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Flying Operations

C-12 OPERATIONS PROCEDURES

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This instruction implements AFD 11-2, *Aircraft Rules and Procedures*. It establishes procedures for the operation of C-12 aircraft to safely and successfully accomplish worldwide missions. MAJCOMs may supplement this instruction according to AFD 11-2 to address mission unique requirements. In no case will the supplement be less restrictive than the basic document. 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. This AFI does not apply to the Air National Guard or Air Force Reserve Command.

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SUMMARY OF REVISIONS

This revision incorporates interim change (IC) 2001-1, which changes the requirement for electric elevator trim (**Table 4.1.**); modifies the minimum runway length and width for takeoff and landing for specified DIA pilots (paragraphs **5.15.3.1.3.**, **5.15.3.2.**, and **5.15.3.3.3.**); deletes requirement to inform FAA when an official hazardous air traffic report is filed (paragraph **8.3.1.5.**, note); adds an exception for touch-and-go landings (paragraph **9.3.1.**); changes the title of **Chapter 23** to make it not applicable to DIA aircraft (**Chapter 23**); and updates office symbols. See the last attachment of the publication for the complete IC. A “|” indicates revision from the previous edition.

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CHAPTER 1

GENERAL INFORMATION

1.1. General. This instruction applies to all Air Force units operating C-12 aircraft. It provides guidelines for C-12 operations and applies to C-12 aircrews and all management levels concerned with operation of the C-12. It is a compilation of information from aircraft flight manuals, flight information publications (FLIP), and other Air Force directives as well as an original source document for many areas. Copies of this publication will be current and available to planning staffs from headquarters to aircrew level. A copy of this instruction will also be maintained by transportation and base operations passenger manifesting agencies.

1.2. Deviations and Waivers. Do not deviate from the procedures and guidance in this publication under normal circumstances, except:

1.2.1. For safety.

1.2.2. When it is necessary to protect lives or when safety of flight dictates, the aircraft commander has ultimate authority and responsibility for the course of action to be taken. Report all deviations or exceptions without waiver through channels to the major command (MAJCOM) office of primary responsibility (OPR).

1.2.3. Unless otherwise directed, MAJCOM DOs have waiver authority for this publication according to AFPD 11-2, *Aircraft Rules and Procedures*. If necessary, waiver authority may be delegated to local commanders for specific areas of this document in the appropriate MAJCOM supplement. Forward copies of waivers to this instruction to HQ AETC/DOF. **EXCEPTION:** Waiver authority for contingency missions is listed in the operation order (OPORD)/tasking order, etc., or the director, mobility forces (DIRMOBFOR) (or equivalent) for the agency with command and control (C2) of the aircraft. Crewmembers may request additional information or confirmation from their home units or MAJCOM DO.

1.3. Supplement Procedures. MAJCOMs may supplement this AFI according to AFPD 11-2. Units may publish local procedures as **Chapter 10** of this AFI. Supplements and local procedures will not duplicate, alter, amend, or be less restrictive than the provisions of this basic AFI or flight manual publications.

1.3.1. Prior to publication, MAJCOMs will send one copy of supplements to the lead command OPR and HQ AFFSA/XOF for validation.

1.3.2. Prior to publication, units will send one copy of **Chapter 10** to the parent MAJCOM OPR for validation.

1.3.3. Send final copies to HQ USAF/XO, HQ AETC/DOF, parent MAJCOM, and the appropriate NAF.

1.4. Improvement Recommendations. Send comments and suggested improvements to this instruction on AF Form 847, **Recommendation for Change of Publication**, through user-MAJCOM channels to HQ AETC/DOF, 1 F Street, Suite 2, Randolph AFB TX 78150-4325, according to AFI 11-215, *Flight*

Manuals Program, and MAJCOM supplement. HQ AETC/DOF will forward all AF Forms 847 to HQ USAF/XO for approval.

CHAPTER 2

COMMAND AND CONTROL

2.1. General. Command and control of Air Force C-12 aircraft is exercised through either HQ AETC/DO or PACAF Air Operations Squadron (AOS) and PACAF numbered Air Forces (NAF). Contingency requirements may dictate that other command and control centers (CCC) exercise operational control. CCCs are executive agents for commanders exercising operational control over mobility forces. The CCC network consists of the United States Transportation Command (USTRANSCOM)/Joint Operational Support Airlift Center (JOSAC), AMC TACC, theater air operations centers (AOC), air mobility elements (AME), unit CCCs, air mobility control centers (AMCC), tanker airlift control elements (TALCE), combat control teams (CCT), and the USAFE AOS.

2.2. Execution Authority. Execution approval will be received through the local command post or command element. The unit commander is the executing authority for local training missions. The aircraft commander is the executing authority for missions outside communications channels.

2.2.1. Supplemental Training Mission (STM). Opportune airlift of cargo and mission personnel may be accomplished as a by-product of crew training missions. STMs may be authorized when minor adjustments can be made to a scheduled training mission or when a productive aircrew training mission can be generated for the airlift. The training mission will not be degraded in any manner to accomplish the STM. Use of STMs for logistical support are only authorized when normal military or commercial transportation modes are unable to provide required support. On STMs, aircraft commanders will release the maximum number of space-available seats commensurate with mission requirements and safety.

2.2.2. Off-Station Training Flights (OSTF). Wing commanders are the approval authorities for off-station trainers. This authority may be delegated to operations (or training) group commanders. Prior to approval, commanders will carefully review each proposed trainer's itinerary to ensure it justifies and represents the best avenue for meeting training requirements. Each training mission must be structured to achieve maximum training. Any by-product airlift opportunity resulting from training must not degrade the intended training in any way and must comply with applicable Department of Defense (DoD) instructions. Any use of flying training hours to accomplish other than direct training requirements must be approved by the appropriate NAF commander.

2.3. Aircraft Commander Responsibility and Authority. An aircraft commander is designated for all flights on the flight authorizations according to AFI 11-401, *Flight Management*, and applicable MAJ-COM supplement. Aircraft commanders are:

- 2.3.1. In command of all persons aboard the aircraft.
- 2.3.2. Responsible for the welfare of the crew and the safe accomplishment of the mission.
- 2.3.3. Vested with the authority necessary to manage crew resources and accomplish the mission.
- 2.3.4. The final mission authority and will make decisions not specifically assigned to higher authority.
- 2.3.5. The final authority for requesting or accepting any waivers affecting the crew or mission.

2.3.6. Charged with keeping the applicable C2 or executing agencies informed concerning mission progress.

2.3.7. Responsible for ensuring that only activity authorized by the executing authority is accomplished, unless emergency conditions dictate otherwise (for example, unscheduled “bootleg” transition training is not authorized without the approval of the executing authority).

2.4. Mission Clearance Decision. When conditions are not correct to start or continue a mission, the executing agency or the aircraft commander may decide to delay a mission. Final responsibility for the safe conduct of the mission rests with the aircraft commander. If the aircraft commander refuses a mission, the mission will not depart until the conditions have been corrected or improved so that the mission can operate safely. Another aircraft commander and aircrew will not be asked to take the same mission under the same conditions.

2.4.1. Rerouting or diverting a mission should be authorized by the execution authority, except in an emergency or when required by en route or terminal weather conditions.

2.4.1.1. The controlling agency directing the rerouting or diversion is responsible for ensuring the aircraft is compatible with departure, en route, and destination requirement and facilities.

2.4.1.2. The aircraft commander will notify the appropriate command center of any aircraft or aircrew limitation that may preclude diverting or rerouting the mission.

2.4.2. When directing an aircraft to an alternate airfield, the CCC will ensure the aircraft commander is provided existing and forecast weather for the alternate. If the planned alternate airfield becomes unsuitable while en route, the aircraft commander will coordinate with the CCC for other suitable alternates. The aircraft commander is the final authority on selecting a suitable alternate.

2.5. Aircrew Responsibilities. The aircraft commander is the focal point for interaction between aircrew and mission support personnel. The local C2 agency is the focal point for all mission support activities. Aircraft commanders must inform C2 of any factor that may affect mission accomplishment. When transiting a stop without a C2 agency, the aircraft commander is responsible for ensuring necessary mission information is placed into the C2 system by the most expeditious means available. The aircraft commander will establish a point of contact with the appropriate C2 agency before entering crew rest.

2.6. Operational C2 Reporting. All units will establish C2 reporting procedures and requirements for their missions.

2.6.1. En Route Reporting. Adhere to the following procedures:

2.6.1.1. Continental United States (CONUS). CCCs may advise aircrews via the controlling air traffic control (ATC) agency to establish contact when communication is needed. Periodic “ops normal” calls or global high frequency (HF) station frequencies are not normally required.

2.6.1.2. Outside the Continental United States (OCONUS). As coordinated and required on a case-by-case basis.

NOTE: Any HF transmissions will be restricted to operational traffic, such as, movement reporting, itinerary revisions, maintenance status, flight plan information, etc.

2.6.2. Arrival Advisory:

2.6.2.1. Aircrews on operational missions transmit arrival advisory to the destination CCC when applicable. Furnish the following information:

2.6.2.1.1. Aircraft call sign.

2.6.2.1.2. Mission number.

2.6.2.1.3. Estimated time in block (ETB).

2.6.2.1.4. Maintenance status. (See [Attachment 1](#), terms, for a list of maintenance status codes.)

2.6.2.1.5. Distinguished visitor (DV) status and honors codes. (Transmit the DV code of each DV on board.)

2.6.2.2. Aircrews transmit an ultra high frequency (UHF) or very high frequency (VHF) arrival advisory as soon as contact can be established with the destination CCC. Furnish the following information:

2.6.2.2.1. Aircraft call sign.

2.6.2.2.2. Mission number.

2.6.2.2.3. ETB.

2.6.2.2.4. Maintenance status.

2.6.2.2.5. DV code and requirements.

2.6.2.2.6. Additional crewmembers (ACM).

2.6.2.2.7. Number of passengers.

2.6.2.2.8. Hazardous cargo and remote parking requirements.

2.6.2.2.9. Additional service required.

2.6.2.2.10. Passengers and or cargo capability for the next mission segment.

2.6.2.2.11. Fuel requirements.

2.6.3. DV Messages. Airborne unclassified messages originated by DV passengers may be transmitted at the discretion of the aircraft commander.

2.7. Mission Commanders. Mission commanders will:

2.7.1. Be required when more than two aircraft are assembled to perform missions away from home station. With two aircraft, the tasked unit will designate an aircraft commander for overall mission responsibility, crew duties, and crew rest. When conflicts with crew responsibilities exist, a separate mission commander should be appointed to ensure mission coordination is accomplished.

2.7.2. Ensure required mission briefings are completed by all collocated aircrews. The mission commander and all aircrew members will attend the appropriate MAJCOM pre-takeoff briefing.

2.8. C2 Agency Telephone Numbers. Units should publish a listing of telephone numbers to assist crews in coordinating mission requirements through appropriate C2 agencies. It should be made readily

available to crews by publishing it in the flight crew bulletin (FCB), read file, or other appropriate publication.

CHAPTER 3

CREW MANAGEMENT

3.1. Aircrew Qualification. Primary crewmembers or those occupying a primary position during flight must be qualified or in training for qualification. If noncurrent, or in training for a particular event, the crewmember must be under the supervision of an instructor while accomplishing that event (direct supervision for critical phases of flight). The following exceptions apply:

3.1.1. Senior staff members who have completed a senior staff familiarization course may occupy either pilot seat under direct IP supervision. These individuals will log "OP" for flight authorization duty code on the AFTO Form 781, **AFORM Aircrew/Mission Flight Data Document**.

3.1.2. For straight and level flights, one pilot may leave the duty station for brief periods to meet physiological needs and to perform normal crew duties.

3.2. Pilots:

3.2.1. Missions With Passengers. With passengers on board, the pilot or copilot may make takeoff, climb-out, flight under actual instrument conditions, approach, and landing. Only a qualified individual (current and possesses a valid AF Form 8, **Certificate of Aircrew Qualification**) will occupy a pilot's seat with passengers on board the aircraft. One of the following conditions must be met:

3.2.1.1. Two qualified and current pilots must be at the controls.

3.2.1.2. A mission ready (MR) pilot regaining currency and an IP providing direct IP supervision must be at the controls.

NOTE: Touch-and-go landings with passengers are prohibited.

3.2.2. Distinguished Visitor (DV) Operating Procedures:

3.2.2.1. Incumbents of general officer positions who desire to fly:

3.2.2.1.1. Must fly under the supervision of an instructor pilot if not fully mission ready.

3.2.2.1.2. Must have a valid AF Form 8 for basic aircraft qualification on all missions with passengers.

3.2.2.1.3. Must have a current instrument refresher course (IRC) and instrument evaluation.

3.2.2.2. When a supported general officer has flight authority and has indicated a desire to fly, the local unit will include the general officer on the AFORMS flight authorization. (See AFI 11-401.)

3.2.2.3. When a general officer, not mission ready, occupies a primary crew position on an operational mission, an additional pilot will accompany the mission.

3.2.3. Qualification Training. Initial qualification, requalification, or upgrade training for pilots will not be conducted on missions with passengers on board. Mission qualification training and mission evaluations may be conducted on missions with passengers on board only if the individual in training is qualified (completed aircraft checkride with a valid AF Form 8).

3.2.4. Left Seat Training. Current and qualified copilots may fly in the left seat provided they are under IP supervision (direct IP supervision for critical phases of flight and taxi operations).

3.3. Crew Complement. Minimum crew complement for a basic flight duty period (FDP) is one aircraft commander (AC) and one copilot (CP). There are no augmented C-12 crews.

3.4. Additional Crewmember (ACM). MAJCOMs will establish ACM guidance in their supplement to this publication or AFI 11-401. Unit commanders may authorize ACM status to crewmembers traveling to or from locations to accomplish training or evaluation requirements.

3.4.1. Procedures:

3.4.1.1. All ACMs require valid orders annotated with ACM authority. A memorandum or message approving ACM status satisfies this requirement. Unit commanders authorizing crewmembers to travel as primary crewmembers, ACM, or combination of duty status with personal leave (during the deployment) must clearly specify the crewmember status during each phase of travel.

3.4.1.2. Other than flight examiners, ACMs are not entitled to log flying time. Positioning and depositing crewmembers traveling in ACM status will not log flying time unless specifically required and authorized to augment a primary crew position. Flight surgeons, etc., may log time according to AFI 11-401.

3.4.1.3. C-12 units will coordinate planned ACMs with the controlling agency. Duty passengers, once scheduled by the controlling agent or manifested, will not be displaced by ACM travelers. However, ACMs have priority over space-available passengers. Both originating and through-load space-available passengers may be displaced by ACM travelers provided the CCC is notified not later than 1 hour prior to departure. Once final passenger loads and seat assignments are made, passengers will not be moved from their assigned seats by ACMs.

3.4.1.4. ACMs desiring travel must notify the aircraft commander at least 1 hour prior to the planned departure time.

3.4.2. Briefings. The aircraft commander or designated representative (normally, a crew ACM counterpart) will brief ACMs on at least the following items:

3.4.2.1. Seat assignment.

3.4.2.2. Appropriate mission information.

3.4.2.3. Emergency procedures including egress (briefing commensurate with ACM's crew qualification).

3.4.2.4. Armed crewmembers (if applicable).

3.4.3. Priority of ACM Travel. Flight examiners have priority and will not be displaced by any other ACMs. The priority of travel for flight examiners is MAJCOM, NAF, wing or group, then squadron.

3.5. Mission-Essential Ground Personnel (MEGP). MEGP status is granted to certain individuals performing unique support duties directly associated with and essential to a particular aircraft, aircrew, or mission. MEGP authority must be on the individual's orders or other written authorization. MEGPs will be manifested (use DD Form 2131, **Passenger Manifest**) and antihijack processed by the aircrew according to AFI 13-207, *Preventing and Resisting Aircraft Piracy [Hijacking]*).

3.5.1. Documentation. MEGPs should normally be documented on DD Form 2131. **EXCEPTION:** Commanders may include MEGPs and contract maintenance personnel on the flight authorization form when warranted for mission accomplishment.

3.5.2. Aircrew Procedures. Touch-and-go landings are allowed. MEGP travel status will be strictly controlled and approved by the appropriate unit standardization/evaluation (stan/eval).

3.6. Scheduling Restrictions. Crewmembers will not be scheduled to fly or perform crew duties under the following conditions:

3.6.1. When the maximum flying time limitations of AFI 11-202, volume 3, *General Flight Rules*, will be exceeded.

3.6.2. After consuming alcoholic beverages within 12 hours of takeoff, or when under the influence of alcohol.

3.6.3. After consuming alcoholic beverages within the 12-hour period prior to assuming ALFA standby force duty.

3.6.4. Within 72 hours of donating blood. The flying unit commander must approve the donation of blood by crewmembers who are subject to flying duties within this 72-hour period. **NOTE:** Crewmembers should not normally donate blood.

3.6.5. When taking oral or injected medication, unless individual medical waiver has been granted by the Command Surgeon. Crewmembers may not self-medicate except according to AFI 48-123, *Medical Examination and Standards*. The following is a partial list of medications which may be used without medical consultation:

3.6.5.1. Skin antiseptics, topical antifungals, 1 percent hydrocortisone cream, or benzoyl peroxide for minor wounds and skin diseases that do not interfere with the performance of flying duties or wear of personal equipment.

3.6.5.2. Single doses of over-the-counter aspirin, acetaminophen or ibuprofen to provide analgesia for minor self-limiting conditions.

3.6.5.3. Antacids for mild, isolated episodes of indigestion.

3.6.5.4. Hemorrhoidal suppositories.

3.6.5.5. Bismuth subsalicylate for mild cases of diarrhea.

3.6.5.6. Oxymetazoline or phenylephrine nasal sprays when used by aircrew members as “get me downs” in the event of unexpected ear or sinus block during flight. These should not be used to treat symptoms of head congestion existing prior to flight.

3.6.6. Within 24 hours of compressed gas diving (including scuba); surface-supplied diving, or hyperbaric (compression) chamber exposure and aircraft pressurization checks that exceed 10 minutes duration.

3.6.7. Within 12 hours after completion of a hypobaric (altitude) chamber flight above 25,000 feet. Personnel may fly as passengers in aircraft during this period, provided the planned mission will maintain a cabin altitude of 10,000 feet mean sea level (MSL) or less. For altitude chamber flights to a maximum altitude of 25,000 feet or below, aircrew members may fly without delay as crewmembers or passengers if their cabin altitude does not exceed 15,000 feet.

NOTE: Do not take off early (prior to scheduled departure time) if the early takeoff time would violate these restrictions.

3.7. Alerting Procedures. Aircrews will normally self-alert. The controlling C2 agency may be used to assist in aircrew alerting. If other agencies are used, establish an alert time of 3+00 prior to scheduled takeoff.

3.7.1. Crew show time will normally be 2+00 hours prior to scheduled takeoff time. The AC may establish other reporting times as required for mission accomplishment, such as scheduled mission departure time changes, etc.

3.7.2. On the aircrew's initial entry or reentry into crew rest, the aircraft commander will establish an expected show time. The crew may not be disturbed before this time except for emergencies.

3.8. Crew Duty Time (CDT) and Flight Duty Period (FDP). CDT is the amount of time an aircrew may perform combined flight and ground duties. FDP is the time period between mission reporting and final aircraft engine shutdown. For planning purposes, CDT normally consists of FDP plus 45 minutes, not to exceed the maximum CDT. When post-flight duties exceed 45 minutes, CDT is FDP plus the time required to complete the post-flight related duties.

3.8.1. CDT and FDP both begin at show time, with the following exceptions:

3.8.1.1. ALFA Standby. CDT and FDP begin when the crew is told to launch.

3.8.1.2. BRAVO Standby. CDT and FDP begin when the crew shows for duty.

3.8.1.3. Crewmembers Performing Other Duties Prior to Flight Related Duties. CDT and FDP begin when reporting for other duties.

3.8.1.4. Crewmembers Showing Early to Perform Mission-related Duties. CDT and FDP begin when reporting for these duties.

3.8.2. The length of FDP will be established by the mission directive or controlling CCC when the crew shows for duty and is briefed for the mission.

3.8.3. FDP ends at engine shutdown following completion of the final mission segment.

3.8.4. Normally, CDT ends 45 minutes after engine shutdown at the end of the mission. If any crewmember must perform mission-related duties past 45 minutes, CDT does not end until that crewmember completes these duties. These duties include up or down loading, servicing, debriefing, mission planning, etc. Post-mission duties will not be performed after the maximum CDT has expired.

3.8.5. Maximum FDP for a basic crew is 14 hours. The basic FDP is 12 hours without an operative autopilot pitch axis. Maximum CDT for a basic crew is 16 hours.

3.8.6. The C-12 does not have in-flight crew rest facilities for an augmented crew capability.

3.8.7. Maximum FDP for training missions is 14 hours. Transition duty day for training missions is 12 hours. Transition duty day begins at the start of CDT.

3.8.8. If the autopilot fails after departure, notify the CCC, continue to the next stop, and comply with the preceding limitations.

3.8.9. Deadhead time is the time for crewmembers in passenger or ACM status, positioning or de-positioning for a mission or mission support function. Crewmembers may perform primary crew duties

after deadheading if they will not exceed a basic FDP for the mission to be flown beginning at reporting time for the deadhead flight. Crewmembers may deadhead following primary crew duties if they will not exceed a 24-hour CDT beginning at reporting time for primary crew duties.

3.8.10. After considering the safety and capability of their crew, aircraft commanders on operational missions may request the MAJCOM DO extend the FDP. This extension does not change CDT limits. CDT extensions and extensions to the FDP exceeding 2 hours require MAJCOM DO approval.

3.8.11. Flight examiners administering evaluations will not exceed basic FDP.

3.8.12. Waiver authority for FDP and CDT on operational missions is the MAJCOM DO. Waivers are not normally authorized for missions under the operational control of the home unit (locals). If a waiver is required due to urgent situational factors, the operations group commander or equivalent is the waiver authority.

3.9. Crew Rest:

3.9.1. Home Station Predeparture Crew Rest. All primary and deadhead crewmembers should enter crew rest 24 hours prior to reporting time for missions scheduled away from home station for more than 14 hours. Crewmembers may perform limited nonflying duties, including mission planning, during the first 12 hours of this period. For all other missions, crewmembers will enter crew rest 12 hours before scheduled show time. Deadhead crewmembers will not be manifested as passengers to reduce or eliminate crew rest requirements.

3.9.2. En Route Crew Rest and Ground Time:

3.9.2.1. Crew rest normally begins 45 minutes after engine shutdown. The 45-minute time period provides crews with time to complete normal post-flight duties. These duties include, but are not limited to, refueling, uploading and downloading of cargo, performing maintenance, or completing mission debriefings.

3.9.2.2. If a crewmember must stay at the aircraft past the 45-minute period, crew rest does not begin until he or she has completed these post-flight duties.

3.9.2.3. The minimum crew rest period is 12 hours. This period provides the crew a minimum of 8 hours of uninterrupted rest plus time for transportation, free time, and meals. The crew will not normally be disturbed during this period, except during emergencies. Should the 12-hour crew rest period be infringed upon by official duties, the crew will enter crew rest for an additional 12 hours on completion of the official duties.

3.9.2.4. A minimum 15+45 ground time between engine shutdown and mission takeoff should normally be planned unless extended post-flight duties are anticipated. This allows 45 minutes for post-flight duties, 12 hours of rest, 1 hour to show, and 2 hours to takeoff. The time between show and takeoff may be shortened to 1+30 for a minimum time of 15+15, when requirements dictate. The controlling agency must coordinate this with the unit.

3.9.2.5. The aircraft commander may modify normal ground time as follows:

3.9.2.5.1. In the interest of safety.

3.9.2.5.2. To no less than 12 hours from the start of crew rest until mission reporting. Before reducing normal ground time, consider mission preparation time, time to load cargo, and other factors peculiar to the mission. The controlling C2 agency will not ask the aircraft commander

to accept less than a normal ground time. Waivers for exercises and contingencies are according to AFI 11-401.

3.9.2.5.3. To a maximum of 36 hours, when the crew has completed three consecutive near maximum CDTs.

NOTE: Flight crews should be afforded crew rest times in excess of the minimum at en route stations, when possible, to give crews the opportunity to overcome the cumulative effects of fatigue while flying on several consecutive days or transiting several time zones.

3.9.3. Post-Mission Crew Rest:

3.9.3.1. Crewmembers returning to their home base will be given sufficient time to recover from the cumulative effects of the mission and tend to personal needs. Crew rest begins immediately on mission termination. Waiver authority for post-mission crew rest will not be delegated below the operations group (OG) commander.

3.9.3.2. One hour of post-mission crew rest time (up to a maximum of 72 hours) will be provided for each 3 hours TDY when the duty exceeds a basic FDP. This time is in addition to and will not run concurrently with predeparture crew rest. (Not applicable to continuing missions.)

3.9.3.3. The OG commander is the waiver authority for post-mission crew rest. Squadron commanders will determine post-mission crew rest time for aircrews TDY less than a basic FDP. This type of waiver should be limited to extraordinary circumstances and not used for day-to-day operations.

3.9.4. Reentering Crew Rest. Crews will reenter crew rest if their aircraft or mission (training or operational) is not capable of departure within 4 hours from scheduled takeoff time. Exceptions will be granted only with the concurrence of the AC.

3.9.5. Crew Rest Waivers. Crew rest waivers approved for exercises and contingencies will be published in the OPORD or OPLAN.

3.10. Standby Force Duty:

3.10.1. Types of Standby Forces:

3.10.1.1. ALFA Standby Force. An ALFA standby force is capable of having an aircraft and aircrew ready to launch in 1 hour. Crewmembers are given 12 hours of pre-standby crew rest before or after aircraft preflight. Aircrews must complete all preflight duties within 6 hours of crew show time. An additional 12-hour pre-standby crew rest is required when preflight time exceeds 6 hours. Once an ALFA force is formed, additional preflights may be necessary to maintain the ALFA aircraft. Additional preflights done during normal waking hours do not interrupt crew rest. A crew will not stay on ALFA standby duty for more than 48 hours. After 48 hours, the crew must be launched, released, or entered into predeparture crew rest. CDT begins when the unit is told to launch.

3.10.1.2. BRAVO Standby Force. This type force has an aircraft or aircrew capable of launching in 2 hours (from the time the unit is told to launch). Crewmembers are given 12 hours of pre-standby crew rest. Crews are legal for alert after pre-standby crew rest. Preflight duties, if required, interrupt crew rest. A crew will not stay on BRAVO standby duty for more than 48 hours. After 48 hours, the crew must be launched, released, or entered into predeparture crew rest.

CDT begins when the crew shows for duty. If a crew is preflighting when the unit is tasked to launch the mission, CDT will begin when the crew first reported for that duty.

3.10.1.3. CHARLIE Standby Force. A CHARLIE standby force has an identified aircrew capable of entering crew rest within 2 hours (after their controlling unit is notified). This aircrew would become legal for alert 12 hours after entering crew rest. CHARLIE alert will not exceed 72 hours. If retained for a 72-hour period, crewmembers will be released for 12 hours before resuming CHARLIE standby force duty, entering crew rest for mission, or entering pre-standby crew rest for ALFA or BRAVO standby force duty.

3.10.1.4. Wing Standby Forces. Standby forces are established by unit commanders. Crewmembers are given normal predeparture crew rest. Standby duty time is limited to 12 hours. Crews will receive at least 12 hours of crew rest prior to another 12 hours of standby duty.

3.10.2. Standby Force Crew Management:

3.10.2.1. The MAJCOM OPR may waive all or any part of a crew rest period. This waiver will normally accompany high priority airlift taskings or a change in unit readiness.

3.10.2.2. Commanders will not use a standby crew to preflight other than their standby aircraft or to do any nonmission duties while on standby.

3.10.3. Post-Standby Missions. On completion of standby duty, crewmembers may be dispatched on a mission.

3.10.3.1. Standby duty and predeparture crew rest may be concurrent if notification is provided at least 12 hours prior to alert.

3.10.3.2. If started, post-standby crew rest must be completed before the start of predeparture crew rest.

3.10.3.3. If an aircrew member is dispatched on a mission, compute the post-mission crew rest time on standby time plus mission time.

3.10.4. Post-Standby Crew Rest. Aircrew members not dispatched on a mission following standby duty will receive post-mission standby crew rest as follows:

3.10.4.1. If standby duty is performed away from normal quarters, crew rest time is computed from this standby time on the same basis as for mission time.

3.10.4.2. If standby duty was performed in normal quarters, no crew rest time is authorized.

3.10.5. ALFA Standby Aircraft Security. Each unit will complete a maintenance and aircrew preflight inspection when they put an aircraft on ALFA standby status. The aircraft commander will ensure the aircraft is closed before entering crew rest. Secure all hatches and doors to show unauthorized entry. Close and lock the crew entrance door with a controllable device that will prevent entry without damage to the door or device. The command post must grant permission prior to persons entering an aircraft once the plane is sealed. Ensure standby aircraft is resealed any time the aircraft has been opened. The aircraft commander or designated representative must be present if access to his or her assigned aircraft is required.

3.11. Orientation Flights and Incentive Flights. Refer to DoD 4515.13-R, *Air Transportation Eligibility*, AFI 11-401, and the appropriate MAJCOM supplement.

CHAPTER 4

AIRCRAFT OPERATING RESTRICTIONS

4.1. Objective. The ultimate objective of the aircraft maintenance team is to provide an aircraft for launch with all equipment operational (fully mission capable [FMC]). Manpower limitations, skills, and spare part availability have a negative and direct impact on accomplishment. However, some redundant systems allow safe operation with less than all equipment operational for certain missions under specific circumstances. The aircraft commander, using the following procedures, determines an aircraft's overall status. Use the following maintenance identifiers to effectively communicate an aircraft's status:

4.1.1. Mission Essential (ME). An item, system, or subsystem component essential for safe aircraft operation or mission completion will be designated mission essential (ME) by the aircraft commander on AFTO Form 781A, **Maintenance Discrepancy and Work Document**. Include a brief explanation of the reason for ME status in the AFTO Form 781A discrepancy block. An aircraft commander accepting an aircraft (one mission or mission segment) without an item or system does not commit that aircraft commander (or a different aircraft commander) to subsequent operations with the same item or system inoperative.

4.1.2. Mission Capable (MC). Any discrepancies not currently ME, but may become ME (if circumstances change), are designated as MC in the AFTO Form 781A discrepancy block. Every effort will be made to clear the MC discrepancies at the earliest opportunity to the extent that maintenance skills, ground time, and spare part availability permit. If subsequently, in the AC's judgment, mission safety would be compromised by the lack of any component, he or she may redesignate the component as ME. However, do not delay a mission to correct an MC discrepancy.

