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Flying Operations

MH-53 OPERATIONS PROCEDURES



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This instruction implements AFD 11-2, *Aircraft Rules and Procedures*. It establishes procedures for the operation of MH-53 helicopters employed by AFSOC and AETC to accomplish their worldwide operational and training missions. Unless noted otherwise, instructions contained herein apply to MH-53J/M helicopters. It provides the most acceptable policies and procedures for most circumstances, but does not replace sound judgment. This instruction does not apply to the Air National Guard or Air Force Reserve Command. The Paperwork Reduction Act of 1974 as amended in 1996 affects this instruction. Maintain and dispose of all records created as a result of prescribed processes in this instruction in accordance with AFMAN, 37-139, *Records Disposition Schedule*. Refer to **Attachment 1** for a Glossary of references, abbreviations and terms. Refer to **Attachment 2** for list of required publications list per crew positions. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

SUMMARY OF REVISIONS

This document is substantially revised and must be completely reviewed.

The tactics, techniques and procedures have been removed from this regulation and placed in AFTTP 3-3 Vol. 34. Changes include, but are not limited to, the following. Procedures for Direct Support Operators have been added. Cover ship requirements have been changed. Security and reporting procedures have been updated. IMC TF/TA guidance has been added. Alert procedures have been altered.

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Chapter 1

GENERAL INFORMATION

1.1. General.

1.1.1. Records Disposition. Ensure that all records created by this AFI are maintained and disposed of IAW AFM 37-139, *Records Disposition Schedule*.

1.1.2. This is an Air Force directive for helicopter aircrews. It is written for normal and contingency operations to minimize requirements for procedural changes at the onset of contingencies. Procedures for the training environment are included.

1.1.3. The Directorate of Aircrew Standardization/Evaluation (HQ AFSOC/DOV) has overall responsibility for this instruction.

1.2. Applicability. This instruction is applicable to all USAF MH-53 units. References to units, personnel, and aircraft in this instruction include all gained forces unless specifically exempted by this instruction.

1.3. Terms Explained.

1.3.1. "Will and Shall" indicate a mandatory requirement.

1.3.2. "Should" indicates a recommended procedure.

1.3.3. "May" indicates an acceptable or suggested means of accomplishment.

1.3.4. **WARNING:** Operating procedures, techniques, etc., which will result in personal injury or loss of life if not carefully followed.

1.3.5. **CAUTION:** Operating procedures, techniques, etc., which will result in damage to equipment if not carefully followed.

1.3.6. **NOTE:** Operating procedures, techniques, etc., which are essential to emphasize.

1.4. Deviations and Waivers. Do not deviate from the policies and guidance in this instruction, except:

1.4.1. For safety.

1.4.2. When it is necessary to protect the crew and aircraft from a situation not covered by this instruction and immediate action is required, the Pilot in Command (PIC) has ultimate authority and responsibility for the course of action to be taken. Report all deviations or exceptions without a waiver through channels to MAJCOM/DO. Although this publication provides guidance for aircraft operations under most circumstances, it is not a substitute for sound judgment.

1.4.3. When waived by the appropriate authority. Unless otherwise indicated, MAJCOM/DO is the waiver authority for this instruction. MAJCOM/DO may delegate this authority to the COMAFSOF for operationally assigned forces. Request waivers through command and control channels.

1.5. Supplements. MAJCOMs may supplement this instruction. Forward MAJCOM supplements to HQ AFSOC/DOV and HQ AFFSA/XOF for approval before publication and provide HQ AFFSA/XOF one copy after publication. Units may supplement this instruction. The purpose of the unit supplement is to

document the process by which units implement the requirements of this instruction. Post the unit supplement behind the basic instruction and MAJCOM supplement. Supplements should not duplicate and will not be less restrictive than the provisions of this or any other publication without prior authorization from the appropriate MAJCOM and HQ AFFSA/XOF.

1.6. Requisitioning Procedures. Units will requisition this instruction through the USAF publications site at <http://www.e-publishing.af.mil>.

1.7. Revisions. Personnel at all echelons are encouraged to submit proposed changes IAW AFI 11-215, through MAJCOM Stan/Eval channels to HQ AFSOC/DOVR. Use AF Form 847, **Recommendation for Change of Publication**.

1.8. Distribution.

- 1.8.1. MH-53 Unit/CCs, All Levels - 1
- 1.8.2. Operational File (Ops Section), All Levels - 1
- 1.8.3. FCIF - 1
- 1.8.4. Staff Ops Officers, All Levels - 1
- 1.8.5. Mission Coordinator Kits - 1
- 1.8.6. Mission Navigation Kits - 1
- 1.8.7. Aircrew – 1

1.9. Development of New Equipment and Procedures. Units are encouraged to suggest new equipment, methods, tactics and procedures. Coordinate these requirements through MAJCOM and 18 Flight Test Squadron. HQ AFSOC approval must be obtained prior to testing of new procedures or equipment.

Chapter 2

COMMAND AND CONTROL (C2)

2.1. General. The following paragraphs summarize Mission Commander, or if one is not assigned, PIC duties with regard to flight reporting.

2.1.1. **Unclassified Missions at Bases with a C2 Facility.** Mission Commanders or PIC will ensure that the following data is relayed to the C2 facility: call signs, mission number, ETA, maintenance status, and additional service requirements. After landing, the mission commander or PIC will contact the C2 facility with ground handling requirements and departure information. Additionally, CONUS-based crews operating within the CONUS must ensure that their home station command posts are kept apprised of all actual takeoff and landing times, projected takeoff times, and other related information.

2.1.2. **Unclassified Missions at Bases without a C2 Facility.** Mission Commanders or PIC will report, as soon as possible, actual takeoff and landing times, maintenance status, projected takeoff times, and other pertinent data to the appropriate reporting agency. CONUS-based crews operating within the CONUS must also ensure that their home station command posts receive real-time reports on aircraft movements.

2.1.3. **Close-hold or Sensitive Missions.** These missions may operate without AIMS setups.

2.1.4. In all cases, Mission Commanders or PIC will pass reporting information to their respective group/wing command post. AFSOC crews may contact the AFSOC Command Center, Hurlburt Fld FL at DSN: 312-579-2171 or commercial: 800-451-7705 or 850-581-2966

2.2. Mission Commander. A Mission Commander will be designated when more than one aircraft and crew is deployed away from home station for training, exercises, or other operations. The Mission Commander should not be used as a primary crewmember. In cases where it is necessary for the Mission Commander to fly, ensure a senior member or designated representative is delegated to fulfill mission commander duties. If an airborne mission commander is required, they will not occupy a primary crew position. Mission Commander responsibilities include, but are not limited to:

2.2.1. Briefing crews on local operating procedures.

2.2.2. Coordinating with ATC, CCT, range control, users, and others that may have an impact on the mission.

2.2.3. Ensuring personnel have ample and adequate billeting, messing, and transportation arrangements.

2.2.4. Ensuring maintenance personnel know of aircraft and fuel requirements.

2.2.5. Submitting timely reports on aircraft movements.

2.3. PIC Responsibility and Authority. A PIC is designated for all flights on the MAJCOM approved flight authorization. PIC are:

2.3.1. In command of all persons aboard the aircraft.

2.3.2. Responsible for the welfare of their crew and the safe accomplishment of the mission.

- 2.3.3. Vested with the authority necessary to manage their crew and accomplish the mission.
- 2.3.4. The final mission authority and will make decisions not specifically assigned to a higher authority.
- 2.3.5. The final authority for accepting a waiver affecting his crew or mission.
- 2.3.6. Charged with keeping the applicable commander informed of mission progress and difficulties.
- 2.3.7. Responsible for the timely reporting of aircraft movements.

2.4. Mission Clearance Decision. The final decision to delay a mission may be made either by the agency with OPCON or the PIC when, in the opinion of either, conditions are not safe to start or continue a mission. Final responsibility for the safe conduct of the mission rests with PIC. If the PIC refuses a mission, it will not depart until the conditions have been corrected or improved so that the mission can operate safely. Another PIC and aircrew will not be alerted to take the same mission under the same conditions.

2.4.1. Diverting or re-routing a mission must be authorized by the commander with OPCON, except in an emergency or when required by enroute or terminal weather conditions or facilities. In the event of an emergency or weather-related divert or reroute, the Mission Commander or PIC must notify the controlling authority as soon as possible.

2.4.2. When directing an aircraft to an alternate airfield, the controlling agency will ensure the PIC is provided existing and forecasted weather for the alternate.

2.5. Assistance to Civil Authorities. Public law and policy restricts the use of military forces to assist civilian law enforcement. The Posse Comitatus Act of 1878 prohibits the unauthorized use of US military forces to assist civilian law enforcement except in very limited circumstances. Report all requests for assistance from civilian law enforcement authorities through command and control channels. In cases of extreme emergencies, in order to prevent the loss of life, prevent human suffering, or mitigate great property loss, a commander may offer assistance to civil authorities and victims which is necessary to meet immediate needs until civil authorities can arrive. If possible and time permitting, the commander should seek command approval. However, the commander will not enforce US civilian criminal laws as prescribed by the Posse Comitatus Act, including search and seizure warrants, making arrests of civilians (differs from temporarily detaining civilians), or transport law enforcement officials into areas of imminent danger or where confrontation with civilian criminals is likely. Non-emergency based assistance must be approved prior to execution.

Chapter 3

CREW COMPLEMENT/MANAGEMENT

3.1. Crew Complement. Authorized aircrew composition for the MH-53J/M is listed in AFI 65-503, *US Air Force Cost and Planning Factors*. The crew complement for operations is specified in the flight manual and Figure 3.1. The Group CC or COMAFSOF may waive the crew complement specified in Figure 3.1 down to the minimum flight manual crew of 3 (pilot, copilot, flight engineer).

3.1.1. Additional Crewmembers (ACM). An ACM is one assigned in addition to the normal aircrew complement required for a mission. AETC crews will refer to AFI 11-401, *Aviation Management / AETC Supplement 1* for ACM guidance.

3.1.2. Logging of Flying Time. Log flying time IAW AFI 11-401, *Aviation Management*.

3.2. Interfly. Group CC or COMAFSOF is the approval authority for interfly of Air Force crewmembers on MH-53 aircraft under their control; otherwise HQ AFSOC/DO is the approval authority. In all cases, the crew must be qualified in the aircraft MDS. AFSOC/AETC Memorandum of Agreement governs 58 SOW interfly requirements. AFSOC/ACC Memorandum of Agreement governs ACC WIC personnel

3.3. Scheduling Restrictions. In addition to the restrictions in AFI 11-202 Vol. 3, *General Flight Rules*, do not schedule crewmembers to fly or perform crew duties:

3.3.1. After consuming alcoholic beverages within 12 hours of mission reporting time or within 12 hours of assuming alert or standby duty, or when under the influence of alcoholic beverages.

3.3.2. Within 24 hours after being administered anesthetics for dental or surgical procedures. Local flight surgeons will determine scheduling restrictions following immunizations. When mission requirements dictate, flight surgeons may authorize shorter periods of not less than 8 hours.

3.3.3. When taking oral or injected medication, unless individual medical waiver has been granted by the command surgeon. Mild analgesics, such as aspirin and aspirin substitutes, may be used without a prescription when the underlying illness itself is not cause for grounding. Dexedrine or similar stimulation "pep pills" may not be used unless authorized by HQ AFSOC/SG.

3.4. Flight Duty Periods (FDP). In addition to the restrictions in AFI 11-202 Volume 3 Chapter 9, *General Flight Rules*, comply with the following:

3.4.1. 12 hours for training flights and FCFs.

3.4.2. 14 hours for contingencies and exercise missions. No tactical training will be accomplished after 12 hours.

3.4.3. 14 hours for deployment/redeployment.

3.4.4. FDP waiver approval authority is the Group CC, representative or higher.

3.5. Crew Rest. In addition to the restrictions in AFI 11-202 Volume 3 Chapter 9, *General Flight Rules*, comply with the following:

3.5.1. Under unusual circumstances, and when waived by the appropriate authority, it is permissible for crewmembers not previously placed in crew rest to fly if they say they are sufficiently rested.

3.5.2. Crewmembers departing on missions scheduled to recover away from home station should be notified 24 hours before reporting for the mission. The first 12 hours are designed to allow crewmembers to resolve personal affairs. During these first 12 hours, a crewmember may perform limited non-flying duties. The second 12-hour period is inviolate.

3.5.3. Post-mission crew rest applies to all flying TDYs and begins upon the final return of an individual to home station and runs continuously until completed. Post-mission crew rest must be completed before starting pre-departure crew rest for a subsequent mission. Do not require a crewmember to get immunizations, engage in ground training, perform standby or squadron duties, or perform any other activity that would encroach upon crew rest.

3.5.3.1. Waiver authority for post-mission crew rest is the Group CC, or COMAFSOF. Waiver requests for post-mission crew rest are considered on a case-by-case basis and only with the concurrence of the individual crewmember. Compute post-TDY crew rest at the rate of 1 hour off for every 3 hours of TDY not to exceed 72 hours.

3.6. Standby Duty. A period of time during which a crew may be required to launch on an anticipated mission for which a firm departure time cannot be established.

3.6.1. Aircrew members will be provided a 12-hour inviolate crew rest period preceding the start of standby duty.

3.6.2. Aircrew not dispatched on a mission following standby duty will receive post-mission crew rest.

3.7. Alert Procedures.

3.7.1. Reference AFI 11-202 Vol. 3, AFSOC Sup 1 for FDP guidance.

3.7.2. Parking. Park the alert aircraft in a designated alert parking area to expedite taxi and takeoff.

3.7.2.1. Climatic Protective Facilities. During periods of extreme cold or severe weather, every effort should be made to shelter essential AGE and alert aircraft in a hangar to ensure operational readiness in the event of a mission. Blade covers and engine heaters must be available for use, as required.

3.7.3. Flying Alert Aircraft. The alert aircraft may be flown for purposes other than actual alert missions provided the following conditions are complied with:

3.7.3.1. Alert requirements can be met with sufficient fuel to meet mission requirements.

3.7.3.2. Communication contact is maintained with the primary controlling agencies.

3.7.3.3. Complete operationally qualified crew is on board.

3.7.3.4. Controlling agencies are notified any time the alert aircraft departs the local area.

3.7.4. Give alert crews a general briefing at the beginning of each alert period. Update the briefing every 24 hours to include weather, local NOTAMs, latest FCIF information, special instructions, and any other appropriate items.

3.7.5. Alert crews will prepare a DD Form 365, **Record of Weight and Balance Personnel**, for the alert aircraft and are authorized to prepare Takeoff and Landing Data (TOLD) using the worst weather

conditions expected during the alert period. Use this data only for alert scrambles. If the alert aircraft is flown for other reasons, compute data for that flight using existing weather conditions.

3.7.6. When an alert crew change occurs and the same aircraft remains on alert, the oncoming alert crew will complete an aircraft preflight, and as a minimum, apply power to the aircraft and check applicable items listed below. When an alert aircraft changes the alert crew will perform an aircraft preflight, engine run, hover check, and cocking of the aircraft.

3.7.6.1. Review AFTO Form 781, **ARMS Aircrew/Mission Flight Data Document**.

3.7.6.2. Proper Configuration and Special Equipment.

3.7.6.3. Fuel quantity.

3.7.6.4. Survival and Emergency Equipment.

3.7.6.5. Navigation and Communication Equipment.

NOTE: Should the aircraft remain on alert for more than 3 consecutive days, a complete aircrew preflight is required each fourth day, to include refuel probe inspection, engine run and hover checks.

3.7.6.6. Once accepted for alert, the alert crew will make an entry in the AFTO Form 781, stating, "Aircraft accepted on alert at _____, _____." (local time and date). No maintenance may be performed on it without prior approval of the alert crew PIC and notification of the unit operations section. To ensure integrity of the crew preflight, an alert crewmember must be present whenever maintenance is performed, or at the completion of the maintenance, the crew is required to check the area in which maintenance was performed. The check should be performed as soon as practical after the maintenance and must be performed prior to flight.

3.7.7. Waiver authority for alert duty period is HQ AFSOC/DO. Unless specifically mentioned above, all other alert waivers rest with Group CC or COMAFSOF.

Table 3.1. Crew Complement.

Mission¹	Pilot	Copilot	Engineer	Gunner	DSO¹¹
FCF ²	1	1	1		
Transition/Instm/Eps ³	1	1	1		
Day Remote ⁸	1	1	2	2	
SAR/ALERT	1	1	2	2	1
Tactical ⁴	1	1	2	2	1
Ferry ⁵	1	1	1		
Day Water Ops	1	1	2	2	
Night Water Hoist or Cover Ship ⁶	1	1	2	2	
Night Water Ops ⁷	1	1	2	2	
Sling ⁸	1	1	2	2	
Hot Refueling ⁹	1	1	1	2	
Augmented ¹⁰	1		1		

¹ For IDAS/MATT modified aircraft comply with the crew complement specified in fig. 3.1. Additionally, any cockpit crewmembers not IDAS/MATT certified must be under the supervision of an instructor.

² Unit Commander or Operations Officer must designate FCF crewmembers in writing. When designated crewmembers are not available, the commander or his designated representative on the flight authorization letter may designate other highly qualified crewmembers. FCF Copilots should be aircraft commander qualified. This, however, does not preclude designation of a highly qualified copilot when an aircraft commander is not available. Crewmembers non-current in mission events may still conduct FCF flights.

³ Use of night vision goggles is authorized. Night EP's require a full tactical crew.

⁴ (58 SOW ONLY): Crew complement for day tactical training including day formation and air refueling may be waived by the 551 SOS/CC to a 5-man crew (P, CP, FE, FE/AG, AG). The aircraft commander will position crewmembers accordingly for different phases of flight. Day water operations and all live teamwork require the standard tactical crew compliment.

