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Flying Operations

C-32B OPERATIONS PROCEDURES

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This manual implements Air Force Policy Directive (AFPD) 11-2, *Aircrew Operations*, AFPD 11-4, *Aviation Service,* and is consistent with Air Force Instruction (AFI) 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure,* and Air Force Manual (AFMAN) 11-202, Vol 3, *Flight Operations.* It establishes procedures for the safe and successful operation of C-32B aircraft. This publication applies to the Regular Air Force, the Air Force Reserve, and the Air National Guard. It provides guidance and procedures for most circumstances, but should not replace sound judgment. This manual requires the collection and or maintenance of information protected by the Privacy Act of 1974 authorized by Title 10 United States Code, Section 9013, *Secretary of the Air Force*. The applicable System of Records Notice (SORN) F011 AF XO A, Aviation Resource Management System (ARMS) is available at: **http://dpclo.defense.gov/Privacy/SORNs.aspx**. Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with AFI 33-322, *Records Management and Information Governance Program*, and disposed of in accordance with the Air Force Records Disposition Schedule located in the Air Force Records Information Management System. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force (AF) Form 847, *Recommendation for Change of Publication*; route AF Forms 847 to AFSOC/A3VS for coordination. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See AFI 33-360, *Publications and Forms Management,* for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval

authority, or alternately, to the requestor's commander for non-tiered compliance items. This publication may be supplemented at any level, but all supplements must be routed to the OPR of this publication for coordination prior to certification and approval. 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. Compliance with the attachments in this publication is mandatory.

SUMMARY OF CHANGES

This document has been revised and must be reviewed. Major changes include: reorganization of **Chapter 6** to include required navigation performance (RNP) Authorization Required (AR) approaches, Category III Instrument Landing System (ILS) approaches, the migration of attachments and checklists to the local supplement to **Chapter 10**, elimination of redundant information/guidance already contained in parent regulations, and refinement of major command (MAJCOM) notification procedures. This publication has been converted from an AFI to an AFMAN.

Chapter 1

GENERAL INFORMATION

1.1. Overview. This manual provides procedures for C-32B operations and applies to C-32B aircrews and all management levels concerned with operation of the C-32B. 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. It is written for normal and contingency operations to reduce procedural changes at the onset of contingencies.

1.2. Key Definitions.

1.2.1. "Must," "Will," and "shall" indicate a mandatory requirement.

1.2.2. "Should" indicates a recommended procedure.

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

1.2.4. ***"WARNING"*** indicates operating procedures, techniques, etc., which could result in personal injury or loss of life if not carefully followed.

1.2.5. ***"CAUTION"*** indicates operating procedures, techniques, etc., which could result in damage to equipment if not carefully followed.

1.2.6. "**Note**" indicates operating procedures, techniques, etc., considered essential to emphasize.

1.2.7. See **Attachment 1** for additional terms, definitions, and references.

1.3. Deviations and Waivers. For those areas where this AFMAN repeats information contained in other source documents, waiver authority is in accordance with these source documents. When guidance in this AFMAN conflicts with basic source documents, those documents take precedence. Air Force Special Operations Command Aircrew Standardization and Evaluation (AFSOC/A3V) has responsibility for the overall administration of this manual. For the purposes of this manual, the National Guard Bureau (NGB) is considered a MAJCOM and has waiver authority as outlined in this section.

1.3.1. Waiver authority for directive guidance (will, shall, must, etc.) throughout this regulation is tiered in accordance with AFI 33-360. In accordance with AFMAN 11-202, Vol 3, a copy of any waiver requests should be submitted through MAJCOM Standardization and Evaluation (stan/eval) channels to the respective Director of Operations (A3).

1.3.2. Although this publication provides guidance for aircraft operations under most circumstances, it is not a substitute for sound judgment. When it is necessary to protect the crew and aircraft from a situation not covered by this manual and when immediate action is necessary, the Pilot In Command (PIC) has ultimate authority and responsibility for the course of action to be taken. Report deviations, without waiver, through channels to MAJCOM/A3 within 48 hours, followed by a written report, if requested. **(T-2)**.

1.3.3. Waiver requests use the following waiver protocol.

1.3.3.1. ANG-Directed Missions. The ANG Readiness Center maintains Command and Control (C2) and waiver authority for ANG crews performing any ANG-directed mission

prior to mobilization. T-1 and T-2 waiver authority for these missions is the NGB/A3 unless otherwise directed by this AFMAN. **(T-1)**.

1.3.3.2. AFSOC-Directed Missions. T-1 and T-2 waiver authority for ANG units flying AFSOC missions is the AFSOC/A3 unless otherwise directed by this AFMAN. **(T-1)**.

1.3.3.2.1. When the directed waiver authority is the Operations Group Commander (OG/CC) (or equivalent), AFSOC/A3V is the waiver authority. **(T-2)**.

1.3.3.2.2. AFSOC/A3 may delegate this authority to Commander Air Force Special Operations Forces (COMAFSOF) for operationally assigned Special Operations Forces (SOF) during deployed/contingency operations. If the AFSOC/A3 chooses to delegate waiver authority, it will be documented in writing and will specify which portions of this manual may be waived by the COMAFSOF. **(T-2)**.

1.3.3.2.3. When waiver authority is delegated, AFSOC/A3V will receive a copy of all approved waivers. **(T-2)**.

1.3.4. Use AF Form 679, *Air Force Publication Compliance Item Waiver Request/Approval,* to accomplish all waivers. **(T-1)**.

1.4. Supplements. OG/CC shall define local operating procedures in a supplement to **Chapter 10**. **(T-2)**. OG/CC shall obtain AFSOC/A3V approval prior to releasing the local supplement to **Chapter 10** of this AFMAN. **(T-2)**. Local supplements cannot be less restrictive than this AFMAN. **(T-2)**.

1.5. Roles and Responsibilities. Refer to AFMAN 11-202, Vol 3, and MAJCOM supplements for guidance on roles and responsibilities.

1.5.1. Major Command (MAJCOM). AFSOC, in coordination with United States Special Operations Command (USSOCOM) and the NGB, will provide headquarters support and oversight to all C-32B operations. MAJCOM Command and Control (MAJCOM/C2) will provide execution approval for all operational missions. **(T-2)**.

1.5.2. Wing Commander (WG/CC). The WG/CC is the approval authority for all off station training (OST). The WG/CC will facilitate the development of local agreements with host and/or co-located units to support the execution of C-32B operations. **(T-2)**.

1.5.3. Operations Group Commander. The OG/CC or designated representative is the execution authority for local training missions.

1.5.4. Unit Commander (CC)/Director of Operations (DO). Unit CC/DO will ensure operations are conducted in accordance with this manual. **(T-3)**. The unit CC/DO will initiate action to obtain necessary support from the appropriate office or headquarters as soon as the need for assistance becomes apparent as a result of operational requirements. **(T-3)**.

1.5.5. Pilot In Command (PIC). A PIC is designated for all flights on the flight authorizations in accordance with AFI 11-401, *Aviation Management,* and applicable MAJCOM supplements. PICs are:

1.5.5.1. In command of all persons aboard the aircraft. **(T-2)**.

1.5.5.2. Responsible for the welfare of the crew and passengers and the safe accomplishment of the mission. **(T-2)**.

1.5.5.3. Vested with the authority necessary to manage crew resources and accomplish the mission. **(T-2)**.

1.5.5.4. The final mission authority to make decisions not specifically assigned to higher authority or when operating outside of communication channels. **(T-2)**.

1.5.5.5. The final authority for requesting or accepting any waivers affecting the crew or mission. **(T-2)**.

1.5.5.6. Responsible for passing mission progress reports daily to C2 agencies. **(T-2)**. PICs must inform C2 agencies of factors that may impact mission accomplishment. **(T-2)**.

1.5.5.7. Responsible for interaction between aircrew members, mission support personnel and passengers. PICs will establish a point-of-contact (POC) with the appropriate C2 agency prior to entering crew rest. **(T-2)**.

1.5.6. Aircrew. The PIC is the focal point for interaction between aircrew, mission support personnel and passengers. It is imperative that the aircrew notify the PIC of all issues that may affect mission accomplishment. Any aircrew member is empowered to make decisions for safety at any time, and then notify the PIC of their actions. **(T-2)**.

1.5.7. Mission Commander (MC). Unit CC or above may direct a MC to act as the overall POC for the mission. The MC is the focal point for complex missions and multi-sortie events. MCs must inform the appropriate C2 of any factors that may affect mission accomplishment. **(T-2)**. The unit CC delegates primary responsibility for mission management to the MC. The PIC is the final authority for all operational matters pertaining to their aircraft, crew, and mission. The MC will not be a primary crew member; however, the MC will be a rated, field grade officer qualified in the type mission. **(T-3)**. The MC's responsibilities include but are not limited to:

1.5.7.1. Briefing crews on local operating procedures. **(T-2)**.

1.5.7.2. Coordinating with Air Traffic Control (ATC), passengers, and other agencies that may have an impact on the mission. **(T-2)**.

1.5.7.3. Ensuring personnel have ample and adequate billeting, eating, and transportation arrangements. **(T-2)**.

1.5.7.4. Ensuring maintenance personnel know of aircraft and fuel requirements. **(T-2)**.

1.5.7.5. Responsible for the timely reporting of aircraft movements. **(T-2)**.

Chapter 2

COMMAND AND CONTROL

2.1. General. The AFSOC C2 system is based on the principles of centralized monitoring through the AFSOC Operations Center (OC) and decentralized control and execution. The result is a C2 mechanism which keeps the AFSOC/CC informed of the current status of forces while enabling the wing or group commander to exercise control over day-to-day execution of operations.

2.2. Operational Control (OPCON). AFSOC is designated as the controlling agency for United States Special Operations Command (USSOCOM) assigned aircraft, while Theater Special Operations Commands have OPCON of theater-based assets. In practice, responsibility for planning and executing AFSOC missions is routinely delegated to the wing or group commander. The wing or group commander, in turn, exercises control of non-close-hold missions through the appropriate C2 agency. If assigned/aligned forces undergo a change in operational control (CHOP), responsibility for mission monitoring passes from the wing or group C2 facility to the gaining command. Changeover is accomplished in accordance with the pertinent operation plan (OPLAN), operation order (OPORD), or deployment order. **(T-2)**.

2.3. Specialized Training Missions. In addition to local training flights, the C-32B may regularly participate in specialized training missions. Operational C2 of these missions is normally accomplished by the 108th Operations Group with support from the AFSOC/OC and NGB, as required. Specialized training missions are as follows:

2.3.1. 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 OG/CC (or equivalent), with Wing/CC coordination, will approve STMs. **(T-2)**.

2.3.2. Off Station Training (OST). Prior to WG/CC approval, the unit will carefully review each proposed itinerary to ensure it justifies and represents the best avenue for meeting training requirements. After approval, the unit will forward a copy of the planned itinerary to the NGB/A3J (NGB Special Operations Division), AFSOC OC/SPDP (Operations Center/Strategic Plans Division Plans), and AFSOC/SA (Special Activities). **(T-3)**. This should be accomplished no later than 30 days prior to departure for training that remains overnight (RON) outside U.S. jurisdiction and no later than 7 days for training that remains within U.S. jurisdiction.

2.4. Mission Clearance Decision. The final decision to delay a mission may be made either by the agency with OPCON or the PIC when, in the opinion of either, conditions are not safe to start or continue a mission. Final responsibility for the safe conduct of the mission rests with the PIC. If the PIC refuses a mission, it will not depart until the conditions have been corrected or improved so that the mission can operate safely. Do not alert another PIC and crew. **(T-2)**.

2.4.1. Diverting or rerouting a mission is authorized by the commander with OPCON, except in an emergency or when required by en route or terminal weather conditions or facilities. In the event of an emergency or weather-related divert or reroute, the mission commander or PIC will notify the controlling authority as soon as possible. **(T-2)**.

2.4.2. The controlling authority directing the rerouting or diversion is responsible for ensuring destination requirements or facilities are adequate for the aircraft. **(T-2)**.

2.4.3. The PIC will notify the controlling authority of any aircraft or aircrew limitations that may preclude diversion or rerouting of the mission. **(T-2)**.

2.4.4. When directing an aircraft to an alternate airfield, the controlling authority will ensure the PIC is provided existing and forecast weather for the alternate. **(T-2)**. If the planned alternate is unsuitable upon arrival at destination, the controlling authority will advise the PIC of other suitable alternates. **(T-2)**.

2.5. Operational C2 Reporting. The PIC or Airborne Mission Systems Operator (AMSO) will report standard aircraft movement information (departure, arrival or diversion) to the appropriate C2 agencies. **(T-2)**. Communications Security (COMSEC) and OPORD requirements may dictate appropriate messaging methods. The PIC will establish a point of contact with the local C2 agency (Command Post, Air Mobility Command [AMC] station manager, U.S. Embassy, U.S. Consulate, or Fixed-Base Operator [FBO]) before entering crew rest. **(T-2)**. Immediately notify the appropriate C2 agencies of any unusual occurrence. **(T-2)**. This includes maintenance, aircraft malfunctions, security and operational concerns. Do not use local agencies if information is sensitive in nature. **(T-2)**.

Chapter 3

CREW COMPLEMENT AND MANAGEMENT

3.1. Aircrew Qualification. Primary crew members or those occupying a primary position during flight must be qualified or in training for qualification in that crew position. **(T-2)**. If non-current, or in training for a particular event, the crew member must be under the supervision of an instructor while accomplishing that event. **(T-2)**. Direct instructor supervision (at the controls) is necessary for critical phases of flight. **(T-2)**.

3.1.1. Mission ready crew members may perform primary crew duties on any sortie.

3.1.2. Mission capable crew members may perform primary duties on local training missions. For other missions, the unit CC will determine the readiness of each mission capable crew member to perform primary crew duties. **(T-2)**.

3.2. Pilots. Unit CC/Director of Operations (DO) shall designate a PIC and form aircrews with enough pilots to accomplish the mission. **(T-2)**. The PIC shall be qualified to perform all duties as a primary aircrew member. **(T-2)**. An instructor pilot (IP) must supervise non-current or unqualified pilots regaining currency or qualification. **(T-2)**. Comply with the requirements for pilots in dual controlled aircraft in AFI 11-401.

3.2.1. Missions with Passengers. Pilots must have a current and valid AF Form 8, *Certificate of Aircrew Certification*, for the C-32B to fly with passengers. **(T-1)**. One of the following is a requisite for pilots to fly passengers:

3.2.1.1. Two qualified and current pilots are at the controls. **(T-2)**.

3.2.1.2. A qualified pilot non-current less than 60 days for flying requirements, to include Air-to-Air Refueling (AAR), and an IP providing direct supervision. **Exception**: Pilots non-current in an overseas sortie must fly under the supervision of an aircraft commander current in overseas requirements. **(T-2)**.

3.2.1.3. A C-32B qualified general officer or senior staff member may occupy either pilot seat under direct IP supervision. Refer to AFMAN 11-2C-32B, Vol 1, *C-32B Aircrew Training,* for supervisory flying restrictions.

3.2.2. Qualification Training. With the exception of Aircraft Commander Certification Program (ACCP), pilot initial qualification, requalification, or upgrade training is not conducted on missions with passengers onboard (not applicable [N/A] to unit maintenance personnel or designated Mission Essential Personnel [MEP] approved by unit CC/DO). **(T-2)**.

3.3. Airborne Mission System Operators (AMSO) and Loadmasters (LM). AMSOs or LMs that are non-current or unqualified may perform duties in their primary crew position on any sortie when under direct supervision of a qualified instructor or flight examiner in their respective crew position. In this case, the student crew member and the instructor or flight examiner fulfills the requirement for one primary position as specified in **Table 3.1** of this AFMAN. **Exception:** AMSOs or LMs that are non-current for an overseas sortie must perform duties in their primary crew position under the supervision of a current aircrew member in the same crew position. **(T-2)**.

3.4. Crew Complement. Table 3.1 specifies minimum crew complement. **(T-2)**. If resources permit, the unit CC/DO may add crew members to enhance mission accomplishment or maximize training.

Table 3.1. Crew Complement.

TYPE CREW	Mission Pilot (MP)	First Pilot (FP)	LM	AMSO
BASIC AIRLAND	1	1	1(5)	1(7)
BASIC WITH AAR	1(1)	1(2)	1(5)	1(7)
AUGMENTED AIRLAND	1	2	2(6)	2
AUGMENTED WITH AAR	1(1)	2(3)	2(6)	2
ALERT	2(4)	1(2)	2	2

Notes (in parenthesis):

1. Minimum qualification of MP2 (Pilot Flying [PF] AAR qualified MP).
2. Minimum qualification of FP3 (Pilot Not Flying [PNF] AAR certified FP).
3. Minimum requirement of FP2 and FP3 (PF AAR qualified FP and PNF AAR certified FP).
4. Minimum of two qualified MP2s (PF AAR qualified aircraft commanders).
5. A LM is required when passengers, patients, or cargo are carried. **(T-2)**. Two LMs are required for more than 40 passengers. **(T-2)**. With unit CC/DO approval, a second AMSO may augment in place of the second LM.
6. Only one LM is required when no passengers, patients or cargo are carried.
7. An AMSO is not required for local area training missions but may be a primary crew member to accomplish appropriate training/currency requirements. A 2.5-hour equal time point (ETP) constitutes the local area for training.

Exception: Unit assigned military/civilian maintenance personnel do not require a LM.

3.5. Mission Essential Personnel (MEP). MEP status is granted in accordance with AFI 11-401. **Exception:** Unit CC may authorize MEP status to personnel assigned or attached to the unit.

3.5.1. MEP status will not be granted to personnel while on leave status. **(T-2)**.

3.5.2. All MEPs require Temporary Duty (TDY) travel orders to specify MEP authorized or a supporting letter from their commander authorizing MEP status. **(T-2)**. Unit commanders authorize MEP status for their aircrew by placing a remark on their TDY orders or a letter stating why the member is traveling as an MEP.

3.5.3. Unit members wanting to travel in MEP status on non-unit aircraft will have to coordinate with the PIC of that aircraft/mission. Members use their TDY orders (with MEP in the remarks) to show their aircrew member/travel status. **(T-2)**.

3.5.4. Logging of Flying Time. MEPs transported that are not C-32B qualified will be listed on the flight authorization in the remarks section (only); they will not be listed on the Air

Force Technical Order (AFTO) Form 781, *ARMS Aircrew/Mission Flight Data Document*. C-32B aircrew members who are current and qualified on the mission may be placed in the aircrew section of the flight authorization. Flight examiners, Higher Headquarters (HHQ) personnel and flight surgeons log flying time in accordance with AFI 11-401.

3.5.5. Briefings. The PIC or representative will brief all MEPs on emergency procedures (EP) and egress. **(T-2)**.

3.5.6. Pilots (including non-current or unqualified pilots) who are authorized to obtain and maintain qualification in the C-32B may occupy a pilot's seat for purposes of conducting training or accomplishing mission requirements when MEPs are on board the aircraft. **(T-2)**.

3.6. Interfly. Interfly is a temporary arrangement between OG/CCs (or equivalent) to permit current and qualified aircrew members from one unit to perform primary aircrew duties on another unit's aircraft. NGB/A3 must approve interfly with Regular Air Force crews in accordance with AFI 11-401. Participating aircrews shall use guidelines established by the MAJCOM or as specified in the OPLAN or CONOPS. Conduct interfly operations as follows:

3.6.1. OG/CC (or equivalent) may authorize interfly of aircrews and/or aircraft. Normally interfly should be limited to specific operations, exercises, or special circumstances but may be used to relieve short-term qualified manpower shortfalls. Long-term interfly arrangements may be found in command-to-command memorandums of agreement or letters of agreement.

3.6.1.1. AFSOC staff personnel or inspection teams are approved for interfly.

3.6.1.2. 645th Aeronautical Systems Squadron personnel who support depot level maintenance are approved for interfly when required.

3.6.2. Interfly is authorized under the following conditions:

3.6.2.1. Aircraft ownership is not transferred. **(T-2)**.

3.6.2.2. Aircrew shall be current and qualified in the Mission Design Series as well as unique systems or configuration required to fly the aircraft/mission. **(T-2)**.

3.6.2.3. Aircrew members will follow operational procedures established by this regulation for operating the C-32B. **(T-1)** The MC or PIC will brief MAJCOM specific items. **(T-2)**.

3.6.2.4. Initiate interfly approval request by the unit or agency requesting the agreement by memo or message format to the OG/CC (or equivalent) controlling the resource. Each OG/CC (or equivalent) with resources (personnel or aircraft) and MAJCOM, if appropriate, must concur with the intention to interfly. **(T-2)**.

3.6.2.5. Request must include details of the deployment or mission including aircrew names, duration or special circumstances. **(T-2)**.

3.7. Medical. Aircrew members must maintain a medical clearance from the flight surgeon to perform in-flight duties. **(T-1)**. Medical or dental treatment obtained from any source must be cleared by a flight surgeon prior to reporting for flight duty. **(T-1)**. Refer to AFMAN 11-202, Vol 3, and MAJCOM supplements for medical limitations.

3.8. Crew Rest. In addition to AFMAN 11-202, Vol 3, and applicable MAJCOM supplements, comply with the following guidance:

3.8.1. Unit CC will ensure crew members receive 12 hours of crew rest. **(T-3)**.

3.8.2. Aircrew members who receive 12 hours of crew rest, without prior notification, may assume alert or perform a basic flight duty period (FDP) that begins and ends at home station. This requires the aircrew member's concurrence and must be approved by the unit CC/DO. **(T-3)**.

3.8.3. Aircrew members departing on missions scheduled to recover away from home station should be notified 24 hours before reporting for a mission. The first 12 hours are not considered crew rest. During these first 12 hours, a crew member may perform limited non-flying duties. The second 12-hour period is inviolate. For short-notice mission tasking or when a scheduled crew member is unable to fly, crew members may be given less than 24 hours of notification with unit CC/DO approval; however, they will not be given less than 12 hours. For missions recovering at home station, crew members will enter crew rest 12 hours before reporting for the mission. **(T-3)**.

3.8.4. Standby crews will be given 12 hours crew rest prior to the earliest anticipated show time. **(T-2)**.

3.8.5. En route Crew Rest and Ground Time.

3.8.5.1. Crew rest normally begins 45 minutes after final 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.

3.8.5.2. If any primary aircrew member must stay at the aircraft past the 45-minute period, crew rest does not begin until post-flight duties are completed. **(T-2)**.

3.8.5.3. Minimum crew rest period is 12 hours. Crew rest is compulsory for aircrew members prior to performing any duties involving aircraft operations and is a minimum of 12 non-duty hours before the FDP begins. **(T-2)**. Crew rest is free time and includes time for meals, transportation, and rest. This time must include an opportunity for at least 8 hours of uninterrupted sleep. **(T-2)**. Crew rest period cannot begin until after the completion of official duties. Any crew rest interruptions must be made under the most exceptional circumstances. **Note:** Refer to AFMAN 11-202, Vol 3, and MAJCOM supplements.

3.8.5.4. A minimum 17-hour ground time between engine shutdown and subsequent mission takeoff should normally be planned unless extended postflight duties are anticipated. **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.

3.8.5.5. The PIC may modify normal ground time:

3.8.5.5.1. In the interest of safety.

3.8.5.5.2. 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 particular to the mission. The controlling C2 agency will not ask the PIC to accept less than a normal ground time except in the interest of aircrew/aircraft safety or unusual mission requirements during contingency operations. **(T-3)**.

3.8.6. Maintenance personnel are responsible to the PIC. The PIC will determine how long maintenance personnel can safely perform aircraft recovery actions. Maintenance personnel must have the opportunity to sleep 8 hours of each 24-hour period. **(T-3)**.

3.8.7. Post-mission crew rest (PMCR) begins upon the final return of an individual to home station and runs continuously until completed. PMCR must be completed before starting the 12-hour pre-departure crew rest period for a subsequent mission. A crew member cannot be required to get immunizations, engage in ground training, perform standby or unit duties, or perform any other activity that would encroach upon crew rest. Waiver authority for post-mission crew rest is the OG/CC. Waiver requests for PMCR are considered on a case-by-case basis only with the concurrence of the individual crew member. For missions exceeding 16 hours off station, 1 hour of post-mission crew rest will be provided for every 3 hours away from home station not to exceed 96 hours. **(T-2)**. This is not applicable for missions scheduled to transit home station as part of a scheduled continuing mission.

3.9. Flight Duty Period (FDP). FDP starts when an aircrew reports for a mission, briefing, or other official duty (show time) and ends when engines are shut down at the end of the mission, mission leg, or a series of missions. Show time for home station departures is established in the local supplement to **Chapter 10** of this AFMAN. For missions originating away from home station, FDP begins when transportation departs lodging, or as established by the PIC. When crewmembers perform other official duties prior to fight related duties, FDP begins when reporting for the earlier duties. **(T-3)**.

3.9.1. Maximum FDP.

3.9.1.1. The basic FDP is 16 hours providing no pilot proficiency training or functional check flights (FCF) are accomplished after 12 hours and no AAR is accomplished after 14 hours. **Exception:** If the autopilot is not operational or its use is denied for more than 4 hours (the use of altitude hold does not constitute use of the autopilot) the FDP will be 12 hours. If the autopilot fails after departure, continue to next scheduled stop and then comply with the basic FDP limitations. **(T-3)**.

3.9.1.2. The augmented FDP is 24 hours providing no pilot proficiency training or FCFs are accomplished after 14 hours and no AAR is accomplished after 18 hours. **Exception:** If the autopilot is not operational or its use is denied for more than 8 hours (the use of altitude hold does not constitute use of the autopilot) the FDP will be 16 hours. **(T-3)**.

3.9.1.3. When official post-flight duties are anticipated to exceed 2 hours, consideration should be given to reducing FDP to ensure fatigue does not affect the safe completion of those duties.

3.9.1.4. Alert/Standby Crews. For alert crews launched on an as-soon-as-possible basis, FDP begins when the crew is alerted for the mission. For alert crews launched on other than an as-soon-as-possible basis, FDP begins when the crew reports for duty. **(T-3)**.

3.9.2. Planning FDP. All missions will be planned within established FDP limits. Pursue FDP waivers in accordance with AFMAN 11-202, Vol 3, and MAJCOM supplements depending on mission tasking. All FDP waivers require the PIC's concurrence. **(T-3)**.

3.9.3. FDP length will be based on the mission to be performed and established by the PIC or the controlling C2 agency prior to the aircrew entering crew rest. Once established, a basic FDP will not be extended to an augmented FDP, regardless of crew composition. **(T-3)**.

3.9.4. Deadhead time is defined by AFMAN 11-202, Vol 3. Deadhead time before performing primary crew duties is considered FDP. Crewmembers may perform primary crew duties after deadheading if their FDP will not exceed the limitations specified in AFMAN 11-202, Vol 3, Table 3.1. Crewmembers may deadhead following primary crew duties. If deadheading following primary crew duties, the FDP will not exceed 24 hours unless de-positioning to RON/crew rest location or home station. If de-positioning to RON/crew rest location or home station and deadheading time will exceed 24 hours, unit CC/DO approval is required. All other deadhead extensions require OG/CC (or equivalent) approval. **(T-3)**. **Note:** The intent is to allow the unit to complete time critical missions where available aircrew or aircraft are limited. Missions will not be routinely planned to utilize this exception. **(T-3)**.

3.9.5. FDP for flight examiners administering flight evaluations and not occupying a primary crew position will not exceed the augmented FDP. **(T-3)**.

3.9.6. If the aircraft is not capable of being airborne within four hours of scheduled departure time, the aircrew will be returned to crew rest or released from the flight. The unit CC/DO may grant exceptions at the request of the PIC. This paragraph applies to all missions, including unit-training missions. **(T-3)**.

3.10. Crew Changes. Crew changes should not be made immediately prior to performing critical phases of flight for non-training flights. Normally allow at least 30 minutes for a new crew member to acclimate prior to initiating the checklist for an event.

