checklist for JSAT assessment visits.
- (5) Providing an onsite JSAT program pre-brief and JSAT assessment post-brief to the training staff.
- (6) Providing leadership and direction to facilitate the interaction between the JSAT Component SMEs.

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(7) Resolving all issues and ensuring compliance with the JSAT program prior to any certification recommendation to USSOCOM J7/9 Director.

(8) Preparing and staffing the certification package for J7/J9 Director's approval.

(9) Distributing USSOCOM J7/9 approved certification memorandum to Component training representatives and course staff.

(10) Maintaining JSAT certification documentation.

b. USASOC, as the Lead Component, will provide one SME, Instructor, and/or a Course Development or Doctrine representative to conduct the assessment and validation of courses. The Lead Component JSAT member is responsible for:

(1) Conducting daily assessments of USSOCOM approved tasks, conditions, and standards.

(2) Submitting a weekly report via email to the USSOCOM JSAT leadership on the assessments completed and other relevant issues.

(3) Validating the course COI or POI.

(4) Providing a formal recommendation for certification/decertification to the Chief, J7/9-T no later than 20 days upon completion of JSAT assessment visit.

(5) Maintain JSAT certification documentation.

c. Coordinating Component supporting SMEs are responsible for accomplishment of the daily assessment tasks assigned by the JSAT Team Leader and providing a daily brief back to the team leader on assessments made.

(1) Coordination between all participants will be required to determine the best and least intrusive time frame for the assessment.

(2) All SMEs are expected to actively participate and provide input to the JSAT post-brief provided by the USSOCOM J7/9-TS representative at the conclusion of the course.

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## CHAPTER 15

### CONDUCTING OPERATIONS AND TRAINING WITH FOREIGN FORCES

#### 15-1. General.

a. The purpose of combined operations with foreign military forces is to foster familiarity with procedures, enhance interoperability, and promote goodwill, rapport and camaraderie through SOF military to military relations. This chapter provides guidance for Component commanders to safely conduct combined infil/exfil operations and training.

b. To function effectively, personnel supporting a combined training program must be aware of a variety of guidelines. These include provisions of applicable status of forces agreements (SOFAs) as well as restrictions on the transfer of equipment, TTPs, and on other types of assistance that may be requested. Because many military activities take place within the HN, applicable legal guidelines may include those of the HN government and the status of U.S. personnel while in country. Accordingly, a country law briefing, cultural orientation, and review of any international agreements affecting status of forces and foreign disclosure should be included in pre-mission preparation.

c. Combined training and operations taking place within a HN require detailed planning and coordination. The USSOCOM unit commander will, as appropriate, integrate qualified U.S. personnel to assist in planning and conducting the evolution. It is incumbent upon the unit commander to exercise discretion and mature judgment in conducting the evolution(s) to ensure that procedures used are in compliance with this directive and Component regulations and are well coordinated and understood by both USSOCOM and all foreign personnel participating. Whether using U.S. or HN SOPs, equipment or ranges, the crawl, walk, run approach to rehearsals will ensure all personnel know and understand the procedures.

d. Combined operations are often hampered by language barriers. English or the HN language may be used during combined training or operations. If necessary a translator will be assigned. All personnel must be able to communicate with the person in charge of the evolution. Key commands and hand signals must be briefed and understood by all participants regardless of language. All personnel involved must be able to communicate in the event of an emergency. Emergency procedures must be well coordinated and understood by both USSOCOM and foreign personnel.

e. Prior to foreign participation in combined operations in the U.S., the hosting unit will ensure the individual(s) are cleared with documentation by their country to participate in such operations. Documentation includes orders, letter from home unit, their embassy, or the local liaison.

f. Prior to U.S. participation in combined operations in the HN, the unit commander will request waivers as appropriate.

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g. Theater Commanders will have the final approval authority for combined operations within their respective area of operations.

**15-2. Specific Responsibilities.****a. Equipment.**

(1) Foreign nationals may use U.S. equipment provided they are trained in its use according to U.S. or their country standards. If they are qualified in the procedure but are not familiar with the specific equipment, the unit commander will ensure the foreign personnel are sufficiently trained in equipment use to conduct safe operations. The unit commander will be the delegated approval authority for foreign military forces utilizing U.S. equipment.

(2) U.S. personnel may use foreign equipment, provided they are trained in its use and the equipment meets U.S. military safety standards per Component regulations. If they are qualified in the procedure but not familiar with the specific equipment, the unit commander will ensure his personnel receive sufficient training in the equipment use to conduct a safe operation. The qualified U.S. person will inspect the equipment prior to use. The unit commander will be the delegated approval authority for the use of foreign equipment.

**b. Training Areas and Ranges.**

(1) Foreign nationals may train on U.S. training areas and ranges when conducting combined training or operations, using U.S. procedures. Unilateral foreign operations may be conducted on U.S. ranges with all deviations from U.S. procedures coordinated and approved by the U.S. host unit.

(2) USSOCOM personnel may train on foreign ranges when conducting combined or unilateral training or operations. U.S. personnel will utilize the foreign range procedures, if safe and practical, when using foreign ranges. Deviations from HN range procedures will be coordinated and approved by the appropriate HN authorities and the U.S. SOF Commander on site.

**15-3. Safety during Combined Training.**

a. Component publications and unit SOPs will address questions about unit integrity, weapons handling and safety, range and target set-up and procedures, breaching equipment, special ordnance handling and procedures, and personnel handling procedures. If there is conflict between the U.S. and HN policy, at a minimum combined training safety standards will not be less than the relevant U.S. Component safety standard for the evolution being conducted.