⁵ Non-simultaneous, day air refueling may be accomplished with a qualified mission pilot or above. Non-tactical day formation is authorized with four rotor disk minimum spacing. Night vision goggle use is authorized. Squadron/Mission Commanders may authorize this crew complement to recover aircraft during daylight hours from remote locations.

⁶ Pilots and Co-Pilots will be Night Water Hoist Certified (NWO IP with any Pilot that is briefed on the applicable crew duties and critical safety considerations). FEs and AGs will be NWO Qualified.

⁷ Both Pilots will be NWO Qualified, (NWO IP with any Pilot that is briefed on the applicable crew duties and critical safety considerations). FEs and Gunners will be NWO Qualified.

⁸ (58 SOW Only) Minimum crew complement is 5 (P/CP/FE and 2 FE/AG).

⁹ Minimum crew complement is 5 (P/CP/FE and 2 FE/AG)

¹⁰ Augmented aircrew consists of another aircraft commander and flight engineer in addition to the crew complement required for the mission being flown.

¹¹ DSOs are not required for local training sorties. Only one DSO is needed for a formation. A DSO may not always be available to fly on scheduled operational events due to tasking levied from the A3, J3, or AFSOC.

Chapter 4

AIRCRAFT SECURITY

4.1. General. This chapter provides guidance on aircraft security and unlawful seizure (hijacking) of a MH-53 aircraft. Aircrew personnel will actively resist all attempts to hijack an AFSOC aircraft. Aircrews will not release information concerning attempts or identify armed aircrew members to the public.

4.2. Security. MH-53 aircraft are priority C resources when they are not configured for special mission aircraft during COMMANDO SOLO and SENIOR SCOUT missions. This security priority designation applies to operational aircraft worldwide. Some aircraft contain equipment and documents, which require protection per DOD 5200.1/AFI 31-401. Requirements for protection of the aircraft in a transient status at US and foreign bases are found in DOD 5200.1 and AFI 31-401.

4.3. Procedures. Pre-mission planning should ensure that adequate enroute security is available. The amount of protection required will vary, depending on the location and ground time. PIC will receive a threat assessment and security capability evaluation briefing at home station and can receive updates at enroute command posts. During scheduled and unscheduled landings at non-USAF installations, PIC will assess the situation and take the following actions, if necessary:

4.3.1. Area Patrol. Obtain area patrol coverage from local security forces to include back up response. If local authorities request payment for this service, use AF Form 15, **USAF Invoice**. If unable to obtain local security forces, direct armed crewmembers to remain with the aircraft and maintain surveillance over aircraft entrances and activities in the vicinity of the aircraft. Acquire a means to report suspicious or hostile activity to security forces (e.g., land mobile radio).

4.3.2. Departure Which Extends FDP or Without Crew Rest. If local security forces are unacceptable/unavailable and the crew is not augmented with security police, the PIC may waive flight duty time limitations and depart as soon as possible for a location deemed secure. If unable to depart the location due to system malfunction coordinate through home base channels to acquire security police support.

4.4. Arming of Crewmembers. Unit commanders may direct arming of crewmembers as deemed necessary by mission threat analysis. During all operations where weapons are on board, arm a weapon qualified aircrew member. Protect these weapons and other installed IAW AFI 31-207, (Arming and Use of Force by Air Force Personnel) and AFMAN 31-229, (USAF Weapons Handling manual).

4.4.1. Loading and Transfer of Weapons. Load and unload weapons at approved clearing barrels, if available. Do not use a hand-to-hand transfer of loaded weapons to another crewmember; place the weapon on a flat surface.

4.4.2. Wearing of Weapons. Wear weapons in a holster, concealed if possible, to protect the identity of armed crewmembers. Do not wear weapons off the flightline except to and from operations, armories, and other facilities associated with aircrew activities (e.g., base operations, passenger terminals, flightline cafeteria, etc).

4.4.3. Weapons Storage In-flight. Arm crewmembers before beginning preflight or on-load duties. When no passengers are aboard, weapons may be stored in the gun box in flight. Rearm before landing. Do not unload weapons before placing them in the gun box.

4.4.4. Weapons Storage at Deployed Location. During crew rest, store weapons in the most secure facility available, normally the base armory. If a weapons storage facility is unavailable or the country prohibits or restricts the entry of weapons, secure firearms and ammunition in the gun box.

4.4.5. Aircraft Without a Gun Box. If an aircraft without a gun box must remain overnight at a location where a government-owned storage facility is unavailable, use the nearest acceptable facility. Acceptable storage facilities are US and allied military services armories, US Reserve and National Guard armories, and US civil law enforcement armories. If none of these are available, or the PIC believes security of weapons may be compromised, secure the weapons in quarters, but one armed crewmember must remain with the weapons.

4.4.6. Passengers will not carry weapon or ammunition on their person or in a hand carried baggage aboard the aircraft, except special agents, guards of the Secret Service or State Department, and other individuals specifically authorized to carry a weapon.

4.4.6.1. If any of the above personnel need to clear their weapons, ask them to use the following procedures:

4.4.6.1.1. Move to a safe, clear area at least 50 feet from any aircraft, equipment and personnel before unholstering or unslinging any weapon.

4.4.6.1.2. Clear weapons IAW standard safety procedures.

4.5. General Hijacking Guidance. An aircraft is most vulnerable when the crew is on board and the aircraft is ready for flight. Delay tactics have been most successful in saving lives and property. Detection of potential hijackers before they board the aircraft is the best solution to the problem.

4.6. Ground Resistance.

4.6.1. Initial Action. Delay movement of the aircraft to provide time for ground forces and the aircrew to evaluate the situation and coordinate their efforts.

4.6.2. Communications. Establish communications with ground agencies using radios, IFF and SIF equipment, or any covert means available.

4.6.3. Delaying Actions. Continue to delay until, in the judgment of the PIC, further delay may result in homicidal attempts by the hijacker. At this time, inform the on-scene commander. The highest ranking officer available (on-scene commander, Wing CC, or MAJCOM CC), will make final decision to discontinue delaying actions.

4.6.4. Positive Detainment. Detain or disable the aircraft when:

4.6.4.1. Requested by the PIC.

4.6.4.2. Directed by MAJCOM/CC or higher for national security.

4.6.5. Local Procedures. Review local ground support hijacking procedures at enroute bases before departure. The local procedures of airfields under the operational control of non-USAF agencies (i.e., Navy, Army, etc.) may conflict with MAJCOM policy, but must be complied with.

4.7. In-flight Resistance. Take advantage of any opportunity to regain control of the aircraft or influence the conduct of the flight.

4.7.1. Notify ATC of your situation immediately. If the hijacker does not permit the use of the radio and the aircraft is under positive control of an ATC facility, attempt to communicate by using the IFF and SIF.

4.7.2. Notify crew and passengers of the situation as soon as practical for maximum assistance against the hijacker.

4.7.3. Be as negative to all of the hijacker's demands as possible. Initial response to the hijacker should leave the issue in doubt. Try to calm the hijacker. Get the hijacker to talk.

4.7.4. Convince the hijacker intermediate stops are necessary and must be at US military bases because of incompatibility of fuel or maintenance at other airfields. After landing, try to discharge passengers. Use ground forces to regain control of the aircraft.

4.7.5. Give reasons for not complying with the hijacker's demands; e.g., inability to communicate with foreign sources (radio frequency or language problem), dangers from surface-to-air missiles, anti-aircraft fire, or armed intercept by hostile aircraft.

4.7.6. Propose favorable alternatives; e.g., landing in a neutral rather than an unfriendly nation.

4.7.7. As a last resort:

4.7.7.1. Simulate emergencies to deceive the hijacker into believing a forced landing is necessary.

4.7.7.2. Use weapons against the hijacker.

4.8. Covert Communications. Figure 4-1 covers procedures to follow if in-the-clear radio transmissions are not possible.

4.9. Forced Penetration of Unfriendly Airspace.

4.9.1. Procedures in this paragraph should prevent hostile actions against an aircraft that penetrates the boundary of an unfriendly nation as a result of a hijacking. Comply with instructions received by radio or from an interceptor. Without instructions, comply with the following before entering unfriendly airspace:

4.9.1.1. Maintain an altitude above 10,000 MSL, if possible.

4.9.1.2. Fly the most direct courses to the destination demanded by the hijacker unless the hijacker insists on another route.

4.9.1.3. Transmit MAYDAY on 243.0 or 121.5

4.9.1.4. Squawk mode 3, code 7700.

4.9.1.5. Try to destroy/zeroize all classified documents and equipment aboard before landing in an unfriendly nation.

Table 4.1. Covert Communication Signals.

	To Report	Take This Action
1.	Am being hijacked.	Set transponder to mode 3, code 7500 and/or transmit "(Call sign) transponder seven five zero zero." ¹ .
2.	In the clear communication not possible.	Use the word "Trip" after the call sign prefix in communicating on the radio with ground agencies (e.g., Cowboy "Trip" 65). ² .
3.	Situation appears desperate.	Change transponder from mode 3 code 7500 to 7700 and/or transmit "(Call sign) squawking seven seven zero zero."
4.	Situation still desperate, want armed intervention and aircraft immobilized.	"(Call sign) flaps are full down."
5.	Leave alone, do not intervene.	If transponder was set to mode 3, code 7700, return to code 7500. Transmit "(Call sign) back on seven five zero zero."

¹ Controllers will acknowledge code 7500 by asking the pilot to verify it. An affirmative response or no reply from the pilot indicates confirmation. Controllers will not ask further questions; they will flight follow, respond to pilot requests, and notify appropriate authorities.

² The controller should respond using the word "TRIP" in the aircraft call sign. Use of the word "TRIP" in the aircraft call sign by the controller prior to its use by the aircrew asks the aircrew if in-the-clear communication is possible. In this situation, the aircrew response should include "TRIP" only if in-the-clear communication is not possible. After notified in-the-clear communication is not possible, ATC will limit radio transmissions to minimum essential ATC functions until advised otherwise by the aircrew.

4.10. Aircraft Force Protection Risk Assessment Matrix. PIC will use Figure 4.2 to help assess the risk to parked aircraft when located at overseas civilian airfields. A cumulative score of less than 55 indicates that normal unmanned aircraft security measures are adequate. A score of 55 to 80 indicates that adequate security is provided by deployed US ground personnel working 24-hour operations. If the cumulative score is greater than 80, or if any of the shaded areas in the figure are applicable, commanders should consider deploying or contracting security personnel. During unscheduled or emergency landings, the PIC should contact the US Embassy or USDAO for security assistance.

Table 4.2. Aircraft Force Protection Risk Assessment Matrix.

FACTORS	0 POINTS	5 POINTS	10 POINTS	15 POINTS
The local terrorist threat is currently: 1	Negligible	Low	Medium	High
Installation/airport security services are: 2	Provided by host military forces only	Provided by host military and contract security forces	Contract security forces only	Not available
Host security forces control entry:	The flightline and installation/airport	To the flightline only	To the installation/airport only	To neither the flightline nor the installation/airport
There is perimeter fencing or barriers around:	The flightline and installation/airport	The flightline only	The installation/airport only	Neither the flightline or the installation/airport
Host security forces will provide _____ to guard the aircraft	An armed sentry	An unarmed sentry	Random security patrol coverage only	No sentry or random patrol coverage
Host security forces will _____ security incidents involving the aircraft	Provide armed response to	Provide unarmed response to	Notify civilian authorities of	Notify the PIC of
The aircraft will be parked:		Separate from host military and civilian aircraft	Among other host military aircraft only	Among civilian aircraft
The aircraft will _____ illuminated during the hours of darkness 3		Be adequately	Be marginally	Not be

TOTAL POINTS:

¹ Derive the local threat from valid intelligence sources only.

² Airport is defined as “exclusively civilian airfield.”

³ “Adequate lighting” is equal to the illumination provided by one standard USAF light cart.

Chapter 5

MISSION PREPARATION

5.1. Flight Planning Systems. The primary flight/mission planning system is the Special Operations Forces Planning and Rehearsal System (SOFPARS). SOFPARS is a subset of the Air Force Mission Support System (AFMSS) which includes the Portable Flight Planning Software (PFPS). Upgraded or new versions of SOFPARS will be released and authorized by the AFSOC/DO for use after applicable testing has been completed (OPR: HQ AFSOC/DOXC).

5.1.1. Electronic Data Transfer. If the flight planning computer transfers a flight plan to the aircraft electronically, it must be an AFSOC approved system. HQ AFSOC/DOXC will periodically publish a listing of approved systems. Aircrews will not use unapproved versions of any system to load an aircraft navigation computer without HQ AFSOC/DOXC approval.

5.2. Coordinates. The following procedures will be used:

NOTE: Aircrew will confirm a common datum to their customers during the mission planning process. Failure to plan navigation/LZ's using a common datum may result in errors of up to several miles.

5.2.1. When reporting or receiving positions using coordinates derived from maps, charts, or related cartographic products, a complete reference to the source of the coordinates will be provided. This reference will include the datum map or chart producer, series, sheet number, edition and date.

5.2.2. When reporting or receiving positions using coordinates derived from non-cartographic sources such as GPS receivers, Analytical Photogrammetric Positioning Systems (APPS), or related systems, a complete reference to the source of the coordinates will be provided. This reference will include the datum, method used to derive the coordinates, agency producing the coordinates, and accuracy of the coordinates.

5.3. Flight Logs . Prepare a MAJCOM approved flight log form for each tactical mission and include the following as a minimum: turn points, headings, distances, ETEs, MSAs, and fuel computations. A flight log is not required if the above information is included on the map.

5.4. Mission Kits.

5.4.1. Mission kits will be on-board the aircraft for all missions. **Exception:** Local area maintenance check flights where an aircraft flight manual is on-board.

5.4.2. Mission/Navigation kits weighing less than 200 lbs. may be secured with seat belts.

5.4.3. Units may supplement kits. The following items will be included:

5.4.3.1. Aircraft Flight Manual (-1) (may be carried by a designated crewmember).

5.4.3.2. Air Refueling Manual (-20) (may be carried by a designated crewmember).

5.4.3.3. AFI 11-202, Volume 3, *General Flight Rules*. (may be carried by a designated crewmember).

5.4.3.4. AFI 23-202, *Buying Petroleum Products, and Other Supplies and Services Off-Station*.

- 5.4.3.5. AFI 11-2MH-53 Volume 3, *MH-53 Operations Procedures*. (may be carried by a designated crewmember).
- 5.4.3.6. AF Form 15, **USAF Invoice**.
- 5.4.3.7. AF Form 315, **USAF Aviation Fuels Invoice**.
- 5.4.3.8. AF Form 457, **USAF Hazard Report**.
- 5.4.3.9. AF Form 651, **Hazardous Air Traffic Report (HATR)**.
- 5.4.3.10. AF Form 711 (series), **USAF Mishap Report**.
- 5.4.3.11. Current Flight Crew Information Summary.
- 5.4.3.12. DOD FLIP IFR Supplement (one each).
- 5.4.3.13. DOD FLIP VFR Supplement (one each).
- 5.4.3.14. DOD FLIP Flight Information Handbook (one each).
- 5.4.3.15. DOD FLIP Enroute Low Altitude Charts (one set for area of operation).
- 5.4.3.16. DOD FLIP Low Altitude Instrument Approach Procedures (two sets for area of operation).
- 5.4.3.17. Maps and Charts (sectional aeronautical charts as required).

5.5. Weather Planning.

5.5.1. Groups may establish minimum weather criteria (ceiling or visibility) less than day minimums for flights during which only hovering maneuvers will be performed (e.g., hover checks, FCFs).

5.5.2. Training Weather Minimums:

5.5.2.1. VFR Minimums. Comply with FAA/ICAO and AFI 11-202 Vol 3 weather minimum unless local or theater specific weather minimum are more restrictive. In the absence of more restrictive criteria, the following minimum weather criteria (ceiling/visibility) apply during all VFR training operations:

5.5.2.1.1. Day: 500/2 SM or 700/1 SM

5.5.2.1.2. Night.

5.5.2.1.2.1. 1000/2 SM: Unaided.

5.5.2.1.2.2. 500/2 SM: ANVIS/ITT 4949 NVGs/PAVE LOW.

5.5.2.2. IFR Minimums. Comply with AFI 11-202 Volume 3.

5.5.3. Operational Minimums.

5.5.3.1. VMC operations are IAW training VFR minimums unless Group CC/COMAFSOF establishes lower minimums.

5.5.3.2. IMC operations are IAW AFI 11-202 Volume 3 unless Group CC/COMAFSOF develops and MAJCOM/DO approves Self Contained Departure (SCD), enroute, and Self Contained Approach (SCA) procedures as well as weather minimums, which ensure takeoffs, enroute operations, and landings can be safely accomplished.

5.6. Hover Coupler Operations During Training. Aircrew will not plan to terminate an IMC arrival (instrument approach or SCA) utilizing the hover coupler.

5.7. Adverse Weather Planning. Flight may be made into areas of known or forecast thunderstorms if VMC is maintained and thunderstorm activity is avoided by a minimum of 5 NM.

5.8. Fuel Planning.

5.8.1. For flight planning purposes, when visibility-only criterion is used, or if destination weather information may be unreliable, fuel requirements for descent, approach, and missed-approach will be 900 pounds.

5.8.2. For all flights VFR or IFR, plan to land at destination with a fuel reserve of 900 pounds.

5.9. Route Planning.

5.9.1. Meet objective TOTs within +/-30 seconds.

5.9.2. Map Selection. Maps with a scale of 1:250,000 or greater detail are required for low-level operations.

5.10. Emergency Safe Altitudes (ESA)/Minimum Safe Altitudes (MSA).

WARNING: Failure to properly plan and execute IIMC procedures incorporating an MSA within the aircraft's capabilities may cause inadvertent impact with the ground or obstacles.