3.11. Alert Procedures. Alert duty is defined as any period during which an alert crew is on call to perform a specific mission. The unit CC/DO will determine alert procedures required for missions. Publish unit alerting procedures in the local supplement to **Chapter 10** of this AFMAN. **Note**: Alert restrictions contained in the AFSOC Supplement to AFMAN 11-202, Vol 3, are not applicable to 150th Special Operations Squadron crew members.

3.11.1. In accordance with AFMAN 11-202, Vol 3, do not give crew members less than 12 hours crew rest. **Exception:** See **paragraph 3.8.2** **(T-2)**. Pre-mission crew rest is waived for flight surgeons or medical technicians who are on alert duty for urgent aero-medical evacuation missions. **(T-2)**.

3.11.2. Alert personnel are those required to be on duty for the prompt execution of the mission. Alert crews will be readily available in a location that allows the crew to meet the required time to launch from notification. Publish flight authorizations for the alert crew to cover the entire alert tour. **(T-2)**.

3.11.3. The alert duty period will begin at a scheduled time that is determined by the unit CC/DO. The unit CC/DO will determine the length of the alert. **Exception**: Once a mission has executed, exercise or real world, there is no limitation on the numbers of alert duty days.

The crew should be tied to the mission until its completion. Changing crewmembers during mission execution will be at the discretion of the unit CC/DO.

3.11.4. Alert Restrictions.

3.11.4.1. Crews may complete initial alert activities (e.g., briefings, preflight) without starting their alert FDP.

3.11.4.2. Alert crew members may be scheduled for mission or office related duties at the discretion of the alert PIC or unit CC/DO without starting their alert FDP.

3.11.4.3. Alert crew members will not accomplish items that may result in a Duties Not Including Flying or grounding status. **(T-2)**.

3.11.4.4. Limit alert duty period to a maximum of 6 hours and should only be conducted during normal duty hours. The alert duty period starts when a crew member on alert shows for any flight and/or office related duties and ends when the flight and/or office related duties are complete.

3.11.4.4.1. Flying the alert crew is authorized with the following restrictions:

3.11.4.4.1.1. Local proficiency flights to include AAR training during daylight hours (night proficiency flights to include AAR training are prohibited). **(T-2)**.

3.11.4.4.1.2. Relocation of the alert aircraft should take place during daylight hours but may take place after daylight hours with approval from unit CC/DO.

3.11.4.4.1.3. Limit flying to a maximum of three sorties during a seven-day alert tour. **(T-3)**. **Exception:** The unit CC/DO may approve additional sorties for required alert aircraft relocations (weather, airfield closure, etc.).

3.11.4.4.2. FDP for HHQ directed alert missions will begin when the crew is alerted for the HHQ directed mission. **(T-2)**.

3.11.5. If the alert crew is launched and returns with FDP remaining, they may be launched again within the constraints of that crew day. Numerous circumstances may arise that affect the decision to replace the alert crew and each incident must be evaluated on an individual basis. The unit CC/DO may reconstitute a new alert crew when the primary alert crew is launched. The new alert crew will be placed into crew rest and will not perform any duties for the first 12 hours. If mission objectives warrant, the new alert crew may be launched with less than 12 hours of pre-alert crew rest. OG/CC (or equivalent) approval is required. **(T-3)**.

3.11.6. Post alert crew rest is not required for alert repositioning sorties (weather, airfield closure, etc.) accomplished within a 6-hour alert FDP. **(T-3)**.

Chapter 4

COMMAND OPERATING GUIDELINES

4.1. Objectives. A fully mission-capable aircraft is the ultimate objective of the logistics effort. The final responsibility regarding equipment required for a mission rests with the PIC. If one PIC accepts an aircraft to operate a mission or mission segment without an item or system, this acceptance does not commit that PIC, or a different PIC, to subsequent operations with the same item or system inoperative. **(T-2)**.

4.2. Minimum Equipment Listing (MEL) Guidance. The MEL is an operating guideline that lists the equipment and systems considered essential for routine operations. Those items that state a minimum requirement and/or have no listed exceptions are grounding items. The PIC is the approval authority for operations with degraded equipment within the guidelines of the MEL. Operating outside of the MEL guidelines requires OG/CC (or equivalent) approval. **Exception:** For MEL items that permit flight but have exceeded the MEL repair interval or have extended range (ER) restrictions the waiver authority is the unit CC/DO. **(T-3)**. When the MEL repair interval is extended, Air Force Special Operations Command Special Aircrew Standardization and Evaluation (AFSOC/A3VS) will be notified. **(T-2)**.

4.2.1. For operational missions where communications with the appropriate C2 is not available, the PIC is the approving authority for operating outside of the MEL guidelines and needs no further approval. **(T-2)**.

4.2.2. The PIC is responsible for exercising the necessary judgment to ensure aircraft are not 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 aircraft operations for an indefinite period with systems/subsystems inoperative.

4.3. Operating Guidelines. Refer to MEL.

Chapter 5

AIRLAND OPERATIONAL PROCEDURES

5.1. Checklists. C-32B normal checklists are designed as clean-up checklists, and items may be accomplished prior to the checklist being read. A checklist is not complete until all items have been accomplished. Momentary hesitations for coordination items, ATC interruptions, and deviations specified in the flight manual, etc., are authorized.

5.1.1. Checklist Inserts. Approved checklist inserts may be placed in an in-flight guide or at the end of the checklist. All proposed checklist inserts must have a POC. **(T-2)**. If any crew member has recommendations or changes, they should contact the POC. Submit changes to operations manuals/checklists through AFSOC/A3VS for approval. **(T-2)**.

5.1.2. Local in-flight guides and inserts not affecting technical order (T.O.) procedures and regulatory guidance may be locally approved by unit stan/eval. **Note:** Commercial manuals are considered T.O. guidance. Additionally, Quick Reference/Recall Hard Cards are authorized. **(T-2)**.

5.2. Duty Station. A qualified pilot will be in control of the aircraft at all times during flight. **Exception:** Under direct IP supervision (at a set of flight controls), unqualified pilots in qualification training and qualified senior staff officers/supervisory flying pilots may occupy a pilot seat. Refer to AFMAN 11-2C-32B, Vol 1, for senior officer/supervisory flying restrictions. **(T-2)**.

5.2.1. Pilots will occupy their assigned stations from takeoff to landing except when duties or physiological needs require absence from their stations. Primary crew members will notify the PIC prior to departing and when returning to their assigned duty station. **(T-2)**.

5.2.2. Use of the cabin jump seats by passengers is prohibited for takeoff and landing. **(T-1)**.

5.3. Flight Deck Entry. PICs may authorize passengers and observers access to the flight deck during all phases of flight. In all cases, sufficient oxygen sources must be available to meet the requirements of AFMAN 11-202, Vol 3. Passengers and observers will not be permitted access to the pilot or copilot position regardless of its availability. **Note**: Passengers occupying the flight deck jump seats are there for visitation and familiarization. These seats will not be used as primary seating except for unit aircrew and unit maintenance personnel. **(T-2)**.

5.4. Takeoff and Landing Guidance. A qualified aircraft commander or higher will occupy either the left or right seat during all takeoffs and landings. **Note:** The designated PIC is not required to occupy a primary position, but will retain overall authority for conduct of the mission. **(T-2)**. With no Instructor/Evaluator Pilot on board, the PIC will accomplish all takeoffs, approaches and landings when:

5.4.1. An actual emergency conditions exist, unless specific conditions prevent compliance. **(T-2)**.

5.4.2. Conditions require an ILS Category II/III or an ILS Precision Runway Monitor (PRM) approach. **(T-2)**.

5.4.3. Hostile conditions exist. **(T-2)**.

5.4.4. Operating to or from airfields requiring MAJCOM, OG/CC (or equivalent) or airfield related waivers. **Note:** A qualified MP will land, taxi, and takeoff from the left seat at airfields requiring waivers for taxiway or runway dimensions. **(T-2)**.

5.5. Landing Gear and Flap Operation In-Flight.

5.5.1. The landing gear will normally be operated by the PNF. Actuate the landing gear only after commanded by the PF. Prior to actuation of the landing gear, the PNF will acknowledge the command by repeating it. **(T-2)**.

5.5.2. The flaps will normally be operated by the PNF. Actuate the flaps only after command by the PF. Prior to actuation of the flaps; the PNF will acknowledge the command by repeating it. **(T-2)**.

5.6. Use of Outside Observers. When available, use a crew member to assist in outside clearing during arrivals, departures and taxi operations.

5.7. Seat Belts.

5.7.1. Crew members occupying primary crew positions will have seat belts fastened at all times in-flight, unless crew duties dictate otherwise. **(T-2)**.

5.7.2. All crew members will be seated with seat belts and shoulder harnesses (if applicable) fastened during takeoff, landing, and AAR operations, unless crew duties dictate otherwise. Crew members performing instructor or flight examiner duties are exempt from seat belt requirements unless they occupy a primary crew station; however, a seat with an operable seat belt will be available. **(T-2)**.

5.7.3. All occupants will have a designated seat with a seat belt. Use of seat belts will be as directed by the PIC and the flight manual. **Exception:** See **paragraph 5.26** **(T-2)**.

5.8. Aircraft Lighting. Aircraft lighting will be in accordance with AFMAN 11-202, Vol 3, MAJCOM supplements, host-nation rules, theater special instructions (SPINS), and this AFMAN. In the case of conflicting guidance, the PIC will determine the most appropriate lighting configuration for mission accomplishment. **(T-2)**.

5.8.1. Use taxi lights (as installed) during all taxi operations. Use landing lights/runway turnoff lights at night in unlighted areas. **(T-2)**.

5.8.2. Anti-collision lights must be on from takeoff to landing. Refer to the aircraft MEL for operations with inoperative anti-collision lights. **(T-0)**.

5.9. Portable Electronic Devices. Comply with AFMAN 11-202, Vol 3, as supplemented. **(T-1)**.

5.10. Tobacco Use. Tobacco use is prohibited on board Department of Defense (DoD) aircraft per AFI 48-104, *Tobacco Free Living.* **(T-2)**.

5.11. Advisory Calls. Mandatory advisory calls are in accordance with the Flight Crew Operations Manual (FCOM) Volume 1 and the Quick Reference Handbook (QRH). **(T-2)**.

5.12. Communications Guidance.

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 Mean Sea Level (MSL) (except cruise). **(T-2)**.

5.12.2. Communications During Takeoff. If an unsafe condition occurs during takeoff and before the computed V1 speed is reached, either pilot observing the condition will give a brief description of the problem. The PIC (or pilot designated by the PIC) will then make the decision to reject or continue the takeoff. If a reject decision is made, the PIC or designee will state "REJECT" and the PF will discontinue the takeoff in accordance with the C-32B flight manuals. **(T-1)**. **Note:** PIC expectations in the event of a rejected take-off (RTO) should be covered during the "Takeoff Briefing."

5.12.3. Aircraft Interphone. Pilots and AMSOs should monitor aircraft interphone at all times. Loadmasters are required to monitor interphone during AAR events or as directed by the PIC. Primary crew members will notify the PIC before going off headset and advise when back on headset. **(T-2)**.

5.12.4. All interphone and radio transmissions are recorded on the cockpit voice recorder (CVR) when operational. Ensure the CVR tape is erased after each flight if classified material was discussed. **(T-2)**.

5.12.5. Do not discuss classified information on the interphone during radio transmissions. **(T-2)**.

5.12.6. Passengers will monitor interphone or radio transmissions only when specifically approved by the PIC. The PIC/AMSO will brief communications guidance to these personnel prior to flight. The PIC/AMSO must ensure no one monitors classified information they are not cleared for, or transmits classified information via non-secure communications. **(T-2)**.

5.12.7. Command Radios. The PNF normally makes all radio calls. The pilot operating the command radios will inform the crew when the primary radio is changed. **(T-2)**.

5.12.8. A flight deck crew member will monitor guard regardless of primary radio. **Exception:** AAR radio usage will be as briefed and in accordance with **Chapter 8** of this AFMAN. **(T-2)**.

5.12.9. A pilot will inform the crew when the aircraft is in any abnormal configuration (for example, one engine inoperative). **(T-2)**.

5.12.10. One pilot will acknowledge all ATC clearances. The AMSO, when available, will monitor the read-back. This includes all transmissions pertaining to ATC instructions involving departure, en route, and approach procedures. **(T-2)**.

5.12.11. The AMSO will be utilized to provide communications with base operations, fixed based operators, and other ground personnel. **(T-2)**.

5.12.12. The PNF will notify the PF when altitude deviates 100 feet from the desired altitude if no attempt is being made to correct the deviation. Any crew member seeing a variation of more than 200 feet from planned altitude or potential terrain or obstruction clearance problems will notify the PF immediately. **(T-2)**.

5.12.13. Crew Resource Management (CRM) Assertive Statement “Time Out."

5.12.13.1. "Time Out" is the common assertive statement for use by all crew members. The use of "Time Out" will:

5.12.13.1.1. Provide a clear warning sign of a deviation or loss of situational awareness. **(T-2)**.

5.12.13.1.2. Provide an opportunity to break the error chain before a mishap occurs. **(T-2)**.

5.12.13.1.3. Notify all crew members that someone sees the aircraft or crew departing from established guidelines, the briefed scenario, or that someone is simply uncomfortable with the developing conditions. **(T-2)**.

5.12.13.2. As soon as possible after a "Time Out" has been called, the aircrew will take the following actions:

5.12.13.2.1. Safety permitting, stabilize the aircraft. **(T-2)**.

5.12.13.2.2. The initiating crew member will voice his or her concerns to the crew. **(T-2)**.

5.12.13.2.3. The PIC will provide all other crew members with the opportunity to voice inputs relative to the stated concerns. **(T-2)**.

5.12.13.2.4. After considering all inputs, the PIC will direct the aircrew to continue the current course of action or direct a new course of action. **Note:** The PIC is the final decision authority. **(T-2)**.

5.13. Transportation of Military Working Dogs. Transportation of military working dogs on the aircraft is permitted, provided they are accompanied by a handler. The aircrew will ensure compliance with **paragraph 6.3.6** Other pets or animals are normally prohibited, but may be moved according to DoDI 4515.13, *Air Transportation Eligibility*. **(T-3)**.

5.14. Alcoholic Beverages. MAJCOM/A3 may authorize the dispensing of alcoholic beverages to passengers.

5.15. Runway, Taxiway and Airfield Requirements. Aircrews will adhere to the general runway and taxiway dimension requirements found in **Table 5.1** and **Table 5.2** **(T-2)**.

5.15.1. Normal Operations (takeoff). Boeing Onboard Performance Tool (OPT) or MAJCOM approved, computer generated airfield analysis will be used to the maximum extent possible for determining takeoff data. If airfield analysis is not available, use the Flight Planning and Performance Manual (FPPM) or the QRH to determine the Aircraft Flight Manuals (AFM) runway length required for takeoff. **(T-2)**. Do not attempt takeoff if the runway available is less than the greater value of the AFM required runway length or 5,000 feet. **(T-2)**.

5.15.2. Normal Operations (landing). OPT generated landing data or the FPPM/QRH will be used to determine the AFM runway length required for landing. When using un-factored data, a 15% safety margin will be added (N/A for emergency aircraft). **(T-2)**. Do not attempt landing if the runway available is less than the greater value of AFM runway length required for landing plus 15% (for the runway conditions that exist or are anticipated at the estimated

time of arrival [ETA]) or 5,000 feet. **(T-3)**. **Note:** The "Normal Configuration Landing Distance" chart from the FPPM/QRH should be used to determine the AFM runway length required (N/A for computer generated data).

Table 5.1. Minimum Runway Length.

Minimum Runway Length (Normal)	Minimum Runway Length (Touch and Go)
5,000 Feet **(T-3)**	7,000 Feet **(T-3)**
1,525 Meters **(T-3)**	2,134 Meters **(T-3)**

5.15.3. Waiver Authority. If operationally necessary, the OG/CC (or equivalent) may approve use of runways shorter than 5,000 feet, but never less than AFM takeoff and landing distance. Approval requires careful evaluation of aircraft and crew capabilities. If operations are approved, a current and qualified PIC, instructor or flight examiner will make the takeoff and/or landing from the left seat. **(T-3)**.

5.15.4. If takeoff/departure end overruns are available (stressed or authorized for normal operations), they may be used to increase the runway available for takeoff/landing if needed.

Table 5.2. Minimum Runway and Taxiway Width (see notes for tiering).

Minimum Runway Width (Normal)	Minimum Runway Width (1)	Minimum Taxiway Width (Normal)	Minimum Taxiway Width (2, 3, 4)
148 Feet	98 Feet	75 Feet	49 Feet
45 Meters	30 Meters	23 Meters	15 Meters

Notes:
1. Use of runways between 148 and 98 feet wide requires OG/CC (or equivalent) waiver. Runway width may not be waived to less than 98 feet (30 meters). **(T-3)**. For runways less than 148 feet, consider implementing more restrictive wind restrictions than those outlined in **Table 5.3**.
2. Taxiways less than 75 feet (23 meters) wide should be given additional consideration in pre-mission planning ORM and must be covered in the aircrew briefing prior to arrival. **(T-3)**.
3. Use of taxiways less than 60 feet wide requires notification to the OG/CC (or equivalent) prior to arrival at the airfield. If prior notification is not possible, notify as soon as practical. Taxiway width will not be less than 49 feet (15 meters). **(T-3)**.
4. C-32B aircraft require fillets when turning from one 50-foot-wide taxiway to another 50-foot-wide taxiway. Turning from one 50 foot to another 50 foot without fillets is prohibited due to the probability of the aircraft departing the paved surface. **(T-2)**.

5.15.5. Takeoff or Landing Over Raised Arresting Cables. The following guidance covers Barrier Arresting Kit (BAK) 9, 12, and 13 (Navy designation E-28) arresting cables, it does not include BAK 14 recessed arresting cables:

5.15.5.1. Do not land on a raised arresting cable. Damage may occur to the cable or aircraft. **(T-2)**.

5.15.5.2. If the aircraft lands before a raised arresting cable and rolls over it, the flight crew should contact the tower to have the cable inspected (this does not include rolling over a cable at normal taxi speeds).

5.15.5.3. Do not takeoff or land over a raised arresting cable that has been reported as slack, loose, or improperly rigged by Notice to Airmen (NOTAM), Automated Terminal Information Service (ATIS), ATC, etc. **(T-2)**.

5.15.6. Crash, Fire, Rescue (CFR) Requirements. At USAF active flying bases, local base instructions determine CFR requirements. At other locations, if local services are not available or practical, the OG/CC (or equivalent) may authorize operations without CFR.

5.16. Wind Restrictions. Airfields will be considered unusable for takeoff and landing when crosswinds (including gusts) are greater than those established in **Table 5.3** **(T-3)**. These limitations are valid for all engines operating and one engine inoperative (OEI) conditions.

Table 5.3. Wind Restrictions.

Flight Phase	Runway Condition	nd Component (knots)
Takeoff	Dry	40
	Wet	25
	Standing Water/Slush	15
	Snow - No Melting*	20
	Ice - No Melting*	15
Landing	Dry	28
	Wet	28
	Standing Water/Slush	20
	Snow - No Melting *	28
	Ice - No Melting*	17
* Takeoff or landing on untreated snow and ice should only be attempted when no melting is present.		

Note: Reduce crosswind guidelines by 5 knots on wet or contaminated runways whenever asymmetric reverse thrust is used.

Note: When the reported depth of contamination is less than .12 inches (3mm), consider the runway wet for all takeoff/landing considerations.

5.16.1. Maximum wind any direction is 50 knots for takeoff and landing. **(T-3)**.

5.16.2. Waiver Authority. If operationally necessary, the OG/CC (or equivalent) may approve operations with winds that exceed **Table 5.3** Approval requires careful evaluation of aircraft and crew capabilities. If operations are approved, a current and qualified PIC, instructor or flight examiner will make the takeoff and/or landing from the left seat. **(T-3)**.

5.16.3. For other wind restrictions, refer to the limitations section of the Flight Crew Operations Manual, Volume 1 and **Chapter 9** of this AFMAN. **(T-2)**.

5.17. Runway Condition Reading (RCR).

5.17.1. During landing on wet runways or runways contaminated with ice, snow, slush or standing water, crews will use pilot reports and the physical description of the runway

surface as the primary means to determine which category of "good", "medium", or "poor" is appropriate when calculating the runway distance required for landing. **(T-3)**.

5.17.2. RCR provides additional information and should be considered by the aircrew prior to determining runway suitability for landing. However, when using RCR, crews should keep in mind that there is no direct correlation between RCR and the descriptive terms "good", "medium", "poor", and "nil" used in pilot braking action reports outlined in the *Flight Information Handbook* (FIH). Chapter 6 of the Flight Crew Training Manual (FCTM) provides additional guidance on using RCR to evaluate braking action.

5.17.3. The information in **Table 5.4** is provided to assist crews in making the most informed decision when using RCR.

Table 5.4. Braking Action.

Braking Action to be used from the QRH	Reported RCR	Reported Runway Surface Condition (RSC)	ted Braking Action
Good	18-23	Wet	Good
Medium	12-17	Standing Water/Snow	Fair
Poor	6-11	Icy	Poor

5.17.3.1. When the RCR is reported as 5 or less or the braking action is reported as "Nil", landing is not recommended.

5.17.3.2. When operating on runways partially covered with snow or ice, computations should be based on the reported RCR for the cleared portion of the runway. To ensure proper takeoff performance in the event of an engine failure, the runway should be cleared to allow for maximum VMCG offset (C-32B is 25 feet plus main gear offset). If the required VMCG offset either side of centerline is not cleared to the reported RCR, then the RCR of the unclear portion, up to the required offset, will be used for takeoff data computations. **Note:** RCR Reporting. T.O. 33-1-23, *Equipment and Procedures for Obtaining Runway Condition Readings*, directs that RCR information be obtained only within 20 feet of the runway centerline. Only the average RCR is reported. Many portions of the runway (laterally and longitudinally) may have a significantly lower RCR than the value reported.

5.17.4. If pilot braking action reports, RCR or RSC are not available, flight crews are to consider a runway surface as wet when there is sufficient water on the surface to cause reflective glare or when rain is falling. For runways contaminated by slush, standing water, snow or ice, the PIC will determine the anticipated braking action. **(T-3)**.

5.18. Aircraft Taxi Obstruction Clearance Criteria and Foreign Object Damage (FOD) Avoidance.

5.18.1. Without wing walkers, avoid taxi obstructions by at least 25 feet. **(T-2)**. With wing walkers, avoid taxi obstructions by at least 10 feet. **Exception:** Wing walkers are not required at home station when aircraft are taxing in accordance with restrictions outline in AFMAN 11-218, *Aircraft Operations and Movement on the Ground*.

5.18.2. When taxi clearance is doubtful, use one or more wing walkers. **(T-2)**. If wing walkers are unavailable, de-plane one or more crew members to maintain obstruction clearance and provide marshalling. Use AFMAN 11-218 signals. The PIC should use marshallers, wing walkers, deplaned crew members, or a crew member positioned at a door or window to act as an observer while maneuvering on narrow taxiways. During night taxi operations, marshallers should have an illuminated wand in each hand. If wands are not available, use flashlights, chemical lights or any other device that will be visible from the cockpit. Observers should be in a position to observe wing walkers at all times (through door or windows) and communicate to the pilot.

5.18.3. FOD Avoidance. Make every effort to minimize the potential for engine FOD. Crews should:

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

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

5.18.3.3. Minimize power settings during all taxi operations.

5.18.3.4. If it is necessary to accomplish a 180-degree turn on a narrow runway the turn should be accomplished at an intersection of a link taxiway or at a designated turn around pad.

5.18.3.5. Avoid (when possible) taxi operations that would position a wing mounted engine over an unprepared or un-swept surface. If it becomes absolutely necessary to position a wing mounted engine over an unprepared or un-swept surface, the engine should be left in idle (to the maximum extent possible) until the engine is back over an improved surface.

5.19. Fuel Requirements. This paragraph implements the standard minimum fuel requirements in accordance with AFMAN 11-202, Vol 3.

5.19.1. As a minimum, required ramp fuel will consist of all fuel required for engine start, taxi, auxiliary power unit (APU) operation, takeoff, climb, cruise, en route reserves, alternate/missed approach (if required), descent, approach, and landing. **(T-2)**.

5.19.2. Required fuel at destination. Plan to land at the destination with a minimum of 50 minutes of usable fuel onboard. This amount will be computed by a MAJCOM approved computer flight plan (CFP). If a CFP is not available, plan to land with a minimum of 6,000 lbs. **(T-2)**.

5.19.3. Alternate Fuel. As a minimum, alternate fuel will include fuel for a flight from the intended destination to the alternate aerodrome at optimum altitude and long range cruise speed. When holding is required in lieu of an alternate at a remote or island destination, compute holding for 2 hours. A remote or island destination is defined as any aerodrome that, due to its unique geographic location, offers no suitable alternate (civil or military) within 2 hours flying time. The forecast weather at the remote or island destination must meet the criteria listed in **Chapter 6** of this AFMAN. **(T-2)**.

5.19.4. Required Ramp Fuel for Extended-range Twin-engine Operational Performance Standards (ETOPS). Block-to-block fuel must be greater than or equal to: fuel required to

fly to the ETP, experience a simultaneous engine failure and loss of cabin pressure, and proceed from the ETP to a recovery field at 10,000 feet using single engine cruise procedures. This amount must also include extra ETOPS fuel requirements listed in **Chapter 6** of this AFMAN. **(T-3)**.

5.20. Intersection Takeoffs. The decision to make intersection takeoffs rests solely with the PIC. Base performance computations on the runway remaining at the point the takeoff is initiated.

5.21. Land and Hold Short Operations (LAHSO). PICs shall not accept nor request LAHSO approach clearances. **(T-2)**. Advance ATC notification may be required for proper sequencing of aircraft to preclude delays.

5.22. Stop-and-Go Landings. Stop-and-Go landings are not authorized. **(T-2)**.

5.23. Reduced Power Operations. Reduced power operations are intended to prolong engine service life. Takeoffs will be accomplished using reduced power unless operational or training requirements dictate otherwise. **(T-3)**.

5.24. Engine Out Takeoffs. Engine out takeoffs require a MAJCOM/A3 waiver. **(T-2)**.

5.25. Engines Running On/Offload (ERO). Do not use ERO procedures when explosive cargo is involved unless authorized by the exercise operation order, contingency air tasking orders (ATOs) or OG/CC (or equivalent). **(T-3)**.

5.25.1. The ERO procedures in this paragraph may be used for any mix of personnel or cargo. Personnel will onload or offload via the air-stairs. PICs will assess prevailing weather, lighting, and parking location to ensure a safe operation. **(T-3)**.

5.25.2. General Procedures.

5.25.2.1. PICs will brief crewmembers on the intended ERO operation, emphasizing specific crewmember duties. **(T-3)**.

5.25.2.2. The parking brake will be set and one pilot will monitor brakes, interphone, and radio. **(T-3)**.

5.25.2.3. Operate engines at idle thrust. **(T-3)**.

5.25.2.4. Turn wing illumination lights on during night ERO. **(T-3)**.

5.25.2.5. Complete passenger and cargo manifests, crew lists and weight and balance form for the subsequent sortie. **(T-3)**.

5.25.2.6. Resume taxi after the door warning light is out and when the loadmaster has verbally acknowledged that the aircraft is ready for taxiing. ***CAUTION:*** Due to hazards involved (e.g., jet blast, proximity to engines), only hand transferable items of cargo may be on or off loaded during ERO operations. ***CAUTION:*** Door 1L may be opened and airstairs extended with the left engine running. The PIC or designated representative (normally the loadmaster) must ensure the hazards involved are understood by the crew and passengers. **(T-3)**.

5.25.2.7. During enplaning or deplaning, station a crew member (normally the loadmaster) at the bottom of the airstairs as an aircraft security and safety monitor. **(T-3)**.