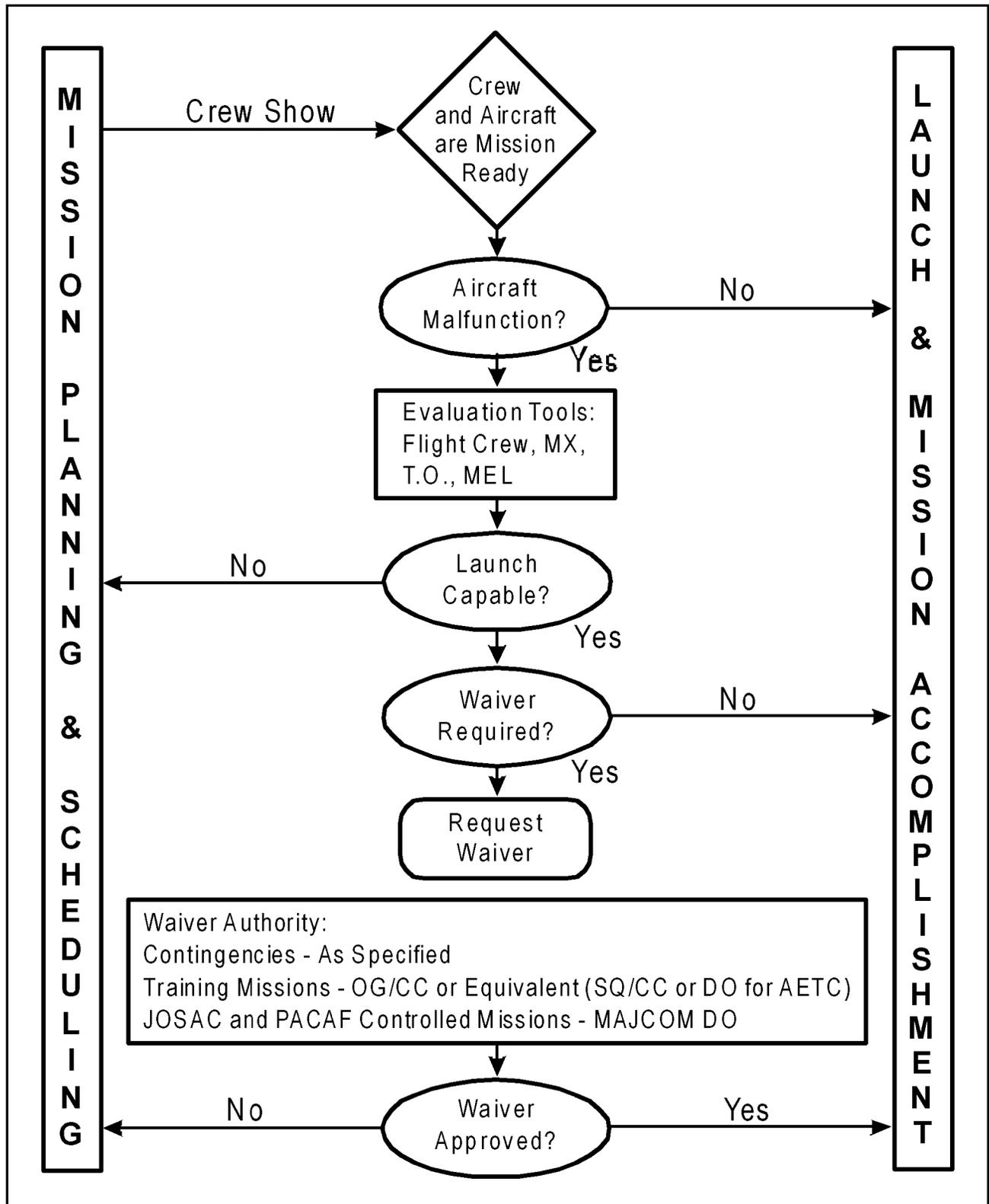
4.1.3. Open Item. Discrepancies not expected to adversely impact the current mission or any subsequent mission are not designated MC or ME. These items receive low priority and are normally worked at home station. Do not accept an aircraft from factories, modification centers, or depots unless all instruments are installed and operative.

4.2. Procedural Guidance. See C-12 Dash 1 and this instruction for the equipment and systems considered essential for routine as well as contingency operations.

4.2.1. The aircraft commander is responsible for exercising the necessary judgment to ensure no aircraft is dispatched with multiple items inoperative that may result in an unsafe degradation and or an undue increase in crew workload. The possibility of additional failures during continued operation with inoperative systems or components shall also be considered. This chapter is not intended to allow for continued operation of the aircraft for an indefinite period with inoperative systems or subsystems.

4.2.2. If, after exploring all options, an aircraft commander determines a safe launch is possible with an item inoperable (beyond a particular restriction) the aircraft commander shall request a waiver. Use C2 channels to notify the appropriate execution agency of intentions.

Figure 4.1. C-12 Launch Decision Matrix.



4.3. Waiver Protocol. Waiver to operate with degraded equipment or waiver to Air Force policy may be granted on a case-by-case basis and only in exceptional circumstances. Waiver authority is based on “who” has operational control and execution of the aircraft performing a specific mission. The aircraft commander determines the need for a waiver. If waiver process, authority, or protocol is in doubt--contact MAJCOM DOF.

4.3.1. Local Missions. Waiver authority for flying local missions is the OG/CC or equivalent.

4.3.2. Other Missions (Contingencies). Waiver authority is listed in the OPORD/Tasking Order, etc., or the DIRMOBFOR (or equivalent) for the agency with C2 of the aircraft. Crewmembers may request additional assistance or confirmation from their home units or MAJCOM DO.

4.4. Technical Assistance Service. The aircraft commander may request (at any time in the decision process) technical support and additional assistance from his or her home unit, MAJCOM staff, and maintenance representatives.

4.4.1. Aircraft commanders electing to operate with degraded equipment or aircraft systems (with appropriate waiver) must coordinate mission requirements (such as, revised departure times, fuel requirements, maintenance requirements, etc.) with the controlling C2 agency prior to flight.

4.4.2. If beyond C2 communication capability, the aircraft commander may deviate from the C-12 Dash 1 and this chapter (paragraph 1.2.). Report deviations (without waiver) through channels to the appropriate MAJCOM DO within 48 hours. Units must be prepared to collect background information and submit a follow-up written report upon request.

4.5. Minimum Equipment List (MEL). Table 4.1. contains operational equipment and systems considered essential for safe flight. Unless otherwise specified, restrictions apply at home and en route stations. “En route” applies to locations where contract maintenance is not available. When the AC considers an item essential that is not covered by this list, that item will be treated as if it is included in the table. The listing does not include all of the minimum essential subsystems list (MESL) items required by the maintenance contractor. MEL items are required for all C-12 operations except as noted.

Table 4.1. Operational Equipment and Systems. (note)

I T E M	A	B
	Equipment and System	Exception
1	Pitch trim systems	Electric elevator trim not required for flight if manual elevator trim is fully operational. Autopilot will not be used without electric elevator trim.
2	Yaw damper systems	Not required for flights below 17,000 feet.
3	Stall warning system	
4	Fuel system components	
5	Ice and rain protection	Can operate in areas without known or forecast icing.
6	Pressurization components	One-time flight may be made below 10,000 to location where components may be fixed.

I T E M	A	B
	Equipment and System	Exception
7	Anticollision and strobe lights	If one is inoperative, comply with AFI 11-202, volume 3.
8	Landing and taxi lights	Okay in daytime, en route okay if one is inoperative at nighttime.
9	Position lights	Okay in daytime.
10	Minimum communication radios required for flight	
11	Electrical generators and batteries	
12	Attitude gyros	Two attitude gyros must be working to continue en route.
13	Weather radar	Can operate in areas without known or forecast thunderstorms.
14	Transponder	Locals okay according to AFI 11-202, volume 3.
15	NAVAIDs appropriate for flight	En route okay if one is inoperative.
16	HSI or RMI	Daylight VFR flight may be made to a location where this can be fixed.
17	Magnetic compass	
18	RPM N1	
19	Crew oxygen system	
20	Oil pressure and temperature	

NOTE: Waiver authority is detailed in paragraph 4.3.

CHAPTER 5

OPERATIONAL PROCEDURES

5.1. Checklists. Accomplish all checklists with strict discipline. A checklist is not complete until all items have been accomplished. Normally, the pilot flying or taxiing will not read the checklist. Momentary hesitations for coordination items, ATC interruptions, and deviations specified in the flight manual, etc., are authorized. Notes amplifying checklist procedures or limitations may be added to the checklists (in pencil).

5.1.1. Checklist Inserts. Units may supplement T.O. guidance with HQ AETC/DOF (C-12C/D) or PACAF/DOF (C-12F/J) approved checklist inserts. Place these inserts at the end of the appropriate checklist or in an inflight guide. Checklist inserts must have a point of contact (POC) and date. Crewmembers should contact the POC with any recommendations or changes. The POC will consolidate inputs and submit changes to MAJCOM DOF for approval. Local inflight guides and inserts not affecting T.O. guidance and procedures may be approved locally with copies sent to OGV.

5.2. Duty Station. A qualified pilot will be in control of the aircraft at all times during flight. (**EXCEPTION:** Unqualified pilots undergoing qualification training and senior staff members who have completed the senior staff familiarization course, both under the direct supervision of an IP may be in control of the aircraft.) The aircraft commander and copilot will be at their duty stations during all takeoffs, departures, approaches, and landings. During other phases of flight, crewmembers may leave their duty station for brief periods to meet physiological needs and to perform normal crew duties. Only one pilot may be absent from the duty station at a time.

5.3. Flight Station Entry. Passengers are not allowed in either pilot seat at any time. Approved contract maintenance personnel may occupy either pilot's seat for contractor maintenance taxi training. A contractor taxi without an Air Force crewmember on board will be in accordance with contract specifications and the flight manual.

5.4. Takeoff and Landing. After thoroughly evaluating all conditions (DV status and comfort level; weather; type of approach to be flown; and crewmember experience), the aircraft commander will determine who accomplishes the takeoff and landing and will occupy either the left or the right seat during all takeoffs and landings.

5.4.1. A qualified aircraft commander will accomplish all approaches and landings under actual emergency conditions unless specific conditions dictate otherwise.

5.4.2. On operational missions with passengers aboard, flying circling maneuvers as close as possible to visual flight rules (VFR) traffic pattern altitudes is preferred over practicing at circling minimums.

5.5. DV-2 Missions. DV-2 or higher missions require an experienced aircraft commander (EAC) certified by the unit commander as highly experienced or certified as an instructor. Highly EACs must have 200 hours primary assigned aircraft (PAA) ("other" time excluded) after certification as an AC. A qualified AC or higher will make all takeoffs and landings on these missions. (**EXCEPTION:** Flying DV-2 generals.) Alert launches with DV-2s may be flown with alert crews; however, comply with AC takeoff and landing requirements. Waiver authority is the OG/CC.

5.6. Outside Observer. When available, use a crewmember to assist in outside clearing during all taxi operations and any time the aircraft is below 10,000 feet MSL.

5.7. Seatbelts:

5.7.1. All occupants will have a designated seat with a seatbelt. Use of seatbelts will be as directed by the aircraft commander and the flight manual. Infants, 2 years old or younger, may be carried in the lap of the parent or guardian. (Separate flotation devices and oxygen sources are required.)

5.7.2. Crewmembers occupying pilot and copilot positions will have seatbelts fastened at all times in flight, unless crew duties dictate otherwise.

5.7.3. All crewmembers will be seated with seatbelts and shoulder harnesses fastened during taxi, takeoff, and landing, unless crew duties dictate otherwise. Additionally, anytime the seat belt advisory sign is illuminated, crewmembers will be seated with seat belt fastened, unless crew duties dictate otherwise. Crewmembers performing duties in the passenger seats are exempt from shoulder harness requirements.

5.8. Aircraft Lighting. See AFI 11-202, volume 3, *General Flight Rules*, and the flight manual for guidance on aircraft lighting.

5.9. Portable Electronic Devices. In addition to the guidance listed in this paragraph, see AFI 11-202, volume 3.

5.9.1. Portable transmitting electronic devices are prohibited. Turn off and properly stow devices from engine start to engine shutdown. Examples of portable electronic devices include cellular phones, citizens band (CB) radios, and other transmitting handheld radios. Brief all passengers prior to engine start on this restriction.

5.9.2. The following nontransmitting devices are permitted above 10,000 feet with authorization from the pilot in command (PIC):

5.9.2.1. Audio and video recorders and playback devices.

5.9.2.2. Computer, peripherals, and electronic entertainment devices.

5.9.2.3. Radio receivers.

5.9.3. MAJCOMs may authorize subordinate units to allow the use of electronic recording equipment below 10,000 feet when required for a public affairs mission involving civilian media personnel. The following restrictions apply:

5.9.3.1. The PIC will be fully briefed on what equipment will be used and when.

5.9.3.2. Aircraft flying below 10,000 feet will maintain visual meteorological conditions when the equipment is operating.

5.9.3.3. The equipment must be turned off if any interference is detected by the crew. Any crewmember may order the equipment turned off for any reason.

5.9.4. The following devices are authorized anytime:

5.9.4.1. Hearing aids.

5.9.4.2. Heart pacemakers.

5.9.4.3. Electronic watches.

5.9.4.4. Handheld nonprinting calculators.

5.9.4.5. Portable voice recorders.

5.9.4.6. Properly certified operator equipment according to paragraph **5.9.5**.

5.9.5. If mission requirements dictate the operation of nontransmitting portable equipment during any phase of flight or operation of a device not included in paragraph **5.9.4**, the equipment or device must meet RE102 and CE102 requirements of Mil-Std-461d or methods, when tested according to Mil-Std-462d. Technical guidance and data evaluation is available from ASC/ENAI, 2450 D Street, Suite 2, WPAFB OH 45433-7630. The PIC must be aware that equipment is operating. **NOTE:** Air Force organizations providing electronic support to public affairs will adhere to these requirements.

5.10. Smoking Restrictions. Smoking is prohibited on board the aircraft.

5.11. Advisory Calls. Pilots will periodically announce their intentions when flying departures, arrivals, and approaches, and when circumstances require deviating from normal procedures.

5.11.1. Mandatory altitude calls for the pilot not flying the aircraft are as follows:

5.11.1.1. Nonprecision Approaches:

5.11.1.1.1. 100 feet above minimum descent altitude (MDA).

5.11.1.1.2. "Minimums" at MDA.

5.11.1.1.3. "Runway in sight." Call when the runway environment is in sight.

5.11.1.1.4. "Go-around." Call at missed approach point if the runway environment is not in sight.

5.11.1.2. Precision Approaches:

5.11.1.2.1. 100 feet above decision height (DH).

5.11.1.2.2. "Land." Call at DH if the runway environment is in sight and the aircraft is in a position for a safe landing.

5.11.1.2.3. "Go-around." Call at DH if the runway environment is not in sight or if the aircraft is not in a position for a safe landing.

5.11.1.3. Climb Out:

5.11.1.3.1. Transition altitude.

5.11.1.3.2. 1,000 feet below assigned altitude.

5.11.1.4. Descent:

5.11.1.4.1. Transition level.

5.11.1.4.2. 1,000 feet above assigned altitude.

5.11.1.4.3. 1,000 feet above initial approach fix altitude or holding altitude.

5.11.1.4.4. 100 feet above procedure turn and final approach fix altitude.

5.11.2. Crewmembers will announce when heading or airspeed deviations are observed, or an altitude variation of 100 feet or more exists.

5.12. Communications. The Air Force does not give a promise of confidentiality to aircrews regarding their recorded aircraft crew communications. Crewmembers are expected to maintain a high degree of cockpit professionalism and crew coordination at all times.

5.12.1. Sterile Cockpit. Limit conversation to that essential for crew coordination and mission accomplishment during taxi, takeoff, approach, landing, and any flight below 10,000 feet MSL (except cruise).

5.12.2. Aircraft Interphone. Do not discuss classified information on interphone.

5.12.3. Command Radios:

5.12.3.1. The pilot not flying the aircraft normally makes all Air Route Traffic Control Center (ARTCC) radio calls.

5.12.3.2. In terminal areas, the pilot and copilot will monitor the primary command radio unless directed otherwise.

5.12.3.3. One designated crewmember should monitor C2 frequencies (if applicable) on the inbound and outbound leg, unless otherwise directed.

5.12.3.4. The pilot operating the command radios will inform the other pilot when the primary radio is changed.

5.12.3.5. One pilot should record and will acknowledge all ATC clearances.

5.12.3.6. Both pilots will normally monitor UHF and VHF guard emergency frequency regardless of primary radio.

5.12.4. Crew Resource Management (CRM) Assertive Statement “Time Out:”

5.12.4.1. “Time out” is the common assertive statement for use by all crewmembers. The use of “time out” will:

5.12.4.1.1. Provide a clear warning sign of a deviation or loss of situational awareness.

5.12.4.1.2. Provide an opportunity to break the error chain before a mishap occurs.

5.12.4.1.3. Notify all crewmembers that someone sees the aircraft or crew departing from established guidelines or the briefed scenario, or that someone is simply uncomfortable with the developing conditions.

5.12.4.2. As soon as possible after a “time out” has been called, the aircrew will take the following actions:

5.12.4.2.1. Safety permitting, stabilize the aircraft.

5.12.4.2.2. The initiating crewmember will voice his or her concerns to the crew.

5.12.4.2.3. The aircraft commander will provide all other crewmembers with the opportunity to voice inputs relative to the stated concerns.

5.12.4.2.4. After considering all inputs, the aircraft commander will direct the aircrew to continue the current course of action or direct a new course of action.

NOTE: The aircraft commander is the final decision authority.

5.13. Transporting Pets. Transporting pets (dogs and cats) in conjunction with the sponsor's permanent change of station is authorized. Other pets or animals are normally prohibited, but may be moved according to DOD 4515.13-R.

5.14. Alcoholic Beverages. MAJCOM DOs may authorize the dispensing of alcoholic beverages on aircraft.

5.15. Runway, Taxiway, and Airfield Requirements. Comply with the weather and runway limits listed below:

5.15.1. Wind Restrictions. Airfields will be considered below minimums for takeoff and landing when winds (including gusts) are greater than the following:

5.15.1.1. Wind Components:

5.15.1.1.1. Maximum operating wind—50 knots.

5.15.1.1.2. Maximum tailwind component—10 knots.

5.15.1.1.3. Crosswinds—Maximum takeoff and landing crosswind component for a dry runway (runway condition reading [RCR] 23) is 25 knots. Maximum takeoff and landing crosswind components, corrected for RCR, are shown in table [Table 5.1](#).

5.15.2. RCR and Runway Surface Condition (RSC) Limitations. Use RCR values as prescribed by the aircraft flight manual. If a value is not reported, use RCR 12 for wet runways and RCR 6 for icy runways. Conversions from other braking action standards to RCR should be according to applicable DoD FLIP documents.

Table 5.1. C-12 Takeoff and Landing Crosswind Components.

I T E M	A	B
	RCR Value	Crosswind Component
1	6	10
2	7	12
3	8	15
4	9	17
5	10	20
6	11	22
7	12 and above	25

5.15.2.1. For operation on wet, ungrooved runways, use RCR designated as “wet” in the aircraft flight manual for all takeoff and landing data. For operations on grooved runways, use the reported RCR.

5.15.2.2. Minimum RCR for taxi operations is 3. Winds cannot exceed 10 knots from any direction while taxiing with RCR less than 6.

5.15.2.3. When RCR and RSC reporting is not available, flight crews are to consider a runway surface as wet when there is sufficient water on the surface to cause a reflective glare, or when rain is falling.

5.15.2.4. Do not use runways with a reported RCR lower than the lowest RCR correction contained in the flight manual.

5.15.3. Minimum Runway Length and Width Requirements:

5.15.3.1. Minimum Runway Length. Minimum runway length is 4,000 feet or 1,220 meters (4,500 feet or 1,373 meters for C-12F/J), or 5,000 feet or 1,524 meters (6,000 feet or 1,830 meters for C-12F/J) for touch-and-goes. (**NOTE:** Lengths are based on dry surfaces only.) If operationally necessary, shorter runways may be used with OG/CC waiver provided:

5.15.3.1.1. A qualified instructor or flight examiner makes the takeoff or landing (mission pilots [MP] require applicable OG/CC waiver).

5.15.3.1.2. Operations are limited to daytime. (The applicable OG/CC is waiver authority.)

5.15.3.1.3. Runway available will not be less than 4,000 feet. **EXCEPTIONS:** 517 AS-assigned C-12s will adhere to 4,500 feet minimum except at austere landing airfields where paragraphs 5.15.3.1.1. and 5.15.3.1.2. apply. DIA/DSCA austere airfield qualified pilots may use less than 4,000 feet of runway available if operationally necessary and with approval of Chief, Air Operations (HQ DIA/DHO-AO). Restrictions in paragraphs 5.15.3.1.1., 5.15.3.1.2., 5.15.3.2., and 5.15.3.3. apply.

5.15.3.2. Runway Length for Takeoff. Do not attempt takeoff if runway available is less than critical field length, or accelerate stop distance is adjusted for RCR, whichever applies. **EXCEPTION:** For 517 AS site-qualified pilots and DIA/DSCA austere airfield qualified pilots, minimum runway length for takeoff is the computed takeoff distance (including climb to 50 feet) plus 500 feet. Site-qualified and DIA/DSCA austere airfield qualified pilots must be instructor-qualified or highly experienced MPs and approved by 517 AS/DO or HQ DIA/DHO-AO, as applicable.

5.15.3.3. Runway Length for Landing. The minimum required runway for landing, corrected for RCR in accordance with the flight manual, will be based on landing distance and the reported RVR/visibility.

5.15.3.3.1. Add 500 feet to landing distance when visibility is greater than or equal to 40 RVR.

5.15.3.3.2. Add 750 feet to landing distance when visibility is between 40 and 24 RVR.

5.15.3.3.3. Add 1,000 feet to landing distance when visibility is equal to or less than 24 RVR.

EXCEPTION: For 517 AS site-qualified pilots and DIA/DSCA austere airfield qualified pilots, minimum landing distance will be computed at ground roll plus 500 feet. Plan to land in the first 500 feet of usable runway. Site-qualified and DIA/DSCA austere airfield qualified pilots must be instructor-qualified or highly experienced MPs and approved by 517 AS/DO or HQ DIA/DHO-AO, as applicable.

NOTE: Compute landing distance with no reverse thrust.

5.15.3.4. Runway Length Overruns. For mission accomplishment, if approach end overruns are available and stressed or authorized for normal operations, they may be used to increase the runway available for takeoff. Departure end overruns (if stressed and authorized) may also be used for landing if needed. Consult with HQ AMC/DOA and PACAF/DOTV for suitability guidance (ASRR).

5.15.3.5. Runway Length for Takeoff and Intersection Takeoffs. Normally, takeoffs will be initiated from the beginning of the approved usable portion of the runway. The decision to make intersection takeoffs rests solely with the aircraft commander.

5.15.3.5.1. Intersection takeoffs may be accomplished provided the operating environment (such as, gross weight, obstructions, climb criteria, weather, etc.) allows a safe takeoff and departure.

5.15.3.5.2. When less than the entire runway is used, takeoff and landing data (TOLD) card computations are based on the actual runway remaining from the point at which the takeoff is initiated.

5.15.4. Minimum Runway Width. Minimum runway width is 60 feet. **EXCEPTION:** DIA/DSCA austere airfield qualified pilots may use runways less than 60 feet wide with HQ DIA/DHO-AO approval.

5.15.5. Airfield Suitability. Aircrews and planning agencies will contact HQ AMC/DOA (Airfield Analysis Branch) for all questions pertaining to airfield capability and will review the ASRR and supplemental theater information file (STIF) prior to all off-station operations. MAJCOM DOF is the waiver authority for all airfield restrictions. Waivers must be obtained prior to mission execution. Once a mission is executed, the AC is responsible for determining airfield suitability based upon operational need. See the summary of airfield restrictions for airfield certification requirements.

5.15.6. Runway Condition. During operations on runways partially covered with snow or ice, takeoff computations will be based on the reported RSC or RCR for the cleared portion of the runway. A minimum of 25 feet either side of center line should be cleared. If 25 feet either side of center line is not cleared, then compute data based on the uncleared portion up to 25 feet either side of center line.

5.16. Aircraft Taxi Obstruction Clearance Criteria:

5.16.1. Without a marshaller and wing walkers, avoid taxi obstructions by at least 25 feet. With a marshaller and wing walkers, avoid taxi obstructions by at least 10 feet.

5.16.2. When taxi clearance is doubtful, use one or more wing walkers. If wing walkers are unavailable, deplane one or more crewmembers to maintain obstruction clearance and provide marshalling (**NOTE:** Both pilot and copilot positions must be occupied for taxi.) Use signals identified in AFI 11-218, *Aircraft Operation and Movement on the Ground*. The aircraft commander should use marshallers and wing walkers, or deplane a crewmember to act as an observer while maneuvering on narrow taxiways. During night taxi operations, marshallers will have an illuminated wand in each hand. Observers should be in a position to see wing walkers at all times and to communicate with the pilot.

5.17. Foreign Object Damage (FOD) Avoidance. Make every effort to minimize the potential for engine FOD. Crews should:

5.17.1. Carefully review airfield layout during mission planning. Be familiar with taxi routes, turn requirements, and areas for potential FOD.

5.17.2. Confirm that taxi routes have been swept. If taxi route has not been swept, consider taxiing via an alternate route.

5.17.3. Minimize power settings during all taxi operations.

5.17.4. When possible, avoid taxi operations that would position a wing engine over an unprepared or unswept surface. If it becomes absolutely necessary to position a wing engine over an unprepared or unswept surface, the engine should be left in idle (to the maximum extent possible) until the engine is back over an improved surface.

5.18. Fuel Requirements. (See AFI 11-202, volume 3.) This paragraph implements standard minimum fuel requirements.

5.18.1. Ramp Fuel. Required ramp fuel consists of all fuel required for engine start, taxi, takeoff, climb, cruise, alternate or missed approach (if required), descent, approach, transition, landing, and fuel reserve. Plan fuel load using computer flight plan or AF Form 70, **Pilot's Flight Plan and Flight Log**, [Table 5.2.](#), and the flight manual.

Table 5.2. Fuel Planning Chart.

I T E M	A	B
	Fuel Load Component	Fuel Requirement
1	Start, taxi, takeoff	C-12C, D, and F: 90 pounds (150 with engine runup).
2		C-12J: 110 pounds (200 with engine runup).
3	En route (note 1)	Fuel for planned climb and cruise to overhead destination at cruise altitude or initial approach fix altitude.
4	En route reserve	Fuel for 10 percent of flight time over category 1 route or route segments not to exceed 1 hour at normal cruise.
5	Alternate, required by paragraph 6.20.	Fuel from overhead destination to the alternate at normal speed and altitude, or
6	Alternate, based on VIS only criteria (paragraph 6.43.) (note 2)	Fuel for descent, approach, and missed approach; use 200 (300 for C-12J) pounds + fuel from destination to alternate using climb and normal cruise charts.
7	Holding (note 3)	0+45 fuel using holding charts at 10,000 feet. When holding in lieu of alternate is required (paragraph 6.19.) or when the alternate is located in Alaska or at latitudes greater than 59E N/S, use 1+15 holding fuel computed at 20,000 feet.
8	Approach and landing	150 pounds (C-12C, D, and F) or 200 pounds (C-12J).
9	Known holding delays	Fuel for planned holding when delays are anticipated.

NOTES:

1. Include all planned off-course maneuvering for departure or en route deviations.
2. When two alternates are required, compute fuel from the destination to the most distant alternate only.
3. Minimum fuel required over destination or alternate is fuel for holding plus approach and landing or 600 pounds (C-12C, D, and F) or 800 pounds (C-12J), whichever is greater.

5.18.2. Alternate Fuel. Alternate fuel is fuel for flight from intended destination to alternate aerodrome at optimum altitude and long-range cruise speed. Compute fuel, time, and altitude from T.O. 1C-12 (applicable model)-1. When holding is required in lieu of an alternate at a remote or island destination, compute holding for 1 + 15 hours using planned destination gross weight at flight level (FL) 200. A remote or island destination is defined as any aerodrome which, due to its unique geographic location, offers no suitable alternate (civil or military). The forecast weather at the remote or island destination must meet the criteria listed in **Chapter 6**.

5.18.3. Fuel Reserve. A fuel reserve consists of fuel for 10 percent of flight time over a category 1 route or route segments not to exceed 1 hour at normal cruise.

NOTE: Plan initial arrival overhead destination with fuel for holding plus approach and landing or 800 pounds, whichever is greater. Additional fuel may be added to allow crews some flexibility when dealing with unplanned contingencies (such as, weather avoidance, ATC delays, etc.). When dealing with unplanned contingencies, crews will still plan to touch down with fuel reserve (minimum). Units may develop standard alternate fuel requirements for local training missions; however, these fuel requirements will not be less than those specified in this chapter.

5.19. Reverse Taxi. The aircraft may be backed, using reverse, when no other means of moving the aircraft are available or when required for familiarization during initial training classes. This procedure will not be used at any time for the purpose of preventing delays when towing equipment is available or when other aircraft or equipment can be moved to provide adequate taxi clearance. Pilots should exercise extreme caution during reverse taxi operation due to the inherent hazards. Ensure a marshaller is present for all reverse taxi operations.

5.20. Airspeed. Airspeed is in accordance with applicable tech orders.

5.21. Bird Aircraft Strike Hazard (BASH) Programs:

5.21.1. BASH programs are centralized unit efforts that provide information crossfeed, hazard identification, and a consolidated course of action. As a minimum, units must implement the following procedures:

5.21.1.1. Ensure compliance with all bird watch condition restrictions.

5.21.1.2. Make every effort to not schedule takeoffs, landings, and low-levels from 1 hour before to 1 hour after sunrise and sunset during the phase II period. Total number of missions that fall within this identified bird hazard window will be annotated and approved on the flying schedule.

Also, significant bird hazards will be published in FLIP General Planning (GP) and the IFR supplement along with the associated airfield operating hour restrictions and avoidance instructions.

5.21.2. The OG/CC is the approval authority for launch during a severe bird watch condition.

5.21.3. When operating at airfields where no BASH program exists, aircraft commanders have the authority to delay takeoffs and arrivals due to bird condition. Coordinate actions through the appropriate command and control authority.