WARNING: Failure to maintain proper altimeter calibration during flight may cause lower than planned terrain clearances or impact with terrain when using the computed ESA/MSA.

NOTE: Mountainous areas are defined as having a 500 foot change in surface altitude over ½ NM.

5.10.1. For flights conducted in a designated low-level area, an ESA/MSA may be computed for the planned area of operation.

5.10.2. Pilots will validate, during the planning phase, the aircraft's capability to climb to the computed ESA/MSA. If aircraft capabilities preclude the ability to climb to the selected EAS/MSA, Group CC/COMAFSOF approval is required prior to executing the mission.

5.10.3. Emergency Safe Altitude. ESA is an altitude that will provide positive terrain clearance in IMC during situations that require the exiting of the low-level environment. Use 1,000 feet (2,000 feet in mountainous terrain) above the highest obstacle or terrain feature within 10 NM of route centerline or intended flight path.

5.10.4. Minimum Safe Altitude. MSA provides terrain clearance and limited threat avoidance during situations that require the interruption of low-level operations. For training, use the criteria for computing ESA as stated in paragraph 5.10.3. For operational missions, use 500 feet above the highest obstacle or terrain feature within 3 NM of route centerline or intended flight path.

5.11. Map Preparation.

5.11.1. Pilots will ensure all maps used for flight have the most current CHUM and hazards posted. Aircrew will also ensure appropriate civil airspace is posted along their route of flight.

5.11.2. See AFTTP 3-3 Vol. 34 for map/routing symbology and posting.

5.12. Pre-Mission Briefing Requirements.

5.12.1. Use briefing guides in AFI 11-2MH-53 V3 CL-1 for briefings. PIC will ensure their crews receive a briefing, prior to each mission, covering all specific areas to be accomplished. More than one briefing may be required for specific missions however, redundant items may be omitted.

5.12.2. Crewmembers will not fly unless they attend the crew briefing for their mission. If critical pre-mission duties conflict with the briefing, PIC may excuse crewmembers. Prior to engine start the PIC will give a mission brief to any excused crewmembers detailing all areas pertinent to their duties.

5.12.3. The PIC will brief, if known, the following factors anytime a landing in a remote landing zone is anticipated:

5.12.3.1. Weather. Determine recent weather and its effect on the landing area. Wind will be evaluated by the aircrew for its effect.

5.12.3.2. TOLD. Compute and brief applicable TOLD and power requirements for LZ.

5.12.3.3. Personnel and Vehicles. Known personnel and equipment locations will be briefed. If vehicles or personnel are operating in the landing area, attempt to determine their effect on the LZ.

5.12.3.4. Confined Area. The PIC will determine if a steep approach will be required, and actions to avoid settling with power. Determine blade tip clearance.

5.12.3.5. Abort Routes. Determine null areas and escape routes.

5.12.3.6. Surface Conditions. Brief expected surface features and conditions (tall grass, plowed field, sand, etc.). Conditions conducive to low visibility approaches must be briefed.

5.12.4. Passenger Briefings.

5.12.4.1. Prior to each flight, the PIC will ensure that all passengers are briefed. When more than one flight is accomplished by the same crew and passengers, subsequent briefings are not be required, except to brief route information, mission changes, etc. When additional passengers are added, brief them completely.

5.12.4.2. The briefing will include demonstration of seat belt and restraint harnesses. All overwater flights will include a briefing on personal and aircraft life support equipment; i.e., life preserver use and life rafts.

5.13. Flight Crew Information File (FCIF). Review VOLUME I, part B, before departure on all missions. AETC crews will also follow procedures outlined in AFI 11-202 Volume 2/AETC Supplement 1.

5.13.1. Update FCIF Currency Record (or MAJCOM equivalent form) and Squadron read file, if new material has been added to the FCIF since the last review. Legibly enter the last FCIF item number, the current date, and initial the FCIF Currency Record. Initialing the FCIF Currency Record certifies review of all items.

5.13.2. PIC will ensure any crewmembers joining a mission enroute receive an FCIF update. Instructor pilots who fly with senior officers are responsible for briefing FCIF items.

5.13.3. Crewmembers not assigned or attached to that unit will certify FCIF review by entering the last FCIF number and their initials behind their name on the file copy of the flight authorization or their ACM orders.

5.14. Flight Plans. MAJCOM approved forms are authorized for use in lieu of DD Form 175, **Military Flight Plan**, or DD Form 1801, **DOD International Flight Plan** for VFR flights terminating at the base of departure if no intermediate stops are planned.

5.15. International Procedures. PIC will review the USAF Foreign Clearance Guide and brief crewmembers on applicable items before flights outside the CONUS. Comply with Customs, Immigration, Agriculture, Immunization, and quarantine requirements. The unit dispatching the mission is responsible for border clearance and other special clearances when required. Entry into foreign countries by personnel and equipment is directed by military agreements, diplomatic agreements, and directives of the operational control commander, ICAO standards, and the Foreign Clearance Guide.

Chapter 6

COMMAND OPERATING GUIDELINES

6.1. Approval of Exercise Training Areas and Low-Level Navigation Areas. Geographical areas, such as range complexes, may be designated as exercise or low-level navigation areas. Ideally, low-level navigation routes, if utilized, should feed into exercise areas.

6.1.1. Surveys. Prior to any operations below 300 feet AGL, accomplish a survey of the route or area as follows:

6.1.1.1. Conduct an extensive map study of the selected routes and areas. Annotate all man-made obstacles over 50 feet AGL (or the lowest altitude to be flown), except when below the tree line. Additionally, annotate any published low-level routes, no-fly areas, animal farms or other hazards within the boundaries. Use the Chart Updating Manual (CHUM) or host nation procedures to ensure current obstacles are depicted on maps.

6.1.1.2. For navigation legs below 300 feet AGL, a highly experienced pilot selected by the unit commander or mission commander will fly the survey. The pilot will conduct a parallel search of the proposed route or area at the lowest applicable altitude down to a minimum altitude of 50 feet AGL. Check the obstacle location against map location and any additional obstacles charted.

6.1.1.3. Flight surveys are not required provided the exercise area is within a designated range complex and the host provides specific information (description, location, height MSL and AGL) for all man-made obstacles over 50 feet AGL or the lowest altitude to be flown.

6.1.1.4. Route or area surveys conducted by other participating aircraft may be used provided the survey information is available and flight operations are conducted no lower than the survey altitude.

6.1.1.5. If a route or area has been inactive or flight operations have not been conducted at survey minimums for 6 months, re-accomplish the survey or restrict operations to or above the lowest level flown during the 6-month period.

6.2. Master Low-Level Hazards Map. Each unit must have a master low-level hazards map depicting hazards to low-flying aircraft for the local areas and areas of frequent operation. Plot them on a suitable chart and display them in the crew briefing area. Make changes as received and bring them to the attention of all crewmembers. Review the chart monthly. The reviewer should annotate the chart with their name and the date. Include an appropriate legend for the hazards. Update master maps monthly using the CHUM supplement (or host nation equivalent). Annotate the date of the update on the master map. When uncharted obstacles are found, record appropriate information (location, approximate height AGL and MSL). PIC will ensure this information is immediately posted on the master hazards map.

6.3. Landing Zones.

6.3.1. The Helicopter Landing Zone (HLZ) program is a tactics function. Unit tactics office must ensure that surveys are conducted and updated IAW AFI 13-217, *Drop Zone and Landing Zone Procedures*, and the procedures below. It is the responsibility of all aircrew and/or ground personnel to notify the POC for the unit HLZ survey program, in a timely manner, of any changes or discrepancies on existing surveys.

6.3.2. A thorough review of the landing zone survey and accompanying photographs or imagery will be accomplished by all crewmembers during the aircrew brief. The PIC is responsible for ensuring that any crewmember unable to attend the brief either reviews the landing zone survey or is briefed on the hazards associated with the HLZ.

6.3.3. All training and operational missions require an approved HLZ survey prior to any landing or AIE to an unprepared area.

6.3.4. Tactical HLZ surveys may be accomplished during exercises and contingencies when time or the situation does not permit completion of a full HLZ survey.

6.3.4.1. Requests for tactical surveys will be forwarded to COMAFSOF for review and approval.

6.3.5. During operational missions and exercise missions, with COMAFSOF approval, a high and low reconnaissance may be performed due to changing mission requirements during execution. Comply with the following guidance:

6.3.5.1. The low reconnaissance may be accomplished on final approach provided OGE power is available.

6.3.5.2. During successive approaches where conditions are equal to or less stringent than a previous approach to the same area, a high and low reconnaissance need not be performed.

6.3.5.3. A high and low reconnaissance need not be accomplished when, in the judgment of the PIC, the accomplishment of the high and low reconnaissance would degrade mission accomplishment.

6.3.6. A qualified combat controller or instructor qualified aircrew member (IP, IF, IG) will conduct surveys during daylight. The reviewer, in order of preference, is the Chief of Group Tactics, Squadron CC, or Squadron DO. The approving official will be Group CC/COMAFSOF. If survey personnel are not available and/or a landing zone survey cannot be accomplished, the Group CC/COMAFSOF may approve the temporary use of the following methods:

NOTE: If the following methods are used, the currency of the materials must be considered and the aircrew should use extreme caution while operating at higher risk.

6.3.6.1. Current Imagery

6.3.6.2. 1:50,000 scale map or less

6.3.6.3. Group CC/COMAFSOF approved personnel that do not meet the above requirements.

6.3.6.4. Group CC/COMAFSOF may approve the use of other MAJCOM or DOD services equivalent HLZ surveys

6.3.7. All HLZ surveys will be updated every 6 months. Hazes that are not updated in the 6 months time period will be closed until resurveyed using the above criteria (does not require a new landing zone survey). Items 6 through 10 of the AF Form 4303 must be evaluated. If a HLZ survey has been more than 1 year without an update it is considered expired and a new landing zone survey will be accomplished IAW AFI 13-217 and the AFSOC supplement.

6.4. Life Support Requirements. Upon reporting to the aircraft, the PIC or designated representative will ensure sufficient quantities of appropriate serviceable life support, survival equipment, and protective clothing for the entire mission are aboard the aircraft. Verify AFTO Form 46, **Prepositioned Life Sup-**

port Equipment, prior to departing home station. Life support equipment and medical kits may be secured with seat belts.

6.4.1. Aircrew members and passengers will wear life preservers on over water flights when route of flight is beyond auto rotational gliding distance of the shore. Flights of this type also require aircrews to have HEEDs. Life rafts, life preservers, and HEEDs are not required when over water flight occurs only for short distances, immediately after takeoff, and before landing.

6.4.2. Helicopter crewmembers will wear survival vests when outside the local closed traffic pattern. **Exception:** Wear of the survival vest is optional with winter weight flight clothing if the combination of vest with winter clothing interferes with movement of the flight controls. Whenever the survival vest is not worn, it must be immediately available.

6.4.3. The PIC will advise all crewmembers and a discrepancy will be entered in the AFTO Form 781A, whenever aircraft emergency equipment is not located IAW the appropriate aircraft technical order.

NOTE: Securing life support and medical kits with a seat belt is authorized. Items requiring constant access, such as navigation/ mission kits and tool boxes that weigh less than 200 pounds, may be secured with a seat belt or snap link.

6.4.4. Personnel will wear anti-exposure suits on any preplanned over water flights which is beyond autorotational distance from land and the water temperature is 50 degrees Fahrenheit or less. If water temperature ranges between 51 and 60 degrees Fahrenheit, the unit/mission commander may waive or extend the anti-exposure suit requirement after conducting a risk assessment considering the following factors:

6.4.4.1. Climate zone and existing weather throughout range of flights.

6.4.4.2. Operational requirements.

6.4.4.3. Number and type of aircraft in formation.

6.4.4.4. Time of flight over water.

6.4.4.5. Risk, based on aircraft load and mission configuration.

6.4.4.6. Location, availability, and capability of search and rescue (SAR) forces, (consider anticipated time in the water prior to pick-up).

6.4.4.7. Winds and wave height and their impact on SAR.

6.4.4.8. Altitude and distance from land.

6.4.4.9. Anti-exposure suits are not required when only the approach or departure is flown over water.

6.5. Flying Clothing/Safety Equipment.

6.5.1. All crewmembers will wear the aircrew uniform and other flying clothing/equipment in accordance with AFI 11-301V1, *Life Support Program* and AFI 36-2903, AFSOC Sup 1.

6.5.2. Eye Protection.

6.5.2.1. Use protective goggles, plastic/shatter resistant lens glasses/sunglasses, or the helmet visor for eye protection if duties require personnel to be in and in close proximity to any operating helicopter. Wear goggles whenever dust, sand, dirt, etc., constitute a hazard.

6.5.2.2. During all live firing of weapons from an aircraft, ensure that all personnel involved in the firing of weapons wear eye protection to include one of the following: helmet visors, plastic/shatter resistant lens glasses/sun glasses, safety goggles, or aircrew gas mask. Glass lens eye-glasses alone do not satisfy the requirement.

6.6. Weight and Balance. A new or corrected DD Form 365-4, **Weight and Balance Clearance Form F-Transport**, need not be recomputed provided the initial takeoff gross weight (item 16) is not changed by more than 500 lbs. The flight engineer will compute inflight crew and passenger equipment movement to ensure CG limits are not exceeded. These computations will address the maximum number of personnel and equipment that can be in a specific compartment without exceeding CG limits. This procedure applies to all operations in which CG limits may be exceeded as a result of personnel and equipment movement. Although no written adjustments are required, the flight engineer will compute these changes and brief the PIC of the new CG. These computations will be briefed during the crew or mission brief or during flight, as required. If the basic weight/moment of the aircraft is changed, a new DD Form 365-4 will be computed.

6.6.1. MAJCOM/DO is waiver authority for gross weights greater than 46,000 pounds.

6.7. AFTO Form 781, AFORMS Aircrew/Mission Flight Data Document.

6.7.1. Review the AFTO Form 781 before applying power to the aircraft or operating aircraft systems.

6.7.2. Ensure that the USAF fuel "Identaplate" and/or other authorized method of payment are aboard the aircraft.

6.7.3. The exceptional release must be signed before flight. A maintenance officer, maintenance superintendent, or authorized civilian will sign the exceptional release. If one of these individuals is not available, the PIC may sign the exceptional release.

6.8. Preflight Inspections.

6.8.1. Preflight inspection will be accomplished by the primary flight engineer(s) for the assigned mission.

6.8.2. Face-to-face turnovers between crewmembers are acceptable during rapid turn-around operations.

6.8.3. During higher headquarters directed exercises and contingency operations, any qualified flight engineer(s) may accomplish the preflight inspection.

6.9. Tool Kits.

6.9.1. Flight engineers and aerial gunners will ensure a tool kit is on board for all flights.

6.9.2. Individual units will establish requirements for tools to be included in the kits. As a minimum, the kit will include enough tools to remove and install chip detector plugs.

6.9.2.1. Tool kits will have an inventory list for accountability and must be sealed.

6.9.2.2. If the tool kit seal is broken, the PIC or his designated representative will inventory the kit and sign the accountability list prior to departing the aircraft.

6.10. Checklists.

6.10.1. Do not place checklists and flight publications on center console while the rotors are turning

6.10.2. Accomplish all checklists with strict discipline using the challenge and response method. A checklist is not complete until all items have been called for and responded to in sequence.

6.10.3. Insert current, approved flight manual or MAJCOM checklists in the USAF flight crew checklist binder IAW AFI 11-215.

6.10.4. Notes amplifying checklist procedures and limitations may be added. Currency of notes is the crewmember's responsibility.

6.11. Flight Briefings and Procedures. The following briefings and procedures are the responsibility of the PIC and must be completed in addition to other briefing requirements.

6.11.1. Departure. Before initial takeoff, brief the crew on the procedures to be followed during takeoff and climb to cruising altitude, TOLD, and instructions for returning to the airport or landing area in case of an emergency.

6.11.2. Inflight. Conduct inflight briefings, as necessary, to cover any unusual circumstances and when flight safety or other conditions require the nonstandard accomplishment of any maneuver.

6.11.3. Approach and Landing. Before starting each approach, the pilot flying the aircraft will brief the procedures to be followed during approach, landing, and go-around/missed approach, if necessary. TOLD and power requirements will be briefed. This briefing may be accomplished in conjunction with the Before Landing Checklist in the flight manual.

6.12. Control. A qualified pilot will be at a set of flight controls at all times when rotors are turning.

6.13. Crew Duties and Responsibilities.

6.13.1. Change of Aircraft Control. The change of flight controls will be accomplished using a positive change of controls. Use the statement, "Pilot/Copilot has controls" to transfer control. The other aircrew member will acknowledge, "Pilot/Copilot has controls".

6.13.2. The flight engineer in the cockpit is the primary crewmember responsible for executing BOLD FACE. The pilot not flying will confirm any switches prior to being actuated and assist the flight engineer, as necessary, with the emergency.

6.13.3. If the flight engineer is not occupying the seat, the pilot not flying will complete the FE duties.

6.14. Communications Policy.

6.14.1. Interphone Communications.

6.14.1.1. Limit intraplane transmissions and radios monitored to those essential for crew coordination.

6.14.1.2. All crewmembers will listen to interphone and hot microphone prior to APP start. Clearance is required from the PIC prior to going off interphone.

6.14.2. Command Radios.

6.14.2.1. Normally, use and monitor only one command radio plus guard. Monitoring two ATC controlling agencies transmissions simultaneously is not recommended. This does not preclude establishing contact or radio check on another frequency.

6.14.2.2. The pilot operating command radios will brief the crew on which radio is primary. All crewmembers will monitor the primary command radio unless specifically directed to do otherwise by the PIC.