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b. The safety of U.S. personnel participating in combined training is the responsibility of the senior USSOCOM representative present. If the USSOCOM unit commander or senior representative believes the coordination and understanding of the operation are inadequate or doubts the safety of the operation, he has the responsibility to prevent his unit from participating.

**15-4. Foreign Disclosure.**

a. CDRUSSOCOM is the Department of Defense proponent for release of Special Operations TTPs. All planned disclosures require coordination with the USSOCOM Foreign Disclosure Officer (FDO).

b. Foreign disclosure planning shall be incorporated into all combined infil/exfil training events. Expect that cross-training will require sharing some level of Component TTPs. SOF infil/exfil joint tactics, techniques, and procedures are advanced training, sensitive in nature, and can be disclosed only in accordance with Component and USSOCOM Foreign Disclosure regulations and USSOCOM D 350-27, *Release of Special Operations Tactics, Techniques and Procedures*. All briefing slides and text must be approved by your Foreign Disclosure Representative (FDR) prior to presentation to a foreign individual or audience. Commitments shall not be expressed or implied, and no disclosures in support of the evolution shall be made pending the required disclosure decision.

c. Disclosure authority delegated by USSOCOM D 550-2 pertains only to USSOCOM originated/controlled Classified Military Information (CMI) that meets the limitations and disclosure criteria stipulated in National Disclosure Policy-1. Disclosure authority resides with designated FDOs.

d. If operationally deployed, TSOC and JSOC commander-appointed FDOs may authorize disclosure of information IAW National Disclosure Policy, USSOCOM Directives, and Service guidance.

e. All persons/units are required to be knowledgeable of and responsible for complying with Foreign Disclosure regulations in USSOCOM D 550-2. Components/units will provide training and guidance to personnel with regards to the foreign disclosure program. Address all questions to: USSOCOM OPR – FDO: SCSO J34-IP. DSN: 299-2151/3313.

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APPENDIX A

HAND AND ARM SIGNALS

**A-1. General.** Hand and arm signals for helicopter operations require standardization to the fullest extent possible to avoid confusion. The hand and arm signals contained in this appendix will be used whenever possible. Any deviation must be thoroughly briefed to all personnel participating in the operation.

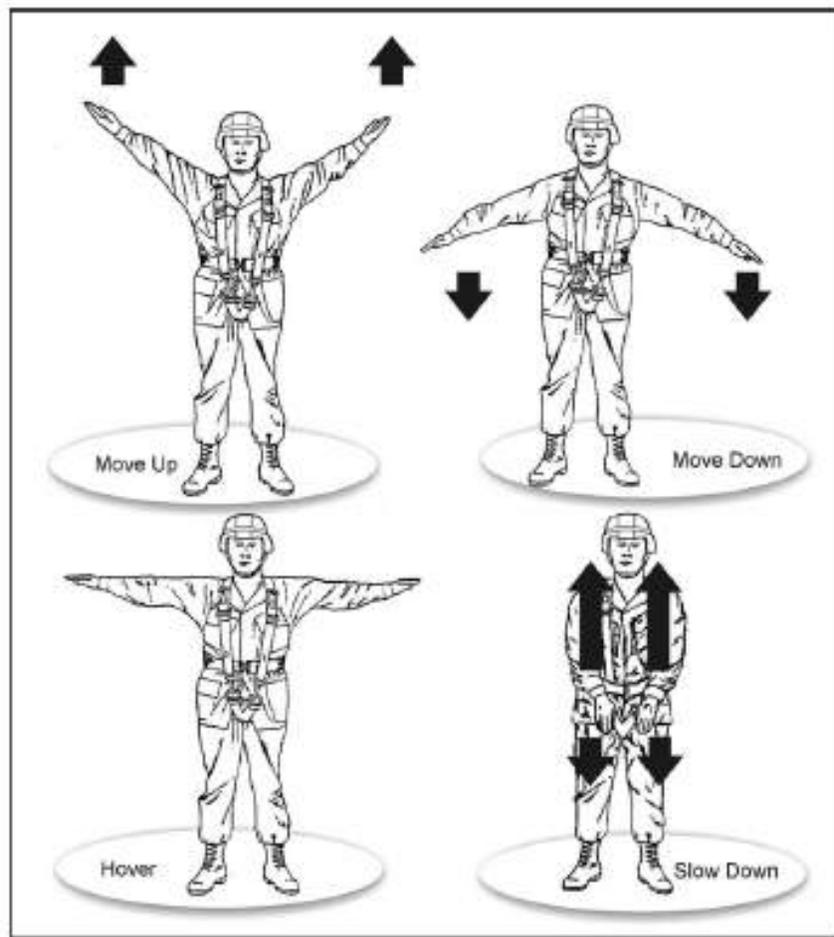


Figure A-1. Hand Signals for Directing Aircraft Movement.