5.22. Functional Check Flights (FCF) and Acceptance Check Flights (ACF). FCFs are performed after accomplishing inspections or maintenance to assure the aircraft is airworthy and capable of mission accomplishment. ACFs specify guidelines for accepting new production aircraft and to determine compliance with contractual requirements. Perform FCFs and ACFs according to T.O. 1-1-300. Additional guidance can be found in T.O.s 00-20-6, and 1C-12A/F/J-6CF-1.

5.22.1. Conditions requiring an FCF according to T.O. 1C-12A /F/J-6CF-1 include (but are not limited to) major retrofit modifications; removal or replacement of moveable flight control surfaces (except repaint); major repairs that would affect the flying characteristics of the aircraft; adjustment, removal, or replacement of major components of the flight control system for which airworthiness cannot be verified by maintenance operational checks; or removal or replacement of any two engines.

5.22.2. The unit commander is responsible for the FCF program. The unit commander may waive a complete FCF and authorize an FCF to check only systems disturbed by maintenance, inspection, or modification. Additional guidance should be published in the local chapter of these instructions.

5.22.3. Conduct the check flight within the designated check flight airspace of the base from which the flight was launched except when the flight must be conducted under specific conditions not compatible with local conditions and area restrictions.

5.22.4. The OG/CC must approve combining an FCF and ferry flight.

5.22.5. FCFs will be accomplished by the best qualified instructor or stan/eval aircrews. They will be designated FCF qualified to their assigned aircrew position by the unit commander in a memorandum.

5.22.6. FCFs will normally be conducted in daylight under VMC conditions. However, the unit commander may authorize a flight under a combination of visual flight rules (VFR), IFR, and "VFR on Top" conditions. The flight will begin in VFR conditions. If the aircraft and all systems are operating properly, it may proceed IFR to penetrate cloud cover to VFR on top to continue the altitude phase of the flight.

NOTE: The OG/CC or deployed mission commander may authorize temporary waivers to these FCF procedures for aircrew qualification when operationally necessary. Permanent waivers require MAJCOM approval.

5.23. Participation in Flyover Events. According to AFI 11-209, *Air Force Participation in Aerial Events*, flyovers must be sanctioned and individually approved by the appropriate military authority and dated with the Federal Aviation Administration (FAA). AFI 11-202, volume 3, clearly identifies what events are sanctioned for flyover support and who is the approving authority for each type of event. In addition, it stipulates that units participating in aerial events will ensure that aerial activities identified in **Attachment 1** of that publication are coordinated with the FAA through the regional Air Force representative.

5.24. Handheld Global Positioning System (GPS). Carry a handheld GPS on every mission without the internal GPS, including off-station training missions. (**EXCEPTION:** A handheld GPS is not required for a local training mission without passengers.) The handheld GPS, when operating properly, can provide useful information; however, it must never be used as the primary navigation source. Use of any handheld GPS receiver that has not been electromagnetic interference (EMI) certified is restricted to operations above 10,000 feet AGL only. Any type of handheld GPS may be used unless interference is noted with any aircraft system. The actual use of the handheld GPS rests with the aircraft commander. Its usage must never jeopardize safety. Before using the internal GPS or handheld GPS in flight, aircrew members must receive training and aircraft must be capable of supporting the internal GPS or handheld GPS equipment. The training should be documented in AFORMS, or on an AF Form 1381, **USAF Certification of Aircrew Training**, in the individual's FEF.

WARNING: Electrical problems have been reported on KLX-100 units. It is extremely important to insert all of the batteries in the proper orientation as shown in section 1.1.2, figures 1-11 through 1-17, of the operator's guide. The manufacturer confirms that if only one battery is inserted incorrectly, the unit will operate for 10 to 30 minutes. An increase in temperature may be noted followed by a crackling sound as the battery expands and ruptures. Be extremely careful as battery acid may leak from the bottom of the unit. A way to double-check proper insertion is to go to the GPS setup page and check the bar graph showing battery power. Make sure it reflects battery strength near 100 percent. If a problem is detected, shut down the GPS immediately and disconnect unit from any external power source. Report the incident through proper channels. Do not attempt to remove the batteries. This action could cause injury to the individual and will impair investigation for warranty claims.

5.25. Engines Running Offload and Onload (ERO) Procedures. An ERO may be made if it will not cause a deviation in scheduled itinerary of more than 30 minutes and all passengers are available. Controlling agency approval is required for deviations greater than 30 minutes.

CHAPTER 6

AIRCREW PROCEDURES

*Section 6A—Permission***6.1. Aircrew Uniform:**

6.1.1. Wear the aircrew uniform as outlined in AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*, on all missions, unless otherwise authorized. When the Foreign Clearance Guide requires civilian attire, wear conservatively styled civilian clothing.

6.1.2. Each unit commander will determine clothing and equipment to be worn or carried aboard all flights commensurate with mission, climate, and terrain involved.

6.1.2.1. All crewmembers will have Nomex gloves in their possession.

6.1.2.2. Wearing Nomex gloves is recommended for all primary crewmembers during engine start, taxi, takeoff, and landing.

6.1.2.3. Crewmembers will remove rings and scarves before performing aircrew duties.

6.1.3. Personnel will have cold weather flight clothing items indicated in AFI 11-301, *Life Support Program*, in their possession when flying in Arctic and Antarctic regions. **EXCEPTION:** Not applicable to transoceanic flights or transiting Elmendorf.

6.1.4. See AFI 10-403, *Air Force Deployment Planning*, for mobility requirements.

6.2. Personal Requirements:

6.2.1. Passport. Carry a valid passport on all missions outside the 48 contiguous states. **EXCEPTION:** Unit commanders may authorize newly assigned personnel who have applied for, but not yet received, a passport to act as crewmembers on missions not scheduled to transit locations where passports are required.

6.2.2. PHS-731, International Certificates of Vaccination. Ensure immunization requirements are met. Carry shot record on all missions outside the 48 contiguous states. PACAF C-12F/J crewmembers must maintain worldwide shot requirements.

6.2.3. Corrective Lenses. Wear prescribed corrective glasses or contact lenses when performing duties requiring corrected vision. Do not wear contact lenses, on or off duty, unless the lenses are approved by the flight surgeon.

6.2.4. Driver's License. A valid state driver's license is required on each TDY where use of US government general purpose vehicles may be required. Contact the local airfield manager if the vehicle will be operated on the flight line.

6.2.5. Identification Tags. Personnel are required to have two identification tags for all flights.

6.2.6. FOD Hazards. Crewmembers will not wear wigs, hair pieces, rings, ornaments, pins, clips, other hair fasteners, or earrings in the aircraft or on the flight line. **EXCEPTION:** Crewmembers may wear plain elastic hair fasteners and or barrettes. These fasteners must not interfere with the wearing of headsets or the donning of oxygen equipment and will be accounted for before and after flight.

6.2.7. Hearing Protection. Hearing protection, specifically ear plugs, should be worn at all times when personnel are working around hazardous noise-producing sources, including flight station and passenger section during many portions of flight.

6.3. Predeployment Actions:

6.3.1. Accomplish theater indoctrination training before transiting the following areas: Asia, Pacific, Australia, and Indian Ocean; Africa and the Middle East; Europe, Baltics, and Russia; and Central America, South America, and the Caribbean.

6.3.1.1. Contents of the theater indoctrination folders should be tailored to the unit's specific mission. As a minimum, include the following:

6.3.1.1.1. Mission/Deployment Checklist. A locally developed checklist includes mobility, training, and personnel requirements that should be accomplished prior to departure and personal and professional items the aircrew must take with them.

6.3.1.1.2. Airspace/Airfield Review. Flip and flight information region (fir), upper information region (UIR), and air defense identification zone (ADIZ) procedures. Airspace classifications, Airfield Suitability and Restrictions Report (ASRR), and airport qualification videos (if available).

6.3.1.1.3. Theater Instrument Procedures. Required instruments and or procedures for non-DoD approaches, course reversal approaches, circling, holding, nondirectional beacon (NDB) approaches, host nation/Jeppesen approaches, and altimeter setting procedures.

6.3.1.1.4. Organized Track Systems. Minimum navigation performance specifications (MNPS) airspace requirements; North Atlantic and Pacific Region Track Systems.

6.3.1.1.5. Communication and Emergency Procedures. Command and control, overwater position reporting, lost communications procedures, emergency procedures, and weather information sources.

6.3.1.1.6. Border Clearance. Foreign Clearance Guide, customs, immigration, agriculture, insect and pest control, and diplomatic clearances.

6.3.1.1.7. Flight Planning. DD Form 1801, **DoD International Flight Plan**, AFCP Computer Flight Plan, Jeppesen Computer Flight Plan, MAJCOM-approved computer flight plan, MAJCOM-approved approach plates and charts, theater weather conditions, fuel reserves and alternate requirements, equal time points and critical wind factors, and international notice to airmen (NOTAM).

6.3.1.1.8. Special Military Operations. Altitude reservations, due regard, and other specified limitations.

6.3.1.1.9. Other Regulatory Requirements. General navigation procedures, life support equipment, hazardous cargo, crew rest and crew duty time, aircraft records and AFTO Form 781 procedures, mission essential ground personnel and additional crewmembers, passenger handling, etc.

6.3.1.1.10. Location Information. Command and control procedures, reporting procedures, maintenance problems, aircraft security, social customs and taboos, billeting, transportation, etc.

6.3.1.2. Units may consolidate information common to all geographic areas into one folder titled “general deployment information.” The remainder of the folders would contain only theater specific information.

6.3.1.3. Aircrews will review theater indoctrination folders prior to mission or deployment. This review will be tracked in AFORMS as event G290.

6.3.1.4. Upon return, the aircraft commander will compile a trip report, when necessary, detailing lessons learned. The trip report will be placed in the theater indoctrination folder, closing the loop on ensuring validity of the folder.

6.3.2. Review tasking and itinerary requirements.

6.3.3. Review applicable OPORD and FLIP.

6.3.4. Review the Foreign Clearance Guide for areas of operation. Obtain necessary diplomatic clearances where required.

6.3.5. Obtain required customs forms.

6.3.6. Complete TDY order request (if required).

6.3.7. Obtain computerized flight plans (CFP), as appropriate.

6.3.8. Coordinate with combat crew communications for worldwide FLIPs and sufficient communications security (COMSEC) materials for the duration of the mission.

6.3.9. Review antihijacking procedures (AFI 13-207 and [Chapter 7](#) of this publication).

6.3.10. Ensure physiological training, annual physical, immunizations, and standardization checks will remain current throughout the TDY period.

6.3.11. Obtain visas, if required.

6.3.12. Obtain terrain charts for unfamiliar destinations, if available.

6.3.13. Compile sufficient spare forms, flight orders, etc., to cover the TDY period.

6.3.14. Release available seats to the passenger terminal.

6.4. Aircrew Publication Requirements. Primary crewmembers will carry the publications as specified in [Table 6.1](#). on all missions.

Table 6.1. Publication Requirements.

I T E M	A	B	C
	Publication	Aircraft Commander	First Pilot (FP)
1	T.O. 1C-12 (Applicable model)-1, <i>Flight Manual</i>	X	
2	T.O. 1C-12(Applicable model)-1CL-1, <i>Pilots' Abbreviated Flight Crew Checklist</i>	X	X
3	AFI 11-202, volume 3, <i>General Flight Rules</i>	X	
4	AFI 11-2C-12, volume 3, <i>C-12 Operations Procedures</i>	X	

Section 6B—Predeparture

6.5. Airfield Certification. All crewmembers and staff mission planners will review airport qualification audiovisual slide tape programs as available before operating missions into unfamiliar airfields. In addition, aircrews will review the ASRR and PACAF's STIFs and should contact HQ AMC/DOA and HQ PACAF/DOTV as applicable for updates to airfield operability. The latest information is available through the worldwide web (<http://www.safb.af.mil:81/hqamc/directorates/amcd/doa/doas.htm>) or through Global Decision Support System (GDSS)/C2IPS.

6.6. Aircrew Intelligence Briefing. Prior to leaving home station on missions departing the CONUS, crews will receive an intelligence briefing that will emphasize terrorist, enemy, and friendly political and military development in the area in which they will be flying. Once in theater, aircrews should receive intelligence updates on initial arrival at a forward operating location (FOL) or en route stop and thereafter when significant developments occur. Report information of possible intelligence value to the local intelligence officers at the completion of each mission.

6.7. Flight Crew Information File (FCIF) Procedures:

6.7.1. Review FCIF, volume 1, (index and safety-of-flight files, as a minimum) before all missions or ground aircrew duties. Update the FCIF currency record with the latest FCIF item number, date, and crewmember's initials or as specified.

6.7.2. Crewmembers delinquent in FCIF review or joining a mission en route will receive an FCIF update from a primary aircrew member counterpart on the mission. Instructor pilots who fly with general officers are responsible for briefing appropriate FCIF items.

6.7.3. Crewmembers not assigned or attached to the unit operating a mission 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 file copy of their ACM orders.

6.8. Flight Crew Bulletins (FCB). Quarterly FCBs are issued under provisions of AFI 11-202, volume 2, *Aircrew Standardization/Evaluation Program* and MAJCOM supplements. OPR for FCBs is the operations or training group stan/eval. Items in FCBs may include local procedures and policies concerning equipment and personnel generally not found in any other publications. All crewmembers should be cognizant of FCB contents.

6.9. Airfield Security. When departing on missions destined outside the CONUS, aircraft commanders should review applicable MAJCOM security publications.

6.10. Mission Kits. Carry mission kits on all operational missions. Suggested items include:

6.10.1. Publications:

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

6.10.1.2. AFJI 11-204, *Operational Procedures for Aircraft Carrying Hazardous Materials.*

6.10.1.3. Airfield Suitability and Restrictions Report (ASRR) (mandatory all missions).

6.10.1.4. Flight crew bulletin.

6.10.2. Forms:

- 6.10.2.1. DD Form 1351-2, **Travel Voucher or Subvoucher.**
- 6.10.2.2. DD Form 1351-2C, **Travel Voucher or Subvoucher (Continuation Sheet).**
- 6.10.2.3. DD Form 1854, **US Customs Accompanied Baggage Declaration** (when required).
- 6.10.2.4. CF Form 7507, **General Declaration (Outward/Inward)** (when required).
- 6.10.2.5. AF Form 15, **United States Air Force Invoice.**
- 6.10.2.6. AF Form 315, **United States Air Force AVFuels Invoice.**
- 6.10.2.7. AF Form 457, **USAF Hazard Report.**
- 6.10.2.8. AF Form 651, **Hazardous Air Traffic Report (HATR).**
- 6.10.2.9. AF Form 1297, **Temporary Issue Receipt.**
- 6.10.2.10. AF Form 3211, **Customer Comments.**
- 6.10.2.11. DD Form 1610, **Request and Authorization for TDY Travel of DoD Personnel.**
- 6.10.2.12. AF Form 1631, **NATO Travel Orders** (when required).

6.10.3. Other:

- 6.10.3.1. TOLD card (mandatory; carry enough for all mission legs).
- 6.10.3.2. Flight authorization.

6.10.4. Authentication and Classified Documents. Obtain and safeguard authentication and operational code documents. These documents are required for flights into an Air Defense identification zone (ADIZ) when specified by operations plans or theater directives, or when directed by the unit commander.

6.11. Route Navigation Kits. A route navigation kit is issued at the home station and remains with the aircraft until it returns to the home station. Kits contain sufficient quantities of material to cover the planned mission and global operations as required. Minimum contents of route navigation kits are listed in [Table 6.2](#).

NOTE: Local area navigation kits may be used in lieu of route navigation kits on local unit training sorties. Contents of these kits is a local unit decision.

Table 6.2. Route Navigation Kit Requirements.

I	A	B
T		
E		
M	Item (applicable to area of operation)	Quantity
1	FLIP IFR Supplement	1
2	FLIP Flight Information Handbook	1
3	FLIP en route (high and low)	1

I	A	B
T		
E		
M	Item (applicable to area of operation)	Quantity
4	FLIP instrument approach procedures (high and low for planned theater of operation)	2
5	Standard instrument departures (for planned theater of operation)	1
6	Standard terminal arrival routes (STAR)	1
7	Topographical and sectional charts for areas of operation (GNC/OPC/TPC/JNC)	as required
8	FLIP VFR supplement	1
9	DoD area arrival charts	(if available)

6.12. Briefing Requirements:

6.12.1. Aircraft Commander Briefing. Brief crewmembers on the specific mission details if not previously accomplished. Details include:

- 6.12.1.1. Time hack.
- 6.12.1.2. Weather.
- 6.12.1.3. Mission itinerary and profile.
- 6.12.1.4. Aircraft tail number and call sign.
- 6.12.1.5. Aircraft gross weight and fuel load.
- 6.12.1.6. Communications requirements and procedures.
- 6.12.1.7. Fuel reserve.
- 6.12.1.8. Airdrome restrictions and hazards.
- 6.12.1.9. Emergency procedures review.

6.12.2. Weather Briefings. Request a written weather briefing on DD Form 175-1, **Flight Weather Briefing**. Obtain a briefing on current weather, trends, and forecast for the proposed route, destination, and alternates. All primary crewmembers will attend the weather briefing unless crew duties dictate otherwise. If the flight will transit non-Air Force bases, crews must make arrangements to ensure adequate weather support facilities and services are available. If adequate services are not available, crews will obtain weather support through any means available to ensure required weather data is in their possession prior to mission accomplishment. When face-to-face briefings are not possible, obtain a telephone weather briefing (precedence up to and including IMMEDIATE is authorized). The designated MAJCOM regional briefing stations provide the telephone briefing for CONUS flights.

6.12.3. Buffer Zone. Prior to operating an aircraft within or adjacent to an established buffer zone, the pilot will ensure primary crewmembers are briefed on current buffer zone procedures outlined in appropriate directives.

6.12.4. Peacetime and Wartime SAFE PASSAGE Procedures. Pilots must be familiar with peacetime and wartime safe passage of friendly military aircraft (if applicable).

6.13. Call Signs:

6.13.1. Training Missions. Aircraft will use the unit static call sign prefix followed by a 2-digit suffix assigned by the parent unit.

6.13.2. Operational Missions. For contingencies and overseas missions, aircraft will use call signs assigned by OPOD, FRAG, or diplomatic clearance. If no call sign has been assigned to the mission, use unit static call signs.

NOTE: The Reach 01, 15, and 21 call signs will only be used by the AMC/CC, 15 AF/CC, and the 21 AF/CC respectively.

6.13.3. Aeromedical Evacuation Missions. For aeromedical evacuation missions, use call sign "E" followed by the 5-digit aircraft tail number or mission designator (as required by FLIP). Use this call sign during the positioning leg and evacuation portion of the mission. When the aeromedical evacuation portion of the mission is completed, normal call signs will then be used.

6.14. Instrument Flight Rules. To the maximum extent possible, conduct flight operations under IFR without unacceptable mission degradation. This does not prevent VFR training to maintain proficiency in mission-essential VFR operations.

6.15. Flight Plan Verification:

6.15.1. Aircrews should acquaint themselves with the mission and individual sortie requirements to ensure successful mission accomplishment.

6.15.2. Contracted computer flight plans (CFP) or CFPs available from Air Force Global Weather Central (AFGWC/DOF) or other DoD-approved CFPs are the official sources of performance, navigation, and climatic data, including en route wind information. If stand-alone microcomputer based plans are used, each mission segment should utilize best wind data available. C-12s may use any computer flight plan system approved for DoD aircraft.

6.15.3. Flight crews may manually compute flight plans, use computer-based or contracted CFPs, or utilize CFPs provided by the staff. CFPs should be utilized to the maximum extent practical. The flight crew has final responsibility for accuracy of the flight plan used.

6.15.4. CFPs will be verified by the flight crew for route definition and fuel computation accuracy prior to departure.

6.16. Departure Planning. Comply with AFMAN 11-217, volume 1, *Instrument Flight Procedures*, AFI 11-202 volume 3, MAJCOM supplements, and the Dash 1.

6.16.1. Gross Weight. Ensure that the aircraft does not exceed the maximum gross weight, zero fuel weight, or center of gravity limitations specified in T.O. 1C-12(appropriate model)-1. Gross weight may be further restricted by operating conditions such as icing, temperature, pressure altitude, runway length and slope, departure maneuvering, required climb gradients, and obstacles.

6.16.2. Departure Routing/Climbout Performance. Appropriate terrain charts must be reviewed prior to departure. Regardless of the type of departure flown (standard instrument departure [SID],

radar vector, IFR departure procedure, or VFR), the aircraft must be able to achieve the published climb gradient (for the runway to be used) with all engines operating and be able to vertically clear all obstacles within the climbout flight path with one engine inoperative. If no minimum climb gradient is published, use 200 feet per NM minimum with all engines operating and 152 feet per NM minimum with one engine inoperative. If a higher required climb gradient is published, use that climb gradient as the minimum with all engines operating, and use that climb gradient minus 48 feet per NM as the minimum with one engine inoperative. This only works at fields having an instrument approach. If the field does not have an instrument approach, then no obstacle survey has been conducted. Therefore, you don't know if 200 or 152 feet per NM is sufficient. In all cases, the minimum engine out climb gradient for the C-12 is 2.5 percent.

6.16.2.1. SIDs. OPRs for SIDs are identified on each individual SID. They are either FAA, United States Army (USA), United States Navy (USN), United States Marine Corps (USMC), or United States Air Force (USAF).

6.16.2.2. Published IFR Departure Procedures. Published IFR departure procedures are available at some civil and military fields to assist in avoiding obstacles during climb to the minimum en route altitude (MEA). Airfields with published IFR departure procedures will have the inverted triangle with a white "T" symbol printed on the approach plates and SIDs. When using Jeppesen publications, IFR departure procedures will be on the airfield diagram page, which is typically on the reverse side of the airport's first approach. A climb gradient and or specific routing and or alternate takeoff weather minimums will normally be specified with a published IFR departure procedure. When flying a published IFR departure procedure, depicted routing and climb gradients must be flown to avoid obstacles. Although alternate takeoff weather minimums allow aircraft to depart with minimum ceiling and visibility, the C-12 is not authorized to use these alternate takeoff weather minimums.

NOTE: If the published IFR departure procedure does not include either a routing or a minimum climb gradient (that is, it includes only alternate takeoff weather minimums), then an IFR departure from that airfield is not authorized unless you depart via a SID, using specific ATC departure instructions (includes radar vectors), or MAJCOM-approved departure.

6.16.2.3. Specific ATC Departure Instructions or Radar Vectors. Crews may depart via radar vectors or specific ATC departure instructions; however, the SID prescribes a safe route of flight for a climb to the en route structure, while minimizing radio communication. A SID, if published, should be readily available as a backup to radar vectors.

6.16.2.4. VFR Departures. VFR departures are authorized if required for mission accomplishment. The weather at takeoff must permit a VFR climb to an IFR MEA, an appropriate IFR cruising altitude, or an altitude where radar vectors can be provided. **NOTE:** In no case will VFR departures be flown in lieu of obstacle clearance planning.

6.17. Obstacle Clearance Planning. Comply with AFMAN 11-217, volume 1, AFI 11-202, volume 3 and the Dash 1.

6.17.1. Obstacle Identification Surface (OIS). Obstacle identification for SID purposes (FAA Handbook 8260.3B, AFM 55-9, *UV Standard for Terminal Instrument Procedures (TERPS)* [projected to be AFJMAN 11-226]), are those objects that penetrate an OIS of 40:1 (152 feet per NM). Calculation of the OIS on a SID continues until the SID reaches a MEA or until the SID terminates.

Climb gradients of 200 feet per NM will provide at least 48 feet per NM clearance above all obstacles that do not penetrate the OIS. Complying with published climb gradients found on a SID or IFR departure procedure will provide at least 48 feet per NM clearance above all obstacles that penetrate the OIS. The aircraft commander must be aware and thoroughly brief the crew on all obstacles along the departure flight path.

6.17.1.1. The AMC Airfield Suitability and Restrictions Report (ASRR) is an excellent source for obstacle information; however, it is not a stand-alone document. It is intended to supplement published climb gradients and obstacle information found on SID, published IFR departure procedures, and terrain charts.

6.17.1.2. Aircrews may contact HQ AMC/DOAS for additional airfield obstacle data.

6.17.2. Objects penetrating the OIS may or may not be depicted. (**EXCEPTION:** Objects penetrating the OIS will not be depicted on civil procedures.) Objects which do not penetrate the OIS will not normally be depicted, but may still require consideration in takeoff planning. The only way to ensure obstacle clearance on any departure is to plot all significant obstacles.

6.17.3. SIDs simplify ATC procedures while providing safe routing to the en route structure; however, SIDs should not be used as the sole source of obstacle information for departure planning. If used as such, inadequate (engine out) obstacle clearance may result. SIDs, instrument approach plates, and topical sectional charts, must be used to determine the distance and height values for all significant obstacles along the flight path.

6.17.4. The controlling obstacle is defined as the obstacle requiring the greatest climb gradient within the flight path. Obstacles are not normally depicted on SIDs when climb gradients of less than 152 feet per NM are required to clear them.

6.17.5. In order to fly any IFR departure, aircrews must ensure they can meet the published or required climb gradient for the planned departure with all engines operating. In addition, aircrews will accomplish the following to ensure they can vertically clear all obstacles on or reasonably near the climbout or emergency return flight path with one engine inoperable:

6.17.5.1. Using the performance manual climbout flight path charts, compute the required engine out climb gradient to clear all obstacles. Review appropriate terrain charts, the ASRR, instrument approaches, sectionals, departure plates, etc., to determine obstacles.

6.17.5.2. To determine the required engine out climb gradient, you will need to:

6.17.5.2.1. Determine the all engine climb gradient required. For SIDs, the number appearing in the “60 knots” block is the required all engine climb gradient in feet per NM. For published IFR departure procedures, the required all engine climb gradient may be depicted in a similar manner as on a SID, or some mathematical conversion may be required. If no gradient information is published on the SID or IFR departure procedure, use 200 feet per NM (3.3 percent). For all other types of departures that do not depict a minimum all engine climb gradient, use 200 feet per NM.

6.17.5.2.2. Subtract 48 feet per NM from the all engine climb gradient derived in paragraph [6.17.5.2.1](#). This is the required engine out climb gradient. In no case will the minimum engine out climb gradient be less than 152 feet per NM (2.5 percent).

- 6.17.5.3. Using the established climb gradient from paragraph 6.17.5.2., compute normal engine out TOLD performance. You must also verify that the aircraft's all engine climb gradient meets the minimum required. If takeoff is possible under these conditions, that is, your aircraft gross weight is less than or equal to the computed maximum allowable takeoff gross weight, you may depart using the planned departure.
- 6.17.6. If the aircraft is unable to vertically clear all obstacles engine out, the crew will consider taking the following actions:
- 6.17.6.1. Downloading cargo.
 - 6.17.6.2. Downloading fuel.
 - 6.17.6.3. Delaying the mission until climatological conditions allow for sufficient performance to clear all obstacles.
 - 6.17.6.4. Coordinating alternate departure procedures with the controlling agency that will provide obstacle clearance.
- 6.17.7. If none of the options in paragraph 6.17.6. are feasible, the crew may depart only if **all** of the following conditions are met:
- 6.17.7.1. Day and VFR conditions exist on the entire departure and planned emergency return routing.
 - 6.17.7.2. The aircraft is able to achieve the minimum published climb gradient (200 feet per NM, if none published) with all engines operating.
 - 6.17.7.3. The aircraft commander has determined through a review of all applicable maps and charts that, in the event of an engine failure, the planned departure and emergency return routing will allow for obstacle avoidance.
 - 6.17.7.4. The planned emergency route is briefed to the entire crew.
- 6.17.8. In the event of an engine failure, aircrews will advise ATC if they are unable to comply with the required climb gradient. Request radar vectors and or avoid all obstacles visually.
- 6.17.9. The following procedures apply for all departures:
- 6.17.9.1. As a minimum, review the appropriate terrain chart or sectional chart in addition to the SID.
 - 6.17.9.2. Consider all obstacles on the SID. Estimate the flying distance to (or abeam) an obstacle if the published distance is questionable. Remember, the climbout performance is not linear. When accomplishing the engine out departure profile, leveling at pressure height for acceleration may result in OIS penetration. For this reason, obstacles that do not penetrate the OIS (not depicted on the SID) may be a factor if the aircraft goes below the OIS during cleanup and acceleration.
 - 6.17.9.3. When using other sources for obstacle information, consider all obstacles which fall within the departure or emergency return routing.
 - 6.17.9.4. Always plan escape routing to ensure obstacle clearance and emergency recovery during engine failure.

6.17.9.5. Have one pilot compute all performance data using T.O. 1C-12A/F/J-1 or T.O. 1C-12A/F/J-1CL-1 and have the second pilot cross check it.

6.18. Alternate Planning. Comply with AFMAN 11-217, volume 1, AFI 11-202, volume 3, and the Dash 1.

6.18.1. Choose alternates that best meet mission requirements and conserve fuel. Those selected should not be within the same terminal area, if terminal forecasts are marginal. Select alternates not restricted by FLIP, the Foreign Clearance Guide, or diplomatic clearances, and are compatible with the mission load and performance characteristics of the aircraft.

6.18.2. The aircraft commander retains final authority in the choice of alternates; however, selection by support agencies normally should be used if they meet the above criteria and the aircraft has already been serviced.

6.18.3. Alternates selected must meet the alternate airport weather requirements according to AFI 11-202, volume 3.

6.19. Departure Alternates. A departure alternate is required if ceiling or visibility is below landing minimums for an available approach (at departure aerodrome). When a departure alternate is required, the aircraft must be capable of maintaining the MEA or minimum obstacle clearance altitude (MOCA), whichever is higher, to the alternate using one engine out performance criteria. To qualify as a departure alternate, the airfield must meet one of the following conditions:

6.19.1. Existing weather at an alternate within 30 minutes flying time must be equal to or better than the published approach minimums and forecast to remain so until 1 hour after takeoff, but in no case forecast to be lower than 200-1/2 (RVR 2400).

6.19.2. The existing weather at an alternate within 2 hours flying time must be at least 500-1 above the lowest compatible published approach minimums, but in no case lower than 600-2 for a precision approach or 800-2 for a nonprecision approach, and forecast to remain so for 1 hour after estimated time of arrival (ETA) at the alternate.

6.20. Destination Requirements (for filing purposes). The forecast destination weather will be according to AFI 11-202, volume 3, and the following:

6.20.1. When the following conditions exist, file two alternates:

6.20.1.1. The forecast visibility (intermittent or prevailing) is less than published for an available DoD or National Oceanic and Atmospheric Association (NOAA) precision approach.