6.14.2.3. Regardless of the primary command radio, monitor UHF GUARD (243.0).

6.14.2.4. Record and read back all ATC clearances except when ATC instructions require immediate execution and read back would interfere with the timely performance of aircrew duties.

6.15. Aircraft Lighting. Operate aircraft lighting IAW AFI 11-202V3, MAJCOM supplements and the following, except where operational mission requirements dictate otherwise (FAR Exemption 5891B, expires 30 Apr 2005):

6.15.1. Anticollision lights. A fully operative anticollision light is required day and night.

6.15.1.1. Aircraft configured with multiple strobe lights may be flown with one light inoperative.

6.15.1.2. Except for life or death missions, fly aircraft without operative anticollision lights to a point where repairs can be made.

6.15.1.3. Do not operate anticollision strobe lights during extended ground operations because of undue distraction to pilots and ground personnel.

6.15.1.4. Strobe lights may be off when using NVGs at night below 200 feet AGL (CONUS ONLY).

6.15.2. Position lights. Position lights may be extinguished for formation training flights when using NVGs at night below 200 feet AGL (CONUS ONLY). Operations are subject to the following conditions and limitations:

6.15.2.1. Limited to NVG flight training in USAF tactical helicopters.

6.15.2.2. Helicopter formations must use NVG scanners on each aircraft to clear the entire formation of airborne traffic.

6.15.2.3. Single-ship operations may only be conducted when escorted by a properly lighted aircraft serving as an observation platform dedicated to surveillance for airborne traffic.

6.15.2.4. Traffic notifications from the observer to the PIC or flight lead shall be timely, commensurate with the position and speed of the observed traffic.

6.15.2.5. When traffic is a factor, all helicopters shall alter course as required to remain well clear of such traffic until it is no longer a factor.

6.15.2.6. Helicopter operations without position lights may not be conducted above 200 feet AGL. Operations must be contained within a prescribed and publicized area that is simply defined; e.g., the radius area of a point or location and :

- 6.15.2.6.1. Is established in an area of low traffic density.
- 6.15.2.6.2. Does not infringe upon FAA-designated airspace areas; e.g., Class D airspace.
- 6.15.2.6.3. Has been coordinated with the appropriate FAA Regional Air Traffic Division and Flight Standards Division Offices.
- 6.15.2.6.4. Units shall advertise each approved training area to operators at all airports within 50 miles of the area for 60 days preceding initial use.
- 6.15.2.7. Ground (airport or staging area) operations not in compliance with AFI 11-202V3 may be conducted at locations where only aircraft involved in NVG flight training are operating and suitable alternative measures for collision avoidance are instituted.
- 6.15.2.8. Each pilot conducting operations without lighted position lights must be thoroughly familiar with these provisions and limitations.
- 6.15.3. Search or landing lights must be on for all night takeoffs (unaided) and after turning final for night (unaided) approaches unless safety, weather, excessive glare, or aircraft operational procedures dictate otherwise.
- 6.15.4. An operable IR spotlight or white light that may be dimmed should be available prior to NVG operations.

6.16. Illumination and NVG Requirements.

WARNING: NVGs worn in black hole conditions can exacerbate induced motion illusions and lead to spatial disorientation.

- 6.16.1. The decision on whether sufficient illumination exist, to complete the mission, rests with the PIC.
- 6.16.2. Fully operational (FLIR and Radar) MH-53 have no enroute illumination restrictions. Other helicopters may fly on the wing of a MH-53 utilizing PAVE LOW systems when zero illumination conditions exist.
- 6.16.3. Without a fully operational MH-53, illumination equivalent to 5 percent moon disk is required. Starlight is considered to be 8 percent Electro Magnetic Interference (EMI).
- 6.16.4. If the aircraft is not fully operational, the crew will not fly with ANVIS and F4949 NVGs mixed. **Exception:** 58 SOW aircrews may mix F4949 and ANVIS NVGs on a crew, however, pilots must wear the same type of NVGs.

6.17. Aircraft Taxi Obstruction Clearance Criteria. In addition to the requirements of AFI 11-218, *Aircraft Operations and Movement on the Ground*, comply with the following:

- 6.17.1. Do not taxi aircraft within 25 feet of obstructions without wing walkers.
 - 6.17.1.1. Locally based aircraft are exempt when fixed taxi routes are marked and the obstruction is permanent. Taxi routes must be used by the same model aircraft for which they were designed and in specifically designed parking spots. Support equipment shall be located in appropriately designated areas.
- 6.17.2. Do not taxi aircraft closer than 10 feet to any obstacle.

6.17.3. When taxi clearance is doubtful, use a wing walker. If wing walkers are unavailable or if provided and doubt still exists as to proper clearance, deplane a crewmember to maintain obstruction clearance.

6.18. Rotor Turning Offload and Onload Procedures. Employ the following procedures when helicopter rotors are turning:

WARNING: Personnel must be aware of the possibility of reduced main rotor and tail rotor blade ground clearance and avoid the up-slope side and tail rotor side of the helicopter when off or on-loading.

WARNING: Personnel will have weapons pointed down, safetied, and radio antennas collapsed prior to entering the rotor plane. They will enter the rotor plane area only when cleared by the crew (beckoning motion hand signal).

6.18.1. The PIC, or designated representative, will brief passengers on procedures to be followed.

6.18.2. One crewmember will escort passengers through the safe approach zone when off/onloading the aircraft, except when off/onloading in a threat environment or during combat training.

6.18.3. Rotors turning off/onload for crew changes during local training missions is authorized provided the enplaning crew does not approach the helicopter until cleared by a crewmember. The crewmember clearing in personnel must be on intercom.

6.19. Altitude Restrictions.

6.19.1. Conduct all operations at or above 300 feet AGL, except when lower altitudes are required for takeoff, landing, operational missions, training flights in approved surveyed areas or routes, or approved exercise missions.

6.19.2. Helicopters are limited to a base altitude of 50 feet above obstacles during day or night low level tactical operations.

6.19.3. Unaided (no NVG and no PAVE LOW systems). Minimum enroute altitude for night navigation, both operationally and for training, is 500 feet above the highest obstacle within 5 NM.

6.19.4. Aided NVGs and PAVE LOW systems are the only approved methods for conducting night operations below 300 feet AGL. Comply with the following restrictions:

6.19.4.1. Normal NVG overwater cruise flight is limited to 100 feet AWL base altitude. If required, due to the tactical situation (METT-T), aircrew training/proficiency, and night water operations, NVG overwater cruise is permitted down to a base altitude of 50 feet AWL.

6.19.4.2. Time spent at the minimum altitude should be the minimum required to defeat the threat or complete tactical proficiency training and night water operations.

6.20. Oxygen Requirements.

6.20.1. Comply with AFI 11-202 Vol. 3.

6.20.2. Aircrew must attend altitude chamber training that fulfills the requirements specified in AFI 11-403 for helicopter aircrew.

WARNING: Unpressurized operations above 10,000 feet MSL without supplemental oxygen are known to cause measurable performance decrement. The effects of several short exposures between

10,000 and 14,000 feet MSL may be cumulative and lead to hypoxia. For operations at night, carefully consider the increased risk associated with the loss of night vision capability and the increase in the time required for full dark adaptation. Flights at 14,000 feet MSL without supplemental oxygen may cause a 40-45% loss of night vision capability. Fatigue and excessive smoking may further reduce night vision capability.

6.21. Required Equipment. The final responsibility regarding equipment required for a mission rests with the PIC. If one PIC accepts an aircraft to operate a mission or mission segment without an item or system, this acceptance does not commit that PIC, or a different PIC, to subsequent operations with the same item or system inoperative. If the PIC elects to operate with degraded equipment or aircraft systems, coordinate mission requirements (i.e., revised departure times, fuel requirements, maintenance requirements, etc.) prior to flight with the mission control agency to ensure the decision does not adversely impact follow-on missions.

6.21.1. Helicopter operations will not be conducted with any malfunction in the main fuel tank quantity or warning systems, except on emergency missions. If operations continue with a malfunction, the fuel tank involved should be fully serviced and visually checked.

6.21.2. The radar altimeter will be operational for night, low-level tactical events.

6.21.3. If a malfunctioning or broken tailskid cannot be secured in the down position, the aircraft will not be used for transition or emergency procedure training missions or any other training mission where approaches to touchdowns or approaches to low hovers will be practiced. On all missions flown with the tailskid in the pinned up position, landings will be accomplished from a medium to high hover. Squadron CC or his designated representative may waive this requirement.

6.21.4. If a minor inflight AFCS malfunction occurs which can be isolated, the flight may be continued at the pilot's discretion IAW the flight manual.

6.22. IFF/SIF. Operate Mode 4 IAW theater and operational directives. Operational check of the Mode 4 will be made prior to takeoff (test equipment permitting). The preferred and primary method of testing Mode 4 is with the ground test set.

6.22.1. Ground and inflight checks are mandatory maintenance debrief items. Crews will annotate any failure or unsuccessful interrogation of the Mode 4 in the aircraft forms. Units will develop procedures for accomplishing the Mode 4 ground check. The check should be coordinated between aircrew and maintenance during the aircraft preflight.

6.22.2. IFF modes 1, 2, and 3A codes, having been inserted and transmitted, are not classified and may be left set in the transponder. IFF Mode 4 codes must be zeroized before leaving the aircraft.

6.23. Emergency Exit Lighting. The Helicopter Emergency Exit Lighting System (HEELS) is unreliable. Secure an alternate lighting source (chemlight) over each exit to aid in underwater egress during any extended flight over water (Day or Night). If aircraft windows are installed, place a chemlight on the emergency exit handles.

6.24. Electronic Devices. The use of electronic devices is as specified in AFI 11-202V3. For electronic devices not listed, the user will provide the aircrew a letter from the Aeronautical Systems Division, Deputy for Engineering (ASC/ENAE) certifying the device is approved for airborne use. If the aircrew detects

any interference from an electronic device used aboard the aircraft, discontinue the use of this device for the duration of the flight.

6.25. Jamming and Interference. All aircrews and other radio users must be familiar with the procedures for reporting incidents of meaconing, intrusion, jamming, and interference (MIJI) or Spectrum Interference (SI). Info HQ AFSOC/DOXT on all MIJI/SIR reports.

6.26. Aircraft Servicing and Ground Operations.

6.26.1. Conduct hot refueling IAW AFI 11-235, TO 00-25-172, and appropriate flight manuals. The guidance in this section supplements the procedures outlined in TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*, appropriate flight manuals and checklist. A comprehensive mission briefing and strict compliance with procedures will ensure an expeditious safe refueling/rearming operation.

6.26.2. Hot refueling operations can be conducted day or night at either fixed sites or an austere environment. Rearming may be conducted in conjunction with hot refueling.

6.26.3. Use the following guidance for aircraft marshaling during Forward Area Resupply Point (FARP) operations:

6.26.3.1. Hose deployment personnel will not be used to marshal aircraft. When CCT/STS are responsible for primary ATC of an airfield, or are responsible for ATC operations at the FARP site, they will marshal and control all aircraft movement into and out of the FARP site. If CCT/STS is not available, units are responsible for self-marshaling into and out of the FARP site.

6.26.3.2. All helicopters will land just prior to the FARP site and deplane a crew member to marshal the helicopter to the designated refueling point. The helicopter will be marshaled into a position so that its refueling receptacle is 25 feet from the IR chemlight placed on the water container.

6.26.3.3. If terrain features do not allow for landing just prior to the FARP site, helicopters will hover taxi to the designated refueling point, utilizing the procedures outlined in **6.26.3.1**.

6.26.3.4. Aircraft commanders will ensure marshaling procedures outlined in the above paragraphs are briefed between the tanker and receiver aircraft prior to FARP operations. These procedures must be strictly adhered to at all times, ensuring all safety requirements are met.

6.26.4. Transmissions on other than UHF/VHF radios are prohibited (radar/HF radios/ SATCOM/ radar altimeter).

6.26.5. Aircrews will not wear Gortex garments within 50 feet of the aircraft when refueling with JP-4 or Jet B.

6.26.6. Personnel not directly involved in refueling operations will remain clear by a minimum of 50 feet.

6.27. Forced or Precautionary Landings. If the crew becomes doubtful of the helicopter's airworthiness or encounters hazardous weather conditions, they should execute a precautionary landing, provided the landing conditions are not more hazardous than the inflight problem. Aircraft security and accessibility for maintenance are secondary considerations to aircrew safety. Report all precautionary landings through the appropriate chain of command as soon as communications are established.

6.27.1. Forced or Precautionary Landings Due to Inflight Malfunction.

6.27.1.1. When the forced or precautionary landing occurs at an Air Force base and the cause has been investigated, corrected, and inspected by qualified maintenance personnel and the PIC has determined that no operating hazards exist at the departure base or enroute, the PIC may continue flight.

6.27.1.2. The squadron commander's approval is required prior to further flight when the host base commander transfers maintenance responsibility to the crew or when the precautionary landing occurs at a location where qualified USAF maintenance is not available. At the squadron commander's discretion, this approval authority may be delegated to the PIC.

6.27.1.3. In the event a forced or precautionary landing occurs at a location where communications are not available, the following procedures apply:

6.27.1.3.1. Remain at the landing site and await assistance if the PIC determines the aircraft is not safe for flight.

6.27.1.3.2. If the aircraft is safe for flight, the PIC may authorize further flight.

6.27.1.3.3. If a greater hazard exists to the crew or aircraft at the landing site, then continue to the nearest safe landing area. The decision to resume flight under these circumstances should be based on a thorough evaluation of all the hazards and risks involved.

6.27.2. Precautionary Landings Due to Weather.

6.27.2.1. If deteriorating weather is encountered during VFR operations, consider a precautionary landing as a viable option in addition to course reversal, or continuing under IFR.

6.27.2.2. Further flight may be authorized by the PIC after a precautionary landing for weather. Make a reasonable effort to notify appropriate agencies of the precautionary landing and to determine additional weather information.

6.28. Fuel Dumping.

6.28.1. During an emergency, fuel may be dumped without restrictions.

6.28.2. Fuel dumping is authorized during operational missions, contingency, and approved MAJCOM or higher headquarters exercise missions.

6.28.3. Fuel dumping during contingencies, operational missions, and MAJCOM or higher headquarters missions for weight adjustment/power margin considerations should be made above 3,000 feet AGL and away from agricultural/populated areas.

6.29. Flare/Chaff Checks. Refer to Para. [7.13](#).

6.30. Instrument Approach Minimums.

6.30.1. When RVR is reported as a "less than value" (example: RVR10-), one-half prevailing visibility (PV) is used to determine required visibility.

6.30.2. Weather Below Minimums. If the reported ceiling is below the minimum for the approach, but the visibility value is at or above the authorized minimums before initiating an enroute descent and

approach, ensure fuel remaining is sufficient to accomplish the enroute descent and approach, missed approach, and flight to alternate with appropriate reserves.

6.31. Radar Altimeter Procedures.

- 6.31.1. Normally, the radar altimeter is set at the appropriate autorotation flare altitude.
- 6.31.2. During low-level operations, the recommended setting is 80 percent of the height you intend to fly.
- 6.31.3. For instrument approaches, set the radar altimeters to the appropriate HAT or HAA prior to the FAF.

6.32. Radar Advisories. Participate to the maximum extent possible while operating in VFR or simulated IFR conditions.

6.33. Advisory Calls. Mandatory altitude calls for the pilot not flying the aircraft:

- 6.33.1. Non-precision Approaches.
 - 6.33.1.1. "One hundred feet above" minimum descent altitude (MDA).
 - 6.33.1.2. "Minimums" at MDA.
 - 6.33.1.3. "Runway in sight" when the runway environment is in sight. Do not call too soon when obstructions to vision (such as fog, haze, low stratus clouds, etc.) are present.
 - 6.33.1.4. "Go-around" at missed approach point if the runway environment is not in sight.
- 6.33.2. Precision Approaches.
 - 6.33.2.1. "One hundred feet above" decision height (DH).
 - 6.33.2.2. "Land" at DH if the runway environment is in sight and the aircraft is in a position for a normal landing.
 - 6.33.2.3. "Go-around" at DH if the runway environment is not in sight or if the aircraft is not in a position for a normal landing.
- 6.33.3. Climb Out.
 - 6.33.3.1. "Transition Level" (when applicable)
 - 6.33.3.2. "One thousand feet below" assigned altitude.
- 6.33.4. Descent:
 - 6.33.4.1. "Transition Level" (when applicable)
 - 6.33.4.2. "One thousand feet above" assigned altitude.
 - 6.33.4.3. "One thousand feet above" initial approach fix altitude or holding altitude.
- 6.33.5. Any crewmember observing unannounced heading deviations greater than 10 degrees, air-speed deviations of 10 knots, altitude deviations of 100 feet, or potential terrain or obstruction problems will immediately advise the pilot flying. Also announce deviations from prescribed procedures for the approach being flown.

6.34. Power Available. All crewmembers are required to know the power margin for intended operations.

6.34.1. Conduct power available checks using the procedures outlined in applicable flight manual section 4. At other times, performing the normal hover power and single point performance checks, as specified in the applicable flight manual, are sufficient in determining minimum acceptable torque for given flight conditions.

6.34.2. Aircrew will reconfirm power requirements when power required is within 10 percent of power available

6.34.3. Aircraft Performance Requirements.

6.34.3.1. Landing to a surface area smaller than the rotor diameter, such as a pinnacle, power for an out of ground effect (OGE) hover should be available.

6.34.3.2. Landing to an area where the flat surface is not at least two rotor diameters, hover power plus 5 percent should be available.