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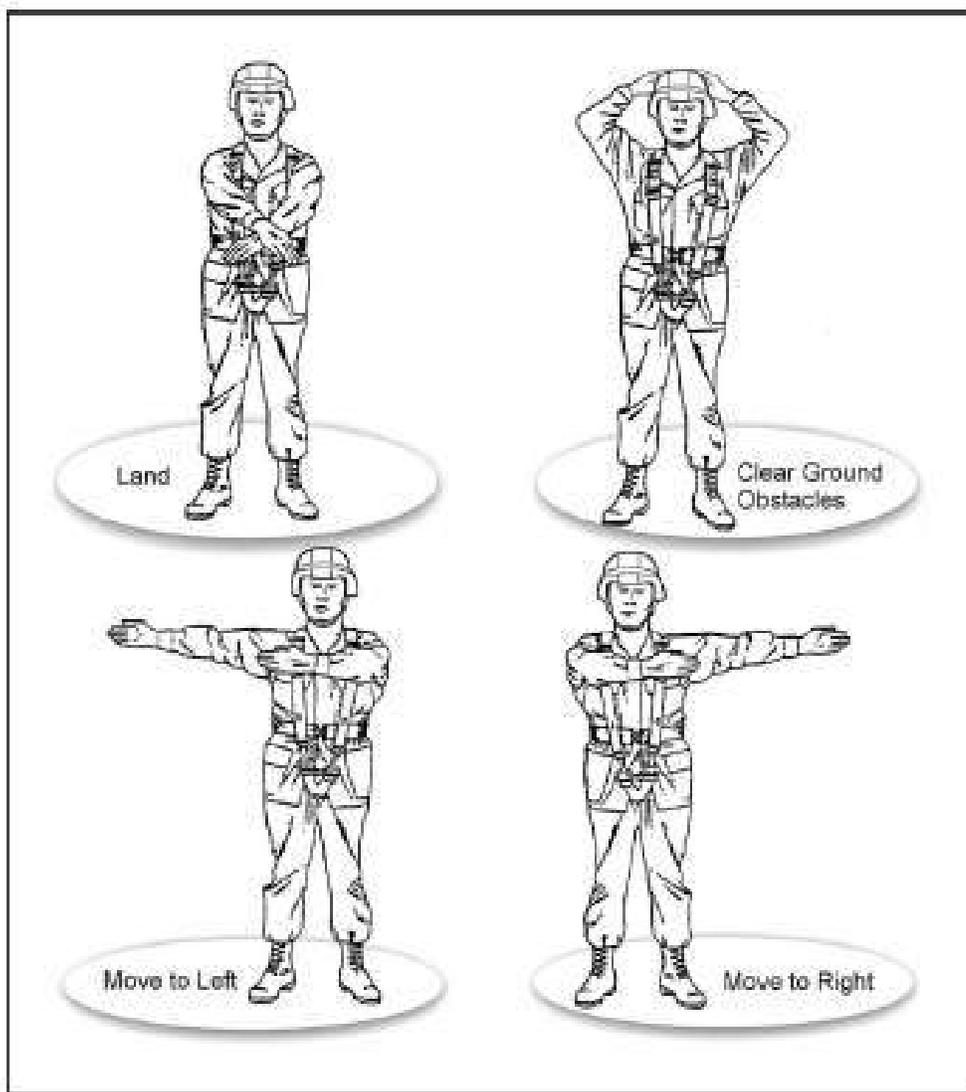
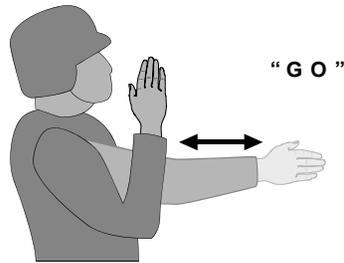


Figure A-2. Hand Signals for Directing Aircraft Movement (continued).

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The hand will be extended from the chest toward aircraft opening to indicate "GO" for all roping & casting operations.

**Figure A-3. Rope and Cast Go Signal.**

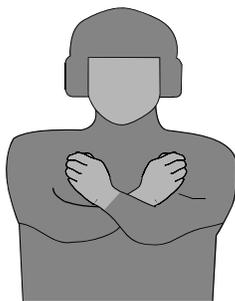


The arm and fist will be extended out to block exit for all roping and casting operations

**Figure A-4. Stop Stick Signal.**

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“FOULED ROPE OR AREA”

The arms will be crossed at chest level to indicate fouled rope or area.

**Figure A-5. Fouled Rope Area Signal.**



DISTRESS or HELP or PICK ME UP  
Hand waving overhead

**Figure A-6. Emergency Signal.**

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APPENDIX B

ROPE LOG

ROPE LOG (USAGE AND HISTORY)				UNIT ID MARKING	
For use of this form, see TC 90-8-1 the proponent agency is TRADOC				D-11-86-5	
NSN 845573560366	DOCUMENT NUMBER WJ30SV 61090007	SERIAL NUMBER 6-6-6933	MFR LOT NUMBER G620135115103		
DATE OF MFR 08 FEB 87	ISSUE DATE 01 OCT 87	DATE IN SERVICE 18 NOV 87	LENGTH 45M (150 FT)		
DIAMETER 11mm (7/16 inch)	FIBER TYPE 6.6 NYLON	COLOR OD GREEN	CONSTRUCTION DYNAMIC KERMANTLE		
INSPECT ROPE FOR DAMAGE OR EXCESSIVE WEAR EACH TIME IT IS DEPLOYED AND AGAIN AFTER EACH USE. IMMEDIATELY RETIRE ALL SUSPECT ROPES.					
DATE USED	LOCATION	TYPE OF USE	ROPE EXPOSURE	INSPECTOR'S INITIAL/DATE	ROPE CONDITION AND COMMENTS
20 Nov 87	YANAH Mtn GA	Direct Aid climb 5-7 A1	65°F clear dry Smooth Granite	BLE 20 NOV 87	
21 Nov 87	YANAH Mtn GA	Top Rope BELAYED Balance Climb	68°F clear dry Smooth Granite	BLE 21 NOV 87	
15-18 Jan 88	GULICORNIA GLACIER ALASKA	ROPED GLACIER TRAVEL	20°F SNOW STORM	BLE 15-18 Jan 88	
27 Jan 88	SUNGGULU'S Mtn VT	Front Point Ice Climb	35°F Cloudy No RELIEF on rope DUE to ICE TRAIL	ATS 27 Jan 88	SUSTAINED RAE 13 FT LEADER FALL
28 Jan 88	SUNGGULU'S Mtn VT	Front Point Ice Climb	20°F Cloudy & SNOWY	JWL 28 Jan 88	
8 Feb 88	MT SHASTA CAL	FIAT FOOT ICE Climb	80°F Lightly snowing	BLE 8 FEB 88	Approx ONE inch of SNOW Slippage on end of rope
22-24 Feb 88	DELOS Mtn NM	TWO MAN PARTY ROCK CLIMB 5.7H	45°F CLEAR DRY GRANITE	BLE 22 FEB 88	
10-22 Jun 88	MT MCKEY ALASKA	ROPED PARTY CLIMB CLASS VI	20-53°F one DAY of RAIN	SPK 10-22 Jun 88	ABRASION TO ROPE AT POINTS of TIE-IN (Ends & MIDDLE)