6.20.1.2. The forecast ceiling or visibility (intermittent or prevailing) is less than published for all other approaches. For approaches with no published ceiling requirement (for example Jeppesen approaches), the minimum required ceiling shall be computed by taking the published height above aerodrome (HAA) or height above terminal (HAT) and rounding it up to the nearest 100 feet. For example, a Jeppesen VOR approach with a published HAA of 642 feet would require a forecasted ceiling of 700 feet.

6.20.1.3. The forecast surface winds (intermittent or prevailing) exceed limits corrected for RCR.

6.20.2. File one alternate, regardless of forecast weather, when the departure or destination aerodrome is outside the 48 contiguous states.

6.20.3. When filing to a remote or island destination, aircrews may use 1 + 15 holding fuel (in lieu of an alternate). Compute holding fuel using planned destination gross weight at FL 200. A remote or island destination is defined as any aerodrome that, due to its unique geographic location, offers no suitable alternate (civil or military). The forecast weather at the remote or island destination must meet the following criteria:

6.20.3.1. The prevailing surface winds, corrected for RCR, must be within limits at ETA and forecast to remain so for 2 hours thereafter.

6.20.3.2. The prevailing ceiling and visibility must be equal to or greater than published minimums for an available nonprecision approach, for ETA plus 2 hours.

NOTE: If a precision approach is available, the ceiling or visibility may be intermittently below non-precision approach minimums, but not below precision approach minimums (for ETA plus 2 hours).

6.20.4. When filing to a destination where the alternate is located in Alaska or at latitudes greater than 59 degrees, carry an additional 30 minutes of holding fuel. In this case, the minimum planned fuel overhead planned destination would include fuel for approach or landing, alternate or missed approach, fuel reserve, and 1 + 15 holding fuel. Compute holding fuel using planned destination gross weight at FL 200.

6.21. Adverse Weather:

6.21.1. Do not take off under conditions of freezing rain or severe icing. Also, flight into areas of forecast or reported freezing rain, severe icing, or severe turbulence is prohibited.

6.21.2. During flight, use any means available to avoid thunderstorms by at least 20 NMs at or above FL 230 or 10 NMs below FL 230.

6.21.2.1. Aircrews should avoid flying in areas of recently dissipated thunderstorms and advected clouds downwind of thunderstorms. Crew actions should err on the side of safety.

6.21.2.2. Use ground-based radar as a means of thunderstorm avoidance only to assist in departing an inadvertently penetrated area of significant weather. It should never be considered a normal avoidance procedure.

6.21.3. Do not fly directly above (within 2,000 feet) thunderstorms or cumulonimbus clouds. If unable to vertically clear thunderstorms or cumulonimbus clouds by at least 2,000 feet, avoid them by using the criteria in paragraph [6.21.2](#).

NOTE: Aircraft damage may occur 20 miles or more from any thunderstorms. Aircrews must familiarize themselves with information on thunderstorm development and hazards. Refer to AFH 11-203, Weather for Aircrews.

6.21.4. In order to minimize exposure to thunderstorm hazards when approaching or departing an airport in an area where thunderstorms are occurring or are forecast:

6.21.4.1. Attempt to maintain VMC.

6.21.4.2. Maintain at least 5 NMs separation from rain shafts associated with thunderstorms or cumulonimbus clouds.

6.21.4.3. Avoid areas of high lightning potential, such as clouds within plus or minus 5,000 feet of the freezing level.

NOTE: Approaches or departures may be accomplished when thunderstorms are within 10 NMs. The thunderstorms must not be producing any hazardous conditions (such as hail, lightning, strong winds, gusts, fronts, heavy rain, wind shear, or microburst) at the airport, and must not be forecast or observed to be moving in the direction of the flight route (to include the planned missed approach corridor, if applicable).

6.21.5. Aircrews performing approaches and landings at locations where temperatures are 0 degrees C or below will refer to the Flight Information Handbook, **Section 6D**, temperature correction chart, to correct MDA, decision height (DH), and other altitudes inside the final approach fix (FAF), if required.

6.21.6. Do not fly into an area of known or forecast moderate or greater mountain wave turbulence. Crews should use good judgment when flying into any area conducive to mountain wave turbulence and avoid these areas when possible.

6.21.6.1. Mountain wave turbulence is normally a predictable condition. Forecasters at base weather stations, using guidance products from weather centers, can advise crews of the potential for encountering mountain wave turbulence along planned routes of flight. However, weather data availability in mountainous regions and forecast model limitations prevent the prediction of all events.

6.21.6.2. Crews must be familiar with the causes of mountain wave turbulence and the characteristic clouds that generally forewarn its presence.

6.21.7. National Weather Service in-flight weather advisories are not limiting to Air Force aircraft, but may indicate a need for the aircrew to contact a military weather facility. Crews will consider all significant meteorological information (SIGMET) valid for their aircraft until verified as not applicable with a military METRO service.

6.21.8. For volcanic dust precautions, see the Airman's Information Manual (obtainable through base operations). Plan all missions to avoid the general vicinity of volcanic activity. Aircraft operation in area of forecast or known volcanic activity or dust is prohibited.

6.22. Fuel Conservation. Conserving fuel requires everyone's active participation. For every pound of excess fuel, 3 percent of the excess will be burned each hour.

Section 6C—Preflight

6.23. AFTO Form 781, AFORM Aircrew/Mission Flight Data Document. Review AFTO Form 781 before applying power to the aircraft or operating aircraft systems. The exceptional release must be signed before flight. A maintenance officer, maintenance superintendent, or authorized civilian normally signs the exceptional release. However, if one of these individuals is not available, the aircraft commander may sign the exceptional release. Ensure that the Air Force fuel identaplate or appropriate fuel credit card is aboard the aircraft.

6.24. Aircraft Servicing and Ground Operations:

6.24.1. Aircraft Refueling:

6.24.1.1. Aircrew members qualified in ground refueling may perform refueling duties. Aircrew members will only refuel in cases when maintenance support is not readily available and the mis-

sion would be delayed. Crewmembers may augment maintenance refueling teams at en route stops. Crewmembers acting as refueling supervisors will comply with T.O. 00-25-172 and T.O. 1C-12 (applicable model)-1 series.

6.24.1.2. The following guidance will be used for fuel servicing (refuel) operations only:

6.24.1.2.1. Passengers are not allowed on board unless expressly directed by the MAJCOM or in combat situations.

6.24.1.2.2. Electric and electronic equipment should normally be turned off during refueling operations. To fill the ferry tank, comply with T.O. 1C-12A/F/J-1 procedures.

6.24.2. Concurrent Ground Operations. Concurrent ground operations are not authorized for C-12 aircraft.

6.25. Aircraft Recovery Away from the Main Operating Base (MOB). When an aircraft lands at a base other than the MOB, the aircraft commander is responsible for ensuring the aircraft is turned to meet subsequent mission taskings.

6.25.1. Recovery items the aircrew may be responsible for include, but are not limited to, the following:

6.25.1.1. Parking.

6.25.1.2. Aircraft servicing, including AGE usage.

6.25.1.3. Minor configuration changes to meet mission tasking.

6.25.1.4. Securing the aircraft prior to entering crew rest.

6.25.1.5. Coordinating aircraft security requirements.

6.25.1.6. AFTO 781-series forms maintenance.

6.25.2. When aircrews turn aircraft without qualified maintenance specialist assistance, they must comply with the appropriate maintenance tech order.

6.25.3. Aircrews are not qualified to accomplish the required ground inspections. In those instances where maintenance personnel are not available, the aircrew will enter a red dash symbol on AFTO Form 781H to update current status and enter a red dash symbol and a discrepancy that reflects that the applicable maintenance inspection is overdue.

6.26. Oxygen Requirements. The minimum quantity of oxygen aboard an aircraft before takeoff must be sufficient to accomplish the planned flight from the equal time point (ETP) to recovery should oxygen be required. Refer to the appropriate T.O. for minimum oxygen requirements. Calculate using the 100 percent oxygen chart in the flight manual.

6.27. Fleet Service Equipment. Ensure required fleet service items are aboard.

6.28. Passenger Handling. ACs are responsible for required passenger handling duties. The following guidance addresses passenger handling:

6.28.1. Passengers are limited to 30 pounds of baggage unless a specific allowance for excess baggage is authorized and planned by the controlling agency. Passengers (duty and standby) with excess

baggage may be transported after the AC determines that aircraft weight limitations and mission requirements are satisfied.

6.28.2. Ensure passengers are manifested and the required antihijacking inspections are performed. When passenger service is not available, leave a passenger manifest with a responsible ground agency prior to takeoff.

6.28.3. After the security and antihijacking inspection, passengers should be under the constant supervision of a passenger service representative or a crewmember. When unable to provide constant supervision, ensure the security and antihijacking inspection is reaccomplished before boarding passengers.

6.28.4. Make every effort to enhance passenger comfort.

6.28.5. Accomplish passenger briefings according to the aircraft checklist or approved briefing guides. Seatbelt usage and emergency equipment will be briefed or demonstrated as required. Additionally, passengers should be notified before takeoffs and landings to ensure seatbelts and harnesses are fastened, loose articles are stowed, seat backs are upright, etc.

6.28.6. Ensure the highest ranking DV is afforded the seat of preference and that other passengers are aware of DV status of passengers.

6.28.7. Release space-available seats to the maximum extent possible, unless restricted by the controlling agency.

6.28.8. Child or infant safety seats or restraints used in aircraft must meet the following criteria:

6.28.8.1. Child or infant safety seats manufactured between 1 January 1981 and 26 February 1985 must have a label stating, "This child-restraint system conforms to all applicable motor vehicle safety standards."

6.28.8.2. Seats and restraints manufactured after 26 February 1985 must have an additional label printed in red stating, "This restraint is certified for use in motor vehicles and aircraft."

NOTE: No other seat or restraint is authorized.

6.28.8.3. Child and infant safety seats and restraints in aircraft must be secure to a seat using the seatbelt. If a passenger seat is not available for an infant less than 2 years old, the infant should be taken out of the child or infant seat or restraint and held in the adult's lap. Normally, passengers with infants will be manifested so each person has a seat. In-lap seating is authorized in unusual or abnormal circumstances; however, each person must have an emergency oxygen mask available.

NOTE: Acceptable child and infant safety seats or restraints may be used for takeoff, landing, or during an emergency in forward- or aft-facing seats only.

6.28.9. Passenger Restrictions. On missions directed by the Special Air Missions Office (HQ USAF/CVAM), consult with the controlling agency before releasing seats on nonrevenue, revenue, or White House missions. This includes positioning and depositioning legs.

6.29. Cargo Documentation. Operational support airlift (OSA) aircraft do not normally carry cargo. If cargo other than passenger bags are carried, proper cargo documentation must accompany each cargo load. A cargo manifest, DD Form 1385, **Cargo Manifest**, is required prior to all departures with cargo,

unless one is not available because of a lack or failure of the manifest processing equipment. In this case, a cargo listing or a punch card deck will accompany the load. The cargo or mail listing may be an abbreviated manifest, but will contain all required military standard transportation and movement procedures (MILSTAMP) data and pallet information for weight and balance purposes. Special handling documents (such as, DD Form 1387-2, **Special Handling Data Certification**, and DD Form 1252, **US Customs Declaration for Personal Property Shipments**) are required for special handling cargo.

6.30. Procedures for Airlifting Hazardous Cargo. The following procedures implement AFJI 11-204:

6.30.1. The term “hazardous materials” as used in conjunction with airlift operations applies to the following classes and types of materials covered by AFJMAN 24-204, **Preparing Hazardous Materials for Military Air Shipments**:

- 6.30.1.1. Class 1 (explosives).
- 6.30.1.2. Class 2 (compressed gas).
- 6.30.1.3. Class 3 (flammable liquid).
- 6.30.1.4. Class 4 (flammable solid).
- 6.30.1.5. Class 5 (oxidizer and organic peroxide).
- 6.30.1.6. Class 6 (poison and infectious substances).
- 6.30.1.7. Class 7 (radioactive material).
- 6.30.1.8. Class 8 (corrosive material).
- 6.30.1.9. Class 9 (miscellaneous dangerous goods).

6.30.2. C-12 aircraft are authorized to transport the following hazardous materials prepared and packaged according to AFJMAN 24-204:

- 6.30.2.1. All classes or divisions of explosives.
- 6.30.2.2. Class or division 2.2 nonflammable aerosols and compressed gases in limited quantities.
- 6.30.2.3. Class or division 2.2 nonflammable high pressure spheres and canisters authorized in support of the Air Force and DoD atmosphere research program.
- 6.30.2.4. Class 9 material (except magnetic material which may affect flight instruments).
- 6.30.2.5. Medical support equipment and supplies.
- 6.30.2.6. Class 8 aircraft batteries required for maintenance support or mobility requirements.
- 6.30.2.7. Hazardous materials accompanying Hammer Ace personnel.
- 6.30.2.8. Hazardous materials in excepted quantities.

6.30.3. Other classes and divisions of hazardous materials are prohibited except by a waiver approved by the operations group commander or equivalent. Items must be prepared and packaged according to AFJMAN 24-204. Waiver approval must take into consideration the lack of onboard hazardous material (HAZMAT) spill and cleanup kit and aircraft jettisoning capability. Waivers are not authorized for:

- 6.30.3.1. Class or division 2.1 cryogenics.

- 6.30.3.2. Class or division 6.1 poisons with an inhalation hazard.
 - 6.30.3.3. Class or division 2.3 toxic gases.
 - 6.30.3.4. Class 7 radioactive material (yellow III).
- 6.30.4. The aircraft commander will be briefed on the following information concerning HAZMAT being carried:
- 6.30.4.1. Hazard class.
 - 6.30.4.2. Proper shipping name.
 - 6.30.4.3. DoD class or division when any type of explosives is involved.
 - 6.30.4.4. Net explosives weight (NEW) for all DoD class or division 1.1, 1.2, and 1.3 explosives.
 - 6.30.4.5. Gross weight of HAZMATs other than the explosives listed in paragraph **6.30.4.4**.
 - 6.30.4.6. Passenger restrictions. (Written authority must be furnished to cover movement of passengers with passenger prohibited cargo identified in AFJMAN 24-204.)
 - 6.30.4.7. Written notification indicating “prior permission required” (PPR), obtained from the next base to be transited.
 - 6.30.4.8. Smoking restrictions.
 - 6.30.4.9. Isolated parking and taxiing requirements.
 - 6.30.4.10. Security classification, if appropriate.
 - 6.30.4.11. Placard requirements.
 - 6.30.4.12. Other special handling requirements.
- 6.30.5. The aircraft commander will not accept HAZMATs that are not manifested and or certified in accordance with AFJMAN 24-204. (**EXCEPTION:** Use an “excepted quantity” label for items meeting the definition.) The transportation function is responsible for ensuring the hazardous materials are properly packaged, marked, and labeled. The aircraft commander will contact the CCC or air terminal operations center (ATOC) concerning any questions on suitable cargo for air transportation.
- 6.30.6. For flight planning, the aircraft commander, when briefed according to paragraph **6.30.4**, will:
- 6.30.6.1. Enter “hazardous cargo” and the mission identifier or flight number in the remarks section of DD Form 175, **Military Flight Plan**, or in the other information section of DD Form 1801, **DoD International Flight Plan**, as appropriate for:
 - 6.30.6.2. Any quantity of class or division 1.1, 1.2, or 1.3 explosives.
 - 6.30.6.3. Class or division 1.4, 1.5, or 1.6 explosives when quantity exceeds 1,000 pounds gross weight.
 - 6.30.6.4. All other hazardous materials identified in paragraph **6.30.2** when quantity exceeds 1,000 pounds gross weight.
- 6.30.7. If possible, plan the flight to minimize over-flying heavily populated or otherwise critical areas. Approach landing and takeoff tracks are excluded.

6.30.8. Prepare a departure message at stations when a CCC is not available. The remarks section of the departure message should include the following information:

6.30.8.1. Class or division of hazardous material aboard, include net explosives weight (NEW) and gross weight for other hazardous material.

6.30.8.2. Request for special handling; for example, isolated parking, security, technical escort teams, etc.

6.30.9. If estimated time en route (ETE) is less than 1 hour, or if other circumstances preclude timely message receipt at destination, notify the base of first intended landing by priority telephone of the ETA and information listed in paragraph 6.30.4. Ask the CCC at the departure base to relay this information to base operations at the point of first intended landing when a CCC is available.

6.30.10. Before engine start, notify the controlling agency parking location, approximate engine start time, and verify the firefighting agency has the hazardous materials information. Otherwise, request the following be relayed to the firefighting agency:

6.30.10.1. Class or division of hazardous material aboard.

6.30.10.2. NEW for DoD class or division 1.1, 1.2, and 1.3 explosives.

6.30.10.3. Estimated time of departure.

6.30.11. En route. Normal procedures apply.

6.30.12. Before landing. Unless specifically prohibited by the theater commander of FLIP planning, contact the agency specified in FLIP, base operations dispatcher, control tower or approach control at least 30 minutes (or as soon as practical) before ETA to announce the hazardous materials aboard. Transmit the mission number, ETA, and information in paragraph 6.30.4. Request the information be relayed immediately to base operations or the civil airport manager, crash and fire protection agency, and other support activities. If landing at a CONUS civil airport without a tower, give the above information to the nearest FAA flight service station.

6.30.13. Aircraft parking. DoD requires aircraft carrying DoD class or division 1.1 or 1.2 explosives be parked in areas isolated from nonassociated personnel and facilities. When such cargo is aboard, aircraft commanders are responsible for ensuring cargo is correctly identified to the tower or ground control. When aircraft are not directed to an isolated area, identify the cargo again to tower or ground control. When identification is acknowledged, the host is solely responsible for selecting the parking area. Should host procedures be questionable, submit trip reports or hazard reports as appropriate to document such occurrences. Host base may direct isolated parking for other hazardous materials according to local procedures.

6.30.14. The military host is responsible for placarding aircraft. When missions operate on nonmilitary bases, the briefing to the aircraft commander will include placarding requirements and, if required, placards will be furnished at the onload base. The shipper and receiver must make prior arrangements with the airport to manage shipments of hazardous materials requiring placarding. The shipper and receiver are responsible for cargo identification, firefighting procedures, and isolated parking requirements.

6.31. Handling of Classified Cargo, Registered Mail, Not Mission Capable-Supply (NMCS)/ Very Very Important Parts (VVIP)/Flight Service Station (FSS) Shipments, and Courier Material:

6.31.1. Receipts will be obtained for classified cargo, NMCS, VVIP, and FSS shipments, and registered mail at the onload and offload station using the cargo manifest.

6.31.1.1. Armed Forces Courier Service (AFRCOS) couriers are authorized to designate officer and enlisted (SSgt and above) crewmembers on military aircraft as couriers to escort and safeguard courier material when other qualified personnel are not available. Qualified passengers will be designated prior to designating crewmembers. The following restrictions apply:

6.31.1.1.1. Primary crewmembers will not be designated without the consent of the aircraft commander.

6.31.1.1.2. Crewmembers on aircraft scheduled to stop at locations where AFRCOS couriers cannot provide en route support will not be designated as couriers. This does not relieve the aircraft commander of the responsibility for life and death urgent shipments.

6.31.2. During stops at en route locations supported by AFRCOS stations, AFRCOS couriers are required to meet designated couriers to protect the material.

6.31.2.1. During unscheduled stops, crewmembers may place courier material in temporary custody of the following agencies listed in descending order of priority:

6.31.2.1.1. AFRCOS courier.

6.31.2.1.2. Top Secret control officer of the US armed forces.

6.31.2.1.3. US Department of State diplomatic courier.

6.31.2.1.4. US Department of State activity.

6.31.2.1.5. US military guards.

6.31.2.1.6. US DoD civilian guards.

6.31.3. If unable to follow the itinerary to the destination of the courier material or if material is lost, stolen, or otherwise compromised, report circumstances to the nearest armed forces courier station and notify the local US military commander or US government activity.

Section 6D—Departure

6.32. Ontime Takeoffs. Operational mission departures are on time if the aircraft is airborne within -20/+14 minutes of scheduled takeoff time. The following applies for early departures (does not apply to training missions):

6.32.1. Home Station. Early departures are authorized to prevent a delay due to weather, ATC restrictions, airfield or aircraft operational limitations, to adjust mission flow during a large scale operation, or if approved through the CCC.

6.32.2. En Route Stations. Early departures at en route stations may be authorized through the CCC, provided the impact on local and downrange facilities and crew duty is evaluated.

6.33. Weather Minimums for Takeoff. **Table 6.3.** provides the minimum weather conditions required for takeoff.

Table 6.3. Weather Minimums for Takeoff. (note)

I T E M	A Mission	B Visibility	C Remarks
1	Operational	RVR 1000	When less than RVR 1600, but equal to or greater than RVR 1000, the crew may take off if mission priority dictates. The OG/CC establishes mission priority provided the runway has dual RVR readouts and displays (minimum RVR 1000 on both), and runway centerline lighting is operational. For any takeoff below 1600 RVR, the crew must be fully qualified.
2	All others	RVR 1600	For runways with more than one operating RVR readout, RVR must read 1600 minimum on all readouts.

NOTE: When weather is below approach and landing minimums (ceiling or visibility) a takeoff alternate is required. (See paragraph 6.19.)

Section 6E—En Route

6.34. Flight Progress:

6.34.1. Any time the very low frequency (VLF) or GPS navigational aid (NAVAID)/waypoint database is not current, a pilot-defined waypoint will be used for navigation. Two pilots will verify the NAVAID/waypoint information prior to selection as the active waypoint. Check both the coordinate information and the distances between waypoints against the flight plan.

6.34.2. In flight, use all available NAVAIDs to monitor VLF or GPS performance. Immediately report malfunctions or any loss of navigation capability that degrades centerline accuracy to the controlling ARTCC. When approaching each waypoint, recheck coordinates for the next waypoint.

6.34.3. C-12 aircraft outfitted with internal GPS are approved for en route area navigation (RNAV). The RNAV may not exceed 1 1/2 hours between GPS updates. An update is accomplished by using visual references, TACAN, or other radio NAVAIDs. C-12s are not approved for GPS-overlay approaches.

6.35. Navigational Aid Capability:

6.35.1. Reduced Vertical Separation Minimum (RVSM) Airspace. Airspace where RVSM is applied is considered special qualification airspace. Both the operator and the specific aircraft type must be approved for operations in these areas. The C-12 is not yet approved for unrestricted use in the full RVSM envelope. Once the aircraft and aircrew are in compliance, refer to FLIP AP/2 and the following for RVSM requirements:

6.35.1.1. Both primary altimeters, at least one autopilot, the altitude advisory system, and the transponder must be fully operational before entering into RVSM airspace. Should any of this equipment fail prior to entering RVSM airspace, request a new clearance to avoid this airspace.

6.35.1.2. Engage the autopilot during level cruise, except when circumstances such as turbulence or the need to retrim the aircraft require disengagement.

6.35.1.3. Continuously cross-check the primary altimeters to ensure they agree ± 200 feet.

6.35.1.4. Should any of the required equipment fail after entry into RVSM airspace, immediately notify ATC and coordinate a plan of action.

6.35.1.5. Document (on the aircraft forms) malfunctions or failures of RVSM-required equipment, including the failure of this equipment to meet RVSM tolerances.

6.36. CIRVIS and Other Reports. Report all vital intelligence sightings from aircraft as indicated in FLIP planning or the FLIP en route supplement.

6.36.1. Aircraft subjected to harassment or hostile action by foreign aircraft will immediately contact the nearest Air Force air and ground voice facility and report the encounter. Include aircraft nationality, type, insignia, or any other identifying features. Also, note the aircraft's position, heading, time, speed when harassed, and the type of harassment. Request relay of the report to the nearest CCC. Also attempt to contact the nearest command post when in UHF and VHF range.

6.36.2. Report other incidents as indicated in JCS Pub 6, volume V, and AFMAN 10-206, *Operational Reporting*.

6.37. In-Flight Meals. The AC and the pilot should not eat meals at the same time, and their meals should consist of different menu items.

6.38. Communications:

6.38.1. HF Communications (according to AFI 33-110, *Data Administration Program*). Confine message traffic to essential operational matters. Perform an HF radio ground check before takeoff when the use of an HF radio may be required for ATC or C2 communications. Establish HF contact before going out of UHF and VHF range. If unable to establish HF contact with the controlling HF station and an alternate means of relay of ATC information in oceanic areas is not available, return to the nearest suitable support base.

6.38.2. General. Provide ARTCC position and weather observations when required. If unable to contact an ATC agency, attempt relay through the GLOBAL HF stations.

6.38.3. AF Form 72, Air Report (AIREP). When directed by the departing weather facility, take and record an AIREP at each position report over a category I route. Identify inaccurate CFP winds by special report if the average wind for a route segment exceeds either 30 degrees error in wind direction or 25 knots in wind speed. Turn in the completed AF Form 72 to the destination Air Force weather facility.

6.39. In-Flight Emergency Procedures. Report deviations from directives that may occur as a result of an emergency in accordance with AFI 11-202, volume 3, and this publication.

6.39.1. Crews should furnish the controlling agency and appropriate CCC a description of the difficulty, assistance required, intentions, and any other pertinent information when practical after completing the aircraft emergency action checklists and associated actions.

6.39.2. A CONFERENCE SKYHOOK may be initiated when additional expertise is necessary to cope with emergencies or other conditions. Communications procedures are as follows:

6.39.2.1. For the local area, when in UHF or VHF range, initiate the conference over appropriate frequencies.

6.39.2.2. While en route and out of UHF range, use HF radios to establish a phone patch with the nearest or controlling C2 center as appropriate.

6.39.2.3. Provide the following information when time permits:

6.39.2.3.1. A narrative description of the situation to include actions taken by the crew and the intentions of the aircraft commander.

6.39.2.3.2. Fuel on board and hours of endurance.

6.39.2.3.3. Position.

6.39.2.3.4. Altitude and flight conditions.

6.39.2.3.5. Number of personnel and DVs on board.

6.39.2.3.6. Qualification of aircraft commander.

6.39.2.3.7. The planned landing base.

6.39.2.3.8. ETA at landing base.

6.40. Need for Medical Assistance. When a person aboard the aircraft requires medical care, inform the station of intended landing in sufficient time so the aircraft may be met by medical personnel. Include the sex, approximate age, and the major complaint in the request.

6.41. Weather Forecasts:

6.41.1. The pilot is responsible for obtaining the destination weather prior to descent.

6.41.2. The primary means of obtaining destination weather is from any Air Force base weather station via a pilot-to-meteorologist service (PMSV) or through an Air Force aeronautical station.

6.41.3. For aircraft flying into Europe, the preferred contact for weather information east of 10 degrees west longitude is through any aeronautical station to the Air Force weather support unit at Ramstein AFB (USAFE Metro).

6.41.4. The ATC system can provide weather information to en route aircraft. In addition, weather information may be obtained through Automatic Terminal Information Service (ATIS) and or the Automated Weather Observing System (AWOS).

6.41.4.1. The ARTCCs have a limited capability to provide weather information to en route aircraft within CONUS.

6.41.4.2. SIGMET advisories will be transmitted from the servicing ATC unit. Crews will consider all SIGMETs valid for their aircraft until verified as not applicable with a military METRO service.

Section 6F—Arrival

6.42. Descent. Before descending into unfamiliar areas, review appropriate terrain charts (Operational Navigation Chart [ONC], Sectional Aeronautical Chart, Tactical Pilotage Chart [TPC], or Joint Operations Graphic [JOG]) to increase aircrew situational awareness of obstructions. Primary crewmembers will not be involved in duties other than aircraft operations, descent and approach monitoring, and required checklist items from the initial descent point to landing.

6.42.1. No flight crewmember may engage in, nor may any pilot in command permit, any activity from start of descent to landing which may distract any flight crewmember from the performance of his or her duties. This includes nonessential conversations and reading of publications not related to proper conduct of the flight. This restriction applies to all ground operations involving taxi, takeoff, and landing, and all other flight operations conducted below 10,000 feet, except cruise flight.

6.42.2. Fly a precision approach, if available, at night or during marginal weather. If a precision approach is not available, fly any available approved instrument approach. During night VFR conditions, if an approved instrument approach is not available, a visual approach may be flown. On training and evaluation flights at familiar fields, pilots may fly nonprecision approaches or VFR traffic patterns to accomplish required training and evaluations. The pilot not flying the approach will monitor a precision approach when practical to enhance safety.

6.43. Instrument Approach Procedures:

6.43.1. Before starting an instrument approach or beginning an en route descent, pilots will confirm that existing weather is reported to be at or above required minimums for the lowest compatible approach. Pilots shall increase the published visibility minimums of an instrument approach by 1/2 statute miles (SM) or as noted in NOTAMs, on ATIS, or on the approach plate, when the runway approach lighting system (ALS) is inoperative. **NOTE:** This applies only to the ALS itself, not to vertical approach slope indicators (VASI), precision approach path indicators (PAPI), and other lights that are not components of the ALS.

6.43.1.1. For a precision approach, the DH will provide a height above touchdown of 200 feet or higher. For precision approach radar (PAR) approaches, visibility will be no lower than RVR 2,400 (730 meters) or 1/2 mile visibility (800 meters) with no RVR readout available.

6.43.1.2. When circling minimums are published, but not by category, circling approach minimums are a ceiling of 600 feet and 2 miles prevailing visibility, or published minimums, whichever is higher.

6.43.2. If established on a segment of the approach or being radar vectored to final approach and the weather is reported or observed to be below approach minimums, the aircraft commander has the option of continuing the approach to the missed approach point (MAP)/DH. If deciding to abandon the approach, level off (or descend if a lower altitude is required for the missed approach procedure). Comply with the last assigned clearance until a new or amended clearance is received.

6.43.2.1. Do not continue the approach below minimums unless the aircraft is in a position to make a safe landing and the runway environment is in sight.

6.43.2.2. If the approach is continued, the aircraft commander must plan to have sufficient fuel available to complete the approach and missed approach and proceed to a suitable alternate with normal fuel reserve.

6.43.2.3. The aircraft commander has final responsibility for determining when the destination is below designated minimums and for initiating a proper clearance request.

6.43.3. The following alternate flight publications are authorized if acceptable DoD FLIP products are not available:

6.43.3.1. United States Department of Commerce National Oceanic and Atmospheric Administration (NOAA) publications.

6.43.3.2. Jeppesen and host government instrument approach flight instrument procedure publications. May be used if an operational requirement exists and with MAJCOM approval in accordance with AFI 11-202, volume 3. Crews will contact the controlling agency to OC to confirm MAJCOM approval prior to flying these approaches.