5.25.2.8. Enplaning or deplaning passengers will be escorted by a crew member. Brief these personnel to remain clear of hazardous areas (see aircraft flight manual). Deplane passengers before cargo and enplane after cargo unless cargo size, location or mission dictates otherwise. **(T-3)**.

5.25.2.9. The loadmaster will direct all onload and offload operations. **(T-3)**.

5.25.2.10. ERO for crew changes during local training missions is authorized. Keep ERO for crew changes to the absolute minimum necessary to accomplish the mission. **(T-3)**.

5.26. Emergency Airlift.

5.26.1. Use these procedures for emergency airlift of personnel for humanitarian reasons or from areas faced with enemy siege, hostile fire, or when directed by the MAJCOM. **(T-2)**. Airlift can be accomplished without the use of individual seats or safety belts only when more personnel than seats are available.

5.26.2. The number of personnel seated within the cabin will vary depending on individual size. If possible, seat personnel in rows facing forward and restrain with straps placed across the aircraft floor. Secure the straps to tie-down rings positioned in the most outboard seat track(s). **(T-2)**.

5.26.3. If time allows, personal effects or baggage may be loaded on the aircraft. However, this may reduce the amount of personnel space available.

Chapter 6

GENERAL OPERATING PROCEDURES

Section 6A—Pre-mission

6.1. Aircrew Uniform.

6.1.1. Wear the aircrew uniform, as outlined in AFI 11-301, Vol 1, *Aircrew Flight Equipment (AFE) Program*, on all continental United States (CONUS) missions. **(T-1)**. For outside continental United States (OCONUS) missions, aircrew members will wear and carry uniforms as directed by the unit CC/DO. When civilian attire is directed, wear conservatively styled civilian clothing. **(T-3)**.

6.1.2. TDY clothing will present a neat, conservative appearance and be appropriate for the country and/or hotel/facilities being visited. At no time will crew members wear clothing with profane or obscene statements, pictures, or logos. **(T-3)**.

6.1.3. Personnel will have the appropriate items of clothing in their possession when flying in Arctic/Antarctic and desert regions in accordance with OPORD (if applicable). **Exception:** Not applicable to transoceanic crossings. **(T-3)**.

6.2. Personal Requirements.

6.2.1. Passports. Carry a valid passport on all missions scheduled OCONUS. **(T-3)**. **Exception:** Unit CC/DO may authorize personnel who have submitted passports for renewal to act as crew members on missions not scheduled to transit locations where passports are required. PICs are responsible for ensuring passports (with applicable visas) are included in the mission kit and taken on the mission.

6.2.2. Shot Record. Carry shot records (CDC-731, *International Certificate for Vaccination or Prophylaxis*) when required on OCONUS missions. C-32B crew members must maintain worldwide immunization requirements in accordance with AFI 48-110, *Immunizations and Chemoprophylaxis for the Prevention of Infectious Diseases.* **(T-3)**.

6.2.3. Corrective Lenses. Comply with AFMAN 11-202, Vol 3. **(T-1)**.

6.2.4. Driver's License. A valid state driver's license is required on each TDY where use of U.S. government or commercial general purpose vehicles may be required. Contact the local airfield manager if the vehicle will be flight line operated. **(T-3)**.

6.2.5. Identification. Each crew member will carry his/her Armed Forces identification card. **(T-2)**.

6.2.6. Rings and Jewelry. Crew members will remove all rings and loose fitting jewelry prior to performing aircrew duties. Crew members will not wear earrings on the flight line. **(T-2)**.

6.2.7. Flashlight. Each crew member must carry an operable flashlight. **(T-2)**.

6.2.8. Headgear. Do not wear headgear that interferes with donning the oxygen mask or smoke goggles while performing crew duties. **(T-2)**.

6.2.9. Hearing Protection. Each crew member will have appropriate hearing protection available for conditions encountered on the flight line. **(T-2)**.

6.2.10. Reflective Belts. Crew members will have reflective belts in their possession. These are to be used on the flight line between dusk to dawn (or as directed by local supplement). **(T-3)**.

6.3. Mission Planning and Airfield Review. The PIC is responsible for ensuring all mission planning, foreign clearance and en route support requirements are coordinated. Planning activities may be accomplished by mission planners or aircrew personnel. The PIC is ultimately responsible for validating all planning material prior to execution. The suggested mission planning review areas for aircrew include, but are not limited to:

6.3.1. Airspace/Airfield Review. Include FLIP, Flight Information Region (FIR)/Upper Flight Information Region (UIR)/Air Defense Identification Zone (ADIZ) procedures as well as study of runways, taxiways, and ramp areas. Contact AMC Airfield Suitability or the Airfield Manager directly if airport capabilities are questionable. Check adequacy of parking and ramp space. Verify the availability of airstairs (if required) prior to mission departure. Check for DoD contract fueling/service/aerospace ground equipment availability prior to making any arrangements with airport facilities. If cold weather operations are expected, check snow removal and de-icing capabilities.

6.3.2. Airspace classifications, AMC Giant Report, Airfield Suitability and Restrictions Report (ASRR) and Jeppesen or National Geospatial-Intelligence Agency (NGA) airport qualification products (when required by AMC Giant Report).

6.3.3. Theater Instrument Procedures. Required instruments and/or procedures for Non-DoD Approaches, International Civil Aviation Organization (ICAO) course reversal approaches, circling, holding, Area Navigation (RNAV), Host Nation/Jeppesen approaches. Jeppesen approaches will be flown in accordance with AFMAN 11-202, Vol 3.

6.3.4. Organized Track System (OTS). Comply with FLIP Area Planning (AP) series and airspace requirements as governed by the appropriate OTS authority.

6.3.4.1. North Atlantic Oceanic airspace. Pilots will follow the procedures in accordance with North Atlantic Track (NAT) Doc 007, *North Atlantic Operations and Airspace Manual, V.2020-1*. **(T-0)**. The manual is produced on behalf of the North Atlantic Systems Planning Group (NAT SPG). The NAT SPG does not have the authority to direct crew actions, hence the use of the word "should" throughout the document. However, where the manual uses "should," crews will interpret this as "shall." **(T-0)**. DoD Area Planning procedures will be followed only if they do not conflict with this manual. **(T-0).**

6.3.4.2. Northern Pacific Oceanic airspace. Pilots will follow the procedures written in the Federal Aviation Administration (FAA) Alaska or Pacific Supplement. DoD Area Planning procedures will be followed only if they do not conflict with these supplements.

6.3.5. Communication and Emergency Procedures. FLIP AP series, FIH, ICAO Doc 10037, *Global Operational Data Link (GOLD)* Manual, lost communications procedures, emergency procedures, and weather information sources.

6.3.6. Border Clearance. Foreign Clearance Guide (FCG), Aircraft Clearance and Personnel Customs, Immigration, Agriculture, Insect and Pest Control, Diplomatic Clearance Log.

6.3.7. Flight planning. DoD Form 1801, *DoD International Flight Plan*, Jeppesen Approach Plates and Charts, Theater Weather Conditions, Fuel Reserves and Alternate Requirements, ETOPS fuel requirements, MEL dispatch restrictions, ETP/Critical Wind Factors, and NOTAMs (Air Route Traffic Control Center [ARTCC], en route and international NOTAMs).

6.3.8. Special Military Operations. Obtain Altitude Reservations (ALTRVs), Area of Responsibility (AOR) procedures, SPINS, ATOs and review due regard procedures if applicable to the mission.

6.3.9. Other Regulatory Requirements. General navigation procedures, AFE, hazardous cargo, crew rest/crew duty time, aircraft records, AFTO Form 781, procedures, mission essential ground personnel/additional crew members, passenger handling, etc.

6.3.10. Location Information. C2 reporting procedures, maintenance problems, aircraft security, embassy/consulate contacts, social customs, billeting, transportation, and cash billing.

6.3.11. Foreign Clearance. Review the FCG, including the classified supplement. Ensure the planned itinerary can be flown in compliance with the provisions of the FCG. If not, obtain an exception to the FCG through Defense Attaché Office (DAO) or State Department channels or coordinate an itinerary change.

6.3.12. Flight Itinerary. Confirm itinerary times. Itinerary leg times are en route times and do not include times for taxi-out and taxi-in. Ensure forecast winds and payloads are accurately assessed.

6.3.13. Messages. Advance notice and/or diplomatic clearance messages are required for all missions to OCONUS destinations, excluding flights to Alaska, Hawaii, and US territories.

6.3.14. En Route Support. PICs are ultimately responsible to ensure adequate en route support is available for all destinations. When a mission or portion of a mission is canceled, or changed, the PIC or unit mission planners are responsible for advising affected support agencies or embassies.

6.3.15. Coordinate for worldwide FLIP and ensure possession of sufficient communications security (COMSEC) materials for the duration of the mission.

6.3.16. Review anti-hijacking procedures as described in AFI 13-207-O, *Preventing and Resisting Piracy (Hijacking)(FOUO)*," and **Chapter 7** of this AFMAN.

6.3.17. Parking, Servicing, and Aircraft Security Requirements. The following should be considered when planning missions into certain locations:

6.3.17.1. Guard and Reserve Facilities. On missions to CONUS civil airports with a military facility (ANG/Air Force Reserve) capable of providing support, use the military facility. If the mission will arrive or depart outside the normal operating hours of the military facility (nights, weekends, or holidays) use a civilian facility (terminal, FBO ramp, etc.) provided you can arrange the necessary support. If the using agency requests use of a civilian facility in preference to an available military facility, use the civilian

facility. In general, avoid requiring ANG/Air Force Reserve units to work overtime in support of C-32B missions unless the using agency has a specific need to use the military facility or suitable support cannot be obtained from civilian sources.

6.3.17.2. Contract Servicing Agents. Use the government fuel contractor unless the required services cannot be obtained. Government FBO contract fuel vendors can be found in the Instrument Flight Rules (IFR) Supplement or at **https://aircardsys.com**. If possible, use the approved government credit card if fuel must be purchased from a vendor other than the designated government contract vendor.

6.3.17.3. Aircraft Security. C-32B aircraft are exempt from the Global Decision and Support System (GDSS) requirement for Ravens. Ravens and AFSOC Deployed Aircraft Ground Response Element (DAGRE) teams may be used if conditions warrant and requested by the unit CC/DO. Aircraft security is ultimately the responsibility of the PIC. When using non-military fields, the PIC will work with the FBO, airport security or DAO directed host nation security to ensure that the aircraft is adequately protected. If the PIC is not satisfied that adequate aircraft security is available, notify the responsible C2 agency for resolution.

6.4. Aircrew Publications Requirements. Unit stan/eval will maintain current C-32B aircraft flight manuals, performance manuals, abbreviated checklists, and hardcards on board the aircraft. AFSOC authorizes the use of electronic publications (e-pubs) for all FLIP. Refer to the local supplement to **Chapter 10** of this manual for local paper/e-pubs guidance. **(T-2)**. Aircrews will comply with AFMAN 11-202, Vol 3, for Electronic Flight Bag (EFB) requirements. **(T-1)**.

Section 6B—Pre-departure

6.5. Airfield Certification. All crew members will review available Jeppesen or NGA airport qualification products (or other approved means) for AMC certification airfields prior to departure. In addition, review all restrictions for a particular airfield. Contact MAJCOM Airfield Suitability and Analysis Branch or the Airfield Manager directly for all questions pertaining to airfield weight bearing and suitability. Airfield suitability waivers must be coordinated through unit stan/eval up to MAJCOM stan/eval for approval. **(T-3)**. The OG/CC (or equivalent) may waive the airfield certification requirement.

6.6. Aircrew Intelligence Briefing. Prior to leaving home station on OCONUS missions, crews should receive an intelligence briefing that will emphasize terrorist, enemy, and friendly political and military development in the area in which they will be flying. Additionally, theater SPINS and ATO procedures should be reviewed if applicable. Aircrews should report information of possible intelligence value to C2 at the completion of each sortie. Aircrews will also debrief home station intelligence personnel at the completion of the mission. **(T-3)**.

6.7. Flight Crew Information File (FCIF). Review Volume I, part B and C, of the FCIF before all missions. **(T-2)**.

6.7.1. If material has been added to the FCIF since the last review, sign off the latest FCIF item number in Patriot Excalibur (PEX). If PEX is inoperative, comply with locally developed procedures in the local supplement to **Chapter 10** of this manual. **(T-2)**.

6.7.2. Crew members delinquent in FCIF review and joining a mission en route will receive an FCIF update from their primary aircrew member counterpart on that mission. Instructor pilots flying with general officers are responsible for briefing appropriate FCIF items. **(T-2)**.

6.7.3. Crew members not assigned or attached to the unit will certify FCIF review by entering the last FCIF number and their initials beside their name on the file copy of the flight authorization. Initials will be in pen. **(T-2)**.

6.7.4. Unit stan/eval is responsible for ensuring TDY aircrews receive newly released FCIFs which may result in mission impact. **(T-2)**.

6.8. Mission Kits. Prior to departure, the PIC, or a designated representative, will ensure a current mission kit is aboard the aircraft. The kit will contain, but is not limited to, the items listed in **Table 6.1** Maintain sufficient quantities of forms and documents to cover a duration of time in excess of the scheduled mission length. **(T-2)**.

Table 6.1. Aircrew Mission Kit.

Section I – Publications
Flight Crew Operations Manuals (Volume 1, 2, QRH and FCTM)
Flight Planning and Performance Manual (FPPM)
Section II – Forms
DD/Customs Forms:
1385, *Cargo Manifest*
1801, *DoD International Flight Plan*
CBP 7507, *General Declaration (Outward/Inward)*
2131, *Passenger Manifest*
AF Forms:
664, *Aircraft Fuels Documentation Log*
457, *USAF Hazard Report*
651, *Hazardous Air Traffic Report (HATR)*
1297, *Temporary Issue Receipt*
2282, *Statement of Adverse Effect - Use of Government Facilities*
4122, *Airborne Radio Log*
AFSOC Forms:
97, *AFSOC Aircraft Incident Report*
Section III – Miscellaneous
Foreign Nation - Custom Forms (When Applicable)
All Applicable Local Forms
Oceanic Plotting Charts
RNAV/VNAV/CAT II/III ILS Hardcard
RNP AR Hardcard
Winter Guidelines and De/Anti-Ice Hardcard
Cockpit Preparation Hardcard
ETOPS/Oceanic Procedures Hardcard
ILS/PRM Procedures Hardcard
Note: The PIC is responsible for the ensuring the contents of the mission kit are aboard the aircraft or available electronically.

6.9. Briefing Requirements.

6.9.1. Pre-Mission Briefings. Briefings should be clear, concise, and designed to provide only mission essential information. Supplement and shorten briefings with visual aids when practical. Avoid needless repetition of published procedures. Schedule briefings after considering the particular mission, crew rest, and other pertinent factors. Aircrew members must be provided all applicable information available to ensure complete and professional aircrew planning. Crew members will not fly unless they attend the crew briefings for their mission. **Exception:** When mission requirements dictate, PICs may excuse certain crew members from the briefing. The PIC will ensure that those personnel receive a face-to-face briefing prior to engine start. Crew members joining a mission en route will receive a face-to-face briefing prior to assuming primary duties. **(T-2)**.

6.9.2. Weather Briefings. Obtain a briefing on current weather, trends, and forecasts for the proposed route, destination, and alternates. The weather briefing should be documented in the crew mission package. **Exception:** Verbal weather briefings are acceptable for local area training missions. See local supplement to **Chapter 10** of this manual for locally developed weather briefing requirements. An FAA-approved contract dispatcher is an authorized weather source. Refer to AFMAN 11-202, Vol 3, for additional information on authorized weather sources. **(T-2)**.

6.9.3. NOTAMs. Obtain NOTAMs in accordance with AFMAN 11-202, Vol 3. **(T-2)**.

6.9.4. Hazardous Cargo Briefing. Prior to acceptance of hazardous materials, the PIC or designated representative should be furnished a cargo briefing and appropriate forms. The PIC will ensure that all crew members thoroughly understand mission requirements and procedures governing the hazardous materials being airlifted. **(T-2)**.

6.9.5. Pilot In Command Briefing. Give this briefing before the first flight of the mission and for subsequent flights when crew member substitutions are made or operating procedures change from the original briefing. **(T-2)**.

6.9.6. Departure and Arrival Briefings. As a minimum, the following topics will be covered:

6.9.6.1. Departure. **(T-2)**.

6.9.6.1.1. RTO and Emergency Return. **(T-2)**.

6.9.6.1.2. Emergency Level off Altitude and Jeppesen Special Departure Procedure (SDP), if applicable. **(T-2)**.

6.9.6.1.3. Minimum Safe Altitude (MSA). **(T-2)**.

6.9.6.1.4. Standard Instrument Departure (SID)/Departure Instructions. **(T-2)**.

6.9.6.1.5. Any non-standard procedures that are anticipated. **(T-2)**.

6.9.6.2. Arrival. Conduct the arrival brief in accordance with the “Normal Procedures” section of the FCOM, Volume 1. **(T-2)**.

6.9.7. En Route Briefings. The PIC will conduct a briefing at the end of each flight duty period prior to entering crew rest, and prior to the first sortie of each flight duty period. **(T-2)**. Applicable crew members or a designated representative for each crew specialty should be

present but crew members may be excused from the briefings at the discretion of the PIC. PICs should keep the passenger POCs informed of mission specifics, changes, problems, etc.

6.9.7.1. Briefings at the end of each flight duty period should include crew contact procedures during crew rest, departure time, crew reporting time and place, transportation arrangements, planned fuel load, uniform changes, and cabin service requirements.

6.9.7.2. Briefings prior to the first sortie of each flight duty period should include, as a minimum: specific mission details for that day's sortie(s), weather, NOTAMs, CRM, and the ORM level and mitigating factors for the mission. Complete this briefing prior to engine start. **(T-2)**.

6.9.7.3. Passenger Briefings. The PIC or designated representative will brief passengers on all flights in accordance with the applicable passenger video or briefing checklist. **(T-2)**.

6.10. Call Signs. Use voice call sign listing (VCSL) or call signs as specified in mission directives. Use standard call signs for local area training missions. **(T-2)**.

6.11. Instrument Flight Rules (IFR). Conduct flight operations under IFR to the maximum extent possible without unacceptable mission degradation. **(T-1)**. **Exception:** On local training flights, Visual Flight Rules (VFR), VFR terminal area procedures, and visual patterns should be reviewed and practiced to ensure aircrew VFR flight proficiency and knowledge of VFR procedures and rules are maintained. During VFR operations, aircraft will utilize radar advisory service to the maximum extent possible. **(T-2)**.

6.12. Flight Data Verification.

6.12.1. CFP Usage. MAJCOM-approved flight planning programs (Jeppesen, MilPlanner, Portable Flight Planning System, Combat Flight Planning System, etc.) flight planning programs are authorized for performance, navigation, and climatic data, including en route wind information for C-32B aircraft. If CFPs are used, each mission segment should utilize current wind data if available. **(T-2)**.

6.12.2. Aircrews may manually compute flight plans if a CFP is not available. **(T-2)**.

6.12.3. Regardless of whether a flight plan is prepared by the aircrew or is furnished by another source, the PIC will verify routes and flight altitudes to ensure proper terrain clearance and hazardous weather avoidance. **(T-2)**.

6.12.4. Aircrews will verify diplomatically-cleared routing and fuel computations for accuracy prior to departure. **(T-2)**.

6.12.5. Takeoff and Landing Data (TOLD). The use of a MAJCOM approved (Jeppesen, Boeing On-Board Performance Tool [OPT], etc.) airfield analysis program is authorized for determining TOLD. Speeds for takeoff and landing will be computed by tabulated data or the aircraft Flight Management Computer (FMC) as applicable. **(T-2)**. TOLD should be independently verified.

6.13. Departure Planning.

6.13.1. Gross Weight. Ensure that the aircraft does not exceed the maximum gross weight, zero fuel weight, or center of gravity (CG) limitations specified in the AFM. **(T-2)**. Gross weight may be further restricted by operating conditions.

6.13.2. For the use of non-standard takeoff minimums, refer to AFMAN 11-202, Vol 3, and applicable supplements. **(T-1)**.

6.13.3. Authorized IFR Departure Methods. Comply with AFMAN 11-202, Vol 3, IFR departure methods. C-32B aircrews are authorized to fly RNAV instrument departures. Comply with procedures in accordance with AFMAN 11-202, Vol 3, and the supplement section of the QRH. **(T-1)**.

6.13.3.1. Obtain and use information or publications from United States Government (USG) sources as first preference. **(T-2)**. Non-USG terminal procedures are authorized after a Terminal Instrument Procedures (TERPS) review. Only the MAJCOM/A3, after a TERPS review, may approve a host nation or commercially produced SID for use in Instrument Meteorological Conditions (IMC).

6.13.3.2. Special Departure Procedures (SDPs). AFSOC authorizes the use of SDPs for C-32B aircraft. SDPs utilize worldwide obstacle database criteria to provide OEI escape routing. ***Warning:*** SDPs may not ensure obstacle/terrain clearance if the aircraft is unable to comply with the specified escape routing. At airfields where obstacle/terrain clearance is a factor, departure procedures from liftoff to the minimum en route altitude (MEA) must be reviewed and included in the takeoff briefing. **Note:** Use of SDPs as alternate departure routing (no emergency) is not authorized. **(T-2)**.

6.13.3.3. VFR Departures. VFR departures are authorized when 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 an IFR clearance can be obtained. **Note:** VFR departures will not be flown in lieu of OEI obstacle clearance planning or in lieu of IFR departure procedures. **(T-1)**.

6.14. Obstacle Clearance Planning. Refer to AFMAN 11-202, Vol 3, and MAJCOM supplements.

6.14.1. Obstacle Identification Surface (OIS). Obstacle identification for SID purposes are those objects that penetrate an OIS of 40:1 (152 feet per nautical mile [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, or published climb gradients, will provide at least 48 feet per nm clearance above all obstacles that do not penetrate the OIS. The PIC must be aware and thoroughly brief the crew on all obstacles along the departure flight path. **(T-2)**. **Note:** Civilian SIDs do not depict the controlling obstacle that the climb gradient is based on.

6.14.2. Boeing OPT and MAJCOM approved computer-generated Airfield Ops Data are sufficient to meet or exceed all obstacle clearance requirements for USAF aircraft.

6.14.3. If OPT and Airfield Ops Data are not available, before flying any departure, the aircrew will:

6.14.3.1. Use the FPPM or QRH to determine the max takeoff gross weight for the runway to be used for the atmospheric conditions that exist or are anticipated for the time of departure. **(T-2)**. ***WARNING:*** When using the FPPM/QRH to determine takeoff data, crews must be aware that there is no weight penalty to account for climb degradation during turning departures.

6.14.3.2. Review appropriate terrain charts (if available), the ASRR, instrument approaches, area charts, departure plates, etc. to determine the controlling obstacle(s). ***WARNING:*** It is extremely difficult to identify all obstacles that may affect the flight path. If terrain/obstacles are a factor, max power takeoffs and climbs should be used until reaching MEA. **(T-2)**.

6.15. Takeoff Minimums and Departure Alternates.

6.15.1. Weather Minimums for Takeoff. Takeoff is permitted when weather is below the published landing minimums with the following visibility requirements:

6.15.1.1. Takeoff Runway Visual Range (RVR) is 1,600 feet (RVR 1600) or greater (with no RVR readout, use visibility ¼ mile or greater). **(T-2)**.

6.15.1.2. Takeoff with RVR minima below RVR 1600 is not authorized unless the runways are equipped with centerline lights, visible runway centerline markings, and two operative transmissometers. Consecutive transmissometers must report RVR 1000 or higher. **(T-2)**.

6.15.2. When weather is below approach and landing minimums (ceiling or visibility) a departure alternate is required. Do not use Category (CAT) II/III minimums to determine if a departure alternate is required. In the absence of RVR readouts, a departure alternate is required when visibility is less than 1/2 statute mile (sm). **(T-2)**.

6.15.3. Suitability of Departure Alternates. When a departure alternate is required, the aircraft must be capable of maintaining minimum IFR altitude, in accordance with the basic instruction, to the alternate using OEI performance criteria. **(T-2).** To qualify as a departure alternate, the airfield must meet one of the following conditions:

6.15.3.1. For an alternate within 30 minutes flying time, the existing weather must be equal to or better than the lowest compatible approach minima and forecast to remain so until 1 hour after takeoff, but in no case forecast to be lower than 200 (foot ceilings)-1/2 (nm of visibility) (RVR 2400), **(T-2)** or;

6.15.3.2. For an alternate within two hours flying time, the existing weather must be at least 500-1 above the lowest compatible published approach minima, but not less than 600-2 for a precision approach or 800-2 for a non-precision approach, and forecast to remain so for one hour after ETA at the alternate. **(T-2)**.

6.15.4. Airfield and Aircraft Approach Capability. For IFR departures, the approach facility upon which weather minimums are based must be operational at the departure and alternate airports. The necessary aircraft approach equipment must also be operational. **(T-2)**.

6.16. Destination Requirements (for filing purposes). The forecast destination weather will be in accordance with AFMAN 11-202, Vol 3, and the following:

6.16.1. File two alternates when:

6.16.1.1. The forecast weather is less than required minimums for the lowest compatible approach. **(T-2)**.

6.16.1.2. The forecast surface winds (intermittent or prevailing) exceed limits corrected for RCR. **(T-2)**.

6.16.2. File an alternate, regardless of forecast weather, when the destination aerodrome is outside the 48 conterminous states. **(T-2)**.

6.16.3. When filing to a remote or island destination, aircrews will use 2 hours of holding fuel (in lieu of an alternate and 50 minutes holding fuel). **(T-1)**. A remote or island destination is defined as any aerodrome which, due to its unique geographic location, offers no suitable alternate (civil or military) within 2 hours flying time. The forecast weather at the remote or island destination must meet the following criteria:

6.16.3.1. The prevailing surface winds, corrected for RCR, must be within limits at ETA and forecast to remain so for 2 hours thereafter. **(T-2)**.

6.16.3.2. The prevailing ceiling and visibility must be equal to or greater than published minimums for an available published approach (excluding radar approaches), for ETA plus 2 hours. **(T-2)**.

6.17. Destination and AAR Alternates. Choose alternates that best meet mission conditions and conserve fuel. When terminal forecasts are marginal, if possible avoid picking alternates within the same weather system. Selected alternates should not be restricted by FLIP, FCG, or diplomatic clearances, and should be compatible with the mission load. A weather alternate does not need to be capable of providing en route maintenance. The PIC retains final authority in the choice of the alternate. **(T-2)**. However, selection by support agencies should be used if the above criteria are met and the aircraft has already been serviced.

6.18. Adverse Weather Planning.

6.18.1. Icing. Air Force Handbook (AFH) 15-101, *Meteorological Techniques,* states that freezing drizzle is equivalent to moderate icing and freezing rain is equivalent to severe icing. Prolonged flight (cruise) in areas of forecast or reported severe icing (freezing rain) is prohibited. **(T-2)**.

6.18.2. C-32B aircrews should use the MAJCOM-approved De/Anti-Icing Hardcard for procedures and to establish holdover times.

6.18.3. Thunderstorms. 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, you must avoid them by using the criteria outlined below. **(T-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, Vol 1, *Weather for Aircrews*.

6.18.3.1. During flight, use any available means to avoid thunderstorms by:

6.18.3.1.1. Minimum of 20 nm at or above (Flight Level) FL 230. **(T-2)**.

6.18.3.1.2. Minimum of 10 nm below FL 230. **(T-2)**.

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

6.18.3.2.1. Attempt to maintain Visual Meteorological Conditions (VMC). **(T-2)**.

6.18.3.2.2. Attempt to maintain at least 5 nm separation from heavy rain showers. **Note:** Approaches or departures may be accomplished with thunderstorms in the

vicinity of the airport. The thunderstorms must not be producing any hazardous conditions (such as hail, lightning, strong winds, gusts fronts, wind shear, or microbursts) at the airport, and must not be forecast or observed to be moving in the direction of the route of flight (to include the planned missed approach corridor, if applicable). **(T-2)**.