DA FORM 5752-R, MAY 89

Figure B-1. Example of Completed Rope Log.

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APPENDIX C

FAST ROPE TROOP BRIEFING

**C-1. General.** This recommended briefing covers detailed instructions concerning every aspect of the operation including the aircraft to be used, training area characteristics, uniform, equipment, and emergency procedures. All participants must attend the entire briefing.

**C-2. Briefing Area.**

- a. Manifest check.
- b. Operations time sequence, radio call signs and frequencies, actions if radio fails, and visual signals/markings.
- c. Location, identification, and marking of:
  - (1) LZ/PZ (day and night).
  - (2) Infil/exfil site (day and night).
- d. Ground operations and loading.
- e. Heading, route, flight time, and predicted weather conditions.
- f. Altitude.
- g. Time warnings.
- h. Hand and arm signals/light signals.
- i. Emergencies.
  - (1) LZ/PZ.
  - (2) Fast Rope personnel on ropes.

**C-3. Rehearsal of Actions in Aircraft.**

- a. Seating order.
- b. Exit order.
- c. Wearing of seatbelts/improvised restraints.

C-1

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- d. Securing of equipment.
- e. Hand and arm signals/emergency signals/light signals for day and/or night operations.
- f. Movement as directed.

**C-4. Fast Roping.**

- a. Releasing of seatbelts/restraints.
- b. Hand and arm signals.
- c. Movement as directed.
- d. Positioning of equipment.
- e. Exiting of aircraft.
- f. Accountability of personnel and/or equipment.

**C-5. Emergencies.** The following procedures will be adhered to in an emergency. Personnel use sound judgment to determine the correct action to take.

**a. Aircraft Emergency.**

- (1) "STOP STICK" (cease FRIES operation and await further instructions from the CE/FE/AG /FRM).
- (2) Ensure ropers are clear.
- (3) Take appropriate action.
- (4) "FOULED ROPE/AREA" (unsafe condition exists on a specified rope or an unsafe condition exists on the objective area- cease FRIES operation and await further instructions from the CE/FE/AG /FRM).

**b. Unsafe Drift or Premature Liftoff.**

- (1) Lock-in.
- (2) "STOP STICK".

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- (3) Get back on objective.
- (4) Continue operations.

**c. Hung Rope/Roper.**

- (1) FRM will re-direct personnel movement and deployment as required.
- (2) Aircraft will descend, if possible.
- (3) CE/FE/AG/FRM will ensure ropers are clear.
- (4) Roper will descend (if possible).
- (5) CE/FE/AG will release rope when ropers are clear.

**d. No Communications.**

- (1) The signal for “STOP STICK” is a clenched fist directed at the individual closest to the exit. If given by the CE/FE/AG, the CE/FE/AG will ensure the FRM is aware of the situation.
- (2) The signal for “ROPER” is pointing an open palm toward the exit.
- (3) The signal for “AIRCRAFT MOVEMENT” is an open palm moving and facing in the direction required, given by the FRM.
- (4) The signal for “STOP AIRCRAFT” is a clenched fist given by the FRM to the CE/FE/AG /pilots.
- (5) The signal for "FOULED ROPE/AREA" is clenched fists, arms overlapped, forming an "X" indicating an unsafe condition (unsafe condition exists on the objective area-cease FRIES operation and await further instructions from the CE/FE/AG /FRM).

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## APPENDIX D

### OPERATIONS CHECKLIST

**D-1. General.** The sequence of actions, time warnings and duties presented here are recommended. However, they may be modified based on unit procedures, mission, and type of aircraft.

**D-2. Pre-mission Actions.**

- a. Conduct risk assessment.
- b. Conduct pilot/crew brief.
- c. Conduct aircraft inspection/rigging.
- d. Conduct safety brief/operations brief.
- e. Conduct static load rehearsal. Ensure emergency procedures and hand and arm signals are covered.
- f. Inspection of personnel and equipment.

**D-3. Load Aircraft.**

- a. Position equipment/personnel.
- b. Ensure personnel are strapped/secured into the aircraft.

**D-4. Actions In Flight.**

- a. Monitor command net.
- b. Monitor aircrew net.
- c. Monitor flight route.

**D-5. Actions at 10-Minute Warning.**

- a. Issue 10-minute time warning.
- b. Check equipment.
- c. Check ropes, platform, and hook-up (for rope operations).