6.34.3.3. When performing coupled approaches, power for the intended hover height plus 5 percent should be available.

6.35. Passenger Policy . DOD 4515.13-R, *Air Transportation Eligibility*, establishes criteria for passenger movement on DOD aircraft. AFI 11-401, *Aviation Management*, provides further guidance on orientation and public affairs travel. Refer to these publications directly. In all cases, passengers will be manifested on a DD Form 96, **Passenger Manifest**.

6.35.1. For spouse orientation, air refueling and threat maneuvers are prohibited.

6.35.2. For other orientation categories, passengers will be seated with belts fastened during threat maneuvers.

6.35.3. Space-required. DOD 4515.13-R lists several categories of passengers, not previously mentioned, who are authorized official travel on DOD aircraft. Group CC or COMAFSOF determine and approve eligibility for all space required categories with the following exceptions:

6.35.3.1. Supported forces (Mission forces). A sub-category of space required passenger defined by this instruction as US and foreign military personnel who are an integral part of the mission being performed, functioning with the aircrew to execute this mission. This may include, but is not limited to, mission specialists and special operations forces. Approval is assumed by the mission tasking. Manifest on DD Form 96 or DD Form 2131 according to mission.

6.35.3.1.1. Restrictions. There are no restrictions on mission events. Passengers will be restrained by the safest means possible within mission constraints. Reference paragraph 6.26., Personnel Restraints, and Fig 6.1., Passenger Classification/Restraint Policy. PIC will ensure that supported forces are briefed on the mission profile and mission events before flight.

6.35.3.2. Supporting forces. A sub-category of space required passenger defined by this instruction as US and foreign military, DOD civilians, and US civilian employees under contract to the DOD, who directly support the mission or a deployment of an AFSOC unit. This may include, but is not limited to; maintenance, communications, intelligence, logistics, fuels, flight test personnel, unit-supporting chaplains and public affairs personnel, civilian contractors required for inflight checks or deployment support, FAA representatives, STS, fire support officers, and other military

personnel who are on board to communicate/coordinate with ground forces. Off-station travel requires travel orders. Local flights will be documented by letter of authorization from the Group CC or COMAFSOF. (Exception: Squadron Commanders/Mission Commanders may approve squadron assigned personnel. Squadron/Mission Commanders may also approve maintenance personnel required for mission accomplishment). When frequent local flights are necessary, commanders may issue annual authorizations by name or AFSC. When using this option, PIC will ensure that all restrictions in the following paragraph are complied with for each individual mission. Manifest all supporting forces on DD Form 96.

6.35.3.2.1. Restrictions. Both pilots must be fully qualified unless excepted by AFI 11-401, paragraph 1.12 (Requirements for Pilots in Dual-Controlled Aircraft). Simulated EPs are prohibited (Exception: EPs required for the purposes of a functional check flight are authorized. In this context, personnel on board are required for mission accomplishment. Limit personnel to absolute minimum required). Other mission events are authorized. Passengers will be seated with belts fastened during threat maneuvers. PIC will ensure that supporting forces are briefed on the mission profile and mission events before flight.

6.36. Passengers Occupying Crew Positions.

6.36.1. PIC may authorize passengers to sit in the flight engineer's seat during cruise flight. Group CC or COMAFSOF may approve authorized passengers to sit in the flight engineer's seat during other phases of flight on specific missions.

6.36.2. AFI 11-401 governs approval for passengers to occupy a crew position with a set of flight controls.

6.36.3. Any passenger occupying a crew position must be on interphone.

6.37. Personnel Restraints. (See Figure 6.1.)

NOTE: Additional aircrew are considered team members within the context of this paragraph and may be secured with alternate restraints.

6.37.1. Aircrew. All personnel must be restrained by the safest means possible for the type mission being flown. At least one pilot will have seat belt and shoulder harness fastened when rotors are engaged. Crewmembers may perform duties that require them to be unrestrained for short periods of time provided they are not in close proximity to an open door.

6.37.2. Flight engineers are not required to wear the shoulder restraint harness when it prevents movement required with duties. The seat back should be up (except over water) and the lap belt used at all times.

6.37.3. Combat equipped troops. When carrying troops/teams and seats/seat belts are not installed/used due to mission or aircraft load, alternate restraints will be used by those personnel. These restraints may not protect occupants in a crash sequence as well as a seat belt, but must be of such design to keep occupants from falling out of open doors. Each individual will have a restraint to secure him to the aircraft. Additionally, doors will be closed or cargo straps across open doors where the possibility exists that personnel could fall out.

6.37.4. Alternate loading methods used should allow seats and equipment not required for the mission to be removed. Define the cabin floor itself as the seat and either a seat belt, snap link device, tie-down

strap, or similar restraining device to restrain all occupants. Brief all users on the type of restraining device installed.

6.37.4.1. Alternate restraints will be secured as soon as possible before/after takeoff. They will not be removed until as late as practical prior to the landing/assault (no earlier than the 5-minute call).

6.37.4.2. Accomplish troop security by one of the following methods in descending order of preference:

6.37.4.2.1. Seatbelts or snap links attached to tie-down rings on the cabin floor.

6.37.4.2.2. Five thousand (5,000) pound tie-down straps.

6.37.4.2.2.1. Attach two 5,000-pound tie-down straps longitudinally along the cabin walls between the 20,000 pound tie-down fitting at station 322 and the 10,000 pound tie-down fitting at station 502 (left side) and the 10,000 pound tie-down fittings at stations 262-502 (right side).

6.37.4.2.2.2. Position two 5,000-pound tie-down straps longitudinally along the cabin floor between the 5,000-pound tie-down fittings at stations 322-502 (left side) and stations 262-502 (right side).

6.37.5. Except for primary crewmembers and SOF team members, all cabin occupants must be seated with seat belts fastened during taxi, initial takeoff, and initial approach and landing. Passengers authorized flight on tactical missions may be secured by alternate methods for subsequent takeoffs and landings provided they do not interfere with primary crewmembers' duties.

Table 6.1. Passenger Classification/Restraint Policy.

Passenger Classification	Approval Authority	Restraint	Air Refueling	Tactical Events
Space Available	Group/CC, COMAFSOF	Seat/Seat Belt	Yes *	No
Aeromedical Evacuation	Group/CC, COMAFSOF	Seat/Seat Belt	Yes *	No
Orientation				
Incentive Flights	See AFI 11-401, Table 1.1	Seat/Seat Belt	Yes*	Yes*
DV	See AFI 11-401, Table 1.1	Seat/Seat Belt	Yes*	Yes*
Familiarization Flights	See AFI 11-401, Table 1.1	Seat/Seat Belt	Yes*	Yes*
Spouse	See AFI 11-401, Table 1.1	Seat/Seat Belt	No	No
Public Affairs Flights	See AFI 11-401, Table 1.1	Seat/Seat Belt	Yes*	Yes*
Space Required				
Supported Forces				
US and Foreign Military Personnel	Mission Tasking Authority	Alt. Load	Yes	Yes
Additional Aircrew	PIC	Alt. Load	Yes	Yes
Supporting Forces				
Maint. Pers. supporting deployment	Unit/CC, Mission Commander	Seat/Seat Belt	Yes	Yes
Unit Assigned/Attached Pers.	Unit/CC, Mission Commander	Seat/Seat Belt	Yes	Yes
Other Mil.Pers.& DOD Civilians	Group/CC, COMAFSOF	Seat/Seat Belt	Yes	Yes
Pers. required for 18 FLTS	18 FLTS/CC	As Req	As Req	As Req

*When authorized by approving authority.

6.38. Deployment of Non-AFSOC Parachutists.

6.38.1. Group CC or Mission Commanders may authorize non-AFSOC parachutists to deploy from AFSOC aircraft provided a qualified jumpmaster is on board.

6.38.2. Personnel authorized must be graduates of an accredited armed forces parachutist course, possess aeronautical parachutist orders, and have a valid operational currency, administrative, or training requirement.

6.38.3. For water jumps utilizing SCUBA equipment, personnel must be certified military SCUBA divers.

6.39. Customs, Immigration, and Agriculture Inspections.

6.39.1. Obtain customs, agriculture, and public health clearance, as required, prior to opening any doors other than the crew entrance door or enplaning and deplaning personnel.

6.39.2. Proceed directly from the aircraft to customs, immigration, or agricultural inspection for processing at those stations where federal or local inspections are required. The flight engineer or the PIC completes the necessary forms before reporting to inspectors.

6.39.3. After clearing with border clearance agencies, the pilot or flight engineer will return to the aircraft for offloading and other post-flight procedures.

6.39.4. A US military aircraft is a sovereign instrument. When cleared to over-fly or land in foreign territory, it is US policy to assert that military aircraft are entitled to the privileges and immunities which customarily are accorded warships. These privileges and immunities include, in the absence of stipulations to the contrary, exemption from duties and taxation; immunity from search, seizure, and inspections (including customs and safety inspections); or other exercise of jurisdiction by the host nation over the aircraft, personnel, equipment, or cargo on board. USAF PIC will not authorize search, seizure, inspection, or similar exercises of jurisdiction enumerated above by foreign authorities except by direction of HQ USAF or the American Embassy in the country concerned.

6.39.5. PIC will not permit the inspection of their aircraft by officials of any foreign government. If requested to do so, the PIC and crew will deny access and seek aid from the senior AFSOC representative or US Embassy or consulate within the host nation. Inform customs or other officials of the above policy and request that they confirm their request through their own government and with US Department of State representatives. If necessary, the aircrew will seal the aircraft and enter into crew rest, and relay departure intentions, until resolution of the matter by appropriate authority. Use communications by the fastest means available to inform command and control facilities should this situation occur.

6.39.6. When confronted with a search request by foreign authorities, aircrews should consider the following procedures:

6.39.6.1. In most cases, search attempts may be stopped by a statement of the PIC to the foreign officials that the aircraft is a sovereign instrument not subject to search without consent of HQ USAF or the chief of mission in the country concerned. This should be clearly conveyed in a polite manner so as not to offend foreign authorities that may honestly, but mistakenly, believe they have authority to search USAF aircraft.

6.39.6.2. If foreign authorities insist on conducting a search, the PIC must negotiate to delay the search until contact is made with HQ USAF/XOFN or the appropriate embassy. The PIC should unequivocally state, the aircrew has no authority to consent to the search and that they must relay the foreign request to these agencies for decision. The PIC should then notify these agencies of the foreign request by the most expeditious means available. Thereafter, the PIC should follow instructions provided by the appropriate embassy and HQ USAF.

6.39.6.3. If foreign officials refuse to desist in their search request, the PIC should indicate that they would prefer to fly the aircraft elsewhere (provided fuel and mechanical considerations permit a safe departure) and request permission to do so.

6.39.6.4. If permission is refused and the foreign authorities insist on forcing their way on board an aircraft, the PIC should state that he protests the course of action being pursued and that he intends to notify both HQ USAF and the appropriate American Embassy of the foreign action. The PIC should then allow the foreign agents on board the aircraft, without physical resistance, and thereafter report the incident to HQ USAF and appropriate embassy as soon as possible.

6.39.7. In all instances, specific instructions may be briefed because of sensitive cargo or equipment. These instructions and applicable provisions of classified supplements to the foreign clearance guide should be followed where applicable.

6.40. Utilization of Civilian Law Enforcement or Medical Personnel. Generally, before transporting civilian law enforcement officials or civilian medical personnel, obtain proper authorization through installation commander, AFSOC, or USSOCOM. Civilian law enforcement or medical personnel may be required to perform duties at an accident site. These duties may include death determination or human remains removal. Local and international laws may affect mission prosecution and should be reviewed prior to deployment or pickup of civilian personnel. The primary method of deploying or recovering civilian law enforcement or medical personnel is by landing. Civilian law enforcement or medical personnel may be deployed and recovered by hoist provided all other transport resources have been examined and determined to be inadequate and approval is obtained from the Group CC or COMAFSOF. Prior to hoist deployment, brief civilian law enforcement or medical personnel on all applicable procedures and safety and emergency considerations involved. If unable to contact the controlling agency for approval, the PIC may approve the carrying of civilian personnel on life or death missions when it is determined that these passengers are essential for the successful completion of the mission. Commanders will not transport civilian law enforcement personnel into areas of imminent danger or where confrontation with civilian criminal targets is likely, will not use military force against civilian criminal targets unless in self defense, and will not direct the action of civilian authorities in enforcing the law or making arrests.

6.41. Crew Debriefing.

6.41.1. Training Missions. The PIC will conduct the debriefing and complete the appropriate documentation.

6.41.2. Operations Under Combat Conditions. Each aircrew participating in operations under actual combat conditions will participate in an intelligence debriefing.

6.41.3. Commanders will ensure that all aircrews are debriefed immediately following a combat or combat support mission during which any tactics or procedures were observed that may affect other operations.

6.41.4. PIC encountering ground fire will submit an immediate airborne report to their controlling agency followed by a ground fire incident report to intelligence immediately after landing.

6.41.5. Other Missions. The PIC has the responsibility of affording to each crewmember the opportunity to discuss unusual aspects of the mission. Debriefings may be formal or informal, as the situation requires.

Chapter 7

TRAINING

7.1. General. See AFI 11-2MH-53 Vol. 1 & 2, AFI 11-202 Vol. 1 & 3, and the applicable supplements for additional information.

7.2. Training Aircraft Not Capable of Flight. If an aircraft is not capable of departure within 4 hours after scheduled departure time, cancel the training mission unless waived by the PIC. Departure consists of actual takeoffs for assigned or planned training missions, and does not include maintenance ops checks or aborted hover checks.

7.3. Wind Restrictions. Takeoffs and landings will not be accomplished when surface winds exceed:

7.3.1. 30 knots steady state or 20 knots gust spread.

7.3.2. 40 knots steady state or 20 knots gust spread when an instructor pilot is in command.

7.3.3. Restrictions IAW applicable flight manual for operational and support missions.

7.4. Water Operations Training. Conduct water training at approved water operating areas.

7.5. IMC Terrain Following/ Terrain Avoidance Training.

7.5.1. FAR Exemption 4371 allows IMC TF/TA operations below published enroute IFR minimum altitudes. Aircraft operating in the CONUS must comply with all requirements of Exemption 4371. Units operating in OCONUS locations must comply with host nation agreements for IMC TF/TA training.

7.5.2. Route surveys must be conducted prior to any IMC TF/TA training. They must be updated within 6 months of use.

7.5.3. Weather Minimums.

WARNING: Degraded systems training will not be conducted during IMC TF/TA operations.

7.5.3.1. In order to TF/TA in IMC conditions for training, you must operate under IFR and abide by the IFR training weather minimums stated in this publication.

7.5.3.2. IMC TF/TA for training will not be accomplished in weather conditions forecast, or observed, which include thunderstorms.

7.5.3.3. IMC TF/TA for training will not be accomplished in weather conditions of observed heavy precipitation.

7.5.3.4. Prior to entering IMC conditions the aircrew must accomplish all in-flight checks of the TF/TA radar and navigation systems to ensure they are functioning correctly.

7.5.4. Altitude Restrictions. For IMC TF/TA training, the minimum set altitude is 300’.

7.5.5. Coupled Approaches are not allowed for training while in IMC conditions.

7.6. Power Required for Terminal Operations Training.

- 7.6.1. Clear escape route - Hover power plus 5 percent.
- 7.6.2. Restricted escape route - OGE hover power plus 5 percent.
- 7.6.3. Also refer to paragraph 6.34.

7.7. Obstacle Clearance for Terminal Operations Training.

- 7.7.1. Horizontal obstacle clearance, other than contingency operations and DLQs, will be no less than 25 feet from the rotor tip path plane.
- 7.7.2. The PIC has the ultimate responsibility for the obstacle clearance and ensuring that all crewmembers are thoroughly briefed and aware of their duties and responsibilities involving obstacle clearance.

7.8. Live-Hoist Training.

WARNING: Personnel trained in hoist operations will assist a survivor who is not familiar with rescue hoist procedures.

- 7.8.1. Restrict live-hoist training to the minimum necessary to accomplish initial qualification, re-qualification, and proficiency training.
- 7.8.2. Hover altitude will be the minimum required to accomplish the mission. When over water or over vessels, hover at the minimum altitude necessary to avoid salt spray. Hoist training over trees should be conducted at sites that are adjacent to a suitable emergency landing area.
 - 7.8.2.1. The survivor/safety observer will be briefed to pick a relatively clear area to facilitate a fast, safe low-hover altitude extraction.
- 7.8.3. Practicing hoist with or without a tag line is permissible.
- 7.8.4. Squadron CC determines eligibility of personnel to ride the hoist during training. Personnel may ride the hoist IAW the following:
 - 7.8.4.1. Aircrew/Qualified Supported Forces. No safety observer is required.
 - 7.8.4.2. Other Personnel. There will be a qualified safety observer available to ensure the survivor properly uses the rescue device.

7.9. Evasive Maneuver Training.

- 7.9.1. Initiate evasive maneuvers at 100 feet Above Highest Obstacle (AHO) minimum, and maintain a minimum of 100 feet AHO throughout the evasive maneuvering.
- 7.9.2. Pilots will make advisory calls to the crew prior to beginning the evasive maneuver. Crewmembers will clear the aircraft of obstacles throughout the maneuvering.

7.10. Helicopter Versus Fighter Evasive Maneuver Training. Refer to AFI 11-214, *Air Operations Rules and Procedures*, for further guidance.