6.18.4. Altimeter Temperature Corrections. Aircrews performing instrument approaches and landings at locations where temperatures are 32°F/0°C or below will apply temperature corrections in accordance with the Flight Information Handbook and AFMAN 11-202, Vol 3. In addition, aircrews will comply with applicable FCOM procedures when flying into Cold Temperature Restricted Airports. **(T-1)**.

6.18.5. Turbulence. Flights into areas of forecast or reported severe turbulence are prohibited. Do not fly into an area of known or forecast moderate or greater mountain wave turbulence. **Note**: Turbulence classification is specific to the size and weight of the aircraft experiencing the conditions. Reported turbulence intensity from smaller aircraft may not be valid for the C-32B. The PIC should attempt to ascertain the source of the report and then use their best judgment on how to proceed. The report must be considered valid if the source cannot be verified. **(T-2)**.

6.19. Fuel Planning. Use the CFP, FPPM or QRH for fuel planning. **(T-2)**. Flying at long-range cruise (approximately .80M) is the most conservative method, and therefore this method is encouraged. However, PICs may elect to fly at other speeds deemed appropriate for the mission. The "recommended" altitude from the FMC is the most economical based on two engines, gross weight, target speed, forecast cruise winds and temperature. Therefore, the aircraft should be flown within 2,000 feet of this altitude (unless the mission dictates other altitudes). Step climbs should be used if available.

6.19.1. Add Extra Fuel:

6.19.1.1. When fuel is unavailable at en route stops; when compressed ground times during single day multi-sortie missions preclude refueling at each en route stop; or when en route refueling will delay or be detrimental to mission accomplishment. **(T-2)**.

6.19.1.2. When passengers or patients are aboard, to recover at a suitable airfield from the ETP at 10,000 feet MSL in the event of unpressurized flight. **(T-2)**.

6.19.1.3. When required by the CFP for extended range operations. **(T-2)**.

6.19.2. Fuel Conservation. Aircrew and mission planners will manage fuel as a limited commodity and precious resource. Fuel optimization should be considered throughout all phases of mission planning and execution. Excessive ramp and recovery fuel adds to aircraft gross weight and increases fuel consumption. Do not ferry extra fuel beyond optimum requirements for safe mission accomplishment and training objectives. Aircrews and mission planners will optimize flight plans and flight routings for fuel efficiency. **(T-2)**. In-flight procedures such as climb or descent profiles and power settings should also be considered for efficient fuel usage. Aircrews should employ the following aviation fuel optimization measures without compromising flight safety or jeopardizing mission/training accomplishment.

6.19.2.1. Optimize fuel loads. Mission plan for the required ramp and recovery fuel. Ensure ramp fuel is correct upon arrival at the aircraft. **(T-2)**.

6.19.2.2. Minimize APU use. Use ground power units when practical. **(T-2)**.

6.19.2.3. Delay engine start time. Establish and implement local engines start time standards. **(T-2)**.

6.19.2.4. Minimize aircraft weight through optimized fuel loads and reduction of equipment not necessary to accomplish the mission. **(T-2)**.

6.19.2.5. Establish C2 and flight following procedures to ensure timely notification of mission changes/cancellations to avoid unnecessary or unproductive flight time. **(T-2)**.

6.20. Mission Folder. The unit will develop a mission folder for each mission to ensure all pre-departure information is available to aircrews. This folder will include the Flight Authorization, Go/No-Go verification, risk assessment and other forms and information required for the mission. **(T-3)**.

6.21. Navigation Kits. The PIC will ensure required aircrew members maintain current worldwide data on their EFBs in accordance with AFMAN 11-202, Vol 3, and applicable supplements. **(T-3)**.

Section 6C—Preflight

6.22. Aircraft Maintenance Forms. Review the official aircraft maintenance forms 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 out of home station. **(T-2)**. If one of these individuals is not available, the PIC may sign the exceptional release.

6.23. En Route Aircraft Pre-flights. Anytime en route maintenance has been performed, the affected systems will be pre-flighted and should be operationally checked as soon as possible, if practical. Thru-flight inspections will be completed anytime a preflight is not required. **(T-2)**. LMs only need to accomplish a thru-flight inspection at en route stops.

6.24. Aircraft Servicing and Ground Operations.

6.24.1. Aircraft Refueling and De-fueling. Qualified maintenance personnel are authorized to refuel or de-fuel the aircraft. Comply with the appropriate aircraft fueling manuals and T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding* (if applicable). **(T-2)**.

6.24.2. Concurrent Ground Operations. Simultaneous refueling or de-fueling while maintenance operations are being performed and/or cargo is being uploaded or downloaded is authorized in accordance with T.O. 00-25-172.

6.24.2.1. Aircrew members are authorized to enplane or deplane during fuel servicing to perform normal aircrew duties.

6.24.2.2. Aircrew personnel are authorized to conduct "power off" portions of inspections during servicing when essential to meet operational turn-around requirements.

6.24.2.3. Passengers may remain on board the aircraft during refueling, provided they are briefed on the hazards of the operation. Stairs and exit(s) will be positioned (if required) with doors open. Passengers will not enplane or deplane during fueling operations unless absolutely necessary and escorted by an aircrew member. A standby fire truck is required if servicing with JP-4 or Jet B fuels. **(T-2)**.

6.24.3. Fire Protection During Engine Start.

6.24.3.1. The aircraft engine fire extinguisher system fulfills the minimum requirements for fire protection during engine start. **(T-3)**. If available, position a portable fire extinguisher for added fire protection.

6.24.3.2. A fireguard is not required for engine start but should be utilized to the maximum extent possible.

6.25. Aircrew/Maintenance Engine Run-ups. Due to procedural differences, a mixed aircrew/maintenance engine run should not be accomplished.

6.26. Towing. The PIC will coordinate with the senior maintenance officer or superintendent to ensure the towing supervisor and crew is qualified. The PIC will ensure that the tow team supervisor briefs all personnel on their duties and the associated hazards. Proper checklists will be used. If any doubt exists as to the qualification of the tow team personnel or the safety of the operation, make no attempt to tow the aircraft until qualified personnel can be located. **(T-2)**.

6.26.1. Towing Procedures. Pilots may act as a tow team member if they are trained and qualified in accordance with applicable unit guidance. **(T-3)**.

6.26.2. During towing operations shut the APU off prior to any part of the aircraft entering hangars and do not restart the APU until the aircraft is completely clear of hangars. **(T-2)**.

6.27. Aircrew Flight Equipment Requirements.

6.27.1. Oxygen Requirements**.** Ensure sufficient oxygen for the planned mission is available to all occupants before takeoff, from the equal time point (ETP) to recovery should oxygen be required. **(T-0)**.

6.27.2. Aircrew members will comply with the oxygen requirements specified in AFMAN 11-202, Vol 3. **(T-1)**.

6.27.3. Prior to each flight, flight deck crew members will accomplish a communications and operational check of their oxygen masks and smoke goggles. **(T-1)**.

6.27.4. All primary crew members will use supplemental oxygen for flight when the cabin altitude exceeds 10,000 feet MSL. **(T-1)**. **Note:** Primary cabin crew members should use the aircraft portable oxygen bottles or a passenger service unit to comply with this requirement.

6.27.5. Rafts. Ensure sufficient life rafts are on board to accommodate all passengers and aircrew members on overwater flights. **(T-2)**.

6.27.6. Ensure a sufficient quantity of Adult-Child life vests will be aboard for all passengers and crew members for overwater flights. **(T-2)**.

6.27.7. Aircrew Flight Equipment. Prior to departing home station, the PIC or designated representative will ensure appropriate serviceable AFE, and survival equipment for the entire mission are aboard the aircraft and all required inspections have been completed. The AFE

section is responsible to ensure that the AFE on the airplane is current and operable. Local training missions require an aircrew preflight inspection prior to the first flight of the day. **(T-2)**. Aircrew members discovering used or missing equipment will make an entry in the aircraft maintenance forms for standard commercial aircraft equipment. If Air Force issued equipment is used or missing, notify AFE section. **Note:** Prior to the first flight each day, the AFTO Form 46, *Prepositioned Aircrew Flight Equipment*, must be signed off by the aircrew member who pre-flights the aircraft life support emergency equipment. **(T-1)**.

6.28. Transponder and Blue Force Tracker (BFT) Operations.

6.28.1. Aircraft will not depart without an operable transponder capable of reporting Mode 3/A and C. **(T-3)**.

6.28.2. Aircraft will not depart with an Identify Friend or Foe/Selective Identify Frequency (IFF/SIF) known to be inoperative if the mission requires mode 5 to be reported. **(T-3)**.

6.28.3. If an operational mode 5 is required, an operational check of the mode 5 will be made prior to takeoff (a self-test satisfies this requirement). If the mode 5 checks bad or fails in-flight, the IFF/SIF unit will be repaired prior to flight and/or aircraft landed for repairs. **(T-3)**. The only exceptions to this requirement are:

6.28.3.1. Missions that are generated in the CONUS and do not plan to exit the CONUS ADIZ.

6.28.3.2. Non-training peacetime missions where cancellation or return to base (RTB) for mode 5 failure would seriously degrade mission effectiveness (e.g., alert response, disaster relief, aeromedical evacuation).

6.28.3.3. Mission where the aircraft will not transit an area where safe passage procedures are in effect.

6.28.4. Ground and in-flight checks of the mode 5 are mandatory maintenance debrief items. Crews will annotate any failure or unsuccessful interrogation of the mode 5. **(T-3)**.

6.28.5. Use the IFF/SIF in accordance with local procedures. **(T-3)**.

6.28.5.1. IFF/SIF mode 1, 2, and 3/A codes, once set and transmitted, are unclassified and may be left in the transponder.

6.28.5.2. IFF/SIF mode 5 codes must be zeroized before leaving the aircraft. **(T-3)**.

6.28.6. If operable, the BFT must be on and operational for all flights. **(T-2)**.

6.29. Dropped Object Prevention. During aircraft exterior visual inspections, pay particular attention to surface panels, and components which potentially could be dropped objects. If a dropped object is discovered and the mission is continued, the flight crew:

6.29.1. Ensures the write-up is entered in the appropriate forms. **(T-3)**.

6.29.2. Notifies the unit DO, unit safety officer, and C2 as soon as practicable, to include route of flight, altitude and weather (e.g., turbulence). **(T-3)**.

6.30. Narcotics. Crew members will ensure narcotics and other unauthorized items are not smuggled aboard the aircraft. **(T-2)**.

6.31. Cockpit Congestion and Loose Objects.

6.31.1. Hold the number of crew members on the flight deck to the minimum commensurate with the mission requirements. **(T-3)**.

6.31.2. Keep the flight deck uncluttered and orderly for all flight and ground operations. **(T-3)**.

6.31.3. Do not place any item (checklist, chart, etc.) on the center pedestal in a position that covers or hides from view any switch, light, or gauge. Do not place any item behind the throttle quadrant which could interfere with thrust lever movement. **(T-3)**.

6.32. Flight Data Recorder (FDR) and Cockpit Voice Recorder (CVR) Systems. The FDR and CVR should be operative prior to departure and operated continuously from the start of the takeoff roll until the aircraft has completed landing roll at destination. If an en route failure occurs, continue the mission to a station where adequate repairs can be made. If involved in a mishap or incident, open the FDR and CVR power circuit breaker after landing and after terminating the emergency. **(T-3)**. CVR recordings are considered factual and the transcript is not a privileged document. The actual aircrew voices on the tape are considered protected under the Privacy Act of 1974, according to AFI 91-204, *Safety Investigations and Reports.* **(T-0)**.

6.33. Passenger Guidance. DoDI 4515.13 establishes criteria for passenger movement on DoD aircraft. It defines five categories of passenger travel: space-available, aeromedical evacuation, orientation, public affairs, and space-required. AFI 11-401 provides further guidance on orientation and public affairs travel. Refer to these publications directly for details not addressed in this manual. In all cases, passengers will be manifested on DD Form 2131, *Passenger Manifest*. Refer to **paragraph 3.5** of this AFMAN for MEP guidance. **(T-2)**.

6.33.1. Space-available. C-32B aircraft will not be used for space-available travel. **(T-2)**.

6.33.2. Aeromedical Evacuation. Aeromedical evacuation is defined as the movement of patients by air. Specific guidance on eligibility and documentation is contained in DoDI 4515.13. **(T-2)**.

6.33.2.1. Restrictions. If tasked to conduct aeromedical evacuation, both pilots must be fully qualified. AAR may be performed if required for mission accomplishment after coordination with tasking authority. Simulated EPs are prohibited. **(T-2)**.

6.33.3. Orientation. AFI 11-401 (as supplemented) contains specific details on the Air Force Orientation Flight Program. There are four categories of orientation flights: incentive flights, distinguished visitor flights, familiarization flights, and spouse orientation flights. Authorized participants and approval authority are contained in AFI 11-401 and applicable supplements. Document authorization by letter and manifest on DD Form 2131. Requests for approval will include the mission profile and mission events to be accomplished. Forward requests through unit stan/eval. **(T-2)**.

6.33.3.1. Restrictions. For spouse orientation, comply with restrictions in AFI 11-401 and applicable supplements. **(T-2)**.

6.33.3.2. For other orientation categories, both pilots must be fully qualified. Simulated EPs are prohibited. All other events may be conducted in accordance with the profile approved by approval authority listed in AFI 11-401. **(T-2)**.

6.33.4. Public Affairs Travel. Public affairs travel is defined as travel in the interest of adding to the public understanding of DoD activities. AFI 11-401 contains specific details on the Air Force Public Affairs Flight Program. Authorized participants and approval authority are contained in AFI 11-401. Document authorization by letter and manifest on DD Form 2131. Requests for approval will include the mission profile and events to be accomplished. Forward requests through public affairs. **(T-2)**. If conducting a public affairs flight, both pilots must be fully qualified. AAR may be approved on a case-by-case basis by the OG/CC (or equivalent). Simulated EPs are prohibited. **(T-2)**.

6.33.5. Space-required. DoDI 4515.13 lists several categories of passengers, not previously mentioned, who are authorized official travel on DoD aircraft.

6.33.5.1. Supported forces are a sub-category of space-required passenger defined by this manual as U.S. and foreign military and civilian personnel who are an integral part of the mission being performed.

6.33.5.1.1. Eligibility under this status is granted by the approval authority for the mission and is assumed by the mission tasking. Supported forces must be properly manifested. **(T-2)**.

6.33.5.1.2. Restrictions. Both pilots must be fully qualified unless allowed by AFI 11-401 and **Chapter 3** of this AFMAN. Simulated EPs are prohibited. PICs will ensure that supported forces are briefed on the mission profile and mission events before flight. **(T-2)**.

6.33.5.2. Supporting forces are a sub-category of space-required passenger defined by this instruction as U.S. and foreign military, DoD civilians, and U.S. civilian employees under contract to the DoD, who directly support the mission or a deployment of an AFSOC/ANG unit. This may include, but is not limited to; maintenance, communications, intelligence, logistics, and flight test personnel, civilian contractors required for in-flight checks or deployment support and other military personnel who are on board to communicate/coordinate with other agencies. **(T-2)**.

6.33.5.2.1. Eligibility under this status is granted by the approval authority for the mission. Off station travel is documented by travel orders. Local flights will be approved by the OG/CC (or equivalent). **Exception:** Unit/CC may approve assigned personnel. When frequent local flights are necessary, commanders may issue annual authorizations by name or AFSC as appropriate. Supporting forces must be properly manifested. **(T-2)**.

6.33.5.2.2. Restrictions. Both pilots must be fully qualified unless allowed by AFI 11-401 and **Chapter 3** of this AFMAN. Simulated EPs are prohibited. **Exception:** When the only passengers on the aircraft are supporting forces and 108 WG aircrew members, i.e., KC-135 pilots and boom operators, practice emergency separations are authorized for demonstration/familiarization purposes. PICs will ensure that supporting forces are briefed on the mission profile and mission events before flight. **(T-2)**.

6.34. One-time Flights. An aircraft may be released for a one-time flight, with a condition that might be hazardous for continued use, if the aircraft is airworthy for one flight to another station. MAJCOM/A3 is the approval authority. **(T-2)**.

6.34.1. The release must first be authorized by the chief of maintenance, the senior maintenance officer, or the chief Boeing repair specialist. **(T-2)**.

6.34.2. After the maintenance release is obtained, contact MAJCOM/A3 for flight authorization. **(T-2)**.

6.34.3. The maintenance release, MAJCOM approval, and the PIC's concurrence are all required before the aircraft can be flown to the specified destination. **(T-2)**.

6.35. Functional, Acceptance and Operational Check Flights (FCF, ACF and OCF). Perform FCF and ACF duties in accordance with T.O. 1-1-300, *Maintenance Operational Checks and Check Flights,* and MAJCOM supplements to AFMAN 11-202, Vol 3. OCFs are conducted in accordance with AFMs and require no specialized aircrew training or certification. **(T-2)**. OCFs should be conducted by experienced crew members.

Section 6D—Departure

6.36. On Time Takeoffs. Mission departures are considered on time if the aircraft is airborne from 20 minutes prior to 14 minutes past the scheduled takeoff time. **(T-3)**.

6.36.1. AAR Missions. Scheduled takeoff time may be adjusted to make the air-to-air refueling control time (ARCT). Notify the C2 agencies (as applicable) as soon as possible with the updated information. **(T-3)**.

6.36.2. Early Departures.

6.36.2.1. Home Station. Early departures are authorized to prevent a delay due to weather, ATC or airfield operating restrictions. **(T-3)**.

6.36.2.2. En route Stations. Early departures at en route stations may be authorized provided the impact on local and downrange facilities, diplomatic clearance restrictions and crew duty time is evaluated. Notify the controlling C2 agency of any itinerary changes. **(T-3)**.

6.37. Cabin Security Procedures for Takeoff and Landing. The following procedures should be followed prior to all takeoffs and landings:

6.37.1. The LM should assure all carry-on luggage and supplies are secured as soon as possible after boarding the passengers. Ensure all passenger carry-on baggage is stowed to prevent a hazard during emergency landings, (e.g., blocking an exit or emergency equipment). Notify the PIC when excessive topside baggage/cargo precludes safe stowage.

6.37.2. The LM should notify the cockpit crew that the cabin is secure prior to being seated for takeoff or landing. The cockpit crew should confirm the cabin security report prior to takeoff and landing.

Section 6E—En route

6.38. Flight Progress.

6.38.1. Operations in International/Territorial Airspace. US military aircraft and DoD personnel entering another nation to conduct U.S. government business therein must have the approval of the foreign government concerned to enter their airspace. **(T-0)**. Foreign

clearances for U.S. international air operations are obtained through U.S. officials known as Defense Attaché Officers. Refer to FLIP *General Planning* (GP) for international strait passage, archipelagic sea lane passage, procedures to follow if intercepted, and other foreign sovereignty issues.

6.38.1.1. There are essentially two types of airspace: international airspace and territorial airspace. International airspace includes all airspace seaward of coastal states territorial seas. Military aircraft operate in such areas free of interference or control by the coastal state. Territorial airspace includes airspace above territorial seas, archipelagic waters, inland waters, and land territory and is sovereign airspace. Overflight may be conducted in such areas only with the consent of the sovereign country.

6.38.1.2. In accordance with international law, the U.S. recognizes sea claims up to 12 nautical miles. Diplomatic constraints and/or a lack of diplomatic clearances usually result in missions operating in international airspace. Because of this, it is imperative sufficient information be provided far enough in advance to allow compliance with FCG requirements established by the countries concerned. The U.S. does not normally recognize territorial claims beyond 12 nautical miles; however, specific guidance from certain U.S. authorities may establish limits, which differ from the standard.

6.38.1.3. Flight Information Region (FIR). A FIR is defined as an area of airspace within which flight information and related services are provided. A FIR does not reflect international borders or sovereign airspace. Aircraft may operate within an established FIR without approval of the adjacent country, provided the PIC avoids flight in sovereign airspace.

6.38.1.4. Aircrews on a flight plan route, which takes them from international airspace into territorial airspace for which approved aircraft clearances were obtained, should not amend entry point(s).

6.38.1.5. Safe Passage violations of foreign sovereignty result from unauthorized or improper entry or departure of aircraft. Aircrews should not enter into territorial airspace (12 nm from sovereign landmass) for which a clearance has not been duly requested and granted through diplomatic channels.

6.38.1.6. ATC agencies are not vested with authority to grant diplomatic clearances for penetration of sovereign airspace where prior clearance is required from the respective country. Aircraft clearances are obtained through diplomatic channels only. **(T-0)**.

6.38.1.7. In the event ATC agencies challenge the validity of a flight routing or attempt to negate existing clearances, pilots must evaluate the circumstances. The normal response will be to attempt to advise the ATC agency that the aircraft will continue to the planned destination as cleared in international airspace. The key phrase is “in international airspace.” Safety of flight is paramount in determining mission continuation. Aircrews will not construe an ATC clearance that routes their mission over sovereign airspace, which was not approved through diplomatic channels prior to mission departure, as being valid authorization. **(T-0)**.

6.38.1.8. Aircrews operating missions requiring unique or specially developed routing will normally be briefed at home station. Aircrews may be briefed at the onload location, but must be briefed prior to performing the critical portion of the mission. **(T-2)**.

6.39. Navigational Capabilities.

6.39.1. Oceanic and Reduced Visual Separation Minimums (RVSM) operations. C-32B aircraft and aircrews are RVSM compliant. For all normal oceanic operations, refer to applicable FLIP, FAA/ICAO publications, MAJCOM-approved Oceanic Hardcard and the supplement section of the QRH.

6.39.1.1. For a list of required aircraft equipment and systems for entry into RVSM airspace, reference *General Planning*, **Chapter 5**, FLIP AP/2 and the aircraft MEL.

6.39.1.2. Document malfunctions or failures of RVSM required equipment, including the failure of this equipment to meet RVSM tolerances, on Form 8-42208-2, *Flight/Maintenance Log Book*. **(T-2)**.

6.39.1.3. Contingency Operations. After entering RVSM airspace the pilot should notify ATC of contingencies (aircraft system failures, weather conditions) which affect the ability to maintain the current flight level and coordinate a plan of action. Contingency procedures for specific regions and areas are located in the applicable AP series publications.

6.39.2. Required Navigation Performance (RNP) Airspace. Airspace where RNP is applied is considered special qualification airspace. Both the operator and the specific aircraft type must be approved for operations in these areas. **(T-2)**. C-32B aircraft are approved for RNP operations. The following are RNP requirements.

6.39.2.1. Preflight Procedures. Review maintenance logs to ascertain status of RNP equipment. **(T-2)**.

6.39.2.2. En route. At least two long range navigation systems certified for RNP must be operational at the oceanic entry point. Periodic crosschecks will be accomplished to identify navigation errors and prevent inadvertent deviation from ATC cleared routes. Advise ATC of the deterioration or failure of navigation equipment below navigation performance requirements and coordinate appropriate actions. **(T-2)**.

6.39.2.3. Document malfunctions or failures of RNP required equipment, including the failure of this equipment to meet RNP tolerances, on Form 8-42208-2, *Flight/Maintenance Log Book*. **(T-2)**.

6.39.3. The C-32B and qualified aircrew are authorized use of Performance-based Communication and Surveillance airspace in the NAT region.

6.40. Communications Instructions for Reporting Vital Intelligence Sightings and Other Reports. Report all vital intelligence sightings from aircraft as indicated in FLIP planning or FLIP En route Supplement. **(T-2)**.

6.40.1. In-Flight harassment or hostile action against C-32B aircraft. Aircraft subjected to harassment or hostile action by foreign aircraft will immediately contact the DAO at the applicable U.S. Embassy. Include aircraft nationality, type, insignia, or any other identifying features; note position, heading, time, speed when harassed, and the type of harassment. **(T-2)**.

6.40.2. Other incidents will be reported as indicated in AFMAN 10-206, *Operational Reporting (OPREP)*. **(T-2)**.

6.41. Communications. Make all communications in accordance with FLIP or as directed by the controlling agency. **(T-2)**.

6.42. In-flight Emergency Procedures. Report deviations from directives that occur as a result of an emergency in accordance with AFMAN 11-202, Vol 3, and this manual. **(T-2)**.

6.42.1. Notification of Controlling Agencies. As soon as practical after completing the aircraft emergency action checklist, furnish the controlling agency and appropriate command and control center with a description and extent of the difficulty, assistance required, intentions, and any further pertinent information. **(T-2)**.

6.42.2. Emergency Divert Procedures.

6.42.2.1. When an emergency divert is necessary, use procedures in FLIP. Maintain VMC, climb or descend to an altitude or flight level which differs from those normally used by 500 feet, change course and request ATC clearance. If unable to maintain VMC, obtain an ATC clearance before changing course. A divert under IFR conditions, without ATC approval, will be made only after a thorough evaluation of the seriousness of the emergency, general traffic density, and known traffic operating in the immediate area. **(T-2)**.

6.42.2.2. Notify the airfield selected for an emergency divert as soon as possible to allow maximum time to prepare the required assistance or services. C2 will assist the PIC as necessary in notifying the appropriate agencies. **(T-2)**.

6.43. Medical Assistance. When a person aboard the aircraft requires medical care, the PIC will inform the station of next intended landing with sufficient time so medical personnel may meet the aircraft. The request will include the individual's sex, approximate age, and the nature of the medical problem. **(T-2)**.

6.44. Weather Forecasts.

6.44.1. The PIC is responsible for obtaining destination weather prior to descent. **(T-2)**.

6.44.2. If a military weather source is not available, the PIC will obtain updated weather information from other sources according to **paragraph 6.9.2** and **paragraph 12.5** **(T-2)**. This includes, but is not limited to, Aircraft Communications Addressing and Reporting System (ACARS), web-based weather information via civilian or host nation weather services.

6.44.3. The ATC system can provide weather information to en route aircraft on a time permitting basis. **Note:** The ARTCCs have a limited capability to provide weather information to en route aircraft within CONUS. Significant Meteorological Advisories (SIGMET) 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 Pilot-to-Metro voice call (METRO) service. **(T-2)**.

6.45. Over-Flying Scheduled Refueling Stops. Before offering to over fly scheduled refueling stops, the PIC must consider all consequences that may arise. As a minimum, coordination with the unit CC/DO, the contact ground support, and final arrival airport must be considered. Notify C2 as soon as possible if this option will be utilized. **(T-3)**.

Section 6F—Arrival

6.46. Crew Coordination. The pilot flying the approach will brief the crew on the descent, approach, and landing in accordance with the flight manual. **(T-1)**. The other pilot will monitor the approach and report any deviations from prescribed procedures. Crew members will confine their activities to aircraft operation, descent or approach monitoring and checklist accomplishment from the initial descent point to engine shutdown. Crew members should not deviate from these duties except for in-flight emergencies. **(T-2)**.

6.47. Changes to Weather During Arrivals. If the reported weather decreases below minimums after starting a descent, receiving radar vectors for an approach, or established on any segment of an approach prior to the missed approach point (MAP), the approach may be continued to the MAP and either execute a missed approach or continue to land if the following conditions are met in accordance with AFMAN 11-202, Vol 3:

6.47.1. Descent Below Decision Height (DH)/Decision Altitude (DA)/Minimum Decision Altitude (MDA). Do not descend below DH/DA/MDA until sufficient visual reference with the runway environment has been established and in a position to execute a safe landing. **(T-0)**.

6.47.2. Descent Below 100 ft. Do not descend below 100 ft. above the threshold elevation or touchdown zone elevation using the approach lights as a reference unless the red termination bars or the red side row bars are visible and identifiable (N/A on CAT III approaches). **(T-0)**.