D-1

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**D-6. Actions at 6-Minute Warning.**

- a. Issue time warning.
- b. Position personnel and equipment.

**D-7. Actions at 1-Minute Warning.**

- a. Issue time warning.
- b. Release personnel restraints (if applicable).
- c. Break chemlights, turn on light source (night operations).

**D-8. GO.**

- a. Accountability of personnel and equipment upon completion of the operation.

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## APPENDIX E

### CASTMASTER (CM) BRIEFING

**E-1. General.** Aircraft cast and recovery operations begin with the CM briefing. This briefing covers detailed instructions concerning every aspect of the operation, to include a description of the aircraft to be used, casting area characteristics, uniform and equipment, and emergency procedures. All swimmers (and aircrew, if available) must attend the briefing. Recommended briefing format:

#### **E-2. Briefing Area.**

- a. Manifest check.
- b. Time sequence for the operation, to include radio call signs and frequencies, action for radio failure, and smoke codes/visual signals.
- c. Flight routes, checkpoints, flight time.
- d. Location and identification of cast area.
  - (1) Markings, day or night.
  - (2) Obstacle markings, day or night.
- e. Cast altitude and speed (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)
- f. Type of aircraft, number, and formation.
- g. Number of sticks, load order, seating arrangement, exit order.
- h. Number of passes.
- i. Water depth and obstacles.
- j. Sea States. Sea States will be considered as part of the risk assessment. For training, operations will not be conducted in excess of Sea State 3.
- k. Location and marking of safety boats.
- l. Conduct of overall operation.

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- m. Cast and recovery rehearsal, if applicable.
- n. Abort procedures/signals.
- o. Pilot and CM briefing.
- p. Positioning of equipment.
- q. Review of jump commands, hand and arm signals, and signals for swimmers to use once in the water.
- r. Movement in aircraft, when permitted.
- s. CM inspection of personnel and equipment prior to boarding the aircraft.

**E-3. In the Aircraft.**

- a. Secure seat belts or safety straps and equipment.
- b. Watch for CM signals.
- c. Move as directed.

**E-4. Cast.**

- a. Release seat belt or safety strap.
- b. Position equipment.
- c. Receive CM signals.
- d. Exit aircraft.

**E-5. After Exiting Helicopter.**

- a. Assume proper body position for water entry.
- b. Signal that you are "OK".
- c. Don swimming gear.

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- d. Secure equipment/accountability of personnel and equipment.
- e. Execute remainder of operation.

**E-6. Recovery.**

- a. Assume correct swimmer alignment.
- b. Follow procedures or techniques for recovery system used.
- c. If a rope ladder is used, snare ladder with arm and stabilize ladder, or follow ascending procedures for the recovery system used.
- d. Board aircraft.
- e. Secure seat belts or safety straps.
- f. Accountability of personnel and equipment.

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APPENDIX F

CASTMASTER (CM) CHECKLIST

**F-1. General.** The sequence of actions and duties of individuals presented here are recommended. This checklist may be modified by the CM based on unit procedures, mission, and type of aircraft.

**F-2. Pre-mission Actions.**

- a. Conduct risk assessment.
- b. Determine tidal and current data.
- c. Determine water depth and forecasted Sea State.
- d. Recon cast zone.
- e. Prep equipment for cast operations
- f. Conduct safety brief/operations brief.
- g. Conduct static load rehearsal.
- h. Verify Safety boat with required personnel on site.
- i. Verify medical coverage on site.
- j. Conduct inspection of personnel and equipment (CM).
- k. Ensure communication between Safety boat/shore/aircraft

**F-3. Load Aircraft**

- a. Load/attach MMC.
- b. Position equipment/personnel.
- c. Secure seat belts or safety straps and equipment.
- d. Inspect rigging of MMC.

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**F-4. Actions in Flight.**

- a. Monitor aircrew net.
- b. Monitor flight route.
- c. Monitor MMC.

**F-5. Actions at 10-Minute Warning.**

- a. Issue 10-minute warning.
- b. Inflate flotation devices to 1/3 capacity (or as pre-briefed by the CM).
- c. Check swimmer equipment.
- d. Check MMC and cutting device.

**F-6. Actions at 6-Minute (5-Minute for Air Force Aircraft) Warning.**

- a. Issue time warning.
- b. Don swim fins.

c. (b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

**F-7. Actions at 3-Minute Warning.**

- a. Verify removal of MMC rear restraint strap by CE/FE/AG.
- b. Remove personnel restraint at the pre-determined release point/time.
- c. Break chemlights, turn on light source.

**F-8. Actions at 1-Minute Warning.**

- a. Issue time warning.
- b. Stand by for CE/FE/AG directed release of MMC.

**F-9. Casting Action.** Release MMC when directed by CE/FE/AG.

- b. CM verify altitude.
- c. CM issues order for personnel to cast.

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**F-10. Actions in the water.**

- a. Give OK signal.
- b. Account for personnel.
- c. Move to and load MMC.
- d. Secure equipment.
- e. Execute remainder of operation.

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APPENDIX G

RULES FOR SEATS OUT AND ALTERNATE LOAD PROCEDURES

SOF Aircraft for Combat, Combat Support (CS), Combat Service Support (CSS) and Training and Non-SOF Aircraft Assigned/Attached/OPCON to SOF for Combat/CS/CSS

Note: See Joint Pub 1-02 for definitions of CS and CSS.