- 7.10.1. Brief all individuals involved in the mission on the rules of engagement (ROE). Conduct a ROE briefing with the aggressor force crewmembers. Minimum separation will be briefed.
- 7.10.2. Procedures. Fly evasive tactics under the following criteria:

- 7.10.2.1. Use procedures outlined in AFTTP 3-1 Volume 34(S), *Tactical Employment- MH-53*, and AFTTP 3-3 Volume 34, *Tactical Employment-MH-53*.
- 7.10.2.2. Helicopters and aggressor will establish and maintain communications on a common pre-briefed frequency during the entire engagement.
- 7.10.2.3. If two aircraft approach head-on, each will clear to the right and the fighter will go above the helicopter.
- 7.10.2.4. If visual contact is lost during an engagement, the aggressor aircraft will proceed to an assigned altitude block.
- 7.10.2.5. All aircraft will maintain a 1,000 foot clearance from clouds and participating aircraft not in their formation.
- 7.10.2.6. Prevailing visibility in the area must be 5 NM or greater.
- 7.10.2.7. Any flight member can terminate the engagement by transmitting "Knock It Off," at which time all participants will cease maneuvering and acknowledge with call sign, such as "HAWK One, Knock It Off."
- 7.10.2.8. Safe all weapons.
- 7.10.3. Cease an engagement when one of the following occurs:
 - 7.10.3.1. If a dangerous situation is developing.
 - 7.10.3.2. An unbriefed or unscheduled flight enters the Aerial Combat Tactics (ACT) area and is a factor detrimental to the safe conduct of the mission.
 - 7.10.3.3. Visual contact is lost by the aggressor aircraft within 3000 feet.
 - 7.10.3.4. Helicopter continuous rocking of the rotor tip path plane (not associated with normal maneuvering).
 - 7.10.3.5. The engagement drifts to the outer edge of the border of the authorized area.
 - 7.10.3.6. Minimum altitude or clouds are approached. Weather below minimums.
 - 7.10.3.7. Loss of situational awareness (SA).
- 7.10.4. Special Instructions.
 - 7.10.4.1. Helicopters flying at or below 300 feet AGL need not maintain radio contact with attacking fixed-wing aircraft so long as vertical and lateral separation criteria are pre-briefed and clearly understood by all participants. Two-way radio contact is required for any air-to-air scenario involving helicopters operating above 300 feet AGL, for any scenario involving aggressor helicopters, and for any scenario involving HC/MC-130E/H/P aircraft.
 - 7.10.4.2. Formation. When helicopters flying in formation are subject to simulated fighter attack during exercise participation, the formation leader will brief formation response to attack by simulated hostile aircraft. The following items must be briefed as a required supplement to the basic tactical consideration:
 - 7.10.4.2.1. Aircraft under simulated aerial attack will maneuver so as to establish and maintain positive lateral separation; aircraft in close formation will make their initial breaks away from each other.

7.10.4.2.2. Terminate evasive maneuvers if inter-formation radio contact is lost or at any time doubt exists as to the position of other aircraft in the formation.

7.11. Helicopter Versus Helicopter Evasive Maneuver Training.

7.11.1. Helicopter versus helicopter evasive maneuver training is only authorized at higher headquarters-directed exercises and formal tactical schools. Current helicopter and fighter procedures and ROE apply with the following additions:

7.11.2. Descend no lower than 100 feet above obstacles.

7.11.3. Maintain a 500-foot lateral displacement and a 100-foot minimum altitude separation between participating helicopters.

7.11.4. Engagement will terminate with loss of visual contact or a termination call.

7.11.5. Coordinate crossing ridgelines and blind covers with opposition helicopters to ensure altitude separation of a minimum of 100 feet.

7.11.6. All participating helicopters will maintain communications on a common pre-briefed frequency at all times.

7.12. ECM Training Policy. For training, operational ECM software can only be used in the CONUS, and only after the signal collection risk is evaluated. Evaluate the signal collection risk through coordination with squadron intelligence personnel. Crewmembers will provide geographical coordinates of the intended operating area, the time period of concern, and the frequency range of ECM operations. After analyzing the signal collection risk, operational ECM software may be used during scheduled airborne intercept training and against ground and sea-based threats. Use of operational software against Multiple Threat Emitter System (MUTES) is prohibited at all times. Accomplishing system BIT in accordance with aircraft checklist with operational software is approved. In all other training situations within the CONUS and in all training situations overseas only use ECM software versions specifically designated for training.

7.13. Flares and Chaff Policy.

7.13.1. Dispense flares IAW controlling agency procedures and restrictions. When over water, dispense flares at least 3 NM from any surface vessel, platform, or landmass.

7.13.2. Upon next landing, deplane a crewmember to visually inspect dispensers to ensure that there are no hung flares or chaff. If a hung flare or chaff is detected, follow hot gun procedures.

7.14. Simulated Instrument Flight. The use of a hood or other artificial vision-restricting device is not authorized for any phase of flight.

7.15. Simulated Emergency Restrictions and Procedures.

7.15.1. Compound emergencies are prohibited.

7.15.2. Prohibited Maneuvers.

7.15.2.1. Actual in-flight engine shutdown.

7.15.2.2. Blade stall and power settling.

7.15.2.3. Actual shutdown of fuel control.

7.15.2.4. Actual shutdown of hydraulic systems.

7.15.2.5. Water landings.

7.15.3. Restrictions.

7.15.3.1. Accomplish unusual attitude training and autorotations during day VMC only. All other EPs may be conducted during day or night VMC.

7.15.3.1.1. Autorotations may be conducted up to 30 minutes past official sunset and no earlier than 30 minutes before official sunrise. A tactical crew compliment is not required during these times.

7.15.3.2. Simulated emergency procedures may be initiated outside the airfield environment but must be terminated at a military airfield or designated airfields with letters of agreement and have proper crash and rescue equipment.

7.15.3.3. When an instructor or flight examiner pilot is designated on flight orders under "Crew Position" as IP or EP and occupies a pilot seat with a set of controls, instructor pilot candidates may perform or supervise simulated emergencies during initial evaluations under the supervision of a flight examiner pilot not in a pilot seat if the other pilot at the controls is qualified as a PIC, or higher, in the maneuver.

7.15.3.4. The following restrictions apply to night EPs:

7.15.3.4.1. Instructor pilot is appropriately certified for night EPs.

7.15.3.4.2. Crew compliment is Tactical Crew (IAW Fig 3-1.).

7.15.3.4.3. Weather is at or above 1,000 feet ceiling and 2 SM visibility or circling minimums, whichever is higher.

7.15.4. Practice Autorotation.

7.15.4.1. Location. Accomplish autorotation to a runway or taxiway if possible. When such an area is not available, select a smooth, level area. The instructor or flight examiner will ensure it is free of obstructions prior to commencing training.

7.15.4.2. Altitude.

7.15.4.2.1. Minimum entry altitude is 500 feet AGL with no more than a 45 degree offset from the intended landing direction.

7.15.4.2.2. Minimum entry altitude is 1000 feet AGL for turns greater than 45 degrees.

7.15.4.3. Winds.

7.15.4.3.1. A functional wind-indicating device must be available to provide accurate wind information.

7.15.4.3.2. Below 15 Knots – For power recovery, the aircraft is required to be aligned within 90 degrees of the wind.

7.15.4.3.3. 15 Knots or greater – For power recovery, the aircraft is required to be aligned within 45 degrees of the wind.

7.15.4.4. Initial Autorotation.

7.15.4.4.1. A straight-ahead autorotation will be accomplished by the instructor to evaluate aircraft performance.

7.15.4.4.2. For evaluations, the pilot being evaluated may perform the initial autorotation.

7.15.4.4.3. May be accomplished from 500 feet AGL.

7.15.4.5. At the first indication of any of the following conditions, terminate the maneuver and initiate a power recover:

7.15.4.5.1. Abnormally high or low rotor RPM.

7.15.4.5.2. Excessive sink rate.

7.15.4.5.3. Low airspeed.

7.15.4.5.4. Ineffective flare.

7.15.4.5.5. Any time an inadvertent touchdown might occur.

7.15.5. Simulated Single-Engine Emergencies.

7.15.5.1. Initiation of practice single-engine emergencies must not be lower than 300 feet AGL, and 80 KIAS.

NOTE: Practice single-engine emergencies may be initiated below the above listed conditions as long as torque available is limited on both engines versus reducing torque available on the simulated failed engine. Instructors must use caution when simulating single-engine emergencies at low altitudes and air-speeds.

7.15.5.2. Single-engine approaches and landings where a throttle is retarded, must be practiced to a hard surface landing area.

7.15.5.3. Practice the following simulated single-engine maneuvers by limiting the torque available on both engines versus reducing torque for the simulated failed engine:

7.15.5.3.1. Air refueling.

7.15.5.3.2. Approaches to a spot.

7.15.6. AFCS Off. Conduct under the following limitations:

7.15.6.1. Initiate the maneuver on the ground or in straight and level flight at a minimum altitude of 300 feet AGL and 80 KIAS.

7.15.6.2. Tactical and non-tactical approaches are authorized to a hover or landing.

7.15.6.3. All practice approaches will be to a runway or slide area.

7.15.6.4. If any control difficulties are encountered while the system is off, the instructor or flight examiner will take control of the aircraft and restore the system as appropriate.

Chapter 8

MISSION EMPLOYMENT

8.1. Formation Flying.

8.1.1. Spacing.

8.1.1.1. During formation flight, minimum spacing is one rotor disk. Base rotor disk separation on the largest disk diameter when engaged in dissimilar formation operations.

8.1.1.2. Maintain a minimum of 100 ft spacing during taxi.

8.1.2. Dissimilar Formation. Formation flights are authorized when participating crewmembers are trained, briefed, and are thoroughly familiar with the other aircraft's performance and tactics.

8.1.3. Communication.

8.1.3.1. Prior to formation flight, conduct a communications check of all aircraft in the formation.

8.1.3.2. Do not initiate formation flight without positive interplane radio communications (exception: communications out procedures).

8.1.4. Aircraft Lighting. Lighting configurations other than those listed below in Figure 8.1 are considered non-standard, and must be briefed.

Table 8.1. Standard Lighting Configuration.

	POSITION LIGHTS	WHITE STROBE	RED STROBE	IR STROBE	TIP LIGHTS	SLIME LIGHTS
DAY OVERT	BRIGHT	CHALK LAST	OFF	OFF	OFF	OFF
NIGHT OVERT	DIM	OFF	CHALK LAST	OFF	40%	40%
COVERT	OFF	OFF	OFF	CHALK LAST	40%	A/R
BLACKED OUT	OFF	OFF	OFF	OFF	OFF	OFF

8.2. Terminal Operations.

8.2.1. Takeoff Procedures: Recompute TOLD prior to departure if personnel or equipment have been on-loaded in the landing zone.

8.2.2. For the first approach into any unprepared landing zone, select all available hover symbology prior to commencing a descent into the LZ. In MH-53M aircraft, the decision to select symbology on the HDD rests with the PIC, however, GVR must be selected by both pilots.

8.2.3. If any degradation in on-board systems (hover indicators, HDD, Doppler, radar altimeter, etc.) is discovered which could result in loss of situational awareness during approach/hover, the PIC will inform the crew. The decision to proceed rests with the PIC.

8.2.4. Go-Around Calls. If any crewmember calls “go-around”, the pilot flying should immediately apply power, up to maximum power, to establish a climb that clears all obstacles.

8.3. Alternate Insertion/Extraction. See AFTTP 3-3 Vol. 34 for additional information.

WARNING: Ensure personnel deploying from the ramp position remain 24 – 27 inches apart due to center of gravity (CG) considerations.

CAUTION: When weapons are installed in the right door, it is possible to get hung up during the exit sequence. Care must be taken to ensure team members clear any weapon. The right crewmember must be prepared to assist a hung team member.

CAUTION: The floor in the right door of the MH-53 slopes up approximately two inches to the door opening. The slope increases the potential for team members to lose their balance during the exit sequence. Care must be taken to ensure team members clear the doorway. The crewmember in the right door should be prepared to assist team members in the event their feet fail to clear the doorway. If the team members feet do not clear the doorway, there may not be enough time to regain control prior to ground impact.

8.3.1. A cutting device will be readily available to cut ropes or AIE devices during emergencies or rope entanglement.

8.3.2. Equipment that is certified as “training use only” will not be used for live training.

8.3.3. Aircrew will ensure all operations off the ramp will not exceed aircraft CG limits.

8.3.4. Mission Briefing. Prior to deployment or pickup, the PIC will ensure the appropriate briefing for alternate insertion and extraction briefing is completed. Aircrew and team briefings will emphasize proper hand signals, time calls, and emergency procedures.

8.3.5. The crewmember at the deploying station will ensure the departing team members have removed their restraining devices prior to deploying.

8.3.6. When deploying team from the left side of ramp, disconnect and stow ammunition chute to keep it from being stepped on, tripped over, and/or damaged.

8.3.7. Hoist.

8.3.7.1. Inspect the entire length of the hoist cable any time a live-hoist is anticipated.

8.3.7.2. Hoist Operator. The primary hoist operator is the FE; however, any crewmember may be designated the hoist operator as the mission dictates. When radio contact is not available, use hand signals between ground personnel and the helicopter IAW AFI 11-2MH-53 Volume 3 CL-1.

8.3.7.3. Ground the hoist to discharge static electricity to prevent personnel on the ground or water from sustaining a shock. Do not ground the hoist near spilled fuel.

8.3.7.4. Do not conduct live hoist training with the hoist operator's intercom inoperative.

8.3.7.5. The hoist operator will wear a heavy, work-type glove or equivalent, on the hand used to guide the hoist cable and have the helmet visor down or eye protection in place.

8.3.7.6. Do not use the hoist to relay messages except when all other possible means of communications (i.e. radio, message streamer, tag line) have been exhausted.

8.3.7.7. Complete the hoist operator's checklist prior to final approach.

8.3.7.8. If the survivor is attached to a parachute, hover at an adequate distance to prevent the rotor wash from billowing the parachute and dragging the survivor.

8.3.7.9. Hoist Equipment

8.3.7.9.1. Forest Penetrator.

8.3.7.9.1.1. The description and maintenance instructions for the forest penetrator are contained in TO 14S6-3-1 and TO 00-25-245, Section IV.

8.3.7.9.1.2. The forest penetrator can be used to recover inert or injured personnel safely with the exception of those with back injuries.

8.3.7.9.1.3. It is possible to recover three people at once with the penetrator. However, this should only be done when time is critical since it may load the hoist to the limit.

8.3.7.9.2. Stokes Litter.

8.3.7.9.2.1. The description and maintenance instruction for the stokes litter are contained in TO 00-75-5. The stokes litter is designed to hold a survivor immobile in a horizontal position. The sides of the litter protect the survivor from bumping against obstructions or the side of the helicopter during retrieval. Configure the stokes litter with the sling, flotation devices, three restraining belts, and tag line when stowed on the aircraft.

8.3.7.9.3. Horse Collar (Rescue Strap).

8.3.7.9.3.1. The horse collar can be used for single occupant recoveries from land or water. The horse collar can only be used to recover ambulatory personnel.

8.3.7.9.4. Tag Line.

8.3.7.9.4.1. Tag Line. The tag line aids the pilot by reducing the time required to hover without a reference and prevents pendulum or spinning motion during hoisting. It should be used to guide the recovery device to or from confined areas, such as ship rigging, trees etc. It may also be used to pass messages or transfer small items to or from the helicopter.

8.3.7.10. During training missions, terminate live hoisting immediately at the first indication of equipment malfunction. If possible, return the individual to the surface by lowering the aircraft. For actual SAR missions, existing circumstances must dictate actions to be taken. The hoist operator will advise the pilot, check hoist power sources and hoist controls, and attempt to operate the hoist from the cockpit position, if necessary.

8.3.7.10.1. To prevent dropping the rescue device, use the hoist hook safety or retaining pin. **(EXCEPTION:** When raising or lowering an empty stokes litter for water recoveries, the use of the safety or retaining pin is not required. Install the safety or retaining pin prior to hoisting the litter with a survivor.)

8.3.7.11. Over water, once the survivor is ready for hoisting, establish the hover over the rescue device prior to hoisting the survivor out of the water.

8.3.7.11.1. Do not descend below 50 feet AWL until established on final.

8.3.7.12. Inert Survivor Recovery. If it is determined that the victim is unconscious or unable to enter the rescue device, lower someone trained in hoist operations to aid an injured or inert survi-

vor. The deployed crewmember will secure the survivor for hoisting and give a "thumbs up" signal to indicate that the survivor is ready for pickup.

8.3.8. Rappelling.

8.3.8.1. Deploying personnel are responsible for aircraft rigging and proper hookup of rappellers.

8.3.8.2. Maximum rappelling altitude for training is 100 ft.

8.3.8.3. Do not deploy ropes until the aircraft is in a stable hover over the intended deployment area.

WARNING: Ensure the aircraft maintains at least a 40 foot hover height during rappel operations to avoid rotor downwash from blowing the ropes into the main or tail rotor system.

WARNING: The crewmember at the deploying station will ensure that the ropes reach the ground prior to final positioning of rappellers for deployment. The crewmember at the deploying station will coordinate with the pilot to ensure the aircraft maintains a hover altitude that will keep the ropes in contact with the ground.

WARNING: After the last rappeller is off the rope, the crewmember at the deploying station will release the ropes. Release ropes prior to commencing forward flight to prevent possible entanglement. Do not pull the rappelling rope back into the aircraft unless rope is weighted with at least 5 lbs or more and conditions deem so. Release ropes before landing.

WARNING: When an unsafe condition is encountered, stop any additional team members deploying from the aircraft. Make no attempt to physically stop a person in the act of deploying as this may cause the person to lose grip of the rope and increase the probability of injury to the team member.

8.3.9. Fast Rope.

WARNING: MH-53 must be configured with 650 gallon external fuel tanks when conducting fast rope operations from the ramp position.

WARNING: Fast Rope must be coiled toe to head.

WARNING: Do not use the fast rope bar or hoist mount for fast rope extractions.

WARNING: The PIC 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: Fastrope operations off the tail will not be conducted below 25 feet AGL.