6.48. Instrument Approach Procedures. Comply with AFMAN 11-202, Vol 3.

6.48.1. Fly a precision approach at night and during marginal weather. If a precision approach is not available, fly any available approved instrument approach. **(T-2)**. On training or evaluation flights, pilots may fly non-precision approaches or VFR traffic patterns to accomplish requirements.

6.48.2. Auto landings are authorized for CAT I, CAT II, and CAT III ILS approaches. **(T-2)**.

6.48.3. Instrument Approach Category. The C-32B is normally a category "C" aircraft for straight-in approaches and a category D aircraft for circling. If approach speed is higher than 140 knots indicated airspeed (KIAS), use category "D" minimums. **(T-2)**.

6.48.4. Alternate Flight Publications. The following publications are authorized if acceptable DoD FLIP products are not available:

6.48.4.1. United States Department of Transportation National Aeronautical Charting Office.

6.48.4.2. MAJCOM TERPS approved Jeppesen and Host Nation FLIP.

6.48.5. Instrument Approach Procedure (IAP) Weather Minimums.

6.48.5.1. Ceiling and Visibility. Pilots flying circling approaches may start the approach (to include en route descent) if the existing ceiling and visibility are greater than or equal to the published minimums. **(T-0)**.

6.48.5.2. Visibility only. Pilots flying straight in approaches may start the approach (to include en route descent) if the existing visibility is greater than or equal to the published visibility minimums. **(T-0)**.

6.48.5.3. Precision Approach Minimums. CAT I ILS approaches are authorized to less than RVR 2400 at locations without Touchdown Zone/Centerline Lighting (or when such system is inoperative) provided the approach is flown using guidance from an approved flight director, heads-up display, or coupled to an autopilot flown to a DA. Authorization must be stated on the IAP or be published in the inoperative components or visual aids table of the Terminal Procedure Publication. Additional ILS RVR requirements are as follows: **(T-0)**.

6.48.5.3.1. CAT I (RVR 1800 or greater). Touchdown zone RVR must be equal to or greater than the specified minimums on the IAP. **(T-0)**.

6.48.5.3.2. CAT II (RVR 1200 to less than RVR 1800). Touchdown zone RVR must be equal to or greater than the specified minimums on the IAP. A rollout sensor is also required for CAT II operations below RVR 1600. When the runway is in excess of 8,000 feet in length, a midpoint RVR sensor is required in addition to the touchdown and rollout sensors for CAT II operations below RVR 1600. **(T-0)**. **Exception:** In accordance with AFMAN 11-202, Vol 3, RVR may be reduced to 1,000 feet with autoland to touchdown when noted on the procedure.

6.48.5.3.3. CAT IIIA (minimum RVR of 700 ft) and CAT IIIB (minimum RVR of 150 ft). Touchdown, midpoint and rollout zone RVRs must be equal to or greater than the specified minimums on the IAP. **(T-0)**. **Exception:** Limited CAT III operations may be approved on runways with only two RVR sensors installed (a touchdown and either a midpoint or rollout zone RVR sensor).

6.48.6. IAP Minimums.

6.48.6.1. Height Above Touchdown (HAT). The category (CAT) I ILS or Precision Approach Radar (PAR) DH will provide a HAT of at least 200 feet. For CAT II ILS approaches, use the lowest published radar altitude that will provide a HAT of at least 100 feet. **(T-2)**.

6.48.6.2. Circling Approaches. For circling approaches, the MDA will be as published for aircraft category. If the minimums are not published by category, the minimum altitude will be no lower than the value indicated below, plus the published airport elevation. **(T-2)**.

6.48.6.2.1. Category C-500 feet - 1 1/2 miles. **(T-2)**.

6.48.6.2.2. Category D-600 feet - 2 miles. **(T-2)**.

6.48.7. RNP Authorization Required (AR) Approaches. In addition to this AFMAN, aircrews should reference AFMAN 11-202, Vol 3, the AFM, and MAJCOM-approved RNP AR Hardcard for RNP AR procedures and restrictions. Comply with the QRH "Required RNP Approach Equipment" table for required aircraft equipment. **(T-2)**. RNP AR restrictions are as follows:

6.48.7.1. Both pilots must be RNP AR current and qualified (for training exceptions see **Chapter 9** and AFMAN 11-2C-32B, Vol 1). **(T-2)**.

6.48.7.2. Minimum RNP values are determined by the QRH "Required RNP Approach Equipment" table and the IAP. **(T-2)**.

6.48.7.3. RNP AR approaches should be flown using category D minimums. Category C may be used provided aircrew are aware of maximum airspeeds and associated performance limitations. **(T-2)**.

6.48.7.4. If multiple lines of minima associated with different RNP values are shown on the approach chart, the crew must confirm that the desired RNP value is entered in the Flight Management Computer (FMC). Aircrew must ensure that the smallest RNP value required to complete the approach or the missed approach is selected before initiating the procedure. **(T-2)**. On approaches with multiple IAFs, the approach chart may specify an RNP value for each IAF.

6.48.7.5. Except where specifically designated on a procedure as "Not Authorized," aircrew may use Distance Measuring Equipment (DME)/DME updating as a reversionary mode during the RNP AR approach or missed approach when the navigation system has the performance to continue the procedure. VOR updating is not authorized on RNP AR approaches and must be disabled prior to commencing the approach. **(T-2)**.

6.48.7.6. Aircrew are expected to maintain procedure centerlines during all RNP AR operations unless authorized to deviate by ATC or under emergency conditions. For normal operations, aircrew should limit cross-track (XTK) error deviation to +/- one half the navigation accuracy associated with the procedure segment. Brief lateral deviations from this standard (overshoots or undershoots) during and immediately after turns, up to a maximum of 1 times the navigation accuracy of the procedure segment, are allowable.

6.48.7.7. Vertical XTK error must be within the expanded vertical deviation scale during the Final Approach Segment (FAS). **(T-2)**. Momentary deviations beyond the expanded limits (AMBER scale) are allowed prior to the FAS during pitch changes associated with speed changes or extension of landing flaps.

6.48.7.8. When commencing a missed approach, Lateral Navigation (LNAV) must be selected immediately after engagement of the TO/GA switch. **(T-2)**. Below 400 feet AGL, LNAV will arm and not engage. Aircrew intervention may be required to ensure the aircraft remains on the required lateral path.

6.48.8. CAT II/III ILS Approaches. In addition to this AFMAN, aircrews should reference AFMAN 11-202, Vol 3, the AFM and the MAJCOM-approved hardcard for all CAT II/III procedures and restrictions. Comply with QRH "Required Category II/III Airborne Equipment" table for required aircraft equipment. **(T-2)**. CAT II/III restrictions are as follows:

6.48.8.1. Both pilots must be current and qualified for the CAT II or III approach to be flown (for training exceptions, see **Chapter 9** of this AFMAN). **(T-2)**.

6.48.8.2. When using visibility only, the aircraft must have enough fuel for the approach, missed approach and flight to the alternate, and to arrive at the alternate with the required reserves. **(T-2)**.

6.48.8.3. "RA NA" is annotated in the CAT II line of minima when radio altimeter minimums are not authorized for a CAT II approach. Only the inner marker may be used to identify the DH due to terrain, obstacles, or other local requirements that preclude the

use of radio altimeter minimums. In this case, CAT II approaches are not authorized when the IM is inoperative. **(T-2)**.

6.48.8.4. CAT II minimums are based on a HAT no lower than 100 feet. **(T-2)**.

6.48.8.5. The maximum crosswind is 25 knots for autoland, and 10 knots for a manual landing. **Note:** Actual CAT II/III approaches will be accomplished coupled. **Exception:** CAT II approaches may be accomplished manually if the autopilot(s) is/are unreliable or inoperative. A manual landing must be accomplished if "No Autoland" is annunciated on the autoland status annunciators (ASA) or if accomplishing a No ASA approach. **(T-2)**.

6.48.8.6. As a minimum, the following airfield equipment must be operational:

6.48.8.6.1. Approach Lights. **(T-2)**.

6.48.8.6.2. Runway centerline lighting. **(T-2)**.

6.48.8.6.3. High intensity runway lights and touchdown zone lights. **(T-2)**.

6.48.8.6.4. ILS far field monitor. **(T-2)**.

6.48.8.6.5. Sequenced flashers. **(T-2)**.

6.49. Radio Altimeter Procedures.

6.49.1. Takeoff. Set the radio altimeter as briefed. If no value is specified, set the radio altimeter for the anticipated approach HAT/HAA for an emergency return. **(T-2)**.

6.49.2. Approach/Landing. Set the radio altimeter to the HAT/HAA for the approach being flown. If arriving via a VFR traffic pattern and not using an instrument approach as a backup, set the radio altimeter to 300 ft. **(T-2)**.

6.50. Wake Turbulence Avoidance. Pilots must exercise the discipline necessary to ensure wake turbulence avoidance criteria are observed during flight operations. Acceptance of visual or contact approach clearance or instructions to follow an aircraft is acknowledgment that the pilot will maintain a safe interval for wake turbulence avoidance. **(T-2)**.

6.50.1. For VFR traffic patterns behind larger aircraft, follow "Vortex Avoidance Procedures" in the Aeronautical Information Manual. **(T-2)**.

6.50.2. For takeoff or landing behind larger jets that execute a low approach, missed approach, or touch and go landing, ensure at least 2 minutes of separation. **(T-2)**.

6.51. Brake Cooling Procedures.

6.51.1. Takeoff. Takeoffs are authorized following full stop landings provided the ground time is greater than or equal to the time required by the recommended brake cooling schedule chart from the FPPM/QRH. ***CAUTION:*** Takeoff with greater than ambient brake temperatures may increase stopping distances in the event of an RTO. PICs should take this into consideration when determining the minimum turnaround time if the required takeoff distance is close to the actual runway available. **Note**: The brakes reach their maximum temperature after approximately 15 minutes, and the crews should take this time/temperature lag into account. Refer to Brake Cooling Schedule in the QRH/FPPM after a full-stop landing if subsequent take-off is less than 15 minutes. **(T-2)**.

6.51.2. Landing. Full stop landings will be delayed until the Brake Temperature Monitoring System reads ≤ "2." **(T-2)**. While full stop landings may be accomplished with an indication of "2", this should not be considered the norm.

Section 6G—Postflight

6.52. Impoundment. If an aircraft is involved in a serious in-flight incident, the PIC should impound the aircraft immediately after landing and contact the MAJCOM/C2 or appropriate controlling agency for further instructions.

6.53. Maintenance. Immediately after arrival, the PIC and other pertinent crew members will debrief maintenance personnel on the condition of the aircraft, engines, avionics equipment, and all installed special equipment. The PIC will complete the appropriate maintenance forms and will ensure a thorough maintenance debrief is provided (if necessary) to the controlling agency prior to entering crew rest. **(T-2)**.

Section 6H—Miscellaneous Procedures

6.54. Border Clearance. Comply with the FCG and this AFMAN for border clearance procedures. **(T-0)**.

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

6.54.2. When staff support is not available, border clearance is the responsibility of the PIC. **(T-2)**. The PIC may delegate these duties to qualified crew members. The PIC is responsible for ensuring the following:

6.54.2.1. Crew members and passengers possess current passports and valid visas (if required). **(T-2)**.

6.54.2.2. Crew members and passengers have current certificates of immunization (CDC-731). **(T-2)**.

6.54.2.3. Cargo entry documents are in proper order. **(T-2)**.

6.54.2.4. Departing or entering the U.S. through an airport (civilian or military) where border clearance can be obtained. **(T-2)**.

6.54.2.5. Obtaining border clearance for aircraft cargo, passengers, crew and baggage, if required, before departing for a foreign area or after arrival from a foreign area. **(T-2)**.

6.54.2.6. Spraying the aircraft in accordance with FCG and this AFMAN. **(T-2)**.

6.54.3. Procedures for U.S. Entry.

6.54.3.1. En route, the LM or designated crew member will distribute personal customs declarations to all passengers and crew members. The LM or designated crew member will also brief passengers and crew members on customs regulations, and prepare and compile necessary border clearance forms for signature. **(T-2)**.

6.54.3.2. While en route, the AMSO should notify the C2 agency or airfield contact at the base of intended landing of any change in ETA to ensure that border clearance is accomplished as soon as possible after landing.

6.54.3.3. Obtain a permit to proceed when military necessities require that an aircraft (which has landed in the U.S. for customs clearance) proceeds to another base in the U.S. 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 off-loading 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 is 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 C2 agency. **(T-2)**.

6.54.3.4. When an aircraft lands for a U.S. border clearance, a U.S. Customs representative normally will meet the aircraft to obtain the required documents. Do not deplane passengers or crew members unless necessary for safety or the preservation of life and property. Do not unload until approved by customs and agriculture personnel or their designated representatives. This procedure applies to the initial landing in the U.S. and all landings required when operating on a permit to proceed or until all crew, passengers, and cargo complete final border clearance. **(T-2)**.

6.55. Customs, Immigration, and Agriculture Inspections.

6.55.1. Obtain Customs, Agriculture, and Public Health clearance, as required, prior to opening any doors, hatches, or windows, other than the left forward entry door, for enplaning host nation personnel. **(T-0)**.

6.55.2. Proceed directly from the aircraft to Customs, Immigration, or Agricultural inspection for processing when required by the inspector. **(T-0)**.

6.55.3. U.S. military aircraft are sovereign. When cleared to overfly or land in foreign territory, it is U.S. policy to assert that military aircraft are entitled to the privileges and immunities which customarily are accorded warships. These privileges and immunities include, in the absence of stipulations to the contrary, exemption from duties and taxation; immunity from search, seizure, and inspections (including customs, immigration and agriculture inspections); or other exercise of jurisdiction by the host nation over the aircraft, personnel, equipment, or cargo on board. USAF PICs should not authorize search, seizure, inspection, or similar exercises of jurisdiction enumerated above by foreign authorities except by direction of HQ USAF or the American Embassy in the country concerned. **(T-0)**.

6.55.4. PICs should not permit the inspection of their aircraft by officials of any foreign government (including customs, immigration and agriculture inspections). If requested to do so, the crew should deny access and seek aid from the senior USAF representative, American Embassy, or consulate within the host nation. Customs or other officials will be informed of the above procedure and requested to confirm their request through their own government and with U.S. Department of State representatives. **(T-0)**. If necessary, the crew should seal the aircraft, enter crew rest and cancel departure intention until resolution of the matter by appropriate authority. Inform C2 authorities by the fastest available means should this situation occur. **(T-0)**. **Note:** PICs should be aware that denying entry to host nation customs/agriculture may result in the suspension of all ground services at the airfield and the ability for the aircrew to deplane and enter crew rest (if applicable). PICs should use their best judgment to determine the appropriate course of action, taking into consideration the

urgency and priority of the mission and aircraft security. In all cases, American Embassy guidance (if available) will be followed. **(T-0)**.

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

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

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

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

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

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

6.56. Insect and Pest Control.

6.56.1. Responsibility. PICs will ensure required spraying is accomplished in accordance with the FCG, or as directed by higher headquarters. Certify the spraying on CBP 7507, or on forms provided by the country transited. Aircraft should never be sprayed with passengers on-board, except when mandated by the FCG. **(T-2)**.

6.56.2. Procedure at Aerial Port of Disembarkation (APOD). On arrival at an 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 crew members 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.

6.57. Operational Prerogative of Military Aircraft (Due Regard Procedures). When operationally necessary, PICs are authorized to conduct military flight operations with due regard for the safety of navigation of civil traffic in international airspace in accordance with FLIP GP. Except for pre-planned missions, PICs shall consider such operations in peacetime as

a flight rule deviation and will comply with the reporting requirements in AFMAN 11-202, Vol 3. **(T-2)**.

6.58. Hazardous Material (HAZMAT) Procedures. The term "hazardous material" refers to any material that may endanger human life or property as a result of its quantity, properties, or packaging. Reference AFJI 11-204, *Operational Procedures for Aircraft Carrying Hazardous Materials* and AFMAN 24-204, *Preparing Hazardous Materials for Military Air Shipments*, for all procedures and restrictions when handling HAZMAT. **(T-2)**.

6.59. Extended-range Twin-engine Operational Performance Standards (ETOPS).

6.59.1. ETOPS are operations in any geographical area where, at any point on the planned route, the aircraft will be more than 60 minutes from an adequate airport, at the single engine drift down speed and altitude in still air. An ETOPS area of operation may also be considered to apply to over-land areas having suitable airports within 60 minutes, at the single engine drift down speed and altitude in still air, but are not considered useable for political or military considerations.

6.59.2. The C-32B is considered 180 minute ETOPS compliant.

6.59.3. ETOPS relief and waivers. Unit CC/DO is the waiver authority for all ETOPS-related waivers. **(T-3)**.

6.59.3.1. ETOPS relief notification due to route. If upon optimizing the flight plan, the flight cannot remain within the maximum ETOPS range, the mission planner or aircrew will notify the unit CC/DO. For flights that cannot remain within the maximum ETOPS range the following applies:

6.59.3.1.1. Training missions. ETOPS compliance is mandatory. Flights will be rerouted, delayed or cancelled until all ETOPS criteria are satisfied. **(T-3)**.

6.59.3.1.2. HHQ-directed alert launches or operational support missions. The unit CC/DO will evaluate and direct the aircrew how the mission should proceed. **(T-3)**.

6.59.3.2. ETOPS waivers for mechanical reasons. If the MEL item states “Except for ER”, “Extended range not authorized” or lists a lower ETOPS time value (120, 90, etc.), the following applies:

6.59.3.2.1. Training missions. Training missions must comply with the MEL-directed ETOPS range limits. If unable to comply, they will not operate in extended range airspace until the condition is corrected. **(T-3)**.

6.59.3.2.2. HHQ-directed alert launches or operational support missions. The unit CC/DO is the waiver authority for extended range operations outside the MEL. **Note:** The OG/CC (or equivalent) retains MEL waiver authority for other than extended range operations. **(T-3)**.

6.59.4. Dispatch Criteria. Flights shall not be dispatched on an ETOPS flight unless the required suitable ETOPS en route alternates are reviewed prior to flight. An airport may not be listed as a suitable ETOPS en route alternate unless:

6.59.4.1. The landing distance required meets the criteria established in **Table 5.1** of this AFMAN. **(T-3)**.

6.59.4.2. The airport services and facilities are adequate for the approved approach procedure(s) and operating minima for the runway expected to be used. **(T-3)**.

6.59.4.3. The latest available forecast weather conditions from the earliest time of landing to the latest time of landing at the airport, equals or exceeds the authorized planning weather minima for ETOPS en route alternate airports. In addition, for the same time period, the forecast crosswind component (including gusts) for the expected landing runway shall not exceed the maximum crosswind permitted in **Table 5.3** of this AFMAN. **(T-3)**.

6.59.4.4. The airport must have one of the following combinations of instrument approach capabilities and weather minima:

6.59.4.4.1. A single operational navigation facility. For airports with at least one operational navigational facility providing a straight-in non-precision approach procedure, or CAT I precision approach, or when applicable, a circling maneuver from an instrument approach procedure: add 400ft to the MDA(H) or DA(H), as applicable and add 1sm or 1600m to the landing visibility minimum. **(T-3)**.

6.59.4.4.2. For airports with at least two operational navigational facilities, each providing a straight-in approach procedure to different suitable runways: add 200ft to the higher DA(H) or MDA(H) of the two approaches used and add 1/2sm or 800m to the higher authorized landing visibility minimum of the two approaches used. **(T-3)**.

6.59.4.4.3. For airports with one useable authorized CAT II/III ILS IAP, use a ceiling of 300ft and visibility 3/4sm (1200m) or RVR 4000 (1200m). **(T-3)**. **Note:** Conditional forecast elements need not be considered, except that PROB40 or TEMPO condition below lowest applicable operating minima must be taken into account. **Note:** For operations outside the United States, because of variations in the international metric weather forecasting standards, visibility of 700m may be used in lieu of 800m.

6.59.4.4.4. Lower than standard en route alternate weather minima. If a suitable ETOPS alternate cannot be found meeting the guidance of **paragraph 6.59.4.4** the flight crew or mission planner will select a suitable alternate having a ceiling and visibility greater than or equal to the lowest suitable approach minimums available (excluding radar) for the expected runway in use, but not less than a ceiling of 200ft and a visibility of 1/2sm (800m) or RVR 2400; whichever is higher; and winds within operational limits of the aircraft, corrected for RCR. The aircrew must be notified prior to departure if these minima are used. The mission planner and the aircraft commander will evaluate the weather and diversion scenario and shall formulate an understanding of the preferred diversion airports that may be used during the portion of the flight affected by the use of the en route alternate weather minima. **Note:** Lower than standard en route weather minima are for operational missions or operations-support missions with passengers only. Unit CC/DO approval is required. For training missions, comply with **paragraph 6.59.3.1.1** **(T-3)**.

6.59.5. ETOPS Range Calculations. An initial calculation is performed to determine ETOPS range and location of ETP(s) for a diversion based on the scenario whereby an engine loss occurs at the most critical point, and the aircraft continues to the alternate at an approved

power setting, at the engine inoperative drift down altitude. This calculation is based on an average no wind true airspeed constant not exceeding the AFM limitations for speed and altitude. Computation of the ETOPS range limitation is determined by the following:

6.59.5.1. Engine loss and decompression is at the most critical point (ETP). **(T-3)**.

6.59.5.2. Immediate descent to, and continued cruise at 10,000ft at the approved one-engine inoperative cruise speed, in still air. **(T-3)**.

6.59.5.3. Using the FPPM, assuming an in-flight weight of 210,000 lbs. and a speed of Mach 0.80/310 KIAS, the range for 180 minutes is 1,268 nm. **(T-3)**.

6.59.6. ETOPS Fuel Requirements. Additional fuel requirements for all flights operating in extended range airspace, as defined by **paragraph 6.59.1**, will account for the following:

6.59.6.1. Upon reaching the suitable alternate, descent to 1,500ft above the field elevation, hold for 15 minutes, and then execution of a normal approach and landing. **(T-3)**.

6.59.6.1.1. 5% penalty for errors in wind forecasts. **(T-3)**.

6.59.6.1.2. 5% penalty in fuel mileage for engine deterioration. **(T-3)**.

6.59.6.1.3. APU operation. **(T-3)**.

6.59.6.1.4. MEL/CDL penalties. **(T-3)**.

6.59.6.1.5. Airframe and engine Anti-icing. **Note:** Only required if temperatures below a certain value are expected during the diversion. **Note:** These fuel requirements are calculated from the extended range entry to exit point, not for the entire route of flight. **(T-3)**.

6.59.7. En Route Progress.

6.59.7.1. Prior to the extended range entry point. During the course of the flight, the aircrew will stay informed of any significant changes in conditions at the designated en route alternates. Prior to the extended range entry point, the aircrew will ensure the weather from the earliest to the latest time of landing at the designated ETOPS alternates, equals or exceeds the authorized planning weather minima for en route alternate airports. In addition, for the same time period, the forecast crosswind component for the expected landing runway shall not exceed the maximum crosswind component permitted in **Table 5.3** of this AFMAN. Additionally, landing distances and airport services at the en route alternate must be evaluated. If any conditions are identified which would preclude a safe approach and landing, and no other suitable alternates are available with 180 minutes, the PIC will notify the unit CC/DO to determine the best course of action. If contact is not practical, the PIC will make the decision on how to continue the mission. **Note:** Training missions must comply with all ETOPS requirements prior to the extended range entry point. **(T-3)**.

6.59.7.2. After the extended range entry point. If an en route alternate becomes unsuitable after the aircraft has passed the extended range entry point, ETOPS weather minimums no longer apply. Conditions need only permit a safe approach and landing. The decision on how to continue rests with the PIC and needs no further approval. This is applicable to all missions (including aircrew training missions). **(T-3)**.

6.59.8. Malfunctions/Emergencies.

6.59.8.1. General. In the event of a single or multiple critical system failure with only one associated system remaining, the crew shall fly and land at the nearest suitable airport. Base this decision on all relevant factors such as aircraft conditions, weather en route and suitability of alternate airports, and notify C2 as soon as practical of this decision. **Note:** If an aircraft is unable to continue its flight in accordance with its ATC clearance, a revised clearance shall, whenever possible, be obtained prior to initiating any action using the radio distress or urgency message, as appropriate. If prior clearance cannot be obtained, an ATC clearance shall be obtained at the earliest possible time. In the meantime, the crew shall broadcast the aircraft's position (including the track/airway as appropriate) and intentions on 121.5 MHz at suitable intervals until ATC clearance is received. **(T-3)**.

6.59.8.2. Situations which require a landing at the nearest suitable airport include but are not limited to:

6.59.8.2.1. Engine failure/fire. **(T-3)**.

6.59.8.2.2. Cabin smoke/fire which cannot be positively verified or extinguished. **(T-3)**.

6.59.8.2.3. Cargo compartment fire. **(T-3)**.

6.59.8.2.4. Operations with only one hydraulic system or with only one engine driven generator (without an APU) remaining. **(T-3)**.

6.59.8.2.5. Dual Engine Indication and Crew Alerting System failure. **(T-3)**.

6.59.8.3. Before Passing the Extended Range Entry Point:

6.59.8.3.1. On 120 minute ETOPS, the flight may not proceed beyond the extended range entry point if any of the following failures or malfunctions have occurred:

6.59.8.3.1.1. Fuel Filter Message. **(T-3)**.

6.59.8.3.1.2. Air conditioning pack. **(T-3)**.

6.59.8.3.1.3. Cargo compartment fire extinguisher system, unless both cargo compartments are empty or only non-combustible materials are carried. **(T-3)**.

6.59.8.3.1.4. Loss of left hydraulic system together with a generator failure. **(T-3)**.

6.59.8.3.1.5. Engine and/or wing anti-ice unless the aircraft is not to be operated in known or forecast icing conditions. **(T-3)**.

6.59.8.3.1.6. Dual Inertial Reference System (IRS) failure. **(T-3)**.

6.59.8.3.1.7. Dual Electronic Flight Instrument System (EFIS) failure (one symbol generator remaining). **(T-3)**.

6.59.8.3.1.8. Single Flight Management System (FMS) system failure. **Note:** Both FMS systems required for entry into oceanic airspace. **(T-3)**.

6.59.8.3.2. In addition to the above items a flight may not proceed beyond the extended range entry point on 180 minute ETOPS flights if the following failures or malfunctions have occurred:

6.59.8.3.2.1. Loss of left hydraulic system. **(T-3)**.

6.59.8.3.2.2. Loss of a generator. **(T-3)**.

6.59.8.3.2.3. Left or center IRS failure. **(T-3)**.

6.59.8.3.2.4. Single EFIS failure (symbol generator). **(T-3)**.

6.59.8.3.2.5. Weather radar. **(T-3)**.

6.60. Inappropriate Charges. In accordance with the FCG, aircrews should not pay inappropriate charges, which include any air navigation, overflight fees, and landing or parking at any government airport. If asked to pay such charges aircrews should:

6.60.1. Advise the local authorities that the charges are inappropriate for a U.S. Government aircraft and the aircrew cannot pay them.

6.60.2. Contact United States Defense Attaché Office (USDAO) personnel or other appropriate American Embassy officials at either the airport or at the embassy itself and follow their guidance. **Note:** USDAO or American Embassy intervention may not always be feasible.

6.60.3. If there is no USDAO or American Embassy guidance to the contrary and the local authorities will not let the aircraft depart without payment, aircrews should do the following:

6.60.3.1. Obtain a fully itemized copy of the receipt or bill bearing the printed name and legible signature of the person accepting payment and note the amount paid. **Note:** Verify the signer's identity by asking to see photo identification (if available).

6.60.3.2. If cash payment is demanded, insist that the bill include a statement written in English that cash was paid and that a specific person received it.