6.43.4. Aircrews performing approaches and landings at locations where temperatures are 0 degrees C or below will refer to the Flight Information Handbook, section D, Temperature Correction Chart, to correct MDA, DH, and other altitudes inside the final approach fix (FAF) if required.

6.44. Classified Equipment and Material:

6.44.1. Equipment. When classified equipment is on board, ensure the CCC or base operations office is aware of the requirement for aircraft security according to **Chapter 7** of this instruction. At bases not under jurisdiction of the Air Force, ensure the aircraft and equipment are protected. AFI 31-401, *Managing the Information Security Program*, provides specific guidance concerning the security of various levels of classified equipment aboard aircraft.

6.44.2. Material. Ensure COMSEC and other classified materials are turned in at destination and receipts are obtained for them. Combat crew communications or CCC will provide temporary storage for COMSEC and other classified materials during en route, turnaround, and crew rest stops.

6.44.3. Aircrews will conduct an operational ground test of the mode 4 on the following missions (ground test assets permitting):

6.44.3.1. All missions departing home station and all locals.

6.44.3.2. Air tasking order (ATO) missions where safe passage procedures are implemented.

6.44.4. Attempt to fix an inoperable mode 4 prior to takeoff. Do not delay takeoff or cancel a mission for an inoperable mode 4, except when the aircraft will transit an area where safe passage procedures are implemented.

6.44.5. Conduct an in-flight check of the mode 4 on all missions departing the CONUS for overseas locations. Aircrews can request the mode 4 interrogation check through NORAD on UHF frequency 364.2.

6.44.6. Aircraft with inoperable modes 4 will continue to their intended destinations. Repairs will be accomplished at the first destination where equipment, parts, and maintenance technicians are available. In theaters where safe passage is implemented, aircraft will follow procedures for inoperable modes 4 as directed in the applicable airspace control order or ATO.

6.44.7. Ground and in-flight checks of the mode 4 are mandatory maintenance debrief items. Crews will annotate successful and unsuccessful interrogation of the mode 4 on all aircraft forms (AFTO Form 781A).

6.44.8. Aircrews will carry COMSEC equipment and documents required to operate the mode 4 on every mission (on local sorties, only the equipment necessary to load the mode 4 is required). Prior to departing for any destination without COMSEC storage facilities, crews will contact their local COMSEC managers for guidance.

6.45. Unscheduled Landings. When an unscheduled landing or crew rest occurs at a base without a passenger facility, the aircraft commander should immediately advise the appropriate CCC and request assistance in arranging substitute airlift for passengers aboard.

6.46. Maintenance. Complete AFTO Form 781 after each flight. After landing, crewmembers debrief maintenance personnel on the condition of the aircraft, engines, avionics equipment, and all installed special equipment as required. At stations where there is no maintenance, and maintenance support is required, crews should contact the contractor's toll free number to coordinate for required maintenance. Once the impact on the mission is determined, the crew should inform the controlling CCC and home station before entering crew rest.

6.47. Border Clearance:

6.47.1. Normal Operations:

6.47.1.1. The unit dispatching the mission is normally responsible for the border clearance of all aircraft.

6.47.1.2. When staff support is not available, border clearance is the responsibility of the aircraft commander. Duties may be assigned to ground personnel, but the aircraft commander retains ultimate responsibility. When a C-12 aircraft is unloaded at a base without an air traffic function, the aircraft commander is responsible for ensuring the following:

6.47.1.2.1. Crewmembers and passengers possess current passports and valid visas, when required.

6.47.1.2.2. Crewmembers and passengers have current certificates of immunization (shot record).

6.47.1.2.3. Cargo entry documents are in proper order.

6.47.1.2.4. The aircraft departs or enters the United States through an air base where border clearance can be obtained.

6.47.1.2.5. A border clearance is obtained for aircraft cargo, passengers, crew and baggage, if required, before takeoff to a foreign area or after arrival from a foreign area.

6.47.1.2.6. The aircraft is sprayed (Foreign Clearance Guide and paragraph [6.48.](#)).

6.47.2. Procedures for US Entry:

6.47.2.1. En route, one crewmember will distribute personal customs declarations (when not accomplished by passenger services) to all passengers and crewmembers. A crewmember will also brief passengers and other crewmembers on customs regulations and prepare and compile necessary border clearance forms for the aircraft commander's signature.

6.47.2.2. En route, notify the CC agency at the base of intended landing of any change in ETA to ensure that border clearance is accomplished as soon as possible after landing.

6.47.2.3. Obtain a permit to proceed when military necessities require that an aircraft (which has landed in the United States for customs clearance) proceed to another base in the United States to obtain border clearance. The permit to proceed delays customs inspection of cargo, passengers, and crew until arrival at the off-load station and saves intermediate offloading and reloading normally required for customs inspection. The permit to proceed is valid only to the airport of next landing where the border clearance must be completed or a new permit to proceed issued by a customs official. Do not make intermediate stops between the issue point of the permit to proceed and destination of manifested cargo unless required by an emergency situation or directed by the controlling CCC.

6.47.2.4. When an aircraft lands for a United States border clearance, a US Customs representative normally will meet the aircraft to obtain the required documents. Do not deplane passengers, troops, or crewmembers unless necessary for safety or the preservation of life and property (wing-walker excepted). Do not unload until approved by customs and agriculture personnel or their designated representatives. This procedure applies to the initial landing in the United States and all landings required when operating on a permit to proceed or until all crew, passengers, and cargo complete final border clearance.

6.47.3. Inspections of United States Aircraft by Foreign Officials:

6.47.3.1. U.S. Air Force policy on status of military aircraft is stated in the Foreign Clearance Guide. This policy holds that U.S. military aircraft are immune from searches, seizures, and inspections (including customs and safety inspections) by foreign officials. In addition, aircraft commanders must be aware of and adhere to any specific Foreign Clearance Guide provisions for individual countries.

6.47.3.2. If confronted with a search request by foreign authorities, aircrews should use the following procedures:

6.47.3.2.1. In most cases, search attempts may be halted simply by a statement of the aircraft commander to the foreign official that the aircraft is a sovereign instrumentality not subject to search without consent of U.S. Air Force headquarters or the U.S. Department of State officials in the country concerned. This should be clearly conveyed in a polite manner so as not to offend foreign authorities who may honestly, but mistakenly, believe they have authority to search U.S. Air Force aircraft.

6.47.3.2.2. If foreign authorities insist on conducting a search, the aircraft commander should make every effort to delay the search until he or she can contact U.S. Air Force headquarters (or appropriate C2) or embassy officials. The aircraft commander should then notify these agencies of foreign request by the most expeditious means available and follow their instructions.

6.47.3.2.3. If foreign officials refuse to desist in their search request, pending notification to U.S. Air Force headquarters or the appropriate embassy, the aircraft commander should indicate that he or she would prefer to fly the aircraft elsewhere (provided fuel, flying time, and mechanical considerations permit a safe flight) and request permission to do so.

6.47.3.2.4. If permission is refused and the foreign authorities insist on forcing their way on board an aircraft, the aircraft commander should state that he or she protests the course of action being pursued and that he or she intends to notify both U.S. Air Force headquarters and the appropriate American embassy of the foreign action. The aircraft commander should not

attempt physical resistance, and should report the incident to U.S. Air Force headquarters and the appropriate embassy as soon as possible. If the inspection cannot be avoided, the aircraft commander should escort foreign authorities.

6.47.3.3. Other procedures may apply when carrying sensitive cargo or equipment. Follow these procedures and applicable portions of classified Foreign Clearance Guide supplements.

6.48. Insect and Pest Control:

6.48.1. Aircraft commanders will ensure required spraying is accomplished according to AFJI 48-104, *Quarantine Regulations of the Armed Forces*, Department of Defense Foreign Clearance Guide, or as directed by higher headquarters. Certify the spraying on CF (Customs form) 7507 or on forms provided by the country transited. Aircraft should never be sprayed with passengers on board. The only exception is when the Foreign Clearance Guide mandates it.

6.48.1.1. When spraying is required, use insecticide, aerosol d-phenothrin-2 percent, national stock number (NSN) 6840-01-067-6674 (or equivalent), to spray the aircraft.

6.48.1.1.1. Direct the nozzle toward the ceiling of the compartment or space being sprayed.

6.48.1.1.2. Spray spaces inaccessible from within the aircraft after completely loading fuel, baggage, cargo, and passengers, including tail cone equipment compartments and other similar spaces.

6.48.1.1.3. Spray the cabin, cockpit, and other spaces accessible from within the aircraft after the crew is aboard and after closing all doors, windows, hatches, and ventilation openings.

CAUTION: If the insecticide label directs disembarkation after use, spray prior to boarding crew or passengers. Close all doors and hatches for 10 minutes after dispensing and ventilate for 15 minutes before allowing anyone on board.

6.48.1.2. Spray for 4 seconds unless longer periods are specified for the country being transited.

NOTE: Keep used aerosol cans separate from other trash so they can be disposed of safely.

6.48.2. When seeing any insect or rodent infestation of the aircraft in flight, the aircraft commander will notify the destination CCC, base operations, or airport manager of the situation before landing so the proper authorities can meet the aircraft.

6.48.3. On arrival at an aerial port of disembarkation (APOD), do not open cargo doors or hatches except to enplane officials required to inspect the aircraft for insect or rodent infestation or to deplane the minimum number of crewmembers required for block-in duties. Do not onload or offload cargo or passengers until the inspection is satisfactorily completed. This procedure may be altered to satisfy mission or local requirements, as arranged by the base air terminal manager or the local C2 organization.

Section 6G—Miscellaneous

6.49. Dropped Object Prevention. If an externally dropped object is discovered, the flight crew will notify:

6.49.1. The controlling agency as soon as practical. Include routing, altitude, weather, etc., information.

6.49.2. Maintenance at the first station transited.

6.50. Cockpit Voice Recorder (CVR). If involved in a mishap or incident, after landing and terminating the emergency, open the CVR power circuit breaker (if the airplane is equipped).

6.51. Life Support and Dash 21 Equipment:

6.51.1. The aircraft commander or designated representative will:

6.51.1.1. Prior to departing home station or en route stations, ensure appropriate serviceable protective clothing, and life support, survival, and Dash 21 equipment for the entire or remainder of the mission are aboard the aircraft.

6.51.1.2. Prior to departing home station and following en route crew changes, review the aircraft Dash 21 equipment to ensure all required Dash 21 equipment has been installed by maintenance..

6.51.1.3. Prior to departing home station and following en route crew changes, review, sign, and date the AFTO Form 46, **Pre-positioned Life Support Equipment**, to ensure all required protective clothing and life support and survival equipment have been certified as installed by aircrew life support and that configuration documents match mission requirements. Ensure appropriate number and type of life preservers are aboard for over-water missions carrying children and infants.

6.51.2. Aircrew members discovering equipment missing will:

6.51.2.1. Make an AFTO Form 781 entry for equipment found missing. Additionally, ensure equipment removed from the aircraft at an en route station is documented on AFTO Form 781.

6.51.2.2. Annotate AFTO Form 46 in the next vacant column indicating the quantity remaining for the item. Ensure the International Civil Aviation Organization (ICAO) location designator is entered above the check number of that column. Leave AFTO Form 46 on board the aircraft in the event of an en route crew change.

6.51.2.3. Advise the aircraft commander and determine whether the missing equipment should be recovered or replaced before continuing the mission.

6.51.2.4. Assist, as required, in preparing reports of survey for missing equipment.

6.51.2.5. When possible, advise home unit before continuing the mission.

6.51.3. Aircrew members discovering more equipment during the preflight than is annotated on AFTO Form 46 will annotate the total quantity in the next vacant column for the item. Ensure the ICAO location designator is entered above the check number of that column.

6.52. Weather Debrief. Debrief the base weather station duty forecaster, if available, on significant weather encountered en route. Give the forecaster the completed AF Form 72 at the first opportunity. Debrief the actual wind factor.

6.53. No-Show Passenger Baggage. Download no-show passenger baggage or baggage of passengers removed from flight prior to departure.

6.54. Arresting Cables: (*NOTE:* Does not include recessed cables.)

6.54.1. Do not land on approach end arresting cables. If the aircraft lands before the cable, the crew should contact the tower to have the cable inspected.

6.54.2. Do not take off or land over an approach end cable reported as slack, loose, or improperly rigged by NOTAM, ATIS, or ATC.

6.55. Airfield Data Reports. Aircrews transiting strange airfields or airfields where conditions may adversely affect subsequent flight will:

6.55.1. Report airfield characteristics that produce illusions, such as runway length, width, slope, and lighting, as compared to standard runways, sloping approach terrain, runway contrast against surrounding terrain, haze, glare, etc.

6.55.2. Debrief the next CCC transited.

6.56. Impoundment of Aircraft. If an aircraft is involved in a serious in-flight incident, the aircraft commander should impound the aircraft immediately after landing and contact the controlling CCC for further instructions.

CHAPTER 7

AIRCRAFT SECURITY

7.1. General. This chapter provides guidance on aircraft security and preventing and resisting aircraft piracy (hijacking) of C-12 aircraft. AFI 13-207, AFI 31-101, volume 1, *The Air Force Physical Security Program*, and specific MAJCOM security publications contain additional guidance. Aircrews will not release information concerning hijacking attempts or identify armed aircrew members or missions to the public.

7.2. Security. The aircraft commander (AC) will ensure that adequate security of the aircraft is provided at all times. This includes determining that aircraft is properly chocked and responsible personnel on both military and civilian airfields are advised as to the length of stay and where the crew may be contacted.

7.3. Security Procedures:

7.3.1. Briefings. When required, ACs will receive a threat assessment and security capability evaluation briefing at home station and receive updates at en route C2 facilities.

7.3.2. Unauthorized Entry. The AC will have the aircraft locked with a security system employed during all remain over nights (RON) and at other times when a crewmember is not at the aircraft.

7.3.2.1. If forced entry is apparent, notify the local authorities and nearest command and control. Inspect the aircraft thoroughly.

7.3.2.2. Coordinate with the local base operations or transient alert representatives on procedures for servicing the aircraft while the crew is away.

7.4. Protective Standards for Aircraft Carrying Distinguished Visitors (DV) (Code 4 or Above).

ACs are responsible for aircraft security at en route stops as follows:

7.4.1. DoD Installations. Notify the base security of estimated arrival and departure times. Request continuous security surveillance during the entire ground time. If the installation is unable to comply, arrange for the best protection available.

7.4.2. Foreign or Civilian Installations. Notify the airport manager, commander, or defense attaché to arrange for aircraft security. If available security is inadequate, purchase additional security using AF Form 15, **USAF Invoice**.

7.5. Detecting Unauthorized Entry:

7.5.1. When parking on a secure ramp, the aircraft will normally be left unlocked and unsealed to allow ground personnel immediate access. If, in the AC's judgment, the aircraft needs to be locked and sealed in order to detect unauthorized entry, then:

7.5.1.1. Use available aircraft ground security locking devices.

7.5.1.2. Secure the doors in a manner that will indicate unauthorized entry (for example, tape the inside of doors to the airframe so that the entry pulls the tape loose).

7.5.1.3. Close and lock the door.

7.5.1.4. Wipe the immediate area around lock and latches clean to aid in investigation of a forced entry.

7.5.1.5. Report any unauthorized entry or tampering to the Air Force Office of Special Investigations (AFOSI), security forces or local authorities, and the CCC agency. Have aircraft thoroughly inspected prior to flight.

7.5.2. Security awareness is crucial to effective mission accomplishment. Aircrews must always remain vigilant to their surroundings, especially at high threat, low security locations. During pre-flight activities, aircrews will inspect accessible areas, to include aircraft wheel wells, and tail cone compartment for unfamiliar devices. Report any suspicious items to host security forces. Aircrews will maintain a heightened security posture throughout all pre-takeoff activities.

7.6. Preventing and Resisting Hijacking. The Air Transportation Act of 1974 and the Federal Aviation Act of 1958, as amended, vest the FAA administrator with exclusive responsibility for the direction of law enforcement activity in aircraft hijacking situations involving all aircraft (civil and military) in flight in the United States.

7.6.1. A concerted effort must be made to prevent the hijacking of military or military contract aircraft by detecting potential hijackers before they board the aircraft. Should preventive efforts fail, any actual attempt to hijack a military aircraft must be resisted in a manner appropriate to the situation.

7.6.2. In taking action during an aircraft hijacking situation, military forces will act under military command within the scope of their duties.

7.6.3. In the event an aircraft involved in an aircraft hijacking situation is carrying documents, equipment, or material that DoD has determined to be highly sensitive, or weapons of mass destruction, DoD will provide FAA, and where appropriate, the FBI, with all pertinent information. Where possible, the FAA will consult and cooperate with DoD prior to directing any law enforcement activity.

7.6.4. An aircraft is most vulnerable to hijacking when the aircrew is aboard and the aircraft is operationally ready for flight.

7.6.5. Air piracy may be committed by political terrorists or by individuals to whom the threat of death is not a deterrent but a stimulus; therefore, ordinary law enforcement procedures may be ineffective. Thus, successful conclusion of a hijacking situation and apprehension of the hijackers may require use of specialized law enforcement techniques and procedures.

7.6.6. Delaying actions have been most successful in overcoming hijackings without loss of life or property.

7.6.7. In the case of an aircraft carrying passengers, the primary concern is the safety of the passengers.

7.6.8. Assistance to hijacked civil or military contract aircraft will be rendered as requested by the pilot in command of the aircraft and the authority exercising operational control of the antihijacking effort.

7.7. Preventive Measures. Commanders at all levels must ensure preventive measures are taken to minimize access to the aircraft by potential hijackers. When a C-12 is operating away from the home station, the AC will ensure provisions of this chapter and AFI 13-207, as supplemented, are complied with.

7.7.1. The host station passenger processing or manifesting facility should conduct antihijacking inspections. Do not board passengers until the aircraft commander is fully satisfied with inspection results. In the absence of qualified passenger service representatives, the AC will ensure the antihijacking inspection of passengers and baggage is accomplished.

7.7.2. Medical facility commanders are responsible for antihijacking inspection of patients. When patients are delivered to the aircraft by civilian sources, the aircrew will perform required inspections prior to loading.

7.7.3. During exercises or contingencies in support of combat operations involving the movement of large groups of personnel, the unit being supported should manifest passengers and perform antihijacking inspections.

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

7.7.5. If weapons must be cleared, ask the individual to:

7.7.5.1. Move to a safe, clear area at least 50 feet from any aircraft, equipment, or personnel before unholstering or unslinging his or her weapons.

7.7.5.2. Clear weapons in accordance with standard safety procedures.

7.8. Initial Response. When an act of air piracy involves an Air Force installation or aircraft within the United States, response will be according to the following guidelines until FAA assumes active direction of antihijacking efforts. Resist all attempts to hijack a military aircraft. Resistance may vary from simple discussion through deception and subterfuge to direct physical confrontation, including the prudent use of weapons. Use the following guidelines to counter a hijacking, actual or threatened, while the aircraft is on the ground:

7.8.1. Delay movement of the aircraft to provide time for ground personnel and the aircrew to establish communication and execute coordinated resistance actions.

7.8.2. The authority for determining when ground resistance will be discontinued is vested in the highest available level of command. When adequate communication cannot be established, or when time does not permit, this authority is delegated in the following order:

7.8.2.1. MAJCOM commander exercising operational control of the aircraft.

7.8.2.2. MAJCOM commander in whose area of responsibility (AOR) the airfield lies.

7.8.2.3. Senior operational commander on scene.

7.8.2.4. Aircraft commander in compliance with MAJCOM directives.

7.9. In-Flight Resistance. After airborne, success in thwarting a hijacking depends on the resourcefulness of the aircrew. Many variables of a hijacking preclude using any specific counter-hijacking procedure. Some key factors should be evaluated before deciding a course of action to be taken, including the nature of the threat, danger to life, or crippling damage to the aircraft in flight, destination indicated by the hijacker, and the presence of sensitive material on board. Some counter-hijacking actions the aircrew may consider are:

- 7.9.1. Engage the hijacker in conversation to calm him or her and evaluate what course of action might be effective.
- 7.9.2. Dissuade the hijacker.
- 7.9.3. Use facts or subterfuge to convince the hijacker that intermediate stops are necessary.
- 7.9.4. Propose more favorable alternatives, such as landing in a neutral, rather than a hostile, country.
- 7.9.5. Exploit any reasonable opportunity to incapacitate or overcome the hijacker physically, including the prudent use of firearms.

7.10. Communications Between Aircrew and Ground Agencies. Crews facing a hijacking threat will notify ground agencies by any means available as soon as practical and follow up with situation reports as circumstances permit.

- 7.10.1. If possible, transmit an in-the-clear notification of hijacking to ATC. Controllers will assign IFF code 7500 (does not preclude subsequent selection of code 7700).
- 7.10.2. If in-the-clear transmissions are not possible, report “am being hijacked” by setting transponder to code 7500. If unable to change transponder code, or when not under radar control, transmit a radio message to include the phrase “(call sign) transponder seven five zero zero.”
- 7.10.3. Controllers will acknowledge receipt and understanding of transponder code 7500 by transmitting “(call sign) (facility name) verify squawking 7500.” An affirmative reply or lack of reply from the pilot indicates confirmation and proper authorities are notified.
- 7.10.4. To report “situation appears desperate; want armed intervention” after code 7500 is used, change to code 7700. If unable to change transponder code to 7700, or when not under radar control, transmit “(aircraft call sign) transponder seven seven zero zero.”
 - 7.10.4.1. When changing from code 7500 to code 7700, remain on 7500 for at least 3 minutes or until a confirmation of code 7500 is received from ATC, whichever is sooner, before changing to code 7700. ATC acknowledges code 7700 by transmitting “(call sign) (facility name) now reading you on transponder seven seven zero zero.”
 - 7.10.4.2. Aircraft squawking 7700 after squawking 7500 that are not in radio contact with ATC are considered by ATC to have an in-flight emergency (in addition to hijacking). Appropriate emergency procedures are then followed. Notification of authorities in this case includes information that the aircraft displayed the hijack code as well as the emergency code.
- 7.10.5. To report “situation still desperate, want armed intervention and aircraft immobilized,” leave flaps full down after landing or select flaps full down while on the ground. To facilitate message distribution, transmit “(aircraft call sign) flaps are full down.”
- 7.10.6. To report “leave alone, do not intervene,” retract the flaps after landing. Pilots who retract flaps after squawking 7700 should return to code 7500 and remain on code 7500 for the next leg of the hijacked flight unless the situation changes. Transmit “(call sign) back on seven five zero zero” to emphasize that intervention is no longer desired.

7.11. Forced Penetration of Unfriendly Airspace. The following procedures are designed to deter possible hostile action against the hijacked aircraft that has been forced to penetrate airspace of a nation unfriendly to the United States:

- 7.11.1. If instructions from the unfriendly nation are received either by radio contact or by air intercept before boundary crossing, comply with instructions received.
- 7.11.2. If no contact with the unfriendly nation is made before approaching a boundary:
 - 7.11.2.1. Maintain true airspeed (TAS) not more than 400 knots.
 - 7.11.2.2. Maintain an altitude between 10,000 feet and 25,000 feet if possible.
 - 7.11.2.3. If no course is specified, fly a direct course toward destination announced by the hijacker.
 - 7.11.2.4. Transmit the international distress signal, MAYDAY, on any of the international distress frequencies (121.5 MHz, 243.0 MHz, or 2182 KHz) in an effort to establish communications.
 - 7.11.2.5. Set mode 3 code 7700 on transponder.
 - 7.11.2.6. If radio contact cannot be established, follow procedures set forth in the FLIP.
- 7.11.3. Consider the presence of classified documents and equipment aboard the aircraft. When a landing in an unfriendly nation is imminent, attempt to dispose of or destroy the equipment or material.

7.12. Arming of Crewmembers. When crewmembers are directed to carry weapons, one pilot will normally be armed.

- 7.12.1. Before departing home station, obtain weapon and ammunition from the weapons storage area. Present a current AF Form 523, **USAF Authorization to Bear Firearms**, for weapon issue. The same weapon will be reissued until the mission terminates at home station. If an armed crewmember must leave the crew en route, transfer the weapon to another authorized crewmember using AF Form 1297, **Temporary Issue Receipt**.
- 7.12.2. Load and unload weapons at approved clearing barrels. To transfer loaded weapons to another crewmember, place the weapon on a flat surface. Do not use hand-to-hand transfer.
- 7.12.3. Wear weapons in a concealed holster at all times to prevent identifying armed crewmembers. Do not wear weapons off the flight line except to and from the armory and other facilities associated with aircrew activities, such as, base operations, fleet service, cargo or passenger terminal, flight line cafeteria or snack bar, etc.
- 7.12.4. Crewmembers will be armed prior to preflight duties and until completion of all offload duties.
- 7.12.5. During crew rest, store weapons in the most secure facility available, normally a base armory. If a weapons storage facility is not available, secure firearms and ammunition in the aircraft. If aircraft is not equipped with a gun box, leave weapons in the most secure and least visible location on the aircraft. Lock aircraft during all RONS.
- 7.12.6. MAJCOMs will publish ammunition requirements in their MAJCOM supplement.

CHAPTER 8

OPERATIONAL REPORTS AND FORMS

8.1. General. Applicable reports and forms for flying operations are contained in this chapter.

8.2. AF Form 457, USAF Hazard Report. (See AFI 91-202, *The US Air Force Mishap Prevention Program*.)

8.2.1. The Air Force hazard reporting system provides a means for Air Force personnel to alert supervisors and commanders to hazardous conditions requiring prompt corrective action.

8.2.2. For hazard reports concerning weather, complete the front of AF Form 457 and address it to the parent wing flying safety office. If a computer flight plan (CFP) deficiency is involved, attach one copy of the AF Form 72, **Air Report (AIREP)**, and the CFP to the report. Send the report so that the parent unit receives it within 5 days.

8.3. AF Form 651, Hazardous Air Traffic Report (HATR). (See AFI 91-202.) The Air Force HATR program provides a means for personnel to report all near midair collisions and alleged hazardous air traffic conditions. The following procedures and guidance on submitting HATRs apply:

8.3.1. Make an airborne report of the hazardous condition to the nearest air traffic control agency (for example, center, flight service station (FSS), control tower, or aeronautical radio station), and give the following information as appropriate:

8.3.1.1. Call sign.

8.3.1.2. Time and place (radial and DME of NAVAID, position relative to the airfield, etc.) of the occurrence.

8.3.1.3. Altitude or flight level.

8.3.1.4. Description of the other aircraft.

8.3.1.5. Statement that a written HATR will be filed upon landing.

NOTE: DELETE

8.3.2. File the HATR as soon as possible (within 24 hours) using any available means of communication. Normally, it should be filed at the Air Force base operations office at the landing airport. If this is impractical and if communications permit, notify the safety office of the Air Force base where the condition occurred, the safety office at the home base, or as prescribed by the overseas MAJCOM. In any case, provide the base or wing safety office with all available information needed to prepare AF Form 651. Turn in a completed copy of AF Form 651 to the wing safety office.

8.3.3. Individuals who submit HATRs on incidents are granted immunity from disciplinary action provided:

8.3.3.1. The violation was inadvertent; that is, not deliberate.

8.3.3.2. No mishap occurred.

8.3.3.3. No criminal offense was intended or committed.

8.3.3.4. The individual reported the incident according to paragraphs **8.3.1.** and **8.3.2.**

NOTE: Intentional shutdowns for FCF or other nonemergency purposes are excluded; however, report failure to restart, using the criteria above.

8.4. Reports of Violations. Report violations identified in AFI 11-202, volume 3, and alleged navigation errors (including over-water position errors exceeding 24 NMs, and border and air traffic control violations).

8.4.1. Provide the following information (in the order presented) in the report:

8.4.1.1. Factual circumstances.

8.4.1.2. Investigation and analysis.

8.4.1.3. Findings and conclusions.

8.4.1.4. Recommendations.

8.4.1.5. Actions taken.

8.4.1.6. Attachments to include:

8.4.1.6.1. Notification of incident.

8.4.1.6.2. Crew orders.

8.4.1.6.3. Statement of crewmembers (if applicable).

8.4.1.6.4. Documenting evidence (logs, charts, etc.).

8.4.2. In addition to the information listed, download the historical flight plan onto a floppy disk and turn it in to the command and control facility or owning standardization and evaluation office.

8.4.3. Send the original investigation report within 45 days to the appropriate MAJCOM. AFRC units receiving alleged violations will send the original investigation through channels to arrive at HQ AFRC/IGI within 35 days. HQ AFRC/IGI will send the investigation report to the MAJCOM within 45 days.

8.4.4. On notification of a navigational position error, the aircraft commander (or agency receiving notification) documents the circumstances surrounding the incident (report content below) and ensures submission of an OPREP-3 report through CCC channels. Report the following OPREP-3 reporting procedures for aircraft notified of navigational errors exceeding 24 NMs under AFMAN 10-206. The report will contain:

8.4.4.1. Name and location of unit submitting report.

8.4.4.2. Mission identification number.

8.4.4.3. Reference to related OPREPs-3.

8.4.4.4. Type of event. (State "Navigation position error.")

8.4.4.5. Date, time (zulu), and location (such as, ARTCC area).

8.4.4.6. Description of facts and circumstances. Include aircraft type and tail number, unit (wing or squadron assignment of crew), home base, route of flight, point of alleged deviation, and how many miles off course.

8.5. Aviation Fuels (Petroleum, Oil, and Lubricants [POL]) Documentation. This paragraph describes documentation use and procedures for the aviation fuel program (AVPOL) for all Air Force aircraft. Procedures are established for correct documentation, processing of forms and invoices, program oversight, and personnel responsibilities. Reference AFI 23-202, and AFM 67-1, volume 1, part 3, *Air Force Stock Fund and DPSC Assigned Item Procedures (PA)*. The following paragraphs provide guidance on the various forms used:

8.5.1. Documentation Use and Procedures:

8.5.1.1. AF Form 664, Aircraft Fuels Documentation Log. Used to log and store all AVPOL transaction documentation. Log *all* off-station transactions on the front of AF Form 664, then insert the supporting documentation inside the envelope. Turn in AF Form 664, with supporting documentation, at the maintenance debriefing.

NOTE: When logging in-flight, onload transactions on AF Form 664, place the eight-digit tail number of the tanker in the block titled "Airfield Name," and the unit number and home station in the block titled "Airfield Address."