WARNING: When using the rope(s) with the metal sleeve and ring, ensure all personnel are clear below the aircraft before releasing the rope.

WARNING: Do not fire weapons located at the deployment stations during personnel deployment.

NOTE: When releasing the aft rope(s), ropes will drop back and to the aircraft's right 10 to 20 ft.

8.3.9.1. The aircrew will install ropes, inspect attaching points, and/or accomplish the Hoist Power On Preflight Checklist if the hoist is used for fast rope operations (entire length of cable need not be checked).

8.3.9.2. The deploying team is responsible for providing and inspecting ropes.

8.3.9.3. Accomplish the hoist operator's Before Pick-up Checklist (The Hoist Master Switch must be in the "CREW" position) prior to using the hoist for fast rope operations.

8.3.9.4. Cabin configuration.

8.3.9.4.1. Ensure the cabin is configured for the number of personnel and type of mission. Deploying personnel must be secured to the cargo compartment floor using aircraft seat belts, person restraints and alternate loading procedures. Coil and secure the fast rope.

8.3.9.4.2. Handrails consist of two 5000 pound aircraft tie down straps. The straps run from the top of the fast rope bar to half way down the cabin, hooking to the center compartment wall brackets (litter hooks-up brackets along the cabin wall).

8.3.9.5. NVG Over water Operations. With the exception of final approach, the fast rope pattern is the same as a hoist pattern. On final, descend to 40 ft AWL while decelerating to the deployment ground speed. Deploy the fast rope upon entering the insertion zone, once personnel are deployed, slowly start an accelerating climb out to allow recovery of the rope if not released. A 2-4 knot forward drift will assist in deployment of teams and prevent them from landing on each other and possible injuries.

8.3.10. **Rope Ladder.**

WARNING: When using cargo tie-down straps to attach ladders to the aircraft, do not use a strap that has any sign of grease or oil contamination or corroded hardware for live pick-ups.

CAUTION: Rope ladder extractions, over salt water, will not normally be performed due to possible engine power deterioration.

8.3.10.1. The flight crew is responsible for providing, inspecting, and rigging rope ladders.

8.3.10.2. In an emergency with personnel secured to the ladder do not exceed 60 KIAS.

8.3.10.3. Limit the number of personnel on the ladder at any one time to five forward and five aft.

8.3.11. **Special Patrol Insertion and Extraction (SPIE) Operations.**

8.3.11.1. During SPIE operations do not exceed 70 KIAS (50 KIAS in cold weather).

8.3.11.2. 200 feet of obstacle clearance will be maintained between the bottom of the SPIE assembly and any ground obstacles, tactical situation permitting.

8.3.11.3. The team is responsible for providing, inspecting, and rigging all required equipment.

8.3.11.4. The helicopter must have an operable radar altimeter.

8.3.11.5. Maximum flight time with personnel on the rope is 15 minutes.

8.3.12. **Helocast Operations (Low and Slow).**

8.3.12.1. Cover Ship/Safety Boat Requirements.

8.3.12.1.1. All water operations deploying personnel and night water operations require a safety boat or cover ship to be present. Squadron CC or COMAFSOF may approve alternate cover ship capabilities after careful consideration of water temperature, sea state, distance from shore, response time, and illumination.

8.3.12.1.2. A cover ship must meet either of the following requirements:

8.3.12.1.2.1. Night Water Hoist Cover Ship

8.3.12.1.2.1.1. Operable Hoist

8.3.12.1.2.1.2. Night water hoist certified aircrew

8.3.12.1.2.1.3. Enough fuel for 1 hour of loiter time and recovery

8.3.12.1.2.1.4. Maintain visual and radio contact with the other aircraft

8.3.12.1.2.2. Helicopter Capable of Deploying a Raft

8.3.12.1.2.2.1. Deployable raft in addition to the raft that is standard with the aircraft

8.3.12.1.2.2.2. Enough fuel for 1 hour of loiter time and recovery

8.3.12.1.2.2.3. Maintain visual and radio contact with the other aircraft

8.3.12.1.2.2.4. Accomplish the appropriate checklist prior to final.

8.3.12.2. Deployments will be conducted at a maximum of 10 feet AWL and 10 KGS.

8.3.12.3. Open all deploying exits at 50 feet AWL and below. Deploying personnel must be in a restraining harness or safety belt until the 5-minute call.

8.3.12.4. All required water hoist extraction devices will be on board, inspected, and rigged prior to low and slow deployments.

8.3.12.5. All rescue hoist checklists will be completed, prior to water deployment, in the event an injury occurs to the departing team. An immediate extraction may be required. Stow the rescue hoist hook so the cable is not in the doorway.

8.3.13. **Combat Rubber Raiding Craft (CRRC) Delivery Operations** (Soft Duck):

WARNING: CRRC center of gravity limitations will be discussed during both team/crew briefings. Failure to ensure adequate distribution of the team's equipment may result in an aft CG causing the craft to become near vertical during deployment.

8.3.13.1. Aircraft will have an operable radar altimeter and the tailskid retracted prior to drop.

8.3.13.2. The team may exit the aircraft from either the door, the ramp or both. During simultaneous deployments, the ramp position will be deployed first.

8.3.13.3. Crewmembers are responsible for cabin configuration, loading, and tie-down of CRRC/soft duck.

8.3.13.4. Reference USSOCOM MAN 350-6, chapter 9/10 for maritime operations and USSOCOM MAN 350-4 Vol 2, page 9 para. E for approved CRRC.

8.3.13.5. Army or Navy personnel/boat deployment limit is Sea State 4 (17-21 knots/3.8-5.0 average wave height). Reference USSOCOM MAN 350-4 Vol 2 Sea State Chart, Appendix D.

8.3.13.6. CRRC and personnel equipment must be securely attached and positioned inside the craft before loading on aircraft.

8.3.13.7. Boat/Raft configuration. Remove keel guard if desired. The crafts may be laced to plywood or suitable material which will roll easily on the aircraft rollers.

8.3.13.7.1. The boat may be loaded bow or stern first; two boats may be loaded if loaded bow first in the aircraft. Secure the boats with at least two cargo tiedown straps per boat, with a short bow or stern line attached to the aircraft.

8.3.13.8. Brief the following procedures:

8.3.13.8.1. At the “5 minute call,” team members deploying from the front, if this method is used, will move to the front of the cabin area. The team members who will deploy the boat will prepare the boat.

8.3.13.8.2. At the “1 minute call,” team members and crewmembers will prepare the boat for drop by removing the two cargo tiedown straps. **EXCEPTION:** The bow or stern line will remain attached until pilot flying calls, “Boats, Boats, Boats.”

8.3.14. **Seven or Twenty-Man Life Raft**

8.3.14.1. Pre-flight the raft and sign off in the AFTO Form 46 (Life Support Equipment) prior to extended flight over water.

8.3.15. **Personnel Parachute Delivery.** Personnel will exit the aircraft on the command of a qualified jumpmaster after clearance is received from the PIC. Reference USSOCOM Manual 350-3, *Airborne Operations (Parachuting)*.

8.3.15.1. Mission Briefing. The PIC and jumpmaster will conduct a thorough briefing. All aircrew members and the jumpmaster will attend. Ensure a passenger briefing is given. In addition, cover the following items:

8.3.15.1.1. Use of restraining devices.

8.3.15.1.2. Use of doors or ramp.

8.3.15.1.3. Movement in the cargo compartment.

8.3.15.1.4. Hung jumper procedures. (define procedure)

8.3.15.2. Altitude and Airspeed Limitations for Personnel Parachute Delivery (Training).

8.3.15.2.1. Minimum pattern altitude. 1500 AGL/AWL. (1000 ft for SOF when required for contingency training.)

8.3.15.2.2. Delivery Airspeed. 60-90 KIAS. (Specific airspeed must be briefed prior to take-off.)

8.3.15.2.3. Tail skid must be retracted.

8.3.15.3. The jumpmaster will configure the aircraft as required by regulation and unit operating procedures.

8.3.16. **Land Equipment Drops.**

8.3.16.1. Drops should be made at as low an altitude as safety permits, but never above 200 feet AGL.

8.3.17. **Vehicles, Motorcycles, and ATV's.** The T.O. 1H-53(H)B-9 will be referred to when loading any vehicle. When loading and unloading vehicles, use marshalling signals IAW AFI 11-218 and AFI 11-2MH-53 Vol 3 CL 1.

8.3.18. Belay Operations .

WARNING: Belaying ropes will be released prior to landing or forward flight. Ropes may be pulled back into the aircraft. Rope requires a weight, 5 pounds or greater, be attached if pulled back into the aircraft.

- 8.3.18.1. The aircrew is responsible for ensuring accurate rigging of belay equipment and safe deployment from the aircraft.
- 8.3.18.2. The team is responsible for pre-mission inspection of belay equipment and rigging.
- 8.3.18.3. All loose rope will be in a weighted bag.
- 8.3.18.4. The belaying person will maintain control of the rope at all times.
- 8.3.18.5. A gunner's belt, first line belt, and/or Army Swiss Seat will secure all participating personnel.
- 8.3.18.6. Only one package will be connected to the fast rope quick release for deployment.
- 8.3.18.7. The crewmember will maintain positive control of the weight bag prior to releasing the fast rope quick release. Release the weighted bag immediately after the quick release paddle to prevent entanglement and bag to body contact with crewmember.
- 8.3.18.8. Do not deploy the belay equipment until established in a stable hover over the deployment area.
- 8.3.18.9. Fast rope and belaying operations will not occur simultaneously off the ramp.

8.4. Cargo Sling Operations.

- 8.4.1. Brief all personnel conducting sling operations on all aspects of the operation, to include:
 - 8.4.1.1. Rotor Wash effects
 - 8.4.1.2. Hook-up procedures and method
 - 8.4.1.3. Safety
 - 8.4.1.4. Interphone procedures
 - 8.4.1.5. Emergency procedures (in-flight and hovering)
 - 8.4.2. Prior to Sling Operations, PIC will ensure a thorough preflight of all cargo sling and hook components.
 - 8.4.3. Confirm power available is sufficient prior to conducting sling operations.
 - 8.4.4. Move all cargo sling loads slightly before pick-up to ensure that the load is not frozen or held to the surface.
 - 8.4.5. The sling arming switch will be on at or below 500 ft AGL.
 - 8.4.6. Avoid overflight of personnel, buildings or equipment.
- WARNING:** If load begins to develop an undesirable or abnormal aerodynamic characteristics it may be controlled by reducing airspeed and/or coordinated turn.
- 8.4.7. Hook-up personnel will wear protective goggles or helmet with visor down for eye protection.

8.4.8. Turn off the lower strobe light during pick-up and delivery. Other lights may be turned off at the discretion of the aircrew.

8.4.9. Due to electrostatic discharge, hook-up/ground personnel need to ensure the aircraft is properly grounded prior to touching the aircraft in a hover.

8.4.10. Emergency Procedures. It is not practical or necessary to publish all emergency situations that could occur during cargo sling operations. Good training habits and sound judgment eliminates problems when emergencies do occur. The following guidance is given:

8.4.10.1. When using ground hook-up personnel:

8.4.10.1.1. If, prior to hook-up, complete loss power occurs, attempt a hover autorotation to the left to clear the load conditions permitting.

8.4.10.1.2. After hook-up, should engine failure or loss of power occur over land, make every attempt to release the load and execute a hover autorotation (if required) to the left of the load.

8.4.10.1.3. If engine failure or loss of power occurs, the ground crew should consider the following:

8.4.10.1.3.1. Marshaller. Turn away from the aircraft and lie face down on the ground, covering your head with both arms to protect from flying objects, should the aircraft "crash".

8.4.10.1.3.2. Hook-up Person. Take action prebriefed with crew, i.e. hug the load, dive to the aircraft's right to get clear.

8.4.10.1.4. If an in-flight emergency is encountered, external loads should be jettisoned if necessary.

8.4.10.2. When using the cargo hook loading pole (Shepherd's hook), if power is lost while hovering above the load, immediately jettison the load (if necessary) and clear the load to the side which provide the best obstacle clearance or landing surface. Normally, clear the load to the side of the pilot flying. Once clear, execute a normal hovering autorotation or single-engine landing.

8.5. Weapons Employment.

8.5.1. Give flight engineers/gunners an opportunity to test fire weapons prior to any potential engagement. Avoid inhabited areas. When in formation, prior to test fire, the pilot will request permission from flight lead.

8.5.2. Flight engineers/gunners will immediately notify the pilot of gun malfunctions.

8.6. Peacetime SAR On-Scene Procedures.

8.6.1. Human Remains. AFSOC and AETC do not remove human remains from crash or incident sites except as provided in the subparagraph below. Do not commit resources to body removal until the mission approving or releasing authority has been informed of the request and the attendant circumstances, and has authorized the removal of the remains.

8.6.1.1. Military Personnel. If the crash or incident site is on a military reservation or within military jurisdiction, the remains of military personnel shall be removed only with the approval of a medical officer. In the absence of a medical officer at the crash or incident site, approval must be

obtained from the proper military medical authority prior to removal of remains. If the crash or incident site is not within military control, jurisdiction over the remains rests with the civil authorities. In such cases, do not remove remains unless authorized by the appropriate civil official (usually the local coroner or medical examiner).

8.6.1.2. Civilian Personnel. The remains of civilian personnel employed by the military are recovered as stated above. Remains of other civilians may be removed IAW applicable laws of the jurisdiction, after authority has been obtained.

8.6.1.3. Exceptional Cases. In extreme situations where time is critical and communications are impossible, the PIC may, with the approval of the appropriate civil official, remove remains and deliver them to the proper civil authorities. This procedure is authorized only if conditions already make it impossible to obtain timely approval from the mission approving or releasing authority. Whenever this procedure is employed, the PIC must comply with any laws or regulations affecting the transport of human remains.

8.6.2. Civil Appointments. AFSOC and AETC personnel will not, at any time, accept appointments as deputy coroner.

8.6.3. International Aspects. A mission requiring the removal of human remains, military or civilian, across international borders, will involve national as well as local law. Prior to such operations, consult the United States diplomatic officials to the concerned countries to obtain necessary clearances for the operation.

8.6.4. Safeguarding Aircraft Wreckage. Reference AFI 91-204. If first on the scene, establish security until properly relieved. Guard classified matter until competent authority assumes control. Do not disturb personal effects on survivors or deceased. Inventory and store personal effects found in the crash area. Obtain receipts from personnel who assume custody, and retain them with inventories in the unit.

8.6.5. Permission to Enter Private Property. Obtain written permission from the owner or person in control prior to entering private property. Trespass by SAR personnel is excused or justified if it is required by necessity.

8.6.6. Marking Aircraft Wreckage. Obliterating or marking abandoned USAF aircraft wreckage is the responsibility of base commanders (reference AFI 91-204). However, this function may be delegated to an AFSOC unit. Use the following procedures:

8.6.6.1. USAF Aircraft. Mark wreckage with a yellow cross as large as the condition of the wreckage permits. When condition of wreckage prevents a marking easily visible from the air, appropriately mark logs, rocks, and other material in the immediate area.

8.6.6.2. Non-USAF Wreckage. Do not mark or obliterate non-USAF aircraft to guard against possible damage claims against USAF. Paint a yellow cross on material other than aircraft parts.

8.6.6.3. Recording Data on Wreckage. To assist aircraft accident investigations, the recovery team will prepare a written description of the aircraft remnants and their location; the location, attire, and appearance of victims and survivors; evidence of accident cause, including instrument readings, control settings, condition and attitudes of control surfaces and landing gear; and such other data that may assist in analyzing the accident. Make every effort to preserve all aircraft papers, including flight records, charts, maintenance forms, radio logs, etc.

8.6.7. IFF. MH-53 aircraft are authorized to use Mode 3, Code 1277, and call sign, (“AF Rescue XXX {tail number}”), when operating in domestic airspace, when on a VFR flight plan or on the VFR segment of a composite IFR or VFR flight plan, and:

8.6.7.1. On an official SAR mission.

8.6.7.2. Enroute to or from or within a designated search area.

8.7. Non-Tactical Shipboard Operations.

8.7.1. Aircrews will abide by the versions, to include marshaling procedures outlined in the following: Joint Publication 3-04.1 *Joint Tactics, Techniques, and Procedures for Shipboard Helicopter Operations (Electronically or updated CD version)* and AFI 11-218, *Aircraft Operations and Movement on the Ground*.

8.7.2. Currency and Qualification Training. Aircrew will conduct shipboard operations training IAW Navy/Air Force Memorandum of Understanding. Refer to AFI 11-2MH-53 Volume 1 for all training requirements.

8.7.3. Mission Commanders will ensure that all personnel receive a pre-deployment brief consisting of the following:

CAUTION: Aircrews will reference shipboard EMI restrictions in the aircraft flight manual prior to conducting shipboard operations.

8.7.3.1. Launch Procedures and light/hand signals

8.7.3.2. Landing Procedures and light/hand signals

8.7.3.3. Aircraft control doctrine and procedures

8.7.3.4. Emergency procedures peculiar to shipboard operations

8.7.3.5. Special procedures for night and IFR

8.7.3.6. Landing Aids

8.7.3.7. Communication

8.7.3.8. Ship Resume

Chapter 9

DIRECT SUPPORT OPERATOR PROCEDURES

9.1. General. This volume establishes procedures for AFSOC Direct Support Operators (DSO). In addition to the duties established in applicable T.Os and other directives, the DSO will comply with the procedures and duties in this volume. The DSO is responsible for enhancing situational awareness and providing internal, direct threat warning to the aircrew.

9.2. Pre-Deployment/Pre-Mission Procedures.

9.2.1. Theater Analysis. The DSO will coordinate with intelligence personnel and other agencies to obtain pertinent, current, and complete data for the area of operation. The DSO and other aircrew, as necessary, will use obtained data for inclusion in mission planning.