6.60.3.3. Mark inappropriate charges on the receipt or bill: "INVALID FEES."

6.60.3.4. Annotate the receipt or bill with the remark: "PAID UNDER PROTEST."

6.60.3.5. Submit the signed receipt or bill to the finance officer at the aircrew's home station.

Chapter 7

AIRCRAFT SECURITY

7.1. General. This chapter provides guidance on aircraft security and preventing and resisting unlawful seizure (hijacking) of aircraft. AFI 13-207-O, AFI 31-101, *Integrated Defense (ID)* and specific MAJCOM security publications contain additional guidance. Aircrews will not release information concerning hijacking attempts or identify armed aircrew members to the public. **(T-1)**.

7.2. Security. The C-32B is normally designated as a protection level "3" asset. However, it requires protection level "2" if Top Secret/SCI information is to be stored on board. AFI 31-101 determines the security requirements for assets that are to be left unattended on U.S. Military bases. The PIC is responsible for aircraft security at non-military installations. **(T-3)**. HHQ or the OG/CC (or equivalent) may direct the use of security measures above and beyond the requirements set forth by the PIC.

7.3. Air Force Physical Security Program. The following security procedures will implement AFI 31-101 and AFI 13-207-O requirements for C-32B aircraft:

7.3.1. PIC Authority. The PIC will ensure that adequate aircraft security measures are provided at all times. **(T-1)**. If, in the PIC's opinion, airfield security is inadequate and the safety of the aircraft is in question, the PIC may waive the flight duty period limits and crew rest requirements and depart as soon as possible for an airfield considered reliable; report movement and intentions to the controlling agency as soon as practical. If departure is not possible, the aircrew must secure the aircraft to the best of their ability. In no case will the crew leave the aircraft unattended. Crew rest requirements will be subordinate to aircraft security when the airframe may be at risk. The PIC should rotate a security detail among the crew to provide for both aircraft protection and crew rest until relief is available. Request security assistance from the nearest DoD installation, U.S. Embassy, local military or law enforcement agencies as appropriate. **(T-2)**.

7.3.2. Advance Security Support Arrangements. Unit mission planners and the PIC will ensure security support has been coordinated at en route stations in advance. If security requirements cannot be met prior to departure, the airfield may be deemed unsuitable for RON by the unit. Units should use local, MAJCOM and AOR Intelligence/Threat Working Group and U.S. Embassy recommendations to determine suitability. The OG/CC (or equivalent) is the arbiter for security. Unit CC/DO and unit mission planners will work with the PIC for alert missions and en route diversions. **(T-3)**.

7.3.3. Briefings. PICs will obtain threat assessment and security capability evaluation briefings before departing home station for all missions that will RON outside of the United States or its territories. Unit CC/DO will provide the PIC with pertinent updates en route. **(T-3)**.

7.3.4. Baggage Security. Baggage not certified safe for loading by a responsible government agency will be inspected prior to loading at the PIC's discretion. Verify baggage identification against the passenger manifest (if possible). Aircrew members will secure their own baggage. The PIC or designated representative is responsible for explaining baggage security requirements to the passenger POC. **(T-2)**.

7.3.5. Flight line photography. Refer to the *Security Classification Guide* for guidance pertaining to aircraft photography and videos. **(T-2)**.

7.4. Detecting Unauthorized Entry.

7.4.1. Anytime the aircraft is to RON or will be left unattended for a significant amount of time, the following procedures apply:

7.4.1.1. Lock all interior hatches from the inside and place a padlock on the crew entry door and the forward Electrical/Electronic (E/E) compartment. **(T-3)**.

7.4.1.2. The two padlock locations will be sealed with alphanumeric seals. The seal numbers will be recorded in the mission package by a crew member or unit maintenance. **(T-3)**.

7.4.1.3. Upon return to the aircraft or at the completion of crew rest, whichever occurs first, a crew member or unit maintenance will verify the seal numbers and the internal security of the other aircraft entry points. **(T-3)**.

7.4.1.4. Preflight inspections will be expanded to include a thorough check of all accessible areas. This check includes aircraft wheel wells, keel beam bays and lower nose compartment for unauthorized packages, personnel, other unfamiliar devices or any signs of tampering. Report any suspicious items to host security forces. **(T-3)**.

7.4.2. Suspected Unauthorized Entry. If the PIC suspects the aircraft has been tampered with or subjected to unauthorized entry, take the following actions:

7.4.2.1. Notify the local security authorities and request a thorough inspection of the aircraft for sabotage, explosive devices, and pilferage. **(T-3)**.

7.4.2.2. Notify the appropriate C2 agency. Advise C2 of any requirements for assistance, and provide a revised departure time. **(T-3)**.

7.4.2.3. If there are indications that sabotage is a possibility or if security inspections may delay the departure, notify C2 and the passenger POC. Establish a new departure time. If necessary, coordinate alternate transportation for the passengers through C2. **(T-3)**.

7.4.2.4. Monitor the security check of the aircraft. When cleared by security authorities, conduct thorough preflight inspection. Look for broken wiring, damaged components, foreign devices, etc. **(T-3)**.

7.4.2.5. If both the security authorities and the PIC are assured aircraft is safe to fly, notify the OG/CC (or equivalent). Depart only with the OG/CC (or equivalent) approval. **(T-3).**

7.4.3. Security awareness is crucial to effective mission accomplishment. Aircrews must always remain vigilant to their surroundings, especially at high threat, low security locations. Aircrews should maintain a heightened security posture throughout all pre-takeoff activities.

7.5. Protecting Classified Material on Aircraft. The PIC is responsible for the protection of classified materials aboard their aircraft. The AMSO is responsible for supporting the PIC with these duties. Comply with AFMAN 17-1302-O, *Communications Security (COMSEC) Operations* and this AFMAN for the storage and protection of classified material. **(T-2)**.

7.6. Preventing and Resisting Hijacking. Refer to AFI 13-207-O for guidance on preventing and resisting hijacking. **(T-2)**.

7.7. Arming of Crew Members. When crews are directed to arm, the PIC will determine which aircrew members will be armed (two crew members will be armed unless directed otherwise). **(T-1)**. All crew members should know who is armed. Aircrew will check out weapons when directed by C2 or in accordance with the OPORD or OPLAN. Aircrews will arm in accordance with the local supplement to **Chapter 10** of this AFMAN. The unit CC will ensure that crew members are familiar with weapon issue, loading, transfer, and receipt procedures. Comply with AFMAN 31-129, *USAF Small Arms and Light Weapons Handling Procedures***,** AFI 13-207-O and local supplement to **Chapter 10** of this AFMAN for all arming requirements and procedures. If an armed crew member must leave the crew en route, transfer the weapon to another authorized crew member using AF Form 1297, *Temporary Issue Receipt*. **(T-3)**.

Chapter 8

AIR-TO-AIR REFUELING PROCEDURES

8.1. General. For AAR procedures, "receiver" refers to the C-32B. "Tanker" refers to the KC-135/KC-10. NATO publication ATP-3.3.4.2, *Air-To-Air Refuelling* (ATP-56) provides guidance for refueling terminology and procedures.

8.1.1. Fuel transfer rate is approximately 6,000 pounds per minute for the KC-135 and approximately 8,000 pounds per minute for the KC-10 with all tanker air refueling pumps operating.

8.1.2. Slipway Door Procedures. To prevent freezing, the slipway door should be cycled open and closed prior to passing 10,000 feet MSL.

8.2. Air-to-Air Refueling Limitations. This chapter establishes guidelines applicable to C-32B aircraft and aircrews, and is supplemental to those prescribed by the flight manual and other applicable directives. **(T-2)**.

8.2.1. Refueling During Training Missions. AAR should not be accomplished during training missions when:

8.2.1.1. Encountering conditions that, in the opinion of the PIC, result in marginal control of either aircraft or the boom. **(T-2)**.

8.2.1.2. Either the tanker or the receiver has less than the full number of engines operating. **(T-2).**

8.2.1.3. Manual Boom Latching. A tanker without disconnect capability means the boom operator cannot trigger an immediate disconnect. AAR operations will not be conducted after a known loss of tanker disconnect capability. **Exception:** Fuel emergency situation or contingency operations. **Exception:** Manual boom latching procedures are authorized for all refueling operations with the KC-10 if the tanker's independent disconnect system is operational. **Note:** When conducting AAR without tanker automatic disconnect capability, limit contacts to the minimum number necessary to complete mission requirements. Do not accomplish boom limit demonstrations, or practice emergency separation while in the contact position. **Note:** Boom operator and receiver pilot must coordinate all actions as required by applicable directives and checklists when making AAR contacts using emergency boom latching procedures. **(T-1)**.

8.2.2. Practice Emergency Separation.

8.2.2.1. Prior to the accomplishment of a practice emergency separation, coordination between the tanker pilot, boom operator, and receiver pilot is mandatory. Coordination must include when the separation will occur and who will give the command of execution. Tanker pilot coordination may be accomplished over interphone with the boom operator. **(T-2)**.

8.2.2.2. If separation is initiated from the contact position, the receiver's AAR system must be in normal, and boom operator disconnect capability confirmed. **(T-2)**.

8.2.2.3. Practice emergency separation will not be accomplished with passengers on board. **(T-2)**. **Exception:** When the only passengers on the aircraft are supporting forces and 108 WG aircrew members (e.g., KC-135 pilots and boom operators), practice emergency separations are authorized for demonstration/familiarization purposes.

8.2.3. Receiver AAR Training for Unqualified or Non-Current Receiver Pilots. In-flight training will be accomplished with IP1 direct supervision (access to a set of flight controls) and the following procedures:

8.2.3.1. For receiver pilot initial qualification or requalification, an IP1/EP1 will be in the other pilot seat through all phases of the refueling from astern until post AAR. **(T-2)**.

8.2.3.2. Pilots that are not PF AAR qualified may fly AAR maneuvers including contacts, with an IP1 in the other pilot seat through all phases of the refueling from astern to post AAR, on designated training sorties with no passengers onboard. Unit maintenance personnel, MEP and/or certain supporting forces are not considered passengers for these purposes. **(T-2)**.

8.2.3.3. If a change of pilot control is made, the receiver aircraft will move back to at least the astern position except for immediate assumption of control by the IP1. **(T-2)**.

8.2.3.4. If a receiver seat change takes place, move back to at least 100 feet in trail of the tanker and to a point where the receiver pilot can maintain visual contact with the tanker until the seat change is complete. **(T-2)**.

8.2.3.5. When conducting AAR behind a KC-135, disconnect capability must be demonstrated by a boom operator-initiated disconnect prior to conducting a limit demonstration or a practice emergency separation from the contact position. **(T-2)**.

8.2.4. Weather Limitations.

8.2.4.1. Turbulence: Do not plan AAR in areas of forecast or actual severe turbulence. Terminate refueling if moderate turbulence is encountered. **(T-2)**.

8.2.4.2. Visibility: Do not plan AAR in areas where forecast visibility is less than 1 nm. Do not close from 1 nm range (2 nm for tanker cell formations) unless you have visual contact with the tankers. Discontinue refueling if in-flight visibility is insufficient to continue safe refueling operations. **(T-2)**.

8.3. ATC Coordination.

8.3.1. Receiver aircraft will maintain two-way radio contact with ATC until cleared to the AAR block altitude, established in that block, and cleared to the AAR frequency by ATC. **(T-2)**.

8.3.2. AAR operations are normally accomplished on tracks or in anchor areas published in the DoD FLIP. Certain missions or operational considerations may require AAR operations in areas not published in FLIP in which an ALTRV is used. When operating in oceanic or foreign airspace, ALTRV guidance may or may not be applicable. Aircrews should verify all ALTRV procedures and restrictions with the mission planner, host nation air traffic service or OPORD as applicable.

8.3.3. Normally conduct AAR on an IFR clearance. Refueling may be conducted under VFR when coordinated with the controlling ARTCC. AAR under due regard should only be

done as a last resort when operational requirements dictate. These procedures are permitted only with tanker concurrence. **(T-2)**.

8.3.4. Military Assumes Responsibility for Separation of Aircraft (MARSA).

8.3.4.1. Acceptance of MARSA is normally the tanker's responsibility. MARSA begins when requested by the tanker and approved by the controlling air traffic service. This is usually done prior to the air-to-air refueling initial point (ARIP) or rendezvous initial point for AAR conducted on published tracks. When a rendezvous is conducted in an area that does not use normal AAR track or anchor rendezvous procedures, MARSA begins when participating aircraft enter the refueling airspace. **(T-2)**.

8.3.4.2. MARSA ends when normal separation standards are established and ATC accepts control at the end of refueling. **(T-2)**.

8.3.5. During AAR, the PIC will designate one crew member as the primary monitor for ATC. This crew member will be responsible for writing down any clearance issued to the tanker for the receiver aircraft. The PIC will ensure the receiver and the tanker are on the same frequency. The PIC will ensure the accuracy of the clearance. **(T-2)**.

8.3.6. Receiver aircraft shall squawk normal when separation from the tanker is greater than 3 miles or as requested by ATC. **(T-2)**.

8.4. Emission Control (EMCON) Procedures.

8.4.1. EMCON is to be the minimum required for flight safety and will depend on prevailing weather conditions. AAR is normally conducted utilizing EMCON Option 2. Reference ATP-3.3.4.2 for comprehensive EMCON information. **(T-2)**.

8.4.2. EMCON Options 2-4 Procedures. Tanker and receiver planners will coordinate and aircrews will be briefed on the following:

8.4.2.1. RV type. **(T-2)**.

8.4.2.2. RV point and time. **(T-2)**.

8.4.2.3. Tanker and receiver altitudes. **(T-2)**.

8.4.2.4. Tanker formation procedures and break up arrangements. **(T-2)**.

8.4.2.5. Missed RV procedures, to include refueling area departure time and backup communication procedures if applicable. **(T-2)**.

8.5. AAR Radio Procedures.

8.5.1. Communications requirements should be established prior to flight. Radio communications should be kept to a minimum consistent with safety and the published EMCON option. Refer to ATP-3.3.4.2 for a full description of communication procedures.

8.5.2. With the exception of breakaway calls, crew members may shorten individual call signs using only the number. Example: TERRA 11 (one-one) would be 11 (one-one).

8.6. Visual Signals. Radio silent refueling can be conducted by use of visual signals provided precaution and procedures are observed. Refer to ATP-3.3.4.2 for a full description of visual signals. Descriptions and diagrams of tanker lighting and pilot director lights (PDL) for the KC-135/KC-10 can be found in ATP-3.3.4.2 (C), *Standards Related Document.* **(T-2)**.

8.7. Lighting.

8.7.1. While accomplishing a rendezvous and descent during hours of darkness or during periods of limited visibility, the receiver will have the following exterior lights set to aid in visual acquisition. The receiver's position and anti-collision lights will be ON. Applicable tanker external lights will be turned on at least 15 minutes prior to the latest known receiver ETA for the rendezvous point. As the receiver approaches the astern position, the flight deck lights will be dimmed as required, and the upper beacon light turned OFF. **(T-2)**. While approaching the contact position, the intensity of receiver slipway lights may be adjusted as requested by the boom operator. Diagrams of tanker lighting and PDLs for the KC-135/KC-10 can be found in ATP-3.3.4.2 (C). **Note:** Visual contact for night AAR can be aided by requesting the tanker flash his landing light prior to and/or during the tanker turn.

8.7.2. If the PDLs fail to illuminate when contact is established, the receiver pilot will inform the boom operator if refueling operations will continue. Verbal corrections from the boom operator may be requested if refueling is continued. Attempts to affect contact during a loss of any AAR lightning that results in less than desire illumination will be at the discretion of the boom operator. **(T-2)**.

8.7.3. Single tankers performing a rendezvous will always display red/white in the upper and lower rendezvous beacon lights. The spare tanker will not display a rendezvous beacon light during the rendezvous. However, if the spare tanker is used during AAR, the appropriate color code will be displayed until the receiver is in the astern position. Formation tanker identification lighting will be in accordance with **Table 8.1** To further aid in identification, tanker position lights will be BRIGHT and FLASHING for numbers 1 and 3 and will be BRIGHT and STEADY for 2 and 4. After the receiver has established visual contact and has closed to 1/2 nm in trail, tankers will turn position lights to STEADY and DIM and turn lower rotating beacon lights OFF. When any aircraft will be flying visual wing formation on the tanker, the tanker will also turn off the upper rotating beacon. **(T-2)**.

Table 8.1. Tanker Identification Lighting.

Tanker Number	Light Color	
	Upper	Lower
1	Red	Red
2	White	White
3	Red-White	Red-White
4	White	Red

8.7.4. Pilot Director Lights. The director lights do not give true vertical and horizontal information. The up-and-down lights change because of angular movement of the boom and the fore-and-aft lights change because of in-and-out movements of the boom. The axis of the director light system is inclined at a 30-degree angle to the tanker fuselage. The angle causes an indication in both lights when the receiver makes a true vertical or horizontal movement. For example, flying forward while in contact will cause the boom to compress and also increase its angle with the tanker fuselage. The lights will show that the aircraft is flying forward and down. If a true up movement is made, the boom will compress and also lessen its angle with the tanker fuselage giving a combined up and forward indication from the lights. When this interaction between lights is understood, it can be used as an advantage in

keeping position. Small fore-and-aft corrections can be made with little or no power change by moving vertically. The PDLs will remain illuminated and follow boom movements in both the contact made and disconnect conditions. PDLs on the left row are for elevation and on the right row for telescoping (forward and aft movement). The elevation lights are triangular shaped and the telescoping lights are rectangular shaped.

8.7.5. Background lights are located behind the panels. The colored panels are illuminated by lights controlled by boom elevation during contact. On the telescoping side, background lights do not illuminate the colored panels. There is an illuminated white panel between each panel to serve as a reference. The A for aft and F for forward augment the colored panels on the telescoping side. The receiver PDLs illuminate and follow boom movements in both contact and disconnect conditions. There are no lights for azimuth position. The pilot may use a fluorescent yellow stripe on the bottom center of the tanker fuselage as a centerline reference.

8.8. Boom Envelope Limits. The AAR boom envelope is the operational limits dictated by the aerodynamic control authority of the boom. As long as the receiver is positioned inside the limits, contact can be held despite rolling, yawing, or pitching. The envelope limits are set well within mechanical limits of the boom so that disconnect will normally take place before any structural damage occurs. Boom envelope limits are outlined below in **Table 8.2** Reference ATP-3.3.4.2 (C) for KC-135/KC-10 boom envelope diagrams. ***CAUTION:*** Approaching boom limits at relatively high velocity can cause structural damage due to binding action of the boom nozzle.

Table 8.2. Boom Envelope Limits.

KC-135	Limit	KC-10
20 Degrees	Upper Elevation	20 Degrees
40 Degrees	Lower Elevation	40 Degrees
10 Degrees	Left/Right Azimuth	25 Degrees
6 Feet	Inner Telescopic	6 Feet
18 Feet	Outer Telescopic	21 Feet
Note: The KC-135 lower limit is reduced to 35 when less than 4 units of boom trim are used.		

8.9. Rendezvous Procedures. Refer to ATP-3.3.4.2 for a full description of rendezvous procedures. ***WARNING:*** When adverse weather is encountered in the rendezvous area, the search radar should be used for weather scan, rather than for monitoring or directing the rendezvous.

8.9.1. Rendezvous B and C procedures will not be trained or executed by USAF aircraft. **(T-2)**.

8.9.2. Normal Rendezvous Procedures. Normal rendezvous procedures and reference information for the C-32B are as follows:

8.9.2.1. Rendezvous Alpha (Anchor RV) ATP-3.3.4.2 Annex 2A.

8.9.2.2. Rendezvous Delta (Point Parallel RV) ATP-3.3.4.2 Annex 2D.

8.9.2.3. Rendezvous Golf (En route RV) ATP-3.3.4.2 Annex 2G.

8.9.3. Alternate Rendezvous Means. When primary means are not available, or are lost, alternate means will be utilized to perform the rendezvous. When using alternate means, the tankers and receivers will fly the same profiles as described in ATP-3.3.4.2. **(T-1)**. The following are some suggested alternate means for conducting the rendezvous. The various alternate means should be used in conjunction with each other when equipment availability permits, and when practical, to ensure a successful rendezvous (e.g., common VORTAC, TACAN DME, Radar Beacon, and FAA/Ground Controlled Intercept advisories).

8.9.3.1. FAA facilities, when available, may be used for vector and separation advisories.

8.9.3.2. DME/Radial information from a common TACAN/VORTAC may be exchanged, with the final turn to refueling track being accomplished when the DME difference equals proper turn range.

8.9.3.3. When adequate navigational checkpoints are available, tanker may adjust final orbit pattern to arrive over the air-to-air refueling control point (ARCP) on refueling heading at receivers ETA to the ARCP.

8.9.4. Descent and Closure. The receiver should be established at an altitude 1,000 feet below the assigned air refueling altitude prior to the rendezvous. The receiver should descend at 2,500 feet per minute. Establish Mach 0.85 or 310 KIAS, whichever is less, through level-off to a point 2 nautical miles from the tanker. This level-off altitude will be maintained until 1 nm from the tanker and visual contact has been established at which time a gradual climb to the astern position will be initiated, arriving at 1/2 nm in trail with a minimum altitude separation of 500 feet. The receiver should maintain 310 KIAS until the range vs. airspeed schedule from **Table 8.3** applies. During deceleration, it is imperative the airspeed schedule be maintained. **(T-2)**. The PNF will pass the range calls to the receiver pilot at 3, 2, 1, and 1/2 nm.

Table 8.3. Airspeed Schedule.

>1 nm	Mach 0.85 or 310 KIAS, whichever is less
1 nm	Mach 0.83 or 290 KIAS, whichever is less
1/2 nm	Mach 0.81 or 285 KIAS, whichever is less
Contact	Mach 0.80 or 275 KIAS, whichever is less
WARNING: Tankers will maintain applicable contact AAR airspeed during closure. If within 1 nm closure the tanker is off airspeed by more than 10 knots and required to decelerate or accelerate to obtain contact airspeed, the receiver pilot will be informed prior to tanker airspeed changes. **(T-1)**. **Note:** If the receiver is more than 4 nm in trail with the tanker, the airspeed may be increased to 330 KIAS for closure. The normal speed schedule should be resumed at 1 nm in trail.	

8.9.5. Rendezvous Overrun. Upon recognition, either aircraft can direct or terminate overrun procedures. The receiver will reduce airspeed to 255 KIAS and maintain track and altitude. The tanker will increase airspeed to 310 KIAS, maintain altitude, adjust track as required, and overtake the receiver. After overtaking the receiver and terminating the overrun, the tanker will reduce the airspeed to 275 KIAS for final receiver closure. **(T-2)**.

8.9.6. Early Arrival of Receiver. In the event the receiver arrives ahead of the tanker at the ARIP, ARCP, or RV point, the receiver will obtain ATC clearance to orbit at an altitude that ensures at least 1,000 feet separation between tanker and receiver. **(T-2)**.

8.10. Additional AAR Procedures.

8.10.1. The receiver pilot will establish a rate of deceleration in sufficient time to allow a zero rate of closure at the astern position. **Note:** If the receiver fails to obtain a stabilized position at astern, or it becomes apparent that a closure overrun will occur, a breakaway will be initiated. **(T-1)**. ***WARNING:*** Failure to initiate a breakaway under closure overrun condition may result in a mid-air collision. Due to the magnitude of interrelated aerodynamic effects, flying two aircraft in close vertical proximity is unsafe. Upwash and downwash effects may occur drawing the aircraft together. Low-pressure areas created by an overrunning receiver flying under the tanker will affect static ports causing possible erroneous airspeed and altitude indications to both aircraft. The tanker autopilot altitude hold function may sense the low pressure as a climbing indication and initiate a descent into the lower aircraft.

8.10.2. Once the astern position is attained, the receiver pilot should make necessary corrections to line the receiver up with the tanker fuselage centerline and dampen all relative lateral movement of the receiver aircraft. Closure from astern to the contact position should be made very slowly (approximately 1 foot per second) to enable both the tanker pilot/autopilot and the receiver pilot to compensate for the required trim changes. The proper technique is to fly formation using the forward fuselage and wings of the tanker as visual references, crosscheck the PDL signals, and use the boom operator's directions as necessary to judge the location of the receiver in the envelope. Anytime lateral movement, pitch oscillations, or rate of closure become excessive, reduce power and drop back into the astern position and stabilize the aircraft. As the receiver reaches the contact position, the receiver pilot should hold a steady platform until the boom is in the slipway.

8.10.3. The AAR boom envelope is the operational limits dictated by the aerodynamic control authority of the boom. Rough usage of controls on the part of either receiver or tanker pilot will cause a chain reaction with progressively larger corrections required to maintain position. Therefore, development of a smooth technique is necessary. Envelope limits are set well within the mechanical limits of the boom so that when a disconnect occurs there is ample time for a separation. Avoid extreme azimuth disconnects at all times. **(T-2)**. ***CAUTION:*** Approaching boom limits at relatively high velocity can cause structural damage as a result of an inability to disconnect due to binding action of the boom nozzle.

8.10.4. PDLs are used in conjunction with visual references to maintain the optimum position. The receiver pilot should be familiar with operation of the PDLs and understand they do not give true vertical and horizontal information.

8.10.5. Turns and banks may be made during contact without disconnects provided no large or abrupt motions or throttle movements are made by either tanker or receiver.

8.10.6. The lateral control spoilers introduce a pitch up movement, but during AAR operations, this characteristic is not objectionable. During AAR in rough air, it may be necessary to apply a small amount of elevator to offset the pitch tendency if a large amount of lateral correction is rapidly made.

8.10.7. Maintain position by making small anticipated corrections. Once the receiver pilot establishes proper visual references, a crosscheck between the pilot director lights and any change in position indicated by visual references will indicate the magnitude and direction of corrections. As a guide, the movement of the nose of the tanker may be used to gauge required elevator inputs. Lateral control is accomplished by proper aileron inputs to maintain a parallel wing condition with the tanker. Power corrections are based upon the magnitude and direction of any movement fore or aft relative to the tanker. **(T-2)**.

8.10.8. Pilot Fatigue. One of the greatest potential hazards during AAR is fatigue. If for any reason large oscillations develop which require increasing amounts of control displacement, disconnect and let the other pilot fly the aircraft in the astern position for a few minutes. The time spent in stabilizing and resting will result in better air refueling in a shorter time, since fewer disconnects will be experienced.

8.11. Disconnect. There are two major classifications of disconnects; planned and inadvertent. Planned disconnects may be initiated by the boom operator or either receiver pilot or by activating the disconnect switch. Disconnects may be initiated by the receiver if less than a full load is required, if a malfunction is suspected, or for training purposes. If a prearranged quantity of fuel is to be transferred, the disconnect will be initiated by the tanker boom operator after the planned amount of fuel is transferred and the receiver pilot is notified. **(T-2)**.

8.11.1. Inadvertent disconnects may be caused by exceeding the refueling boom envelope limits. A pressure disconnect switch will cause a disconnect if excessive pressure surges occur either from transfer pressure or when the selected tanks become full and the high-level float switches close. Upon disconnect, the boom will automatically retract, except when using manual boom retract.

8.11.2. When a disconnect occurs, the disconnect light illuminates and the contact light goes out. Press the reset button after a disconnect if additional contacts are required. The blue ready light will illuminate, the amber disconnect light will go out, and the green contact made light will be out.

8.11.3. To disconnect in an emergency, both receiver pilots must be prepared at all times to press the autopilot/AAR boom disconnect buttons. ***CAUTION:*** Unless a serious emergency occurs, every effort should be made to stay in contact position until certain that the boom is clear of the receptacle. Remain stabilized in the contact position until the boom operator or PNF visually confirms a disconnect has been made. This will prevent damage to the boom and/or receptacle through a brute force disconnect. **Note:** In the event of failure to obtain a contact and after each disconnect, the receiver will move aft and stabilize in a position in trail of the boom or in the astern position, reset AAR system and await boom operator signal to return to the contact position. **(T-2)**.

8.12. Air Refueling Formations. Refer to ATP-3.3.4.2. **(T-2)**.

8.13. Emergency Air Refueling Procedures. The following paragraphs describe emergency AAR procedures including tanker aborts, emergency disconnects, systems malfunctions, and breakaway procedures.