8.5.1.2. AF Form 315, United States Air Force AVfuels Invoice. Used to purchase aviation fuel at non-DoD activities. (See AFI 23-202.) When completed, log and place inside AF Form 664.

8.5.1.3. AF Form 15, United States Air Force Invoice. Used for procurement of items or services required at commercial locations where normal DoD support and supplies are not available. If the vendor will not accept the aircraft identaplate, use AF Form 15 to pay for ground fuels, oils, or services. The accomplished form is returned to the aircraft's home station for payment. (See AFI 23-202.) When completed, log and place inside AF Form 664.

8.5.1.3.1. If the vendor wants to be paid without submitting an invoice, the aircraft commander retains the original AF Form 315 to return to home station for accounting and finance processing. Provide two legible copies of the form to the vendor. If the vendor wants to submit an invoice for payment, give the vendor the original AF Form 315 to attach to the invoice.

8.5.1.3.2. Document purchases at Canadian into-plane locations using the local vendor's invoice. (AF Form 15 or 315 *will not* be accomplished.) Hand scribe the information from the aircraft identaplate to the vendor's invoice and complete a separate sheet with the information listed on the aviation issues to DoD and non-DoD, aircraft refueling tender sheet (AFI 23-202). Log and place a copy inside the AF Form 664.

8.5.1.3.3. Present the aircraft identaplate on purchases at Shell International Trading Company (SITCO) agreement locations. The invoice must include the date of transaction, grade of the product, quantity issued or defueled, unit of measure, and signature of the Air Force representative. If the vendor also requires a completed AF Form 15 or 315 in addition to the invoice, annotate on the vendor's invoice "AF FORMS EXECUTED." Log and place the documentation inside the AF Form 664.

8.5.1.3.4. Use the AF Form 15 or 315 on purchases at noncontract commercial airfields. Refer to AFI 23-202, figures 4, 5, and 6, for guidelines on completing these forms.

8.5.1.3.5. Use host country forms to record purchases at foreign military airfields, including replacement-in-kind (RIK) locations. Hand scribe information from the aircraft identaplate on the local form. Log and place a copy inside the AF Form 664.

8.5.1.4. AF Form 1994, Fuel Issue/De-fuel Document. Used for purchases at all Air Force locations using a valid DD Form 1896, **Jet Fuel Identaplate**. Log and place inside AF Form 664.

8.5.1.5. AFTO Form 781H, Aerospace Vehicle Flight Status and Maintenance Document.

Complete form per applicable technical directives. When removed from jacket, turn in to maintenance. Maintenance will retain for 90 days after inter-fund billing to provide a secondary audit trail for fuels issue and flying hours.

8.5.1.6. DD Form 1896, Jet Fuel Identaplate. Charge card for aircraft fuel and oil purchases.

8.5.1.7. DD Form 1898, AVfuels Into-Plane Sale Slip. Fuel transaction receipt used for purchases at other DoD locations, including Defense Fuel Supply Center (DFSC) into-plane contract locations. Log and place inside AF Form 664.

NOTE: If the contractor insists on completing his or her own invoice in addition to DD Form 1898, annotate the invoice to state "DUPLICATE DD FORM 1898 ACCOMPLISHED."

8.5.2. Responsibilities. All aircrew and maintenance personnel will be familiar with the procedures and documentation requirements of this chapter. Purchase of aviation fuel not complying with this instruction may become the financial responsibility of the purchaser.

8.5.2.1. Wing Scheduling. The wing scheduling office will:

8.5.2.1.1. Work with and provide a representative to the AVPOL advisory group.

8.5.2.1.2. Prepare a monthly report for the invoice control officers (ICO) by the 7th of each month stating the following:

8.5.2.1.3. Organization (by squadron).

8.5.2.1.4. Mission design and series (MDS).

8.5.2.1.5. Programmed flying hours for previous and current month.

8.5.2.1.6. Actual flying hours for the previous month.

8.5.2.2. Aircraft Commanders. Aircraft commanders will:

8.5.2.2.1. For local training missions:

8.5.2.2.1.1. Verify that AF Forms 791, **Aerial Tanker In-Flight Issue Log**, and AFTO Form 781H are completely filled out prior to maintenance debriefing.

8.5.2.2.1.2. Turn in AFTO Form 781H at the maintenance debriefing. Turn in AF Forms 791 according to local procedures.

8.5.2.2.2. For off-station missions:

8.5.2.2.2.1. Verify that AF Forms 15, 315, 664, 791, 1994, AFTO Form 781H, DD Form 1898, and all associated fuels receipts are completely filled out and placed inside the AF Form 664. **NOTE:** All Air Force aircraft must contain an eight-digit tail number.

8.5.2.2.2.2. Ensure that AF Form 664, with all refueling documentation, and AFTO Form 781H are turned in at the maintenance debriefing.

8.5.2.2.2.3. Ensure that all AF Forms 664 and 791 information is phoned, faxed, or sent by message back to the ICO if aircraft is to be off station past the last day of the month.

8.5.2.3. Maintenance Personnel. Maintenance personnel will:

8.5.2.3.1. For local training missions, ensure all in-flight refueling documentation, such as, AF Form 791 and AFTO Form 781H are completed and collected for each mission, if required.

8.5.2.3.2. For off-station missions:

8.5.2.3.2.1. Ensure that all ground refueling and defueling documents are accurately completed and placed inside AF Form 664.

8.5.2.3.2.2. Prior to deployment, ensure an adequate supply of fuels transaction documents are on board the aircraft to complete the deployment.

8.6. Refueling or Defueling. Aircraft will be refueled or defueled at DoD locations. However, if DoD-owned fuel is not available, fuel may be procured from other sources using the following priority. (**NOTE:** Aircraft commanders and maintenance personnel are responsible for ensuring the following alternate refuel and defuel procedures are accurately documented on the applicable form.)

8.6.1. Defense Fuel Supply Center (DFSC) or Canadian into-plane contracts.

8.6.2. Foreign government air forces.

8.6.3. Open market purchase to include SITCO agreement.

NOTE: DoD FLIP en route supplements identify locations with into-plane contracts.

CHAPTER 9

TRAINING

9.1. Qualification Training. Initial qualification, requalification, or upgrade training for pilots will not be conducted on missions with passengers on board. Mission qualification training may be conducted on missions with passengers on board only if the individual in training is qualified (has completed an aircraft checkride with a valid AF Form 8).

9.1.1. Touch-and-go landings with passengers or cargo are prohibited.

9.1.2. MEGP and civilian employees under direct contract to the DoD or engaged in official direct mission support activities are considered mission essential and may be on board when touch-and-go landings are performed.

9.2. Simulated Emergency Flight Procedures:

9.2.1. Conduct simulated emergency flight procedures according to AFI 11-202, volume 3, and this instruction. Use a realistic approach; do not compound emergencies.

9.2.2. Use radar flight following to the maximum possible, consistent with training objectives.

9.2.3. Conduct simulated emergencies only during training and evaluation or currency flights when an instructor or flight examiner pilot is occupying one of the pilot seats. Instructor or flight examiner pilot candidates who occupy a pilot seat and are under the direct supervision of a flight examiner pilot not in a pilot seat may conduct simulated emergencies during initial and requalification upgrade evaluations.

9.2.4. Passengers (except flight surgeons, ACMs, and aeromedical evacuation crewmembers [AECM]) are prohibited on training and evaluation or currency flights when simulated emergencies are practiced.

9.2.5. Notify the controlling agency when initiating an approach, landing, or missed approach in conjunction with a simulated emergency only when flying a nonstandard pattern requiring special sequencing.

9.3. Touch-and-Go Landings:

9.3.1. Touch-and-go landings will only be accomplished under the supervision of an IP. **EXCEPTION:** Certified DIA/DSCA MPs may perform touch-and-go landings without IP supervision.

9.3.2. Current and qualified instructor pilots are authorized to conduct and supervise touch-and-go landings under the following conditions:

9.3.2.1. Flight manual restrictions and procedures apply.

9.3.2.2. Use a runway of sufficient width and length to permit a safe, normal, full-stop landing.

9.3.2.3. Reported ceiling or visibility values are at or above 300-3/4 (RVR 40) minimums.

9.3.2.4. Wet runway or RCR must be a measured 12 or higher.

NOTE: Do not accomplish touch-and-go landings on slush-covered runways.

9.3.2.5. Passengers or cargo will not be carried during touch-and-go operations or multiple practice approaches.

9.3.2.6. IPs, instructor pilot candidates, or evaluator pilot candidates on initial or requalification instructor or evaluator pilot evaluations, and evaluator pilots are in either seat.

9.3.2.7. Any pilot from either seat provided that an instructor pilot, instructor pilot candidate on initial or requalification instructor evaluation, or flight examiner pilot is in the other seat.

9.3.3. To supervise touch-and-go landings, review the following:

9.3.3.1. Flight manual procedures.

9.3.3.2. The importance of smooth application of power to the touch-and-go torque setting while maintaining symmetric thrust as the power levers are advanced.

9.3.3.3. Engine failure, including recognition and corrective action.

9.3.3.4. Proper use of flaps, trim, and rudder.

9.3.4. To provide additional training flexibility, crews may perform multiple approaches and, if the aircraft commander is an instructor, touch-and-go landings on operational airlift missions provided the following requirements are met:

9.3.4.1. Normal touch-and-go limitations apply.

9.3.4.2. All transition training will be accomplished during the first 12 hours of the flight duty period (FDP) only.

9.3.4.3. Upon initial arrival at the training location, close out the current line on the AFTO Form 781 and log the training time on the next line using the appropriate training mission symbol and number.

9.3.5. Touch-and-go landings may be performed with ACM and MEGP personnel on board provided the mission is a designated training flight and an instructor or evaluator pilot is in command. Touch-and-go landings are not authorized with passengers (except ACMs and MEGPs) on board.

9.4. Engine-Out Limitations. Aircraft will not perform engine-out approaches and landings at night or in instrument meteorological conditions (IMC). Simulated engine failure is not authorized at less than engine-out minimum control speed (as published in the flight manual) and when an actual emergency condition exists. Landings may be performed with one power lever in idle. Simulated engine failure will not be initiated below 500 feet. A simulated engine out will not be practiced in other than VMC conditions.

9.5. Training Maneuver Restrictions. [Table 9.1](#) lists the training maneuver restrictions that apply on all training flights and FCFs.

Table 9.1. Training Maneuver Restrictions.

I T E M	A	B	C
	Maneuver	Restriction	Other Restriction
1	Actual engine shutdown	5,000 feet AGL minimum	Perform only for FCF or familiarization during initial/upgrade syllabus training (actual or training)
2	Engine out abort		FCF flights only
3	Simulated single engine go-around	Not lower than 300 AGL	
4	Approach to stalls/slow flight	5,000 feet AGL minimum	FCF and qualification/upgrade syllabus training flights only

9.6. Operating Limitations. Unless specifically authorized in this instruction, do not practice emergency procedures that degrade aircraft performance or flight control capabilities (in flight). In an actual emergency, terminate all training and flight maneuvers practice. Resume training only when the pilot in command determines it is safe.

9.6.1. Initiate a planned missed approach according to the restrictions in [Table 9.1](#).

9.6.2. Other simulated emergency procedures will be limited to noncritical phases of flight and will be kept to a minimum when IMC or at night.

9.7. Prohibited In-Flight Maneuvers. Maneuvers required for FCFs or FCF training are authorized in flight. Practice the following maneuvers in the simulator only, unless specified in the qualification or IP upgrade syllabus:

9.7.1. Simulated engine-out takeoffs.

9.7.2. Full stalls.

9.7.3. Approach to stalls, slow flight, and flight on the backside of the power curve (except FCF and qualification/upgrade syllabus training flights).

9.7.4. Dutch rolls.

9.7.5. Jammed stabilizer approaches and landings.

9.7.6. Aborted takeoffs (except for FCFs).

9.7.7. Unusual attitudes.

9.7.8. Emergency descents.

9.7.9. Runaway pitches or roll trims and yaw demonstrations.

9.7.10. Simulated dual-engine failures.

9.7.11. Actual engine shutdowns (exceptions noted in [Table 9.1](#)).

9.8. Instructor Pilot Briefing. Before all training and evaluation missions, aircraft commanders, instructors, or flight examiners will brief their crews on the following additional items:

9.8.1. Training and evaluation requirements. Instructors and evaluators will outline requirements and objectives for each student or examinee.

9.8.2. Planned training area and seat changes.

9.9. Debriefing. Review and evaluate the overall training performed. Each student or aircrew member should understand thoroughly what training has been accomplished. Ensure all training is documented.

9.10. Simulated Instrument Flight. Artificial vision-restricting devices are not authorized for any phase of flight. Simulated instrument flight may be flown and logged without the use of a vision-restricting device.

CHAPTER 10**LOCAL OPERATING PROCEDURES****10.1. General:**

10.1.1. The applicable operations group will publish local or unique unit operating procedures as a supplement to this chapter, commencing with paragraph 10.2. The title of this paragraph will indicate the unit concerned (for example, "81st Training Group Local Operating Procedures").

10.1.2. Send two copies of the supplement to the MAJCOM DOF.

CHAPTER 11

NAVIGATION PROCEDURES (NOT USED)

11.1. This Chapter is Not Used.

CHAPTER 12

CREW SPECIALTY 1 (NOT USED)

12.1. This Chapter is Not Used.

CHAPTER 13

CREW SPECIALTY 2 (NOT USED)

13.1. This Chapter is Not Used.

CHAPTER 14**FUEL PLANNING (NOT USED)**

14.1. This Chapter is Not Used.

CHAPTER 15

AIR REFUELING (NOT USED)

15.1. This Chapter is Not Used.

CHAPTER 16**MISSION PLANNING (NOT USED)**

16.1. This Chapter is Not Used.

CHAPTER 17

EMPLOYMENT TRAINING (NA FOR AETC)

17.1. General. Each unit will have a tactics ground training program tailored to the unit's wartime taskings. Tactics and intelligence staff should join forces in this area to ensure success. Using a building block approach, the ground tactical training program forms the base of the unit's tactics program. Each unit's tactics ground training program may be different because of unit mission taskings; however, the overall objectives should be the same.

17.2. Tactics Ground Training Program. The tactics ground training program will be a coordinated effort between the unit's IN, wing tactics, DOT, DOF, and DOX (or their equivalent) for continuity and to ensure mission tasking is addressed. The program is the responsibility of the squadron commander and is run by the unit tactics program manager.

17.2.1. Unit Tactics Program Manager. The unit tactics program manager is responsible for the development, maintenance, and currency of the instructional materials used in the tactical training of crews. He or she is also responsible to find motivated, informed, and credible instructors to administer these materials. The program manager ensures the tactics training syllabus is comprehensive and covers all the aforementioned topics. More importantly, the program manager is responsible for infusing tactics throughout the unit's operations, through classes, tactics simulator and flight profiles, and other proactive aircrew members with tactics mission planning and initiatives.

17.2.2. Dissemination of Tactical Information. The unit tactics officer, with IN assistance, is responsible for developing procedures for timely dissemination of tactical and intelligence information to unit aircrew members. This information can be located in the threat reference library, tactics read file, and tactics guide.

17.2.2.1. Tactics Reference Library. The unit tactics officer should maintain this library. It provides study material at the unit level.

17.2.2.2. Tactics Guide. The wing tactics program manager should develop and maintain a by-subject tactics guide and update it as materials are received.

17.2.2.3. Tactics Read File. The tactics read file should contain classified materials of timely interest to the aircrews. It may include messages, magazine articles, excerpts from MCM 3-1, tactical analysis bulletins, etc.

17.3. Hostile Fire Entry and Exit Checklist. Use the hostile fire entry and exit checklist at [Attachment 2](#) of this publication on training and operational missions into simulated or actual low-threat environments. This checklist may be incorporated into the handheld checklist.

17.4. Tactics Flight Training:

17.4.1. Scope. The tactics flight training program is designed to provide C-12 crewmembers with the necessary training to confidently and successfully survive the wartime threat environment without endangering aircrews or aircraft in peacetime. This instruction attempts to point out those maneuvers;

however, do not attempt any maneuver not specifically mentioned in this publication without parent MAJCOM DO approval.

17.4.2. Objectives. Flight training is the final phase of the tactics program. Its goal is to provide actual application of the tactics training concepts. Accomplish all flight maneuvers with strict adherence to aircraft limitations as defined in T.O. 1C-12F/J-1 and this publication. The flight phase also involves a “walk before you run” philosophy.

17.4.3. Tactical Maneuvers. The maneuvers described below are basic tactical maneuvers. Do not practice maneuvers other than these without parent MAJCOM DO approval.

17.4.3.1. VFR Overhead:

17.4.3.1.1. Limitations:

17.4.3.1.1.1. Plan the maneuver not to exceed 45 degrees of bank.

17.4.3.1.1.2. Minimum weather is VFR.

17.4.3.1.1.3. Maximum speed is 200 KIAS.

17.4.3.1.1.4. Minimum speed is 140 KIAS (0 percent flaps) or 130 (40 percent flaps) until rolling out on final.

17.4.3.1.2. Procedures:

17.4.3.1.2.1. Initial Entry. Fly altitude as published or assigned, 200 KIAS, and complete approach checklist.

17.4.3.1.2.2. Break Power. Initially idle, then as required to maintain 160 KIAS through the break.

17.4.3.1.2.3. Downwind. Select flaps approach and gear down, complete before landing checklist.

17.4.3.1.2.4. Final Turn. Plan to roll out on final, 1 NM from runway, normal glidepath, flaps landing when landing is assured.

17.4.3.1.2.5. Final. $V_{app} + 1/2$ gust (min).

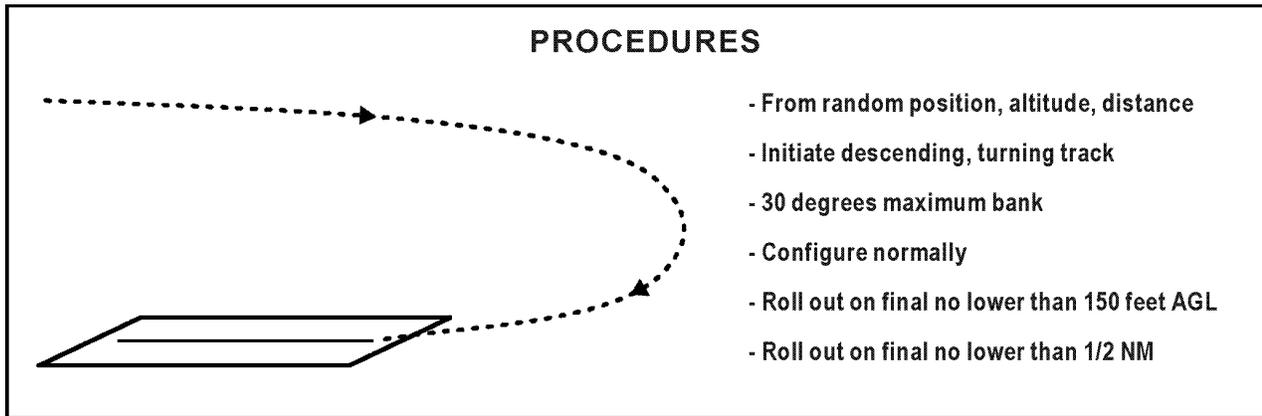
17.4.3.2. Random Steep Approach (Figure 17.1):

17.4.3.2.1. Limitations:

17.4.3.2.1.1. Plan the maneuver not to exceed 45 degrees bank.

17.4.3.2.1.2. Minimum weather is VFR.

Figure 17.2. Curvilinear Approach.



NOTE: Airspeed, altitudes, and distances are approximate and may be adjusted to fit the tactical situation.

17.4.3.4. Spiral-Up (Random Steep) Departure (Figure 17.3.):

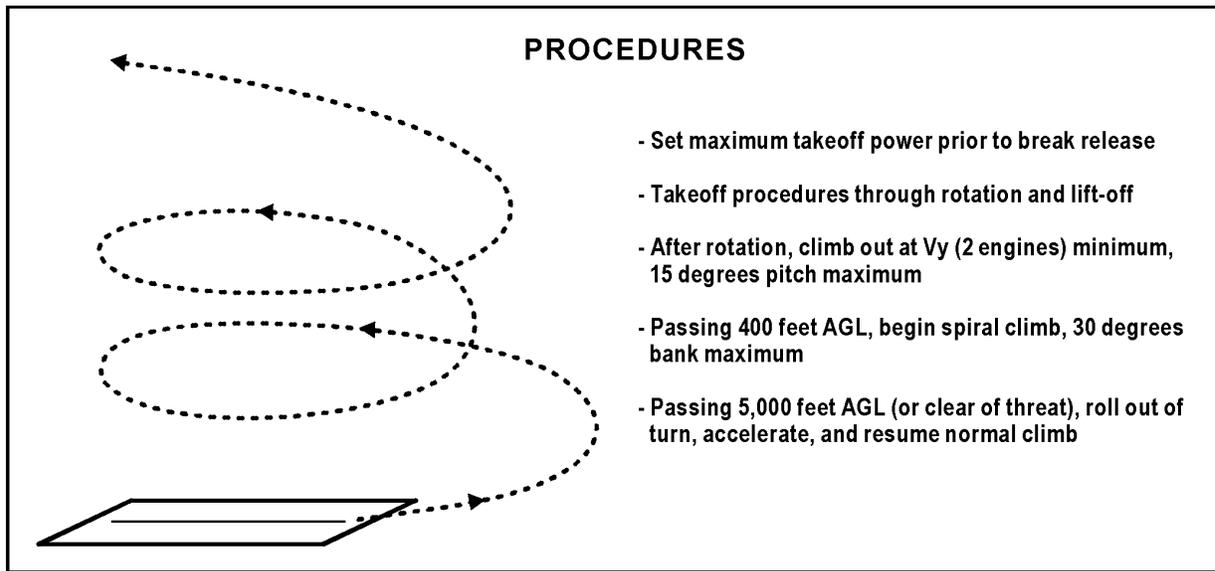
17.4.3.4.1. Limitations:

- 17.4.3.4.1.1. Maximum bank angle of 30 degrees.
- 17.4.3.4.1.2. Minimum weather is VFR.
- 17.4.3.4.1.3. If the threat avoidance altitude has not been reached after 5 minutes, reduce to maximum continuous power setting.

17.4.3.4.2. Procedures:

- 17.4.3.4.2.1. Maximum takeoff power set prior to brake release.
- 17.4.3.4.2.2. Accomplish normal rotation and lift-off.
- 17.4.3.4.2.3. Retract gear, select flaps up, engage yaw damper (200 feet AGL minimum), climb out at V_y (2 engines), 15 degrees maximum pitch until above threat.
- 17.4.3.4.2.4. Passing 400 feet, a turn may be initiated toward planned escape route.
- 17.4.3.4.2.5. When above the threat altitude, lower pitch attitude slightly.
- 17.4.3.4.2.6. Set climb power and resume normal climb schedule and complete after take-off checklist.

Figure 17.3. Spiral-Up Departure.



NOTE: Airspeed, altitudes, and distances are approximate and may be adjusted to fit the tactical situation.

17.4.4. Coordination with Air Traffic Control (ATC). In all cases, units should coordinate these procedures with the local ATC and any location where these maneuvers will be flown. Do not fly these procedures at uncontrolled fields unless called for in actual operations.

17.5. Exercises:

17.5.1. Scope. Exercises provide realistic combat-scenario training. This training is representative of the unit mission tasking. Unit planner ensures exercises are planned and flown to maximize training objectives.

17.5.2. Objectives. Tactics training will be built into each exercise during the planning stage. Training objectives include, but are not limited to, tactical deception, threat advisories, and defensive tactics. Consider the following elements during exercise planning:

17.5.2.1. Utilize warning, alerting, deployment, and execution orders.

17.5.2.2. Theater ATO's should be sent secure by STU III and fax at least 1 day during the exercise.

17.5.2.3. Conventional exercises should stress the ability to survive and operate (ATSO) in a chemical environment as much as possible within the constraints of equipment, budget, and supplies.

CHAPTER 18**AIRCRAFT FORMATION (NOT USED)**

18.1. This Chapter is Not Used.

CHAPTER 19

AIRDROP (NOT USED)

19.1. This Chapter is Not Used.

CHAPTER 20

AEROMEDICAL EVACUATION (NA FOR AETC)

Section 20A—General Information

20.1. Applicability. This chapter applies to AECMs assigned to Air Mobility Command (AMC) and AMC-gained Air National Guard (ANG), Pacific Air Force (PACAF), and U.S. Air Force Reserve (USAFR) units. It also applies to theater-assigned AECMs performing AE duties on C-12 aircraft.

20.2. Mission:

20.2.1. The primary function of OSA for aeromedical evacuation (AE) is transport of ill or injured DoD members and their dependents for single patient transfers requiring little or no medical support. These AE missions may be directed at any time. OSA aircraft will only be used with the concurrence of the appropriate theater medical validating authority.

20.2.2. Opportune airlift is preferred to launching a special airlift aircraft. The appropriate aeromedical evacuation control center (AECC) (Global Patient Movement Requirements [GPMRC] or Theater Patient Movement Requirements Center [TPMRC] and airlift agency (such as, PACAF Air Mobility Operations Control Center [AMOCC]) should direct the move. Use of opportune airlift is considered an unscheduled AE mission and managed or reported in the same manner as any other AE mission, to include changing the mission number when patients are on board. As a minimum, the medical crew director (MCD) and charge medical technician (CMT) on these missions will both be qualified C-9, C-17, C-130, or C-141 crewmembers.

20.2.3. AE personnel will use the procedures in applicable 41-series Air Force instructions and handbooks in conjunction with this publication to accomplish the AE mission.

20.3. Definitions:

20.3.1. Aeromedical Evacuation (AE). The movement of patients under medical supervision between medical treatment facilities (MTF) by air transportation.

20.3.2. Aeromedical Evacuation Control Center (AECC). A medical element established to operate in conjunction with command and control centers (CCC). The AECC (GPMRC or TPMRC) coordinates overall medical requirements with airlift capabilities and monitors patient movement.

20.3.3. Aeromedical Evacuation Crew Member (AECM). Qualified flight nurse (FN) or aeromedical evacuation technician (AET) performing AE duties.

20.3.4. Aeromedical Evacuation Operations Officer (AEOO). A Medical Service Corps (MSC) officer or medical administrative specialist or technician (AFSC 4A0X1) assigned to the AE system to perform duties outlined in AFRD 41-3, *Worldwide Aeromedical Evacuation*, applicable Air Force 41-series publications, and this directive.

20.3.5. Aeromedical Readiness Mission (ARM). Training mission using simulated patients to prepare for the wartime and contingency movement of patients.

20.3.6. Charge Medical Technician (CMT). An AET responsible for ensuring completion of enlisted medical crew duties.

20.3.7. Global Patient Movement Requirements Center (GPMRC). Responsible for coordinating all patient movement once the mission arrives at the continental United States (CONUS) reception aerial port, ensuring the patients are continued to final destinations as appropriate, and notifying receiving MTFs of aircraft arrival time as well as types and numbers of patients to be offloaded.

20.3.8. Medical Crew Director (MCD). An FN responsible for the supervision of patient care and medical crew assigned to AE missions. On missions where an FN is not on board, the senior AET will function as the MCD.

20.3.9. Theater Patient Movement Requirements Center (TPMRC). Responsible for the coordination and requirements for patient movement from communication zone (COMMZ) to CONUS.

20.4. Deviations and Waivers. Waiver requests to this chapter must process through C2 channels, and first be approved by Air Mobility Command (AMC) Command Surgeon (HQ AMC/SG) and then the appropriate MAJCOM DO. For overseas operations, waivers will process through theater command and control channels and first be approved by the medical validating authority and then the appropriate MAJCOM DO.

Section 20B—Aeromedical Evacuation Command and Control

20.5. Operational Control (OPCON) and Reporting of Aeromedical Forces:

20.5.1. AMC headquarters is responsible for the overall management of AE service. The AC is responsible for ensuring the safety of the flight and aeromedical crew, patients, and passengers. The MCD or senior AECM is responsible for providing medical care to the patients. In matters concerning flight safety, decisions of operations personnel are final; in matters of patient care, decisions of aeromedical crew are final.

20.5.2. OPCON of aeromedical evacuation missions is the same as for other airlift missions.

20.5.3. HQ AMC/SG is responsible for providing standards and procedures concerning the treatment of patients in flight, and for approval of medical equipment used on AE missions.

20.5.4. AECMs will integrate with the flight crew. The MCD or senior AECM will advise the AC when a patient's condition or use of medical equipment may affect aircraft operations.

20.5.5. If available, the AEOO is responsible for supervising flight line execution of aeromedical evacuation missions. The MCD or senior AECM is directly responsible for the safety and medical well-being of patients on the aircraft and coordinates enplaning and deplaning procedures with the AEOO and supporting agencies.

20.6. Aircraft Commander Responsibilities. The aircraft commander will:

20.6.1. Assist the MCD or senior AECM in obtaining patient support requirements based on local availability.

20.6.2. Brief the aeromedical crew on the mission, flight plan, flight profile, and current threat (if applicable).

- 20.6.3. Maintain cabin altitude at the level requested by the AECC (GPMRC or TPMRC), MCD, or senior AECM.
- 20.6.4. Coordinate with the MCD or senior AECM to determine if any flight restrictions are necessary due to patient conditions and if passengers or cargo may be carried.
- 20.6.5. Coordinate with the MCD or senior AECM to ensure mission-required equipment is available and installed as necessary.
- 20.6.6. Advise the AECMs of intentions to start engines, taxi, itinerary changes, in-flight difficulties, etc.
- 20.6.7. Brief the MCD or senior AECM on additional responsibilities of the flight crew.
- 20.6.8. Ensure patients and passengers are briefed concerning emergency egress, cabin safety, and visits to the flight crew compartment.
- 20.6.9. Transmit medical movement coordination messages as requested by the MCD or senior AECM.
- 20.6.10. Coordinate crash and rescue unit requirements when transiting airfields that are unfamiliar with AE requirements. Crash and rescue will stand by according to AFD 32-20, *Fire Protection*, and T.O. 00-125-72, *Ground Servicing of Aircraft and Static Ground/Bonding*.