<ul style="list-style-type: none"> <li>▪ <b>SOF Personnel Approval Authority*</b> <ul style="list-style-type: none"> <li>a. USASOC/NAVSPECWARCOM/AFSOC/MARSOC: First O-6 in Chain of Command of Forces at Risk and/or O-6 in Mission/Course Of Action Approval Authority.</li> </ul> </li> <li>▪ <b>Aircraft Approval Authority</b> <ul style="list-style-type: none"> <li>a. Army: Aviation Chain of Command Final Mission Approval Authority.</li> <li>b. Air Force/Navy: Aircraft Commander/Mission Tasking Authority.</li> <li>c. Marine Corps: Wing Commander.</li> </ul> </li> <li>▪ <b>Must be Mission Essential</b> <ul style="list-style-type: none"> <li>a. Case-by-case basis for training.</li> <li>b. Specified period of time during combat.</li> </ul> </li> <li>▪ <b>Alternate Restraint Required</b> <ul style="list-style-type: none"> <li>a. Airland: From before takeoff until after landing and aircrew signals “clear to offload”.</li> <li>b. Infil/Exfil (USSOCOM M 350-6 specific): From before takeoff to a pre-coordinated and briefed point and/or time.</li> </ul> </li> </ul> <p><b>*Includes Non-SOF personnel that are attached, assigned, or OPCON to USSOCOM or its subordinate commands.</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Non-SOF Personnel Approval Authority*</b> <ul style="list-style-type: none"> <li>a. Army, Air Force, Navy, and Marine Corps: First O-6 in Chain of Command of Forces at Risk.</li> </ul> </li> <li>▪ <b>Aircraft Approval Authority:</b> <ul style="list-style-type: none"> <li>a. Army: Aviation Chain of Command Final Mission Approval Authority.</li> <li>b. Air Force/Navy: Aircraft Commander/Mission Tasking Authority.</li> <li>c. Marine Corps: Wing Commander.</li> </ul> </li> <li>▪ <b>Must be Mission Essential</b> <ul style="list-style-type: none"> <li>a. Case-by-case basis for training.</li> <li>b. Specified period of time during combat.</li> </ul> </li> <li>▪ <b>Alternate Restraint Required</b> <ul style="list-style-type: none"> <li>a. Airland: From before takeoff until after landing and aircrew signals “clear to offload”.</li> <li>b. Infil/Exfil (USSOCOM M 350-6 specific): From before takeoff to a pre-coordinated and briefed point and/or time.</li> </ul> </li> </ul> <p><b>*Not attached, assigned, or OPCON to USSOCOM or its subordinate commands.</b></p>
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**RULES FOR SEATS OUT AND ALTERNATE LOAD PROCEDURES**

**Non-SOF Aircraft Assigned/Attached/OPCON to SOF for Training**

<ul style="list-style-type: none"><li>▪ <b>SOF Personnel Approval Authority*</b><ul style="list-style-type: none"><li>- <b>Army (Non-SOF) Aircraft:**</b><ul style="list-style-type: none"><li>a. USASOC/NAVSPECWARCOM/AFSOC/MARSOC: Service Component Commander equivalent or first 4-Star in the Chain of Command of Forces At Risk (can be delegated to a 2-Star).</li></ul></li><li>- <b>All Other (Non-SOF) Aircraft:</b><ul style="list-style-type: none"><li>b. USASOC/NAVSPECWARCOM/AFSOC/MARSOC: First O-6 in Chain of Command of Forces at Risk.</li></ul></li></ul></li><li>▪ <b>Aircraft Approval Authority</b><ul style="list-style-type: none"><li>a. Army: Aviation Chain of Command Final Mission Approval Authority.</li><li>b. Air Force/Navy: Aircraft Commander/Mission Tasking Authority.</li><li>c. Marine Corps: Wing Commander.</li></ul></li><li>▪ <b>Must be Mission Essential</b><ul style="list-style-type: none"><li>a. Case-by-case basis for training.</li><li>b. Specified period of time during combat.</li></ul></li><li>▪ <b>Alternate Restraint Required</b><ul style="list-style-type: none"><li>a. Airland: From before takeoff until after landing and aircrew signals “clear to offload”.</li><li>b. Infil/Exfil (USSOCOM M 350-6 specific): From before takeoff to a pre-coordinated and briefed point and/or time.</li></ul></li></ul> <p><b>*Includes Non-SOF personnel that are attached, assigned, or OPCON to USSOCOM or its subordinate commands.</b></p> <p><b>**Reference AR 95-1</b></p>	<ul style="list-style-type: none"><li>▪ <b>Non-SOF Personnel Approval Authority*</b><ul style="list-style-type: none"><li>- <b>Army (Non-SOF) Aircraft:**</b><ul style="list-style-type: none"><li>a. Army, Air Force, Navy and Marine Corps: Service Component Commander equivalent or first 4-Star in the Chain of Command of Forces At Risk (can be delegated to a 2-Star).</li></ul></li><li>- <b>All Other (Non-SOF) Aircraft:</b><ul style="list-style-type: none"><li>b. Army, Air Force, Navy and Marine Corps: First O-6 in Chain of Command of Forces at Risk.</li></ul></li></ul></li><li>▪ <b>Aircraft Approval Authority:</b><ul style="list-style-type: none"><li>a. Army: Aviation Chain of Command Final Mission Approval Authority.</li><li>b. Air Force/Navy: Aircraft Commander/Mission Tasking Authority.</li><li>c. Marine Corps: Wing Commander.</li></ul></li><li>▪ <b>Must be Mission Essential</b><ul style="list-style-type: none"><li>a. Case-by-case basis for training.</li></ul></li><li>▪ <b>Alternate Restraint Required</b><ul style="list-style-type: none"><li>a. Airland: From before takeoff until after landing and aircrew signals “clear to offload”.</li><li>b. Infil/Exfil (USSOCOM M 350-6 specific): From before takeoff to a pre-coordinated and briefed point and/or time.</li></ul></li></ul> <p><b>*Not attached, assigned, or OPCON to USSOCOM or its subordinate commands.</b></p> <p><b>**Reference AR 95-1</b></p>
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**RULES FOR SEATS OUT AND ALTERNATE LOAD PROCEDURES**  
**Non-SOF Aircraft Not Assigned/Attached/OPCON to SOF for Combat/CS/CSS/Training**

Note: See Joint Pub 1-02 for definitions of CS and CSS.