8.13.1. Tanker Abort. A tanker aborting during AAR will inform the receiver and the tanker lead (if necessary), and make a slow descending turn to clear the formation. The tanker will then proceed on briefed route or take action as required by the abort. **(T-2)**.

8.13.2. If a receiver aborts, all available means will be used to advise the tanker, particularly if radio contact between tanker and receiver has not been established. When in radio contact with tanker, an aborting receiver will advise tanker leader so that appropriate action can be taken. **(T-2)**.

8.13.3. Emergency Disconnect. The receiver pilot must be prepared to press the boom disconnect switch at all times during AAR. The other hand must be readily available for immediate thrust lever actuation in the event of a breakaway. **(T-2)**. Unless a serious emergency occurs, every effort should be made to stay in the contact position until certain that the boom nozzle is clear of the receptacle.

8.13.4. Systems Malfunctions. If a tanker AAR system malfunction precludes transfer of fuel during AAR, the tanker will stow the boom, inform the receiver, and state the amount of fuel transferred. Remaining tankers with operational AAR systems and transferable fuel will advise the tanker leader as to the amount of fuel that can be transferred. **Note:** When any system malfunction or condition exists which could jeopardize safety, AAR will not be accomplished except during fuel emergencies or when continuance of AAR is dictated by operational necessity. **(T-2)**.

8.13.5. AAR System Failures. See detailed procedures in *Aircraft User's Manuals* for abnormal and emergency AAR procedures. **(T-1)**.

8.14. Breakaway Procedure. Refer to *Aircraft User's Manuals* and ATP-3.3.4.2 for detailed procedures and information. **(T-2)**.

8.14.1. Relative position of both aircraft must be closely monitored by all crew members during all phases of AAR. When either a tanker or receiver crew member determines that an abnormal condition exists which requires an immediate separation of the aircraft, they will transmit the breakaway call on AAR frequency. This will include, but not be limited to, excessive rate of closure, closure overrun, and engine failure. **(T-2)**.

8.14.2. The aircraft do not necessarily have to be in contact to call a breakaway. During loss of communications, the crew member desiring a breakaway, or observing the tanker initiating a breakaway, will transmit the breakaway call on interphone. **(T-2)**.

8.14.3. For all breakaways, transmit the tanker's call sign and the word "breakaway" three times (Example: "GUCCI 11, breakaway, breakaway, breakaway") and simultaneously take the actions in **paragraph 8.14.4,** as indicated. **(T-2)**.

8.14.4. Receiver Pilots. Both pilots actuate disconnect switches. The PF positions throttles to IDLE and establish a definite rate of descent; add drag, if necessary. Avoid under flying the tanker if possible and drop aft of tanker until entire tanker is in sight. Then the PF should monitor flight instruments while the PNF monitors the tanker. ***WARNING:*** The receiver pilot should use caution not to overrun the tanker. If overrunning does occur, under no conditions should a turn, either right or left, be made until breakaway has been completed. **(T-2)**.

8.15. Post AAR. The tanker will give post AAR information to the receiver as required. The receiver will advise the tanker of any PDL malfunctions/deficiencies; e.g., lights intermittent, inoperative, dim, dirty. Upon termination of AAR, all exterior lights will be operated as required. ***WARNING:*** If required to accelerate and climb on the refueling heading, the receiver

will maneuver either left or right (minimum of 1 nm) of the tanker(s) prior to accelerating and climbing. This will preclude the departing receiver's jet wash from causing injury to personnel or damage to the tankers. **(T-2)**.

8.16. KC-10 AAR Procedures. The following items of information are provided to amplify only the differences to KC-135 tanker procedures contained herein.

8.16.1. KC-10 Pilot Director Lights. The PDLs consist of two rows of lights located forward of the wing root. Relative elevation position is provided by the left row and the right row provides telescoping position. The elevation row contains one striped green, two amber, and two red triangular panels, and two white letters, (U) for up and (D) at the aft end for down. The colored panels and letters are dimly illuminated by background lights. The telescoping row contains one striped green, two amber, two red, and four white rectangular panels and two white letters, (A) at the aft end for Aft, and (F) at the aft end for Forward. The colored panels do not have background lighting; however, the letter at each end of the row is dimly illuminated. Separation is provided by the white panels. The pilot director lights are adjusted by the boom operator to the size air to AAR envelope, for each receiver and provide guidance during contact.

8.16.2. To provide more response time, the appropriate panel and letter are illuminated in anticipation of receiver movement. The director lights provide commands based on both receiver position and rate of movement. With rapid motions of the receiver the lights can show a correction required even though the receiver is in the center of the envelope. The red panel and letter at the ends of each row can be illuminated by the boom operator to aid the receiver in attaining the contact position.

8.16.3. Handling Characteristics. More power will be required to maintain position than usual behind a KC-135. A stronger centering tendency exists behind the KC-10 as compared to the KC-135 when the receiver is left or right of the tanker centerline.

8.16.4. Disconnect. The KC-10 aerial refueling boom is controlled by a digital fly-by-wire system. Certain failure conditions of this system may cause one or more axis of the boom control system to become inoperative. Should this occur, the boom operator may not be able to maneuver the boom to avoid striking the receiver aircraft. In this situation, the boom operator will direct the receiver to a position where a safe disconnect can be effected. ***WARNING:*** When notified that a KC-10 boom flight control system failure has occurred, do not initiate a disconnect unless directed by the boom operator. Follow the boom operator's instructions explicitly. To reduce the probability of boom strike after disconnect, it may be necessary to remain in a stabilized position to allow for aerodynamic fairing of the boom control surfaces. ***WARNING:*** Due to the possibility of uncommanded boom movement, no HF transmissions are to be made when in close proximity or connected to the KC-10 boom. **(T-2)**.

Chapter 9

FLYING TRAINING RESTRICTIONS

9.1. Qualification Training. With the exception of ACCP, initial qualification, requalification, or upgrade training for pilots will not be conducted on missions with passengers onboard. **(T-2)**.

9.1.1. The PIC will notify the unit CC/DO when maintenance problems cause unacceptable delays and/or when weather is not suitable for the type training or evaluation to be accomplished. The unit CC/DO will make the final determination to fly or cancel a training mission. **(T-3)**.

9.1.2. Requirement for instructor and flight examiner. 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 pilot candidates who occupy a pilot seat and are under the supervision of a flight examiner pilot (not in a pilot seat) may conduct simulated emergencies during initial and requalification upgrade evaluations to instructor pilot. This applies to all maneuvers in **Table 9.1** unless otherwise restricted. **(T-2)**.

9.2. Simulated Emergency Flight Procedures. Practice emergencies which require simulating an engine shutdown, placing switches in other than their normal positions, or an abnormal configuration, only during training, evaluation, or currency flights when an instructor or flight examiner pilot is in one of the pilot seats. Preface all simulated emergencies with the word "simulated" and terminate simulated emergencies when an actual emergency arises. **(T-2)**.

9.2.1. Do not perform simulated emergencies with passengers onboard. See **paragraph 6.33** of this manual for further guidance. **(T-2)**.

9.2.2. Conduct simulated emergency flight procedures in accordance with AFMAN 11-202, Vol 3, and this manual. Use a realistic approach and do not compound emergencies. Limit simulated emergencies, other than simulated engine out, to noncritical phases of flight when possible. Notify the controlling agency if a nonstandard traffic pattern or pattern requiring special sequencing is anticipated. **(T-2)**.

9.2.3. Request an "option approach" prior to initiating an approach when a landing or low approach option is desired. **(T-2)**.

9.2.4. Training maneuver restrictions for specific flight maneuvers and missions are listed in **Table 9.1** of this AFMAN.

9.3. Touch and Go Landing Limitations. Practice touch and go landings only on designated training, evaluation, and currency missions. **(T-2)**.

9.3.1. Touch and go landings may be performed by:

9.3.1.1. Instructor pilots, instructor pilot candidates on initial or requalification instructor evaluations, and flight examiner pilots from either seat. **(T-2)**.

9.3.1.2. 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. **(T-2)**.

9.3.1.3. Pilots who have completed Aircraft Commander Touch and Go Certification.

9.3.2. Limitations. **(T-2)**.

9.3.2.1. Comply with all flight manual restrictions and procedures. **(T-2)**.

9.3.2.2. Minimum runway length for touch and go landings is 7,000 ft. **Note:** If there is a requirement to land beyond a runway barrier, the 7,000 ft minimum touch and go distance will be calculated after the barrier. **(T-2)**.

9.3.2.3. Minimum ceiling of 300 ft and 3/4 miles (RVR 4000) for Instructor/Evaluator Pilot. Minimum ceiling of 600 ft and 2 miles with no Instructor/Evaluator Pilot. **(T-2)**.

9.3.2.4. The runway will be dry or wet only (no contamination). **Note:** Runways are considered wet if there is < .12 inches (3mm) of slush/standing water. **(T-2)**.

9.3.2.5. Maximum crosswind component is 25 knots (15 knots with no Instructor/Evaluator Pilot). **Note:** This value may be further reduced by **Table 5.3** of this AFMAN. **(T-2)**.

9.3.2.6. Touch and go landings with passengers are prohibited. **Exception:** N/A for unit maintenance, MEP and/or supported/supporting forces when authorized by the unit CC/DO. **(T-3)**.

9.3.2.7. Touch and go landings are not authorized when normal wake turbulence criteria cannot be met, or when intercepting or crossing the flight path of a jumbo jet while performing an approach or landing. **(T-2)**.

9.3.2.8. Stop and go landings are prohibited. **(T-2)**.

9.3.3. Supervision of touch and go landings. For all flights when touch and go landings will be performed, the following must be reviewed:

9.3.3.1. Flight manual procedures (if applicable). **(T-2)**.

9.3.3.2. Abort considerations. **(T-2)**.

9.3.3.3. Engine failure, including recognition and corrective action. **(T-2)**.

9.3.3.4. Proper use of spoilers, flaps, and trim. **(T-2)**.

9.3.3.5. Importance of smooth application of power to the touch and go Engine Pressure Ratio setting while maintaining symmetric thrust as the throttles are advanced. **(T-2)**.

9.4. Special Maneuvers. The following maneuvers or procedures are prohibited for training in the aircraft and may only be practiced in the flight simulator.

9.4.1. Aborted takeoffs. **(T-2)**.

9.4.2. Dutch rolls. **(T-2)**.

9.4.3. Emergency descents. **(T-2)**.

9.4.4. Simulated runaway trim malfunctions. **(T-2)**.

9.4.5. Simulated hydraulic system loss by turning off the engine driven or electrical hydraulic pumps. **(T-2)**.

9.4.6. Full stalls or approach to stall maneuvers. **(T-2)**.

9.4.7. Landing with pitch trim cutout. **(T-2)**.

9.4.8. Simulated engine out takeoffs. **(T-2)**.

9.4.9. No flap landings. **(T-2)**.

9.4.10. Unusual attitudes. **(T-2)**.

9.4.11. Split flap landings. **(T-2)**.

9.5. Simulated Instrument Flight. Do not use a hood or other artificial vision-restricting device for any phase of flight. **(T-2)**. Simulated instrument flight may be flown and logged without use of a vision restricting device.

9.6. Category II/III ILS Approach Training Restrictions. Flight and evaluation may be conducted at any ILS facility where signal output is accurate and stable enough to achieve the desired training. AFM and MAJCOM-approved hardcard procedures will be utilized. **(T-2)**.

9.6.1. Actual weather. The ceiling and visibility will be no lower than 200-foot and 1/2-mile visibility (RVR 2400); day or night (touch and go ceiling and visibility limitations still apply). **(T-2)**.

9.6.2. Crosswind component. Maximum crosswind component is 25 knots. **(T-2)**.

9.6.3. When a Category II DH is not published, DH will be based on HAT of 100 feet. **(T-2)**.

9.7. AAR Training Restrictions.

9.7.1. Boom limits demonstrations are not authorized at night or during times of marginal visibility. **(T-2)**.

9.7.2. Simulated emergency separations are not authorized with passengers onboard. **Note:** N/A for unit maintenance personnel. **(T-2)**.

9.7.3. Pilot seat positions will be in accordance with AFMAN 11-2C-32B, Vol 1, Attachment 3, Allowable Maneuvers for PF Qualification/Certification. **(T-2)**.

9.7.4. In addition to the restrictions in **Chapter 8** of this AFMAN, with no IP1 on board, the following restrictions apply.

9.7.4.1. Simulated emergencies are not authorized (N/A for simulated emergency separations). **(T-2)**.

9.7.4.2. Boom limits demonstrations are not authorized. **(T-2)**.

9.8. Instructor or Flight Examiner Briefings. Before all training and evaluation missions, instructors or flight examiners brief their crew on the mission profile, training requirements, and objectives or evaluation requirements. See local supplement to **Chapter 10** of this manual. **(T-2)**.

9.9. Debriefing. After training flights, instructors will:

9.9.1. Review and critique student performance. **(T-2)**.

9.9.2. Review training requirements fulfilled for each student and aircrew member (all aircrew members should understand thoroughly what training was accomplished). **(T-2)**.

9.9.3. Answer technical questions. **(T-2)**.

9.9.4. Preview the objectives of the next mission. **(T-2)**.

9.9.5. Complete training paperwork. **(T-2)**.

Table 9.1. Training Maneuver Restrictions.

Maneuver	Restrictions
Go-Around or Missed Approach	Minimum altitude is 500 ft AGL when aircraft, equipment or personnel are on the runway. There are no altitude restrictions for normal VMC go-arounds. **(T-2)**.
Simulated Engine Failure	Authorized in day IMC if the weather is at or above circling minimums. Authorized in night VMC only. In flight initiate no lower than 300 ft AGL and at or above V2. Use all engines for touch and go landings. **(T-2)**.
Go-Around or Missed Approach (Simulated Engine Failure)	Initiate VMC go-arounds no lower than 200 ft AGL. Use all engines if initiated below 200 feet AGL. If in IMC, initiate at the appropriate IAP minima. **(T-2)**.
Simulated EPs	Initiate no lower than 300 ft AGL. Should be accomplished during non-critical phases of flight if possible. **(T-2)**.
Go-Around or Missed Approach (Simulated EPs other than simulated engine failure)	Initiate VMC go-arounds no lower than 100 ft AGL. If IMC, initiate at the appropriate IAP minima. **(T-2)**.
Steep Turns	Authorized in day VMC. Initiate no lower than 5,000 ft AGL or 5,000 ft above a cloud deck. Use a maximum bank angle of 45 degrees. **(T-2)**.
Cross Bleed Start	Authorized only with approval from the controlling ground agency. **(T-2)**.
AAR Contacts	Any pilot can accomplish AAR contacts on designated training missions, with no passengers on board, and under the supervision of an IP1. **(T-2)**.
Boom limitations demonstrations	Only day VMC by an IP1 or student pilot in IP1 upgrade training. **(T-2)**.
Circling* Approaches	Fly 20-degree flap configuration. Maintain 20 flap maneuvering speed until aircraft is in a position to intercept the normal glide path. **(T-2)**.
***Note:** PICs may elect to circle in a normal landing flap configuration if they feel it necessary to increase terrain clearance, during times of marginal visibility or when experiencing higher than normal groundspeeds due to winds or operations at high altitude airports.	

9.10. Allowable Maneuvers. See AFMAN 11-2C-32B, Vol 1, Attachment 3, Allowable Maneuvers for PF Qualification/Certification.

Chapter 10

LOCAL OPERATING PROCEDURES

10.1. General. The unit will publish a local operating procedures supplement to **Chapter 10**. Do not duplicate, alter, or amend the provisions of the basic volume. Prior to publication, forward a copy of all supplements to AFSOC/A3VS. **(T-2)**.

Chapter 11

LOADMASTER PROCEDURES AND FORMS

11.1. General. In addition to the duties established in the FCOM, Vol 1, the loadmaster will comply with the procedures and duties in this regulation. **(T-1)**. The PIC may assign other duties as necessary. The loadmaster will:

11.1.1. Coordinate loading and offloading with air terminal operations or the shipping agency. **(T-2)**.

11.1.2. Load plan and supervise loading, tiedown, and offloading of cargo, baggage, mission equipment, and passengers. **(T-2)**.

11.1.3. Be assigned to the crew anytime passengers or cargo are being transported aboard the aircraft. MAJCOM/A3 may waive this requirement when necessary for mission accomplishment. **(T-2)**.

11.2. Responsibility for Aircraft Loading.

11.2.1. Shippers are responsible for providing documentation for cargo and personnel. They will advise the loadmaster of size, weight and type of cargo (classified, hazardous, etc.), coordinate traffic activities that may affect loading and offloading, and assign sufficient personnel for cargo handling. Shippers, under the aircraft loadmaster's supervision, are responsible for safe positioning of material handling equipment and cargo to and from the aircraft. If cargo, aircraft equipment, or aircraft structure is damaged during loading or offloading, or if loading personnel are injured, the loadmaster will stop the loading operation and notify the PIC. **(T-1)**.

11.2.2. The loadmaster is responsible for aircraft preflight, load planning, preparation of weight and balance forms, operation of aircraft equipment, coordination with loading crew supervisor for inspection of cargo and documentation, and supervision and direction of loading, offloading, and tiedown. The loadmaster directs loading and is responsible for safe movement of cargo into and out of the aircraft. **(T-2)**.

11.3. Emergency Exits and Safety Aisles. Load aircraft in such a manner that the following emergency exits are available:

11.3.1. At least one unobstructed emergency exit per 20 passengers. At least two unobstructed emergency exits equipped with escape slides must be useable (one forward and one aft). **(T-2)**.

11.3.2. When cargo or baggage is being loaded into the aircraft cabin, allow for a clear emergency egress aisle from the cockpit door to the aft most exit. **(T-2)**.

11.4. Air Cargo Restraint Criteria. Load and restrain cargo in the cargo holds when possible. **(T-2)**. Cargo hold compartmental netting will be used to secure cargo when available. A safety belt or other tiedown strong enough to prevent shifting of cargo under all normal flight and ground conditions may be used.

11.5. Passenger Handling.

11.5.1. The loadmaster is the key figure concerning good passenger relations, and is responsible for the passenger's safety and security during loading, offloading and flight. Loadmasters are also responsible for ensuring only authorized personnel are allowed on board the aircraft. Be aware of any doubts and fears that may arise in the minds of personnel and anticipate their questions and actions. Offer support and perform duties in a professional manner and show a personal interest and willingness to assist passengers. **(T-2)**.

11.5.2. Passengers may move about the cabin; however, judgment must be exercised on the number of passengers allowed out of their seats at one time. Encourage passengers to keep seat belts fastened when seated. If passengers are allowed to move freely in the cabin at cruise altitude good judgment must be exercised allowing the crew access to emergency equipment. In all cases a clear aisle way from the front of the aircraft to the rear of the aircraft must be maintained at all times. **(T-2)**.

11.5.3. Do not allow passengers to lounge on or tamper with equipment, cargo, or baggage. Additionally, passenger bags will be stored in the overhead bins or under the seats in front of them for takeoffs and landings. **(T-2)**.

11.5.4. Make frequent checks on the cabin temperature and the cleanliness of the cabin and lavatories. Special emphasis must be placed on removing and properly securing or destroying all classified or sensitive refuse. **(T-2)**.

11.5.5. On flights of long duration, particularly during hours of darkness, use all possible means to make passengers comfortable. Dim lights and extinguish unnecessary cabin lights. **(T-2)**.

11.5.6. Passengers may visit the flight deck when approved by the PIC. Good judgment must be used when authorizing flight deck visitation. **(T-2)**.

11.5.7. Any time passengers are on board, one loadmaster will be awake to monitor passenger activities and maintain cabin discipline and safety. While on the ground, the AMSO will monitor all passengers if both loadmasters are required for loading operations. **(T-2)**.

11.6. Border Clearance. Customs, Immigration, and Agriculture require certain forms for border clearance. The loadmaster is the custodian of all border clearance forms. Distribute the forms to the crew and passengers and ensure their completion prior to landing. A crew member will give completed forms to proper authorities. **(T-1)**.

11.7. Weight and Balance.

11.7.1. Responsibility for the weight and balance rests with the pilot, although this is normally delegated to the loadmaster. The index system for calculating weight and balance will be used. The primary loadmaster onboard is responsible for ensuring a CG is computed and presented to the flight deck prior to engine start. Canned weight and balance forms may be used if they reflect the current crew, fuel, passengers, and cargo onboard. For home station departures, a copy of the weight and balance is normally filed with the pre-mission paperwork. On continuing missions, the completed weight and balance form is maintained onboard and properly disposed of when no longer needed. **Note:** The loadmaster will make every effort to notify the AMSO with the following information: crew count, passenger

count, cargo load, and any other pertinent information deemed necessary. The AMSO will relay the information to C2 as soon as practical. **(T-2)**.

11.7.2. Unit stan/eval is the OPR for weight and balance. All weight and balance books will be maintained and updated by the OPR and a copy provided to AFSOC/A3VS. Unit stan/eval will review each weight and balance book semi-annually for currency. **(T-2)**.

11.8. Loadmaster Forms. All forms are maintained in the loadmaster trip kit. The kit contents will be checked prior to departure from home station to ensure sufficient quantities of required forms. Required forms are specified on the index sheet located in the loadmaster trip kit. Unit stan/eval is OPR for the loadmaster trip kit. **(T-2)**.

11.9. Emergency Equipment. Emergency equipment requirements are identified in the aircraft operations manual, loadmaster's preflight checklist, and aircraft MEL.

11.10. Aircraft Tiedown Equipment. Required tiedown equipment is identified in the loadmaster's preflight checklist.

11.11. Baggage Loading System. The baggage loading system is designed to load baggage at austere locations that do not have adequate material handling equipment available. The loadmaster must coordinate with the PIC prior to employing the system. **(T-2)**.

11.11.1. The Boeing Cargo Loading Manual provides a chart showing the acceptable length, width, and height of baggage that can safely be loaded in the aft cargo hold. This chart does not reflect reductions of the cargo door opening due to the installment of the baggage loading system. This chart may still be used for planning purposes, but may not accurately reflect the actual length x width x height of an item to be loaded. There are too many variables involved (e.g., connecting material, stretch factors, angle of insertion) to provide a chart for all scenarios. The loadmaster must use experience to know if a piece of cargo can be loaded. If any doubt arises in the safe execution of loading an item, immediately terminate loading operations and notify the PIC. **(T-2)**.

11.11.2. If multiple items are to be loaded, use a drift strap hooked to the item and a floor ring to position the item forward or aft in the cargo compartment. **(T-2)**.

11.11.3. The loadmaster will inspect all components of the baggage loading system prior to use. Only qualified loadmasters or crew members under the supervision of an instructor loadmaster will utilize this system. **(T-2)**.

11.11.4. Loadmasters will wear gloves when using the baggage loading system. ***WARNING:*** When lifting items, ensure area under and around the item is clear of personnel. ***WARNING:*** Prior to raising an item into the aircraft, ensure area is clear and there are no obstacles in the cargo hold that would hinder the safe movement of the cargo. ***WARNING:*** Ensure all required pins on the winch carriage are installed and track pins engaged prior to any load being applied. ***WARNING:*** Ensure a minimum of four wraps of cable are placed on the winch drum assembly prior to any load being applied. **(T-2)**.

11.12. Emergency Airlift.

11.12.1. Use these procedures for emergency airlift of personnel for humanitarian reasons or from areas faced with enemy siege, hostile fire, or when directed by AFSOC. Airlift can be accomplished without the use of individual seats or safety belts only when more personnel than seats are available.

11.12.2. The number of personnel seated within the cabin or cargo area will vary depending on individual size. If possible, seat personnel in rows facing forward and restrain with straps placed across the aircraft floor. Secure the straps to tiedown rings positioned in the most outboard seat track(s). **(T-2)**.

11.12.3. If time allows, personal effects or baggage may be loaded on the aircraft. However, this may reduce the amount of personnel space available.

11.13. Specific Loadmaster Responsibilities. The loadmaster trip kit will be inventoried prior to home station departure. Ensure kit contains sufficient quantities of required forms. The inbound loadmaster will leave a memo or note (in an obvious location) inside the kit, indicating all items that are missing, broken, require restocking, etc. The outbound loadmaster will review the note prior to crew stations time. **(T-2)**.

11.13.1. Normally, the primary loadmaster is not indicated on the flight authorization. During the initial crew briefing, the primary loadmaster will be identified. The primary loadmaster is the highest qualified loadmaster logging primary, instructor or evaluator time. The primary loadmaster is responsible for safe mission accomplishment. There may be times when a qualified loadmaster is acting as the primary loadmaster, but overall responsibility rests with the actual primary loadmaster. **(T-2)**.

11.13.2. Due to the unit's alert requirements, every effort must be made by each loadmaster to ensure the alert aircraft is mission capable at all times. **(T-2)**.

11.13.3. PICs and loadmasters will make every effort to provide C2 a current passenger manifest or passenger count prior to each takeoff. **(T-2)**.

11.14. Boldface/Critical Action Procedures. See local supplement to **Chapter 10** of this AFMAN.

Chapter 12

AIRBORNE MISSION SYSTEMS OPERATOR PROCEDURES AND FORMS

12.1. General. The terms Airborne Mission Systems Operator (AMSO) and Radio Operator (RO) may be used interchangeably in this and other publications. AMSOs will comply with the procedures and duties in this regulation. **(T-1)**. The PIC may assign other duties as necessary. The AMSO will:

12.1.1. Attend crew briefings to obtain all pertinent information on purpose, route of flight, mission objective, and communications requirements. **(T-2)**.

12.1.2. Coordinate communications requirements, frequencies, and any special procedures necessary to ensure optimum communications coverage is provided. **(T-2)**.

12.1.3. Sign out and maintain control of all COMSEC and classified documents required by the AMSO during the mission. Encode, decode, and authenticate messages as required. Use authentication systems to identify friendly units. Return all COMSEC and classified materials to proper storage facilities. **(T-2)**.

12.1.4. Preflight all mission communications equipment to ensure satisfactory operation. **(T-2)**.

12.1.5. Ensure IFF/SIF modes 1, 2, 3, and 5 are set in accordance with mission requirements. **(T-2)**.

12.1.6. Maintain continuous communications with appropriate ATC agencies, C2 agencies, and other mission/support aircraft as necessary. Use secure communications to the maximum extent possible. Mission tasking will control when and where secure communications are utilized. **(T-2)**.

12.1.7. Provide a documented record of all pertinent events during the mission using AF Form 4122, *Airborne Radio Log*, in accordance with **paragraph 12.8** **(T-2)**.

12.1.8. Troubleshoot and repair/swap malfunctioning communications equipment in-flight and at locations where qualified ground maintenance personnel are not available. Communications equipment repair is limited to the scope of the appropriate aircraft T.O. or equipment documentation. Document all malfunctions and debrief qualified ground maintenance personnel after all flight activities in accordance with local procedures. **(T-2)**.

12.1.9. Establish emergency communications using national or international procedures when directed by the PIC. **(T-2)**.

12.1.10. Zeroize all cryptographic devices and clear classified frequencies prior to leaving the aircraft, as required. **(T-2)**.

12.2. Aircraft Interphone and Radio. The AMSO will monitor the primary radio, normally Ultra High Frequency (UHF)/Very High Frequency (VHF), and interphone at all times except when the use of Satellite Communications (SATCOM) precludes monitoring these radios. The AMSO(s) will notify the PIC when there will not be an AMSO at their duty station. The primary AMSO should monitor ATC frequencies throughout the flight. Monitoring of ATC frequencies should be conducted using a mission line-of-sight radio.

12.3. Communications Procedures. Communications procedures used during all phases of a mission are directly related to the type of mission being flown. Each AMSO will be knowledgeable of operational environments described below. **(T-2)**.

12.3.1. Coordinate with appropriate agencies to determine mission communication requirements. (e.g., SATCOM, VHF, UHF, International Maritime Satellite (INMARSAT), and broadband technologies). **(T-2)**.