20.7. Flight Crew Responsibilities. The flight crew will:

- 20.7.1. Assist the AE crew with aircraft systems.
- 20.7.2. Provide AECMs with a walkaround of the aircraft and brief AECMs on emergency egress.
- 20.7.3. Coordinate an emergency evacuation plan with the MCD or senior AECM.
- 20.7.4. Operate aircraft systems, such as, doors, emergency exits, etc.
- 20.7.5. Assist the aeromedical crew as necessary, providing such assistance does not interfere with primary duties.
- 20.7.6. Keep the aircraft as clean as possible.
- 20.7.7. Operate galley and prepare food and beverages for food service provided to patients by AECMs (if applicable).
- 20.7.8. Configure aircraft for AE operations.
- 20.7.9. Complete preflight and emergency briefings.
- 20.7.10. Control the passengers.

20.8. Aeromedical Crew Responsibilities. The aeromedical crew will:

- 20.8.1. Be primarily responsible for patient activities.
- 20.8.2. Assist the flight crew with aircraft AE configuration.
- 20.8.3. Install and remove medical equipment and supplies.
- 20.8.4. Assist the flight crew with observation and care of passengers when it doesn't interfere with primary duties.

20.8.5. (MCD or senior AECM) Coordinate with the AC for integration of the flight and aeromedical crew for continuing missions in which no crew changes take place including en route transportation, dining, billeting, etc.

20.8.6. Control patient rests with the MCD or senior AECM.

20.9. Patient Death in Flight. When a death or suspected death of a patient occurs in flight, the planned itinerary will not be interrupted if the next scheduled stop is a military airfield. If the next stop is a civilian or foreign military airfield, that stop will be overflown (mission requirements allowing). Coordination with command and control channels is essential. Specific guidelines are in applicable 41- series Air Force publications.

Section 20C—Aeromedical Crew Complement and Management

20.10. Aeromedical Crew Complement:

20.10.1. Aircrew Qualification. AECMs must be fully qualified on C-9, C-17, C-130, or C-141 aircraft and authorized to log primary flight time while performing duties on operational AE missions. Prior to being utilized as an AECM on C-12 aircraft, AECMs will be briefed on emergency egress and oxygen capabilities as they relate to patient or emergency use and will be provided an aircraft review by a qualified crewmember prior to takeoff. Aircrew members are responsible for emergency egress and cabin safety.

20.10.2. Crew Complement. A basic AE crew consists of one FN and one AET. An alert crew consists of one FN or one AET, or a combination which includes one of each. The crew complement can be adjusted by group or squadron senior nurse executive. The group or squadron senior nurse executive is the final authority for increasing or decreasing the number of aeromedical crewmembers assigned to an AE mission. Augmentation of the basic AE crew is authorized based on patient or mission requirements. Physicians, nurses, medical technicians, or other personnel designated as medical attendants to specific patients does not extend crew duty time. Basic crews will not be augmented after crew duty has started.

NOTE: The appropriate AECC (GPMRC or TPMRC) will notify the CCC or flying organization operations officer of the AE crew complement for each AE mission on OSA aircraft.

20.11. Aeromedical Crew Management. AECMs will be managed like other aircrew members. (See [Chapter 3](#).)

Section 20D—Aeromedical Aircrew Procedures

20.12. Checklists:

20.12.1. This publication and AFI 11-215 establish procedures and provide guidance for standardization of contents and maintenance of flight crew checklists. Maintain checklists according to AFI 11-215/AMC Supplement 1.

20.12.2. During aircraft operations, AECMs will use the guidance contained in their abbreviated checklists.

20.12.3. Only HQ AMC/SG-approved inserts and briefings pertaining to crew positions will be kept in the abbreviated flight crew checklist binders.

20.12.4. Information in the AECM checklists will not be changed except by published revisions or changes.

Section 20E—Aeromedical Airlift Operations

20.13. General:

20.13.1. Determining Factors. Consider the following factors when transporting patients on OSA aircraft: patient's diagnosis, condition, equipment, oxygen requirements, in-flight time, in-flight patient care requirements, and the number of medical personnel required. Always emphasize providing quality and appropriate care while minimizing potential risks during transport.

20.13.2. Patient Load Planning Factors. The AECC (GPMRC or TPMRC) determines size and composition of patient load on AE missions. AE mission planning factors will be according to applicable 41-series Air Force publications.

20.13.3. Patient Preparation. A flight surgeon, if available, will determine the patient's suitability for aeromedical evacuation on the C-12 aircraft. Medical authorities requesting the patient's evacuation must be informed of the in-flight physical stress on the patient. If the MCD or senior AECM determines the patient's medical condition is beyond the capability of the aeromedical crew or aircraft, contact the theater AECC (GPMRC or TPMRC) for further guidance. The MCD or senior AECM, in coordination with the appropriate theater medical validating authority, may refuse to accept any patient whose medical condition is beyond their capability. The MCD or senior AECM will advise the AC when a patient's condition or use of medical equipment may affect aircraft operation.

20.13.4. Equipment for AE Missions. Medical equipment must be tested and deemed airworthy, and then approved for use by HQ AMC/SG before using on board AE missions. For those unique patient moves requiring equipment that has not met the above criteria, contact GPMRC for approval before using on board the aircraft (applies to that specific mission only). AECMs are responsible for all medical supplies and equipment.

20.13.5. Aircraft Security. See [Chapter 7](#).

20.14. En Route Diversions:

20.14.1. The MCD or senior AECM is the medical authority on board all AE missions and has the responsibility to determine what is beneficial or detrimental to the patients. If a physician is on board, as an attendant, he or she will make decisions involving that specific patient's care and may be consulted for advice as appropriate. Specific guidelines are in applicable 41-series Air Force instructions and handbooks.

20.14.2. Should a diversion become necessary due to a change in patient's condition, the AC will make every effort to comply with the requests of the MCD or senior AECM. Establish communications with the responsible CCC, which, in turn, will relay the information to the appropriate AECC (GPMRC or TPMRC).

20.14.3. Should an en route diversion become necessary for reasons other than change in patient's condition, the AC will coordinate with the MCD or senior AECM before deciding the point of land-

ing. Welfare of the patient is a prime consideration in all such decisions; however, safety is the final determinant. The AC notifies the responsible CCC of the diversion and requests appropriate medical agencies be notified.

20.14.4. Normally, patients on the mission will be advised of changes in itinerary and reasons for the diversion.

20.14.5. If the MCD or senior AECM determines the diversion will be detrimental to a patient or the AC determines the diversion to be unsafe, the CCC will be advised and guidance requested.

20.15. Ground Handling:

20.15.1. Engines should be shut down during enplaning and deplaning of patients.

20.15.2. If possible, park aircraft so that doors used for enplaning and deplaning are upwind or on the windward side of the aircraft. Remaining exits may be closed, but not locked.

20.16. Refueling Operations. When possible, refuel the aircraft before enplaning patients. Concurrent servicing is not authorized for C-12 aircraft in T.O. 00-125-72.

20.17. Aircraft Pressurization:

20.17.1. Normally, altitude restrictions are passed from the AECC (GPMRC or TPMRC) to C2 channels for flight planning purposes. The MCD or senior AECM will advise the pilot of any new cabin altitude or rate of cabin altitude change restrictions during the preflight briefing update.

20.17.2. Provide emergency oxygen for AECMs and patients.

20.17.3. Therapeutic oxygen is not available on the aircraft and must be brought on board for patient use.

20.18. Aircraft Configuration:

20.18.1. The AECC (GPMRC or TPMRC) MCD or senior AECM determines the size and composition of the patient load on board AE missions. Load planning will be according to guidelines for the C-12 aircraft.

20.18.2. On dedicated AE missions, configure the aircraft during preflight.

20.18.3. There are provisions for two litter patients on C-12F aircraft. **EXCEPTION:** C-12J aircraft has provisions for up to five litter patients.

20.18.4. Patients not normally transported on OSA aircraft include:

20.18.4.1. Patients on a Stryker turning frame. The Stryker "A" frame can be carried, but is not recommended due to the difficulty in onloading or offloading on some OSA aircraft.

20.18.4.2. Patients with a high potential for seizure activity, combativeness, or who require constant suctioning.

20.18.4.3. Unstable cardiac patients, cardiac patients requiring a cardiac monitor, and patients with a recent history of chest pains or requiring intravenous therapy en route.

20.18.4.4. Patients with respiratory problems requiring large amounts of therapeutic oxygen, ventilator support, or frequent suctioning.

20.18.4.5. Patients with contagious illnesses.

20.18.4.6. High-risk neonates without special medical supervision from a neonatal team.

20.19. Passengers and Cargo:

20.19.1. With the concurrence of the MCD or senior AECM, the AC will ensure maximum aircraft usage for passengers and cargo. Passenger restrictions based on patient considerations will be identified when seats are released. At stations with an AECC (GPMRC or TPMRC), the AEOO or AECC (GPMRC or TPMRC) will advise the appropriate CCC on the number of seats available for passengers.

20.19.2. If space is released, the air terminal operations center (ATOC) will decide whether passengers or cargo will be carried.

20.19.3. Cargo and passengers may be carried with patients unless a clear detriment to the health and well-being of the patient can be demonstrated. Considering the need for maximum utilization of the aircraft, the MCD or senior AECM will make this decision. Refer conflicts to the respective AECC (GPMRC or TPMRC) for a decision.

20.20. Crash Coverage and Fire Protection:

20.20.1. Aircraft carrying patients will be provided crash and fire protection according to AFD 32-20. Stand-by is not necessary during normal operations. The aircrew will coordinate crash and fire protection requirements when transiting airfields where they are unfamiliar with aeromedical evacuation requirements. At AMC or PACAF bases and civilian airfields, the AC will request coverage, as necessary.

20.20.2. When this service is unavailable due to austere conditions, forward operations, or hostile environments, request personnel at the onload or offload airfield provide crash coverage and fire protection (as required).

20.21. AE Call Sign and Use Of Priority Clearance:

20.21.1. For AE missions, use the call sign "E" followed by the five-digit aircraft number or mission designator as required by FLIP. (For example, E 12345, ATC will call you "evac" or "air evac.") When the AE portion of the mission is completed, use normal call signs.

20.21.2. Only use the AE priority when carrying a sick or seriously injured patient who requires urgent medical attention. The patient need not be classified "urgent." Only use AE priority for that portion of the flight requiring expedited handling. Pilots should request priority handling if AE missions are experiencing long delays during takeoff or landing phases that will affect a patient's condition.

NOTE: Do not use this priority status simply to avoid ATC delays, make block and departure times, or avoid inconveniences. ATC agencies do not question the motive when an AE priority is declared. Use this status judiciously.

20.22. Load Message:

20.22.1. At military bases, the flight crew will pass inbound load messages to proper C2 personnel. At civilian airfields, notify ground control.

20.22.2. The MCD or senior AECM will complete an appropriate AE mission offload message according to applicable 41-series Air Force instructions and handbooks.

20.23. Change in Patient Status. See applicable 41-series Air Force instructions and handbooks for guidance on managing change in patient status.

CHAPTER 21

SEARCH AND RESCUE (NOT USED)

21.1. This Chapter is Not Used.

CHAPTER 22

ENAF (NOT USED)

22.1. This Chapter is Not Used.

CHAPTER 23

AIRCREW CHEMICAL OPERATIONS AND PROCEDURES (NA FOR AETC AND DIA/DSCA)

23.1. Wear of the Aircrew Chemical Defense Ensemble (ACDE). Wearing ACDE (which includes the aircrew eye respirator protection [AERP] above-the-shoulder system and CWU-66P integrated aircrew chemical coverall [IACC]) will constrain normal aircraft operations. Procedures and equipment have been tested under restricted conditions, and “business as usual” will not be possible. Individual situations will dictate what can and cannot be done. To properly adapt, aircrews must understand hazards involved and the limitations of their chemical defense equipment.

23.1.1. The information in this chapter will enhance other aircrew chemical defense training and provide the crewmember a basic understanding of using ACDE in a chemical-biological threat area (CBTA). It combines information from technical orders and unit inputs to form a single source document.

23.1.2. This chapter briefly describes the nature of the chemical threat and agents that may be faced. Secondly, it discusses some of the situations and problems the aircrew may encounter in a chemical threat environment. Preparatory actions and countermeasures are examined so the crewmember can make optimal use of the ACDE and fly the mission safely. While the information presented may need to be modified, the specific objectives of this chapter will help prepare the aircrew member for the unique challenges imposed by chemical weapons.

23.2. Factors Influencing the Chemical Warfare (CW) Agent Hazard. The major instances in which a crew may be exposed to chemicals is through inhalation, absorption through the skin and eyes, and ingestion. Contaminated drink and food are harmful, but immediate concerns must be avoiding contamination to the maximum extent-limit exposure of the skin and eyes, as well as avoid breathing the contaminants. Factors affecting persistence are weather, agent physical characteristics, method of dissemination, droplet size, and the terrain.

23.2.1. Weather. Factors include temperature, wind, humidity, precipitation, and atmospheric stability. For example, high winds and heavy rains reduce the contamination hazard. Conversely, lack of wind, overcast skies, and moderate temperatures favor persistence.

23.2.2. Agent Dissemination. Agents are disseminated as vapors, aerosols, or liquids. Solids seem unlikely, but agents may become solids at lower temperature.

23.2.3. Agent Droplet Size. The persistence factor is determined by droplet size. Agents may be mixed with other chemicals (“thickeners”) and form large drops, making removal more difficult.

23.2.4. Surface and Terrain. CW agent clouds tend to follow the terrain, flowing over countryside and down valleys. Chemicals persist in hollows, depressions, and other low areas. Rough terrain retards cloud movement. Flat countryside allows a uniform, unbroken cloud movement. Vegetated areas are more contaminated than barren terrain. Liquid agents soak into porous surfaces, making evaporation much slower than for nonporous surfaces.

23.3. Categories of CW Agents. CW agents having military significance may be categorized as nerve, blister, choking, and blood agents. Because they are produced biologically, toxins are technically not chemical agents. However, they are considered a potential CW threat.

23.3.1. Nerve Agents:

23.3.1.1. Military Significance. Nerve agents are the most lethal and fastest acting of the standard CW agents. These agents affect the nervous system and are highly toxic whether inhaled, ingested, or absorbed through the skin. Persistency ranges from hours to many days.

23.3.1.2. Symptoms of Exposure. Nerve agent exposure is difficult to distinguish. Symptoms include runny nose, tightness of the chest, difficulty breathing, excessive sweating, drooling, nausea, vomiting, diarrhea, and convulsions. Nerve agents can also cause muscular twitching, dimness of vision, and pinpointing of the pupils.

23.3.1.3. Onset of Symptoms. Inhalation produces symptoms within 1 to 2 minutes. The victim may be incapacitated within 5 to 10 minutes. Death may occur after several hours or days. Ingestion may cause the same symptoms; however, incapacitation may take longer. Nerve agents are retained by the body for an extended period; thus intermittent, cumulative exposure to low amounts can lead to the same ultimate effect as a single exposure to a higher amount.

23.3.1.4. Protection. The full protective ACDE is effective against nerve agents. When properly worn, the various chemical protective masks prevent inhalation of nerve agents. All layers of the outer garment must be protected against saturation of liquids, chemical agents, water, or petroleum.

23.3.1.5. Antidotes and Prophylaxis. Antidotes are effective in combating effects of nerve agent exposure. These antidotes may be effective if given to a victim having advanced symptoms and as long as the victim continues breathing. People who use the antidotes must be seen by medical personnel and may not be combat-ready for several days.

23.3.2. Blister Agents:

23.3.2.1. Military Significance. Blister agents are dispensed as vapors or liquids, and may be encountered as solids. These agents primarily affect the eyes, respiratory tract, and the skin.

23.3.2.2. Symptoms of Exposure. Placed on the skin, a drop the size of a pin head can produce a blister 1 inch in diameter. This action is accentuated by moisture; hence, a more severe danger is present during periods of sweating. The groin and armpits, which tend to be sweaty, are especially susceptible to blister agents. Blister agents that come in contact with the eyes lead to redness, watering of the eyes, blurring of vision, sensitivity to light, and frequently, blindness. Inhalation causes serious damage due to burns and blisters to the mouth, nose, throat, and lungs. Incapacitation may last for days or weeks; aircrews will probably be unable to fly for indefinite periods. After hospitalization, complications from blister agent exposure can arise and may be fatal.

23.3.2.3. Onset of Symptoms. Blister agents are quickly absorbed through the skin. However, it usually takes several minutes (up to 5 minutes and as long as several hours) for the symptoms to appear. They act most rapidly in liquid form, but are also effective in vapor form.

23.3.2.4. Protection. The full ACDE is effective against blister agents. Exposed areas must be cleaned thoroughly immediately after exposure. Blister agents are easily transferred from contaminated surfaces; thus, great care must be taken to avoid contact with any contamination.

23.3.3. Choking Agents:

23.3.3.1. Military Significance. These agents are disseminated as vapors. When inhaled, they affect the respiratory system by damaging the lungs. Persistence is very brief, and they dissipate rapidly (within minutes) under most field conditions.

23.3.3.2. Symptoms of Exposure. Choking agents cause coughing, choking, tightness of the chest, nausea, headache, and watering of the eyes. Choking agents can be lethal. Death normally results from the lungs filling with fluids, making breathing difficult or impossible.

23.3.3.3. Onset of Symptoms. Exposure to choking agents has an immediate effect. Victims experience slightly delayed effects, such as painful cough, breathing discomfort, and fatigue.

23.3.3.4. Protection. Both the aircrew and ground crew protective mask are extremely essential to protect against exposure. Use the entire protective ACDE as directed.

23.3.4. Blood Agents:

23.3.4.1. Military Significance. Blood agents are usually dispensed as vapor or aerosol and inhaled. Under most field conditions they may briefly persist on target (up to 10 minutes).

23.3.4.2. Symptoms of Exposure. Exposure to a single breath of blood agent causes giddiness, headaches, confusion, and nausea. As the dose increases, breathing becomes more difficult. The victim will have deep, uncontrollable breathing and cramps, then loss of consciousness. Death is certain if the victim receives no medical aid.

23.3.4.3. Protection. Blood agents are breathing hazards. The full ACDE is most effective because the mask provides the breathing protection needed.

23.3.4.4. Additional Threats. Blood agents will damage mask filters. All personnel must change mask filters at the earliest possible opportunity after a blood agent attack.

23.4. Limitations. Performing duties while wearing the ACDE can be extremely physically and mentally demanding. Special preparation and crew coordination are required to operate under chemical conditions. The following factors will enable the aircrew to successfully operate in a chemical environment by recognizing limits and exploiting the capabilities of the chemical defensive equipment:

23.4.1. Nonflying Ground Operations . Ground operations can represent the highest threat to aircrew safety. Protection from enemy attacks and exposure to liquid chemical agents is paramount. Advise aircrews to limit activities to essential duties only and to separate ground duties from air duties. The ground ensemble is designed for quick donning and heavier levels of concentration that can be more evident during ground operations. The aircrew ensemble is designed for light concentration levels that could be found during flying operations and transiting to and from the aircraft. Also, ACDE requires care during donning using "buddy dressing" procedures and life support expertise during aircrew contamination control area (ACCA) processing.

23.4.2. Equipment Limitations. Due to thermal stress and the degraded performance associated with wearing the ACDE, it is highly desirable to minimize the time and number of personnel exposed to chemical agents. ACDE is designed to protect against vapor agents only, plus the mask and hood assembly can not be donned quickly in time of attack. Because of these limitations, aircrew members must properly plan their duties.

23.4.3. Body Temperature and Fluids Control. Heat stress and dehydration are serious hazards while wearing the ACDE. Aircrew members need to control perspiration rates and limit activities to essential duties only. Aircrew members must consciously slow the work pace while performing physical labor, share workloads, and monitor each other's physiological condition.

23.4.4. Breathing Restrictions. One of the design-inherent characteristics of the filter assembly is moderate breathing resistance. Normally, this is not noticeable except during high flow rates. For example, during physical exertion, users should be aware of the possibility of hyperventilation. During flying operations, resistance can be reduced by using the EMERGENCY position on the oxygen regulator. The Valsalva maneuver cannot be performed while wearing the MBU-13/P mask. Instead, try yawning or chewing. If these are unsuccessful, attempt to clear ears by holding the oxygen regulator in the TEST MASK position and forcefully exhale or yell against the regulator pressure. The new AERP mask and hood assembly that incorporates a blower system presents less-than-moderate breathing resistance. However, in the event of a blower system failure, aircrews will experience an increase in breathing resistance.

23.4.5. Limited Dexterity. Wearing three pairs of gloves restricts dexterity; therefore, visual confirmation of switch selection and positioning become very important.

23.4.6. Restricted Communications. Normal communications are limited while wearing the chemical defense mask. Use the mini-amplifier and speaker with the ACDE to enhance communications. (Some of the newer ground masks may be issued with a built-in amplifier.) Otherwise, visual signals, the aircraft's public address system, and the aircraft's interphone system can be used to compensate.

23.4.7. Peripheral Vision Limits. The aircrew chemical defense mask may reduce peripheral vision as much as 15 percent.

23.4.8. Emergency Procedures . Wearing any of the chemical defense masks and filter assemblies imposes several limitations:

23.4.8.1. The aircrew member will not be able to detect fumes from fuel, hydraulic fluid, and oil.

23.4.8.2. Filter assembly will not protect the user against ammonia fumes and carbon monoxide gas.

23.4.8.3. Filter assembly without an oxygen source will not be used in an oxygen-deficient atmosphere.

23.5. Aircrew Operations. Aircrews need to be mentally prepared to face the dangers of chemical weapons. Develop plans to limit aircrew exposure during enemy attacks and liquid agent contamination while engaged in nonflying activities. Flight planning must be thorough; aircraft commanders should emphasize chemical defensive operations during mission planning, hazards and countermeasures, plans for onload and offload in the event of a ground attack, and plans for the return leg in the event of a contaminated aircraft. Also consider alternate scenario plans in the event conditions change.

23.5.1. Fuel Requirements. As the result of chemical agent exposure, extra fuel may have to be carried to compensate for altitude restrictions. If the aircraft has contamination, follow procedures outlined in paragraph 23.12. If purging procedures are used, the aircraft will be unpressurized and, although the aircrew can use the aircraft oxygen systems, passengers wearing the ground chemical defense ensemble (GCDE) cannot be. This restricts the aircraft cruise altitude and increases fuel requirements.

23.5.2. Oxygen Requirements. Operating into a CBTA will increase oxygen requirements. The aircrew may be required to rely on the ACDE mask and aircraft oxygen system to counter actual and suspected chemical contamination. Using the 100 percent oxygen setting offers the greatest protection in a contaminated environment. Plan appropriate oxygen reservoir levels to meet higher consumption rates. Use the aircraft Dash 1 charts to calculate the required reservoir levels.

23.6. ACDE Issue and Medical Pretreatment. Aircrews will be issued sized ACDE and GCDE at the home station. Aircrews will ensure their ACDE and GCDE are available at all times while in a CBTA. During deployments, at least one ACDE and one GCDE will be issued to each crewmember as directed by the unit commander or the PACAF AMOCC. Life support technicians will prepare and issue mobility ACDE D bags for aircrew members (AFI 11-301). Mobility processing personnel will issue GCDE C bags. Aircrew members will confirm the mobility bag contents and correct sizes. The local AMC command and control agency will direct aircrews to undergo medical pretreatment for chemical exposure.

23.7. In a CBTA:

23.7.1. Establishing Threat Level. Aircrews should monitor command and control channels to ensure they receive the latest information concerning the destination's alarm condition. Diverting PACAF aircraft to alternate "clean" locations may be required, unless operational necessity dictates otherwise.

23.7.2. Protective Equipment Postures. The following U.S. forces alert signals outline ACDE and GCDE procedures for flying personnel:

23.7.2.1. All Clear. Attack is not probable. *Notification:* verbal; removal of warning signs and flags. *ACDE Requirements:* equipment is issued, prepared for flying, and kept readily available. *GCDE Requirements:* equipment is issued and readily available.

23.7.2.2. Alarm Yellow. Attack is probable. *Notification:* verbal; posting of yellow warning signs and flags. *ACDE Requirements:* if en route to fly or during flying operations, all components will be worn except mask, hood, gloves, overcape, and overboots. Mask and hood will be immediately available. *GCDE Requirements:* appropriate components should be worn with the mask and hood and immediately available commensurate with ground duties.

23.7.2.3. Alarm Red. Attack is imminent or in progress. *Notification:* verbal; posting of red warning signs and flags; 1-minute warbling tone from sirens; succession of long blasts (3 seconds on, 1 second off) from warning devices. *ACDE Requirements:* full ACDE will be worn for flying duties. *GCDE Requirements:* full GCDE should be worn commensurate with ground duties.

23.7.2.4. Alarm Black. Contamination is suspected or present. *Notification:* verbal; posting of black warning signs and flags; broken warbling tone from sirens; succession of short blasts (1 second on, 1 second off) from warning devices. *ACDE Requirements:* full ACDE will be worn. *GCDE Requirements:* full GCDE will be worn commensurate with ground duties.

23.8. Donning Equipment . Aircrew will don ACDE based on the alarm condition. Use the "buddy dressing" procedures and refer to AMCVA 50-2, *ACDE Donning Checklist (Conventional and AERP)*, to ensure proper wear. When wearing the ACDE, Atropine and 2 PAM Chloride auto injectors will be kept in the upper left flight suit pocket. This standardized location will allow personnel to locate the medication should an individual be overcome by nerve agent poisoning. M-9 paper on the flight suit will facili-

tate detection of liquid chemical agents and ACCA processing. M-9 paper should be placed on the flight suit whenever entering a CBTA with a declared alarm condition of “yellow” or higher. When inbound to CBTA, prior to descent, the aircraft commander will ensure crew and passengers don appropriate protective equipment according to arrival destination’s mission-oriented protective posture (MOPP) level and brief aircrew operations in the CBTA. As a minimum, this briefing will include:

- 23.8.1. Flight deck isolation.
- 23.8.2. Oxygen requirements.
- 23.8.3. Air-conditioning system requirements.
- 23.8.4. CW clothing requirements.
- 23.8.5. Ground operations and MOPP levels.

23.9. Ground Operations:

23.9.1. Off and On Considerations. Exercise extreme care to prevent contamination of aircraft interiors during ground operations. Reduce the number of personnel entering the aircraft. Do not place contaminated engine covers, safety pins, and chocks in the aircraft unless sealed in clean plastic bags. Protect unloaded cargo prior to and while being transported to the aircraft. Remove protective covers right before placing the cargo on the aircraft. It is the user’s responsibility to determine and decontaminate equipment in his or her charge. Aircrew members entering the aircraft will remove plastic overboots and overcape portions of the ACDE and ensure flight and mobility bags are free of contaminants and placed in clean plastic bags. Aircrew exiting aircraft into a chemical-contaminated environment will don plastic overboots and overcape prior to leaving the aircraft.

23.9.2. Physiological Factors. Aircraft commanders must be very sensitive to the problems resulting from physical exertion while wearing ACDE. The aircraft commander should consider factors such as ground time, temperature, and remaining mission requirements when determining on-load and off-load requirements. Individuals involved should be closely monitored for adverse physiological effects.

23.9.3. Communications. Conducting onloading and offloading operations while wearing the complete ACDE complicates communications capability. Use the mini-amplifier or speaker, aircraft public address systems, or aircraft interphone system. Augment with flashlight and hand signals as required.

23.9.4. Passengers and Patients. A path should be decontaminated between the aircraft and the ground transportation vehicle to reduce interior decontamination when loading and unloading passengers and patients.

23.10. Chemical Attack During Ground Operations. If an attack (condition red) occurs during on-loading and offloading operations or transport to and from aircraft, take immediate cover away from the aircraft or vehicle. Follow “buddy dressing” procedures to ensure proper donning of ACDE prior to flight.

NOTE: Aircrews should don the ground crew protective chemical mask and protective helmet, consistent with circumstances and duties. Aircrews could be expected to forward information concerning medical aid, damage estimates, and unexploded ordinances. Appropriate information may be sent via aircraft radios to the controlling agencies.

23.11. Crew Rest Procedures. Operational necessity may require the aircrew to rest or fly in a contaminated CBTA. If the mission is not being staged by another aircrew or preflight crews are not available, the aircrew will normally preflight, load, and secure the aircraft prior to entering crew rest. The departing aircrew will perform necessary crew preparations and preflight briefings, then report to the ACCA for processing with assistance from life support personnel who will assist aircrews donning ACDE prior to reassuming flying duties. If possible, aircrew transport should be provided in a covered vehicle. Aircrews should avoid preflighting aircraft prior to departure to prevent contamination to themselves and the aircraft. As aircrews proceed to fly, they will require assistance from ground support personnel in removing their aircrew protective overcape and overboots prior to entering the aircraft.

23.12. Outbound with Actual or Suspected Chemical Contamination—Venting Aircraft and Removing ACDE Components. With actual or suspected vapor contamination, the aircraft must be purged for 2 hours using smoke and fume elimination procedures to eliminate the vapor hazard. To ensure no liquid contamination exists, a close inspection of aircrew, passengers, flight deck, passenger compartment, and cargo compartment will be conducted using M-8 and M-9 detection paper. Currently, vapors may be detected using the M-256 kit. Aircrews and passengers may remove their respective ensemble components if vapors have been purged and liquid agents are not detected on the flight deck or in the passenger compartment. If liquid contamination is present, the aircrew must take every precaution to prevent spreading them throughout the aircraft, especially on the flight deck. The best course is to identify actual or suspected contamination and physically avoid those areas for the remainder of the flight. Aircrews should attempt to maintain a total separation between the cargo compartment and the flight deck if the cargo area has liquid contamination. The environmental curtain should be fully installed and the cargo compartment kept as cool as possible (liquid agents are less volatile at lower temperatures). Personnel who have been contaminated with liquid agents will remain in their respective ensemble until processed through the applicable CCA.

23.13. Communicating Down-Line Support. Pass chemical contamination information through command and control channels when inbound. This information is used to determine if a diversion flight is required. Report the physical condition of any crew or passengers who are showing chemical agent symptoms. Also report whether they are wearing chemical defense ensembles.

23.14. After Landing Decontamination Procedures. Aircraft returning from CBTA bases will be decontaminated by the most expedient method at an island base or CONUS offload station. Advise recovery base command post of suspected or actual chemical contamination. Aircrews will proceed to the ACCA for processing. Ground personnel will report to the ground contamination control area (GCCA) for processing. All personnel will remove protective clothing according to established procedures located in the respective CCA.

NOTE: Because of the technical characteristics of life support and flying equipment and mission-essential aircrew resources, an ACCA is required to ensure minimum exposure to contaminants. GCCAs are generally used to process ground crew personnel and are typically subject to potentially higher concentration levels. The ACCA is equipped and manned by trained life support personnel to process aircrews and decontaminate their equipment.