<ul style="list-style-type: none"> <li>▪ <b>SOF Personnel Approval Authority*</b></li> <li>- <b>Army (Non-SOF) Aircraft:**</b> <ul style="list-style-type: none"> <li>a. USASOC/NAVSPECWARCOM/AFSOC/MARSOC: Service Component Commander equivalent or first 4-Star in the Chain of Command of Forces at Risk (can be delegated to a 2-Star).</li> </ul> </li> <li>- <b>All Other (Non-SOF) Aircraft:</b> <ul style="list-style-type: none"> <li>b. USASOC/NAVSPECWARCOM/AFSOC/MARSOC: First O-6 in Chain of Command of Forces at Risk.</li> </ul> </li> <li>▪ <b>Aircraft Approval Authority</b> <ul style="list-style-type: none"> <li>a. Army: Aviation Chain of Command Final Mission Approval Authority.</li> <li>b. Air Force: Squadron Commander.</li> <li>c. Navy: Aircraft Commander/Mission Tasking Authority.</li> <li>d. Marine Corps: Wing Commander.</li> </ul> </li> <li>▪ <b>Must be Mission Essential</b> <ul style="list-style-type: none"> <li>a. Case-by-case basis for training.</li> <li>b. Specified period of time during combat.</li> </ul> </li> <li>▪ <b>Alternate Restraint Required</b> <ul style="list-style-type: none"> <li>a. Airland: From before takeoff until after landing and aircrew signals “clear to offload”.</li> <li>b. Infil/Exfil (USSOCOM M 350-6 specific): From before takeoff to a pre-coordinated and briefed point and/or time.</li> </ul> </li> </ul> <p><b>*Includes Non-SOF personnel that are attached, assigned, or OPCON to USSOCOM or its subordinate commands.</b></p> <p><b>**Reference AR 95-1</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Non-SOF Personnel Approval Authority*</b> <ul style="list-style-type: none"> <li>a. Army: ACOM, ASCC, DRU, or NGB CDR or first 4-Star in the Chain of Command of Forces at Risk (can be delegated to a 2-Star).**</li> <li>b. Air Force: Squadron Commander.</li> <li>c. Navy/Marine Corps: Not Authorized.</li> </ul> </li> <li>▪ <b>Aircraft Approval Authority:</b> <ul style="list-style-type: none"> <li>a. Army: Aviation Chain of Command Final Mission Approval Authority.</li> <li>b. Air Force: Squadron Commander.</li> <li>c. Navy/Marine Corps: Not authorized.</li> </ul> </li> <li>▪ <b>Must be Mission Essential</b> <ul style="list-style-type: none"> <li>a. Case-by-case basis for training.</li> <li>b. Specified period of time during combat.</li> </ul> </li> <li>▪ <b>Restraint Required</b> <ul style="list-style-type: none"> <li>a. Airland: From before takeoff until after landing and aircrew signals “clear to offload”.</li> </ul> </li> </ul> <p><b>*Not attached, assigned, or OPCON to USSOCOM or its subordinate commands.</b></p> <p><b>**Reference AR 95-1</b></p>
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(b)(3)(10 U.S.C. § 130), (b)(2), (b)(7)(E)

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APPENDIX I

PROCEDURES FOR INSPECTING THE FAST ROPE BAG AND COMPONENTS TO DETERMINE SERVICEABILITY

(b)(3)(10 U.S.C. § 130)

Interval	Item to Check/ Service	Procedure	Not fully mission capable if:
Before	Fast Rope Bag	Inspect for broken or missing stitching; frayed, worn, or cut webbing and material; bent, broken, rusted, or missing hardware.	Components are damaged or missing.
After	Fast Rope Bag	Inspect for broken or missing stitching; frayed, worn, or cut webbing and material; bent, broken, rusted, or missing hardware.	Components are damaged or missing.
Before	Release Straps with Snap Shackles	Inspect for broken or missing stitching; frayed, worn, or cut webbing and material; bent, broken, rusted, or missing hardware.	Components are damaged or missing.
After	Release Straps with Snap Shackles	Inspect for broken or missing stitching; frayed, worn, or cut webbing and material; bent, broken, rusted, or missing hardware.	Components are damaged or missing.
Before	Snap Shackles	Inspect for bent, broken, rusted, or missing hardware.	Components are damaged or missing.
After	Snap Shackles	Inspect for bent, broken, rusted, or missing hardware.	Components are damaged or missing.

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Interval	Item to Check/ Service	Procedure	Not fully mission capable if:
Before	Locking Carabineer	Inspect for bent, broken, rusted, or missing hardware.	Components are damaged or missing.
After	Locking Carabineer	Inspect for bent, broken, rusted, or missing hardware.	Components are damaged or missing.
Before	Fast Rope Bag	IAW TM 10-1670-262-12&P (Table 2-1)	Components are damaged or missing.
After	Fast Rope Bag	IAW TM 10-1670-262-12&P (Table 2-1)	Components are damaged or missing.