12.3.2. Ensure the aircraft communication systems will support mission requirements. **(T-2)**.

12.3.3. Ensure the COMSEC kit is current and will support mission requirements. **(T-2)**.

12.3.4. Ensure the appropriate Communications-Electronics Operating Instruction (CEOI), call signs, frequencies, communications and mission set-up worksheets, and any required documents are obtained. **(T-2)**.

12.3.5. Accomplish preflight inspections in accordance with AMSO checklist and users guide. **(T-3)**.

12.3.6. Maintain continuous communications with the appropriate agencies in accordance with the AMSO checklist, CEOI, operational orders, exercise orders, and PIC's direction. **(T-2)**.

12.3.7. Communicate takeoff and landing times, ETA, duration, maintenance status (via secure means for alert aircraft), and any pertinent mission changes to the appropriate controlling agency as directed by the PIC. **(T-2)**.

12.3.8. Maintain the airborne radio log. **(T-2)**.

12.3.9. Ensure all message traffic is distributed to appropriate agencies and individuals. **(T-2)**.

12.3.10. Brief and assist users on the operation of the planning area communications systems. **(T-2)**.

12.3.11. Accomplish postflight procedures in accordance with AMSO checklist. **(T-2)**.

12.3.12. Secure or obtain classified material and equipment in accordance with the AMSO checklist. **(T-2)**.

12.3.13. Turn in COMSEC. **(T-2)**.

12.3.14. Attend any required debriefings. **(T-2)**.

12.4. Communication Checks. Communication checks made during preflight, en route and postflight will be in accordance with Allied Communications Publication (ACP) 121, *Communications Instructions—General.* It is the responsibility of all AMSOs to be cognizant of their OPSEC requirements prior to making any communication checks. **(T-2)**.

12.5. Weather Forecasts. When marginal weather is expected, provide the PIC with forecasts and timely updates, to include alternate landing fields. Whenever SIGMETs are received from any source, contact the nearest USAF weather facility to determine mission applicability. **(T-2)**.

12.6. Airborne Mission System Operator Information Guide (AMSOIG). AMSOIGs are used to consolidate communications information, procedures, guidance, etc., for quick reference

during mission planning, preflight, in-flight, and postflight duties. Unit stan/eval is the approval authority for unit AMSOIG. These guides will be reviewed. **(T-2)**.

12.7. Emergency Procedures and Checklists. Emergency procedures and operating checklists for use by the AMSO during flight operations are contained in the local supplement to **Chapter 10** of this AFMAN.

12.8. AF Form 4122, *Airborne Radio Log*.

12.8.1. The AMSO will complete a single AF Form 4122 for each day's flight or flights. **(T-2)**.

12.8.2. Radio logs are normally unclassified; however, if classified information is entered into the radio log, it must be properly marked. Complete the log in accordance with ACP 125F, *Communication Instructions Radiotelephone Procedure,* and **paragraph 12.9**. File completed unclassified logs chronologically in a transitory file. Dispose of logs in accordance with the AF Records Disposition Schedule. Classified logs will be handled and stored in accordance with the *Security Classification Guide*. **(T-2)**. Maintaining log entries is the lowest mission priority.

12.9. AF Form 4122 Procedures.

12.9.1. Entries should be recorded electronically or legibly handwritten, and include all relevant details and timing of the following:

12.9.1.1. All transmitted and received informal messages and voice conversations in full or, when this is impractical, a message summary in sufficient detail to provide adequate reference information. **(T-2)**.

12.9.1.2. Reports of stations with which contact is difficult or suspect, including any corrective action taken. **(T-2)**.

12.9.1.3. Unusual occurrences such as procedural or security violations, or suspected deception or jamming. Entries should include the reporting action taken. **(T-2)**.

12.9.2. Complete AF Form 4122 as follows:

12.9.2.1. Log Heading. Complete the entire log heading for page 1. **(T-2)**. Headings of subsequent pages need only contain call sign, date, page number, mission, and operator's name(s).

12.9.2.2. Date. Enter the current Zulu date. **(T-2)**.

12.9.2.3. ATC Call sign. Enter the normal ATC voice call sign. **(T-2)**.

12.9.2.4. Mission or Route. Enter point of departure and destination if other than departure point. Plain language, FAA, or ICAO identifiers may be used. “LOCAL” may be used for training missions originating and terminating at home station. Use the mission code name if the departure or destination is classified. **(T-2)**.

12.9.2.5. Tail Number. Enter the aircraft tail number. **(T-2)**.

12.9.2.6. Squadron. Enter unit to which the aircraft is assigned. **(T-2)**.

12.9.2.7. Personnel on Board. Enter the total number of personnel on board (crew members and passengers). When there are multiple destinations and the number of personnel on board changes, indicate each leg with a slash (/) between counts. **(T-2)**.

12.9.2.8. Takeoff Time. Enter Zulu time for takeoff as recorded in the AFTO Form 781. Use a slash (/) between each leg if there are multiple destinations. **(T-2)**.

12.9.2.9. Land Time. Enter Zulu time for landing as recorded in the AFTO Form 781. Use a slash (/) between each leg if there are multiple destinations. **(T-2)**.

12.9.2.10. Total Time. Enter the total flight time as recorded in the AFTO Form 781. Use a slash (/) between each leg if there are multiple destinations. **(T-2)**.

12.9.2.11. Page __ of __ Pages. Enter the page number. Each sheet of paper, front and back, is considered one page. **(T-2)**.

12.9.2.12. PIC. Enter the PIC's rank and last name. **(T-2)**.

12.9.2.13. Operator. Enter rank and last name of the AMSO(s). **(T-2)**.

12.9.2.14. Time. Enter Zulu time the transmission is completed and acknowledged. For events that warrant noting, but no transmission is completed, enter the time you make the log entry. **(T-2)**.

12.9.2.15. To/From. If you are initiating the call, enter the station called in the upper left portion of this block followed by a slash (/). If you are called, place the slash in the middle of the block and the call sign of the calling station in the right lower portion of this block. Enter “NOTE” for all notes or comments not involving a radio/INMARSAT transmission. **(T-2)**.

12.9.2.16. Frequency. Enter the radio frequency used for HF, VHF, and UHF calls unless the frequency is classified. Use the assigned designator for classified frequencies. **(T-2)**. Unclassified designators, if assigned, may also be used.

12.9.2.17. Enter “SATCOM” for all calls made over the SATCOM system. **(T-2)**.

12.9.2.18. Enter “CELL” for all calls made from unit-issued or personal cell phones. **(T-2)**.

12.9.2.19. Enter “MARSAT” for all calls made over the INMARSAT system. When documenting INMARSAT calls, specify which system (High Speed Data (HSD), CELL, AIRCELL, Ka) was used. This includes when INMARSAT was used for data. Example: “NOTE LOG [HSD USED FOR FLIGHT PLANNING].” **(T-2)**.

12.9.2.20. Enter LOG for all notes or comments that do not involve a radio/INMARSAT transmission. **(T-2)**.

12.9.2.21. Message/Remarks.

12.9.2.21.1. The first entry will be the statement "ON WATCH" followed by the AMSO signature. The last entry will be the statement "OFF WATCH" followed by the AMSO signature. On augmented missions, only the AMSO sitting in the seat for takeoff is required to sign on and off watch. If other AMSOs make log entries, they will place a double slash (//) at the end of the Message/Remarks entry and initial the entry. **(T-2)**.

12.9.2.21.2. AMSO may exchange watch by using ON WATCH/OFF WATCH entries. The AMSO on watch at the end of the radio day will make an entry indicating the end of the current radio day and a separate entry for the start of the new radio day. The end of the radio day, (midnight Zulu), is designated 2400Z. 0001Z is the beginning of the new radio day. Radio log entries will read "2400 NOTE LOG END RAYDAY" and "0001 NOTE LOG BEGIN RAYDAY." **(T-2)**.

12.9.2.22. Abbreviations and Operating Signals. ACP 131, FLIP abbreviations, and other aeronautical-related abbreviations may be used in radio log entries. Use brackets ([]) to enclose important information, simulated transmissions, transmission summaries, or any other information necessary in the log, but not actually transmitted over the radios. Otherwise, enter sent or received information verbatim. **(T-2)**.

12.9.2.23. Entry Corrections. Entry corrections may be made manually or electronically. Manual and electronic corrections may be made to the same document as required. **(T-2)**.

12.9.2.23.1. Manual Corrections. Make manual corrections to the form by lining out the incorrect portion and initialing at the end of the lined-out portion. Enter the correct information immediately after the lined-out portion. **(T-2)**.

12.9.2.23.2. Electronic Corrections. Electronic corrections may be made as required at any time before mission completion. **(T-2)**.

12.9.2.24. There will be no empty spaces on the AF Form 4122. Empty spaces will be lined from bottom left corner to top right corner. The operator will “Z” out last available spaces on the 4122 and annotate “LAST ENTRY.” **(T-2)**.

MARK D. KELLY, Lt Gen, USAF
Deputy Chief of Staff, Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

ACP 125F, *Communication Instructions Radiotelephone Procedure*, 5 September 2001

ACP 121, *Communications Instructions—General*, October 2010

AFH 11-203, Vol 1, *Weather for Aircrews,* 12 January 2012

AFH 15-101, *Meteorological Techniques,* 5 November 2019

AFI 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure,* 21 September 2018

AFI 11-221, *Air Refueling Management (KC-10, KC-46, AND KC-135),* 5 June 2020

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AFI 11-401, *Aviation Management,* 10 December 2010

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AFI 91-204, *Safety Investigations and Reports,* 27 April 2018

AFJI 11-204, *Operational Procedures for Aircraft Carrying Hazardous Material,* 11 November 1994

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AFMAN 11-202, Vol 3, *Flight Operations,* 10 June 2020

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AFMAN 11-2C-32B, Vol 1, *C-32B Aircrew Training,* 1 September 2020

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AFMAN 31-129, *USAF Small Arms and Light Weapons Handling Procedures,* 1 January 2020

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ATP-3.3.4.2 (C), *Standards Related Document (SRD),* 20 February 2019

Boeing 757-200, *Flight Crew Operations Manual,* Volumes 1 and 2

Boeing 757-200, *Flight Crew Training Manual*

Boeing 757-200, *Minimum Equipment List*

Boeing 757-200, *Quick Reference Handbook*

DoD *Flight Information Handbook*

DoD *Foreign Clearance Guide*

DoDI 4515.13, *Air Transportation Eligibility,* 22 January 2016

FLIP *General Planning*

G5601.00.25, *-31 Aircraft User's Manual*

G5628.00.25, *-41 Aircraft User's Manual*

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NAT Doc 007, *North Atlantic Operations and Airspace Manual, V.2020-1,* January 2020

Security Classification Guide, 1 October 2019

Title 5 United States Code (USC) Section 552a, *The Privacy Act of 1974*

T.O. 1-1-300, *Maintenance Operational Checks and Check Flights,* 14 November 2017

T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding,* 6 September 2019

T.O. 33-1-23, *Equipment and Procedures for Obtaining Runway Condition Readings,* 30 November 2006

Adopted Forms

AF Form 8, *Certificate of Aircrew Qualification*

AF Form 457, *USAF Hazard Report*

AF Form 651, *Hazardous Air Traffic Report (HATR)*

AF Form 664, *Aircraft Fuels Documentation Log*

AF Form 679, *Air Force Publication Compliance Item Waiver Request/Approval*

AF Form 847, *Recommendation for Change of Publication*

AF Form 1297, *Temporary Issue Receipt*

AF Form 2282, *Statement of Adverse Effect - Use of Government Facilities*

AF Form 4111, *SOF/CSAR Training Record*

AF Form 4122, *Airborne Radio Log*

AF Form 4348, *Certification of Aircrew Training*

AFSOC Form 97, *AFSOC Aircraft Incident Report*

AFTO Form 46, *Prepositioned Aircrew Flight Equipment*

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

CBP 7507, *General Declaration (Outward/Inward)*

CDC-731, *International Certificate for Vaccination or Prophylaxis*

DD Form 1385, *Cargo Manifest*

DD Form 1801, *DoD International Flight Plan*

DD Form 2131, *Passenger Manifest*

Form 8-42208-2, *Flight/Maintenance Log Book*

Abbreviations and Acronyms

AAR—Air-to-Air Refueling

ACARS—Aircraft Communications Addressing and Reporting System

ACCP—Aircraft Commander Certification Program

ACF—Acceptance Check Flight

ACP—Allied Communications Publication

ADIZ—Air Defense Identification Zone

AF—Air Force

AFE—Aircrew Flight Equipment

AFH—Air Force Handbook

AFI—Air Force Instruction

AFM—Aircraft Flight Manuals (includes FCOM Volume 1, 2, QRH, FCTM)

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFTO—Air Force Technical Order

AFSOC—Air Force Special Operations Command

AFSOC/A3V—Air Force Special Operations Command Aircrew Stan/Eval

AFSOC/A3VS—Air Force Special Operations Special Missions Stan/Eval

AFSOCI—Air Force Special Operations Command Instruction

AGL—Above Ground Level

ALTRV—Altitude Reservation

AMC—Air Mobility Command

AMSO—Airborne Mission Systems Operator

AMSOIG—Airborne Mission System Operator Information Guide

ANG—Air National Guard

AOR—Area of Responsibility

AP—Area Planning (FLIP)

APOD—Aerial Port of Disembarkation

APU—Auxiliary Power Unit

AR—Authorization Required

ARCP—Air-to-Air Refueling Control Point

ARCT—Air-to-Air Refueling Control Time

ARIP—Air-to-Air Refueling Initial Point

ARMS—Aircrew Resource Management

ARTCC—Air Route Traffic Control Center

ASA—Autoland Status Annunciator

ASRR—Airfield Suitability and Restrictions Report

ATC—Air Traffic Control

ATIS—Automated Terminal Information Service

ATO—Air Tasking Order

BAK—Barrier Arresting Kit

BFT—Blue Force Tracker

C2—Command and Control

CAT I—Category I ILS Approach

CAT II—Category II ILS Approach

CAT III—Category III ILS Approach

CC—Commander

CEOI—Communications-Electronics Operating Instructions

CFP—Computer Flight Plan

CFR—Crash, Fire and Rescue

CG—Center of Gravity

CHOP—Change of Operational Control

COMAFSOF—Commander Air Force Special Operations Forces

COMSEC—Communications Security

CONUS—Continental United States

CRM—Crew Resource Management

CVR—Cockpit Voice Recorder

DA—Decision Altitude

DAGRE—Deployed Aircraft Ground Response Element

DAO—Defense Attaché Office

DD—Department of Defense (as used on forms)

DH—Decision Height

DME—Distance Measuring Equipment

DO—Director of Operations

DoD—Department of Defense

E/E—Electrical/Electronic

EFB—Electronic Flight Bag

EFIS—Electronic Flight Instrument System

EMCON—Emission Control

EP—Emergency Procedure

EP1—Evaluator Pilot with AAR Instructor Certification

E—Pubs—Electronic Publications

ER—Extended Range

ERO—Engine Running Offload

ETA—Estimated Time of Arrival

ETOPS—Extended-range Twin-engine Operational Performance Standards

ETP—Equal Time Point

FAA—Federal Aviation Administration

FAS—Final Approach Segment

FBO—Fixed-Base Operator

FCF—Functional Check Flight

FCG—Foreign Clearance Guide

FCIF—Flight Crew Information File

FCOM—Flight Crew Operations Manual

FCTM—Flight Crew Training Manual

FDP—Flight Duty Period

FDR—Flight Data Recorder

FIH—Flight Information Handbook

FIR—Flight Information Region

FL—Flight Level

FLIP—Flight Information Publication

FMC—Flight Management Computer

FMS—Flight Management System

FOD—Foreign Object Damage

FOUO—For Official Use Only

FP—First Pilot

FPPM—Flight Planning and Performance Manual

GDSS—Global Decision Support System

GOLD—Global Operational Data Link

GP—General Planning

HAT—Height Above Touchdown

HAT—Height Above Touchdown

HATR—Hazardous Air Traffic Report

HAZMAT—Hazardous Material

HHQ—Higher Headquarters

HQ USAF—Headquarters United States Air Force

HQ USSOCOM—Headquarters US Special Operations Command

HSD—High Speed Data

IAP—Instrument Approach Procedure

ICAO—International Civil Aviation Organization

IFF/SIF—Identify Friend or Foe/Selective Identify Frequency

IFR—Instrument Flight Rules

ILS—Instrument Landing System

IMC—Instrument Meteorological Conditions

INMARSAT—International Maritime Satellite

IP—Instructor Pilot

IP1—Instructor Pilot with AAR Instructor Certification

IRS—Inertial Reference System

KIAS—Knots Indicated Airspeed

LAHSO—Land and Hold Short Operation

LM—Loadmaster

LNAV—Lateral Navigation

MAJCOM—Major Command

MAP—Missed Approach Point

MARSA—Military Authority Assumes Responsibility for Separation of Aircraft

MC—Mission Commander

MDA—Minimum Decision Altitude

MEA—Minimum En route Altitude

MEL—Minimum Equipment List

MEP—Mission Essential Personnel

METRO—Pilot-to-Metro Voice Call

MP—Mission Pilot

MSA—Minimum Safe Altitude

MSL—Mean Sea Level

N/A—Not Applicable

NAT—North Atlantic Track

NAT SPG—North Atlantic Systems Planning Group

NGA—National Geospatial-Intelligence Agency

NGB—National Guard Bureau

nm—Nautical Mile

NOTAM—Notice to Airman

OC—Operations Center

OCF—Operational Check Flight

OCONUS—Outside Continental United States

OEI—One Engine Inoperative

OG—Operations Group

OIS—Obstacle Identification Surface

OPCON—Operational Control

OPLAN—Operation Plan

OPORD—Operation Order

OPR—Office of Primary Responsibility

OPREP—Operational Reporting

OPT—Onboard Performance Tool

OST—Off Station Training

OTS—Organized Track System

PAR—Precision Approach Radar

PDL—Pilot Director Lights

PEX—Patriot Excalibur

PF—Pilot Flying

PIC—Pilot in Command

PMCR—Post-Mission Crew Rest

PNF—Pilot Not Flying

POC—Point-of-Contact

PRM—Precision Runway Monitor

PROB40—40-49% Probability

QRH—Quick Reference Handbook

RCR—Runway Condition Reading

RNAV—Area Navigation

RNP—Required Navigation Performance

RO—Radio Operator

RON—Remain Overnight

RSC—Runway Surface Condition

RTB—Return to Base

RTO—Rejected Take-off

RV—Rendezvous

RVR—Runway Visual Range

RVSM—Reduced Vertical Separation Minimums/Minima (aircraft)

SATCOM—Satellite Communications

SDP—Special Departure Procedure

SID—Standard Instrument Departure

SIGMET—Significant Meteorological Advisory

SM—Statute Mile

SOF—Special Operations Forces

SORN—System of Records Notice

SPINS—Special Instructions

STAN/EVAL—Standardization and Evaluation

STM—Supplemental Training Mission

TACAN—Tactical Air Navigation

TDY—Temporary Duty

TEMPO—Temporary

TERPS—Terminal Instrument Procedures

T.O.—Technical Order

TOLD—Takeoff and Landing Data

UHF—Ultra High Frequency

UIR—Upper Flight Information Region

USAF—United States Air Force

USDAO—United States Defense Attaché Office

USG—United States Government

USSOCOM—US Special Operations Command

V2—Takeoff Safety Speed

VCSL—Voice Call Sign Listing

VFR—Visual Flight Rules

VHF—Very High Frequency

VMC—Visual Meteorological Conditions

VMCG—Minimum Control Speed on the Ground

VOR—VHF Omni—directional Beacon

VORTAC—Very High Frequency Omni-Directional Radio Range Tactical Air Navigation Aid

XTK—Cross-track

Terms

Aeromedical Evacuation—Movement of patients under medical supervision between Medical Treatment Facilities by air transportation.

Airborne Mission Systems Operator—A non-rated aircrew member specially trained to operate aircraft communication systems.

Air-to-Air Refueling—For the purpose of this manual, airborne fuel onload (simulated or actual) by receiver aircraft.

Air-to-Air Refueling Control Point—The planned geographic point over which the receiver(s) arrive in the observation/astern position with respect to the assigned tanker.

Air-to-Air Refueling Control Time—The planned time that the receiver and tanker will arrive over the ARCP.

Air-to-Air Refueling Exit Point—The designated geographic point at which the refueling track terminates. In a refueling anchor it is a designated point where tanker and receiver may depart the anchor area after refueling is complete.

Air-to-Air Refueling Initial Point—A point located upstream from the ARCP at which the receiver aircraft initiates a rendezvous with the tanker.

Air Route Traffic Control Center—The principal facility exercising en route control of aircraft operating under instrument flight rules within its area of jurisdiction. Approximately 26 such centers cover the United States and its possessions. Each has a communication capability to adjacent centers.

Air Traffic Control—A service operated by appropriate authority to promote the safe, orderly and expeditious flow of air traffic.

Alert Force, Aircraft, or Crews—Designated aircraft and crews capable of being launched in less than the normal notification to takeoff time period.

Augmented Crew—Basic aircrew supplemented by additional qualified aircrew members to permit in-flight rest periods.

Basic Crew—Minimum crew complement required for a mission (see **Chapter 3** of this manual).

Block Time—Time determined by the scheduling agency responsible for mission accomplishment for the aircraft to arrive at (block in) or depart from (block out) the parking spot.

Border Clearance—Those clearances and inspections required to comply with federal, state, and local agricultural, customs, immigration, and immunizations requirements.

Change of Operational Control—The date, time, and/or point where the responsibility for operational control of force passes from one operational authority to another.

Command and Control—The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission.

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

Contingency Mission—Mission operated in direct support of an OPORD, OPLAN, disaster, or emergency.

Continuing Mission—A mission where the aircraft and crew transits home station, either as an en route stop or to remain over night, then continues on with the same mission and on the same flight orders.

Critical Phase Of Flight—Takeoff, air refueling, formation, low level, air drop, approach, and landing.

Deviation—Performing an action not in sequence with current procedures, directives, or regulations. Performing action(s) out of sequence due to unusual or extenuating circumstances is not considered a deviation. In some cases, momentary deviations may be acceptable; however, cumulative momentary deviations will be considered in determining the overall qualification level.

Due Regard—Operational situations that do not lend themselves to International Civil Aviation Organization flight procedures, such as military contingencies, classified missions, politically sensitive missions, or training activities. Flight under "due regard" obligates the military PIC to be his or her own 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.

Estimated Time of Arrival—A mission's expected touchdown time at its destination airfield.

First Pilot—First pilots are copilots who are qualified in accordance with volumes 1 and 2 of this manual to taxi, take-off, and land the aircraft from both the left and right seat under the supervision of a qualified PIC.

Fuel Reserve—Amount of usable fuel that must be carried beyond that required to complete the flight as planned.

Ground Time—Interval between engine shut down (or arrival in the blocks if engine shutdown is not scheduled) and next takeoff time.

Hazardous Cargo or Materials—Articles or substances that are 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; i.e., 1.1, 2.3, 6.1, (AFJI 11-204, AFMAN 24-204).

Instructor Certified Events—Training given to an aircrew member that requires an instructor to certify the student's attainment of the required proficiency and knowledge levels as specified in courseware and, if appropriate, AF Form 4111, *SOF/CSAR Training Record*. Instructor certified events are documented on AF Form 4348, *Certification of Aircrew Training*.

International Maritime Satellite—United Nations-sponsored organization with controlling authority over a commercial satellite constellation. The constellation provides near global voice/data communications coverage for land-based, maritime and aeronautical radio operations. Users of the system are required to register with the organization, abide by the charter, and pay "by the minute" usage fees.

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.

Long Range Cruise—Airspeed that gives 99% of maximum nautical miles per pound of fuel.

Maintenance Status—See Below

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, i.e., hydraulic, ultra high frequency 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 or mission contributing.

A—3 (Plus Noun); Major maintenance. Delay is anticipated. Affected units or systems are to be identified.

A—4; Aircraft or system has suspected or known biological, chemical, or radiological contamination.

Military Authority Assumes Responsibility for Separation of Aircraft—A condition whereby the military services involved assume responsibility for separation between participating aircraft in the ATC system.

Minimum Equipment Listing—Listing of all equipment necessary for flight or dispatch.

Minimum IFR En Route Altitude—Compute minimum IFR en route altitude by adding 1,000 feet (2,000 feet in mountainous terrain) above the highest obstruction to flight (man-made obstruction, terrain feature, or spot elevation) within five nautical miles of route centerline. Outside the United States, the distance from centerline should be increased to 10 nms in controlled airspace. This altitude may be rounded off to the next higher 100-foot increment.

Mission Commander—The individual given the responsibility to accomplish part of the overall operation.

Mission Essential—A degraded component, system, or subsystem which is essential for safe aircraft operation or mission completion.

Mission Qualified Aircrew Member—An aircrew member who has satisfactorily completed mission qualification and evaluation.

Mission Ready—Crews or crew members fully qualified and current to perform the unit mission.

Mission Ready Crew Member—Crew member who has successfully completed appropriate qualification, and is maintaining qualification currency requirements of this manual.

Operational Control—Transferable command authority that may be exercised by commanders at any echelon at or below the level of combatant command. Operational control is inherent in combatant command (command authority). Operational control may be delegated and is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. Operational control includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command. Operational control should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through

subordinate joint force commanders and service and/or functional component commanders. Operational control normally provides full authority to organize commands and forces and to employ those forces as the commander in operational control considers necessary to accomplish assigned missions. Operational control does not, in and of itself, include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training.

Operational Missions—A mission that has as a primary purpose the direct support of contingencies, or HQ USSOCOM and its subordinate commands. Missions executed at or above TACC level. Operational missions termed "CLOSE WATCH" include CORONET missions and AFI 11-221, *Air Refueling Management,* priority 1, 2, and 3 missions tasked by the TACC. Other operational missions such as deployment, re-deployment, reconnaissance operations, Operational Readiness Inspections, AMC channel or Special Airlift Assignment Missions, and Joint Airborne/Air Transportability Training missions may be designated "CLOSE WATCH" as necessary.

Operational Risk Management—A logic-based, common sense approach to making calculated decisions on human, materiel, and environmental factors before, during, and after Air Force operations. It enables commanders, functional managers and supervisors to maximize operational capabilities while minimizing risks by applying a simple, systematic process appropriate for all personnel and Air Force functions.

Permit to Proceed—Aircraft not cleared at the first US port of entry may move to another US airport on a permit to proceed issued by customs officials at the first port of entry. This permit lists the requirements to be met at the next point of landing; i.e., number of crew and passengers, cargo not yet cleared. PICs are responsible to deliver the permit to proceed to the customs inspector at the base where final clearance is performed. Heavy monetary fines can be imposed on the PIC for not complying with permit to proceed procedures.

Reduced Vertical Separation Minimums—See FLIP/GP Area Planning for specific definition.

Significant Meteorological Information—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.

Supported Forces—Space required passengers consisting of US and foreign military members who are on board as an integral part of the mission being performed.

Supporting Forces—Space required passengers consisting of US and foreign military, DoD civilians, and US civilian employees under contract to the DoD, who directly support the mission or deployment of an AFSOC unit.

Time Out—Common assertive statement used to voice crew member concern when safety may be jeopardized.

Total Flying Time—Total time for all aircraft flown in military service to include student time. Time accumulated must be in the aircrew member's current rating (e.g., pilot).

Training Mission—A mission where the main goal is to train aircrew and doesn’t qualify as an operation mission.

Training Status—A deficient status in which a crew member must fly under the supervision of an instructor when occupying a primary crew position. Once deficient items are corrected, the crew member is removed from training status.

Zero Fuel Weight—Weight, expressed in pounds, of a loaded aircraft not including fuel. All weight in excess of the maximum zero fuel weight will consist of usable fuel.