9.2.2. Mission Equipment/Materials. The DSO is responsible for coordinating with all appropriate agencies to obtain any required mission planning materials, professional gear, and SILENT SHIELD equipment. The DSO will ensure all equipment is inventoried and checked to ensure proper operation prior to deployment/flight (as required) for mission accomplishment.

NOTE: The DSO will ensure there is additional equipment (as required) to sustain mission needs for the entire deployment/flight.

9.3. Mission Planning.

9.3.1. Based upon data analysis, the DSO will coordinate with the aircrew to ensure the planned route of flight minimizes aircraft exposure to threats and the probability of detection. The DSO will also use this information to assist the crew in assessing the survivability of the aircraft against known threats.

9.3.2. The DSO will formulate a planned use of SILENT SHIELD equipment based upon the route of flight and brief the crew on anticipated inputs in relation to the route.

9.3.3. Training missions: The DSO will coordinate with the PIC during mission planning for a Combat Mission Profile scenario.

9.3.4. Briefings. The DSO will brief the crew on the following items:

9.3.4.1. Classification of briefing: At the beginning and end of the brief.

9.3.4.2. Anticipated threats/enemy activity

9.3.4.3. Crew interaction/interphone plan

9.3.4.4. SILENT SHIELD capabilities/limitations

9.3.4.5. SILENT SHIELD equipment configuration and if a hot turn is expected, coordinate installation of corresponding tank/landing gear pins and the use of wheel chocks.

9.3.4.6. OPSEC

9.3.4.7. Emergency Destruction

9.4. Pre-flight

9.4.1. Accomplish pre-flight equipment installation and functional checks, as soon as possible, after mission briefing.

9.4.2. Antenna placement: The primary antenna will be the lower side blade antenna installed in the cargo hook compartment. The C2 antenna connection is viable and is used when anticipating cargo hook sling use. Engine running installation (hot turn) of the lower blade antenna requires installing the corresponding auxiliary fuel tank pin and the use of wheel chocks, but notify the PIC prior to proceeding.

9.4.3. The DSO will coordinate maintenance for SILENT SHIELD equipment problems and keep the crew informed as to any potential mission delays or degraded mission capabilities.

9.5. In-flight Duties.

9.5.1. The DSO will be responsible for knowing approximate aircraft location, altitude, and crew intentions at all times.

9.5.2. The DSO will advise the crew of any changes in the status of SILENT SHIELD equipment prior to reaching hostile environment.

9.5.3. The DSO will perform other duties assigned by the PIC.

9.6. Post-Mission Duties.

9.6.1. The DSO will complete debrief form.

9.6.2. The DSO will pass equipment discrepancies to SILENT SHIELD maintenance.

9.6.3. The DSO will provide TECHSUM inputs to supporting SILENT SHIELD analyst.

9.7. Augmentation. Some contingency operations may require non-aircrew personnel from other units to provide Silent Shield support. In these cases, a instructor DSO will be responsible for inputs to aircrew and for safety of augmenting personnel.

Chapter 10

STANDARD OPERATING PROCEDURES

10.1. General.

10.1.1. Units will publish local and unique unit operating procedures. The title of this SOP will indicate the unit concerned. Example, "20 SOS Standard Operating Procedures."

10.1.2. These procedures will not be less restrictive than items contained in this or extracted from other Air Force Instructions. Items may include, but are not limited to the following:

10.1.2.1. Local terrain and weather rules.

10.1.2.2. Local area flying procedures.

10.1.2.2.1. Gunnery/ECM range procedures.

10.1.2.3. Taxi or parking plans, etc.

10.1.2.4. Evacuation or dispersal plans.

10.1.2.5. Training or operational landing/AIE sites.

10.1.2.6. Noise abatement procedures.

10.1.2.7. Standard briefing items and terminology.

10.1.2.8. Standard mission folder/ kneeboard items.

10.1.2.9. Mission planning factors.

10.1.2.10. Copies of these Standard Operating Procedures will be distributed to all affected aircrew members. Forward two copies of these SOPs to HQ MAJCOM/DOV.

10.2. Forms Prescribed

10.2.1. Adopted Forms: No forms are adopted in this publication.

10.2.2. Prescribed Forms: AF Form 847, **Recommendation For Change of Publication**; DD Form 365, **Record of Weight and Balance Personnel**; AFTO Form 781, **ARMS Aircrew/Mission Flight Data Document**; AF Form 15, **USAF Invoice**; AF Form 315, **USAF Aviation Fuel Invoice**; AF Form 457, **USAF Hazard Report**; AF Form 651, **Hazardous Air Traffic Report (HATR)**; AF Form 711, **USAF Mishap Report**; DD Form 175, **Military Flight Plan**; DOD Form 1801, **DOD International Flight Plan**; AFTO Form 46, **Prepositioned Life Support Equipment**; AF Form 4303, **Helicopter Landing Zone Survey**; DD Form 365-4, **Weight and Balance Clearance Form F-Transport**; DD Form 96, **Passenger Manifest**.

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Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 11-202V1, *Aircrew Training*

AFI 11-202V2, *Aircrew Standardization/Evaluation Program*

AFI 11-202V3, *General Flight Rules*

AFI 11-205, *Aircraft Cockpit and Formation Flight Signals*

AFI 11-215, *Flight Manuals Program (FMP)*

AFI 11-218, *Aircraft Operations and Movement on the Ground*

AFI 11-301V1, *Aircrew Life Support (ALS) Program*

AFI 11-401, *Aviation Management*

AFI 11-403, *Aerospace Physiological Training Program*

AFI 13-217, *Drop Zone and Landing Zone Operations*

AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*

AFI 23-202, *Buying Petroleum Product, and Other Supplies and Services Off-Station*

AFI 24-401, *Customs—Europe*

AFI 24-402, *Customs – Pacific*

AFI 24-403, *Customs – Southern*

AFI 24-404, *Customs -- Domestic*

AFI 31-207, *Arming and Use Of Force By Air Force Personnel*

AFI 31-401, *Information Security Program Management*

AFI 91-202, *The US Air Force Mishap Prevention Program*

AFI 91-204, *Safety Investigations and Reports*

AFJI 11-204, *Operational Procedures for Aircraft Carrying Hazardous Material*

AFMAN 11-217 V1 and V2, *Instrument Flight Procedures*

AFMAN 24-204(I), *Preparing Hazardous Materials for Military Air Shipments*

AFMAN 31-229, *USAF Weapons Handling Manual*

AFMAN 37-139, *Records Disposition Schedule*

AFMAN 91-201, *Explosives Safety Standards*

AFTTP 3-3 Vol 34 *MH-53J/M Combat Aircraft Fundamentals*

CJCSI 3900.01. Chairman Joint Chiefs of Staff Instruction, Position Reference Procedures, 21 Mar 94

DOD 4515.13-R, *Air Transport Eligibility*

DOD 4500.54-G, *Foreign Clearance Guide*

DOD 5200.1, *DOD Information Security Program*

DODI 5000-2, *Defense Acquisition*

FAA AC 90-45A, *Approval of Area Navigation Systems for use in the U.S. National Airspace System*

Joint Pub 3-04.1, *Joint Tactics, Techniques and Procedures for Shipboard Helicopter Operations*

Joint Pub 3-50, *National Search and Rescue Manual Volume 1*

NAEC-ENG-7576, *Shipboard Aviation Facilities Resume*

NAVAIR 13-1-6.5, *Rescue and Survival Equipment*

TO 1-1A-8, *Emergency Manual Series, Aircraft & Missile Repair, Structural Hardware*

TO 1-1C-1-20, *Flight Crew Refueling Procedures*

TO 14D1-2-2, *TCTO Series*

TO 1H-53(M) J-1, *Flight Manual, USAF Series, MH-53J Helicopter*

TO 1H-53(M) M-1, *Flight Manual, USAF Series, MH-53M Helicopter*

TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*

TO 00-75-5, *Use, Inspection and Maintenance Stokes Rescue Litters*

TO 11A10-24-7, *Aircraft Parachute Flares, Specialized Storage and Maintenance Practices*

TO 11A10-25-7, *Pyrotechnic Signals, Specialized Storage and Maintenance Practices*

TO 11A10-26-7, *Storage and Maintenance Procedures, Pyrotechnic Signals*

TO 11A8-2-1, *Operating Instructions, Hand and Rifle Grenades*

TO 11A8-5-5, *Storage and Maintenance Procedures, Grenades, Hand and Rifle*

TO 11W1-13-5-2, *Field Maintenance and overhaul Instructions Gun, Automatic 7.62MM*

TO 11W1-13-3-132, *Aircraft Machine Gun Caliber .50 XM 218*

USSOCOM Manual 350-2, *Joint Air Asset Allocation Conference*

USSOCOM Manual 350-3, *Airborne Operations (Parachuting)*

USSOCOM Manual 350-4 Vol 1, *Combat Swimming/Diving Operations*

USSOCOM Manual 350-4 Vol. 2, *Combat Rubber Raiding Craft Operations*

USSOCOM Manual 350-5, *Joint Helicopter Operations*

USSOCOM Manual 350-6, *Special Operations Forces Infiltration/Exfiltration Techniques*

Abbreviations and Acronyms

AGL—above ground level.

AHO—above highest obstacle.

ARC—Air Reserve Component.

AWL—above water level.

COMAFSOF—Commander Air Force Special Operations Forces.

DSO —Direct Support Operator

FARP—Forward Area Resupply Point

FEBA—forward edge of battle area.

FLOT—forward line of troops.

FOL—FORWARD OPERATING LOCATION.

FRIES—FAST ROPE INSERTION and EXTRACTION SYSTEM.

IDAS/MATT—INTERACTIVE DEFENSIVE AVIONICS SYSTEM/MULTI-MISSION ADVANCED TACTICAL TERMINAL.

IIMC—INADVERTENT INSTRUMENT METEOROLOGICAL CONDITIONS

JSOTF—JOINT SPECIAL OPERATIONS TASK FORCE.

LZ—LANDING ZONE.

MSA—MINIMUM SAFE ALTITUDE.

NVG—NIGHT VISION GOGGLE.

NWO—NIGHT WATER OPERATIONS.

OPCON—OPERATIONAL CONTROL

OPR—OFFICE OF PRIMARY RESPONSIBILITY

RNAV—AREA NAVIGATION.

SOF—SPECIAL OPERATIONS FORCES.

SPIES—SPECIAL PATROL INSERTION and EXTRACTION SYSTEM.

Terms

Abort—To turn back from or cut short a mission before its successful completion for reasons other than enemy action. This may occur after an aircraft is airborne or on the ground before takeoff.

Additional Crewmember (ACM)—An additional crewmember is one assigned in addition to the normal aircrew complement required for a mission for purposes of performing flight evaluations, supervising, or monitoring inflight procedures.

Alert Aircraft—An operationally ready aircraft specifically designated to be launched IAW timing factors established for the assigned missions with a ready crew available.

Available Crew—Operationally qualified aircrew which has completed the allotted ground time since completion of a mission and can be available for aircrew duty within one hour.

Backup Aircraft—Any aircraft ready, available, and unassigned which may be substituted for the assigned aircraft for specific missions.

Basic Crew—The crew complement required to accomplish a mission. The basic crew is determined by

the tasking and the aircraft flight manual. Basic crew may be in excess of the flight manual minimum crew (pilot, copilot, flight engineer).

Basic Mission Capable—Crewmembers qualified and current to perform some portion of the unit mission, but who do not maintain mission ready status.

Bingo Fuel—The computed fuel remaining at a point in flight that will allow safe return to the point of intended landing.

Border Clearance—Those clearances and inspections required to comply with federal, state, and Agricultural Customs, Immigration, and Immunization requirements.

Chalk Number—Numerical position of each wingman in the formation; i.e., "two, three, four."

Commander, Air Force Special Operations Forces (COMAFSOF)—The commander designated by USCINCSOC for CONUS deployments or by theater SOC/CCs for overseas deployments, who is responsible for management of Air Force Special Operations Forces (AFSOF) within a theater, a geographic area, or a designated operation. The COMAFSOF is responsible to USCINCSOC for management of CONUS-deployed AFSOF or to the respective SOC/CC for management of theater assigned AFSOF and is responsible to COMAFSOF for monitoring and management of AFSOF operating within the specific area of responsibility.

Command and Control—An arrangement of personnel and facilities, plus the means of acquisition, processing, and dissemination of information, used by a command in planning, directing, and controlling operations.

Contingency Mission—A mission operated in direct support of an OPLAN, operation order, disaster, or emergency.

Crew Complement—The number of crew personnel used for a specific mission.

Diversion—Operational term for the inflight diversion of a mission from its point of intended landing to any other location.

Designated Representative—Individuals authorized in writing by the appropriate command level as having decision-making authority.

Deviation—A deviation occurs when:

The takeoff time is greater than 0.2 hours (14 minutes) after scheduled takeoff time.

The takeoff time is greater than 0.3 hours (20 minutes) prior to scheduled takeoff time.

Exercise—A military maneuver or simulated wartime operation involving planning, preparation, and execution. It is carried out for the purpose of training or evaluation. It may be combined, joint, or single-service, depending on participating organizations.

Extended Overwater Flight—Flight beyond the navigation aid or communications receiving capability of the aircraft.

Forward Area Resupply Point (FARP)—A ground site designated for quick refueling/rearming.

Hazardous Cargo or Materials—Explosive, toxic, caustic, nuclear, combustible or flammable, biologically infectious, or poisonous materials that may directly or indirectly endanger human life or property, particularly if misused, mishandled, or involved in accidents (AFI 11-204, AFMAN 24-204I; TO 11N-20-11).

HEEDS—Helicopter Emergency Egress Device.

Hot Refueling—Hot refueling is the transfer of fuel into the fuel tanks of an aircraft with one or more aircraft engines operating.

Initial Point (IP)—A point near drop zones, landing zones, or extraction zones over which final course alterations are made to arrive at the specified zone.

Intermittent or Temporary Weather Conditions—The definition of these two terms can be considered synonymous for aircrew use. They describe the weather (cloud coverage and height, visibility, and winds, including gusts) that is expected to exist for periods of 30 minutes or less and forecast to occur less than one-half of the forecast period.

LATN—Low Altitude Tactical Navigation.

Low and Slow Approach—An approach to water utilizing Pave Low unique systems in order to accomplish swimmer/equipment deployment day or night. This maneuver will apply to operations below 50 feet AWL and does not apply to hoisting operations.

Manifest—Movement record of traffic airlifted on aircraft operated by, for, or under the control of the Air Force.

METT-T—Mission, enemy, terrain and weather, troops and support available and time available. Factors to be considered in estimating the situation during the planning of a military operation.

Mission Capable Fuel—The minimum fuel required to complete the mission, as planned, and land at the destination with the required fuel reserves.

Mission Following—Monitoring the location and status of aircraft and crews through the use of departure, arrival, and advisory messages.

Mission Ready—Crewmembers fully qualified and current to perform the unit mission.

Night Water Operations—Low and slow, rope ladder, fast rope, CRRC deployment, and hoist operations below 50' AWL utilizing NVGs/PAVELOW systems.

Operationally Ready Aircraft—An aircraft which is capable of flight with all required equipment operable to carry out the primary assigned mission

Station Time—A specified time at which aircrew, passengers, and material are to be in the aircraft and prepared for flight. Passengers will be seated and loads tied down. Aircrews will have completed briefing and aircraft preflight inspection prior to station time.

Twilight—The periods of incomplete darkness following sunset and before sunrise. Civil twilight is designated when the center of the sun is 6 degrees below the celestial horizon, about 24 -28 minutes before and after sunrise or sunset.

Attachment 2

REQUIRED PUBLICATIONS LISTING

<i>PUBLICATION</i>	<i>P</i>	<i>FE</i>	<i>AG</i>	<i>DSO</i>
AFI 11-202 V1	I	I	I	I
AFI 11-202 V2	E	E	E	E
AFI 11-202 V3	X	X	X	X
AFMAN 11-217 V1	X			
AFMAN 11-217 V2	X			
AFI 11-2MH-53 V1	I	I	I	I
AFI 11-2MH-53 V2	E	E	E	E
AFI 11-2MH-53 V3	X	X	X	X
AFI 11-2MH-53 V3 CL-1	X*	X*	X*	X*
AFI 11-401	X	I	I	I
FCIS/FCB (NOTE 1)	X	X	X	X
AFI 13-217	I			
T.O. 1-1C-1	X	X		
T.O. 1-1C-1-20	X	X*		
T.O. 1-1C-1-20 CL 1	X [^] *	X [^] *		
TO 1H-53(M)J-1	X [^]	X [^] *		
TO 1H-53(M)J-1CL-1	X [^] *	X [^] *		
TO 1H-53(M)J-1 CL-2		X [^] *		
TO 1H-53(M)M-1	X [^]	X [*] [^]	X [^]	
TO 1H-53(M)M-1 CL-1	X [*] [^]	X [*] [^]		
TO 1H-53(M)M-1 CL-2		X [*] [^]	X [*] [^]	
TO 1H-53(M)J-5		X*		
TO 1H-53(H)B-9		X*	X	
11W1-13-5-2			X	
11W1-13-3-132			X	
AFTTP 3-3 VOL 34	X	X*	X	
USSOCOM MANUAL 350-3	X [^]			
USSOCOM MANUAL 350-4 VOL 1		X	X [^] #	
USSOCOM MANUAL 350-4 VOL 2		X	X [^] #	
USSOCOM MANUAL 350-6		X	X [^] #	

I- Instructor

E- Evaluator

X- All

* required in flight

[^] only in applicable units # required for TDY

NOTE: AETC crews follow guidance contained in 58 OGI 11-202, AETC Supplements for FCIF and FCB requirements.