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**GLOSSARY**

**SECTION I--ABBREVIATIONS AND ACRONYMS**

<b>AD</b>	Airworthiness Directive
<b>AFI</b>	Air Force Instruction
<b>AG</b>	Aerial Gunner
<b>AGL</b>	Above Ground Level
<b>AMC</b>	Air Mission Commander
<b>AFRM</b>	Assistant Fast Rope Master
<b>AFSOC</b>	Air Force Special Operations Command
<b>ASCC</b>	Army Service Component Command
<b>ATM</b>	Aircrew Training Manual
<b>ATP</b>	Advanced Trauma Practitioner
<b>AWR</b>	Air Worthiness Release
<b>BALCS</b>	Body Armor Load Carrying System
<b>BALCS-R</b>	Body Armor Load Carrying System, Releasable
<b>BCM</b>	Buoyancy Compensator, Military
<b>CASEVAC</b>	Casualty Evacuation
<b>CE</b>	Crew Chief (Helicopter)
<b>CG</b>	Center of Gravity
<b>CHEMLIGHT</b>	Chemical Light
<b>CM</b>	Cast Master
<b>COMJSOC</b>	Commander JSOC
<b>CRRC</b>	Combat Rubber Raiding Craft
<b>CS</b>	Combat Support
<b>CSS</b>	Combat Service Support
<b>CWST</b>	Combat Water Survival Test
<b>DA</b>	Department of the Army
<b>DAF</b>	Departure Airfield
<b>DFT</b>	Deployment For Training
<b>DOD</b>	Department of Defense
<b>EMT</b>	Emergency Medical Technician
<b>EPS</b>	External Passenger System
<b>EXFIL</b>	Exfiltration
<b>EZ</b>	Extraction Zone
<b>FC</b>	Flight Clearance
<b>FDO</b>	Foreign Disclosure Officer

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<b>FE</b>	Flight Engineer
<b>FM</b>	Field Manual
<b>FRIES</b>	Fast Rope Insertion/Extraction System
<b>FRM</b>	Fast Rope Master
<b>GO</b>	General Officer
<b>HMMWV</b>	High Mobility Multipurpose Wheeled Vehicle
<b>HN</b>	Host Nation
<b>HQ</b>	Headquarters
<b>IAW</b>	In Accordance With
<b>ICS</b>	Internal Communications System
<b>INFIL</b>	Infiltration
<b>INTERCOM</b>	Intercommunications
<b>IR</b>	Infrared
<b>JCET</b>	Joint Combined Exchange Training
<b>JCS</b>	Joint Chiefs of Staff
<b>JMETL</b>	Joint Mission Essential Task List
<b>JSOC</b>	Joint Special Operations Command
<b>JTTP</b>	Joint Tactics, Techniques and Procedures
<b>K-DUCK</b>	Kangaroo Duck
<b>KGS</b>	Knots Ground Speed
<b>KIAS</b>	Knots Indicated Air Speed
<b>L/H</b>	Left Hand
<b>LPU</b>	Life Preserver Unit
<b>LRSD</b>	Long Range Surveillance Detachment
<b>LZ</b>	Landing Zone
<b>MARSOC</b>	Marine Corps Forces Special Operations Command
<b>MEDEVAC</b>	Medical Evacuation
<b>METL</b>	Mission Essential Task List
<b>MILES</b>	Multiple Integrated Laser Equipment System
<b>MMC</b>	Maritime Mobility Craft
<b>MOI</b>	Method of Instruction
<b>MPC</b>	Multi-purpose Canine
<b>MTT</b>	Mobile Training Team
<b>NAVSPECWARCOM</b>	Naval Special Warfare Command
<b>NCOIC</b>	Noncommissioned Officer In Charge
<b>NVD</b>	Night Vision Device

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<b>OCONUS</b>	Outside Continental United States
<b>OIC</b>	Officer In Charge
<b>OPORD</b>	Operations Order
<b>OPR</b>	Office of Primary Responsibility
<b>PFD</b>	Personal Flotation Devices
<b>PC</b>	Pilot in Command
<b>PLF</b>	Parachute Landing Fall
<b>POA&amp;M</b>	Plan of Action and Milestones
<b>POC</b>	Point of Contact
<b>POI</b>	Program of Instruction
<b>PZ</b>	Pickup Zone
<b>R/H</b>	Right Hand
<b>RM</b>	Rappel Master
<b>SM</b>	STABO Master
<b>SME</b>	Subject Matter Expert
<b>SO</b>	Safety Officer
<b>SOCEP</b>	Special Operations Combat Expendable Platforms
<b>SOF</b>	Special Operations Forces
<b>SOFBIS</b>	Special Operations Forces Baseline Interoperable Standards
<b>SOP</b>	Standard Operating Procedures
<b>SPIE</b>	Special Patrol Insertion and Extraction
<b>SPM</b>	SPIE Master
<b>STABO</b>	Stabilized Body Operations
<b>TC</b>	Training Circular
<b>T-DUCK</b>	Tethered Duck
<b>TSOC</b>	Theater Special Operations Command
<b>TTP</b>	Tactics, Techniques, and Procedures
<b>USAF</b>	United States Air Force
<b>USASOC</b>	United States Army Special Operations Command
<b>USSOCOM</b>	United States Special Operations Command

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