23.15. Work Degradation Factors. Adjust work timetables to minimize thermal stress caused by wearing the ACDE. Aircrews must weigh all factors when performing in-flight and ground duties. [Table 23.1](#) provides degradation factors for wearing a full ground chemical ensemble and may also be

used to represent the task time multipliers for the ACDE. To estimate how much time it takes to perform a task or operation, take the task time multiplier for the appropriate work rate and ambient air temperature, and multiply it by the time it normally takes to perform the task. For example, given a heavy work rate and an air temperature of 70 degrees F, the crewmember should expect a normal 1-hour task to take 2.1 hours while wearing ACDE.

Table 23.1. Work Degradation Factors.

I T E M	A	B	C	D
	<i>Work Rate</i>	Hours		
		20 - 49 degrees F	50 - 84 degrees F	85 - 100 degrees F
1	Light	1.2	1.4	1.5
2	Moderate	1.3	1.4	3.0
3	Heavy	1.7	2.1	5.0

23.16. Forms Adopted. DD Forms 175, 175-1, 1252, 1351-2, 1351-2C, 1387-2, 1610, 1801, 1854, 1896, 1898, and 2131; AF Forms 8, 15, 70, 72, 315, 457, 523, 651, 664, 791, 847, 1297, 1381, 1631, 1994, and 3211; AFTO Forms 46, 781, 781A, and 781H; and Customs Form 7507.

CHAPTER 24

SPECIAL OPERATIONS LOW-LEVEL (SOLL) II (NOT USED)

24.1. This Chapter is Not Used.

CHAPTER 25

CONFIGURATION (NOT USED)

25.1. This Chapter is Not Used.

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ATTACHMENT 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

- AFMAN 10-206, *Operational Reporting*
- AFI 10-403, *Air Force Deployment Planning*
- AFPD 11-2, *Aircraft Rules and Procedures*
- AFI 11-202, volume 3, *General Flight Rules*
- AFH 11-203, volume 1, *Weather for Aircrews*
- AFJI 11-204, *Operational Procedures for Aircraft Carrying Hazardous Materials*
- AFI 11-209, *Air Force Participation in Aerial Events*
- AFI 11-215, *Flight Manuals Program (FMP)*
- AFMAN 11-217, volume 1, *Instrument Flight Procedures*
- AFI 11-218, *Aircraft Operation and Movement on the Ground*
- AFI 11-301, *Life Support Program*
- AFI 11-401, *Flight Management*
- AFI 13-207, *Preventing and Resisting Aircraft Piracy (Hijacking)*
- AFI 23-202, *Buying Petroleum Products, and Other Supplies and Services Off-Station*
- AFJMAN 24-204, *Preparing Hazardous Materials for Military Air Shipments*
- AFI 31-101, volume 1, *The Air Force Physical Security Program*
- AFI 31-401, *Managing the Information Security Program*
- AFPD 32-20, *Fire Protection*
- AFI 33-110, *Data Administration Program*
- AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*
- AFPD 41-3, *Worldwide Aeromedical Evacuation*
- AFJI 48-104, *Quarantine Regulations of the Armed Forces*
- AFI 48-123, *Medical Examination and Standards*
- AFM 67-1, volume 1, part 3, *Air Force Stock Fund and DPSC Assigned Item Procedures (PA)*
- AFI 91-202, *The US Air Force Mishap Prevention Program*
- DOD 4515.13-R, *Air Transportation Eligibility*
- T.O. 00-20-6, *Inspection System, Documentation and Status Reporting for Ground-Launched Missiles and Their Trainers, Safety, and Ground Equipment*
- T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*

T.O. 00-125-72, *Ground Servicing of Aircraft and Static Ground/Bonding*

T.O. 1-1-300, *Acceptance/Functional Check Flight and Maintenance*

T.O. 1C-12, *Flight Manual*

T.O. 1C-12A/F/J-6CF-1, *Functional Check Flight Checklist*

Foreign Clearance Guide

Abbreviations and Acronyms

AC—aircraft commander

ACCA—aircrew contamination control area

ACDE—aircrew chemical defense ensemble

ACF—acceptance check flight

ACM—additional crewmember

ADIZ—Air Defense identification zone

AECC—aeromedical evacuation control center

AECM—aeromedical evacuation crewmember

AEOO—aeromedical evacuation operations officer

AERP—aircrew eye respirator protection

AET—aeromedical evacuation technician

AFOSI—Air Force Office of Special Investigations

AFRC—Air Force Reserve Component

AFRCOS—Armed Forces Courier Service

AIREP—air report

ALS—approach lighting system

AMC—Air Mobility Command

AMCC—air mobility control center

AME—air mobility element

AMOCC—air mobility operations control center

ANG—Air National Guard

AOC—air operations center

AOR—area of responsibility

AOS—air operations squadron

APOD—aerial port of disembarkation

ARM—aeromedical readiness mission

ARTCC—Air Route Traffic Control Center
ASRR—Airfield Suitability and Restriction Report
ATC—air traffic control
ATIS—Automatic Terminal Information Service
ATO—air tasking order
ATOC—air terminal operations center
ATSO—ability to survive and operate
AVPOL—aviation petroleum oil and lubricants
AWOS—Automated Weather Observation System
BASH—bird aircraft strike hazard
C2—command and control
CB—citizens band
CBTA—chemical-biological threat area
CCC—command and control center
CCT—combat control team
CDT—crew duty time
CFP—computer flight plan
CIRVIS—communications instructions for reporting vital intelligence siting
CMT—charge medical technician
COMMZ—communication zone
COMSEC—communications security
CONUS—continental United States
CP—copilot
CRM—crew resource management
CVR—cockpit voice recorder
DFSC—Defense Fuel Supply Center
DH—decision height
DIRMOBFOR—director, mobility forces
DME—distance measuring equipment
DOD—Department of Defense
DV—distinguished visitor
EAC—experienced aircraft commander

EMI—electromagnetic interference
ENAF—emergency nuclear airlift
ERO—engine running offload and onload
ETA—estimated time of arrival
ETB—estimated time in block
ETE—estimated time en route
ETP—equal time point
FAA—Federal Aviation Administration
FAF—final approach fix
FCB—flight crew bulletin
FCF—functional check flight
FCIF—flight crew information file
FDP—flight duty period
FEF—flight evaluation folder
FIR—flight information region
FL—flight level
FLIP—flight information publication
FMC—fully mission capable
FN—flight nurse
FOD—foreign object damage
FOL—forward operating location
FOUO—for official use only
FP—first pilot
FRAG—fragmented order
FSS—flight service station
GCCA—ground contamination control area
GCDE—ground chemical defense ensemble
GDSS—global decision support system
GP—general planning
GPMRC—Global Patient Movement Requirements Center
GPS—global positioning system
HAA—height above aerodrome

HAT—height above touchdown

HATR—hazardous air traffic report

HAZMAT—hazardous material

HF—high frequency

IACC—integrated aircrew chemical coverall

ICAO—International Civil Aviation Organization

ICO—invoice control officer

IFR—instrument flight rules

IMC—instrument meteorological condition

IRC—instrument refresher course

JOG—Joint Operations Graphic

JOSAC—Joint Operational Support Airlift Center

KIAS—knots indicated airspeed

MAJCOM—major command

MAP—missed approach point

MC—mission capable

MDA—minimum descent altitude

MDS—mission design and series

ME—mission essential

MEA—minimum en route altitude

MEGP—mission-essential ground personnel

MEL—minimum equipment list

MILSTAMP—military standard transportation and movement procedures

MNPS—minimum navigation performance specifications

MOB—main operating base

MOCA—minimum obstacle clearance altitude

MOPP—mission-oriented protective posture

MP—mission pilot

MR—mission ready

MSC—Medical Service Corps

MSL—mean sea level

MTF—medical treatment facility

NA—not applicable
NAF—numbered Air Force
NDB—nondirectional beacon
NEW—net explosives weight
NM—nautical mile
NMCS—not mission capable - supply
NOAA—National Oceanic and Atmospheric Administration
NORAD—North American Aerospace Defense
NOTAM—notice to airman
NSN—national stock number
OCONUS—outside of CONUS
OG—operations group
OIS—obstacle identification surface
ONC—operational navigation chart
OPCON—operational control
OPORD—operation order
OPR—office of primary responsibility
OPREP—operational report
OSA—operational support aircraft
OSTF—off station training flight
PAA—primary assigned aircraft
PACAF—Pacific Air Force
PAPI—precision approach path indicator
PAR—precision approach radar
PIC—pilot in command
PMSV—pilot-to-meteorologist service
POC—point of contact
POL—petroleum, oil, and lubricants
PPR—prior permission required
RCR—runway condition reading
RIK—replacement-in-kind
RNAV—area navigation

RON—remain over night
RSC—runway surface condition
RVR—runway visual range
RVSM—reduced vertical separation minimum
SID—standard instrument departure
SIGMET—significant meteorological information
SITCO—Shell International Trading Company
SM—statute mile
STAR—standard terminal arrival route
STIF—supplemental theater information file
STM—supplemental training mission
TACC—tanker airlift control center
TALCE—tanker airlift control element
TAS—true airspeed
T.O.—technical order
TOLD—takeoff and landing data
TPC—Tactical Pilotage Chart
TPMRC—Theater Patient Movement Requirements Center
UHF—ultra high frequency
UIR—upper information region
USA—United States Army
USAF—United States Air Force
USAFR—US Air Force Reserves
USMC—United States Marine Corps
USN—United States Navy
USTRANSCOM—United States Transportation Command
VASI—vertical approach slope indicator
VFR—visual flight rule
VHF—very high frequency
VLf—very low frequency
VMC—visual meteorological condition
VVIP—very very important parts

Terms

Additional Crewmember (ACM)—Mobility aircrew members and authorized flight examiners possessing valid aeronautical orders who are authorized to accompany the normal crew complement required for that mission ([Chapter 3](#)).

Aeromedical Evacuation (AE)—Movement of patients under medical supervision between medical treatment facilities (MTF) by air transportation.

Aeromedical Evacuation Coordination Center (AECC)—Medical element established to operate in conjunction with command and control centers. AECC, through global or theater patient movement requirement centers, coordinates overall medical requirements with airlift capabilities and monitors patient movement.

Aeromedical Evacuation Crewmember (AECM)—Qualified flight nurse (FN) and aeromedical evacuation technician (AET) performing AE crew duties.

Aeromedical Evacuation Operations Officer (AEEO)—Medical Service Corps (MSC) officer or medical administrative specialist or technician (AFSC 4A0X1) assigned to the AE system to perform duties outlined in applicable Air Force publications.

Airlift—Aircraft is considered to be performing airlift when manifested passengers or cargo are carried.

Air Mobility Control Center (AMCC)—Provides global coordination of tanker and airlift for AMC and operationally reports to the AMC TACC. Functions as the AMC agency that manages and directs ground support activities and controls aircraft and aircrews operating AMC strategic missions through overseas locations.

Air Mobility Element (AME)—Command and control center deployed in theater under the control of the director, mobility forces (DIRMOBFOR), where detailed planning, coordinating, and tasking for theater tanker and airlift operations are accomplished. The AME is the focal point for communications and the source of control and direction for theater tanker and airlift forces.

Bird Condition Low—No significant bird activity that would present a probable hazard to flying operations. No operating restrictions.

Bird Condition Moderate—Concentrations of 5 to 15 large birds (waterfowl, raptors, gulls, etc.) or 15 to 30 small birds (terns, swallows, etc.) observable in locations that represent a probable hazard to flying operations. Initial takeoffs and final landings allowed only when departure and arrival routes will avoid bird activity. Local IFR and VFR traffic pattern activity is prohibited.

Bird Condition Severe—All takeoffs and landings are prohibited without OG/CC (or higher) approval.

BLUE BARK—U.S. military personnel, U.S. citizen civilian employees of the Department of Defense (DoD), and the dependents of both categories who travel in connection with the death of an immediate family member. Also applies to escorts for dependents of military members traveling under competent orders.

Border Clearance—Those clearances and inspections required to comply with federal, state, and local agricultural, customs, immigration, and immunization requirement.

Category I Route—Any route that does not meet the requirements of a category II route, including tactical navigation and overwater routes.

Category II Route—Any route on which the position of the aircraft can be accurately determined by the

overhead crossing of a radio aid (NDB, VOR, TACAN) at least once each hour with positive course guidance between such radio aids.

Charge Medical Technician (CMT)—AET responsible for ensuring completion of enlisted aeromedical crew duties.

COIN ASSIST—Nickname used to designate dependent spouses accompanying dependent children and dependent parents of military personnel reported missing or captured who may travel space available on military aircraft for humanitarian purposes on approval of the Chief of Staff, United States Army; Chief of Staff, United States Air Force; Chief of Naval Operations; or the Commandant of the Marine Corps.

Command and Control (C2)—Exercise of direction and authority over assigned forces by a properly designated command echelon in the accomplishment of the mission.

Command and Control Center (CCC)—Each CCC provides supervision, guidance, and control within its assigned area of responsibility. For the purpose of this AFI, CCCs include operations centers, command posts, air mobility elements, tanker airlift control elements (TALCE), air mobility control centers, and tanker task forces.

CONFERENCE SKYHOOK—Communication conference available to help aircrews solve in-flight problems that require additional expertise.

Contingency Mission—Mission operated in direct support of an OPORD, OPLAN, disaster, or emergency.

Controlling Agency—Controlling agencies will be defined in each MAJCOM supplement.

Deadhead Time—Duty time for crewmembers in passenger or ACM status, positioning or depositioning for a mission or mission support function.

Designated Courier—Officer or enlisted member in the grade of E-5 or above of the US Armed Forces, or a Department of State diplomatic courier, selected by the Defense Courier Service (DCS) to accept, safeguard, and deliver DCS material as directed. A primary aircrew member should be used as a courier only as a last resort.

Deviation—A deviation occurs when takeoff time is not within 20/+14 minutes of scheduled takeoff time.

Direct Instructor Supervision—Supervision by an instructor of like specialty with immediate access to controls (for pilots, the instructor must occupy either the pilot or copilot seat).

Director, Mobility Forces (DIRMOBFOR)—Individual in command of all mobility forces within a designated area or for a designated operation. In overseas theaters, the DIRMOBFOR is normally responsible for theater mobility force management. The Air Force component commander exercises operational control of assigned or attached mobility forces through the DIRMOBFOR. The DIRMOBFOR monitors and manages assigned mobility forces operating in theater.

Distinguished Visitor (DV)—Passengers, including those of friendly nations, of star or flag rank or equivalent status, to include diplomats, cabinet members, members of Congress, and other individuals designated by the DoD due to their mission or position (includes BLUE BARK and COIN ASSIST).

Due Regard—Operational situations that do not lend themselves to International Civil Aviation Organization (ICAO) flight procedures, such as military contingencies, classified missions, politically sensitive missions, or training activities. Flight under “due regard” obligates the military aircraft

commander to be his or her own air traffic control (ATC) agency and to separate his or her aircraft from all other air traffic. (See FLIP General Planning, section 7.)

Equal Time Point—Point along a route at which an aircraft may either proceed to destination or first suitable airport or return to departure base or last suitable airport in the same amount of time based on all engines operating.

Execution—Command-level approval for initiation of a mission or portion thereof after due consideration of all pertinent factors. Execution authority is restricted to designated command authority.

Experienced Aircraft Commander (EAC)—Aircraft commander with 200 hours pilot in command since certification as an AC.

Familiar Field—An airport in the local flying area at which unit-assigned aircraft routinely perform transition training. Each operations group commander will designate familiar fields within their local flying area.

Ground Time—Interval between engine shutdown (or arrival in the blocks if engine shutdown is not scheduled) and next takeoff time.

Hammer Ace—Air Force Command, Control, Communications, and Computer Agency (AFC4A) assigned personnel performing essential communication missions carried by OSA aircraft for accident investigations.

Hazardous Cargo or Materials—Articles or substances capable of posing significant risk to health, safety, or property when transported by air and classified as explosive (class 1), compressed gas (class 2), flammable liquid (class 3), flammable solid (class 4), oxidizer and organic peroxide (class 5), poison and infectious substances (class 6), radioactive material (class 7), corrosive material (class 8), or miscellaneous dangerous goods (class 9). Classes may be subdivided into divisions to further identify hazard, such as, 1.1, 2.3, 6.1, etc.

Instructor Supervision—Supervision by an instructor of like specialty. For critical phases of flight, the instructor must occupy one of the seats with immediate access to the controls.

Local Training Mission—A mission scheduled to originate and terminate at home station (or an off-station training mission) generated for training or evaluation, and executed at the local level.

Maintenance Status:—

A-1— No maintenance required.

A-2 (Plus Noun)—Minor maintenance required, but not serious enough to cause delay. Add nouns that identify the affected units or systems, such as, hydraulic, ultra high frequency (UHF) radio, radar, engine, fuel control, generator, boom or drogue, etc. Attempt to describe the nature of the system malfunction to the extent that appropriate maintenance personnel will be available to meet the aircraft. When possible, identify system as mission essential (ME) or mission contributing (MC).

A-3 (Plus Noun)—Major maintenance. Delay is anticipated. Affected units or systems are to be identified as in A-2 status above.

A-4—Aircraft or system has suspected or known biological, chemical, or radiological contamination.

Medical Crew Director (MCD)—FN responsible for supervising patient care and AECMs assigned to

AE missions. On missions where an FN is not on board, the senior AET will function as MCD.

Mission-Essential Ground Personnel (MEGP)—MEGP status is granted to individuals on a case-by-case basis who perform unique support duties directly related and essential to a particular aircraft, aircrew, or mission.

Mission—Movement of aircraft from a designated point of origin to a designated destination as defined by assigned mission identifier, mission nickname, or both in the schedule, mission directive, OPORD, OPLAN, or Frag order.

Mission Advisory—Message dispatched by command and control agencies, liaison officers, or aircraft commanders advising all interested agencies of any changes in status affecting the mission.

Off-Station Training Flight—A training flight that originates or terminates at other than home station that is specifically generated to provide the aircrew experience in operating away from home station. Off-station trainers will not be generated solely to transport passengers, cargo, or ACMs.

Operational Control (OPCON)—Functions of command and control involving composition of subordinate forces, authority to approve allocation of assets to specific missions, assignment of tasks, designation of objectives, and authoritative direction necessary to accomplish the mission. This is a higher authority than the command that performs specific mission functions.

Operational Missions—Nontraining missions executed at or above the controlling agency level. Operational missions termed “CLOSE WATCH” include CORONET missions and priority 1, 2, and 3 missions tasked by the controlling agency. Other operational missions such as deployment, redeployment, and operational readiness inspections (ORI) missions may be designated “CLOSE WATCH” as necessary.

Opportune Airlift—Transportation of personnel, cargo, or both aboard aircraft with no expenditure of additional flying hours to support the airlift.

Originating Station—Base from which an aircraft starts on an assigned mission. May or may not be the home station of the aircraft.

Overwater Flight—Any flight that exceeds power off gliding distance from land.

Patient Movement Categories:—

Urgent—Patients who must be moved immediately to save life, limb, or eyesight, or to prevent complication of a serious illness.

Priority—Patients requiring prompt medical care that must be moved within 24 hours.

Routine—Patients who should be picked up within 72 hours and moved on routine or scheduled flights.

Positioning and Depositioning Missions—Positioning missions are performed to relocate aircraft for the purpose of conducting a mission. Depositioning missions are made to return aircraft from bases at which missions have terminated.

Scheduled Takeoff Time—Takeoff time is established in the schedule or OPORD. For air aborts and diversions, this will be engine shutdown time (or arrival in the blocks if engine shutdown is not scheduled) plus authorized ground time. Early deviation does not apply to aborts or diversions unless the mission is formally rescheduled by current operations.

Significant Meteorological Information (SIGMET)—Area weather advisory issued by an ICAO meteorological office relayed to and broadcast by the applicable ATC agency. SIGMET advisories are issued for tornadoes, lines of thunderstorms, embedded thunderstorms, large hail, severe and extreme turbulence, severe icing, and widespread dust or sand storms. SIGMETs frequently cover a large geographical area and vertical thickness. They are prepared for general aviation and may not consider aircraft type or capability.

Tactical Event—Threat avoidance approaches and departures.

Tanker Airlift Control Element (TALCE)—Team of qualified Air Force personnel established to control, coordinate, and function as an Air Force tanker and airlift C2 facility at a base where normal AMC C2 facilities are not established or require augmentation. TALCEs support and control contingency operations on both a planned and no-notice basis.

Time Out—Common assertive statement used to voice crewmember concern when safety may be jeopardized.

Training Mission—Mission executed at the unit level for the sole purpose of aircrew training for upgrade or proficiency. Does not include operational missions as defined in this AFI.

Unit Commanders—For purposes of this publication, unit commanders are operations group commanders or equivalent.

Zero Fuel Weight—Weight, expressed in pounds, of a loaded aircraft not including wing and body tank fuel. All weight in excess of the maximum zero fuel weight will consist of usable fuel.

ATTACHMENT 2**ITEMS FOR HOSTILE FIRE ENTRY AND EXIT CHECKLISTS**

A2.1. Hostile Fire Entry. Ensure the following checklist is completed no later than 30 minutes prior to entering the threat environment.

1. Crew briefing completed (P, CP). Review intentions (airspeeds and altitudes), threat locations, aircraft configuration, and approach requirements.
2. Survival equipment secured (P, CP). Ensure the following equipment is immediately available (as required):
 - 2.1. Flight gloves
 - 2.2. Flak vest/body armor
 - 2.3. Chemical defense ensemble
 - 2.4. Oxygen mask

WARNING

If protective equipment is to be worn, don at this time.

3. Internal and external lights as required. Set interior lighting to the minimum required (night only). Turn off all nonessential exterior lights.
4. IFF set (as required).
5. Nav and comm radios as required. Brief essential radios. To reduce emissions, turn off all non-essential radios and equipment.
6. Radar as required. If threat dictates or if not required for flight, turn off radar to reduce emissions.
7. Radio altimeter set.
8. Loose items secured. Ensure cabin is secure.
9. Observers in position. All aircrew members not performing crew duties will scan outside the aircraft for threats, as briefed by the aircraft commander.
10. Hostile fire entry checklist complete (P, CP).

A2.2. Hostile Fire Exit. This checklist returns the aircraft to normal cruise configuration upon departing the threat environment:

1. Observers cleared to reposition (P).
2. Battle damage assessment complete. If available, aircrew members will make a sweep of the aircraft looking for any damage.
3. Survival equipment as required (P, CP).

4. IFF set.
5. Nav and comm radios set.
6. Radar as required.
7. Internal and external lights set.
8. Hostile fire exit checklist complete (P, CP).

ATTACHMENT 3

IC 2001-1 TO AFI 11-2C-12, VOLUME 3, C-12 OPERATIONS PROCEDURES

20 DECEMBER 2001

OPR: HQ AETC/DOFV (Mr Richard Moken)

Certified by: HQ USAF/XOO (Maj Gen Walter E. Buchanan III)

SUMMARY OF REVISIONS

This revision incorporates interim change (IC) 2001-1, which changes the requirement for electric elevator trim (**Table 4.1.**); modifies the minimum runway length and width for takeoff and landing for specified DIA pilots (paragraphs **5.15.3.1.3.**, **5.15.3.2.**, and **5.15.3.3.3.**); deletes requirement to inform FAA when an official hazardous air traffic report is filed (paragraph **8.3.1.5.**, note); adds an exception for touch-and-go landings (paragraph **9.3.1.**); changes the title of **Chapter 23** to make it not applicable to DIA aircraft (**Chapter 23**); and updates office symbols. See the last attachment of the publication for the complete IC. A H indicates revision from the previous edition.

1.2.3. Unless otherwise directed, MAJCOM DOs have waiver authority for this publication according to AFD 11-2, *Aircraft Rules and Procedures*. If necessary, waiver authority may be delegated to local commanders for specific areas of this document in the appropriate MAJCOM supplement. Forward copies of waivers to this instruction to HQ AETC/DOF. **EXCEPTION:** Waiver authority for contingency missions is listed in the operation order (OPORD)/tasking order, etc., or the director, mobility forces (DIRMOB-FOR) (or equivalent) for the agency with command and control (C2) of the aircraft. Crewmembers may request additional information or confirmation from their home units or MAJCOM DO.

1.3.3. Send final copies to HQ USAF/XO, HQ AETC/DOF, parent MAJCOM, and the appropriate NAF.

1.4. Improvement Recommendations. Send comments and suggested improvements to this instruction on AF Form 847, **Recommendation for Change of Publication**, through user-MAJCOM channels to HQ AETC/DOF, 1 F Street, Suite 2, Randolph AFB TX 78150-4325, according to AFI 11-215, *Flight Manuals Program*, and MAJCOM supplement. HQ AETC/DOF will forward all AF Forms 847 to HQ USAF/XO for approval.

Table 4.1. Operational Equipment and Systems. (note)

I T E M	A	B
	Equipment and System	Exception
1	Pitch trim systems	Electric elevator trim not required for flight if manual elevator trim is fully operational. Autopilot will not be used without electric elevator trim.
2	Yaw damper systems	Not required for flights below 17,000 feet.
3	Stall warning system	
4	Fuel system components	
5	Ice and rain protection	Can operate in areas without known or forecast icing.
6	Pressurization components	One-time flight may be made below 10,000 to location where components may be fixed.
7	Anticollision and strobe lights	If one is inoperative, comply with AFI 11-202, volume 3.
8	Landing and taxi lights	Okay in daytime, en route okay if one is inoperative at nighttime.
9	Position lights	Okay in daytime.
10	Minimum communication radios required for flight	
11	Electrical generators and batteries	
12	Attitude gyros	Two attitude gyros must be working to continue en route.
13	Weather radar	Can operate in areas without known or forecast thunderstorms.
14	Transponder	Locals okay according to AFI 11-202, volume 3.
15	NAVAIDs appropriate for flight	En route okay if one is inoperative.
16	HSI or RMI	Daylight VFR flight may be made to a location where this can be fixed.
17	Magnetic compass	
18	RPM N1	
19	Crew oxygen system	
20	Oil pressure and temperature	

NOTE: Waiver authority is detailed in paragraph [4.3](#).

4.3. Waiver Protocol. Waiver to operate with degraded equipment or waiver to Air Force policy may be granted on a case-by-case basis and only in exceptional circumstances. Waiver authority is based on “who” has operational control and execution of the aircraft performing a specific mission. The aircraft commander determines the need for a waiver. If waiver process, authority, or protocol is in doubt--contact MAJCOM DOF.

5.1.1. Checklist Inserts. Units may supplement T.O. guidance with HQ AETC/DOF (C-12C/D) or PACAF/DOF (C-12F/J) approved checklist inserts. Place these inserts at the end of the appropriate checklist or in an inflight guide. Checklist inserts must have a point of contact (POC) and date. Crewmembers should contact the POC with any recommendations or changes. The POC will consolidate inputs and submit changes to MAJCOM DOF for approval. Local inflight guides and inserts not affecting T.O. guidance and procedures may be approved locally with copies sent to OGV.

5.15.3.1.3. Runway available will not be less than 4,000 feet. **EXCEPTIONS:** 517 AS-assigned C-12s will adhere to 4,500 feet minimum except at austere landing airfields where paragraphs **5.15.3.1.1.** and **5.15.3.1.2.** apply. DIA/DSCA austere airfield qualified pilots may use less than 4,000 feet of runway available if operationally necessary and with approval of Chief, Air Operations (HQ DIA/DHO-AO). Restrictions in paragraphs **5.15.3.1.1., 5.15.3.1.2., 5.15.3.2.,** and **5.15.3.3.** apply.

5.15.3.2. Runway Length for Takeoff. Do not attempt takeoff if runway available is less than critical field length, or accelerate stop distance is adjusted for RCR, whichever applies. **EXCEPTION:** For 517 AS site-qualified pilots and DIA/DSCA austere airfield qualified pilots, minimum runway length for takeoff is the computed takeoff distance (including climb to 50 feet) plus 500 feet. Site-qualified and DIA/DSCA austere airfield qualified pilots must be instructor-qualified or highly experienced MPs and approved by 517 AS/DO or HQ DIA/DHO-AO, as applicable.

Replace the EXCEPTION below paragraph 5.15.3.3.3. with the following:

EXCEPTION: For 517 AS site-qualified pilots and DIA/DSCA austere airfield qualified pilots, minimum landing distance will be computed at ground roll plus 500 feet. Plan to land in the first 500 feet of usable runway. Site-qualified and DIA/DSCA austere airfield qualified pilots must be instructor-qualified or highly experienced MPs and approved by 517 AS/DO or HQ DIA/DHO-AO, as applicable.

5.15.4. Minimum Runway Width. Minimum runway width is 60 feet. **EXCEPTION:** DIA/DSCA austere airfield qualified pilots may use runways less than 60 feet wide with HQ DIA/DHO-AO approval.

5.15.5. Airfield Suitability. Aircrews and planning agencies will contact HQ AMC/DOA (Airfield Analysis Branch) for all questions pertaining to airfield capability and will review the ASRR and supplemental theater information file (STIF) prior to all off-station operations. MAJCOM DOF is the waiver authority for all airfield restrictions. Waivers must be obtained prior to mission execution. Once a mission is executed, the AC is responsible for determining airfield suitability based upon operational need. See the summary of airfield restrictions for airfield certification requirements.

Delete the NOTE below paragraph 8.3.1.5. as follows:

NOTE: DELETE

9.3.1. Touch-and-go landings will only be accomplished under the supervision of an IP. **EXCEPTION:** Certified DIA/DSCA MPs may perform touch-and-go landings without IP supervision.

10.1.2. Send two copies of the supplement to the MAJCOM DOF.

17.2. Tactics Ground Training Program. The tactics ground training program will be a coordinated effort between the unit's IN, wing tactics, DOT, DOF, and DOX (or their equivalent) for continuity and to ensure mission tasking is addressed. The program is the responsibility of the squadron commander and is run by the unit tactics program manager.

Change the title of **Chapter 23** as follows:

**AIRCREW CHEMICAL OPERATIONS AND PROCEDURES (NA FOR AETC AND DIA/
DSCA)**

23.16. Forms Adopted. DD Forms 175, 175-1, 1252, 1351-2, 1351-2C, 1387-2, 1610, 1801, 1854, 1896, 1898, and 2131; AF Forms 8, 15, 70, 72, 315, 457, 523, 651, 664, 791, 847, 1297, 1381, 1631, 1994, and 3211; AFTO Forms 46, 781, 781A, and 781H; and Customs Form 7507.